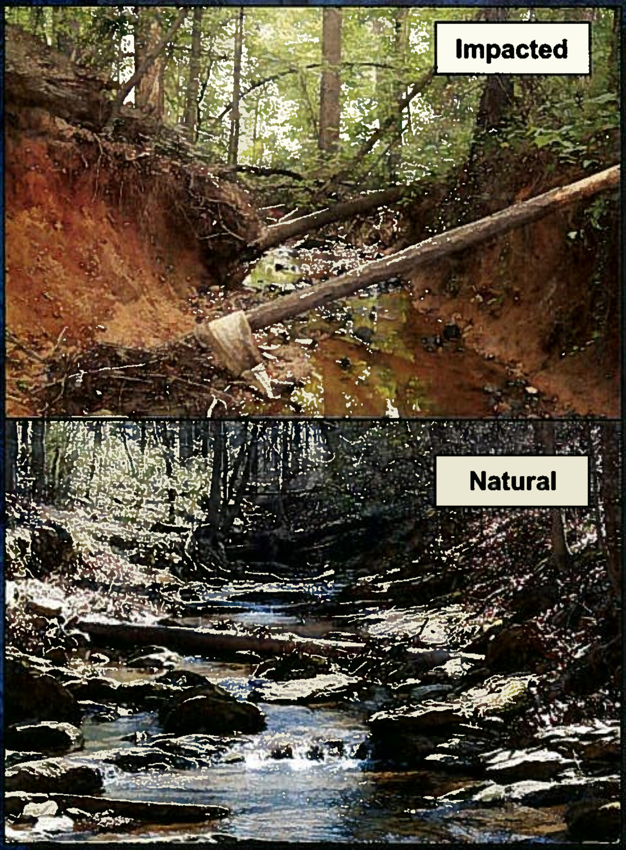
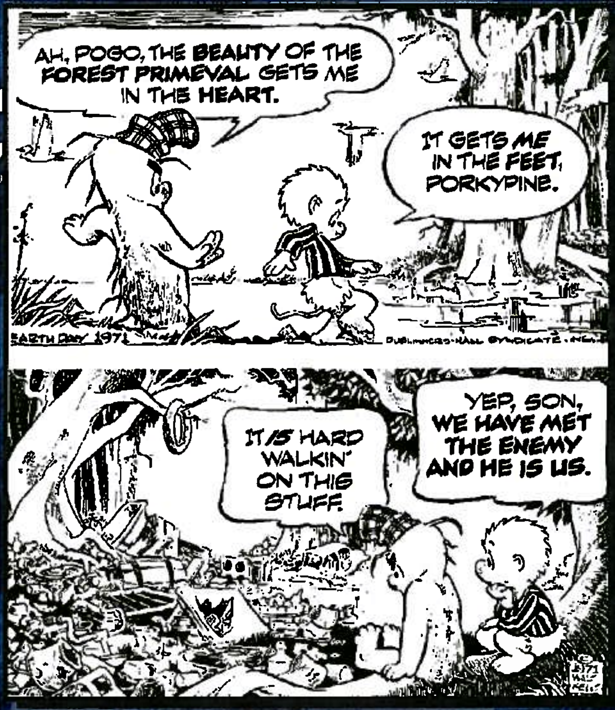
FULTON COUNTY
DEPARTMENT OF
PUBLIC WORKS

Water Resources Management Program

Volume 7 - Sandy Springs Study Are





June 2001

BROWN AND CALDWELL

EXECUTIVE SUMMARY

Sandy Springs Study Area Description

The Sandy Springs study area lies within the Southern Piedmont physiographic province of Georgia and is comprised of 14 watersheds that drain directly into the Chattahoochee River. The combined area of these watersheds is approximately 23 square miles.

Streams in the Sandy Springs study area are generally small, draining watershed areas between 0.3 and 8.0 mi^2. In the smaller streams, channel widths are typically less than 10 feet across with an average depth of less than two feet. Dry weather flows in these small stream are only a couple of cubic feet per second (cfs). The larger streams, Long Island Creek and Marsh Creek, are approximately 15 to 40 feet wide and up to 4 feet deep.

The majority of the Sandy Springs study area is characterized by low to medium density residential land use. High-density residential and commercial land use occurs along the Roswell Road corridor and in the southwestern portion of the study area along I-285. The Powers Branch watershed in the northern portion of the study area and the upper reachs of Long Island Creek contain the highest proportion of watershed area in highly developed land use. In-fill development is occurring throughout the study area. The typical in-fill development occurs when a single home located on a multiple acre lot is replaced by several large single-family homes on the same land area.

Sewer service is available throughout the Sandy Springs study area. However, many of the houses in the area were constructed in the 1930’s and 1940’s before sewer service was extended to the area. These houses were built on multi-acre lots with septic systems and an indeterminate number of the houses have never been tied into the sewer system.

Water Quality Results

Results of water quality monitoring indicated that water quality in the Sandy Springs study area is generally degraded. Peak flows and pollutant levels were generally high relative to the reference station and the recommended Levels of Service (LOS) for each water quality constituent.

The parameter of greatest concern in the Sandy Springs study area is fecal coliform. All monitored streams exceeded water quality standards for fecal. Extreme levels of fecal coliform observed in many of the study site storm samples indicate that raw sewage is being directly discharged to streams in the Sandy Springs study area during rainfall events, either from direct sanitary sewer overflow into the stream, from leaky pipes, from ineffective septic systems, or some combination thereof. High nutrient levels were often observed in conjunction with the high fecal levels. Brown and Caldwell (BC) recommends that repairs and improvements to the sanitary sewer collection system be implemented and that a door-to-door inventory of septic systems be completed immediately. The stream system should be re-evaluated after existing and planned improvements to the sanitary sewer collection system are completed.

During a single stormflow sampling event, heptachlor epoxide was detected in concentrations above water quality standards in five of seven samples collected in the Sandy Springs study area. Heptachlor Epoxide is a pesticide that binds strongly to sediment particles in aquatic environments. The health risk posed by the presence of this contaminant is currently unknown because only the dissolved fraction of heptachlor epoxide is toxic. Brown and Caldwell recommends that additional monitoring of heptachlor epoxide in water and sediments be conducted throughout the Sandy Springs study area.

On-site investigations of commercial businesses revealed that more than 90 percent of dumpsters inspected throughout the Sandy Springs study area did not comply with existing local ordinances. In several cases, runoff from dumpsters and oil and grease pits was observed flowing directly into headwater creeks or stormflow inlets.

As mentioned previously, some residential areas in Sandy Springs continue to be served by individual septic systems. The impact of these septic systems on water quality is unknown. Other potential sources on nutrients include fertilizer runoff from residential and commercial landscapes, improper disposal of yard wastes into streams, animal waste, and direct runoff from parking lots and roads.

Sediment is contributing to degraded aquatic habitat in the Sandy Springs study area. Nutrients and pesticides often bind with sediment particles and are carried into the stream with the sediment particles. Total Phosphorus (TP) concentrations generally mimicked Total Suspended Solids (TSS) concentrations and in general, both increased with increasing land use density. Therefore, TSS is often used as an indicator of water quality impairment due to its direct impact on aquatic habitat and its high affinity for nutrients, pesticides, and other compounds.

Sources of sediment within the Sandy Springs study area are not clearly defined. Inspection of erosion control measures on construction sites has increased in Fulton County in recent years, however additional inspection is needed. For example, BC staff observed clearing of a steep site without erosion controls and removal of trees within the protected 25-foot stream buffer near Colquitt Road and Calvaderas Drive in Sullivan's Creek. The County was notified and a stop-work order was issued. Numerous other construction sites with poor erosion control practices were also observed. The County responded quickly to each of these problems after notification; however, additional resources will be needed to prevent these problems from taking place. Once the damage is done, the result is sediment deposition in downstream receiving waters. Removal of the accumulated sediments is costly and damaging to existing stream habitat.

Visual inspections of the streams also indicated numerous locations where streambank erosion was evident. More than 5 miles of stream channel were observed to have significant bank loss due to erosion. Stream channels that were reportedly one-foot deep and two-feet wide are now over 12-feet deep and 20-feet wide. This increased erosion is likely due to the very high flow rates in Sandy Springs streams due to inadequate runoff controls. This increased erosion is also thought to contribute a large percentage of sediment into the aquatic system.

The study found that all residents and businesses of the Sandy Springs study area contribute in one way or another to the observed flooding, stream erosion, and water quality problems. Lawns are fertilized, lawn clippings are dumped in streams, cars drip oil and grease, and parking lots and houses reduce infiltration and increase runoff. The old adage, “We have found the enemy, and he is us,” illustrates that just as we are all part of the problem, we must all be a part of the solution.

Biological Results

Habitat was less than optimal throughout the Sandy Springs study area and was observed to be different from the reference sites due in large part to differences in the hydrologic regime caused by development. Regardless of these differences, adequate cobble/gravel substrate and riffle/run habitat were observed in monitored streams. However, both macroinvertebrate and fish community results indicate that biota are generally impaired throughout the Sandy Springs study area. Water quality concerns, perhaps from the pesticide Heptachlor Epoxide, is thought to have a greater effect on the degraded state of the biota rather than the habitat. The scouring effect from high flows may also have a significant effect on the macroinvertebrate communities, flushing them downstream with insufficient time between storm events for populations to fully recover.

Storm Water Modeling Results

The results of the hydrologic and hydraulic analysis revealed that flooding of roads and structures occurred within the Sandy Springs study area. The hydrologic modeling results for the study area indicated that high peak runoff rates for most common storms are directly related to uncontrolled runoff from impervious areas. Flooding problems are also significant. Over 20 bridges throughout the study area are predicted to experience frequent flooding and may have to be replaced. In additionally, model results also indicate that private residences and driveway bridges also experience flooding.

Water Quality Modeling Results

Model predictions of average annual sediment washoff and phosphorus loads are summarized in Table 1. For reference purposes, suggested targets for sediment and total phosphorus washoff are included in the table. Sediment targets are based on CH2M-Hill’s recommendation of 700 lb/acre/year, while total phosphorus targets are calculated to bring the long-term average TP concentration to 0.1 mg/L. The total phosphorus target in Powers Branch is 0.05 mg/L due to the presence of a lake near the confluence with the Chattahoochee River.

TABLE EX-1
Watershed Loads for Existing Conditions and Targets

	Existing conditions		Target	
	Sediment washoff (tons/year)	**TP (lbs/year)**	**Sediment washoff (tons/year)**	**TP (lbs/year)**
Game Creek	195	423	290	270
Heards Creek	219	393	290	320
Long Island Creek	1082	1626	1550	1082
Marsh Creek	910	1800	1280	1350
Powers Branch	337	662	530	305
Sullivans Creek	313	611	530	610
Tributary 7	240	359	350	360

Regulatory Requirements for Storm Water

Existing ordinance requirements were reviewed to determine their adequacy in providing the proper regulatory framework for stormwater management for the Sandy Springs area. The existing 1995 Fulton County Comprehensive Stormwater Management Ordinance requires that "Should the subdivider fail to obtain an off-site easement for the purpose of drainage conveyance, then the design discharge at the outlet facilities of the subdivision shall be limited to the pre-developed conditions for all storm events, including the discharges and velocities, whichever is more restrictive shall apply." Because much of the Sandy Springs area was developed prior to 1995, less restrictive regulations were applied to those areas; accordingly, much of the Sandy Springs area has developed without storm water controls.

Recommended Storm Water Guidelines

A broad set of recommendations were developed that addressed the range of water resources management issues that exist within Fulton County. The list of recommended regulatory requirements is provided in Volume II, the Methodology and Approach document. The recommendations of greatest interest to the Sandy Springs area relate to regulatory control of in-fill development and soil erosion controls for construction sites. In-fill development is the construction of new homes or businesses on small lots (2-20 acres) in-between existing developed parcels. In-fill development sites were often not developed previously due to site constraints such as steep slopes, a stream bisecting the property, or lack of infrastructure (sanitary sewers, water, etc.). Existing regulations for in-fill development provide waivers of stormwater management requirements for certain types of development. Management recommendations proposed for new in-fill development include stormwater management and erosion and sediment control for all developments with exposed soil areas exceeding 5,000 square feet.

Additional recommendations for improvement of County regulations include requirements to store 1.2 inches of runoff from impervious lands associated with new development. This storage requirement will provide peak flow reduction for a broad range of storms, including the frequent smaller events up to and through the 100-year rainfall event.

Regulatory Requirements for Water Quality

The existing County regulations do not have specific water quality performance standards for new developments. This management plan recommends 80% removal of storm water pollutants for new development. The revised regulations would require new development proposals to include an evaluation of pollutant removal for proposed stormwater management facilities. The pollutant removal calculations may result in different storage requirements than the water quantity requirement to store 1.2 inches of runoff. The more restrictive requirement is recommended for new developments.

Poor erosion control at construction sites is a large potential source of pollutants to streams in Sandy Springs. Sediment loads from uncontrolled, or poorly controlled, construction sites are typically 100 to 1,000 times larger than sediment loads from undeveloped sites. Recommendations for better enforcement of erosion control activities for construction sites will have significant benefits to Sandy Springs streams. If water quality in the streams does not improve to desired levels after implementation of BMPs, then additional storm water control measures may be necessary.

The management framework utilized in the development of the watershed management plan seeks to improve water quality, reduce flooding problems, and minimize stream erosion. The watershed management plan for the Sandy Springs area will primarily address existing problems rather than future problems because most of the study area is already developed. There will be some future development as small parcels of undeveloped land with site limitations are converted to urban land uses.

Management Framework

The management framework focuses on addressing problems in three stages. The most serious problems are addressed first, with the second and third stages addressing problems of gradually decreasing concern. The three stages are:

1. *Address health and safety problems*
   - flooded roads and water quality problems that threaten the health of the general public
2. *Address health and safety problems and meet water quality standards*
   - Address Stage 1, plus provide Best Management Practices (BMPs) that improve water quality conditions so that streams meet State water quality standards
3. *Address health and safety problems, meet water quality standards, and improve the quality of life for residents of the County*
   - Address Stages 1 and 2, plus provide BMPs that improve the quality of life, such as restoration of stream habitat

The three stages of watershed management all involve actions that will be voluntary for residents, some regulated practices (e.g. more treatment of stormwater runoff to reduce flooding and stream erosion, and improve water quality), and some County-sponsored programs to address existing problems in the watersheds. Some of the problems identified are flooding problems of private roads and/or buildings. Current County policy does not generally provide for County-sponsored work on private land. Exceptions are when there is some over-riding public interest in County-sponsored work on private land or where previous County actions negatively affected the welfare of an individual. Who pays to resolve these cases will be based on the specifics of each situation.

There are many voluntary measures that citizens can take to protect water quality and reduce flooding in their watershed. If implemented by a significant number of homeowners within a watershed, there could be a significant beneficial effect at a minimal cost. These include:

- Keep all chemicals (including fertilizers, used oil, paint, grease, and other household chemicals) and other wastes (including yard clippings) as far away from environmentally sensitive areas as possible.
- Divert stormwater runoff from gutter downspouts and driveways away from streams and drainage ways and into vegetated areas.
- Compost yard wastes for mulch.
- Stabilize areas of exposed soil, particularly near streams. This may be accomplished simply by planting appropriate trees, shrubs, or grass. Trees and shrubs are recommended along stream banks to stabilize the banks and shade the stream.
- Citizens with local water quality concerns should be encouraged to organize and become involved as Adopt-A-Stream volunteers.

Local business associations can also take a leadership role in voluntary implementation of BMPs. In Sandy Springs, businesses that complied with a list of improvements compiled by the Sandy Springs Business Association (SSBA) and Brown and Caldwell were awarded the distinction of an “EverGreen Business” emblem, and were featured in SSBA promotional materials.

There are other actions in urban areas that need to be regulated. Uncontrolled runoff from impervious surfaces causes problems in downstream areas, due to the increased volume of runoff and increased peak flows. Because streams in Fulton County are privately held, the general welfare of residents is enhanced by regulations for new development so that post-development runoff rates and velocities are no greater than pre-development conditions. Water quality treatment measures are also regulated since the State of Georgia has established water quality standards for streams, rivers, and lakes, however current County regulations do not mandate measures to maintain the quality of post-development urban runoff.

Water Resources Management Unit Recommendations

Long Island Creek Water Resources Management Unit (WRMU)

The Long Island Creek WRMU includes Long Island Creek and Riverview Creek. No action is recommended for the undeveloped Riverview Creek, while extensive recommendations were developed for Long Island Creek due to extensive development in the headwaters. The recommended plan for Long Island Creek includes construction of detention ponds, retrofit of existing detention ponds, bridge replacements, and stream restoration. The plan includes:

- 21 pond retrofits,
- 7 new ponds, and
- 4 miscellaneous BMPs

Final recommendations for the Long Island Creek WRMU are presented in Table EX-2.

Table EX-2
Final recommendations for the Long Island Creek WRMU

Final Recommendation	Estimated Cost
Bridge Replacements	$ 1,850,000
Detention Ponds	$13,400,000
Unresolved Maintenance	$ 35,000
Street sweeping	$ 1,000,000
Immediate stream bank stabilization/restoration	$ 951,400
Long term stream bank stabilization/restoration	$ 2,648,600
Final Cost:	$19,885,000.00

Heards Creek WRMU

The Heards Creek WRMU includes Game Creek, unnamed tributaries north of Game Creek, Tributary 9, Tributary 8, Heards Creek, Colewood Creek (Tributary 7), and Tributary 6. No actions are proposed for Tributaries 8 and 9 and the unnamed tributaries. Retrofit of existing detention facilities is recommended for Game Creek.

Heards Creek is impacted from I-285 runoff and high stream velocities. Recommendations include three new detention ponds and selected stream riffles to reduce stream velocities.

Colewood Creek is a residential watershed with a significant flooding problem. The management plan for Colewood Creek recommends actions to resolve the flooding problem and the improve water quality. Voluntary incentive-based on-site management of runoff is also recommended within this watershed.

Tributary 6 has a lake at the mouth of the watershed adjacent to Riverside Drive. Dredging of the lake and voluntary, incentive-based, on-site management of runoff is recommended in this watershed.

The final recommendations for the Heards Creek WRMU are presented in Table EX-3.

Table EX-3
Final recommendations for the Heards Creek WRMU

Final Recommendation	Estimated Cost
Game Creek	
Detention Ponds (Retrofits)	$ 660,000
On-site BMPs	$3,540,000
Heards Creek	
Detention Ponds (new) and biofiltration	$ 782,000
Stream bank stabilization/restoration and riffle reestablishment	$ 400,000
Colewood Creek	
Voluntary Residential Grant Program	$ 750,000
Stream Bank Stabilization/Restoration	$ 450,000
Culvert Replacement	$ 91,500
Tributary 6	
Voluntary Residential Grant Program	$184,000
Lake Dredging	$ 50,000
Total:	$6,907,500

Marsh Creek WRMU

The Marsh Creek WRMU includes Marsh Creek and Tributary 5. No actions are recommended for Tributary 5. The Marsh Creek watershed is highly urbanized with very little storm water management. There are a number of challenges in this watershed, and the recommended plan includes a mix of detention ponds and on-site BMPs to correct the problems. The plan includes:

- 25 ecoroofs,
- 39 edge-of-parking lot sand filters,
- 9 pond retrofits,
- 17 new ponds, and
- 6 miscellaneous BMPs.

The final recommendations for the Marsh Creek WRMU are presented in Table EX-4.

Table EX-4
Final recommendations for the Marsh Creek WRMU

Final Recommendations		Cost
Bridge Replacements		$ 5,320,000
Revised Plan Option		$18,637,000
Unresolved Maintenance		$ 350,000
Immediate Action Stream Bank Stabilization/Restoration		$ 896,300
Long Term Stream Bank Stabilization/Restoration		$ 1,812,700
	Total:	$27,016,000.00

Sullivan's Creek WRMU

The Sullivan's Creek WRMU includes the Huntcliff tributaries, Sullivan' s Creek, and Powers Branch. Powers Branch is a mixed urban watershed with both low density and high density urban development. There is a lake at the mouth of the watershed, and the Big Trees Forest Preserve is located just east of Roswell Road. This watershed has a more aggressive plan to meet a lower phosphorus concentration for protection of lake water quality. A mix of detention and on-site BMPs have been recommended to achieve a phosphorus water quality concentration goal of 0.05 mg/l.

Sullivan's Creek is a mixed urban watershed comprised primarily of more recent developments. There are storm water control facilities in the watershed for the newer developments. Flooding exists upstream of Roswell Road where an apartment complex filled across the creek. Upstream detention is proposed as a solution to this flooding problem. Other flooding problems will be solved with culvert replacements.

Final recommendations for the Sullivan's Creek WRMU are presented in Table EX-5.

Table EX-5
Final recommendations for the Long Island Creek WRMU

Final Recommendations	Estimated Cost
Powers Branch	
Check Dams	$ 43,200
Ecoroofs	$ 1,543,214
Parking Lot Infiltration	$ 1,841,700
Cisterns	$ 1,913,130
New Ponds/Inlet Control/Land Acquisition	$ 3,923,845
Pond Retrofit	$ 962,392
Unresolved Maintenance Issues	$ 10,000
Immediate Action Stream Bank Stabilization/Restoration	$ 130,000
Long-Term Stream Bank Stabilization/Restoration	$ 620,000

Sullivan's Creek		
Culvert Replacement		$ 73,000
New Ponds		$ 2,848,545
Streambank Restoration		$ 723,000
Tributaries of Huntcliff		
Streambank Restoration		$ 49,600
	TOTAL:	**$14,681,626**

Capital Improvement Program

Detailed studies were conducted to identify solutions to improve water quality and to reduce flooding. In this analysis, a number of new Best Management Practices (BMPs) were identified, and retrofits to existing ponds were also identified. The plan identified 20 bridge and culvert replacements, 24 pond retrofits, 40 new ponds, 20 in-stream BMPs, 135 on-site BMPs (e.g. edge of parking lot filters, ecoroofs), and 14.5 miles of stream restoration. The total cost of the restoration project will be in the range of $68,000,000. Of that total, approximately 13 percent is for flood control. The cost per property or parcel was calculated by using GIS to apportion cost as a function of impervious land area per parcel. Those parcels with impervious land would pay more than parcels with less impervious land. Median costs were provided for residential parcels, commercial parcels, and DOT parcels (I-285 and Georgia 400). The median costs for water quality BMPs (excluding flood control BMPs) are listed in Table EX-6.

Table EX-6
Median Annual Cost for Parcel Owner for Implementation of Stormwater BMPs

Land Use Category	Statistic	Equivalent Annual Storm Water Fee
Residential	Median	$ 207
Commercial	Median	$ 1,251
Institutional	Mean	$ 3,316
DOT (for I-285 & GA 400)	Overall	$274,109

This mix of BMPs is predicted to reduce pollutant concentrations in urban runoff. The BMPs are predicted to reduce the phosphorus load from the study area by 26% and will result in an average phosphorus concentration of 0.1 mg/l in Sandy Springs streams without lakes and 0.05 mg/l for stream with lakes. These BMPs are expected to improve stream health so that aquatic integrity can improve from poor to fair conditions.

CONTENTS

Section 1	Introduction
Section 2	Description Of The Study Area
Section 3	Characterization
Section 4	Storm Water Modeling Results
Section 5	Water Quality Modeling Results
Section 6	Management Plan Development And Recommendations

1.0 Introduction

Fulton County has undertaken the task of performing watershed assessments and master planning throughout the county to address water quality and stormwater drainage issues as well as to develop a comprehensive Water Resources Management Plan (WRMP). Study areas were selected based on hydrologic or watershed boundaries and geographic area contributory to each of the County's wastewater treatment plants. During 1998-1999, work was initiated in the following study areas: Big Creek, Camp Creek, Johns Creek, Little River, and Sandy Springs. The following report is for the Sandy Springs Service Area, which is shown in Figure 1-1. The Sandy Springs Service Area will be hereinafter referred to as the Sandy Springs study area. The purpose of the watershed assessment is to identify point and nonpoint source impacts on streams within the existing and future service areas and to develop watershed management plans meet water quality standards for concurrent existing and future land use scenarios.

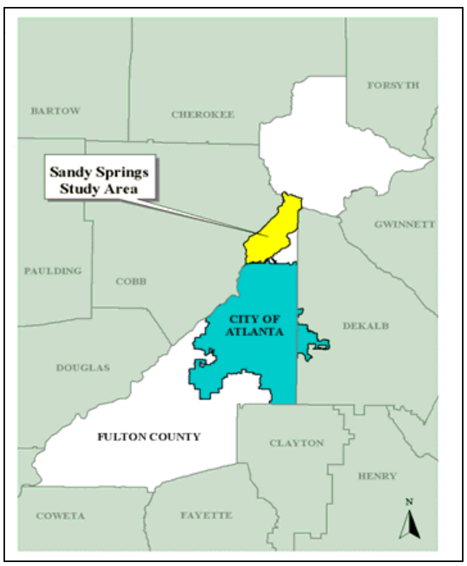


Figure 1-1.
Sandy Springs Study Area

The approximate boundaries of the Sandy Springs study area are the City of Atlanta on the south, DeKalb County on the east, and the Chattahoochee River on the west and north. The southern-most watershed in the study area is Long Island Creek, and the southern boundary of this watershed is a topographical ridge. Streets named Northside Drive, Mount Paran Road, and Glenridge Road follow this ridge line. The watershed boundary at the northern extent of the study area is formed by a number of small creeks that drain into the Chattahoochee River in the vicinity of the Cherokee County Club.

This scope of work for this project included watershed assessment, modeling, and stormwater master planning and watershed planning for the Sandy Springs Service Area. Key issues of the project were water quality, water quantity, aquatic integrity, flooding and streambank erosion. Management scenarios were designed to minimize existing and future flooding hazards, to meet water quality standards, and to restore eroded reaches of streams. A public education and involvement program was incorporated into key phases of the process, which offered local residents ownership in the planning process, and future management of their watersheds.

1.1 Background

Fulton County has experienced rapid growth that has strained the capacity of the existing infrastructure. There have been water quality problems from both wastewater discharges and storm water discharges. Certain streams in Fulton County do not meet state water quality standards because of elevated levels of fecal coliform bacteria. Additionally, there have been large sanitary sewer overflows in the Johns Creek sanitary sewer service area, which has prompted regulatory action by the Georgia Environmental Protection Division (GaEPD). There have also been numerous situations of flooding and stream erosion in Fulton County streams in urban areas. The existing resources of Fulton County Department of Public Works have been insufficient to provide acceptable solutions to flooding and stream erosion problems.

Due to the increases in storm water associated with growth, the State requires local governments to conduct watershed assessments as a part of the National Pollution Discharge Elimination System (NPDES) permitting process for wastewater treatment plant expansion. In order to receive a new discharge permit, the county or municipality is required to develop a management plan that will address non-point source pollution within the treatment plant service area. In addition, the County is required to develop a Master Plan under the requirements of the NPDES permit for discharges of storm water to Waters of the State.

The four main components of the watershed assessment include characterization, modeling, watershed management, and public involvement. The characterization task evaluates the current conditions within the watershed by collecting water quality and biological data to determine the health of the streams, as well as researching historic reports of flooding or water quality problems. The modeling effort develops predictive water quality and flood models that are used as decision tools for evaluating alternative management scenarios developed by the watershed management task. The watershed management task evaluates a set of management scenarios and recommends the best scenario for achieving the water resources management goals. The public involvement task gathers values and concerns from the public and uses the information to shape the development of the management plan.

Master Planning components include a storm water system inventory, storm water modeling, development of a master plan and public involvement. The storm water system inventory includes the survey and mapping of the various components of the storm water infrastructure as well as the survey of stream cross sections. The storm water modeling includes both hydrologic and hydraulic modeling of existing conditions, future conditions, and alternative management scenarios. Similar to the watershed management task of the watershed assessment, the master plan evaluates a set of management alternatives and recommends the best scenario for achieving the water resources management goals. The primary difference is that the watershed assessment focuses more on water quality issues while the master plan focuses more on the water quantity issues such as flooding and erosion. The same concept applies for the public involvement task since the watershed assessment public involvement focuses on obtaining public input on water quality issues while the master planning public involvement focuses on obtaining public input on flooding and erosion.

Fulton County's Water Resources Management Program combines the watershed assessments and master planning efforts integrating the water quality and water quantity issues under one goal of protecting the water resources of Fulton County.

The Sandy Springs area was evaluated jointly for flooding and water quality problems. There was no distinction between watershed assessments and storm water master planning since the solutions for both problems are so closely inter-related.

As part of this overall WRMP, a series of reports were prepared to describe conditions in each study area. Volume 1 describes the overall county-wide WRMP, focusing on the implementation strategy. Volume 2 documents the methodology used in completing the technical studies. Volumes 3 through 7 describe watershed assessment and storm water master planning results and provide recommendations for managing the surface water resources within each water resources management unit (WRMU). This document is Volume 7, the WRMP for the Sandy Springs area. There are four WRMUs within the Sandy Springs study area: Long Island Creek, Heards Creek, Marsh Creek, and Sullivan's Creek. The WRMUs are presented in Figure 1-2.

1.2 Summary of Overall Regulatory Requirements

This work was done in response to state regulations that require such assessments be done prior to issuance of any new NPDES permits or expansion of existing permits for domestic wastewater systems. Because storm water is considered a water quality pollutant in many highly developed areas and flooding and stream erosion problems were common, Fulton County decided to address both water quality and storm water issues under one watershed project. Additionally, storm water management must be implemented for Fulton to comply with the separate NPDES municipal storm sewer system discharge permits. Therefore, storm water master planning is within the scope of the current project.

1.3 Goals and Objectives

The overall goal of the watershed assessment was to identify water quality and storm water problems and develop watershed management plans to correct such problems. The scope of work includes the assessment, modeling and storm water master planning of the Sandy Springs study area, along with providing technical coordination for the future management of the watershed. Additionally, the scope includes providing the public with education assistance and guidance of the project activities.

The primary objectives of the project are to:

- Establish data in a database/overlay compatible with Fulton County's GIS System (see Table 1-1 for GIS data layers)
- Develop a program for collection and assessment of water quality and quantity data
- Assess current status of streams in the Sandy Springs study area and determine if they are meeting water quality standards for their designated uses
- Locate, map, and inventory storm water conveyance systems and facilities

- Eliminate flooding that is hazardous to human life and health
- Reduce non-hazardous flooding where feasible
- Develop plans to avoid increased flooding resulting from existing and future development
- Identify primary causes of impairment in the streams
- Develop a quick assessment of obvious local receiving water problems, pollutant sources, and existing control programs based upon available data and visual observation
- Identify and evaluate areas of water quality concerns, water quantity (flooding) concerns and channel erosion concerns
- Develop flexible, feasible non-point source pollution control strategies for consideration by the County
- Identify strategies to reduce the need for sediment removal from natural and man-made detention facilities
- Develop methods to achieve no net loss of creek, wetlands, or riparian habitat
- Identify inappropriate land uses in riparian areas
- Promote environmentally sound techniques for bank stabilization
- Develop and identify Best Management Practices (BMPs) that will maintain stream water quality and meet designated water quality standards using current land use plans
- Provide public information and education assistance
- Support issuance of advantageous and defensible NPDES discharge permits

TABLE 1-1
GIS Data Layers for Sandy Springs Study Area

Description of Data Layer:	
Aerial Photography	Sampling Sites
Biological and Habitat Assessment Areas	Sanitary sewer overflow database
Channel Erosion Reaches	Soils
Complaint Sites	Stream Centerlines (including attainment status, i.e. TMDL-listed)
Cross Sections (point)	Stormwater Storage Facilities
Cross Sections (line)	Structures
Flood Plain (effective)	Study Area
Flood Plain (existing)	Catchments
Flood Plain (future)	Water quality Sub-basins
Landuse (existing)	Contours
Landuse (future)	Wetlands (polygons)
Photolog + Links	Wetlands (lines)
Pipes	Existing/Historical Landfills
Potential Pollution Sources	

Objectives were accomplished by incorporating the County's current activities, stakeholder concerns, regulatory requirements, and an in-depth understanding of County projects and conditions. The project was developed in nine major tasks described below:

Task 1-Project Management included all tasks involved in developing an approach to execute the project, such as, proper communication, planning, and coordination of project budget and schedule.

Task 2-Public Information and Education included development and implementation of a public information and education plan including preparing relevant information to educate the public on the activities associated with the watershed assessment.

Task 3-Data Collection involved the collection of both historical and current data relevant to the assessment, modeling, and management of the watershed.

Task 4-Infrastructure Inventory included collection of field data to develop an inventory of the infrastructure for the surface water conveyance system in the watershed.

Task 5-Watershed Characterization included assessment of the existing water quality and biological health of streams and watersheds.

Task 6-Hydraulic Modeling involved the development of both the hydrologic and hydraulic models of the watershed to evaluate current and future conditions.

Task 7-Water Quality Modeling included developing water quality models for the watershed to evaluate current and future conditions.

2.0 Description of the Study Area

2.1 Hydrology

Streams in the Sandy Springs study area are generally small, draining watershed areas between 0.3 and 8.0 mi^2. In the smaller study streams, channel widths are typically less than 10 feet wide with an average depth of less than two feet. Dry weather flows in these small stream are only a couple of cubic feet per second (cfs). The larger study sites, Long Island Creek (SS-1) and Marsh Creek (SS-6) are approximately 15 to 40 feet wide and up to 4 feet deep. Dry weather flows in the larger streams were measured as 5.0 cfs or more and storm flows were measured at 250 cfs. Flow monitoring was also conducted at an undeveloped reference site in Carroll County, southwest of Atlanta. The reference site drainage area is approximately 8 mi^2 which is equivalent to the Long Island and Marsh Creek drainage areas.

Because the Sandy Springs study area is highly developed, streams respond more rapidly to rainfall events than those of comparable type and size in more rural settings. Lag time (time between peak precipitation and peak runoff) is shorter, flow velocities are higher, and stormflow volumes are greater, relatively speaking, in such highly urbanized streams. A high proportion of impervious to pervious area (e.g. more roads, parking lots, roofs, etc. and less undeveloped area, or "green space") creates conditions for rapid overland flow, or surface runoff to storm drains and streams following storm events. More runoff means less infiltration and percolation of precipitation into the soil. Because a significant portion of the precipitation volume that would have otherwise infiltrated into pervious areas is now lost as runoff, there is less ground water available to "feed" or discharge to streams during baseflow conditions. Therefore, watersheds with extensive paved areas produce higher peak stormflows and lower baseflows than do undeveloped watersheds.

Stream channels constantly readjust to accommodate fluctuating energy patterns. It is normally the continuous, low intensity precipitation or a series of natural catastrophic events that govern the natural development of drainage patterns over long periods of time. However, accelerated landform development can occur in response to anthropogenic forces such as dramatic land use changes. Such has been the case in Sandy Springs. The increase in impervious surface area resulting from increasing development pressures, coupled with conveyance of surface water runoff through storm drains directly to streams has led to high energy storm flows and accelerated channel alterations in Sandy Springs.

High peak flows and accelerated flow velocities have altered the size and shape of stream channels throughout the study area. Channel beds have eroded down to bedrock levels. High flows continue to cause stream banks to erode leaving wide channels characterized by unstable banks of exposed soil with vegetation collapsing into the stream. The consequence of such processes is larger stream channel capacities with a lower frequency of flows that overtop stream banks. A decrease in the frequency of overbank flow means less opportunity for stormwater interaction with adjacent floodplains. While this may be perceived as having a positive effect for property owners in floodplain areas, it may have a negative effect from a hydrologic and water quality perspective. Floodplains can act as natural stormwater detention and treatment areas, reducing the magnitude and velocity of stormflows and filtering sediment and pollutants from the water column.

A loss of such natural functions can lead to higher stormwater management and water treatment costs in the long run. Furthermore, routing of floodwaters further downstream can lead to greater flooding problems in those areas. The age of the development in the study area exacerbates the stormwater management challenge. Many of the homes and commercial developments in Sandy Springs were constructed more than 25 years ago. Few have any stormwater controls. For those that do, many have failed, or are close to failure.

Groundwater in the Piedmont is held in joints, fractures, and other secondary openings in bedrock and in pore spaces in the overlying regolith. (Regolith refers to the soil, alluvium, and saprolite, collectively). The largest volume of groundwater is stored in the regolith. Since the unweathered and unfractured portion of bedrock in the Piedmont province has very low porosity, most recharge to deep groundwater aquifers is by seepage through the regolith and into secondary openings, or by flowing directly into openings in exposed rock. Groundwater levels are variable across topographic settings and are highest in the early spring when evapotranspiration is low and rainfall is high (Radtke et al., 1986).

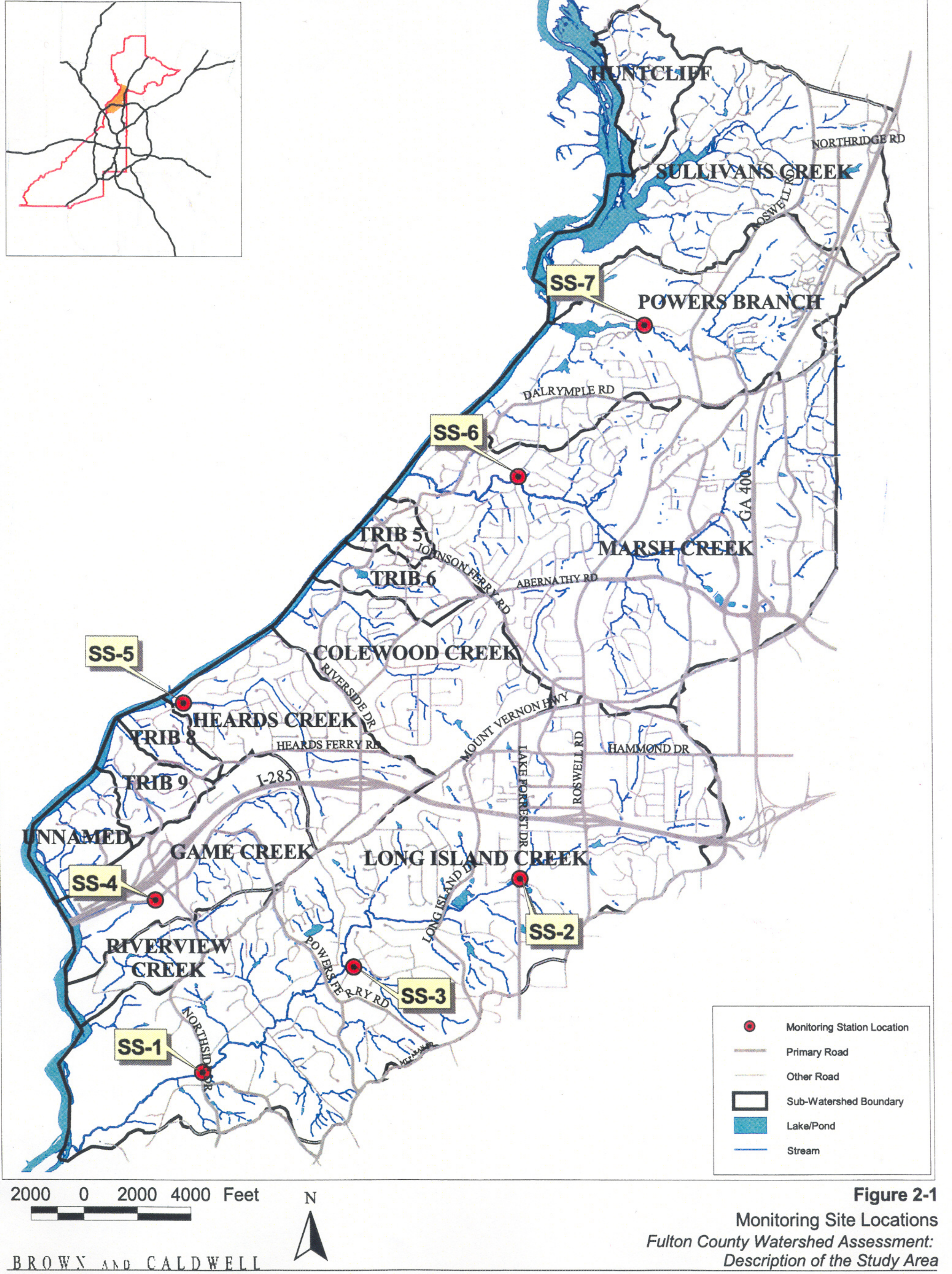
Assuming uniform conditions within the saprolite-bedrock system, more groundwater is expected to flow horizontally through saprolite than vertically down through underlying bedrock due to higher horizontal hydraulic conductivities of saprolitic material (Dowd et al., 1993). This implies greater horizontal flow from uplands to floodplains and streams than vertical flow from uplands to deeper aquifers. Therefore, the loss of infiltration capacity in upland areas leads to a loss of (slow-release) flow to floodplains and streams and ultimately results in lower baseflow levels in streams. Lower baseflow levels in turn impact the biological integrity of the stream system because there is less water to assimilate pollutants in the stream and to provide dissolved oxygen to aquatic species.

2.2 Designated Uses

In the Rules and Regulations for Water Quality Control (Chapter 391-3-6, revised February 2000), the state of Georgia has established designated uses for all surface water bodies. Specific water quality standards apply to each designated use. For those streams and stream reaches not specifically listed in the Rules, the designated use or classification is Fishing. None of the streams in the Sandy Springs study area are listed in the Rules; therefore, their designated use is Fishing. Fishing is defined as the propagation of fish, shellfish, game and other aquatic life. Also included within this classification is secondary recreational contact. Water quality criteria for this water usage given in Volume 3, Chapter 6, Section 6.2.2.1 and include numeric criteria for dissolved oxygen, pH, bacteria and temperature. All monitored streams in the Sandy Springs study area fail to meet their designated use criteria due to excessive bacterial concentrations.

2.3 Station Location

Monitoring station locations are shown on Figure 2-1. Station SS-1, draining the largest area within Sandy Springs, was the most downstream monitoring station on Long Island Creek,



BROWN AND CALDWELL

Figure 2-1

Monitoring Site Locations

Fulton County Watershed Assessment: Description of the Study Area a TMDL-listed stream for fecal coliform violations. Located at Northside Drive, it is an automated sampling station managed by Fulton County to measure stage and capture composite samples during storm events to meet storm water-permitting requirements (see Section 2.7.2 for results). Khafra Engineering manages the station on behalf of Fulton County. At Brown and Caldwell's (BC) request, the station was reconfigured to measure stage and discharge, and reprogrammed to collect multiple grab samples during the course of a storm event. BC was responsible for collecting data from this station for this study. Analytical results were shared with Khafra Engineering.

Station SS-2 was located near the headwaters of Long Island Creek and measures the combined contribution of highly developed commercial and some residential property. This station was automated and programmed to measure stage and discharge and to collect multiple grab samples during the course of a storm.

Station SS-3 was located on a small tributary of Long Island Creek. The only land use within this sub-basin is low density residential. This station, in conjunction with Stations SS-1 and SS-2, provides a longitudinal measure of the hydrology and chemistry within the sub-basin.

Station SS-4 was located in Game Creek, a small heavily developed watershed. I-285 forms the northern boundary. The remainder of the watershed is comprised primarily of office and commercial developments. A large portion of the stream system has been channelized.

Station SS-5 in Heards Creek was comprised primarily of low-density residential development. The headwaters of the watershed are crossed by I-285. This station was selected to measure the impact of a major highway in a watershed that otherwise has a uniform land use. This station was automated.

Station SS-6 was located on Marsh Creek. This watershed has a mixed land use and the sampling location will measure the cumulative impact of low density residential, office, and commercial development. This is the second largest watershed in the Sandy Springs area. This station is automated and programmed to measure stage and discharge and to collect multiple grab samples during the course of a storm.

Station SS-7 at Powers Branch lies in a watershed that is composed primarily of high density residential and commercial land uses. The sampling location will measure the actual loading rates into a large pond located immediately downstream of the sampling station.

The reference station was located in Carroll County on Snake Creek at East Wayside Road. The property around this site is owned in large part by the Temple Inland Paper Company. Most of the watershed area upstream is in managed forests. The station was set up with automated sampling equipment programmed to measure stage and discharge and to collect multiple grab samples during storm events.

2.4 Basin Land Use

Figure 2-2 delineates land use patterns within the Sandy Springs study area. General descriptions of land use are discussed in the previous section. Percentages of current and future land use are presented in Table 2-1. The majority of the Sandy Springs study area is low to medium density residential. High-density residential and commercial land use

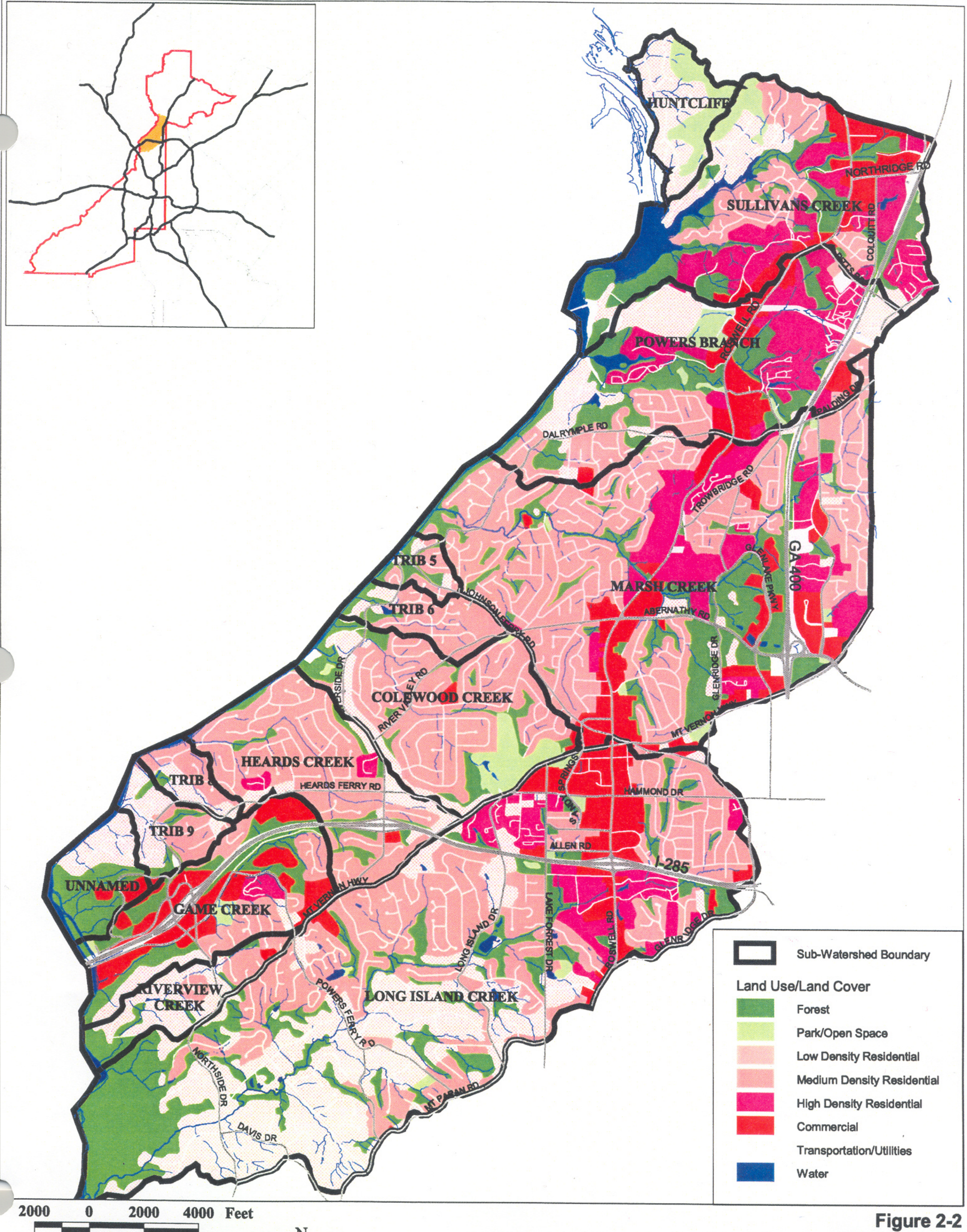


Figure 2-2
Land Use Classifications and Sub-Watershed Delineations
Fulton County Watershed Assessment: Description of the Study Area

BROWN AND CALDWELL

TABLE 2-1
Land Use Distribution Within the Sandy Springs Study Area

Watershed	**Landuse Percentage**															
	Low Density Single-Family Residential		Medium Density Single-Family Residential		High Density Residential (Incl. Multi-Family)		Commercial (Incl. Institutional)		Forest		Park/Open Space		Transportation & Utilities		Water	
	Now	Future	Now	Future	Now	Future	Now	Future	Now	Future	Now	Future	Now	Future	Now	Future
Colewood Creek	10	15.9	63	63	0.04	0.01	1.7	1.7	13.2	7.3	10.6	10.6	0.4	0.4	0.9	0.9
Game Creek	7.9	6.6	20.2	22.8	3.7	5.1	33.9	39.3	22	15.9	2.3	0.5	8.6	8.6	1.3	1.3
Heards Creek	10.2	10.3	72.5	72.5	3.3	3.3	0.9	0.9	8.4	8.3	0	0	3.5	3.5	1.2	1.2
Huntcliff	61.2	61.2	0	0	0	0	0	0	0	0	38.6	38.6	0	0	0.2	0.2
Long Island Creek downstream of Lake Forrest Drive	40.3	38	29.7	28.9	3.1	3.9	1.2	7.1	23.7	20.3	0.4	0.3	0.6	0.6	1.1	0.9
Long Island Creek upstream of Lake Forrest Drive	4.4	14.8	36.3	32.5	17	14.2	24.9	30	11	3.4	2	0.5	3.9	4.2	0.5	0.4
Marsh Creek	2.3	1.4	48.4	45.6	14.2	19.8	13.4	18.9	17.2	9.6	0.8	0.4	3.3	3.8	0.5	0.5
Powers Branch	15.1	9.6	17.8	18.5	23.9	29.8	12.7	17	19.6	8.6	3.7	9.4	4.6	4.6	2.5	2.5
Riverview Creek	49.6	46.6	24.5	28	0	0	2.3	1.8	21.3	21.3	0	0	0	0	2.3	2.3
Sullivans Creek	10.6	9.2	18	15.6	22.2	26.3	12.9	17.8	20.5	14.5	3.9	4.6	2.9	2.9	8.9	8.9
Tributary 5	10.9	17.2	51.7	51.7	0	0	0	0	31.2	25	0	0	0	0	6.1	6.1
Tributary 6	9.5	17.9	74.9	74.9	0.3	0	0	0.3	12.9	4.6	0	0	0	0	2.3	2.3
Tributary 8	33.9	33.9	56.9	56.9	0	0	0	0	4.1	4.1	0	0	0	0	5.2	5.2
Tributary 9	44.6	44.6	35	35	0	0	1.4	4.9	14.5	10.9	0	0	1.1	1.1	3.3	3.3
Unnamed	32.9	32.9	0	0	0	0	9.1	26.9	47.7	29.9	0.1	0.1	0	0	10.2	10.2

occurs primarily along the Roswell Road corridor and in the southwestern portion of the study area along I-285. Station SS-7, Powers Branch, contains the highest proportion of watershed area in highly developed land use. Station SS-2, Upper Long Island Creek, is the second highest. In-fill development is occurring throughout the study area. Typically, a single home located on a multiple acre lot is replaced by several large single-family homes on the same land area.

2.5 Physiographic and Geologic Characteristics

The Sandy Springs study area lies within the Southern Piedmont physiographic province of Georgia. Within this general province, the Upper Chattahoochee River Basin occupies the Dahlonega (upstream of Lake Lanier) and Atlantic Plateaus (a southwestward extension of the Dahlonega Plateau). The study area lies within the Atlantic Plateau. Land and channel slopes are generally less steep than is typically found on the Dahlonega Plateau. The stream channel network draining the Dahlonega Plateau is rectangular and is mostly structurally controlled, while that of the Atlantic Plateau is dendridic and less controlled by structure, as explained below.

Early studies assert that Piedmont streams are the result of uplift with base levels controlled by the underlying lithology and structure (LaForge, 1925 and Parizek, 1954). Staheli (1976) presents evidence to the contrary. The Brevard zone lineament, referred to as a fossil Fall Line, follows the Chattahoochee River and separates two regions on the Georgia Piedmont. The northwestern section has a trellis drainage pattern with northeast-oriented valleys that developed as a result of subsurface geologic controls. The southeastern section is of a dendritic pattern with valleys oriented across regional structures. These distinctive drainage patterns suggest different stream evolutions. Staheli suggests that the Piedmont was covered by earlier Coastal Plain sediments, specifically from the Oligocene strata, at least up to the Brevard zone. Streams extended headward in a dendritic pattern through these sediments as sea levels dropped. Subsequent to uplift, streams were superimposed above the covered crystalline rocks and continued to develop without control by the structure or lithology of underlying geologic material.

The Piedmont Plateau is characterized by hilly topography with ridges 457 m (1,500 ft) feet above sea level at the northern boundary. This area is underlain by igneous and metamorphic rocks of the Appalachian Mountain system, oriented predominantly northeast to southwest. Outcrops of erosion-resistant granite and gneiss are apparent in areas where stream valleys intersect overlying erodible migmatite and mica schist that form the valley wall. Nearer to the surface, bedrock has been weathered to saprolite. It is thickest on uplands where slope is less than 15 percent, thinner on steep slopes, and even nonexistent in some valleys where erosion has left exposed bedrock or bedrock covered by alluvial deposits. Relative to its underlying materials, soil is present across most areas as a thin mantle on top of the saprolite and alluvium.

The felsic crystalline soil system of the Piedmont originally had surface soils that were predominantly sandy loam. Surface soils have since eroded into the floodplains and streams leaving clayey subsurface soils exposed in upland areas. Typical major soil series in upland Piedmont areas include Cecil, Appling, Pacolet, and Madison. The floodplains are mostly Entisols composed of alluvial materials. Piedmont floodplain soils are often too undeveloped to be classified as anything other than "undifferentiated alluvium". Major soil series that are mapped in Piedmont floodplains include Chewacla (Fluvaquentic Dystrochrepts), Congaree (Typic Udifluvents), and Whadkee (Typic Fluvaquent).

Soils are grouped into four hydrologic soil groups (A, B, C, and D) according to their minimum infiltration rate. Hydrologic soil groups are used to determine curve numbers that are used in the hydraulic modeling. Upland soils in the Sandy Springs study area were primarily Group B, with moderate to high infiltration rates. Floodplain soils were primarily Group C, with moderate to low infiltration rates.

2.6 Pollution Sources

2.6.1 Point Sources

Point source pollution is normally defined as pollution that can be traced to a particular source. Examples include effluent from a wastewater treatment plant or industrial processing plant that is directly discharged from a pipe into a downstream receiving stream. There are no water reclamation facilities or other permitted (NPDES) point source discharges within the watershed boundaries of the Sandy Springs study area. However, site visits to industrial and commercial businesses in the Sandy Springs Area resulted in the identification of numerous direct illicit discharges to streams, including but not limited to sanitary sewer overflows. See section 3.1.1.3 for details.

2.6.2 Nonpoint Sources

Nonpoint source (NPS) pollution is the leading cause of surface water quality impairment across the nation. NPS pollution is usually associated with runoff from diffuse sources in the watershed and is typically not traceable to any discrete or identifiable facility. Types of NPS pollution in Sandy Springs include, but are not limited to, the following:

- discharge of wastewater from leaky sewer pipes and septic systems;
- runoff of sediment from construction sites;
- runoff of petroleum products (organic compounds) from paved surfaces;
- runoff of sediment and fertilizers (nutrients) from landscaped areas;
- mobilization of in-stream sediment from eroding channel bed and banks;
- deposition of yard clipping into streams;
- runoff of animal waste;
- runoff of food wastes, bacteria and other foreign chemicals from dumpsters;
- runoff of trace metals that originate from cars, construction materials, and other metal materials; and
- runoff of pesticide-contaminated sediments;

2.7 Existing Information

A thorough review of existing data was conducted and potential data sources were discussed with Fulton County staff. Historic water quality and quantity data were researched through both state and federal environmental agencies. Table 2-2 is a category of existing data that was collected for this study.

TABLE 2-2

Catalog of Collected Existing Information

Data Description	Data Source	Data Format	Task(s)	Compiled By
Land Use (present & future)	Fulton County	Digital GIS Coverage	6.2,7.4	BC
Land lot & district coverage	Fulton County	Digital GIS Coverage	6.2	BC
Utility construction work orders	Fulton County	Hard copy files	4.2, 6.2	BC
Book on Industrial Facilities	Fulton County		3.4.1, 3.4.4	BC
Industry data	Fulton County, Field observations	Database	3.4.1, 3.4.2, 3.4.4	
Streets	ARC EDIS CD	Digital GIS Coverage	6.2	BC
Transportation Department data	Fulton County	Electronic files	6.2	BC
GPS control points	Fulton County	Digital GIS Coverage	4.3	BC
Parcels	Fulton County	Digital GIS Coverage	6.2	BC
Tile index for Sandy Springs Service Area	Fulton County	Digital GIS Coverage	6.2	BC
NRCS hydrologic soil Types	NRCS, STATSGO Fulton County Soil Survey (Supplement)	Digital GIS Coverage	6.2	BC
Soil Types	NRCS	Electronic files		CH2MHILL
Customer Service data (1990-1993)	Fulton County	Electronic & hard copy files	3.2	BC
Customer Service data (1993-present)	Fulton County		3.2	CDM
Miscellaneous storm water complaints	Fulton County	Hard copy files	3.2	BC
Historical citizen flooding complaints	Fulton County FEMA (FIRM)	Digital Q3 GIS Coverage	6.2	BC
Existing flood plains	FEMA (FIRM)	Digital Q3 GIS Coverage	4.4	BC
Wetlands	NWI maps	Digital GIS Coverage	3.5.1	BC
Multi objective factors (parks, greenways & areas of biological significance	Fulton County	Digital GIS Coverage	6.2	BC
Storm water conveyance system infrastructure (including detention/ retention ponds)	Field inventory and surveying	Digital GIS Coverage	4.2	KHAFRA, R&D, QB
Topographic and planimetric contours (stream networks, building footprints, contours with 5 ft attributes)	Fulton County USGS	Digital GIS Coverage	6.2	BC
Current Storm water monitoring locations	Fieldwork		5.4	BC
Digital photography	Hoffman & Co.	Ortho-digtal photographs, GIS Coverage	3.4.3, 6.2, 6.3,	BC

Data Description	Data Source	Data Format	Task(s)	Compiled By
Channel erosion reaches	Fieldwork	Manning's Roughness Coefficient estimates, Digital photographs	3.4.3, 3.4.5	FC BC
Centerline flow path of major & minor conveyance system	Fulton County GIS files BC field verification		4.2.2	BC
Water quality data	Toxic Release Inventory (TRI) web site, ARC, USGS, NOAA, GA EPD	Digital and hardcopy files	5.2, 5.4, 5.6, 7.4	BC
Biological & habitat	Threatened and Endangered Species List (Georgia) US FWS, EPA Center for Environmental Statistics, Upper Chattahoochee River Keeper	Digital and hardcopy files	3.5.2, 5.5	BC
WRF flows & effluent quality	NPDES effluent data & parameters Fulton County	Digital and hardcopy files	5.2, 5.4, 5.6, 7.4	BC
Hydrologic & meteorological (rainfall)	Fulton County USGS, NOAA, EPA BASINS & STORET web sites, National Climatological Data Center	Digital and hardcopy files	5.2, 5.4,7.4	BC
Existing attainment status for streams and data upon which status was determined	GA EPD		5.2, 8.3	PARSONS
Existing & Historical landfills	Fulton County		6.2	BC
Publicly sewered & septic tank areas	Fulton County Health Department		4.3, 6.2	CDM
Existing BMPs	Fulton County		8.3	BC
Existing ordinances & regulations	Fulton County		8.3	OGDEN
Fulton County Stormwater NPDES Permit	Fulton County Georgia DNR web site		8.3	BC
Fulton County Tree Protection Regulations	Fulton County		8.5.1	BC
Drainage system (individual impervious areas that connect to the drainage system, the extent and location of open drainage systems, closed drainage system and curb and gutter systems)	Fulton County as-built drawings of drainage structures (subsurface storm sewer structures, culverts, storage facilities, bridges, outfalls) for roadway projects, general developments, and subdivisions	Digital GIS Coverage	4.2.2	BC

2.7.1 Previous Studies and Reports

Previous studies in the Sandy Springs Service Area include HEC-2 modeling in both Long Island Creek and Marsh Creek for 10-, 50-, and 100-year storms. The 100-year floodplain was established for the main-stem of each stream. Data were reviewed as part of the hydraulic modeling for the basins.

Studies from urban watersheds in the surrounding area or in other urban areas may be useful in understanding water quality problems in the Sandy Springs study area. Various types of water quality studies have been conducted through the National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey (USGS). One is a nation-wide study of pesticides and pesticide degradation products in streams and rivers in agricultural, urban, and mixed land use settings (Larson et al., 1999). In urban watersheds, the herbicides prometon and simazone were commonly detected. Commonly detected insecticides included carbaryl, chlorpyrifos, diazinon, and malathion. Pesticide concentrations rarely exceeded drinking water criteria, but often exceeded criteria established for the protection of aquatic life. Another NAWQA study in the Apalachicla-Chattahoochee-Flint and Ocmulgee River basins found that more pesticides were detected in urban watersheds vs. agricultural watersheds (Hippe et al., 1994). Moreover, they were detected at generally higher concentrations and were more persistent in the urban areas.

Water quality data from continuous monitoring stations on the Chattahoochee River above and near Atlanta indicate water quality degradation. Specific conductance, nitrite plus nitrate-nitrogen, and total phosphorus were an order of magnitude higher at the Atlanta station vs. the upstream station at Cornelia (McConnell and Buell, 1991). Likely sources include contributions from nonpoint sources, water-pollution control facilities, and combined storm- and municipal-sewer overflows that originate in the metropolitan area.

Phosphorus discharges from wastewater treatment facilities (WWTFs) in the Atlanta metropolitan area were reduced by about 83% from 1988 to 1993 (Wangsness et al., 1994). The same study concluded that phosphorus loadings from land-applied manure and fertilizers (nonpoint sources) were higher than from WWTFs. However, phosphorus from nonpoint sources is largely not bioavailable. Phosphorus from WWTFs is bioavailable and has not been reduced to the level to meet water quality criteria. Therefore, even though WWRFs contribute relatively less, phosphorus concentrations in wastewater effluent remain a problem because of the bioavailable form.

Unlike pesticides and nutrients, erosion yields are typically lower from urban watersheds than from agricultural and transitional land use watersheds in the Upper Chattahoochee River Basin (Faye et al., 1980). However, sediment discharges are greatest in urban watersheds compared to other land uses. A large proportion of this sediment is thought to be from stream-channel erosion.

The health of aquatic biota has been linked to the degree of imperviousness, among other things, in watersheds. Several studies have suggested that greater than 10% imperviousness adversely affects aquatic macroinvertebrate diversity (Schueler, 1995). However, a recent study of paired watersheds in the metropolitan Atlanta area suggests that impervious cover as low as five (5) percent can be linked to channel instability and impaired aquatic biota (Walker, 2000).

2.7.2 Historical data

For the past five years, Khafra has conducted quarterly monitoring in Long Island Creek at a permanent wet-weather monitoring station for compliance with the Fulton County NPDES MS4 Permit. This site coincides with monitoring station SS-1, the most downstream site in the Long Island Creek sub-basin. The table below (Table 2-3) summarizes results of the monitoring. Total dissolved solids (TDS) were generally high for all periods, particularly in January 1995, indicating an excess of dissolved material in the water column. Nutrients were high, particularly on 1/95, 7/95, 1/96, 4/98, 7/98, 11/99 and 3/99. Coliform bacteria was high for the majority of samples and coincided with high nutrient levels in most but not all of the samples.

TABLE 2-3

Historical Water Quality Data

DATE	pH	BOD (mg/L)	COD (mg/L)	TSS (mg/L)	TDS (mg/L)	TP (mg/L)	SRP (mg/L)	TKN (mg/L)	NO_2_NO_3 (mg/L)	Lead (mg/L)	Copper (mg/L)	Zinc (mg/L)	Cadmium (mg/L)	Total_ Coliform	Fecal Coliform
1/7/95	7.2	8	87	396	1400	0.36	0.27	2.0	0.49	0.037	0.011	0.08	<0.001	3600	560
8/4/95		8	26	26	0	0.06	0.02	0.74	0.17	<0.003	<0.02	0.015	<0.020		>6000
1/24/96		11.7	32	199	0	0.38	0.23	0.68	0.22	0.02	0.02	0.08	<0.005	>60000	1800
4/6/96	6.8	<1	8	13	200	0.06	0.02	0.22	0.17	<0.005	<0.01	0.02	<0.005		400
7/28/96		<1	14	16	0	0.25	0.18	<0.20	9.3	<0.01	<0.02	0.03	<0.005		
1/22/97	6.7	<1	0	5	300	0.09	0.06	<0.20	0.62	<0.01	<0.01	<0.02	<0.005	58000	1160
7/30/97	7.0		0	0	0									>1200	
10/3/97	7.17	<1	3	1	0	0.05	0.01	<0.20	0.58	<0.01	<0.01	<0.02	<0.005	5867	150
10/27/97		4.8	35	76	4200	0.17	0.07	<0.20	0.45	<0.01	<0.01	0.059	<0.005	2100	2700
1/22/98	7.05	5	46	70	100	0.15	0.09	0.92	0.55	0.01	0.01	0.02	0.005		8
4/15/98	7.28	9	44	139	100	0.24	0.08	1.10	0.65	0.06	<0.01	0.17	<0.005	>80,000	5,200
7/27/98	7.2	9	60	1331	600	0.58	0.17	3.64	0.23	0.06	0.06	0.271	<0.005	35,000	>12,000
1/11/99	8.3	BDL	5	4	100	BDL	BDL	0.49	0.78	BDL	BDL	0.029	BDL	9000	800
1/30/99	7.4	ND	7	16	98	0.07	ND	0.57	0.84	ND	ND	ND	ND	230	ND
3/14/99	7.14	BRL		24	108	0.17	0.06	0.35	0.45	BRL	BRL	BRL	BRL	230	130
5/18/99		16	42	177	85	0.04		11.2	0.09			0.038			
6/2/99		3	2	13	0							0.031			5700
9/29/99	6.40	BDL	11	5	100	BDL	BDL	0.38	0.33	0.004	0.064	0.012	0.028	10000	>12000
11/26/99	7.5	29	53	530	200	0.27	BDL	0.36	0.52	0.011	0.048	0.107	BDL	30000	2200
Min	**6.4**	**BDL**	**0**	**0**	**0**	**BDL**	**BDL**	**BDL**	**0.09**	**BDL**	**BDL**	**BRL**	**BDL**	**230**	**ND**
Max	**8.3**	**29**	**87**	**1331**	**4200**	**0.58**	**0.27**	**11.2**	**9.3**	**0.061**	**0.064**	**0.27**	**0.028**	**>80000**	**>12000**
Mean	**7.2**	**5.8**	**26**	**160**	**400**	**0.17**	**0.08**	**1.36**	**0.91**	**0.015**	**0.017**	**0.056**	**0.004**	**4707**	**7500**

2.8 Infrastructure

The infrastructure assessment was accomplished in two phases: the infrastructure inventory and the infrastructure survey. The infrastructure inventory was performed jointly by two firms. A field reconnaissance was done to identify stormflow drainage structures in the field. These included manholes, inlets, end-walls, weirs and ponds. These structures were identified on a map, assigned an inventory number, and marked in the field with a orange (spray-paint) dot. Other data collected in the field included pipe diameters and invert levels. A joint survey effort was conducted by two separate firms. Approximately 19,000 structures were surveyed for the infrastructure inventory. The end product was a map for each sub-basin showing the drainage features, connectivity, and direction of flow. This data was then utilized for the hydraulic modeling. Table 2-4 summarizes this data. The complete infrastructure inventory, including maps, structure diagrams, and a list of undersized curb inlets is presented in Appendix A.

TABLE 2-4
Results of the Infrastructure Inventory

Watershed	Ponds[1]	Tanks[1]	Bridges[2]	UJBS	Pipes	Pipe Ends	Flumes	Manholes, Endwalls, and Inlets
Long Island Creek	84	9	13	162	2,037	523	156	2,027
Game Creek	9	0	1	37	634	130	72	647
Riverview Creek	1	0	0	3	48	9	4	64
Unnamed[3]	0	0	0	0	3	0	0	5
Trib 9	2	0	1	2	62	6	3	83
Trib 8	0	0	0	2	41	9	3	53
Heards Creek	2	0	1	8	253	25	11	315
Trib 7	7	0	1	26	391	99	14	408
Trib 6[3]	1	0	0	0	32	16	3	34
Trib 5	1	0	0	3	44	7	2	55
Powers Branch	24	1	4	30	920	109	100	1,059
Sullivans Creek[3]	10	0	1	6	166	61	7	172
Hunt Cliff[3]	0	0	0	0	8	0	1	11
Marsh Creek (Fulton)	83	1	5	112	2,413	321	269	2,748
Total:	224	11	27	391	7,052	1,315	645	7,681

1 Table entry indicates one per pond or tank; actual inventory count equals five structures per pond or tank

2 Table entry indicates one per bridge; actual inventory count equals three structures per bridge

3 Inventory completed only on main stem of stream; numbers presented are estimates for entire watershed area.

2.8.1 Primary Drainage System

Primary drainage systems were defined as those systems located within 100 feet of the main channel upstream to just below 100 acres of drainage area. Survey of the primary drainage system is complete and has been incorporated into the models.

2.8.2 Secondary System

Secondary drainage systems were defined as those systems located within 100-acre drainage basins. They included streams in headwater areas, most of which were underground pipe systems. Survey of the secondary drainage system is still in progress.

2.9 References

Dowd, J., D. Wenner, and Mirta Carpenter. 1993. Piedmont geohydrology: implications for flow and transport. *Proceedings of the 1993 Georgia Water Resources Conference*, held April 20-21, University of Georgia, Athens, GA.

Faye, R.E., W.P. Carye, J.K. Stamer, and R.L. Kleckner. 1980. Erosion, sediment discharge, and channel morphology in the Upper Chattahoochee River Basin, Georgia. U.S. Geological Survey Professional Paper 1107.

Hippe, D.J., D.J. Wangsness, E.A. Frick, and J.W. Garrett. 1994. Water quality of the Apalachicola-Chattahoochee-Flint and Ocmulgee River basins related to flooding from tropical storm Alberto; pesticides in urban and agricultural watersheds; and nitrate and pesticides in ground water, Georgia, Alabama, and Florida. U.S. Geological Survey, Water-Resources Investigations Report 94-4183.

LaForge, L. 1925. The provinces of Appalachian Georgia. Physical Geography of Georgia: *Georgia Geol. Survey Bull*. 42, p. 55-92.

Larson, S.J., R.J. Gilliom, and Paul D. Capel. 1999. Pesticides in streams of the United States—initial results from the National Water-Quality Assessment Program. U.S. Geological Survey, Water-Resources Investigations Report 98-4222.

McConnel, J.B. and G.R. Buell, National Water Summary 1990-91 – Stream Water Quality: Georgia. U.S. Geological Survey Water-Supply Paper 2400.

Parizek, E.J. 1954. The influence of lithology and structure on the course of the Upper Oconee River. *Bulletin of the Georgia Academy of Science*, Vol.12, No. 4, pp. 110-114.

Radtke, D.B., C.W. Cressler, H.A. Perlman, H.E. Blanchard Jr., K.W. McFadden, and R. Brooks. 1986. Occurrence and availability of ground water in the Athens Region, Northeastern Georgia. *Water-Resources Investigations Report* 86-4075, U.S. Geological Survey.

Schueler, T. 1995. Site Planning for Urban Stream Protection. Center for Watershed Protection. Metropolitan Washington Council of Governments.

Staheli, A.C. 1976. Topographic expression of superimposed drainage on the Georgia Piedmont. *Geological Society of America Bulletin*, 87:450-452.

Wangsness, D.J., E.A. Frick, G.R. Buell, and J.C. DeVivo, 1994. Effect of the restricted use of phosphate detergent and upgraded wastewater-treatment facilities on water quality in the Chattahoochee River near Atlanta, Georgia. U.S. Geological Survey Open-File Report 94-99.

3.0 Characterization

3.1 Field Reconnaissance

In order to thoroughly understand the Sandy Springs study area, a significant amount of time was spent in the field performing reconnaissance activities. Field reconnaissance or "ground-truthing" tasks outlined in the data collection scope of work, included compiling a channel photolog, estimating Manning's Roughness coefficients, performing a preliminary wetlands inventory and conducting problem site visits along all major stream reaches in the Sandy Springs study area. The field time provided a thorough understanding of storm water related problems in each watershed in the Sandy Springs study area. Water quality and hydrologic/hydraulic modelers utilized data collected during field assessments to develop storm water management scenarios. Subsequently, water resources experts, Fulton County staff, Technical Advisory Committee members, WIN (Watershed Initiative Network) members and the public evaluated these modeled scenarios. The discourse generated from field reconnaissance activities and modeling results proved critical in developing the Fulton County Water Resources Management Plan.

3.1.1.1 Channel Photolog

A digital photograph database was compiled for all major stream reaches within watersheds of the Sandy Springs study area. Field staff took digital photographs along stream reaches while deciding where cross-section areas were to be surveyed. The photograph information included geographic location, direction (both upstream and downstream), photograph number and description. This key photograph information was entered into a database entitled "Photolog." In addition to taking photographs of surveyed stream cross sections, the field team also took photographs of all major structures (storm water pipes/culverts > 24 inches). The closest cross-section or structure ID number was recorded for each photograph. The Photolog is provided in Appendix B. A photolog shape file was created in ArcView GIS to link photographs to the location where they were taken. The Photolog also documents the significant erosion areas noted in the field. Photographs of both major and minor eroding areas were also compiled and linked to an ArcView GIS erosion coverage for each sub-watershed. Hydrologic and hydraulic modelers used the Photolog, in addition to cross-section survey data and erosion classification to calibrate the watershed models.

3.1.1.2 Manning’s Roughness Estimates

Data collection activities included the estimation of Manning's roughness coefficients at all stream cross-sections in the watershed. Each roughness estimate described the channel cross-section in terms of its substrate composition, channel morphology, obstructions to flow, and vegetation. Such parameters were similarly described for both the right bank and left bank (facing upstream) of each channel cross-section. On average, channel cross-sections and Manning's roughness coefficient estimates were conducted every 250 feet along each modeled stream segment. Hydrologic and hydraulic modelers reviewed and considered these data in calibrating watershed models. Manning's roughness coefficient estimates were compiled to improve the accuracy of the watershed models. Appendix C provides a table entitled “Roughness,” which provides these values.

3.1.1.3 Illicit Discharges and Other Field Discoveries

Illicit discharges originating from both commercial facilities and local residences were noted throughout the watershed assessment. Restaurants were the most significant point source of storm water pollution sources in the Sandy Springs study area. Sanitary sewer infrastructure problems were identified that contribute to water quality degradation. The illicit discharges discovered during the study are listed in Table 3-1.

TABLE 3-1
Illicit Discharges Observed in the Sandy Springs study area and Sent to Fulton County

Type	Location	Description	Watershed	Date Sent To Fulton County	Status
Water Quality	Residential development; Grantley Court, near Huntcliff	Letter, Map of suspected sewer leak, CD of digital photos	Sullivans Creek	Letter, Pictures w/ Descriptions, Map sent (Fed Ex) to Debra Hudson (Senior Public Service Coordinator) on June 3, 1999	?
Water Quality	Hotel; New Northside Drive,	Illicit cross-connection found in stormwater yard drain in hotel parking lot	Game Creek	Letter sent to Gary Sargent (Department of Public Works) on April 15, 1999	Fixed
Maintenance	Apartments; just upstream of Big Trees Forest Preserve, east of Roswell Road.	Field crew noted uncovered manholes in wetland area between two apartment complexes. Danger to residents, especially small children.	Powers Branch	Letter, pictures w/ descriptions, map sent (Fed Ex) to Debra Hudson on June 3, 1999.	Fixed at end of November, 1999 Note: same site as Big Trees listed below.
Maintenance	Spalding Dr. east of Duncourtney	Channel & culvert has sanitary sewer line embedded in concrete channel bottom; concrete has broken/eroded, is severely undercut & sewer is exposed & unsupported; exposed joint could be leaking sewage directly into stream	Marsh Creek	10/11/99	?
Water Quality & Maintenance	North side of I-285, just downstream from culvert passing under I-285 near Wesley Oak Rd	Suspected sanitary sewer leak coming from a failed joint between the ductile iron pipe crossing the stream and PVC pipe coming from residence. Water spilling into creek is grayish-white in color and had foul odor.	Heards Creek	Fax sent to Earl Burrell (Dept of Public Works) and Nick Ammons (RMJ Construction Managers) on March 24, 1999	Fixed

TABLE 3-1
Illicit Discharges Observed in the Sandy Springs study area and Sent to Fulton County

Type	Location	Description	Watershed	Date Sent To Fulton County	Status
Maintenance	Restaurant; E. of Roswell Rd, N of Johnson Ferry Rd. intersection	Leaking, unbermed dumpster observed directly behind large strip mall; Claudia Zahorcak of Brown and Caldwell visited on 10/1/99	Marsh Creek	10/11/1999	?
Maintenance & Erosion	Wright Rd South of Abernathy in residential neighborhood	Field crew observed indications of a broken sanitary sewer line and also noted a direct discharge of laundry waste from a residence directly to a stream.	Marsh Creek	Letter, CD with pictures & descriptions, map sent to Earl Burrell (Dept of Public Works) on November 22, 1999	Unknown
Water Quality & Maintenance	Restaurants; Roswell Rd and Johnson Ferry Rd	Restaurants discharging cooking grease and oil into stormwater drainage systems, which is contributing to pollution of receiving creeks (reported by Khafra Engineering to BC)	Marsh Creek	Terry Cole of BC forwarded information to Debra Hudson on October 20, 1999. Ashley Thurman of BC called Debra Hudson on October 28, 1999	Unknown
Water Quality	Big Trees Forest Preserve, Roswell Rd	Foam in Powers Branch coming from apartment complex on Pitts Rd. Sharon Cowden reported problem to Fulton County and tested water. The Phosphate level of the sample was 0.3 mg/L and was collected about 12 hrs after a rainstorm	Powers Branch	Roger Copp and Tad Slawecki (Limno Tech) visited on November 9, 1999	Sanitary sewer fixed by County after EPD visited site.
Water Quality	Restaurant; Hammond Drive at Roswell Road	Suspect a sewage overflow adjacent to a pond outlet	Long Island Creek	Fax with map sent to John Gormley of Fulton County, Environmental Health Services on 4/17/00	Unknown
Water Quality	Restaurant; Roswell Road near Johnson Ferry Road	Restaurant dumping kitchen waste into storm drain	Marsh Creek	4/10/00	Unknown

TABLE 3-1
Illicit Discharges Observed in the Sandy Springs study area and Sent to Fulton County

Type	**Location**	**Description**	**Watershed**	**Date Sent To Fulton County**	**Status**
Water Quality	Grogan's Ferry Road in residential neighborhood	Broken sanitary sewer line. Raw sewage discharging directly into creek	Sullivans Creek	4/18/00	Public works visited site on 4/19/00 and repair plans are under way.

3.1.2 Wetlands Inventory

Field reconnaissance activities included conducting a preliminary inventory of wetlands occurring in the major (> 50 acre drainage area) sub-watersheds of the Sandy Springs study area. An ArcView GIS coverage of wetland areas was obtained from the National Wetland Inventory, a division of USGS. Wetlands outlined by the NWI were displayed on high-resolution GIS maps that field staff used to verify the existence and geographic span of wetland areas. Wetlands were classified based on three main components. Wetland qualifications include the presence of hydric soils, wetland species vegetation, and hydrology. A number of new wetland areas were discovered and defined, while a few were eliminated. These amendments to the NWI data are represented in the "Wetlands" ArcView GIS shape files for each sub-watershed in the Sandy Springs study area. The updated wetlands GIS coverage is included in the ArcView GIS database issued to Fulton County.

3.1.3 Problem Site Visits

Problem site visits were performed based on 1) discoveries made in the field, 2) correspondence from residents, and 3) areas highlighted from the Fulton County complaint database. Approximately 115 problem site visits were conducted during the Sandy Springs watershed study. These visits were critical to understanding the overall water resources concerns confronting not only the Sandy Springs study area, but also Fulton County. Table 3-2 lists information compiled during problems sites visits to the most severe areas including problem description, location, contact name, type of problem, status of action, severity of the problem and possible solution(s). A scale of one (1) through four (4) was used to rank the severity of each problem area visited. A ranking of "1" is least severe and "4" is the symbolic of most severe problem areas. An ArcView GIS map that displays the problem sites our team visited, as well as the type of problem, is included in Appendix D of this report. An ArcView GIS coverage of problem sites was included in the GIS databases prepared for Fulton Co. The problem area visits proved insightful in determining areas of concern for the watershed model to address.

Brown and Caldwell (BC) personnel also observed a number of construction sites where sediment and erosion control BMPs were not working adequately. Observations included failed silt fences, erosion rills underneath haybales, and direct runoff. At one site, BC and Fulton County staff observed a backhoe digging directly in the streambed. Figure 3-1 shows the impact of improper sediment and erosion control at a construction site in Sandy Springs.

These various types of problem site visits helped the BC team understand the magnitude of flooding, maintenance, erosion, runoff and water quality concerns specific to the Sandy Springs study area.

FIGURE 3-1
Direct Runoff of Sediments at Construction Site

3.1.4 Industrial Site Inspections

A detailed inventory of commercial and industrial facilities that could contribute to storm water pollution and degraded water quality was compiled. In this inventory, 121 facilities were assessed with regard to their potential storm water pollution impact. In addition to these facility inspections, polluting facilities were identified during field visits. The infrastructure inventory and photolog field teams also located polluting facilities. These problem sites were conveyed to Fulton County staff in correspondence and meetings. Also, a meeting was conducted between Brown and Caldwell staff and John Gormley of the Fulton County Public Health Department on January 12, 2000. BC provided a list of the restaurant facilities with storm water pollution issues to Mr. Gormley for follow-up inspections. On-going correspondence has been made with Mr. Gormley as new water pollution sources are discovered.

TABLE 3-2
Significant Problem Sites Observed in the Sandy Springs Study Area

ADDRESS	DESCRIPTION	BASIN
575 Glenforest Road	Encroachment of the stream towards his house. Banks are 8-10 feet steep with severe erosion, exposed roots and high sinuosity, water flow has increased substantially since the I-285 expansion.	Long Island
7460 Halfpenny Place	Collapsed and corroded storm drainage structure. Public safety hazard.	Powers Branch
395 Spalding Drive NE	Severe erosion problem due to runoff from Roswell Rd. Wants County to be more involved in erosion control and correction measures.	Marsh Creek
7320 Hunters Branch Dr	Law suit by the Hidden Branches Community; Colonial pipeline spill; Piping of stream on Peactree Dunwoody; Flooding of Westfair Townhomes	Marsh Creek
7085 Northgreen Dr.	Manhole causing problem; RB (US) is severely eroded-6 ft. vertical banks. Stream bank stabilization or restoration needed.	Marsh Creek
211 Devonwood Dr.	Channel running through lot lined with rip-rap and silt fence; need to call homeowner; make slopes flatter, will have to move trees back	Marsh Creek
455 Hammond Dr.	2 36" pipes run through property, hole suspected to be caused by joint in pipes-joint needs to be sealed; runoff problems from Hammond Rd-curb inlet on road not working	Long Island Creek
9340 Huntcliff Trace	Severe erosion, vertical banks & exposed roots & trees falling into creek: $8,000 spent on rip-rap, on-going struggle with both Cherokee Country Club & Fulton Co to take responsibility for the erosion and sediment run-off.	Huntcliff Sullivans Creek
525 Carol Way	Laural Chase subdivision on Mt. Paran; 24" culvert installed 20 years ago-it clogged; 17 complaints, built $24K bridge; US neighbor put in small culvert just US of his house-claims it's too small	Long Island Creek
154 Chaseland Rd	Flooding problems from runoff from street onto property; specifically water in garage & basement (in early 80's); collapsed stormwater pipe noted.	Marsh Creek
150 Old College Way	3 yard drains in back of property that cause basement to flood when blocked; neighbor's basement (Mr. Wolfe) also floods; wants to know if developer (Charles Devore) is responsible for fixing it; also inquired about sanitary sewer blockage problem; Mrs. Turner would also like for others to have storm drains on their property	Powers Branch
5295 Mt. Vernon Pkwy	Severe erosion over past 6 years; flooding of back yard from main channel of Long Island Creek-stream degradation; 5' vertical banks. Encroachment of stream towards house.	Long Island Creek
5285 Mt. Vernon Pkwy	Lost 10' of property in back of house; water flowing over Mt. Vernon Pkwy due to development on Whitner about 30 yrs ago, neighbor of Mr. Tobia. She is constructing cinder block wall along right bank of stream bordering her house to stop bank erosion and protect her home.	Long Island Creek

Brown and Caldwell identified industries and other facilities to be inspected for storm water pollution sources based on the Fulton County Industrial database. The industrial database was queried for industries located in the Sandy Springs study area. BC staff conducted a pilot study to test the accuracy of this database. The database proved to be significantly obsolete and therefore the field crews decided to add facilities as they were encountered in the field. A database entitled; "SS_REGSITES" lists the facilities inspected in this study. The SS_REGSITES database lists the Fulton County facility code number, name of facility, type of facility, SIC code, contact person, address, latitude/longitude coordinates, date inspected, crew, description of the pollutants found, and corresponding digital photographs. New entries to the database made by Brown and Caldwell were numerically coded with a "BC" identifier. The SS_REGSITES database is attached as an electronic Appendix E to this report.

Brown and Caldwell's Facility Inspection Procedure and Field Inspection Datasheet used during industrial site inspections are found in Appendix F. The datasheet called for a sketch of the facility's storm water drainage pattern, as well as a listing of potential pollutants identified on-site.

Many facilities are in violation of the Fulton County Dumpster regulations as cited in Solid Waste Ordinance No. 30-2-08. Restaurants have a large potential to be significant contributors to storm water pollution due to their waste management activities. Educating facility managers about simple BMPs would significantly improve runoff from commercial sites. Such BMPs include proper storage of chemicals on-site and managing waste disposal areas more carefully. This commercial BMP fact sheet is included as Figure 3-2.

FIGURE 3-2
Commercial BMP Fact Sheet

Subject: Industrial Site Inspections for the **Sandy Springs Watershed Assessment**
Fulton County, Georgia

September 1999

Dear Sandy Springs business:

Thank you very much for cooperating with Brown and Caldwell as we work on the Sandy Springs Watershed Assessment for Fulton County. The inspection of your facility constitutes an integral part of this project.

To give you some background information, Fulton County is performing multiple watershed assessments and stormwater master planning to comply with state regulations. The study involves assessing current water quality and quantity conditions, as well as using computer models to project future conditions. We are working with citizens and the County to determine Best Management Practices (BMP's) for the protection of the watershed.

The inspection of your facility is an important part of stormwater master planning. Brown and Caldwell's inspection may reveal areas that can be improved to help protect water quality. Please help us protect and improve water quality in the Sandy Springs study area by taking time to review the following recommended BMP's for commercial activities.

Recommended BMPs for Commercial Activities:

- Keep dumpster areas clean; dumpster should have a pressurized water source nearby, be placed on a sloped surface so that runoff drains to a sanitary sewer, **not** a stormwater sewer (NOTE: Fulton County Solid Waste Ordinance No. 30-2-8).

- When washing out facility floors (e.g. restaurant kitchen floors, auto care areas), make sure contaminated runoff drains to sanitary sewer.

- Chemicals, oil & other hazardous material should be stored in covered areas with a secure top and protected from rainfall.

- All waste-generating activities (e.g. fueling stations, loading areas, storage areas) should be covered and runoff from should drain to a sanitary sewer. These areas should be cleaned regularly.

- All potentially polluting materials, like fuel, solvent, detergents, plastic pellets, metallic products, fertilizers, pesticides, arsenic) should be stored inside, protected from rainwater.

While these measures will not eliminate Sandy Springs' water quality problems, they will help reduce the amount of pollutants entering our neighborhood streams. Please keep in mind that materials stored and used outside eventually end up in the streams. Any measures that your business can take to reduce potential pollutant loads to the streams will be most appreciated by Fulton County and especially the environment.

Once again, thank you for your cooperation. We hope to make Fulton County a national leader in watershed protection and management.

Very truly yours,

BROWN AND CALDWELL

3.2 Station Selection

The goal of watershed characterization is to build a reliable database that accurately reflects current and future land use, water quality and in-stream habitat conditions, and stormflow response patterns that can be used to evaluate future watershed management scenarios. Site selection is the first step in properly characterizing a watershed. Sampling sites must be selected with specific goals and objectives in mind.

A reference vs. study site approach was selected as the model study design in the Sandy Springs study area. EPA guidance for monitoring water quality impacts from nonpoint source pollution recommends the use of reference streams to develop a reference condition and to provide a measure of ecosystem health. The reference condition defines the range and variability of chemical, biological and physical habitat conditions.

The objectives of the Watershed Characterization task were to:

- isolate specific land uses and calculate the annual pollutant loads for those land uses,
- evaluate longitudinal trends within one watershed,
- calculate total annual pollutant loads from all monitored watersheds, and
- compare watershed information against the reference stations.

3.2.1 Study Area Station Selection

The Sandy Springs study area is comprised of 14 watersheds that drain directly into the Chattahoochee River. Seven monitoring stations were selected in the Sandy Springs study area. Station locations were selected after evaluating land use patterns, stream physical characteristics, site access, and various safety considerations. Stations were installed in watersheds that are representative of landuse patterns of unmonitored watersheds. Stations were typically located at the most downstream road crossing on the creek. In Long Island Creek, the largest watershed in the study area, three sample locations were selected. Sampling station locations within the Sandy Springs study area are shown in Figure 3-3. Table 3-3 describes the land use and monitoring objectives for each monitoring station. Table 3-3 also provides a description of the sampling activities that occurred at each site.

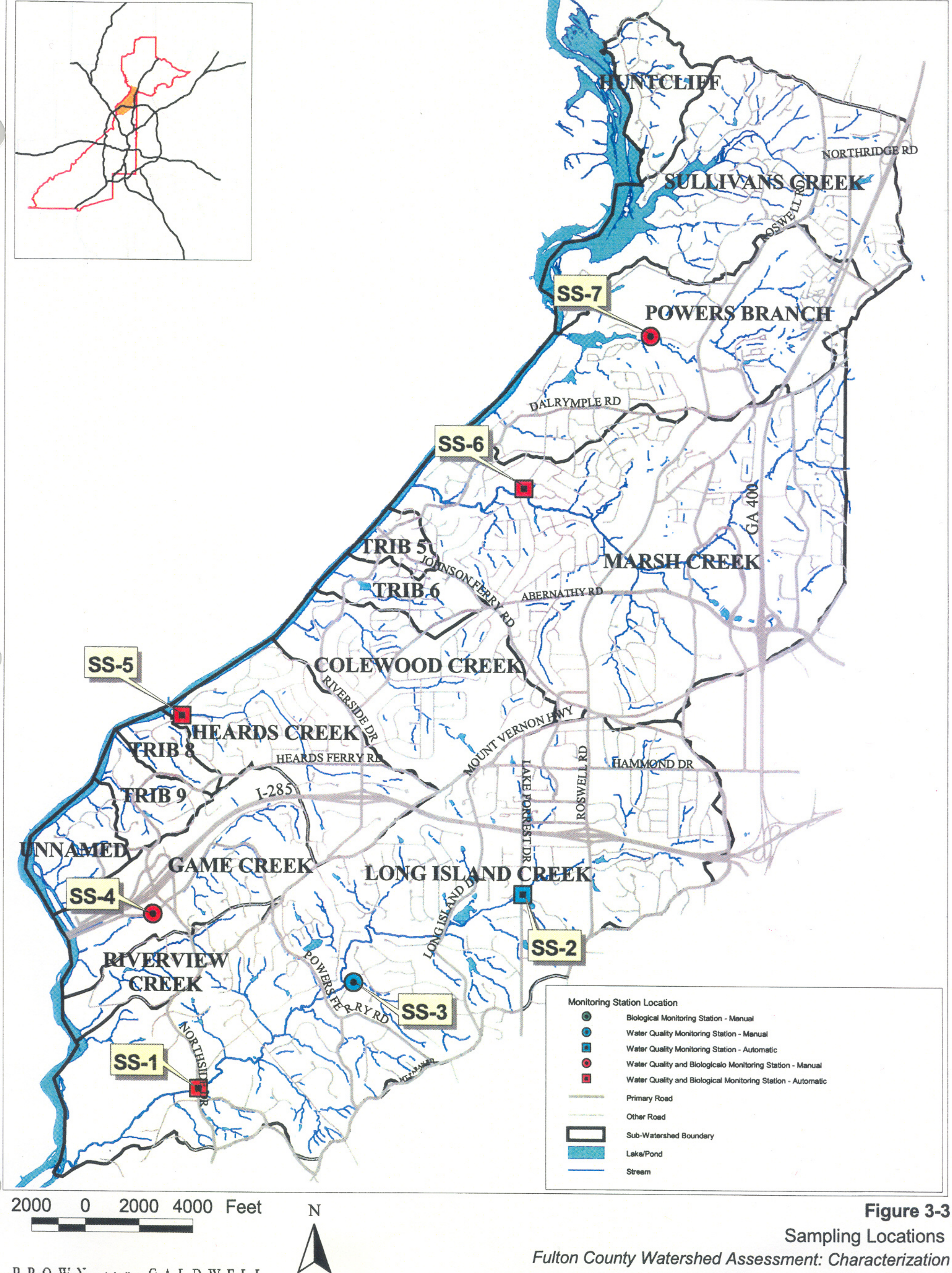


Figure 3-3

Sampling Locations

Fulton County Watershed Assessment: Characterization

BROWN AND CALDWELL

TABLE 3-3
Water Quality Monitoring Stations – Sandy Springs Study Area

Watershed and Station Location	Drainage Area (miles^2)	Land Use and Rationale for Selection	Installed Equipment	Chemical Analysis	Benthic Macro inverts.	Fish IBI	Fish Tissue
LONG ISLAND CREEK		State 305(b) list for fecal coliform					
(SS-1) at Northside Drive	6.40	Land use above this station is mixed, with high-density residential and commercial development in the headwaters and low density residential in the remainder of the watershed.	Existing, automated station	4	4	4	4
(SS-2) at Lake Forrest Drive	2.27	Land use above this station is high-density residential, commercial, some low density residential. The station will be used for longitudinal analysis of the stream.	Automated station	4			
(SS-3) at Londonberry Road	0.31	Land use above this station is low density residential. Specific land use to determine loading ratios. The station will be used for longitudinal analysis of the stream system and to determine the loading rates for the specific land use.	Manual station	4			
GAME CREEK							
(SS-4) at Northside Drive	0.91	Land use is high-density commercial and office development. The station will be used to determine loading rates for the land use.	Manual station	4	4	4	
HEARDS CREEK							
(SS-5) at Ferry Landing Drive	1.17	Land use is low density residential with highway in the headwaters. Will be used to evaluate highway impact on land use.	Automated station	4	4	4	
MARSH CREEK							
(SS-6) at Brandon Mill Road	5.00	Land use is mixed. Will be used to estimate total loading for the watershed. Second largest stream in the study area.	Automated station	4	4	4	
POWERS BRANCH							
(SS-7) at Monterey Parkway	1.72	High density residential, commercial, and parkland. Will be used to determine total loading rates into large pond from multiple land uses.	Manual station	4	4	4	

Watershed and Station Location	Drainage Area (miles^2)	Land Use and Rationale for Selection	Installed Equipment	Chemical Analysis	Benthic Macro inverts.	Fish IBI	Fish Tissue
REFERENCE STATIONS							
(R-1) Snake Creek @ East Wayside Road (Carroll County)	8.00	Least disturbed, mostly forest	Automated station	4	4	4	4
(R-2) Bluff Creek (Douglas County)	2.00	Lease disturbed, mostly forest	Manual station		4	4	

3.2.2 Reference Site Station Selection

Two reference stations were identified that are tributary to the Chattahoochee River. These stations are located in the same physiographic region (the Georgia Piedmont) as the Sandy Springs study area. These stations were selected based on drainage area size, location within the physiographic region, and current land use patterns. These stations will be used for comparison to study sites within the Sandy Springs study area. Rapid development throughout the Chattahoochee River watershed limited the number of potential reference locations. Potential reference station locations were visually inspected to determine land use and to look for indications of degradation.

Two reference stations were selected; they are located in Carroll and Douglas counties, respectively. Reference station R-1, Snake Creek, is comparable in size to the two larger watersheds (SS-1 and SS-6) in the Sandy Springs study area. Reference station R-2, Bluff Creek, is comparable in size to the smaller watersheds in the study area. It should be noted that the reference stations are not pristine and have been impacted to some degree by agricultural and forestry activities.

3.3 Water Quality Sampling

The scope of work for the watershed characterization task for the Sandy Springs study area included water quality monitoring, habitat assessment, biological sampling, and flow monitoring. The time period to conduct sampling was limited to four months; therefore a decision was made to sample aggressively throughout the monitoring period. A variable combination of sites was sampled periodically according to the type of monitoring or assessment being conducted (Table 3-3). An existing reference data set containing data pooled from a number of reference sites was utilized for analysis of the biological data. The following sections describe monitoring approaches, methods and results in detail.

3.3.1 Approach

Water quality monitoring activities were designed to obtain data required to define pollutant-flow relationships for each sub-basin and to determine the level of chemical impairment to streams in the Sandy Springs study area. Water quality monitoring data were used to:

- create loading coefficients from specific sub-basins and for particular land uses,
- compare observed values to State and Federal water quality standards,
- provide input and a calibration set for the water quality model,
- provide input to the hydraulic model, and
- develop target pollutant loads for watershed management.

3.3.2 Methods

A team of Brown and Caldwell staff conducted the water quality and flow monitoring for the Sandy Springs study area. Monitoring included both stormflow and baseflow sampling. Storm flow events were defined as any rainfall event of more than 0.10 inches in a two-hour period or more than 0.25 inches in a twelve-hour period. In addition, the sampling plan required that total rainfall in the 72-hours prior to a storm not exceed a total of 0.10 inches.

Specific details of water quality monitoring included:

- A training session for all members of the water quality sampling team.
- Manual flow and stage monitoring at all seven Sandy Springs study area sites and one reference station (R-1) during four baseflow and four storm events of varying magnitude.
- Manual grab sampling at all seven Sandy Springs study area sites and one reference station (R-1) during four base flow sampling events. Standard chemical analytes and analytical methods are listed in Table 3-4. Base flow-sampling events for the standard analytical parameters occurred during the first week of each month starting in June 1999 and ending in September 1999. Fecal coliform and *E. Coli* samples were collected on a weekly basis between base flow sampling events in order to maintain a rolling geometric mean throughout the sampling period.
- Collection of multiple samples, either automated or grab, throughout the hydrograph at all monitoring stations during storm events.
- Collection of one grab sample at all sites for priority pollutants and trace metals using clean sampling techniques during one dry weather and one wet weather event. Non-standard analytes are listed in Table 2.
- Water chemistry analysis.
- Field measurements of pH, conductivity, temperature, turbidity, and dissolved oxygen. Table 3-5 describes the equipment utilized to conduct on-site measurements.

TABLE 3-4
Summary of Sites, Sampling Events and Analytical Parameters
for Water Quality Monitoring

NUMBER OF WATER QUALITY MONITORING STATIONS		8		
Sampling Stations in Sandy Springs study area		7		
Reference Sampling Stations		1		
Automated Storm Sampling Stations		5		
STREAM SAMPLING EVENTS		(Includes water quality sampling and flow monitoring)		
Standard Base Flow Sampling Events		4		
Non-Standard Base Flow Sampling Events		1 (of 4)		
Standard Storm Sampling Events		4 (five samples collected during hydrograph)		
Non-Standard Storm Sampling Events		1 (of 4)		
Stage		Recorded during every flow monitoring event		
STANDARD ANALYTICAL PARAMETERS	(method)	MDL (mg/l)	Base flow/ First Flush	Additional Storm Samples
Ammonia	(350.2)	0.02	√	
Fecal coliform bacteria	(SM9222C)	1 cfu/100 ml	√	√
E. Coli	(SM9225C)	1 cfu/100 ml	√	√
Nitrite + nitrate	(353.3/352.1)	0.005	√	√
Total Kjeldahl Nitrogen	(351.3)	0.02	√	
Phosphorus – Total	(365.3)	0.005	√	√
Phosphorus – Ortho	(365.2)	0.005	√	
Total dissolved solids	(160.1)	10	√	
Total Suspended Solids	(160.2)	2	√	√
Total Hardness ($CaCO_3$)	(130.2)	5	√	
CBOD5	(SM5210B)	2	√	
TOC	(415.2)	1	√	
Dissolved Organic Carbon	(415.2)	1	√	
COD	(410.4)	2	√	
Zinc (total recoverable)	(200.7)	0.009	√	
NON-STANDARD ANALYTICAL PARAMETERS	(method)	MDL (mg/l)	Base flow/ First Flush	
Dissolved cadmium	(1638 mod)	0.000005	√	
Total cadmium	(1638 mod)	0.000005	√	
Dissolved chromium	(1638 mod)	0.00005	√	
Total chromium	(1638 mod)	0.00005	√	
Dissolved copper	(1638 mod)	0.00005	√	
Total copper	(1638 mod)	0.00005	√	
Dissolved lead	(1638 mod)	0.00002	√	
Total lead	(1638 mod)	0.00002	√	
Dissolved zinc	(1638 mod)	0.0001	√	
Priority Pollutant Scan	(Methods 200.7, 335.3, 420.2, 608, 615, 624, and 625)		√	
Asbestos	(100.1/100.2)		2 samples	2 samples
QUALITY ASSURANCE SAMPLES		One random field duplicate per event. One trip blank per event.		

TABLE 3-5
IN-SITU Parameters and Monitoring Equipment

Parameter	Equipment
Conductivity	Horiba U-10
Dissolved Oxygen	Horiba U-10
Stage	Staff Gauge at all stations;
	American Sigma Area/Velocity probe at automated stations
Velocity/Discharge	Marsh McBirney Flo-Mate 2000 at all stations;
	American Sigma Area/Velocity probe at automated stations
PH	Horiba U-10
Temperature	Horiba U-10
Turbidity	Horiba U-10

Automated Sampling

Automated samplers were used at four monitoring stations in the Sandy Springs study area (Stations SS-1, SS-2, SS-5, and SS-6) and at reference station R-1. These samplers were programmed to record continuous stream stage and velocity data. In addition, the American Sigma 900 MAX portable automated liquid sampling units were programmed to collect the first flush (four 1-liter bottles) of a storm event when the stage had risen approximately 4-inches above the baseflow level. Additional samples (two 1-liter bottles) were collected at 10-minute intervals for approximately two hours after the device was triggered. The first flush sample and four of the ten additional samples were sent to the lab for analysis. The four additional samples were selected based on the their relative position along the hydrograph. One was selected from the rising limb, one at the peak, and two on the falling limb of the hydrograph. The technician removing bottles from the automated sampler was able to review the stage data recorded by the device and determine the relative position of each sample along the hydrograph.

Manual Sampling

Manual grab samples were collected from all seven study sites and one reference site during all base flow sampling events. One grab sample was collected for each site for each baseflow sampling event. At three of the monitoring stations (SS-3, SS-4, and SS-7) five grab samples were collected per site during storm events. Upon notice of a rain event, a technician was dispatched immediately to the monitoring station. The technician recorded stage elevation every ten minutes from the staff gauge in order to build a hydrograph of the stream throughout the storm. A first flush grab sample was collected when the stream had risen approximately two-inches above base flow levels. Four additional grab samples were collected during the storm, one on the rising limb, one at the peak, and two on the falling limb of the hydrograph. The technician used his or her best judgement to determine when each sample was taken.

3.3.3 Results

The Level of Service (LOS) for each major water quality constituent is the recommended maximum average target concentration for streams in Fulton County. Screening levels (SL) were also established for parameters related to major water quality constituents to aid in data interpretation. They are not regulatory standards, but are intended to provide a cue for further investigation of potential problem areas. The following sub-sections detail results of the water quality monitoring effort.

<u>Total Suspended Solids</u>

Background

Total suspended solids (TSS) refers to the mineral and organic material that is suspended in the water column. Suspended solids are often used as a surrogate measurement of sediment and can be a useful indicator of active erosion and sedimentation in a watershed. However, interpretations of measurements can be difficult given the high natural spatial and temporal variability of suspended sediment, particularly in wet weather vs. dry weather conditions. This often makes it difficult to detect a statistically significant increase from background levels. Turbidity is another measure of sediment in streams. Turbidity is the amount of light that is scattered or absorbed by a fluid. An increase in turbidity is usually associated with increased cloudiness of the water. It is caused by the presence of suspended particles of silt and clay, as well as other particles such as finely divided organic matter, colored organic compounds, plankton, and microorganisms.

The adverse effects of sedimentation in streams are complex since many other pollutants, like nutrients, metals, and pesticides can be transported with sediment. Large increases in sediment delivery to streams can change the shape and flow of stream channels through the processes of scour and deposition. It can greatly impair or even eliminate aquatic habitat by inundating substrate and reducing the concentration of dissolved oxygen in the stream.

Study Results

The recommended LOS for TSS in the Sandy Springs study area is an average concentration that ranges from 25 to 80 milligrams/liter (mg/L). The screening level for turbidity was set at 50 NTU. The average dry weather (baseflow) and wet weather (stormflow) results for TSS and turbidity are shown in Figures 3-4 and 3-5, respectively. Table 3-6 gives the percent land use classified according to high/medium/low development for sub-basin areas above the seven monitoring stations in the Sandy Springs study area. Tables 3-7 and 3-8 give minimum, maximum, and mean concentrations for each site, as well as the number of times a sample exceeded the recommended LOS or SL. Multiple samples were collected throughout stormflow events. Numbers in the far right column were obtained by evaluating the entire raw data set.

TABLE 3-6
Percent land use for Sandy Springs Study Sites.

	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7
Highly Developed[1]	19	50	0	45	9	35	70
Moderately Developed[2]	65	37	79	35	83	45	9
Minimally Developed[3]	14	12	21	16	8	17	19
Transitional	0.6	0.6	0.1	3.0	0	0.9	1.6

[1] Highly developed = commercial, transportation, utilities, communications, high density residential, multifamily complexes, institutional, and limited access highways
[2] Moderately developed = medium and low density residential
[3] Minimally developed = parks, cemeteries, and forested

TABLE 3-7
Minimum, Maximum, and Mean Concentrations of Total Suspended Solids (TSS) and Number of Exceedances above Recommended Level of Service (LOS) for Baseflow and Stormflow Samples.

Station No.	Minimum Baseflow (mg/L)	Minimum Stormflow (mg/L)	Maximum Baseflow (mg/L)	Maximum Stormflow (mg/L)	Mean Baseflow (mg/L)	Mean Stormflow (mg/L)	# Above LOS[1] Baseflow	# Above LOS[1] Stormflow
SS-1	2	BDL[2]	13	814	6	133	0	7
SS-2	2	24	35	1080	12	326	0	23
SS-3	3	BDL[2]	7	1370	5	221	0	10
SS-4	4	21	41	920	22	161	0	12
SS-5	BDL[2]	28	22	722	6	327	0	16
SS-6	2	100	8	1400	5	455	0	20
SS-7	BDL[2]	2	14	148	5	48	0	9
R-1	3	BDL[2]	25	242	11	18	0	1

[1] LOS = Level of Service = 25-80 (avg. 52.5) mg/L
[2] BDL = below laboratory detection limit of 2 mg/L

TABLE 3-8
Minimum, Maximum, and Mean Concentrations of Turbidity and Number of Exceedances above Recommended Screening Level (SL) for Baseflow and Stormflow Samples

Station No.	Minimum Baseflow (NTU)	Minimum Stormflow (NTU)	Maximum Baseflow (NTU)	Maximum Stormflow (NTU)	Mean Baseflow (NTU)	Mean Stormflow (NTU)	# Above SL[1] Baseflow	# Above SL[1] Stormflow
SS-1	2	7	23	80	10	41	0	2
SS-2	0.5	15	62	203	19	80	1	2
SS-3	7	11	10	308	8	91	0	1
SS-4	3	24	25	221	14	116	0	3
SS-5	BDL[2]	72	9	93	4	79	0	4
SS-6	4	34	11	162	8	86	0	3
SS-7	3	6	9	75	7	40	0	2
R-1	6	9	17	182	12	42	0	1

[1] SL = screening level = 50 NTU; sustained concentrations may lead to degradation of aquatic communities
[2] BDL = below laboratory detection limit of 1 NTU

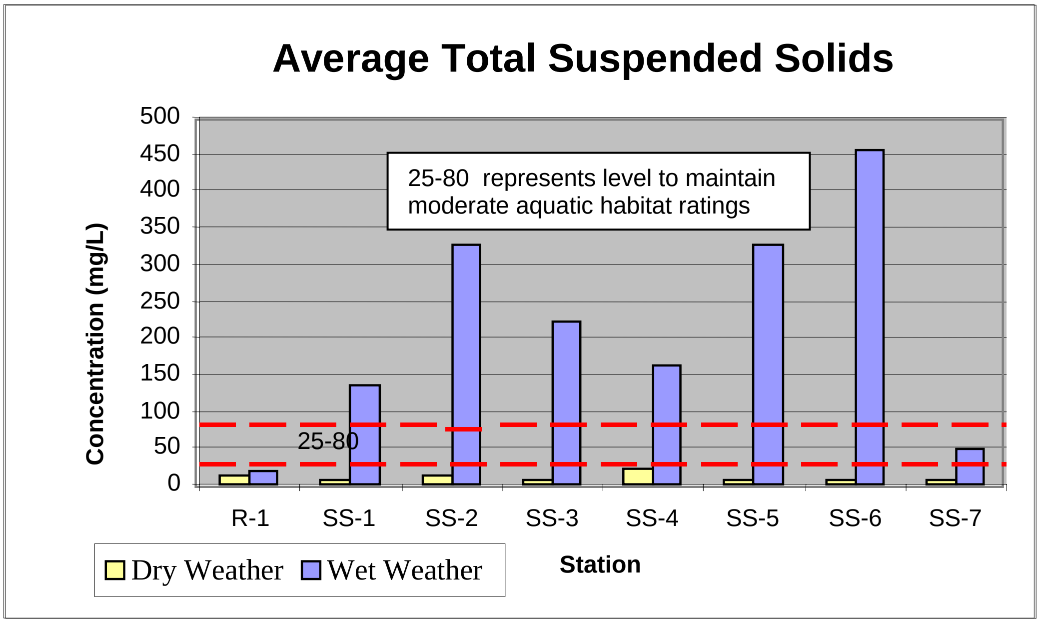


FIGURE 3-4
Average Total Suspended Solids Results

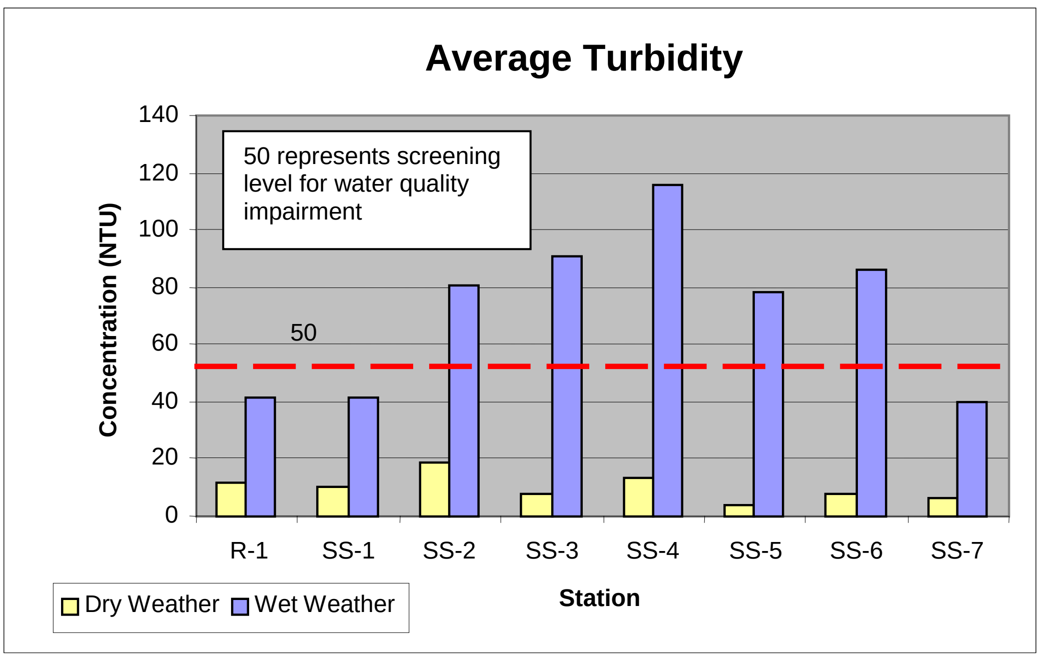


FIGURE 3-5
Average Turbidity Results

No site exceeded the TSS LOS for any given sample during baseflow conditions. However, all sites, including the reference, exceeded the LOS at least once during stormflow. Average stormflow TSS concentrations were typically one to two orders of magnitude higher than average baseflow concentrations. Average concentrations exceeded the LOS at six of seven study sites and were higher across all study sites compared to the reference site (Figure 3-3). Mean TSS concentrations were highest and the LOS was most frequently exceeded at sites SS-2, SS-5 and SS-6 (Table 3-8). Of these sites, SS-2 had the most highly developed area (Table 3-6). Interestingly, mean and peak concentrations of both TSS and turbidity were lowest at SS-7, the site with the overall greatest proportion of highly developed area.

Average turbidity concentrations showed a similar pattern to TSS across sites, but differences between sites was not as pronounced. Turbidity was typically low for all baseflow samples, with the exception of one sample at SS-2, and was inconsistently high for stormflow samples, with the highest frequency of elevated concentrations at SS-4, SS-5, and SS-6.

Regressions of flow against TSS did not reveal a strong correlation at any given site, perhaps due to the limited data set. However, suspended sediment and turbidity generally increase with increasing flows. Study sites SS-2, SS-5, and SS-6 appear to have the highest concentrations of suspended sediment during storm events with SS-3 and SS-4 falling close behind. Concentrations at SS-1 and SS-7 were relatively low and more comparable to the reference site.

Phosphorus Species

Background

Phosphorus is usually measured in aquatic ecosystems as dissolved phosphate (PO4), dissolved total phosphorus, and particulate phosphorus. Dissolved phosphorus includes both inorganic and organic forms. Dissolved phosphate is available for biotic uptake and is also referred to as soluble reactive phosphorus (SRP). Particulate phosphorus is usually present in much larger quantities than the soluble forms and includes bacterial plant and animal phosphorus as well as that attributable to suspended inorganic particles such as clays. Total phosphorus (TP) is the sum of the particulate and dissolved forms.

There are no federal or state standards for phosphorus in drinking water, nor is it toxic. However, high concentrations can increase stream productivity and often are the cause of algal blooms and eutrophic conditions. As plants decompose, the demand for oxygen increases and can lead to depressed levels of dissolved oxygen and may in turn threaten the viability of fish and other aquatic organisms. Guidelines have been suggested by McDonald (1991) that range from 0.025 mg P/L as PO_4 for lakes and reservoirs, to 0.05 mg P/L as PO4 for streams that flow into lakes and reservoirs, and 0.1 mg/L as PO_4 for streams that do not flow into lakes and reservoirs. Particulate P is the more common form of phosphorus in aquatic systems and is typically associated with transported sediment. Elevated concentrations of P are commonly found in lakebed sediments in the Georgia Piedmont transported from upstream tributaries.

Agricultural, domestic, and industrial wastes are common sources of phosphorus to surface waters. Phosphorus from solid wastes and P-based detergents are common sources in municipal wastewater. P-fertilizers applied to lawns and landscaped areas are another source of P in urban streams. However, since phosphorus easily adheres to clay particles, most Piedmont soils have the necessary components to immobilize most P. Therefore, unless there is a sediment source from fertilized areas, or unless fertilizer is applied directly to the water surface, this is not a typical pathway for P transport to streams.

Study Results

The recommended LOS for Total Phosphorus (TP) is an average concentration of 0.1 mg/L. The established SL for SRP was also set at 0.1 mg/L. Figures 3-6 and 3-7 illustrate average concentrations across sites for TP and SRP. Tables 3-9 and 3-10 give additional statistics for each parameter. Average baseflow concentrations were below the LOS for all sites. However, LOS was exceeded at least once at two study sites during baseflow (SS-2 and SS-4) and at all sites, including the reference, at least once during stormflow. Average and maximum stormflow concentrations were lowest at study sites SS-3 and SS-7. SS-3 is 79% residential and 21% undeveloped, while SS-7 is primarily highly developed.

TABLE 3-9
Minimum, Maximum, and Mean Concentrations of Total Phosphorus (TP) and Number of Exceedances above Recommended Level of Service (LOS) for Baseflow and Stormflow Samples.

Station No.	Minimum Baseflow (mg/L)	Minimum Stormflow (mg/L)	Maximum Baseflow (mg/L)	Maximum Stormflow (mg/L)	Mean Baseflow (mg/L)	Mean Stormflow (mg/L)	# Above LOS[1] Baseflow	# Above LOS[1] Stormflow
SS-1	0.02	0.03	0.07	0.57	0.04	0.16	0	6
SS-2	0.04	0.01	0.15	0.93	0.09	0.33	2	20
SS-3	0.01	0.01	0.05	0.33	0.03	0.09	0	5
SS-4	0.03	0.02	0.11	0.65	0.06	0.16	1	11
SS-5	0.03	0.01	0.08	0.65	0.05	0.29	0	13
SS-6	BDL[2]	0.01	0.02	0.98	0.01	0.33	0	14
SS-7	0.01	0.02	0.06	0.18	0.03	0.07	0	4
R-1	0.02	0.03	0.06	0.42	0.04	0.06	0	1

[1] LOS = Level of Service = 0.1 mg/L for TP
[2] BDL = below laboratory detection limit of 0.005 mg/L

TABLE 3-10
Minimum, Maximum, and Mean Concentrations of Soluble Reactive Phosphorus (PO_4-P) and Number of Exceedances above Recommended Screening Level (SL) for Baseflow and Stormflow Samples.

Station No.	Minimum Baseflow (mg/L)	Minimum Stormflow (mg/L)	Maximum Baseflow (mg/L)	Maximum Stormflow (mg/L)	Mean Baseflow (mg/L)	Mean Stormflow (mg/L)	# Above SL[1] Baseflow	# Above SL[1] Stormflow
SS-1	BDL[2]	BDL[2]	0.02	0.077	0.011	0.046	0	0
SS-2	BDL	BDL	0.14	0.089	0.056	0.048	1	0
SS-3	BDL	BDL	0.02	0.063	0.009	0.025	0	0
SS-4	BDL	BDL	0.03	0.360	0.016	0.136	0	2
SS-5	BDL	BDL	0.04	0.238	0.018	0.072	0	1
SS-6	BDL	BDL	0.018	0.04	0.006	0.026	0	0
SS-7	BDL	BDL	0.019	0.025	0.01	0.016	0	0
R-1	BDL	0.024	0.021	0.050	0.011	0.033	0	0

[1] SL = screening level = 0.1 mg/L for SRP sustained concentrations may lead to degradation of aquatic communities
[2] BDL = below laboratory detection limit

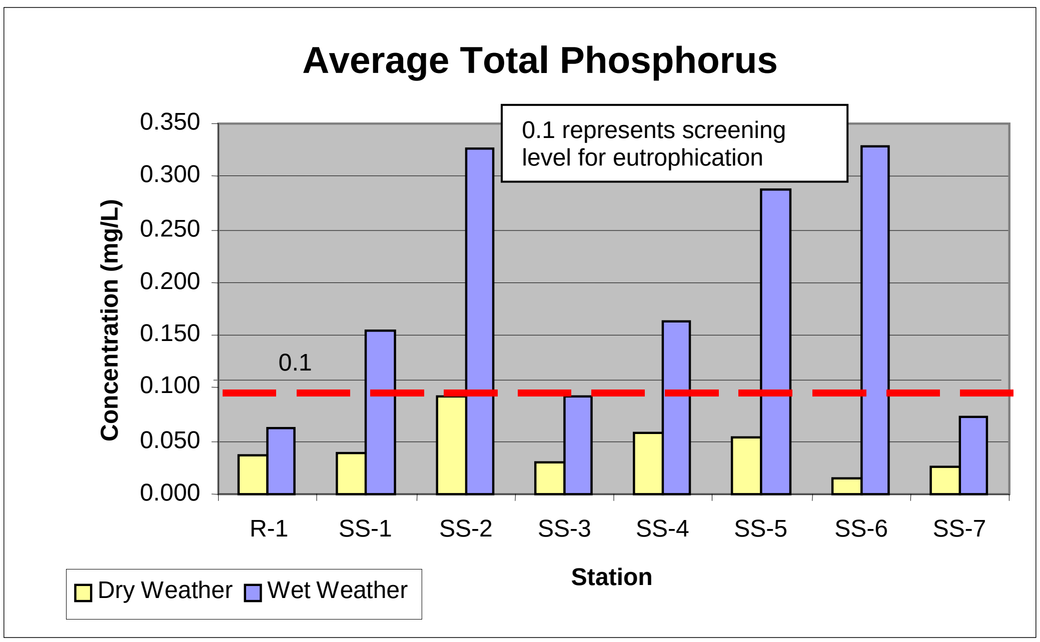


FIGURE 3-6
Average Total Phosphorus Results

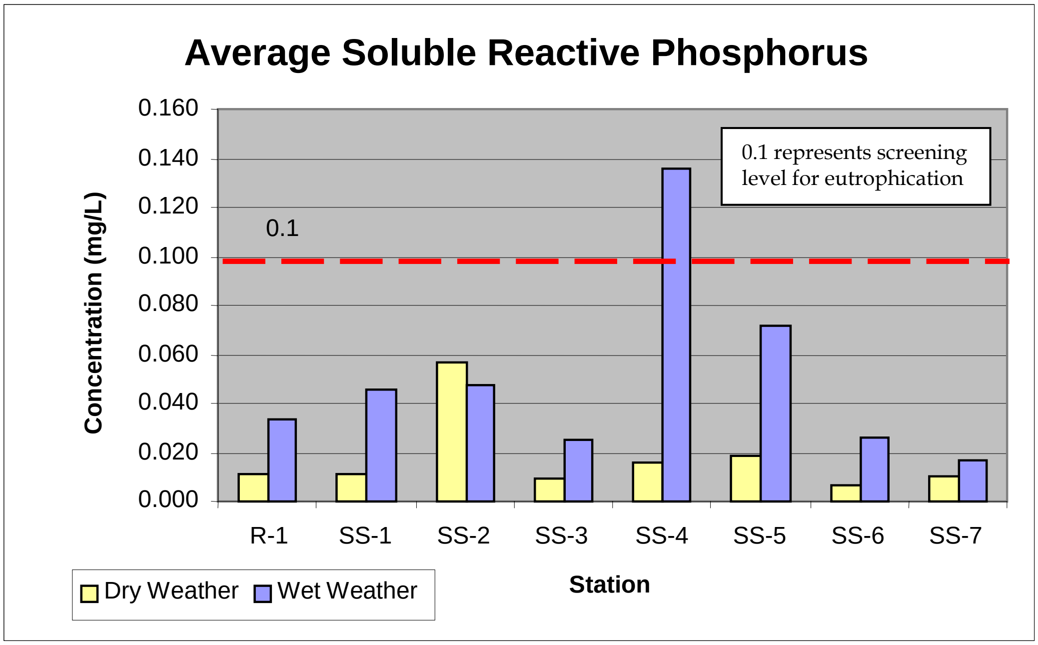


FIGURE 3-7
Average Soluble Reactive Phosphorus Results

Similar to TSS results, mean TP concentrations were highest and the LOS was most frequently exceeded at sites SS-2, SS-5 and SS-6. Also similar to TSS, TP and SRP loadings were highest at SS-2, which, of the three sites, had the highest percentage of highly developed land area. SRP results generally did not show similar trends and was typically much lower across sites. At lower TP concentrations (< 0.1 mg/L), SRP appears to be the dominant form of P. At higher TP concentrations (> 0.1 mg/L), particulate P is the dominant form of P. Interestingly, a stormflow event at SS-4 (Game Creek) in May yielded similar TP and SRP results (0.40 and 0.36 mg/L, respectively), indicating a direct discharge of P to the stream. Similarly, a storm event in August at SS-5 (Heards Creek) had a high proportion of SRP to TP, also suggesting a direct discharge.

Nitrogen Species

Background

Total nitrogen is the sum of the concentrations of Total Kjeldahl Nitrogen (TKN) and Nitrate+Nitrite-nitrogen (NO_2/NO_3-N). TKN includes both organic nitrogen and ammonia nitrogen (NH_3-N). In urban settings, organic nitrogen (N) sources include urine, fecal matter, garbage disposal waste, and ammonia-based household cleaners. Nitrogen in sewage and septic effluent is primarily ammonium. NH_3 is usually present in urban streams as an intermediate breakdown of organic and inorganic N. Ammonia is usually reported as total ammonia (ammonia, NH_3-N + ammonium, NH_4-N), since they are in a temperature and pH-dependent equilibrium. The NH_3 form is toxic, NH_4 is not. Generally, as pH declines, ammonia toxicity increases, but the proportion of NH_3 to NH_4 decreases. Ammonia can be converted temporarily to nitrite-N (NO_2-N) and finally to NO_3-N, the highly mobile, plant-available form. Ammonia may be reduced to nitrogen gas under anaerobic conditions, such as in wetland areas adjacent to streams. NH_4-N and NO_3-N are inorganic forms of N found in various commercial fertilizers that may reach the stream via runoff from lawns and other landscaped areas.

There are no state or federal standards for TN and TKN. The drinking water standard for NO_3-N is 10 mg/L. Lower levels of nitrates in conjunction with phosphate can stimulate the growth of algae and lead to eutrophication, although there are no regulatory criteria to minimize such impacts. Some states use a screening level of 1.0 mg/L NO_3-N for evaluating surface water quality. NH_3 concentrations can vary from <10 ug NH_3-N/L in natural surface waters to > 30 mg/L in some wastewaters. Concentrations as low as 0.03 and 0.002 mg NH_3-N/L are considered potentially toxic as acute and chronic concentrations, respectively, to some aquatic organisms.

Study Results

The recommended LOS for Total Nitrogen (TN) is an average concentration of 1.5 mg/L. This is based on a 15:1 ratio of TN:TP. Figures 3-8, 3-9, and 3-10 and Tables 3-11, 3-12, and 3-13 illustrate the analytical results for TN, NO_2+NO_3-N, and NH_3+NH_4-N under dry and wet weather conditions. The analytical information indicates a similar distribution across sites for TN and TKN and suggests that organic N is dominant form of N in all streams. Stormflow concentrations were elevated above baseflow concentrations at all but two sites, SS-2 and SS-7. However, average baseflow results were confounded somewhat by one sample in which five of the six study site samples collected on September 8 had TN that ranged from approximately 8-21 mg/L. Corresponding samples for R-1 and SS-1 were < 0.1 mg/L. These results are suspect and suggest either a lab error, or a system-wide back-up of sewage. Since fecals were generally higher than average across sites on this date, particularly at sites SS-5 and SS-6, the latter hypothesis appears to be more likely. In addition a review of internal laboratory QA/QC documentation did not indicate a lab error.

TABLE 3-11
Minimum, Maximum, and Mean Concentrations of Total Nitrogen (TN) and Number of Exceedances above Recommended Level of Service (LOS) for Baseflow and Stormflow Samples.

Station No.	Minimum Baseflow (mg/L)	Minimum Stormflow (mg/L)	Maximum Baseflow (mg/L)	Maximum Stormflow (mg/L)	Mean Baseflow (mg/L)	Mean Stormflow (mg/L)	# Above LOS[1] Baseflow	# Above LOS[1] Stormflow
SS-1	0.05	0.12	4.56	11.3	1.50	2.91	2	2
SS-2	0.30	0.35	21.0	9.01	5.94	2.98	2	2
SS-3	0.64	0.10	1.52	23.4	1.05	6.26	1	1
SS-4	0.16	0.23	10.2	26.86	3.08	7.10	4	1
SS-5	0.37	0.21	8.36	15.2	2.23	8.15	2	3
SS-6	1.06	4.41	17.9	17.1	5.51	10.8	3	4
SS-7	0.24	0.05	12.6	7.84	3.48	2.53	1	2
R-1	0.10	0.05	0.29	14.0	0.19	2.59	0	1

[1] LOS = Level of Service = 1.5 mg/L for TN

TABLE 3-12
Minimum, Maximum, and Mean Concentrations of (Nitrate + Nitrite)-Nitrogen (NO_2+NO_3-N) and Number of Exceedances above Screening Level (SL) for Baseflow and Stormflow Samples.

Station No.	Minimum Baseflow (mg/L)	Minimum Stormflow (mg/L)	Maximum Baseflow (mg/L)	Maximum Stormflow (mg/L)	Mean Baseflow (mg/L)	Mean Stormflow (mg/L)	# Above SL[1] Baseflow	# Above SL[1] Stormflow
SS-1	BDL[2]	0.03	0.59	0.54	0.29	0.17	0	0
SS-2	0.18	0.12	1.80	0.85	0.71	0.42	1	0
SS-3	0.12	0.03	0.59	0.24	0.33	0.11	0	0
SS-4	0.09	0.06	2.22	0.95	0.66	0.28	2	0
SS-5	0.17	0.03	1.83	0.90	0.70	0.38	1	0
SS-6	0.25	0.07	1.97	0.67	0.71	0.30	1	0
SS-7	0.04	BDL[2]	0.68	2.84	0.29	0.29	0	1
R-1	0.05	BDL[2]	0.24	0.12	0.14	0.02	0	0

[1] SL = screening level = 1.0 mg/L for (NO_2+NO_3)-N; sustained concentrations may lead to degradation of aquatic communities

[2] BDL = below laboratory detection limit of 0.005 mg/L

TABLE 3-13
Minimum, Maximum, and Mean Concentrations of Ammonia-Nitrogen (NH_3-N) and Number of Exceedances above Recommended Screening Level (SL) for Baseflow and Stormflow Samples.

Station No.	Minimum Baseflow (mg/L)	Minimum Stormflow (mg/L)	Maximum Baseflow (mg/L)	Maximum Stormflow (mg/L)	Mean Baseflow (mg/L)	Mean Stormflow (mg/L)	# Above SL[1] Baseflow	# Above SL[1] Stormflow
SS-1	BDL[2]	BDL[2]	BDL[2]	BDL[2]	BDL[2]	BDL[2]	0	0
SS-2	BDL	BDL	BDL	0.25	BDL	0.06	0	1
SS-3	BDL	BDL	BDL	BDL	BDL	BDL	0	0
SS-4	BDL	BDL	BDL	0.56	BDL	0.15	0	1
SS-5	BDL	BDL	BDL	BDL	BDL	BDL	0	0
SS-6	BDL	BDL	BDL	0.50	BDL	0.13	0	1
SS-7	BDL	BDL	BDL	BDL	BDL	BDL	0	0
R-1	BDL	BDL	BDL	BDL	BDL	BDL	0	0

[1] SL = screening level = 0.05 mg/L for NH_3-N; sustained concentrations may lead to degradation of aquatic communities

[2] BDL = below laboratory detection limit of 0.02 mg/L

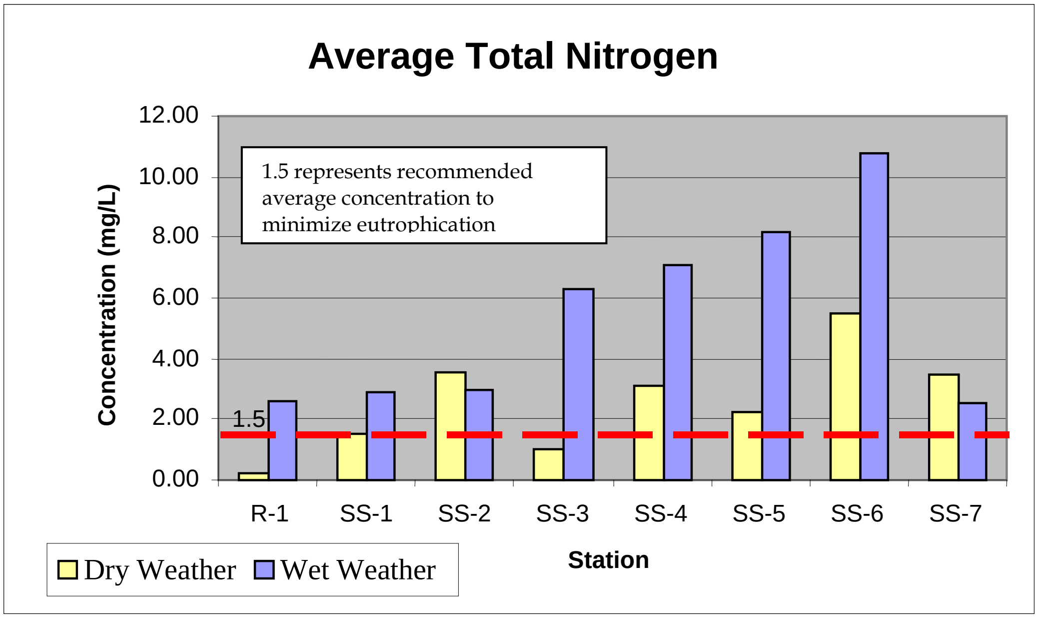


FIGURE 3-8
Average Total Nitrogen Results

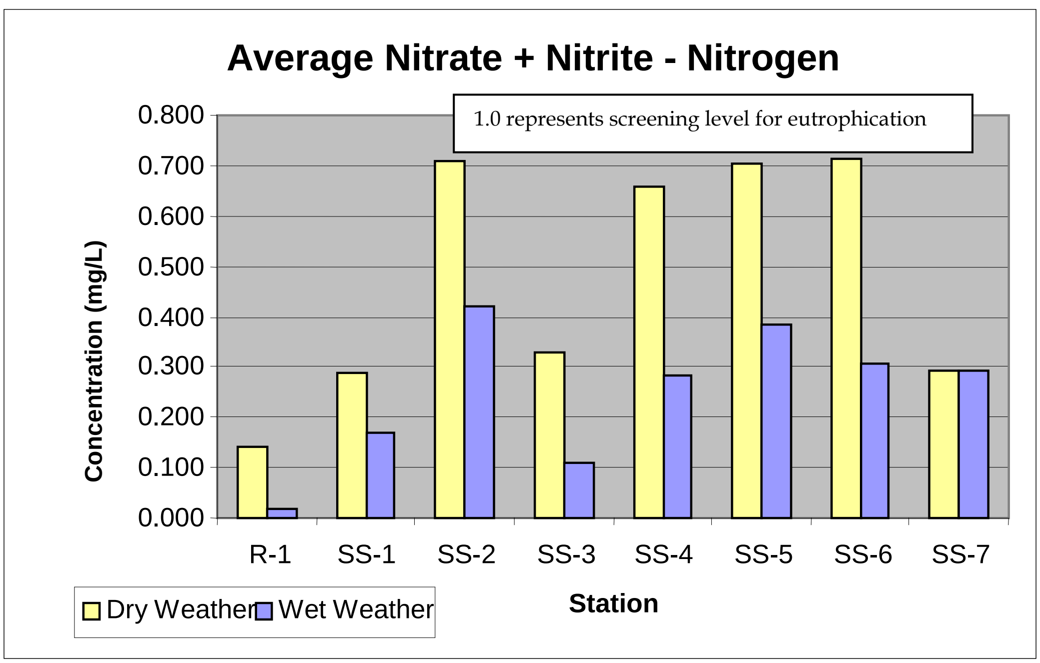


FIGURE 3-9
Average Nitrite-Nitrate-Nitrogen Results

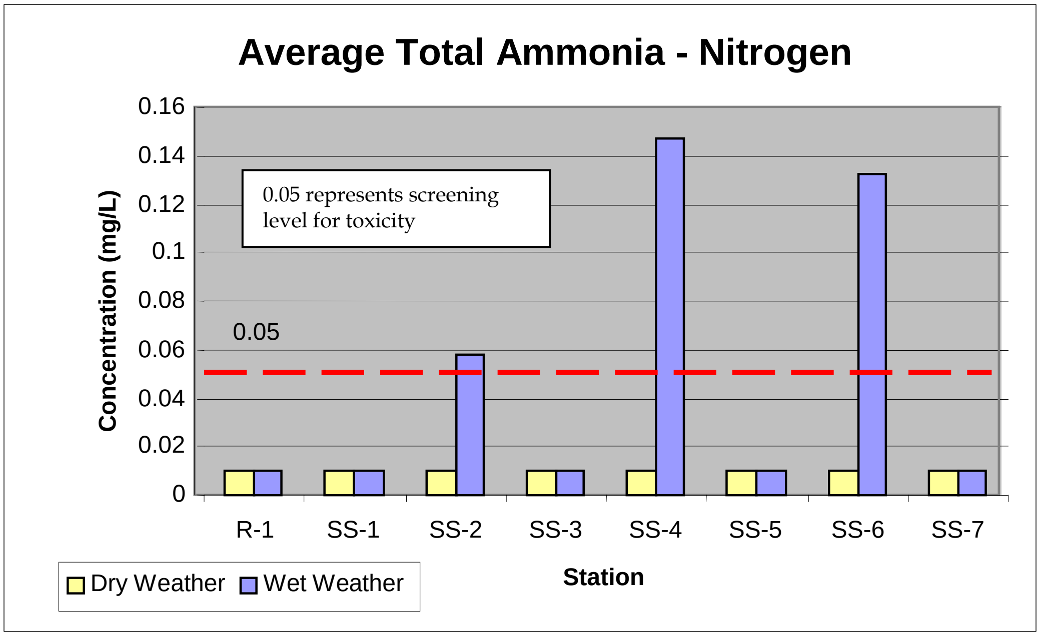


FIGURE 3-10
Average Total Ammonia-Nitrogen Results

Although the LOS was exceeded across sites during stormflow, sites 2-6 appear to have the greatest departure from the reference. TN stormflow loading was higher at SS-5, relative to sites SS-2 and SS-6, contrary to other water quality parameters. However, nitrate and ammonia loadings followed a similar pattern to other parameters with SS-2 having the highest relative loading rate. These results suggest a higher relative input of organic N at SS-5.

Conversely, nitrite-nitrate nitrogen was higher during baseflow at all sites, suggesting a dilution effect during stormflow. Similar to other water quality parameters, mean concentrations were highest at sites SS-2, SS-4, SS-5, and SS-6 (i.e. those sites, with the exception of SS-7, that had the highest percentage of highly developed area). Ammonia was not detected at any sites under base flow conditions, however, it was observed infrequently in elevated concentrations at sites SS-2, SS-4, and SS-6 during stormflow.

Fecal Coliform

Background

Fecal coliform is used as an indicator of bacterial viruses in the water column. One of the difficulties associated with fecal coliform is in identifying its source. There is much on-going research to identify genetic markers of fecal to trace its source. In-stream concentrations of bacteria tend to increase sharply during storm events. Higher bacteria counts are typically due to either the enhanced input of bacteria to streams from surrounding land store source (e.g. animal feed lots, failed septic fields, wildlife, etc.), or from washout of bacteria living in stream bed sediments (Kay and McDonald, 1982).

Fecal coliform has been positively correlated with turbidity in streams. Bacteria adsorb to sediments and can remain in a dormant state until conditions are favorable for its culture. Concentrations in bottom sediments can be 100-1,000 times higher than in overlying waters.

Thus, sediment can act as a bacterial reservoir and can play a significant role in the survival and distribution of bacteria in aquatic environments. Other fecal coliform sources include sanitary sewer overflows, leaking sewer lines, failed septic systems, pets, and wildlife.

Study Results

The recommended LOS for fecal coliform is 4,000 colonies per 100 milliliters of water (4,000 cfu/100 mL). The LOS is based upon a water quality standard that requires that a single grab sample have a concentration of fecal coliform less than 4,000 cfu/100 mL in the non-recreation season. The fecal coliform analytical results are summarized in Figure 3-11 and Table 3-14. Three of the study sites had average concentrations that exceed the LOS during baseflow. Six of the study sites had average concentrations that exceeded the LOS during stormflow. Three sites (SS-3, SS-4, SS-6) had average stormflow results one order of magnitude higher than the LOS, while three others (SS-1, SS-2, SS-5) were two orders of magnitude higher. Maximum concentrations of over one million colonies/100 ml were observed at SS-1 and SS-5. Sites SS-2 through SS-6 had the greatest frequency of exceedances above the LOS. Dry weather rolling geometric means, calculated from 4 samples collected within 30 days, exceeded the recreation season standard of 200 cfu/100 mL at all sites, including the reference. Inclusion of wet weather sampling data would increase the calculated rolling geometric means significantly at all sampling stations.

TABLE 3-14
Minimum, Maximum, and Mean Concentrations of Fecal Coliform and Number of Exceedances above Recommended Level of Service (LOS) for Baseflow and Stormflow Samples.

Station No.	Minimum Baseflow (cfu/100 ml)	Minimum Stormflow (cfu/100 ml)	Maximum Baseflow (cfu/100 ml)	Maximum Stormflow (cfu/100 ml)	Mean Baseflow (cfu/100 ml)	Mean Stormflow (cfu/100 ml)	# Above LOS[1] Baseflow	# Above LOS[1] Stormflow
SS-1	110	1	57000	1400000	5726	222619	4	5
SS-2	260	500	40000	600000	6676	133938	3	12
SS-3	BDL[2]	270	2200	60000	1157	19257	0	14
SS-4	120	300	20000	162000	3315	24822	3	12
SS-5	20	500	8800	2100000	2334	326808	2	15
SS-6	100	1	36000	650000	6741	62914	4	11
SS-7	200	90	5600	8500	1507	2992	1	6
R-1	BDL[2]	182	18000	14545	1788	3509	1	8

[1] LOS = Level of Service = 4,000 cfu/100 ml
[2] BDL = below laboratory detection limit of 1 cfu/100 ml.

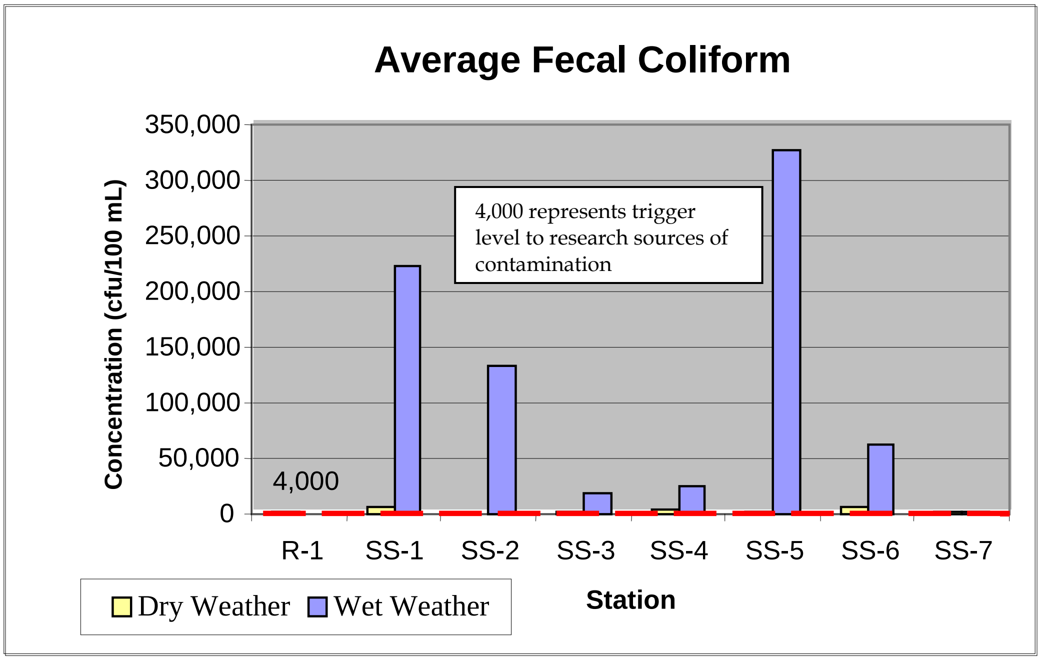


FIGURE 3-11
Average Fecal Coliform Results

Results of the fecal coliform analysis did not reveal any strong correlation's with land use or with flows. However, similar to other water quality parameters, SS-7 was the most comparable to the reference site.

Priority Pollutants and Trace Metals

Background

Heavy metals are associated with municipal wastewater and are often detected in highly urbanized watersheds. Like phosphorus, they have a high affinity to be adsorbed to sediment particles or chelated with organics. Metals become harmful to aquatic life when they are precipitated into the water column under low pH conditions, as in the case of runoff from acid mine drainage.

Priority pollutants include volatile organic compounds, semi-volatile organic compounds, pesticides, and herbicides. These compounds may be present in the water column as a result of historical usage, or from current overusage or mismanagement of materials. Many compounds are released from automobiles and are washed directly into streams during rainfall events.

Study Results

No trace metals were detected in any of the baseflow or stormflow samples. One priority pollutant, heptachlor epoxide, was detected at five sites in the Sandy Springs study area (Figure 3-12). Heptachlor Epoxide is a breakdown product of the pesticide Heptachlor. Heptachlor was used to control termites in the 1960s and was banned for residential use in 1978. Heptachlor Epoxide bonds strongly with soil particles and has a very long residual life. The water quality standard for Heptachlor Epoxide is 0.0038 micrograms/liter (ug/L). It was detected above the water quality standard at one site (SS-2) during baseflow, and five sites (SS-2,4,5,6,7) during stormflow sampling. Since only one sample was collected across sites for each flow condition, these results may be an indication of a serious water quality problem and a potential human health risk.

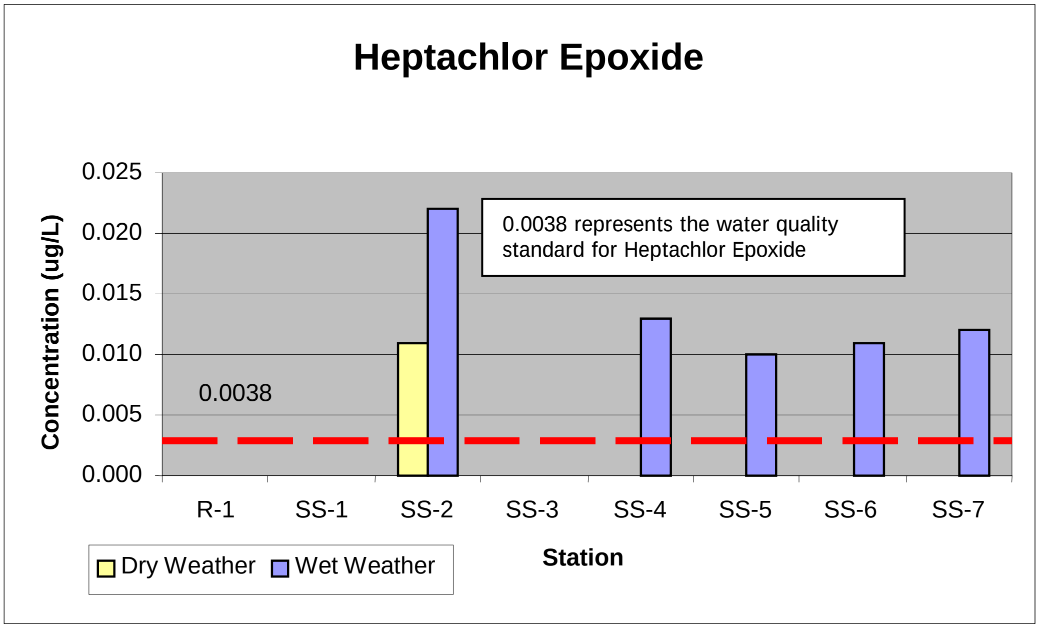


FIGURE 3-12
Heptachlor Epoxide Results for Single Dry Weather and Wet Weather Samples

3.3.4 Discussion

Results of water quality monitoring indicated that water quality in the Sandy Springs study area is generally degraded. Peak flows and pollutant levels were generally high relative to the reference station and the recommended Levels of Service (LOS) for each water quality constituent.

The parameter of greatest concern in the Sandy Springs study area is fecal coliform. All monitored streams, including the reference station, exceeded water quality standards for fecal. The exceedance of the fecal coliform water quality standard at the reference station highlights the difficulty in identifying an appropriate "background" level for fecal coliform. Nevertheless, extreme levels of fecal coliform observed in many of the Sandy Springs study area storm samples indicate that raw sewage is being directly discharged to streams during rainfall events, either from direct overflow into the stream, from leaky pipes, from ineffective septic systems, or some combination thereof.

Often high nutrient levels were observed to be elevated in conjunction with the high fecal coliform levels. Brown and Caldwell believes that the majority of the loading can be attributed to the sanitary sewer collection system in the Sandy Springs study area. However, there are an indeterminate number of septic systems in the study area and their contribution has not been determined. BC recommends that repairs and improvements to the sanitary sewer collection system be implemented and that a door-to-door inventory of septic systems be completed immediately. The stream system should be re-evaluated after improvements to the sewer system are completed.

Sediment is a contributor to water quality problems in the Sandy Springs study area. Visual inspections of the streams indicated numerous locations where streambank erosion was evident. Streams in the Sandy Springs study area experience very high flows due to the high level of development, indicating that elevated suspended sediment concentrations may originate from scouring of the channel bed and banks. However, BC staff observed many construction sites where soil and erosion control measures were ineffective. Subsequently, sediment was being carried off the construction site and deposited directly into the stream channel.

Nutrients and other pollutants are carried with sediments and pose a potential water quality problem. Therefore, Total Suspended Solids (TSS) should be used as an indicator of water quality impairment due to its high affinity for nutrients, pesticides, and other compounds. Total Phosphorus (TP) concentrations generally mimicked TSS and, with the exception of Station SS-7, concentrations of both increased with increasing land use density. The highest average concentrations of TSS and TP were observed at sites SS-2, SS-5, and SS-6. Of these, Station SS-2, that drains an area of predominately commercial and some residential landuse, had the highest relative loading rates. However, TSS, turbidity, TP and total nitrogen concentrations decreased due to dilution at downstream stations in the Long Island Creek subbasin. The dilution is most likely associated with increased residential landuse and decreased imperviousness surface area downstream.

The Heptachlor epoxide results are of concern. As indicated in the results section, five of seven samples collected during one storm event contained this compound at concentrations above water quality standards. Other studies suggest that pesticides and other compounds, previously undetected due to inadequate analytical capabilities, are present in urban streams and are associated with sediment (Hippe et al., 1994). Heptachlor epoxide is a pesticide that binds strongly to sediment particles in aquatic environments. The presence of this compound may pose a risk to human health and likely contributes to degraded water quality conditions in the Sandy Springs study area. It should be noted that the soluble Heptachlor epoxide posed a greater health risk than other, non-soluble forms. Brown and Caldwell recommends that additional monitoring of water and sediments be conducted throughout the Sandy Springs study area. Details of the proposed monitoring activities are presented in Section 6.6.3

Nutrient loading can be attributed to many sources within the Sandy Springs study area. On-site investigations of commercial businesses revealed that more than 90 percent of the dumpsters inspected throughout the Sandy Springs study area did not comply with existing local ordinances. In several cases, runoff from dumpsters and oil and grease pits was observed flowing directly into headwater creeks or stormwater inlets. Fertilizer runoff from residential and commercial landscapes is also a likely contributor to nutrient loads to stream throughout the Sandy Springs study area. The deposition of yard waste (leaves, grass clippings, etc.) into streams and drainage ditches is another source of nutrients and organic material within the Sandy Springs study area. Examples of this practice were observed in many residential areas throughout the study area.

Site SS-4 (Game Creek) had unusually high mean concentrations of dissolved phosphorus, Dissolved Organic Carbon, and Biochemical Oxygen Demand, suggesting a direct discharge of organic materials to the stream. Additionally, in-situ measurements indicated that Game Creek had higher relative temperatures and conductivity and lower concentrations of dissolved oxygen. A hotel sewer line was subsequently found to be plumbed into a storm drain and not a sewer line. This problem was corrected, however high TP concentrations were again detected during November 1999.

Powers Branch (SS-7) consistently had the lowest relative concentrations of fecal coliform and other pollutants in water quality samples. The concentrations observed at this site were most similar to the reference site. This sub-basin also has the greatest proportion of its watershed in impervious (highly developed) area. BC anticipated that the results would be substantially higher. BC subsequently discovered that a gabion wall had been constructed across the stream channel above the monitoring station following the start of sampling activities. This gabion wall likely attenuated the stream discharge and captured suspended solids and other pollutants; preventing them from moving downstream in the water column. In additional, there are a number of wetlands in the stream valley upstream of Big Trees Forest Preserve that may be effectively trapping pollutants.

Recommendations

- **Address sanitary sewer overflows and leaks.** Target areas of known overflows. Inspect main lines and feeder lines for leaks. Insure adequate pump station capacity for existing and projected flows. Identify and redirect illicit cross connects of sewer lines into storm drains. Conduct door-to-door inventory of septic systems and encourage system maintenance.
- **Investigate Heptachlor epoxide further.** Additional surface water and sediment samples should be collected throughout the Sandy Springs study area and analyzed for this pesticide. Analytical results will be used to fully evaluate the potential risks posed by this contaminant.
- **Control TSS and nutrient loading through on-site or regional stormwater detention structures.** Watershed areas in Upper Long Island Creek, Heards Creek, Powers Branch and Marsh Creek should be the first priority. Improve inspection procedures of construction site and review the effectiveness of existing erosion and sediment control regulations.
- **Bring commercial dumpsters into compliance with local ordinances**. Regulations require that all dumpsters be within a bermed area. Runoff from dumpsters and oil and grease pits should be routed into treatment structures or sanitary sewer inlets.
- **Encourage protection of streams in residential and commercial areas.** Prohibit dumping of chemicals (fuels, oils, pesticides and other household chemicals) and yard debris (limbs and leaves) and other trash into streams and drainage ways.

3.4 Habitat and Biological Sampling

This section discusses the approach, methods, and results of habitat assessments and biological monitoring conducted in the Sandy Springs study area. Biological monitoring included benthic macroinvertebrate sampling, fish community sampling, and fish tissue analysis.

3.4.1 Approach

One of the difficulties associated with nonpoint source pollution control is the limited techniques to directly monitor and assess impairment. Chemical measurements of water quality can be useful but provide only a "snapshot" of water quality at the time of sampling. The Georgia Environmental Protection Division (EPD) protocol for conducting watershed assessments requires a biological monitoring component for streams as part of a multi-metric approach for assessing chemical, physical, and biological health of the watershed. Biological sampling can reveal the effects of short-term, long-term, and cumulative pollution to streams and rivers. Biological criteria are used to assess the biological integrity of the watershed and are based on the premise that an aquatic biological community's structure and function provide critical information about the quality of surface waters (EPA, 1990). The Georgia Rules and Regulations for Water Quality Control, Chapter 391-3-6, define biological integrity as "the condition of the aquatic community inhabiting least impaired water bodies of a specific habitat measured by community structure and function." Aquatic biota, including benthic macroinvertebrate and fish communities, integrate the prevailing and past interactions of stream flow, pollutant loadings, habitat, and chemical quality of their aquatic environment.

Benthic macroinvertebrates are excellent monitors of water quality that are used to assess the biological integrity of waterbodies. *Benthic* refers to those organisms that reside on or in any substrate, such as rocks, logs, and leaves, within the aquatic environment. *Macroinvertebrates* are those animals without backbones that are larger than 0.5 mm. Aquatic insects such as mayflies, stoneflies, caddis flies, dragon flies and true flies (e.g. mosquitoes and blackflies), among others, are benthic macroinvertebrates that spend most of their life cycle as aquatic immature life forms, then complete their life cycle by emerging into the terrestrial environment as adults. Other macroinvertebrates including snails, leeches, aquatic worms, and crayfish spend all or most of their life cycle in the stream. Benthic macroinvertebrates continually “sample” the water throughout their complex, short life cycle (typically one-year) for all substances and physical characteristics in the aquatic environment. Certain species are sensitive to organic and inorganic pollution and respond quickly to stress, while others are more tolerant. They can provide cues particularly to immediate changes in water quality as they are relatively sessile, that is, they do not readily move up and downstream in response to stress do fish.

Fish are yet another component of the aquatic community that can reflect the health of a watershed. Fish inhabit waters for all of their life cycle (up to 10 years or longer) and therefore their diversity and abundance reflect past and recent environmental conditions. Furthermore, analysis of fish tissue can reveal bioaccumulation of metals and pesticides that may not be detected during routine chemical sampling. Therefore, the biological sampling employed for the Sandy Springs study area was a four-pronged approach that included habitat assessment, benthic macroinvertebrate sampling, fish community sampling, and fish tissue analysis. Habitat assessment allows the quality of the structure of the surrounding habitat that influences water quality and condition of the aquatic biota to be evaluated and may identify non-water quality related factors of biological impairment, if present. In situ measurements of water temperature, dissolved oxygen (DO), pH, turbidity, total residual chlorine, and conductivity also were taken at each study site during all biological sampling events.

3.4.2 Methods

The following sections describe methods used for habitat and biological sampling and assessment in the Sandy Springs study area and associated reference sites. Biological sampling was conducted in spring (April/May) using the Georgia DNR’s *Draft Standard Operating Procedures: Freshwater Macroinvertebrate Biological Assessment* (DNR, 1997) and EPA's *Rapid Bioassessment Protocols for Use in Streams and Rivers: Benthic Macroinvertebrates and Fish* (Plafkin et al., 1989). Five of the seven study sites and both reference sites were sampled for benthic macroinvertebrates and fish (Figure 3-3, Table 3-3). Fish tissue sampling and analysis was done at one study and one reference site only. Habitat assessment was performed at all sites.

A drainage size-specific comparison was used between reference and study sites for habitat assessment. R-1 was used to represent the larger study streams (SS-1 and SS-6) that drained watersheds between 5 and 7 mi^2 . (Table 3-3). This location has been used as a reference for previous watershed studies and has exhibited high quality aquatic habitat and biotic integrity. R-2 was used to represent the smaller study streams (SS-4, SS-5, and SS-7) that drained watersheds less than 2 mi^2. Macroinvertebrate and fish community data collected at both reference sites was pooled with previously collected reference data for comparison to all study sites. Reference data pooling was done to increase the robustness of the data and allow for more comparable results.

The sample reach at each site was approximately 100 meters in length and was selected in areas with surrounding land uses that were representative of that of the entire upstream drainage area. Where possible, sample reaches were located upstream of road crossings to avoid bridge-related physical (slower, deeper water) and chemical (roadway runoff) effects.

3.4.2.1 Habitat Assessment

Habitat assessments were conducted at all sites in accordance with the state's protocol, *Draft Standard Operating Procedures: Freshwater Macroinvertebrate Biological Assessment* (DNR, 1997). The Habitat Assessment Worksheet for riffle/run habitat was utilized as this was the prevalent habitat type throughout the Sandy Springs study area. The DNR worksheet has ten habitat parameters that require visual evaluation of physical habitat parameters, including in-stream cover, substrate, channel morphology and flow, bank stability and vegetation, and riparian zone condition. At each site, all individual habitat parameters were scored (values of 0-20 or 0-10, depending on parameter), and a total score was obtained. Habitat parameter score totals were then used to derive an ecological condition rating (Table 3-15). Habitat scores for the study sites were compared to the reference habitat score to classify each site on the basis of its similarity to expected conditions (reference site) and its apparent potential to support acceptable levels of biotic integrity. Percent of comparability (ratio) of each monitoring site to the reference fell into one of four assessments categories (Table 3-16).

TABLE 3-15
Habitat Condition Categories and Scoring Values (DNR, 1997)

Condition Categories	Scoring Value Ranges
Optimal	200 – 166
Suboptimal	153 – 113
Marginal	100 - 60
Poor	44 - 0

TABLE 3-16
Assessment Categories and Percent Comparability for Habitat Scores

% Comparability to Reference Score	Assessment Category
90%	Comparable to Reference
75 - 89%	Similar
60 - 74%	Partially Similar
59%	Dissimilar

In addition to the habitat assessment forms, DNR's Physical Characterization/Water Quality Field Sheets and Impairment Assessment Sheets also were completed at each site. A copy of all physical habitat assessment forms; DNR's Physical Characterization/Water Quality Field Sheets and Impairment Assessment Sheets are found in Appendix G, Section 1.

3.4.2.2 Benthic Macroinvertebrate Sampling

Benthic macroinvertebrate sampling was performed in conjunction with the habitat assessment under a modified Georgia Bioassessment Protocol (GBP) (DNR, 1997). A standardized semi-quantitative method was utilized at each site and included sampling of a variety of habitat types including riffles, undercut banks/roots, woody debris, sand, and leaf packs/coarse particulate organic matter (CPOM). Study sites were sampled in a consistent and representative manner. A total of 8 half-meter samples were collected from riffle and sand habitat types, and 20 meters of woody debris and undercut banks/roots were sampled at each site (where available). Rectangular dip nets were used to collect the riffle, sand, and woody debris samples, and "D" frame dip nets were used for the undercut banks/roots. The nets were a 500-micron mesh.

Also included in the sampling protocol was a 30-minute visual search and sampling of all habitat types at the study site for identification and collection of unusual species. The CPOM sample (3 - 4 liters) was collected by hand and kept separate from the other habitat samples. All other habitat samples were composited and preserved into a single sample at each site for laboratory analysis and data evaluation. Specimens were identified to species/lowest taxonomic level.

Under the GBP, assessment scoring is based on a variety of metrics and is ecoregion-specific. Scoring for the Sandy Springs study area and associated reference sites follows the Ecological Condition Worksheet for the Upper Piedmont ecoregion. Seven metrics are utilized for assessment scoring including:

1) Taxa richness,
2) EPT Index (an index of sensitive taxa Ephemeroptera, Plecoptera, and Trichoptera)
3) Indicator Assemblage Index (IAI),
4) Percent contribution of dominant taxon,
5) North Carolina Biotic Index (NCBI),
6) Percent shredders, and
7) Total habitat score.

Scoring values for the Piedmont ecoregion are summarized in Table 3-17. Percent comparability of each site's score to the reference site score was used to determine ecological condition (Table 3-18). Except for the percent shredders metric (only used CPOM sample), all other metrics were calculated using pooled data, i.e., both CPOM and composite samples.

TABLE 3-17
Benthic Macro Invertebrate Assessment Scores for the GBP

	Scoring Values			
METRIC	5	3	1	0
Taxa Richness	> 80%	60 - 80%	59 - 40%	< 40%
EPT Index	> 90%	70 - 90%	69 - 50%	< 50%
IAI	0.8 - 1.0	0.65 - 0.79	0.5 - 0.64	< 0.5
Percent Dominant Taxon	< 20%	20 - 30%	31 - 40%	> 40%
NCBI	> 85%	85 - 70%	69 - 50%	< 50%
Percent Shredders	> 50%	50 - 35%	34 - 20%	< 20%
Total Habitat Score	> 90%	89 - 75%	74 - 60%	< 59%

- Value = ratio of study site to reference site X 100 (except IAI and % dominant taxon).

TABLE 3-18
DNR Ecological Condition Categories

Percent Comparability to Reference Score	**Ecological Condition Category**	**Attributes**
> 83%	Very Good	Comparable to best situation expected; balanced trophic structure; optimum community structure for stream size and habitat quality
83 – 54%	Good	Community structure less than expected; # of tolerant forms increases; loss of some intolerant forms
53 – 21%	Poor	Fewer taxa due to loss of most intolerant forms; reduction in EPT Index
< 21%	Very Poor	Few taxa present; usually predominance of 1 or 2 taxa

3.4.2.3 Fish Community Sampling

The fish community was assessed under the EPA Rapid Bioassessment Protocol V (Plafkin *et al.*, 1989), which has been somewhat modified by CH2M Hill, Inc. This protocol is based on the Index of Biotic Integrity (IBI) developed by Karr (1981) and refined by Karr *et al.* (1986). Sampling was conducted during the following the habitat and macroinvertebrate sampling spring (with the exception of the reference sites) to allow previous sampling perturbations to subside. Collection was performed by backpack electroshocking. Seining was also done, particularly if some of the less vulnerable species (e.g., darters, minnows, or other smaller fish) were not adequately represented in the initial sample. Fish were processed (enumerated and identified) in the field and returned to the collection area. Some voucher fish specimens were preserved and returned to the laboratory for identification.

Twelve scoring metrics were used for assessing biotic integrity. These metrics are classified into three broad categories:

- species richness and composition,
- trophic composition, and
- fish abundance and condition.

Each metric correlates either positively or negatively to increased levels of stream degradation. IBI scoring is achieved by assigning a value of 1, 3, or 5 for each metric based on its deviation from the "expected" value derived from the reference data and summing these values for a total IBI score at each site. Metrics 1-5 and 10-11 are rated against the expectation criteria developed from the pooled reference data, while Metrics 6-9 and 12 are rated using fixed criteria taken directly from the RBP V (Table 3-19). IBI scores total from 12 to 60 and generally fall within one of five integrity classes, which range from very poor to excellent (Table 3-20).

TABLE 3-19
IBI Metrics Used to Evaluate Fish Community Sampling Data (Source: CH2M Hill)

	METRIC	SCORING CRITERIA 5	3	1
SPECIES RICHNESS AND COMPOSITION				
1.	Number of fish species	See Appendix G; Figure 1		
2.	Number of benthic species (darters, sculpins, madtoms, Alabama hogsucker, and jumprock species)	See Appendix G; Figure 2		
3.	Number of sunfish species (excludes bass)	See Appendix G; Figure 3		
4.	Number of native (cyprinid) species	See Appendix G; Figure 4		
5.	Number of sensitive species	See Appendix G; Figure 5		
6.	Proportion of tolerant species	< 5%	5 – 20%	> 20%
TROPHIC COMPOSITION				
7.	Proportion of omnivores	< 20%	20 – 45%	> 45%
8.	Proportion of insectivorous minnows (cyprinids)	> 45%	45 – 20%	> 20%
9.	Proportion of top carnivores	> 5%	5 - 1%	< 1%
FISH ABUNDANCE AND CONDITION				
10.	Catch per unit sampling effort (no./hr.), excluding the tolerant species	See Appendix G; Figure 6		
11.	Proportion of gravel/crevice spawners	See Appendix G; Figure 7		
12.	Proportion with disease/anomalies (DELT's)	0 - 2%	> 2 - 5%	> 5%

TABLE 3-20
IBI Scores, Integrity Classes, and Associated Attributes

Total IBI Score	Ecological Condition Category	Attributes
58 – 60	Excellent	Comparable to best situation without human disturbance; full array of size/age classes for all regionally expected species, including most intolerant forms; balanced trophic structure; optimum community structure for stream size and habitat quality
48 – 52	Good	Species richness somewhat below expectations; trophic structure showing some signs of stress; loss of most intolerant forms
40 – 44	Fair	Fewer species; more loss of intolerant forms; highly skewed trophic structure; older age classes of top predators
28 – 34	Poor	Dominated by tolerant species, habitat generalists, and omnivores; few top carnivores; hybrids and diseased fish often present; growth rates and condition factors depressed
12 – 22	Very Poor	Few fish present, mostly introduced or tolerant forms; hybrids common; disease, parasite, fin damage and other anomalies common

3.4.2.4 Fish Tissue Analysis

Fish tissue was collected only at SS-1 and at reference sites R-1 for chemical analysis. The objective of fish tissue sampling was to collect fillets from target species of edible fish to determine possible contaminant concentrations and human health risks associated with consuming these species from the study area.

Target species from two trophic levels were selected for analysis:

1) bottom-feeders, e.g., catfish/bullheads (ictalurids); and,

2) top predators, e.g., black bass (largemouth, redeye) or sunfish (redbreast, bluegill, etc.).

Bottom-feeders receive the greatest exposure to contaminants in the sediments due to their benthic life style, and top predators are at the highest level of the food chain and represent the total accumulation of contaminants in the system.

Fish were processed and analyzed in accordance with the guidance established by the DNR Fish Tissue Advisory Committee (FTAC, 1992). Fillets were extracted from select fish and composited for analysis. Attempts were made to collect at least two, similarly sized fish of the target species at each selected site. Fish were measured and weighed prior to processing. Scaled fish (i.e., top predator species) were processed by removing the scales and extracting skin-on fillets; bottom-feeding ictalurids were skinned and filleted.

The FTAC-recommended list of parameters and detection limits and FDA Action Levels are presented in Table 3-21. A total of 43 parameters were tested, including 13 metals, various pesticides, and PCBs. Currently, the Georgia DNR calculates a quantitative value for risk from consumption of fish containing carcinogens based on EPA risk assessment techniques (EPA, 1989; FTAC, 1992; Dourson and Clark, 1990). Fish consumption advisories are based on specific contaminant concentrations in fish tissue associated with a range daily intake levels, as follows:

Advisory	**Calculated Fish Intake**
(fish meal of 1/4 to 1/2 lb.)	(grams of fish per day)
Do not eat	Nil to 3
One meal per month	>3 to 10
One meal per week	> 10 to 30
No restriction	> 30

The DNR lists a water body as non supporting if a "no consumption/do not eat" fish advisory has been issued and lists as partially supporting a water body for which any restrictive consumption advisory (i.e., one meal per month or week) has been issued. The FDA also has "action levels" or tolerances for various constituents of concern which were used evaluate human health risk and were developed to protect consumers of commercial seafood in interstate commerce from fish contamination (see Table 3-21).

TABLE 3-21
Parameters and Screening Levels for Fish Tissue Contaminants

Parameter	FDA Action Level (ppm)	Requested Reporting Limit (ppm)	Parameter	FDA Action Level (ppm)	Requested Reporting Limit (ppm)
Metals by ICP			Chlorinated Pesticides		
Total Antimony		0.995	4,4'-DDD	5	9.5
Total Arsenic		0.0199	4,4'-DDE	5	9.5
Total Antimony		0.995	4,4'-DDT	5	9.5
Total Arsenic		0.0199	Aldrin	0.3	9.5
Total Beryllium		0.995	alpha-BHC		9.5
Total Cadmium		0.995	beta-BHC		9.5
Total Chromium		0.995	Chlordane	0.3	29
Total Copper		0.995	Chlorpyrifos		9.5
Total Lead		0.995	delta-BHC		9.5
Total Mercury	1.0	0.995	gamma-BHC		9.5
Total Nickel		0.995	Dieldrin	0.3	9.5
Total Selenium		0.0199	Endosulfan I		19
Total Silver		0.995	Endosulfan II		29
Total Thallium		0.995	Endosulfan sulfate		48
Total Zinc		0.995	Endrin	0.3	9.5
			Endrin aldehyde		9.5
Polychlorinated Biphenyls			Heptachlor	0.3	9.5
Aroclor 1016	2	29	Heptachlor epoxide	0.3	9.5
Aroclor 1221	2	29	Hexachlorobenzene		9.5
Aroclor 1232	2	29	Methoxychlor		48
Aroclor 1242	2	29	Mirex	0.1	95
Aroclor 1248	2	29	Pentachloroanisole		9.5
Aroclor 1254	2	29	Surr: Decachlorobiphenyl		30-150
Aroclor 1260	2	48	Surr: Tetrachloro-m-xylene		30-150

3.4.3 Results

Habitat assessments and macroinvertebrate sampling were conducted at the study sites on April 29 - 30, 1999. Fish sampling was conducted at the study sites on April 30 and May 3, 1999. The reference sites were assessed and sampled on May 11, 1999. The Game Creek site (SS-4) was re-sampled for macroinvertebrates on August 15, 1999 due to problems with the laboratory analysis.

The spring was unusually dry and warm in 1999, and stream levels were generally at base flow or lower. The droughty conditions may have resulted in depressed conditions across monitoring sites. Furthermore, reference sites received only about 1/3 of the precipitation as the study sites over the study period. This may have led to slightly increased depressed conditions at the reference sites, therefore making observed differences between study site biota and reference site biota even more pronounced.

3.4.3.1 Habitat Assessment

Photographs of the study and reference sites are presented in Appendix G, Section 3. Study site streams generally were small, often 10 feet wide or less, less than a couple of feet deep, with flow of only a couple of feet per second (cfs). The Long Island Creek (SS-1) and Marsh Creek (SS-6) sites were larger, i.e., 15 to 20 feet wide, up to 4 feet deep, with flow 5 cfs or more. Most streams had a moderate gradient, with substrates predominately composed of rock (gravel, cobble, rubble, and some bedrock). All streams had moderate to well developed riffle/ run complexes. The study streams generally had a moderate amount of in-stream habitat cover, including snags/limbs, rocks, undercut banks, and exposed tree roots, as well as good canopy cover. Discolored water and sewage odors were noted at the Game Creek and Powers Branch sites (SS-4 and SS-7, respectively). Both sites also had stormflow pipes within or directly above the study area.

All study sites had some degree of an orange-brown coating on rocks and other surfaces. It is a natural iron bacteria that oxidizes ferrous (reduced) iron. It is normally found in association with groundwater seepage areas where anoxic water is discharged to surface waters. However, it was observed in greater than "natural" abundance across the study areas. Because the hydrology of the Sandy Springs study area is altered (more impervious area = higher peak flows and lower baseflows), it is theorized that there is less infiltration throughout watersheds and thus less discharge of shallow (oxidized) groundwater to streams. The result is less dilution of shallow groundwater with deeper (anoxic) water. Therefore, the bacteria are better able to utilize ferrous iron and thus thrives and proliferates under such conditions. It is not known to what extent this bacteria has an adverse impact to biological communities. However, in areas where rocks are thickly coated, it is surely inhibiting spawning and growth of some species.

The in-situ water quality parameters measured at sites were within state water quality standards and acceptable levels for protection of aquatic biota (EPA, 1986). Water temperature ranged from 12.3 to 16.1 C, DO from 5.82 to 10.00 mg/L, pH from 6.99 to 7.48, conductivity from 61.6 to 96.0 S/cm, and turbidity from 1.8 to 7.4 NTUs (Table 3-22). However, site SS-4 (Game Creek had higher relative temperature and conductivity and lower dissolved oxygen. Since temperature and dissolved oxygen are influenced by diurnal fluctuations, continuous measurements are needed to verify actual trends. No residual chlorine was detected at any of the sites. The highest temperature and conductivities were measured at SS-4. The lowest DO was also at SS-4.

TABLE 3-22
IN SITU Water Quality Measurements

Study Sites	pH (s.u.)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Conductivity (S/cm)	Residual Chlorine (mg/l)
SS-1	7.06/7.34[1]	15.4/13.1	7.94/9.42	2.6/2.0	61.6/87.7	0/0
SS-4	6.80/7.08[2]	23.6/14.2	5.69/6.88	6.8/4.7	115.2/89.7	0/0
SS-5	7.48/7.49	13.6/12.5	9.57/10.07	1.8/1.8	69.9/71.6	0/0
SS-6	7.18/7.38	12.3/14.3	9.61/9.76	4.0/5.6	76.2/77.0	0/0
SS-7	7.22/7.40	12.3/14.8	10.00/10.03	7.4/3.2	63.2/61.9	0/0
R-1	6.83[3]	17.6	8.62	6.1	19.5	0/0
R-2	6.90	18.0	9.40	5.5	21.3	0/0

1 Water quality data collected twice during macroinvertebrate and fish sampling.

2 First set of data are from the resampling event (macroinvertebrates) on 8/15/99; second data set from fish sampling on 5/3/99.

3 Single sampling event; therefore, only one set of water quality data.

The results of the DNR habitat assessments are presented in Table 3-23. The habitat assessment scores for the reference sites were "suboptimal" at R-1 and "suboptimal to optimal" at R-2. R-1 was relatively more impacted than the R-2 primarily due to a heavier sediment load. These scores, while not perfect, are intended to represent the least impacted habitat, or the best attainable conditions for streams in the area.

TABLE 3-23
Habitat Assessment Results

STUDY SITE	GBP Score/ Condition Rating	Percent of Comparability/ Assessment Category
SS-1[1]	104.5 / Marginal to Suboptimal	77.0% / Similar
SS-4[2]	107 / Marginal to Suboptimal	65.6% / Partially Similar
SS-5[2]	115 / Suboptimal	70.4% / Partially Similar
SS-6[1]	134.5 / Suboptimal	99.1% / Comparable to Reference
SS-7[2]	109/ Marginal to Suboptimal	66.7%/ Partially Similar
R-1	135 / Suboptimal	N/A
R-2	163 / Suboptimal to Optimal	N/A

1 Compared to R-1.
2 Compared to R-2.

Sites SS-1, SS-4, and SS-7 had the lowest habitat scores. SS-6 received the highest percent of comparability to reference score. at 99.1%, within the "comparable to reference" assessment category. The next highest percent of comparability value (77.0%) was at SS-1, which scored as "similar" to the reference site. Study sites SS-4, SS-5 and SS-7 had like scores (65.6%, 70.4% and 66.7%, respectively), which were considered as "partially similar" to the reference site. All study sites showed some level of habitat degradation, however, all had fairly well-developed riffle/run complexes favorable for aquatic biota. All study sites had the sufficient amount of habitat to obtain adequate samples from riffles and sand/pool areas. However, none had the sufficient woody debris and undercut banks/roots, nor did they have emergent macrophyte beds. This is not surprising considering the differences in hydrology between undeveloped and developed watersheds and the consequence it has on geomorphology and channel substrate. High flows flush out woody debris and create scoured channels.

3.4.3.2 Bethic Macroinvertebrate Sampling

The raw benthic macroinvertebrate data are found in Appendix G, Section 4. Results of the benthic macroinvertebrate community assessments are found in Table 3-24. Comparison of the two reference sites to the pooled data/expectation criteria, R-1 scored in the "good" category, and R-2 was "good to very good."

All study sites were given a "poor" qualitative rating, with the exception of SS-4 which was “very poor,” when compared to the pooled data. Comparisons of study sites to R-1 and R-2 according to relative drainage size resulted in slightly improved scores. SS-1, SS-5, and SS-6 shifted from poor to good, SS-4 shifted from very poor to poor, and SS-7 remained in the poor category. Regardless of the method of comparison, sensitive taxa (Ephemeroptera, Plecoptera, and Trichoptera) were noticeably lacking across all study sites (EPT scores for all study sites were 0).

TABLE 3-24
Benthic Macroinvertebrate Metric Values, Ratings, and Total Scores for Study Stations in Sandy Springs Study Area

		Study Stations[2]													
Metric[1]		SS-1		SS-4		SS-5		SS-6		SS-7		R-1		R-2	
1.	Taxa Richness	69.0	3.00	59.0	1.00	57.0	1.00	54.0	1.00	45.0	1.00	75.0	3.00	84.0	5.00
2.	EPT Index	27.0	0.00	27.0	0.00	35.0	0.00	27.0	0.00	19.0	0.00	81.0	3.00	85.0	3.00
3.	Indicator Assemblage Index	35.0	0.00	48.0	0.00	25.0	0.00	45.0	1.00	51.0	1.00	62.0	1.00	94.0	5.00
4.	Percent Contribution of Dominant Taxon	21.2	3.00	25.4	3.00	15.9	5.00	19.0	5.00	18.7	5.00	18.2	5.00	7.9	5.00
5.	NCBI	71.0	3.00	66.0	1.00	80.0	3.00	71.0	3.00	71.0	3.00	92.0	5.00	1.1	5.00
6.	% Shredders	29.0	1.00	20.0	1.00	45.0	3.00	20.0	0.00	18.0	0.00	48.0	3.00	31.0	1.00
7.	Habit	77.0	3.00	65.6	1.00	70.4	1.00	99.1	5.00	66.7	1.00	100.0	5.00	100.0	5.00
Metric Score Sum			13.00		7.00		13.00		15.00		11.00		25.00		29.00
Percentage of Reference			37.00		20.00		37.00		43.00		31.00		71.00		83.00
Qualitative Rating		Poor		Very poor		Poor		Poor		Poor		Good		Very good/good	

[1] Metrics 2 and 4 were rated using the multi-habitat sample. Metric 1 was rated using the total of the CPOM and the multi-habitat sample. Metric 5 was rated using the CPOM sample.

[2] The first column represents the metric value and the second column represents the metric score. The sum at the bottom of the table is calculated using the metric scores. The final GBP rating is based on a comparison of study station total scores to reference station total score.

3.4.3.3 Fish Community Sampling

Fish community sampling yielded 21 species of fish plus one hybrid sunfish species. A total of 762 specimens were collected, dominated by minnow and sunfish species (8 and 6 species, respectively). Fish collection data are found in Appendix G, Section 5. No federally protected fish species were found in the study area.

Three of the sites, SS-4, SS-5 and SS-7, were particularly small (drainage area < 3 mi.^{2}). These three sites also had the lowest number of fish collected (26, 39 and 8, respectively). The low numbers of fish collected at some of the smaller study sites was due in part to the very small stream size (depth and width) at these locations and the lack of deep pools. Numerous researchers have reported on the relationship between stream size and species richness, i.e., species richness generally increases with stream size/order (Karr, 1981; Fausch *et al.*, 1984; OEPA, 1988). These low numbers, however, may also reflected the degraded habitat conditions and poor water quality.

A summary of the IBI scores is shown in Table 3-25. Under the CH2M Hill protocol, reference sites R-1 and R-2 were classified as having "fair to good" and "excellent" biotic quality/integrity, respectively. The highest scoring study sites were SS-1 and SS-5 and only scored "fair to poor". SS-7 scored the lowest.

TABLE 3-25
Fish Community IBI Metric Values, Ratings, and Total Scores for Study Stations

	Study Stations[2]													
Metric[1]	**SS-1**		**SS-4**		**SS-5**		**SS-6**		**SS-7**		**R-1**		**R-2**	
1. Number of native fish species	10	3	1	1	4	1	6	3	1	1	12	5	12	5
2. Number of darter, sculpin, madtom, hogsucker, And jumprock species	2	3	0	1	0	1	0	1	0	1	4	5	3	5
3. Number of identity of sunfish species	4	5	2	5	2	5	2	3	2	5	2	5	1	5
4. Number of minnow species	4	3	0	1	2	3	3	3	0	1	4	3	5	5
5. Number of sensitive species	1	1	0	1	0	1	0	1	0	1	3	3	2	5
6. Proportion of tolerant species	21.5	1	3.8	5	23.1	1	29.5	1	12.5	3	2	5	0.5	5
7. Proportion of individuals as omnivores	6.8	5	0	5	7.7	5	44.3	3	0	5	10.6	5	10.7	5
8. Proportion of individuals as insectivorous minnows	24.3	3	0	1	35.9	3	0	1	0	1	32.9	3	50	5
9. Proportion of individuals as piscivores	0	1	0	1	5.1	5	0	1	0	1	0	1	2.8	3
10. Catch per unit effort (no./hr.) excluding tolerant species	345	3	159	1	205	3	213	3	44	1	342	3	570	5
11. Percent gravel/crevice spawners	31.1	3	0	1	43.6	3	50.3	5	0	1	65.1	5	86.9	5
12. Percent DELT anomalies	0	5	0	5	0	5	0	5	0	5	2.01	3	0.5	5
Metric Score Sum		36		28		36		30		26		46		58
Qualitative Rating	Fair-Poor		Poor		Fair-Poor		Poor		Poor- Very Poor		Fair-Good		Excellent	

1. Metrics 1-5, 10, and 11 were rated against the reference stations using a watershed area curve. Metrics 6-9 and 12 were rated using the fixed criteria prescribed in the IBI and RBP (Karr et al., 1986 and Plakfin et al., 1989)
2. The first column represents the absolute metric value or raw score and the second column represents the metric rating. The sum at the bottom of the table is calculated using the metric rating and represents the final IBI score.

Two replacement metrics also were evaluated. Since the streams in this study were all relatively small (all less than 8 mi.^{2}, many at 2 mi.^{2} or less), two of the metrics associated with larger streams with deeper pools were evaluated for replacement. The sunfish and top carnivore metrics were replaced with number of native sucker species and percentage of pioneering species metrics. The native sucker metric is frequently used in IBI scoring, including Karr's original work (Karr, 1981; Karr *et al.*, 1986; Plafkin *et al.*, 1989; DeVivo *et al.*, 1997). The DNR's Ft. Valley Fisheries Office also developed an IBI based on Karr's original work, which included the sucker metric and which substituted pioneer species for the top carnivores metric in small streams, i.e. first- through third-order streams, such as those found in this study. The Ohio EPA (1988) also found that the number of sunfish species in headwater streams (< 20 mi.^{2}) tends to be quite low and may controlled more by pool quality alone rather than overall stream quality. Substituting these two metrics resulted in only one change to study site classifications: SS-5 changed from "fair to poor" to "poor." R-1 changed from "fair to good" to "good" and R-2 changed from "excellent" to "good to excellent". It is believed that substituting these two metrics provides a more accurate assessment of the fish communities in the study area.

3.4.3.4 Fish Tissue Analysis

A summary of the fish collected for tissue analysis at each site is presented in Table 3-26. All the target species collected were redbreast sunfish. Despite extensive sampling effort, no suitably sized bottom-feeders (ictalurid) were collected for analysis at any these sites.

TABLE 3-26
Summary Data for Fish Collected for Tissue Analysis

Species	Length (mm)	Weight (g)
STATION SS-1		
Redbreast sunfish	170	108
Redbreast sunfish	168	82
Redbreast sunfish	140	52
STATION R-1		
Redbreast sunfish	165	83
Redbreast sunfish	170	96
STATION R-2		
Redbreast sunfish	147	45
Redbreast sunfish	148	70
Redbreast sunfish	155	97
Redbreast sunfish	159	78

The fish tissue analytical results are found in Appendix G, Section 6, and the results are summarized in Table 3-27. At the study site SS-1, all the chlorinated pesticide and PCB levels were below detection limits. Only 2 of the 43 parameters were above their respective detection limit: mercury at 0.137 parts per million (ppm) and zinc at 13 ppm. The mercury level was considerably below the FDA Action Level of 1.0 ppm. Although the samples were evaluated for total mercury, it is assumed that all the mercury detected in the fish tissue is methyl mercury. There is no FDA Action Level for zinc.

TABLE 3-27
Results of Fish Tissue Screening

	Study Station (SS-1)	**Reference Station (R-1)**		**Study Station (SS-1)**	**Reference Station (R-1)**
Parameter[1]	Reported Concentrations*		Parameter[1]	Reported Concentrations*	
Metals			Chlorinated Pesticides		
Total Antimony	-	-	4,4’ DDD	-	-
Total Arsenic	-	0.0203	4,4’ DDE	-	-
Total Beryllium	-	-	4,4’ DDT	-	-
Total Cadmium	-	-	Aldrin	-	-
Total Chromium	-	-	alpha-BHC	-	-
Total Copper	-	-	beta-BHC	-	-
Total Lead	-	-	Chlordane	-	-
Total Mercury	0.137	0.151	Chlorpyrifos	-	-
Total Nickel	-	4.12	delta-BHC	-	-
Total Selenium	-	-	Dieldrin	-	-
Total Silver	-	-	Endosulfan I	-	-
Total Thallium	-	-	Endosulfan II	-	-
Total Zinc		16.2	Endosulfan sulfate	-	-
Organic-Pesticides/PCB’s			Endrin	-	-
Aroclor 1016	-	-	Endrin aldehyde	-	-
Aroclor 1221	-	-	gamma-BHC	-	-
Aroclor 1232	-	-	Heptachlor	-	-
Aroclor 1242	-	-	Heptachlor epoxide	-	-
Aroclor 1248	-	-	Hexachlorobenzene	-	-
Aroclor 1254	-	-	Methoxychlor	-	-
Aroclor 1260	-	-	Mirex	-	-

Results are presented in parts per million (ppm)

As at SS-1, no chlorinated pesticide or PCB levels were above detection limits for the reference station. Similarly, mercury and zinc concentration levels were above their detection limits at the reference site in similar concentration as found at SS-1: mercury levels of 0.151 ppm, and zinc concentration levels at 16.2 ppm at R-1. The mercury levels at the reference site were below the FDA Action Level of 1.0 ppm. Two additional metals were measured above their detection limits at R-1. Arsenic levels were just above detection at 0.0203 ppm (detection limit of 0.02 ppm), and nickel was at 4.12 ppm. No FDA Action Levels exist for either of these metals.

Table 3-28 summarizes the calculations for DNR’s fish consumption advisories for the parameters above detection, i.e. nickel, zinc, arsenic, and mercury. All these parameters were below the concentrations calculated for issuing any tissue advisories. All concentrations were in the “zero restriction” category, which means no impairment was found for any fish tissue samples.

TABLE 3-28
DNR Fish Consumption Advisory Calculations

Detected Parameter	Daily fish intake (mg/kg)						Tissue Concentration (mg/kg)			
	3 g/day		10 g/day		30 g/day					
	NC	C	NC	C	NC	C	SS-1	R-1	R-2	Result
Arsenic	7	3.6	2.1	1.1	0.7	0.4	BDL	0.0203	BDL	Unlimited consumption [1]
Nickel	467	---	140	---	47	---	BDL	4.12	BDL	Unlimited consumption
Zinc	7000	---	2100	---	700	---	13.0	16.2	12.1	Unlimited consumption
Mercury[2]	2.33	---	0.70	---	0.23	---	0.137	0.151	0.127	Unlimited consumption

NC Noncancer endpoint
C Cancer endpoint
BDL Below Detection Limit
[1] No impairment
[2] Assumes in form of methyl mercury.

3.4.4 Discussion

Stream degradation generally increases and biotic integrity decreases with increased urbanization and impervious surface area in the watershed (Mikalsen, 1993; Waters, 1995; EPA, 1998). Stream degradation has been linked to as little as 10 percent watershed impervious cover (Schueler, 1995). The Sandy Springs study area is highly developed with a mix of commercial and residential land use. Stream channels are scoured to some degree throughout the study area due to high volume and velocity flows. High flows are a result of 1) underground piping of streamflow and 2) a high concentration of impervious areas.

Tables 3-29 and 3-30 summarize water quality and habitat and biological sampling results. Habitat was less than optimal across study sites and was different from the reference sites due in large part to differences in the hydrologic regime of streams draining developed watersheds. However, there was adequate cobble/gravel substrate and riffle/run habitat. Nevertheless, both macroinvertebrate and fish community results indicate that biota (macroinvertebrates and fish) are generally impaired across sites. Water quality, perhaps from the pesticide Heptachlor epoxide, is thought to have a greater effect on the degraded state of the biota rather than the habitat. The scouring effect from extremely high flows may also have a significant effect on the macroinvertebrate communities, flushing them downstream with insufficient time between storm events to fully recover.

TABLE 3-29
Water Quality Impairment Ratings

Site	Relative Impairment Rating	Water Quality Issues	Potential Pollutant Sources
SS-1	Moderate-Severe	Fecal Coliform, habitat, biota	Sanitary Sewer Leaks/Overflows
SS-2	Severe	Fecal coliform, TSS, P, N, habitat, biota, Heptachlor epoxide	Sanitary Sewer Leaks/Overflows, dumpster leachate, contaminated sediments, impervious runoff, residential land use
SS-3	Moderate	Fecal coliform, N	Sanitary Sewer Leaks/Overflows, residential land use
SS-4	Severe	Fecal coliform, N, Heptachlor epoxide	Sanitary Sewer Leaks/Overflows, Illicit Discharge, contaminated sediments, impervious runoff
SS-5	Severe	Fecal coliform, TSS, P, N, biota, Heptachlor epoxide	Sanitary Sewer Leaks/Overflows, contaminated sediments, impervious runoff, residential land use
SS-6	Severe	Fecal coliform, TSS, P, N, biota, Heptachlor epoxide	Sanitary Sewer Leaks/Overflows, dumpster leachate, impervious runoff, contaminated sediments
SS-7	Moderate	Fecal coliform, biota, Heptachlor epoxide	Sanitary Sewer Leaks/Overflows, impervious runoff, contaminated sediments

TABLE 3-30
Summary of Habitat and Biological Monitoring Results

Site	Habitat Assessment	Macroinvertebrate Rating	Fish (IBI) Rating
SS-1	Marginal-suboptimal	Poor	Fair-poor
SS-4	Marginal-suboptimal	Very poor	Poor
SS-5	Suboptimal	Poor	Fair-poor
SS-6	Suboptimal	Poor	Poor
SS-7	Marginal-suboptimal	Poor	Poor-very poor
R-1	Suboptimal	Good	Fair-good
R-2	Marginal-suboptimal	Very good-good	Excellent

The fish community data should be viewed cautiously given the very small size of the study streams. While some credence should be placed on these data, a more accurate assessment of biotic integrity at the study sites should be derived from the macroinvertebrate, habitat and water quality information. There are no apparent fish consumption problems at the sampled sites. Most parameters were below detection, and those above were not at levels dangerous to human health. The "no restriction" findings under the DNR's consumption advisory category indicate that the sampled study sites are do not have a limitation on consumption of fish caught in the streams.

Recommendations

- **Reduce pollutant loadings.** This can primarily be addressed through improvements to the sanitary sewer system as discussed in the water quality recommendations. Sanitary sewer overflows are thought to be the primary of contributor of fecal coliform and the various nitrogen species.
- **Reduce channel scouring.** On-site and regional detention structures should be designed to reduce peak flow rates and flow volumes in areas determined to have erosive flows. They would also minimize re-suspension of bed and bank sediments.
- **Stabilize stream channels in severely eroded areas**. Severely eroded stream banks should be stabilized to reduce for degradation and sediment loading to the stream.
- **Conduct additional sampling to determine impact of Heptachlor Epoxide on stream biota.**

3.5 Flow Monitoring

3.5.1 Approach

Flow monitoring is an essential component of watershed monitoring and was conducted to determine stream velocity and discharge rates under baseflow and stormflow conditions. Two methods of flow measurement were utilized for the Sandy Springs study area to obtain continuous discharge for each site. Manual flow monitoring was performed to obtain instantaneous stage and discharge data at each monitoring station in the Sandy Springs study area under both dry weather and wet weather conditions. The data from each monitoring station was used to establish rating curves that could be used to calculate discharge as a function of stage. At several of the monitoring stations, automated flow monitoring equipment was utilized to obtain continuous records of stage and velocity at those stations throughout the study period. Continuous stage data was correlated to stage data recorded from staff gauges installed at each site and a continuous record of discharge was determined.

3.5.2 Methods

This section describes the methods used to conduct flow monitoring during this study.

3.5.2.1 Manual Flow Monitoring

A staff gauge was installed and a channel cross section location was established at each of five monitoring stations for repeated measurement throughout the study period. The cross section location was selected within a straight reach of stream, preferably where a level streambed was cut into bedrock, where laminar flow would create optimal conditions for measurement of average flow across the channel.

Manual flow monitoring was conducted using the following procedures. At the established cross-section location, a tape measure was suspended tightly across the stream channel just above the surface of the water. The width of the active channel was recorded on a field data sheet. Flow measurements and stream depth were taken at a minimum of 20 points across the cross-section defined by the tape measure. During storm events when the stage was changing rapidly, the number of points within the cross-section was reduced. Flow measurements were made using either a Marsh McBirney Flo-Mate 2000 flow meter with a top-set wading rod or a bridgeboard if the stage was too elevated for safe wading. In water less than three feet deep, velocity was measured at 6/10 the recorded depth, measured from the water surface. In water more than three feet deep, velocity was measured at 2/10 and 8/10 depth to obtain an average flow within the water column.

To obtain average discharge within the channel cross-section, the discharge around each measurement point along the cross-section was calculated as area times velocity (A*V), and the products summed. For example, the area around measurement point "2" is defined as half the distance from point "3" to point "1" times the depth at point "2".

3.5.2.2 Automated Flow Monitoring

A Sigma 900 MAX portable automated liquid sampling unit configured with a Sigma Model 930 area/velocity flow probe were installed at four of the seven monitoring stations in the Sandy Springs study area and at the reference station R-1. Stage and velocity measurements were recorded every 15 minutes under base flow and storm flow conditions throughout the four-month study period.

3.5.2.3 Creation of Rating Curves and Discharge Database

First, rating curves were established for each monitoring station by plotting all of the stage and discharge data collected at that station. Curves were then fitted to the data and R^2 values were calculated for each curve. The curve with the highest R^2 value was then selected as the rating curve for that particular stream. Figure 3-13 shows the graphical relationship between stage and discharge at Heards Creek, Station SS-5.

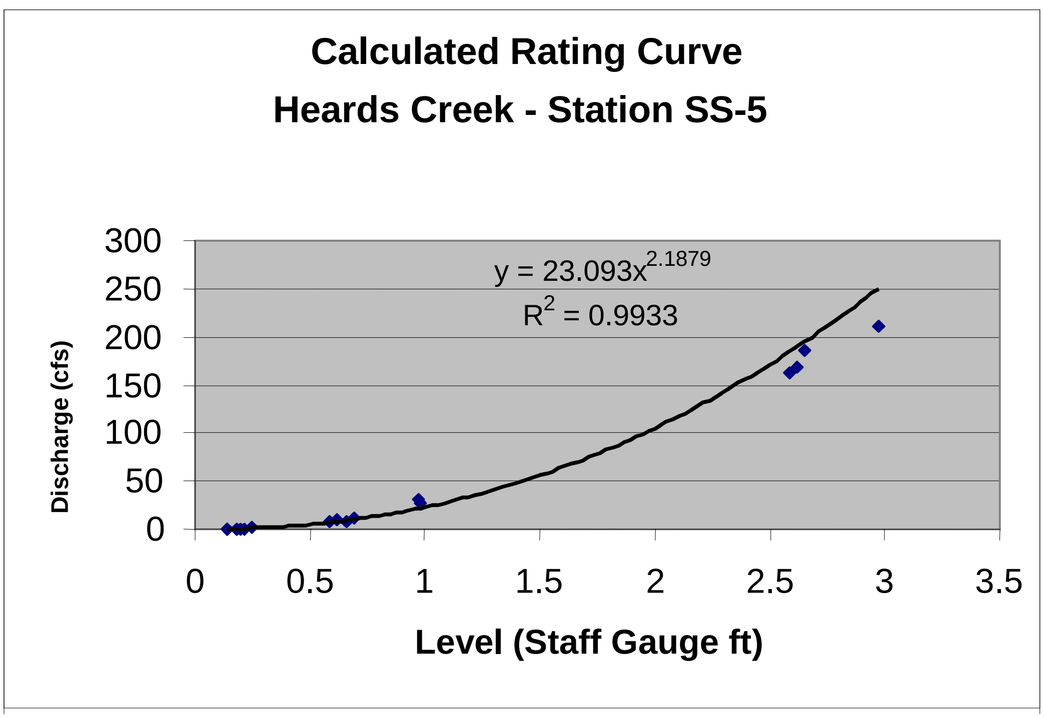


FIGURE 3-13
Calculated Rating Curve for Heards Creek

At the manual stations, this relationship was applied to all stage measurement recorded at the station to develop a record of discharge at the station. This record was then used in the calibration of the hydrologic models for these stations.

At the automated stations, a relationship was determined between instantaneous staff gauge readings and stage readings recorded by the Sigma unit at the same moment in time. After this relationship was established, the continuous record of automated stage readings was converted to a continuous record of staff gauge readings. The rating curve was then applied to the continuous record of staff gauge readings and a continuous record of discharge was generated for use in the calibration of the hydrologic models.

The recorded velocity data and the estimates of discharge calculated by the Sigma units were used only in limited circumstances in this study. This was necessary because no reliable relationship could be established between the Sigma generated velocity data and the manually generated velocity data. The velocities recorded by the Sigma units were usually not representative of the average velocity obtained from detailed manual streamflow measurements.

3.5.3 Results

The flow monitoring results were used to build rating curves for each of the monitored streams in the Sandy Springs study area. These data was also used to compare the response time of the undeveloped watershed above the reference station to the highly developed watersheds above the monitoring stations in the Sandy Springs study area. The streams in Sandy Springs responded to rainfall events more rapidly than the reference station. The streams in Sandy Springs were also observed to peak faster, with higher peak stages and greater velocities than were observed for similar storm at the reference station. However, it should be noted that rainfall at the reference station was observed to be approximately 5″ less than in the Sandy Springs study area during the 4-month monitoring period. This deficit precludes making a true comparison between study stations and the reference station.

Rating curves were established for all monitoring stations and continuous records of discharge were calculated for stations with automated sampling equipment. The only exception was station SS-1, located on Long Island Creek at Northside Drive. This station is a permanent Fulton County monitoring station and is served by a continuous power supply. This station suffered power outages and blown fuses continuously throughout the project. Every effort was made to correct these problems. The head unit was changed out on two occasions, and at one point a battery operated unit was installed as a backup to the unit on permanent power supply. Regardless of the effort to repair the station, the automated stage and velocity dataset generated by this equipment is incomplete and considered unreliable.

3.5.4 Discussion

Stage and discharge monitoring results indicated that the streams in the Sandy Springs study area respond quickly to rainfall events. Significant changes in stage and discharge volume were observed in a very short time period following the beginning of a rainfall event. The discharge volumes are considered to be high relative to the size of the individual streams. Many of the problems associated with discharge volume may be attributed to the age of the development in the study area. Many of the homes and commercial developments in the Sandy Springs study area were constructed more than 25 years ago. Few developments have stormwater management facilities where stormwater controls were constructed; most have failed or are close to failure (discussed in data collection section). Restoration or improvement of these structures and construction of new structures where feasible should significantly decrease stormflow volumes and decrease erosion and sediment loading problems within the study area.

3.6 References

DeVivo, J.C., C.A. Couch, and B.J. Freeman. 1997. *Use of a preliminary index of biotic integrity in urban streams around Atlanta, Georgia.* Pages 119-121 *in* K.J. Hatcher, Editor. *Proceedings of the 1997 Georgia Water Resources Conference*, March 20-22, Carl Vinson Institute of Ecology, University of Georgia, Athens, GA.

Dourson, M.E., and M.J. Clark. 1990. *Fish consumption advisories: toward a unified, scientifically credible approach*. Reg Toxicol. Pharmacol. 12:161-178.

DNR (Georgia Department of Natural Resources). 1997. *Draft Standard Operating Procedures:Freshwater Macroinvertebrate Biological Assessment*. Environmental Protection Division, Watershed Planning and Monitoring Program, Atlanta, GA.

EPA (U.S. Environmental Protection Agency). 1986. *Quality Criteria for Water*. EPA 440/5-86-001. Office of Water, Regulations and Standards, Washington, DC.

EPA. 1989. *Assessing Human Health Risks from Chemically-Contaminated Fish and Shellfish: A Guidance Manual*. Office of Marine and Estuarine Protection, Washington, DC.

EPA. 1990. Biological Criteria: *National Program Guidance for Surface Waters. EPA-440/5-90-004*. Criteria and Standards Division, Office of Water Regulations and Standards, Washington, DC.

EPA. 1998. *Stream Corridor Restoration: Principles, Processes, and Practices*. Prepared by the Federal Interagency Stream Restoration Working Group.

Fausch, K.D., J.R. Karr, and P.R. Yant. 1984. *Regional application of an index of biotic integrity based on stream fish communities*. Transactions of the American Fisheries Society 113:39-55.

FTAC (Fish Tissue Advisory Committee). 1992. *Recommendations for a Fish Tissue Monitoring Strategy for Freshwater Lakes, Rivers, and Streams*. Prepared for Georgia Department of Natural Resources, Enviornmental Protection Division & Games and Fish Division.

Karr, J.R., K.D. Fausch, P.L. Angermeier, P.R. Yant, and I.J. Schlosser. 1986. *Assessing Biological Integrity in Running Waters: A Method and Its Rationale*. Special Publication 5. Illinois Natural History Survey.

Hippe, D.J., D.J. Wangsness, E.A. Frick, and J.W. Garrett. 1994.*Water Quality of the Apalachicola-Chattahoochee-Flint and Ocmulgee River Basins Related to Flooding from Tropical Storm Alberto.* Water Resource Investigations Report 94-4183.

Karr, J.R. 1981. *Assessment of biotic integrity using fish communities*. Fisheries 6:21-27.

Kay D., A.T. McDonald. 1982. *Enteric Bacterial Entrainment in a Recreational Channel Following Reservoir Releases for Competitive Canoeing.* Cambria 9: 61.

McDonald, L.H., and A.W. Smart, and R.C. Wissar. 1991. *Monitoring guidelines to evaluate effects of forestry activities on streams in the Pacific Northwest and Alaska*. EPA/910/9-91-001. 166 p.

Mikalsen, T. 1993. Managing the quality of urban streams in Georgia. *Proceedings of the 1993 Georgia Water Resources Conference*, K.J. Hatcher, Editor. University of Georgia Institute of Natural Resources, Athens, GA.

OEPA (Ohio Environmental Protection Agency). 1988. *Biological Criteria for the Protection of Aquatic Life: Volume II: Users Manual for Biological Field Assessment of Ohio Surface Waters.* Division of Water Quality Monitoring and Assessment, Columbus, OH.

Plafkin, J.L., M.T. Barbour, K.D. Porter, S.K. Gross, and R.M. Hughes. 1989. *Rapid Bioassessment Protocols for Use in Streams and Rivers: Benthic Macroinvertebrates and Fish. EPA/444/4-89-001*. U.S. EPA, Assessment and Watershed Protection Division, Washington, D.C.

Schueler, T. 1995. *The Importance of Imperviousness*. Watershed Protection Techniques 1(3):100-111.

Waters, T.F. 1995. *Sediment in Streams: Sources, Biological Effects, and Control*. American Fisheries Society Monograph 7, Bethesda, MD.

4.0 Storm Water Modeling Results

4.1 Introduction

Storm water modeling was conducted to determine the areas with flooding and stream erosion problems. Once those areas were identified, the models were then used to evaluate watershed management scenarios to determine if the flooding and stream erosion problems could be minimized or eliminated. This section provides documentation on modeling existing and future conditions to assess flooding and stream erosion problems.

4.2 Hydrologic and Hydraulic Modeling Methodology

Hydrologic modeling was performed using the Storm Water Management Model (SWMM) version 4.44, released February 5, 1998. SWMM was used to analyze both the hydrology and hydraulics of the stream systems within each study area. The RUNOFF block of SWMM calculates the volume of water that enters streams as a result of rainfall events. The RUNOFF block can be run continuously over a long time period (many years) or it can be run for single rainfall events. The EXTRAN block routes the water through stream channels, storm drains, and bridges. The EXTRAN block provides information on velocity, water depth, and flow as affected by backwater. SWMM simultaneously solves the RUNOFF and EXTRAN blocks for streams affected by backing up of water behind bridges or constrictions.

This model requires a significant amount of data to provide accurate results. Data that applies across Fulton County (infiltration parameters, rainfall data, evaporation data, etc…) were shared amongst the consultant firms. Drainage system specific data (cross-sections, structure data, etc…) were collected by each firm as necessary for storm water modeling. The following is a list of data used for storm water modeling and the source of the data.

There are no permanent USGS gages in the Sandy Springs study area, therefore Brown and Caldwell utilized stream gaging data for baseflow and wet weather conditions. These data were described above in section 3.4. Gaging stations were installed in watersheds with different types of land use to assist in calibration. The calibration of models for each watershed utilized the stream flow data collected in that watershed. Calibration parameters for watersheds that were not monitored were taken from the watershed where flows were available.

TABLE 4-1
Sources of Data for Hydrologic and Hydraulic Modeling

Modeling Data	Source
Orthophotos	February 1999 aerial photogrammetry provided by this study
Catchment Delineation	Determined from topography and infrastructure inventory
Land Use	
Present	Coverages based upon orthophotos
Future	Fulton County Dept. of Planning and Economic Development
	Coverage modified by consultant to reflect existing areas where existing land use is more dense than zoned. See text below
Impervious Values	
Present	Values based upon orthophotos and field-verified
Future	Values generated from present conditions analysis
Rainfall	Hartsfield Airport data, 15-minute interval
	Local rain gages (USGS, I/I study, etc…)
Type II Design Storms	2-yr.: 3.49 inches; 5-yr.: 4.84 inches; 10-yr.: 5.81 inches; 25-yr.: 6.84 inches; 50-yr.: 7.61 inches; 100-yr.: 7.93 inches; All 24-hr duration
	Rain gages installed in various sub-basins as part of this project
Evaporation	Data from NOAA downloaded from EPA BASINS program, data collected from Lake Alatoona
Infiltration	Values based upon SCS hydrologic soil groupings, Horton Eqn.

Future land use data received from the County could not be used to reflect probable development trends in the watershed because existing land use was often more dense with higher imperviousness than zoning classification. Currently developed areas were retained from the existing land use classification. It is assumed that these areas (e.g. water bodies, parks, highways, commercial/industrial, high density residential, etc.) will not change in the future. Only the developed areas presently classified as low density residential were changed to a higher density classification. Not all lower density residential was changed to a higher density classification. Some areas of low density residential neighborhood shown by zoning to be a higher density were not changed to the higher density when the area was part of an established larger low density residential neighborhood. The remaining currently undeveloped areas (e.g. forest, agriculture, transitional, etc.) were converted to their designated future land use classifications.

Future land use classifications were also modified to correspond to present land use classifications. This facilitated the identification of development trends and problem areas. For example, a future land use classification of Living/Working Corridor along Georgia 400 was not used, but the existing land use classifications for that area (e.g. commercial, high density residential) were used.

The following approach was taken to construct the hydrologic models:

1. Orthophotos and contours were used to define catchment boundaries. Structural inventory survey data were used to refine catchment boundaries for areas where storm drainage systems did not follow topography. This was particularly important where the boundaries for Marsh Creek, Long Island Creek, and Colewood Creek (Tributary 7) all coincide. Construction of commercial establishments and drainage structures modified the natural drainage patterns.

2. Catchment area, impervious percent, width, slope, and infiltration values were obtained for each catchment. These values were taken from digitized street and building footprints. Connectivity of runoff from each catchment is input into the EXTRAN block of SWMM.

3. The RUNOFF block of SWMM was developed with rainfall data, evaporation data and catchment data.

4. The RUNOFF block was executed for the entire sub-basin to establish runoff hydrographs for each catchment. Hydrographs were checked to determine if they were reasonable.

The hydraulic models were then developed. The following approach was used:

1. Structural inventory, survey data, orthophotos, and contours were used to define the model system. The model system was based on the following:

   - natural channel sections using surveyed cross-section data,
   - trapezoidal channel sections where surveyed cross-section data did not exist,
   - stormwater pipes where drainage system is underground,
   - weirs and culverts or bridges at road crossings,
   - storage locations (ponds, constrictions, etc…).
   - cross-section locations, invert elevations, physical dimensions, etc… for each model link (channels, pipes, etc.).

2. The EXTRAN block of SWMM was constructed using the above listed data.

3. The EXTRAN block for the entire sub-basin was used to establish streamflow hydrographs for various points within the sub-basin.

The hydrologic models were then used with the hydraulic model to identify problem areas and propose solutions. The approach for this effort is described below:

1. Results from hydraulic modeling were compared to measured stream flow hydrographs collected by in-stream flow recorders where applicable. Rainfall data were obtained from within the watershed or near the watershed. The calibration used short-term stream flows collected as part of the study for watersheds because there were no historical stream flow records available within the Sandy Springs study area. Two storms (one small and one large) were used for calibration, and at least one different storms (one large or one small, depending on available data) were used for verification. This comparison helped to determine if parameters needed to be modified to calibrate model.
2. For watersheds without monitoring data, model parameters were used from the nearest watershed with comparable landuse that was been both gaged and modeled.

3. Areas requiring in-depth study were selected utilizing information from the hydrologic and hydraulic modeling, customer reports of problems, and input from County staff.
4. Once the model was calibrated, design storm scenarios were evaluated (2, 10, 25, 50, and 100-year frequencies) to identify problem areas. Because future land use was similar to existing land use, the hydrologic and hydraulic modeling of design storms was only run for future conditions.
5. The models were refined in areas of concern to facilitate the development of solutions for identified existing and/or future problems. Enclosed storm drains were explicitly modeled where necessary. Storage nodes were added to simulate the effect of detention ponds. Information added included storage/stage/discharge tables and pond surface area. Outlet hydraulic and storage characteristics were modified to achieve desired peak flow reductions. On-site BMPs were modeled by changing percent impervious values for the catchment.
6. The modeling team focused on multi-objective projects, non-structural approaches, and coordination with other County activities. BC staff met with Fulton County staff on a number of separate occasions to discuss the modeling results and explain the types of scenarios being considered.
7. Potential problem areas for structure inundation, road over-topping, and stream erosion were identified.
8. Flood prone reaches were evaluated to determine if storm water management alternatives could address the problems. Negative and positive impacts of retention/detention facilities were evaluated for both existing and future facilities. Flood proofing and non-structural mitigation alternatives were evaluated in addition to structural alternatives.
9. BC identified opportunities to reduce overtopping of structures, flooding problems associated with backwater conditions, and evaluated downstream impacts from upgrading stream crossings to reduce overtopping or backwater conditions.
10. BC identified areas where both existing and future design storm velocities present the potential for stream and stream bank erosion using the 2-year 24-hour storm event.
11. Cross-sectional and structural data were converted to HEC-RAS format.
12. The EXTRAN flows were used as inputs to the HEC-RAS model.
13. Flood maps were developed for the 100-year storm event.
14. Solutions to problems were evaluated.

4.2.1 Existing Conditions

Calibration for Sandy Springs streams was based on stream flow data collected during the monitoring period which ran from May through October, 1999. Stream flow data was collected for Long Island Creek, Game Creek, Heards Creek, Marsh Creek, and Powers Branch. **Figure 4-1** illustrates calibration results for Heards Creek. Calibration results for Long Island Creek at Lake Forrest Road are presented in **Figure 4-2**. The main parameters used to calibrate the models were percent imperviousness and depression storage. In the modeling of Heards Creek, predicted output for September 9, 1999 was compared to measured output. The model was relatively close to observed values without any adjustment. A field inspection of impervious areas in selected catchments indicated that a number of driveways drained to backyards and were not directly connected to the storm drain system. Also, there are numerous trees in the Heards Creek watershed that cover the road surface of neighborhood streets. The directly connected impervious percentages were reduced to reflect this condition. Directly connected imperviousness was 85 percent of total imperviousness, the value of impervious depression storage used in the Heards Creek model was 0.15 inches, and the value of pervious depression storage was set at 0.2 inches. The depression storage primarily affects the response of the stream to small rainfall amounts. These values are insignificant for rainfall events in excess of approximately 1.5 inches of rainfall.

The model for upper Long Island Creek (uLIC) was originally set up using the directly connected impervious area (DCIA) and depression storage values from the Heards Creek model. Using this set up, the uLIC model over-predicted flow for the measured storms (see Figure 4-2). After a careful quality assurance check of stream flow data reduction procedures, DCIA was reduced to 50% of measured total imperviousness. This adjustment was also necessary for BASINS modeling. Mid and lower Long Island Creek catchments were modeled assuming that DCIA was equal to 85% of total impervious area.

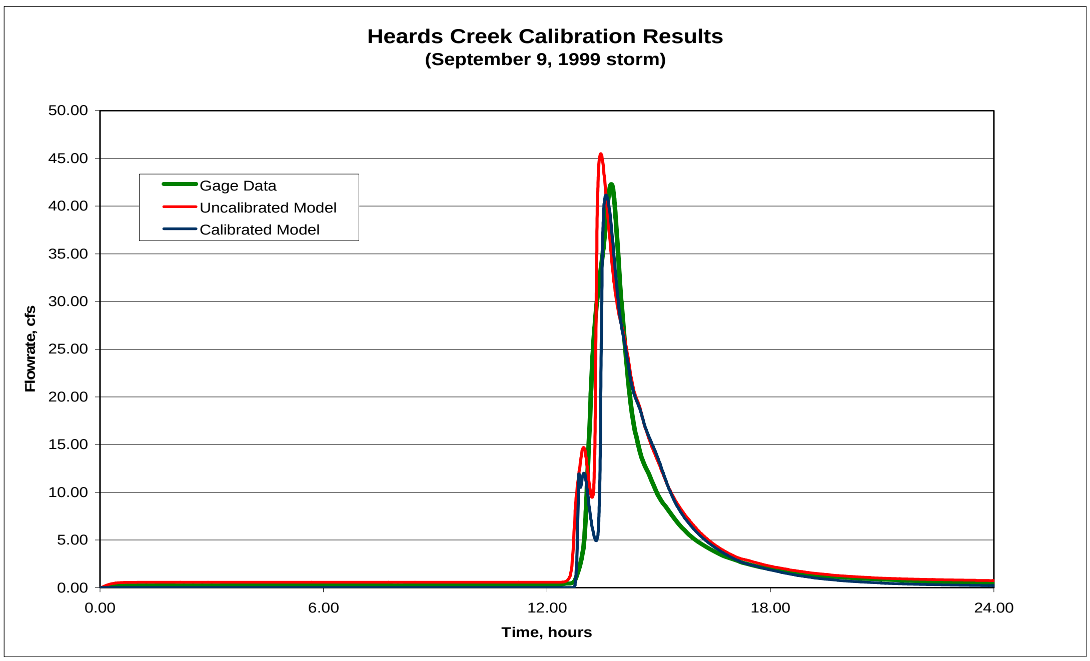


FIGURE 4-1
Heards Creek Calibration Results, September 1999 Storm

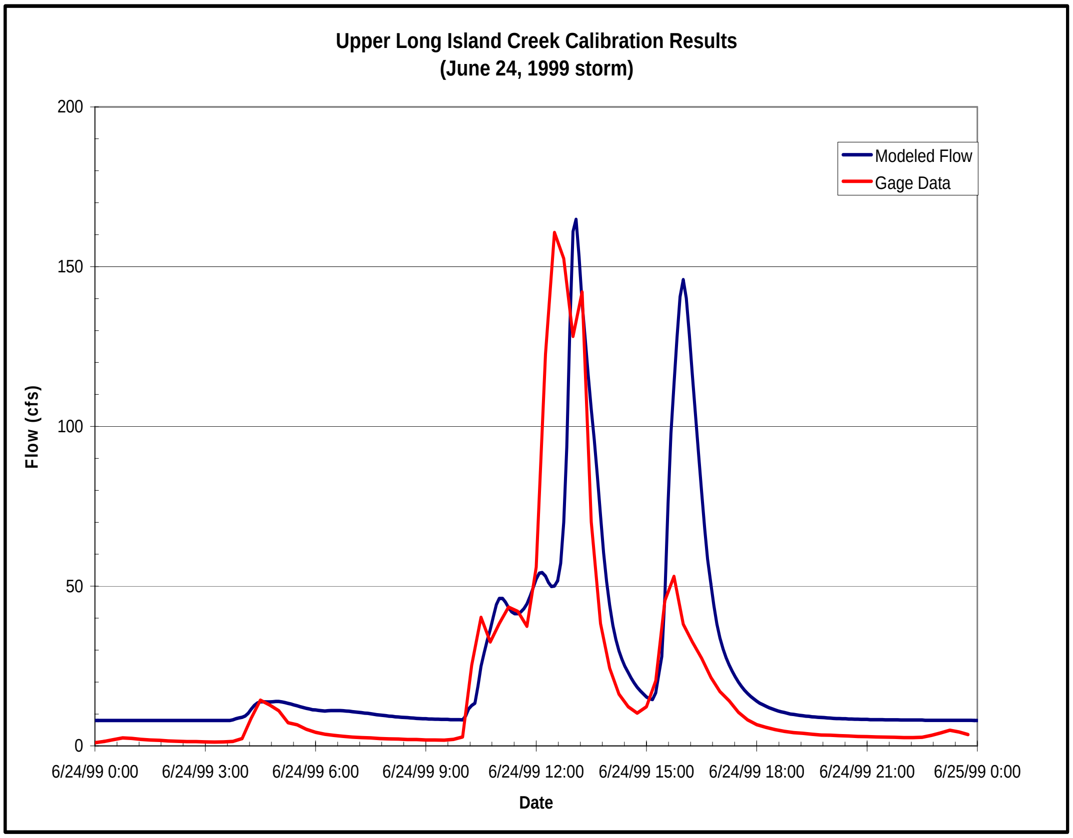


FIGURE 4-2
Upper Long Island Creek Calibration Results, June 1999 Storm

Calibration data for Marsh Creek are presented below in Figure 4-3. Figure 4-3 presents a comparison of predicted flows to measured flows for a 0.7 inch rainfall on August 24, 1999 using a DCIA value equal to the total impervious area, an impervious depression storage value equal to 0.15 inches, and a pervious depression storage value equal to 0.2 inches. With this calibration, predicted flow is less than measured flow for small rainfall events (July 11 and August 23-24). A larger storm was measured on July 10 that had a rainfall total of 2.3 inches with 1.5 inches falling within 20 minutes. Predicted flow is significantly higher than measured flow. Rainfall from the Morgan Falls rain gage nearby the Marsh Creek raingage was one third the Marsh Creek rain gage. Run 2 for the July 9 period used the Morgan Falls gage, which resulted in the measured peak flow exceeding than predicted peak flow. These plots indicate the difficulty in calibrating runoff models using highly variable summer thunderstorms.

Further evidence for the variability of summer thunderstorms is provided by experience of BC field personnel. Field staff mobilized for a summer rainfall event while at a rained-out picnic in lower Long Island Creek. Staff assigned to the lower Long Island stream gage observed a small amount of runoff, while the staff assigned to the upper Long Island Creek monitoring station at Lake Forrest Drive observed no rainfall and no runoff response.

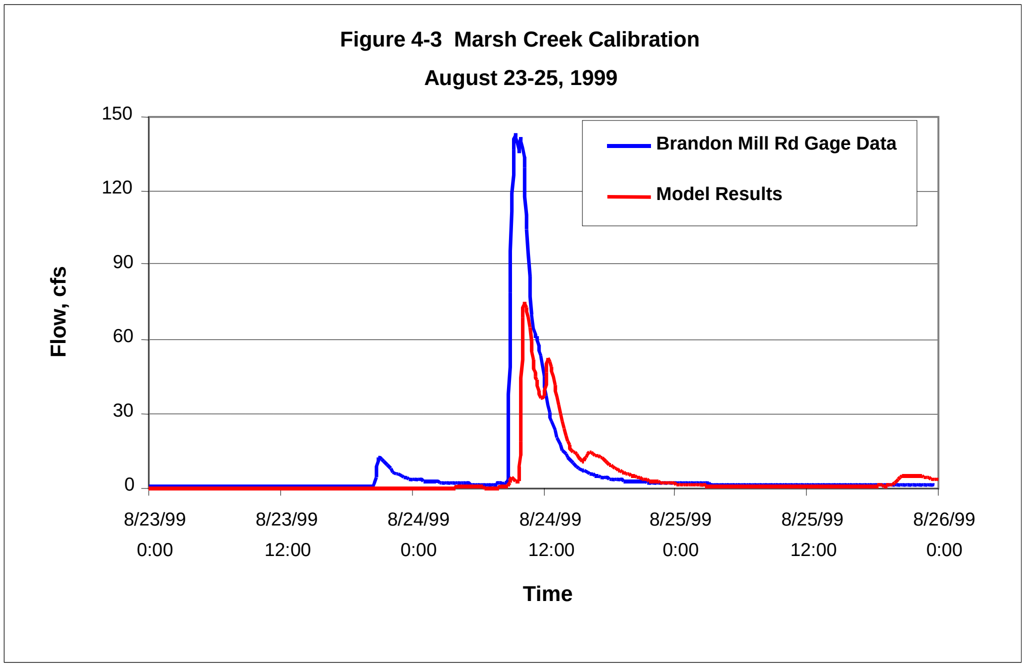


FIGURE 4-3
Marsh Creek Calibration Results, August 23-25 1999 Storm

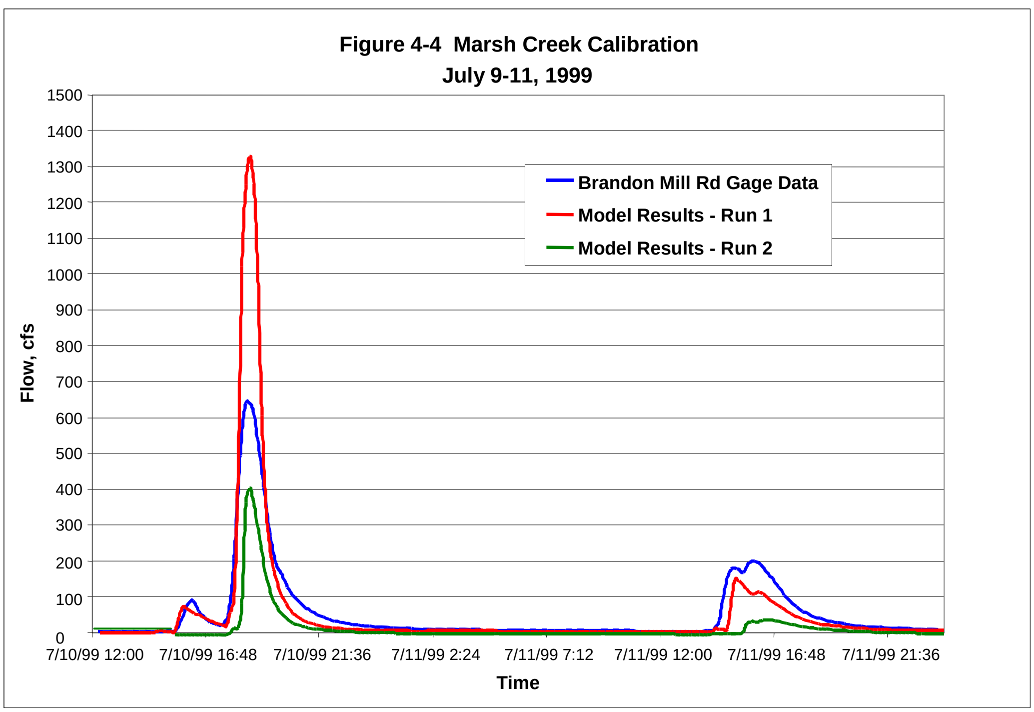


FIGURE 4-4
Marsh Creek Calibration Results, June 9-11, 1999 Storm

The water quality modeling team also experienced difficulty in calibrating to the July 9th event. The first run of BASINS for the July 9th storm yielded a predicted peak flow over four times the measured peak flow. These difficulties in calibration indicate that more monitoring data is needed to adequately calibrate the hydrologic/hydraulic models for the Sandy Springs area. The models were calibrated from stream flow data collected over a 6-month period. Hydrologic calibration is more accurate when longer data sets are available. Flows during a number of low-frequency high rainfall conditions are needed, preferably for different times of the year (e.g. both summer and winter). Additional stream flows of at least five years, and re-calibration of the models using additional high-flow data will raise the confidence of the model to accurately predict problem areas. However, in spite of the challenges experienced in calibration of the models, the models were sufficiently calibrated to yield reasonable predictions regarding flooding problems and erosion problems.

Appendix I provides additional information on calibration parameters for Long Island Creek, Game Creek, Heards Creek, Colewood Creek, Marsh Creek, Powers Branch, and Sullivan's Creek.

4.3 Future Conditions

The land use conditions for future conditions were found to be similar to existing conditions. Table 4-2 presents land use for both existing and future conditions. Because there is essentially no difference between existing and future land use, future land use conditions were used for analysis of hydrologic responses to design storms.

TABLE 4-2
Present and Future Land Use Conditions

	Existing Land Use		Future Land Use	
Watershed	**Area, Ac.**	**Percent**	**Area, Ac.**	**Percent**
Forest	2,735	18.3	1,925	12.9
Park/Open Space	418	2.8	468	3.1
Low Density Residential	2,639	17.7	2,604	17.4
Medium Density Residential	5,364	35.9	5,226	35.0
High Density Residential	1,540	10.3	1,900	12.7
Commercial	1,517	10.2	2,074	13.9
Transportation/Utilities	398	2.7	414	2.8
Water	325	2.1	325	2.1

Storm water modeling was conducted for the 2-, 5-, 10-, 25-, 50-, and 100-year storms using the future land use conditions presented above. Design storm peak flows for Long Island Creek, Game Creek, Heards Creek, Colewood Creek, Marsh Creek, Powers Branch, and Sullivan's Creek are presented in Table 4-3.

TABLE 4-3
Predicted Peak Flows (cfs) for Future Land Use Conditions

Watershed	2-yr.	5-yr.	10-yr.	25-yr.	50-yr.	100-yr.
Long Island Creek - Lake Forrest Dr	682	1,180	1,490	1,760	1,970	2,050
Long Island Creek – Jett Rd	730	1,640	2,440	3,090	3,390	3,590
Game Creek - Northside Rd	695	1,010	1,140	1,260	1,310	1,330
Heards Creek - Ferry Landing	295	474	589	702	785	812
Colewood Creek - Tanacrest Private Driveway	314	580	692	727	746	758
Marsh Creek - Brandon Mill	1,900	2,960	3,710	4,360	4,550	4,640
Power Branch - Big Trees	436	809	908	977	1,020	1,050
Sullivans Creek - Roswell Rd	87	103	170	218	245	255

The results of the hydrologic and hydraulic analysis revealed that flooding of roads and structures occurred within the Sandy Springs area. The areas of flooding are summarized in Table 4-4. There are 125 flooded buildings in Long Island Creek and 148 flooded buildings in Marsh Creek during the 100-year storm event.

The hydrologic modeling analysis for Long Island Creek also indicated that peak runoff rates for most common storms are caused by runoff from impervious areas. Figure 4-5 presents flows for Long Island at Lake Forrest Road (1,260 acres, 40 percent impervious) to Jett Road (3,354 acres, 26 percent impervious). Figure 4-3 indicates that the peak flow at Jett Road for the two-year storm is less than 10 percent higher than the peak flow at Lake Forrest Road, in spite of a 2.7-fold increase in the drainage area.

TABLE 4-4
Areas of Flooding for Existing Conditions

Watershed	Location	Bridge, Flooding Frequency	Flooded Structures 100 yr. Event
Long Island Creek	Stonebridge Apts.	10-year	3
Long Island Creek Tributary	Fountain Lake Apts.	10-year	0
Long Island Creek Tributary	Highland Springs Apts.	10-year	9
Long Island Creek	Private Driveway – Long Island Dr	100-year	0
Long Island Creek	Long Island Drive	100-year	1
Long Island Creek	Jett Road	10-year	6
Long Island Creek	Private Driveway	2-year	1
Long Island Creek	Private Driveway	10-year	1
Long Island Creek	Private Driveway	10-year	0
Long Island Creek	Powers Ferry Road	No	28
Colewood Creek	Private Driveway	25-year	1
Marsh Creek	Brandon Mill Road	10-year	1
Marsh Creek Tributary	North Mill Road (2 locations)	25-year	0
Marsh Creek Tributary	Spalding Drive	25-year	10
Marsh Creek	Roswell Road	10-year	34
Marsh Creek Tributary	Wright Circle	5-year	2
Marsh Creek Tributary	Abernathy Road	25-year	0
Marsh Creek Tributary	Cherry Tree at Abernathy Rd	10-year	6
Marsh Creek Tributary	Cherry Tree near Vernon Woods	5-year	2
Marsh Creek Tributary	Carriage Drive	5-year	1
Marsh Creek Tributary	Roswell Road at Abernathy Rd	25-year	3
Marsh Creek	Mabry Road	10-year	1
Marsh Creek	Peachtree-Dunwoody Road	10-year	4
Marsh Creek Tributary	Twin Branch Road (south)	100-year	4
Game Creek	Bridge by Ray's on the River	2-year	3
Game Creek	Powers Ferry Road	25-year	1
Game Creek	Dupree Road	25-year	0
Game Creek Tributary	Dupree Road	25-year	1
Powers Branch	Apt Complex on Cimmarron Pkwy	10-year	0
Powers Branch	Driveway off of Monterey Pkwy	10-year	0
Powers Branch	Apt complex off of Colquitt Rd	25-year	3
Powers Branch	Trowbridge Lake Drive	100-year	3
Powers Branch	Cimmarron Pkwy	100-year	0
Sullivan's Creek	Northridge Crossing Apts.	2-year	2
Sullivan's Creek	Harbor Point Apts.	25-year	0

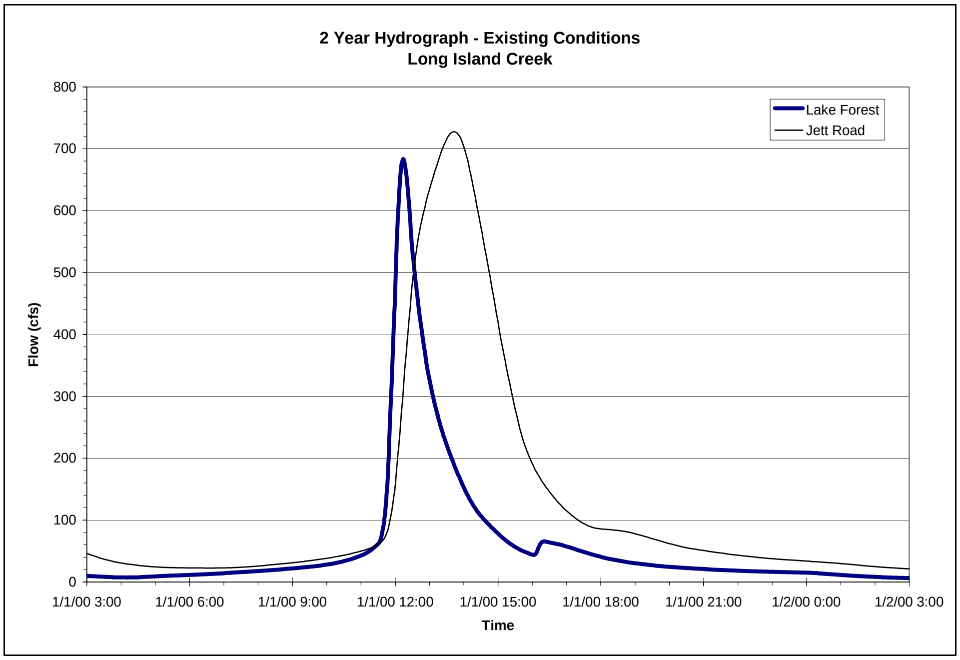
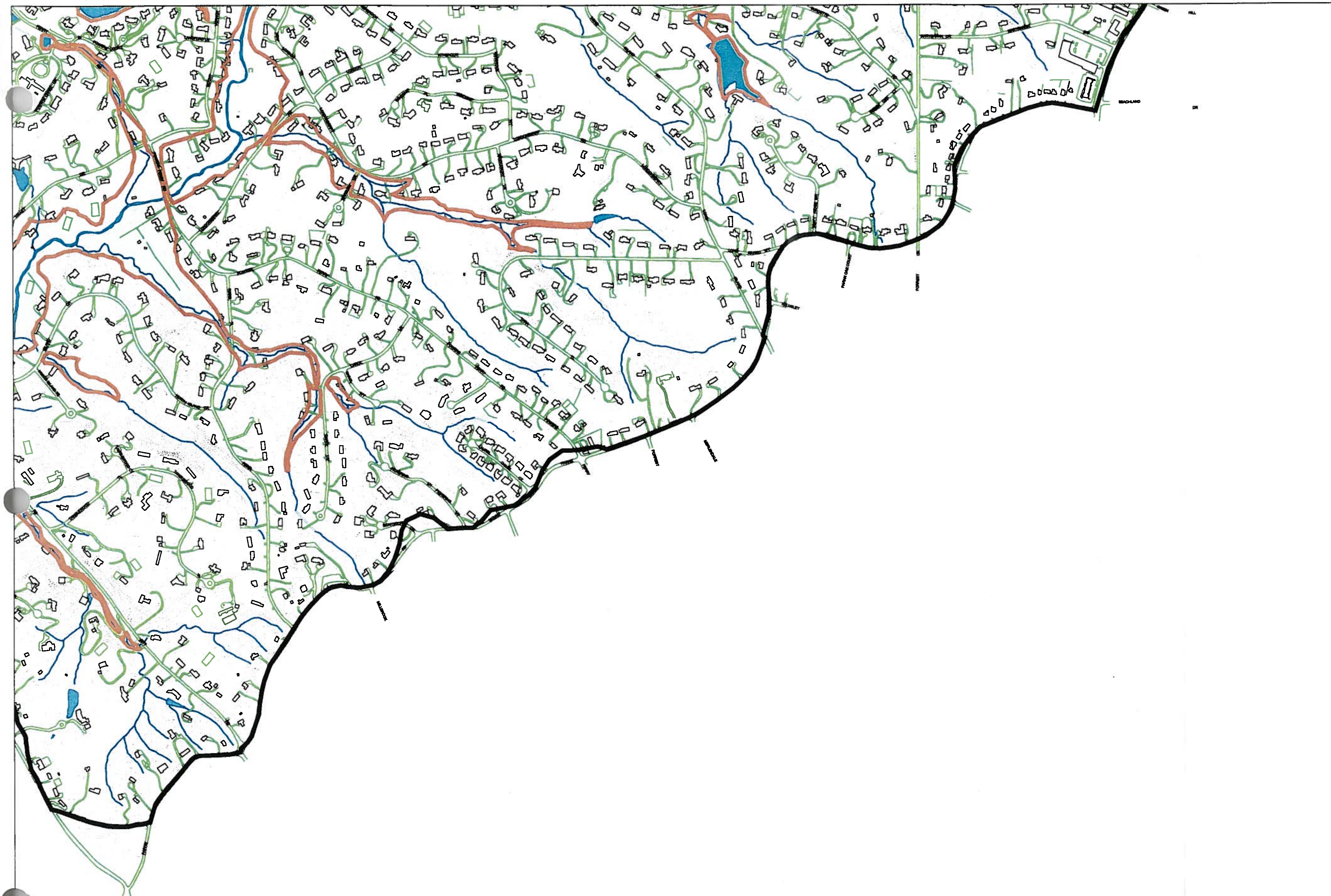


FIGURE 4-5
Long Island Creek; 2-Year Stormflow – Existing Conditions

Figure 4-5 also illustrates that the peak flow rate occurs at Jett Road approximately 1.5 hours later than at Lake Forrest Road. The peak flow at Jett Road is 1.6 times the Lake Forrest Drive peak flow for the 100-year rainfall event, compared to 1.07 times for the 2-year event. The larger difference in peak flows is because infiltration to groundwater is a smaller percentage of the 100-year rainfall event than for the 2-year event. This factor will affect the effectiveness of storm water control measures for Long Island Creek. Storm water control measures will need to be placed near the impervious areas to control peak flows in upper Long Island Creek. Chapter 6 presents the results of modeling storm water management alternatives in those streams with flooding and stream erosion problems. Detailed floodplain maps for the major creeks of the Sandy Springs Study Area are located in Figure 4-6, Tiles 1 through 11.



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 4-6 - Tile 1
Location of 100 Year Flood Zones

100 Year Flood Zone

Stream Type

Stream

Streamflow in Pipe

Planimetrics

Watershed Boundary

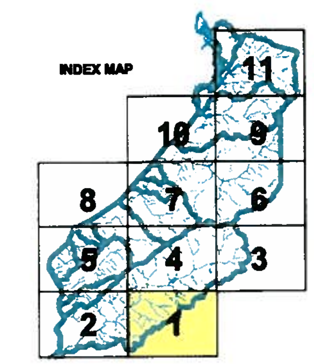
Building Footprint

Elevation Contour

5 Foot Contour

25 Foot Contour

INDEX MAP

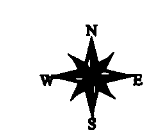


STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

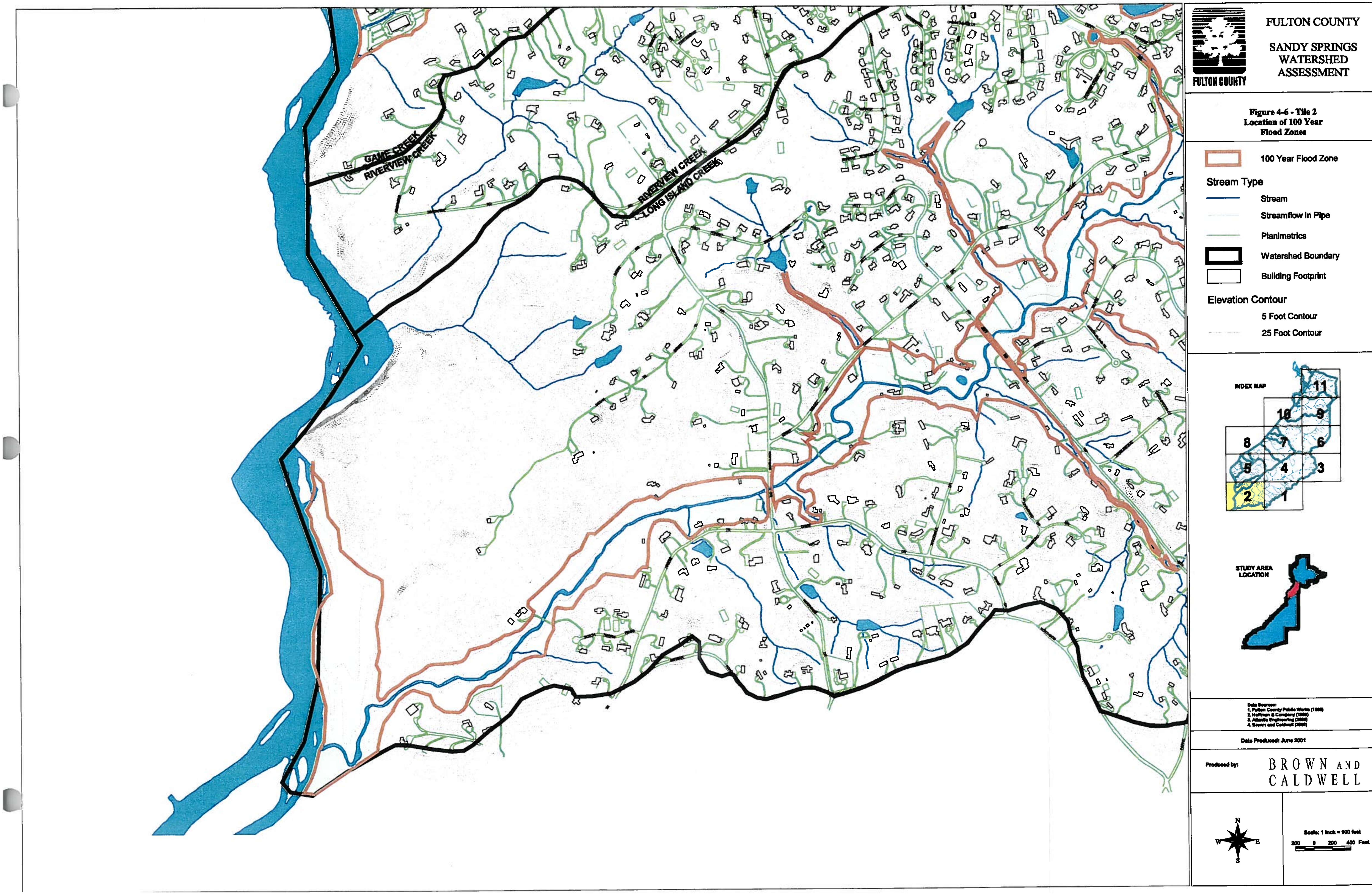
Date Produced: June 2001

Produced by: BROWN AND CALDWELL



Scale: 1 inch = 900 feet

200 0 200 400 Feet


GAME CREEK
RIVERVIEW CREEK
RIVERVIEW CREEK
LONG ISLAND CREEK
FULTON COUNTY
FULTON COUNTY
SANDY SPRINGS
WATERSHED
ASSESSMENT
Figure 4-6 - Tile 2
Location of 100 Year
Flood Zones
100 Year Flood Zone
Stream Type
Stream
Streamflow in Pipe
Planimetrics
Watershed Boundary
Building Footprint
Elevation Contour
5 Foot Contour
25 Foot Contour
INDEX MAP
11
10
9
8
7
6
5
4
3
2
1
STUDY AREA
LOCATION
Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])
Date Produced: June 2001
Produced by:
BROWN AND
CALDWELL
N
W
E
S
Scale: 1 inch = 900 feet
200 0 200 400 Feet

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 4-6 - Tile 3
Location of 100 Year Flood Zones

100 Year Flood Zone

Stream Type

Stream

Streamflow in Pipe

Planimetrics

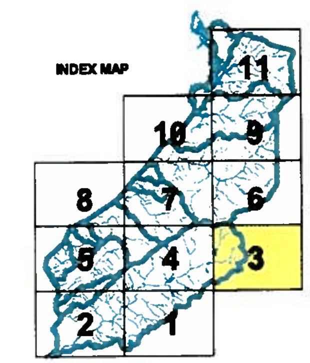
Watershed Boundary

Building Footprint

Elevation Contour

5 Foot Contour

25 Foot Contour



Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N
W E
S

Scale: 1 inch = 900 feet

200 0 200 400 Feet

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 4-6 - Tile 4
Location of 100 Year Flood Zones

100 Year Flood Zone

Stream Type

Stream

Streamflow In Pipe

Planimetrics

Watershed Boundary

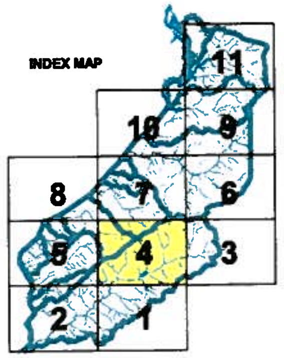
Building Footprint

Elevation Contour

5 Foot Contour

25 Foot Contour

INDEX MAP



STUDY AREA LOCATION

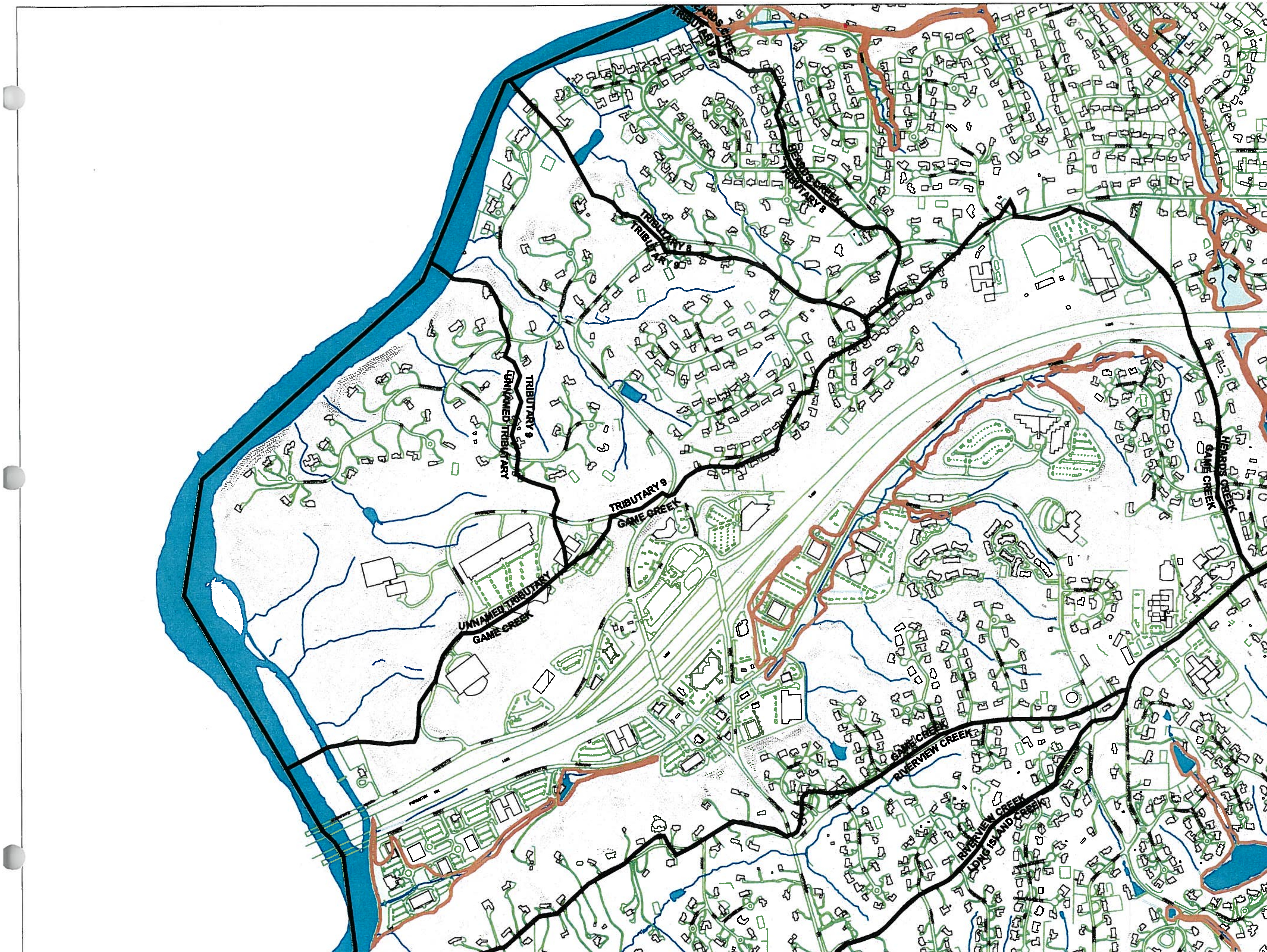
Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

Data Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 4-6 - Tile 5
Location of 100 Year Flood Zones

100 Year Flood Zone

Stream Type

Stream

Streamflow in Pipe

Planimetrics

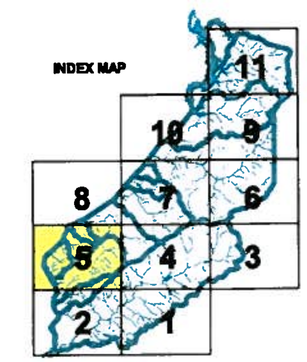
Watershed Boundary

Building Footprint

Elevation Contour

5 Foot Contour

25 Foot Contour



Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N
W E
S

Scale: 1 inch = 800 feet

200 0 200 400 Feet

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 4-6 - Tile 6
Location of 100 Year Flood Zones

100 Year Flood Zone

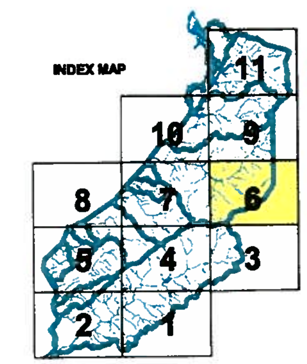
Stream Type

- Stream
- Streamflow in Pipe
- Planimetrics
- Watershed Boundary
- Building Footprint

Elevation Contour

- 5 Foot Contour
- 25 Foot Contour

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1999)
2. Hoffman & Company (1999)
3. Atlantic Engineering (2000)
4. Brown and Caldwell (2000)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N S W E

Scale: 1 inch = 900 feet

200 0 200 400 Feet

FULTON COUNTY

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 4-6 - Tile 7
Location of 100 Year Flood Zones

100 Year Flood Zone

Stream Type

Stream

Streamflow in Pipe

Planimetrics

Watershed Boundary

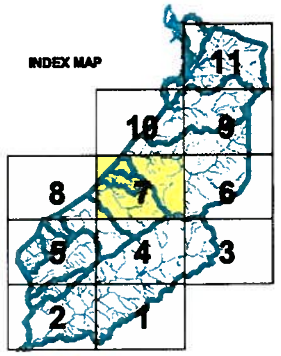
Building Footprint

Elevation Contour

5 Foot Contour

25 Foot Contour

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1999)
2. Hoffman & Company (1999)
3. Atlantic Engineering (2000)
4. Brown and Caldwell (2000)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

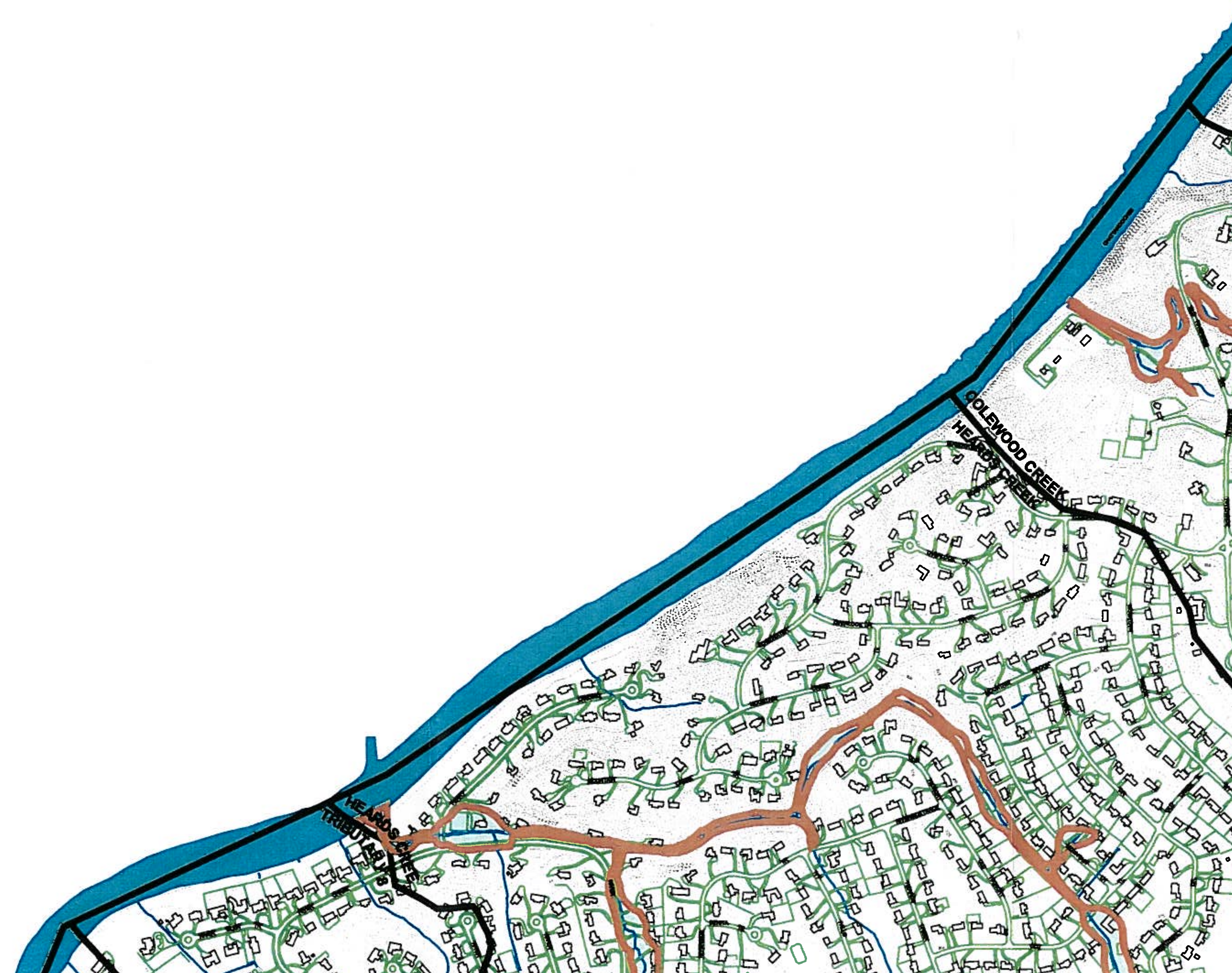
Scale: 1 inch = 900 feet

200 0 200 400 Feet

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 4-6 - Tile 8
Location of 100 Year Flood Zones



100 Year Flood Zone

Stream Type

Stream

Streamflow in Pipe

Planimetrics

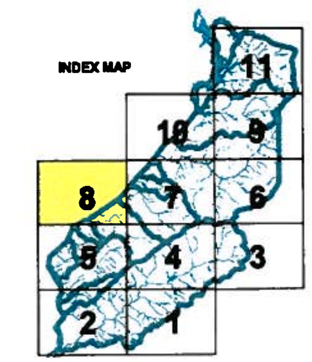
Watershed Boundary

Building Footprint

Elevation Contour

5 Foot Contour

25 Foot Contour



Data Sources:
1. Fulton County Public Works (1999)
2. Hoffman & Company (1999)
3. Atlantic Engineering (2000)
4. Brown and Caldwell (2000)

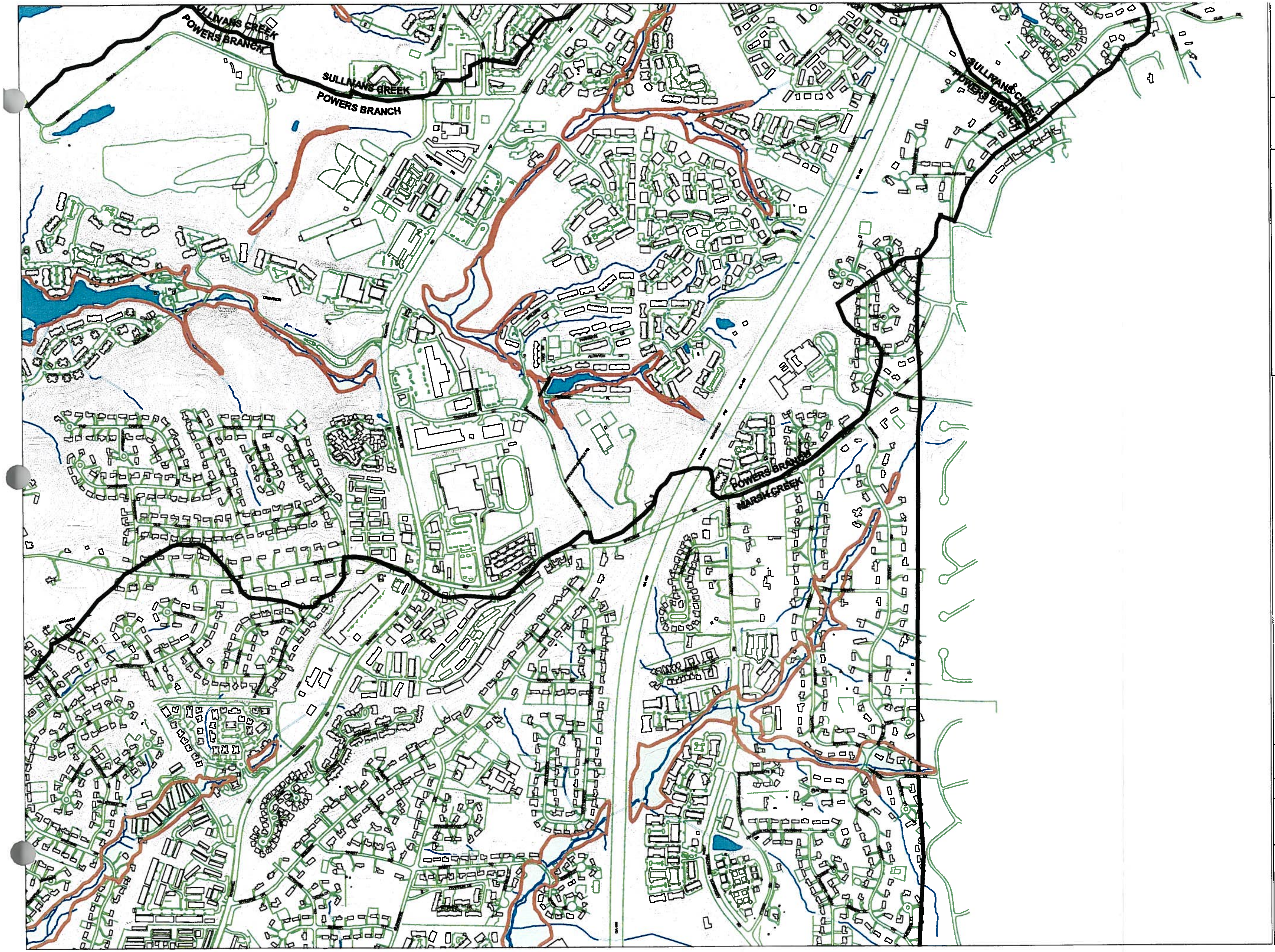
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 4-6 - Tile 9
Location of 100 Year Flood Zones

100 Year Flood Zone

Stream Type

- Stream
- Streamflow in Pipe
- Planimetrics
- Watershed Boundary
- Building Footprint

Elevation Contour

- 5 Foot Contour
- 25 Foot Contour

INDEX MAP

STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1999)
2. Hoffman & Company (1999)
3. Atlantic Engineering (2000)
4. Brown and Caldwell (2000)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet

200 0 200 400 Feet

FULTON COUNTY

FULTON COUNTY

SANDY SPRINGS
WATERSHED
ASSESSMENT

Figure 4-6 - Tile 10
Location of 100 Year
Flood Zones

100 Year Flood Zone

Stream Type

Stream

Streamflow in Pipe

Planimetrics

Watershed Boundary

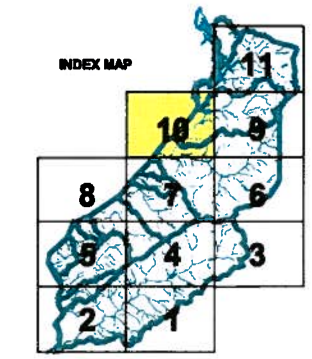
Building Footprint

Elevation Contour

5 Foot Contour

25 Foot Contour

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

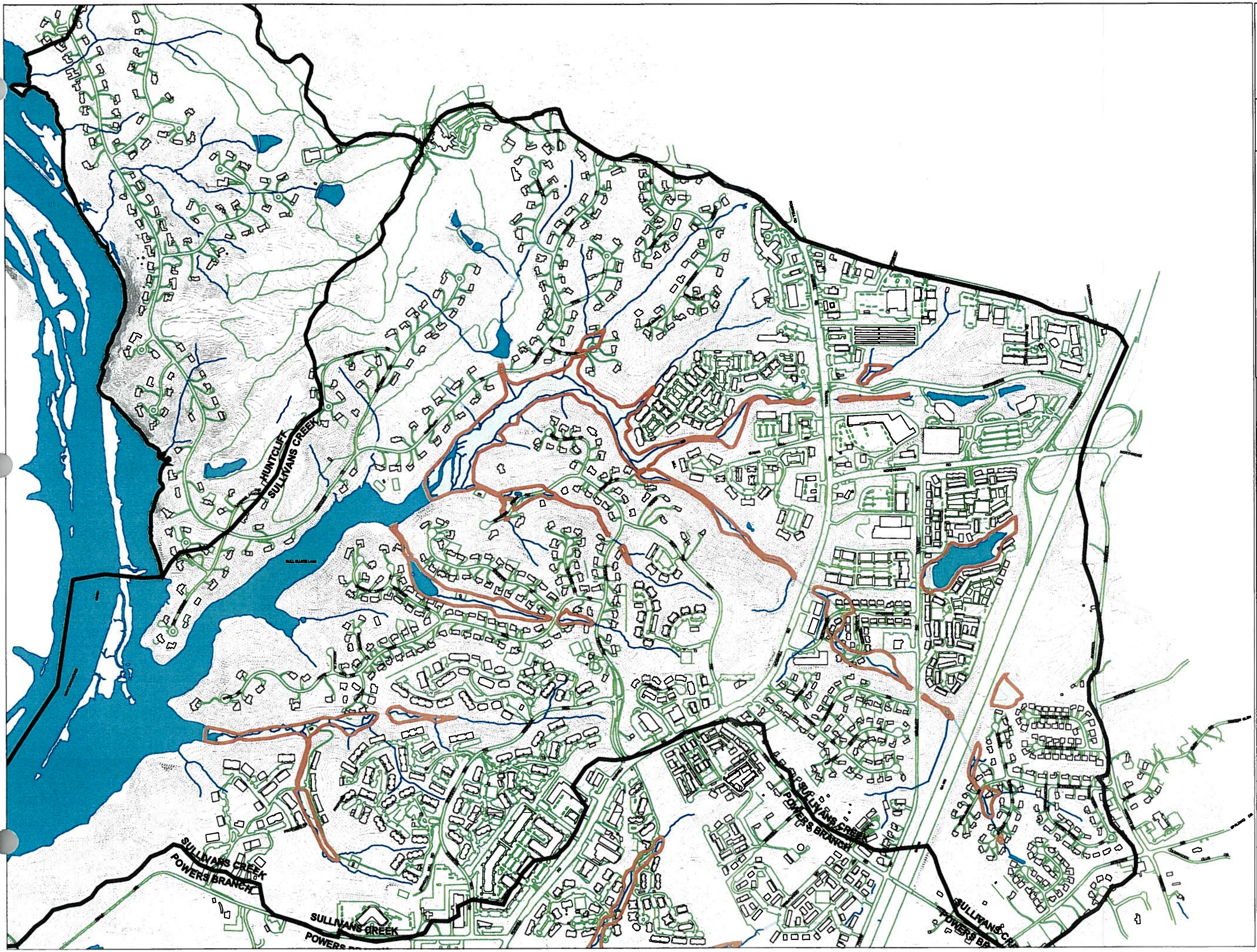
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = 600 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS
WATERSHED
ASSESSMENT

Figure 4-6 - Tile 11
Location of 100 Year
Flood Zones

100 Year Flood Zone

Stream Type

Stream

Streamflow In Pipe

Planimetrics

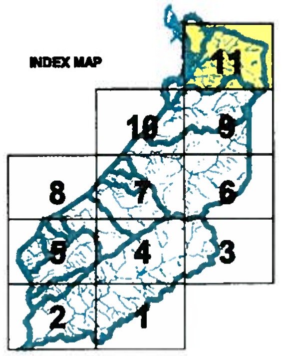
Watershed Boundary

Building Footprint

Elevation Contour

5 Foot Contour

25 Foot Contour



Data Sources:
1. Fulton County Public Works ([illegible])
2. Heffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N
W E
S

Scale: 1 inch = 900 feet

200 0 200 400 Feet

5.0 Water Quality Modeling Results

5.1 Introduction

This section describes the results of the water quality modeling task for the Sandy Springs study area. Modeling establishes a scientific relationship between pollutant levels and the types of land use and pollution control practices currently in place or under consideration. The water quality models use watershed characterization data to develop mathematical simulations of the studied watersheds, which are then calibrated to match observed water quality information. The calibrated models can then be applied to evaluate water quality in the watersheds for existing conditions, and to predict how future water quality will be affected by development of open lands and implementation of management alternatives.

The water quality modeling results are presented in the following order:

- **Calibration Results**. This subsection includes model results for flow, solids, and total phosphorus for the five monitored watersheds in the study area, along with comments about the calibration process.
- **Existing and Future Conditions**. This subsection applies the calibration results to all of the major watersheds in the study area.
- **Discussion**. This subsection summarizes the results, describes significant findings, and presents recommendations for improvement of future water quality studies.

Water quality results for management alternatives are presented in Section 6.

5.2 Calibration Results

Calibration of the Better Assessment Science Integrating point and Nonppoint Sources/NonPoint Source Model (BASINS/NPSM) water quality model was undertaken for the Heards Creek, Upper Long Island Creek, Powers Branch, Marsh Creek, and Game Creek watersheds in the Sandy Springs watershed. The number and small size of the modeled watersheds made it undesirable to use multiple reaches in the BASINS/NPSM applications with the exception of Long Island Creek and Marsh Creek, which each were modeled with two reaches. This means that the many small impoundments in the watersheds are not explicitly modeled; their impacts on hydrology, sediment, and water quality parameters are therefore reflected in the calibrated parameter values.

Emphasis was placed on the calibration of Heards Creek and Upper Long Island Creek as pilot areas representative of less developed/residential and more developed/urbanized land uses respectively. Hydrologic, sediment, and water quality calibration was undertaken for the two pilot areas and for Marsh Creek. Hydrologic parameters from these calibrations were transferred to Game Creek and Powers Branch, where the streamflow record was incomplete, to approximately calibrate sediment and water quality. Values for calibrated water quality model parameters are listed in Appendix J.

The calibration was able to match modeled flow, solids, and total phosphorus to observed data, allowing the model framework to be used effectively to assess loads from existing and future conditions and to evaluate the benefits of suggested management alternatives.

5.2.1 Hydrologic Calibration

Hydrology calibration was performed according to the guidelines set forth in the Hydrologic Simulation Program – FORTRAN (HSPF) User's Guide [USEPA 1993]. The model coefficients were first adjusted to match baseline flow volumes, then storm flow volumes and finally, characteristic shapes of storm hydrographs. Matching of seasonal and annual measures was not practical because of the short (five month) period of record for hydrologic data. Model inputs were based on information from the watershed characterization, default values suggested by the CH2M-HILL water quality modeling task team, and literature values [Aqua Terra 2000].

5.2.1.1 Heards Creek Hydrology Calibration

Heards Creek, an 800-acre watershed was selected as a pilot area for calibration because of its primarily residential and forested areas. Because of the small size of the modeled watershed, there were some questions about the validity of recorded rainfall measurements. For example, the Heards Creek flow record had several rises that appeared to be precipitation-related but which did not correlate to rainfall recorded at the Upper Long Island rain gauge (Figure 5-1). Comparison to other gauges, field observations, and examination of high-resolution precipitation data for selected events suggested that highly localized intense rainfall is common in the Sandy Springs study area.

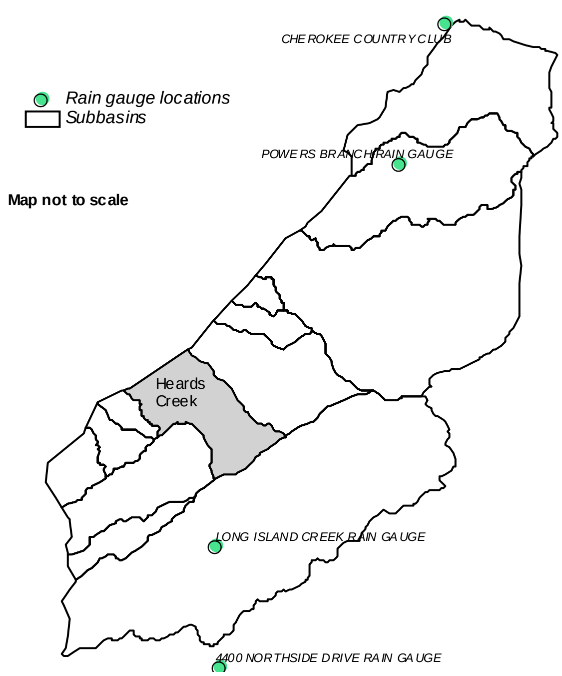


FIGURE 5-1
Sandy Springs Gauge Locations

Additional rain gauges were installed near the mouth of Heards Creek and at the point where the Tributary 7, Marsh Creek and Long Island Creek basins meet. These gauges were installed at the end of August. The Heards Creek stormflow calibration focused subsequently focused on later storms after the new gauge was installed or where field observation confirmed the rainfall (Table 5-1). A comparison of model to observed data for the entire period is also provided (Figure 5-2).

TABLE 5-1
Heards Creek Flow Comparison

	Observed Volume (acre feet)	Modeled Volume (acre feet)	Error
Baseflow	66.6	66.8	0.27%
Stormflow	23.1	27.4	18.86%

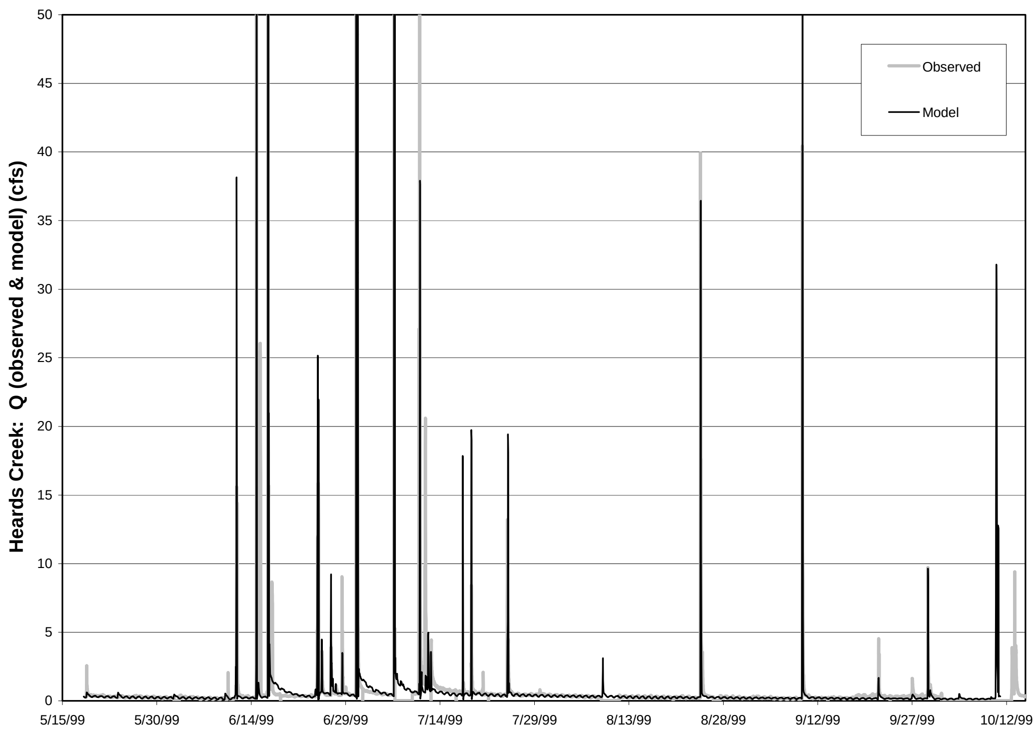


FIGURE 5-2
Heards Creek Flow: Modeled versus Observed

5.2.1.2 Upper Long Island Hydrology Calibration

The upper portion of Long Island Creek (above Lake Forest Drive) was also used as a pilot watershed because of its highly developed nature. This 1200-acre area contains a large fraction of impervious surface (approximately 35 percent) including building roofs, parking lots, and extensive road and highway surfaces.

Following calibration adjustments, modeled baseflow was much lower than observed (Table 5-2), while stormflow was adequately calibrated (Figure 5-3). The large discrepancy in baseflow is likely due to overstatement of the directly connected impervious area, which is based on map information about all impervious areas. However, the methodology used for evaluation of management alternatives models all impervious areas as directly connected, so no corrective actions were taken. Further discussion of this issue is included in Section 5.4.

TABLE 5-2
Upper Long Island Creek Stormflow Comparison

	Observed Volume (acre-ft)	Modeled Volume (acre-ft)	Error
Baseflow	92	62	-32.62%
Stormflow	224	255	13.84%

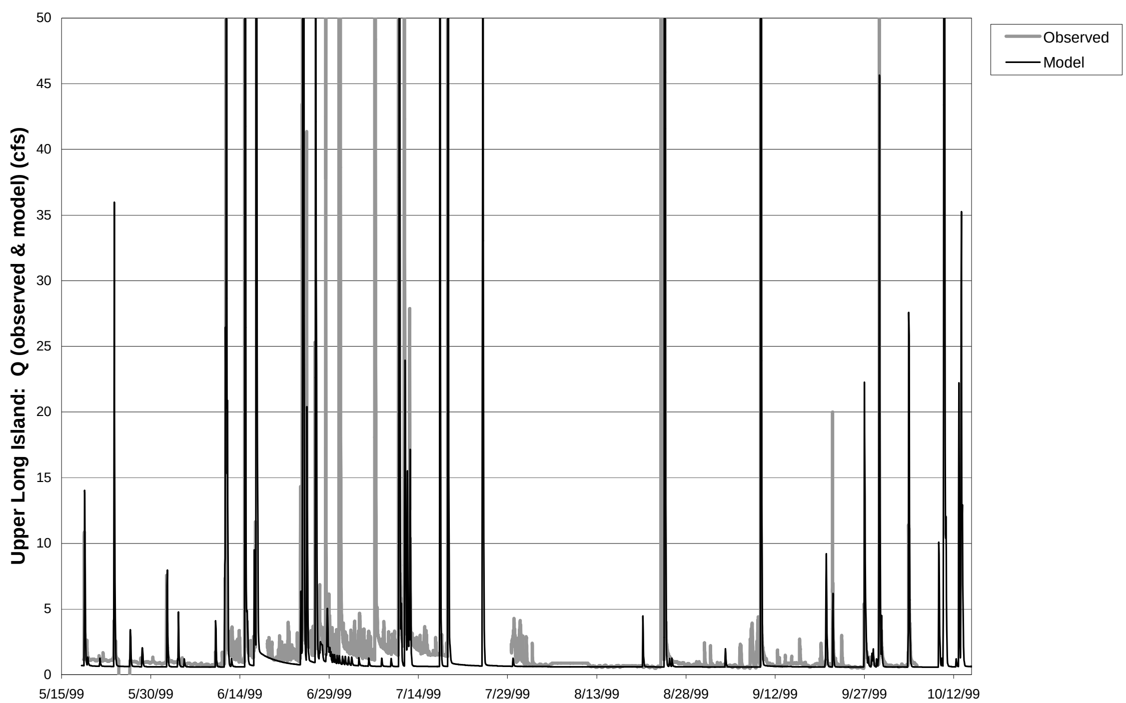


FIGURE 5-3
Upper Long Island Creek Flow: Modeled versus Observed

5.2.1.3 Hydrology Calibration for Other Monitored Watersheds

HSPF hydrologic parameter values derived in the pilot area calibrations were applied to the other watersheds for which monitoring data was available. The parameter values were then adjusted as necessary to better match the observed data. Results for Marsh Creek are presented in Figure 5-4. Flow monitoring data for Powers Branch and Game Creek included only limited baseflow data, so hydrologic calibration was not completed.

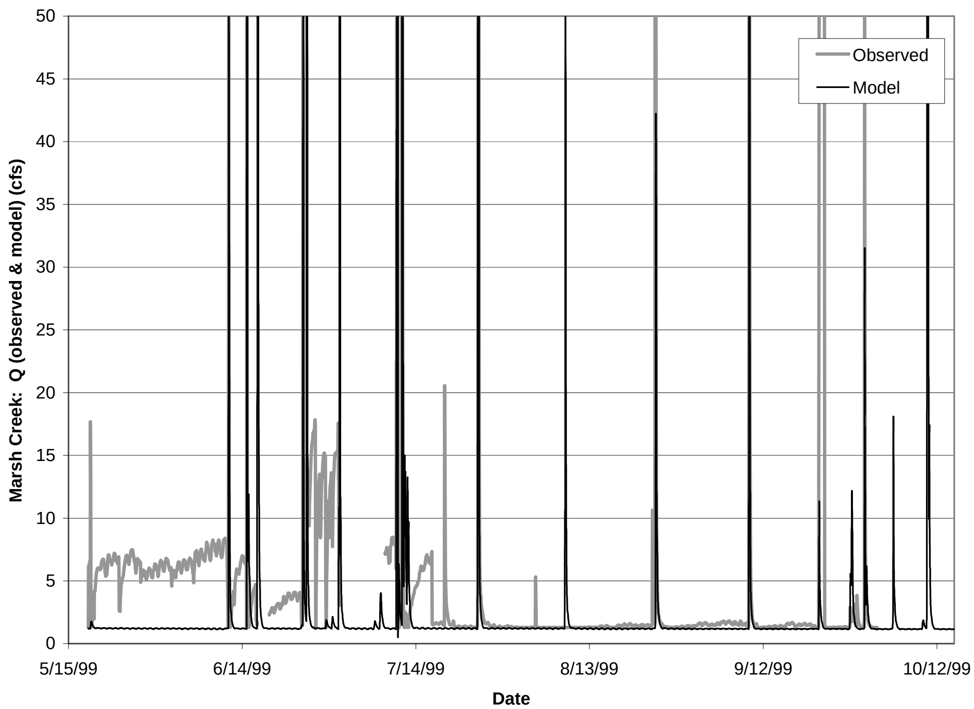


FIGURE 5-4
Marsh Creek Flow: Modeled versus Observed

5.2.2 Sediment Calibration

The data collected for the study dependably characterize the magnitude of total sediment contributions to the modeled systems. However, sediment calibration was somewhat confounded by the fact that observed instream sediment data likely reflect two contributing sources: 1) washoff of solids from land surfaces in the watersheds; and 2) in-channel contributions from erosive processes. The available data were not sufficient to fully distinguish the relative magnitude of either source's to instream sediments, but the modeling establishes that construction of BMPs will reduce both washoff and erosive loads.

The general strategy adopted for sediment calibration was to calibrate washoff from land surfaces to literature values and to then match observed instream concentrations by adjusting reach deposition/scour processes. Calibration of washoff to these other measures was also considered but rejected for the following reasons:

- RUSLE + Delivery Ratio [Renard et al. 1997]. This methodology is best applied in areas where soils are open or disturbed, such as agricultural or silvicultural regions. The Sandy Spring watershed is generally built up and soils are not disturbed, so RUSLE is not suitable.

- Atlanta NPDES EMC [Thomas and McClelland, 1995]. Modeled event-mean concentrations of solids could be compared to monitored data collected during recent area studies. However, the modeled areas in the Sandy Springs watershed are generally much smaller than the areas monitored in the study, and there are also concerns about mismatches in impervious fractions of land area between the Sandy Springs subbasins and the monitored watersheds.
- Big Haynes Creek UALs [CDM 1995]. The Big Haynes Creek study reported event-mean concentrations and unit-area loads which could be used as washoff calibration targets. It was unclear whether or not these unit-area loads included contributions from streambank erosion and gullying of pervious surfaces.

For the Sandy Springs study area, target sediment washoff unit area loads were selected from studies for Big Haynes Creek, a nearby Georgia watershed, and the Occoquan Basin, which is a similar Piedmont area in Virginia [NVPDC 1978]**.** These targets were generally presented for composite pervious/impervious areas, while BASINS/NPSM separates pervious and impervious areas. Impervious areas in the Sandy Springs watershed application of BASINS/NPSM were characterized by simple accumulation/washoff relationships with a target long-term unit area load of about 250-300 lbs/acre/year [Schueler 1987]**.** For pervious areas, unit-area load targets for were set at 150-250 lbs/acre/year for forested and open land. The target loads then increase as residential or commercial density increase because of additional overland flow from adjacent impervious surfaces; residential targets were 600-700 lbs/acre/year, while commercial areas were targeted to 700-1000 lbs/acre/year. Although gullying, or a reasonable representation of this effect, is an available optional model process, its use was precluded by lack of detailed data.

Model parameters were adjusted to bring calculated model unit area loads in line with these targets. Model unit area loads were calculated by pervious and impervious land use as the average sediment yield for a ten-year simulation using 1980 – 1989 meteorological data for Atlanta-Hartsfield International Airport. The averaging period for modeled loads was extended to ten years instead of the agreed five-year period in order to get a better representation of the sediment scour process described below. Area-weighted averages of the pervious and impervious components of each land use were compared with the target.

Finally, the instream sediment scour/deposition processes were calibrated for the period of record. State-level STAATSGO soil maps characterized the study area as predominantly sand (60/20/20 sand/silt/clay), and most of the deposition and scour calibration was driven by the sand-related parameters in NPSM. Washoff parameters were set to match the long-term calibration values, and instream reach parameters controlling deposition and scour were adjusted to match modeled instream solids concentrations to the observed data for the period of record. Daily scour was then summed by year for a long-term simulation to provide an estimate of sediment loads from streambank erosion and bed resuspension. Sediment loads from each basin are therefore reported in two components: washoff and average annual scour (Table 5-3).

TABLE 5-3
Modeled Long-term Annual Average Sediment Loads for Calibrated Subbasins

Subbasin	Washoff (tons/year)	Scour (tons/year)
Heards Creek	200.4	96.9
Upper Long Island Creek	215.9	85.1
Game Creek	210.2	421.6*
Marsh Creek	1013.6	443.7
Powers Branch	254.4	0.0*

**Sediment scour loads for Game Creek and Powers Branch are provisional due to limited baseflow data to complete hydrologic calibration*

5.2.2.1 Heards Creek Sediment Calibration

As discussed above, sediment loads from land segments in the Heards Creek watershed were first calibrated to target values. Reach deposition and scour processes were then used to match modeled instream suspended solids concentrations to observed data (Figure 5-5).

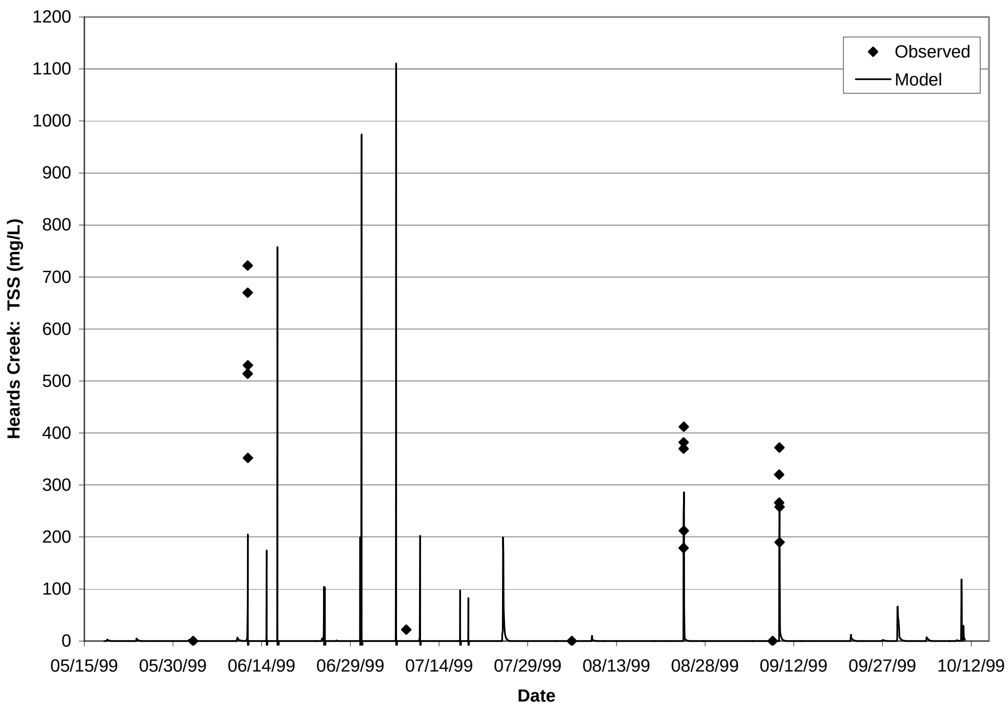


FIGURE 5-5
Heards Creek Sediment: Modeled versus Observed

5.2.2.2 Upper Long Island Creek Sediment Calibration

Results for Upper Long Island Creek are shown in Figure 5-6.

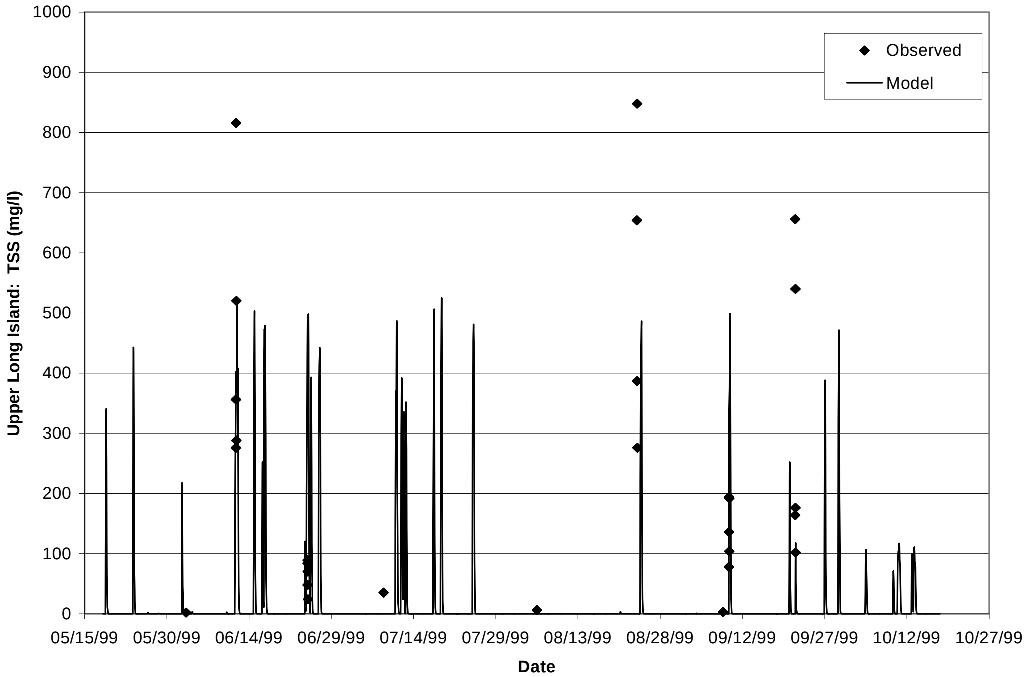


FIGURE 5-6
Upper Long Island Creek Sediment: Modeled versus Observed

5.2.2.3 Sediment Calibration for Other Monitored Watersheds

Comparisons of modeled sediment concentrations to observed data for Game Creek, Marsh Creek, and Powers Branch are shown below in Figures 5-7, 5-8, and 5-9.

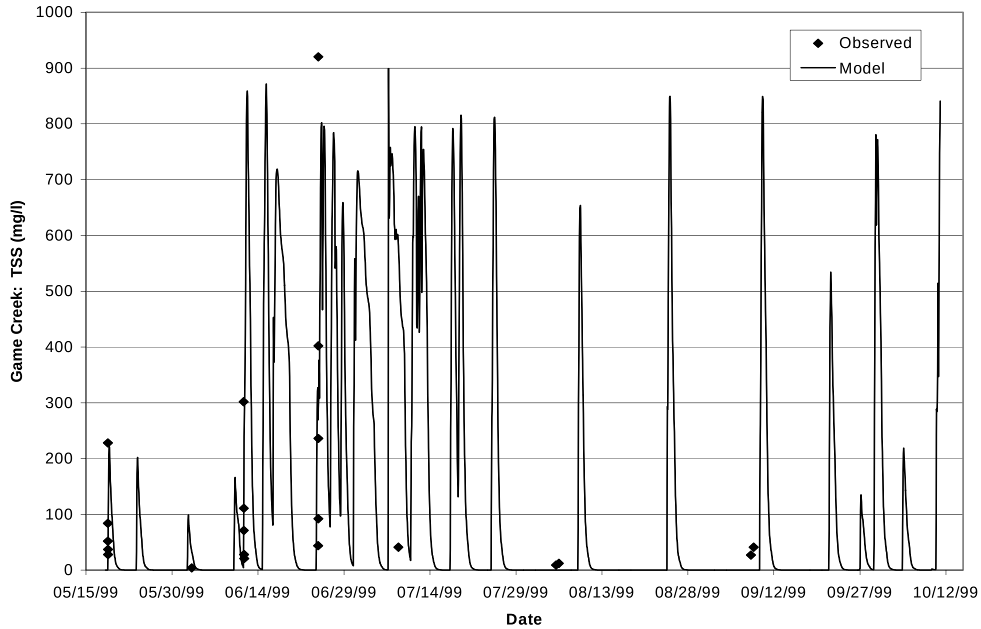


FIGURE 5-7
Game Creek Sediment: Modeled versus Observed

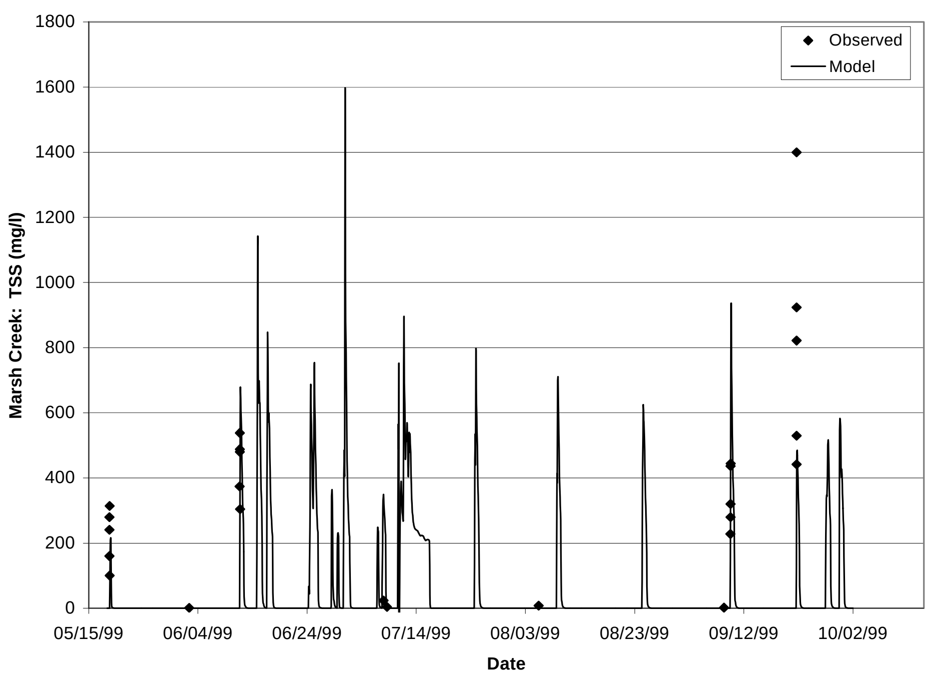


FIGURE 5-8
Marsh Creek Sediment: Modeled versus Observed

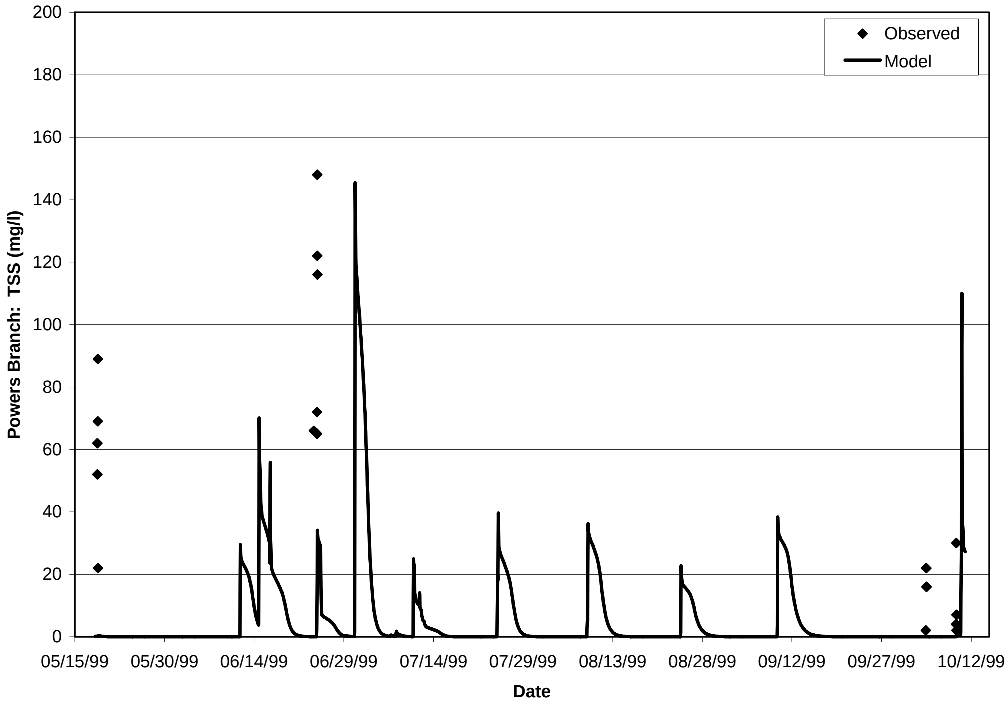


FIGURE 5-9
Powers Branch Sediment: Modeled versus Observed

5.2.3 Water Quality Calibration

Selection of water quality parameters for calibration was based on review of impairment listings for Georgia waters and analysis of the water quality monitoring data collected during the study. None of the watersheds appeared on the impairment lists, but elevated levels of nutrients and fecal coliforms were found in most wet-weather samples. Total phosphorus (TP) was selected as a reasonable surrogate of water quality impacts due to its general association with other nutrients and with bacteria. TP may also be as difficult to remove as fecal coliforms, so successful control of TP with best management practices in the management plans may represent successful control of bacteria and other nutrients.

As with the sediment calibration, confounding factors make it difficult to directly calibrate washoff TP to observed instream concentrations. Specifically, high levels of observed TP and fecal coliforms in the monitoring data suggest the likely presence of sanitary sewer overflows. Calibration focused, therefore, on periods where no overflows were believed present. This conservative approach results in a model calibrated to observed data that show TP loads in exceedance of the levels necessary to protect water quality in the Chattahoochee River. In other words, even if all overflows are corrected, present conditions or likely future development would still lead to excessively high TP loads to the Chattahoochee River from the Sandy Springs study area.

The calibration of phosphorus was accomplished by assuming consistent accumulation and washoff relationships for impervious areas, sediment-attached phosphorus for pervious areas (with slightly increasing potency factors for higher-density areas to account for increased grassy, fertilized areas), and a small load from groundwater carrying phosphorus brought from the surface by infiltration. Impervious accumulation rates were set to 1 pound/acre/year, a typical value for urban areas [Reckhow 1980]. Groundwater concentrations were set to 0.01 mg/L for forested and open areas and 0.03 mg/L for residential and commercial pervious areas based on recent studies in the Lake Sidney Lanier area [LTI 1998]. Land segment parameters were adjusted to bring storm response and long-term unit-area loads in line with values reported for Big Haynes Creek and the Occoquan Reservoir Basin.

No instream processes such as settling, resuspension, or transformation were modeled because the effect of these processes is likely to be minimal given the short length of the modeled reaches. Effects of non-failing impoundments are subsumed in the washoff calibration. Comparisons of modeled total phosphorus concentrations to observe data for Heards Creek, Upper Long Island Creek, Game Creek, Marsh Creek and Powers Branch are shown in Figures 5-10 through 5-14.

5.2.3.1 Heards Creek Water Quality Calibration

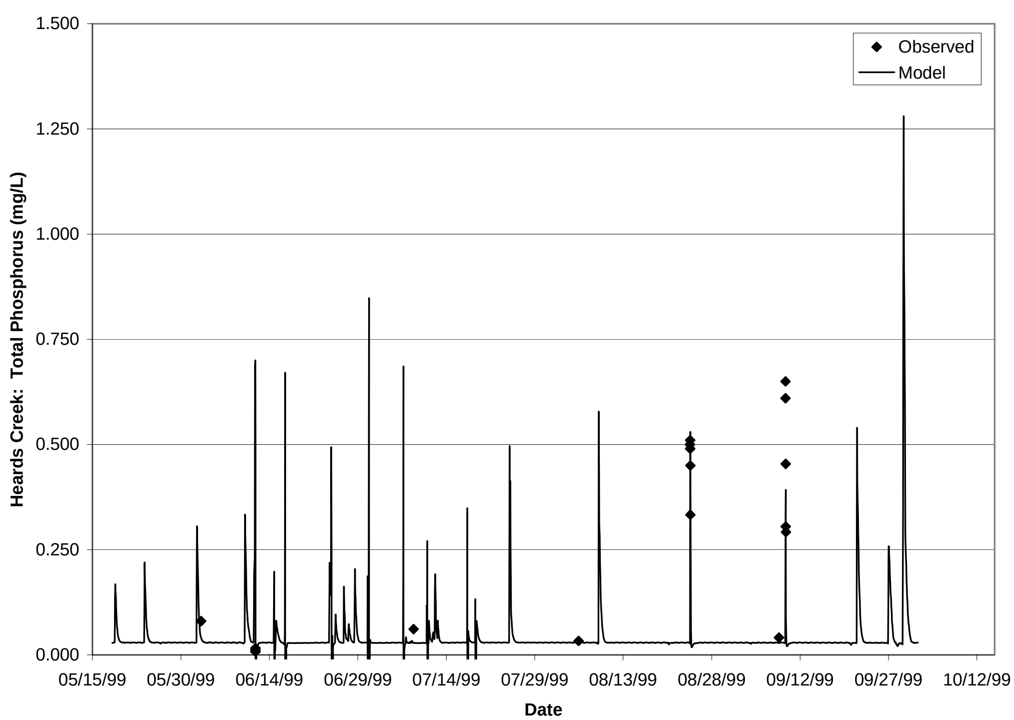


FIGURE 5-10
Heards Creek Total Phosphorus: Modeled versus Observed

5.2.3.2 Upper Long Island Creek Water Quality Calibration

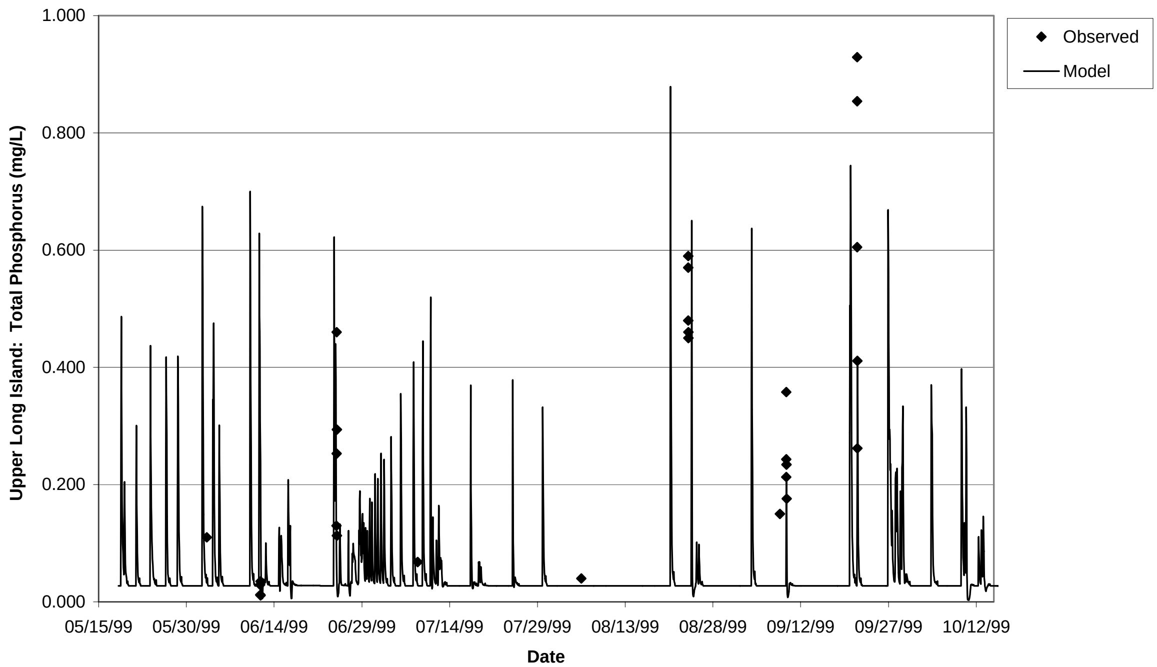


FIGURE 5-11
Upper Long Island Creek Total Phosphorus: Modeled versus Observed

5.2.3.3 Water Quality Calibration for Other Monitored Watersheds

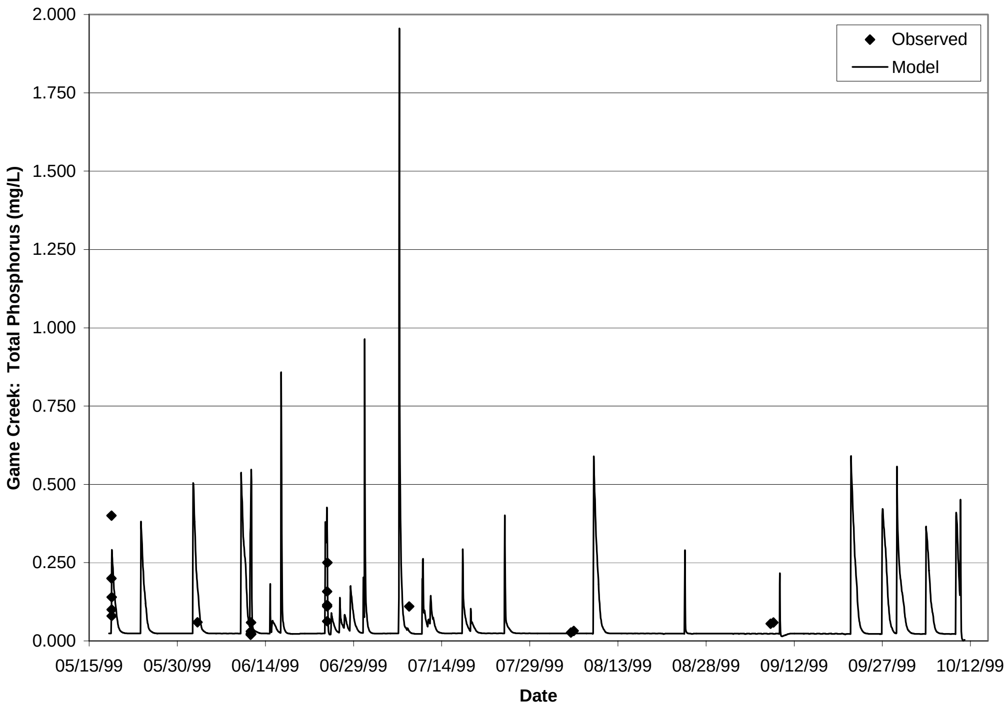


FIGURE 5-12
Game Creek Total Phosphorus: Modeled versus Observed

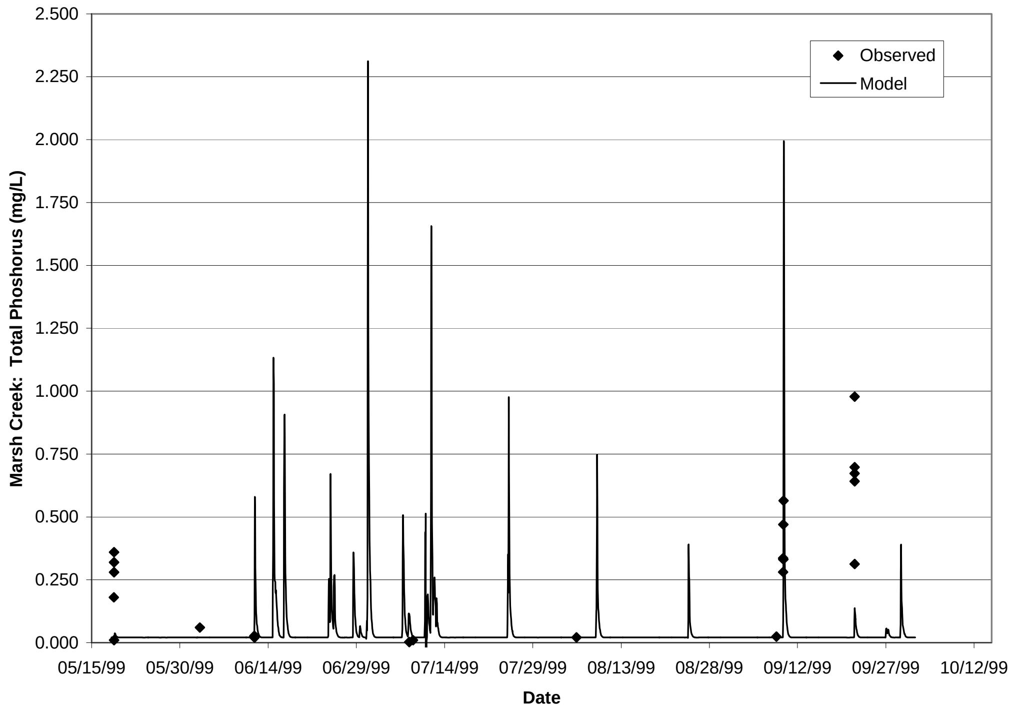


FIGURE 5-13
Marsh Creek Total Phosphorus: Modeled versus Observed

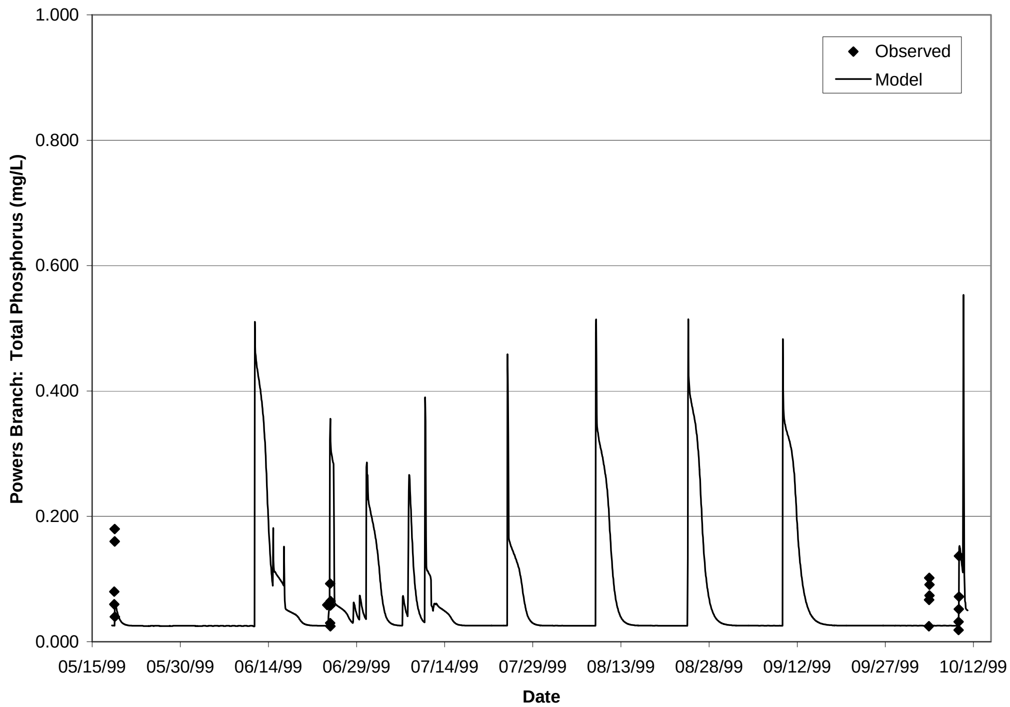


FIGURE 5-14
Powers Branch Total Phosphorus: Modeled versus Observed

5.2.4 Loading Rates

Annual average loading rates by land use are tabulated in Table 5-4.

TABLE 5-4
Calibrated Loads and Loading Rates

	Calibrated TSS UALs (lb/acre/year)					Calibrated TP UALs (lb/acre/year)				
Combined areas	**Heards**	**Marsh**	**ULI**	**Powers**	**Game**	**Heards**	**Marsh**	**ULI**	**Powers**	**Game**
Forest	122	352	206	263	120	0.06	0.13	0.09	0.10	0.02
Low Density Residential	555	605	247	603	556	0.31	0.33	0.30	0.32	0.66
Medium Density Residential	580	623	318	628	581	0.47	0.51	0.43	0.42	0.47
Multi Family Residential	0	605	335	605	582	0	0.59	0.62	0.60	0.76
High Density Residential	596	637	306	0	0	0.52	0.55	0.51	0	0
Institutional	597	644	0	666	583	0.57	0.63		0.56	0.91
Commercial	0	535	414	452	511	0	0.71	0.91	0.79	1.09
Highway	812	603	173	737	644	0.95	0.89	0.92	0.88	1.39
Construction	0	4511	1002	2308	2329	0	2.59	0.71	1.29	0.98
Water	47	0	8	0	48	0.08	0.08	0.06	0.09	0.06
All	548	627	335	548	496	0.44	0.45	0.57	0.51	0.70

TABLE 5-4
Calibrated Loads and Loading Rates (continued)

	Calibrated TSS UALs (lb/acre/year)					Calibrated TP UALs (lb/acre/				
Pervious areas	**Heards**	**Marsh**	**ULI**	**Powers**	**Game**	**Heards**	**Marsh**	**ULI**	**Powers**	**Game**
Forest	122	352	206	263	120	0.06	0.13	0.09	0.10	0.02
Low Density Residential	583	649	239	638	583	0.24	0.25	0.16	0.25	0.63
Medium Density Residential	620	682	328	675	625	0.40	0.43	0.27	0.35	0.40
Multi Family Residential	0	684	369	712	641	0	0.50	0.29	0.49	0.73
High Density Residential	628	685	369	0	0	0.47	0.50	0.30	0	0
Institutional	663	745	0	750	649	0.49	0.54	0	0.47	0.90
Commercial	0	712	487	747	690	0	0.48	0.40	0.51	1.20
Highway	1274	1051	470	1131	1317	0.83	0.69	0.39	0.75	1.98
Construction	0	5140	1009	2530	2329	0	2.88	0.65	1.33	0.98
Water	47	0	8	0	48	0.08	0.08	0.06	0.09	0.06
All pervious areas	584	675	342	629	560	0.36	0.37	0.26	0.37	0.60
Impervious areas										
Low Density Residential	287	287	291	287	287	0.95	0.94	1.09	0.94	0.95
Medium Density Residential	286	285	284	285	286	0.95	0.94	1.02	0.94	0.95
Multi Family Residential	0	285	289	285	286	0	0.94	1.09	0.94	0.95
High Density Residential	286	285	137	0	0	0.95	0.94	1.09	0	0
Institutional	287	286	0	286	287	0.95	0.94	0	0.94	0.95
Commercial	0	358	369	286	287	0	0.94	1.23	0.94	0.95
Highway	294	292	0	292	294	1.08	1.03	1.23	1.02	1.08
Construction	0	947	956	306	0	0	0.94	1.06	0.94	0
All impervious areas	287	320	321	286	289	0.97	0.95	1.15	0.95	0.99

Note: UAL = Unit Area Load

The annual average loading rates are consistent across the modeled areas, with the exception of Upper Long Island Creek. The loading rates from pervious areas in Upper Long Island Creek are affected by the decision in the hydrologic calibration to maximize infiltration in order to increase modeled baseflow. This causes a reduction in overland flow, which in turn reduces sediment detachment and associated TP washoff. Washoff parameters for impervious surfaces would need to be increased correspondingly in order to make up the difference, leading to an increase in impervious UALs. Given the inconsistency of the Upper Long Island Creek loading rates with those from other areas, and the uncertainty of the quality of the baseflow hydrology calibration for Upper Long Island Creek, the loading rates for Upper Long Island were replaced with rates selected from the other areas in the Sandy Springs watershed.

5.3 Existing and Future Conditions

The calibrated model areas described above do not represent the entire Sandy Springs study area. Each of the calibrated areas consists of the portion of the particular watershed, which lies above the monitoring station. In addition, the Sullivans Creek and Tributary 7 watershed were not monitored at all. This subsection describes how the calibrated values are used to provide load estimations for all evaluated subbasins and presents loads for existing conditions. Existing conditions are based on current land use data.

Because of the nearly built-out nature of the Sandy Springs area, future conditions based on Fulton County data indicate that little further development is possible. For this reason, loads under future land use conditions were treated as equivalent to current loads.

5.3.1 Methodology

The methodology for estimating complete watershed loads (including areas downstream of the monitoring stations for the calibrated watersheds) is straightforward for washoff from land segments. The watershed delineations for hydrologic modeling, based on topographic and infrastructure data, were combined with current land use and imperviousness information in ArcView. A report was generated summarizing areas by land use/imperviousness combination. Each area was matched with the appropriate unit-area load, and the calculated loads summed for the watershed.

For each calibrated watershed, the calibrated watershed unit-area loads were used with the exception of Long Island Creek, where selected values from other calibrated watersheds were substituted per Section 5.2.4. Heards Creek unit-area loads were used for the remaining watersheds (Tributary 7 and Sullivans Creek).

Sediment scour values were estimated for Lower Long Island Creek, Tributary 7, or Sullivans Creek because insufficient instream sediment data was available.

5.3.2 Results

Model predictions of average annual sediment washoff and phosphorus loads are summarized in Table 5-5. For reference purposes, suggested targets for sediment and total phosphorus washoff are included in the table. Sediment targets are based on CH2M-HILL’s recommendation of 700 lb/acre/year, while total phosphorus targets are calculated to bring the long-term average TP concentration to 0.1 mg/L.

TABLE 5-5
Watershed Loads for Existing Conditions and Targets

	Existing conditions		Target	
	Sediment washoff (tons/year)	**TP (lbs/year)**	**Sediment washoff (tons/year)**	**TP (lbs/year)**
Game Creek	195.2	423.4	290	270
Heards Creek	219.5	393.1	290	320
Long Island Creek	1082.1	1625.8	1550	1082
Marsh Creek	910.0	1800.0	1280	1350
Powers Branch	337.3	662.4	530	610
Sullivans Creek	313.4	611.1	530	610
Tributary 7	240	359	350	360

5.4 Discussion

The calibration of BASINS/NPSM to selected watershed in the Sandy Springs study area provides an adequate tool for estimating current loads to the Chattahoochee River, and for evaluating the impacts of future development and the effects of different management actions in the watersheds. With the exception of Upper Long Island Creek, model parameters and derived unit area loads for sediment and total phosphorus were consistent with each other.

The BASINS/NPSM framework is a powerful, sophisticated tool for nonpoint source modeling and is well able to represent many important processes. Acceptable calibrations were developed for hydrology, sediment, and total phosphorus, although limitations in the available data made the precise apportionment of sediment loads between washoff **and** instream erosion somewhat problematic. The approach used in the sediment calibration is imperfect in that the erosion is represented in the model by a general scour process applied through the entire reach, where the actual erosion, as verified in the field, takes place in many discrete areas along the reach. This reach-wide scour may result in overestimation of sediment resuspension when the stream is subjected to high flows, and therefore high shear stress. The appropriate corrective action, dividing the stream into smaller reaches, is not practical in BASINS/NSPM. Also, the erosional contribution is more likely to be from bank collapse or slumping, which is not accurately parameterized by critical shear stress.

However, a simple thought experiment demonstrates that regardless of the relative magnitude or proportions of washoff and in-channel contributions, construction of BMPs will have a beneficial impact on water quality for two primary reasons.

1. If all of the sediment contributions are attributed to washoff from land surfaces, BMPs will offer additional opportunities for removal of sediment from runoff into the stream through prevention of washoff or through settling in detention ponds.

2. If all of the sediment contributions are attributed to in-channel erosion, BMPs will attenuate peak flows and velocities (the typical cause of erosion) through added storage, or will decrease the likelihood of erosion through direct improvements to the stream channel.

Further data collection can increase the accuracy of the apportionment of the observed sediment load to washoff and in-channel sources, but will not change the fact that high levels of sediment in Sandy Springs watersheds are affecting habitat and aesthetics to the detriment of public health and enjoyment as well as property values.

In addition, since watershed sediment loads are below targets identified for Fulton County by CH2M, management application of the model is focused on reducing total phosphorus loads to the Chattahoochee River -- a long-term concern for the State and therefore for Fulton County. The exact apportionment of sediment loads between washoff and instream erosion is therefore not essential to developing effective long-term management plans to address Chattahoochee River concerns.

Because of the complexity of the management scenarios being considered in the watershed, BASINS was found to be a limiting factor in evaluation of those scenarios. A simplified management tool, LORELEI, was developed by Limno-Tech and Brown and Caldwell to accommodate these limitations, and is discussed in Appendix K. The annual loads developed in the water quality model calibration are used in the evaluation of different management alternatives for the study area. Each land segment in the evaluation generates model result-based pollutant loads that are then removed by BMPs.

The version of LORELEI used for the evaluation does not model instream processes, which may result in overestimation of loads. This, however, will result in management recommendations that are more protective of Sandy Springs' receiving waters.

The following recommendations are made for future enhancement of water quality calibration and management scenario evaluation:

- Improved meteorological data collection, possibly based on radar models of precipitation calibrated to ground stations.
- Additional monitoring following repair of leaky sewers
- Additional monitoring to support differentiation between sediment washoff and instream erosional contributions to sediment loads
- Linkage or extension of LORELEI framework to include instream processes, probably as part of BASINS.

5.5 References

Aqua Terra Consultants. January 2000. HSPF Training Workshop Documentation.

Camp Dresser & McKee. January 1995. Big Haynes Creek Watershed Management Plan Study.

Limno-Tech, Inc. February 1998. Development of Linked Watershed and Water Quality Models for Lake Lanier.

Northern Virginia Planning District Commission and Department of Civil Engineering, Virginia Polytechnic Institute and State University. July 1978. Occoquan/Four Mile Run Non-Point Source Correlation Study.

Reckhow, K. H., Beaulac, M. N., and Simpson, J. T. June 1980. Modeling Phosphorus Loading and Lake Response Under Uncertainty: A Manual and Compilation of Export Coefficients. U. S. Environmental Protection Agency. EPA 440/5-80-011.

Renard, K. G., Foster, G. R., Weesies, G. A., McCool, D. K., Yoder, D. C. January 1997. Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE). U. S. Department of Agriculture. Agriculture Handbook Number 703.

Schueler, T. R. July 1987. Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs. Department of Environmental Programs, Metropolitan Washington Council of Governments.

Thomas, P. Michael and McClelland, Scott I. 1995. NPDES Monitoring – Atlanta, Georgia Region. In: Stormwater NPDES Related Monitoring Needs: Proceedings of an Engineering Foundation Conference; edited by Harry C. Torno; ASCE, pp. 95-114.

United States Environmental Protection Agency. November 1998. Better Assessment Science Integrating Point and Nonpoint Sources BASINS Version 2.0 User's Manual. Office of Science and Technology and Office of Water. EPA-823-B-98-006.

United States Environmental Protection Agency. September 1993. Hydrological Simulation Program –Fortran User's Manual for Release 10. Office of Research and Development. EPA/600/R-93/174.

6.0 Management Plan Development and Recommendations

6.1 Public Involvement Process

Residents in the Sandy Springs Study Area are actively concerned about the streams and waterways in the watershed, according to the information received through the project public involvement process. Streams are a visible part of the local landscape, with many winding through local neighborhoods and high traffic areas. This close contact with water resources creates concerns about water quality, as well as issues related to flooding and erosion. Many residents live daily with the results of water quality and water quantity challenges in the study area. This heightened concern in water issues offers a tremendous opportunity for positive partnering between the County and local residents.

The goals of the Public Involvement Process for the Water Resources Management Program (WRMP) were to:

- inform residents in the study area of the issues related to water quality and water quantity management, and
- provide opportunities for meaningful input into the recommendations being considered for inclusion in the management plan.

The objectives of the process were to:

- reach out to key stakeholders through community meetings and one-on-one contact,
- support the Fulton County Information and Public Affairs department,
- serve as a resource to the Watershed Initiative Network, and
- generate opportunities for ongoing partnerships between key community groups in the Sandy Springs area and Fulton County.

6.1.1 Watershed Initiative Network

The Watershed Initiative Network (WIN) consisting of approximately 40 residents was formed early on in the process, and consisted of stakeholders from across the county, including several from within the Sandy Springs Study Area. Members of the group represented a wide range of views, and included developers, environmentalists, community activists, homeowners, academicians, and concerned citizens. The group met monthly throughout the course of the project, and spent hours immersed in the details and issues surrounding water quality and quantity management. The group became exceptionally well informed of the challenges, limitations, and opportunities connected with the range of implementation options being considered for the WRMP, and provided valuable insight and ideas into strengthening the management plan.

BC actively participated in developing presentations, resource materials, and maps for this group and its meetings. In addition to the overall group, BC established relationships with the WIN members living or working in the Sandy Springs Study Area. This group included several homeowners, two developers, and a homeowner who also serves on the Fulton County Planning Commission. These individuals were contacted before and after each WIN meeting to seek comments or offer additional information. At the beginning of each WIN meeting, time was spent as a group discussing issues specific to the Sandy Springs area.

In February of 1999, Focus Group Meetings were held at the request of the WIN members to allow in-depth discussions about the project status and recommendations within each study area. Approximately 25 people attended the Sandy Springs focus group meeting, including four WIN members (a severe ice storm in the area several days prior to the meeting forced several people who had RSVPed to miss the meeting). The meeting opened with an Open House format with information stations set up around the room manned by BC project team members. The four stations focused on Customer Complaint tracking and Industry Surveys, Sampling, Modeling, and BMPs. This format allowed attendees to talk one-on-one with project team members and ask questions relevant to their own experiences.

Following the Open House, a presentation was given by Roger Copp of BC and Tad Slawecki of LimnoTech reporting on findings within the Sandy Springs area related to biological and fish habitat, water quality issues such as excessive concentrations of fecal coliform, nitrogen and phosphorus observed at most sampling stations, sanitary sewer overflows, and streambank erosion. Several options for BMPs were presented, along with the concept of "basic, moderate, and aggressive" classifications. Costs and related benefits of each BMP were discussed, along with the complexity of choosing from the menu of BMP options available to solve water quality problems. The presentation also included a demonstration of the Lorelei software package, which illustrates these issues in particular neighborhoods. The presentation concluded with two questions put to the WIN:

1. How do you think we should solve erosion problems (ex. neighbors work it out amongst themselves, creation of a countywide stormwater utility, a developer sponsored fund, or a combination of all of the above), and
2. How much improvement to flooding should be obtained and at what cost?

Active discussion occurred among the WIN members and project team following this presentation. A summary of the meeting, including WIN member comments, was provided to Fulton County.

In addition to the scheduled meetings, BC assisted WIN member Barry Berkovitz in organizing a field trip for the WIN to offer on-sight education about various BMPs. Mr. Berkovitz lives in the Sandy Springs area and has worked over the years to preserve the stream (Long Island Creek) which runs adjacent to his property by constructing various check dams and buffer areas. A walking tour of the stream offered WIN members a firsthand look at the concepts being discussed at their monthly meetings.

6.1.2 Community Meetings and Briefings

To supplement the WIN interaction designed to solicit and incorporate the comments of residents countywide about the project, community meetings and briefings were seen as another component critical to the success of the project. These meetings allowed stakeholders within each study area to hear information specific to their neighborhoods, and offer insights related to the unique challenges in their community. These meetings also allowed busy residents who may find it difficult to include another meeting in their evening schedules to attend presentations at their regularly scheduled homeowner associations or civic club meetings. Throughout the course of the project, BC made presentations to more than 350 people within the Sandy Springs area at various community meetings.

The format for these presentations generally included a 20-minute PowerPoint presentation describing the project overview, providing background on water quality and quantity issues, and discussing findings within the study area. BC took the lead on developing a draft/final template presentation for adaptation by each consultant for each of the watershed study areas. In order to generate interest and facilitate scheduling of community presentations, BC mailed letters to homeowner association presidents, civic groups, and individual residents throughout the watershed requesting the opportunity to come and speak.

BC, along with LimnoTech, also developed a unique interactive software program called Lorelei that allowed residents to compare costs, effectiveness, and specific locations of best management practices. The program, based on the ArcView geographical information system, was tailored to address stormwater control options for each neighborhood in the Sandy Springs Study Area, and was intended to help generate agreement among residents about potentially unpopular stormwater management solutions, such as detention ponds in existing neighborhoods. With the click of a mouse, residents could select one or more stormwater control measures highlighting a map with the exact location of each measure. Another button yielded the implementation costs; a third button produced a description of water-quality benefits. Showing citizens costs and water-quality benefits, along with a detailed map, proved effective in conveying the implications of proposed strategies. For example, residents who first oppose detention ponds for aesthetic reasons may come to favor them over more costly and less effective strategies once the comparison is illustrated.

6.1.3 Identifying Stakeholders

In order to disseminate and collect information from the greatest depths possible within the community, BC worked to establish communication with individual property owners and businesses throughout the Study Area. This was accomplished in part through letters, distributed as door hangers prior to fieldwork, which solicited input from interested residents. The door hanger letter served a dual purpose by providing notice to property owners that field crews would be working in the streams along their property, and by offering an avenue for residents to contact the project team directly with questions or comments about relevant issues. Although these stakeholders did not come together in a formal gathering such as the WIN or community meetings, they offered critical information about the existing conditions within the watershed.

BC staff spoke with more than 125 concerned residents in the Sandy Springs area who called in response to door hangers. A database documenting these calls in presented in Appendix L. The vast majority of these calls related to concerns being expressed about flooding in yards due to storm water, or about excessive erosion along stream banks. As was mentioned earlier in this section, watercourses in the Sandy Springs Study Area travel through neighborhoods, winding their way along the backs of homes and businesses. Excessive erosion of these stream banks carries away gardens, fences, and backyard areas. Residents expressed concerned over safety issues created by these deep gullies, diminished aesthetic value of property, and a pervasive eroding away of home-sites.

In addition to fielding calls and documenting comments for inclusion in the management plan, BC field crews followed up with approximately 85 percent of the contacts to perform site visits and offer further information to the residents. In some cases, Fulton County Public Works was notified of extreme situations, which required more immediate attention. Residents who received this one-on-one interaction expressed positive feedback about the opportunity to share their concerns and be considered for possible solutions through the management plan.

6.1.4 County-Wide Public Meetings

Two countywide public meetings were held prior to the completion of the draft Management Plan. The meeting held in the north Fulton area attracted more than 50 residents.

6.1.5 Project Information Materials

BC prepared information materials for the project including maps, door hanger letters, special access letters, field crew identification badges, PowerPoint presentations, and a newsletter. The project newsletter included information from each of the five study areas, including status of work being conducted in the Sandy Springs Study Area. The newsletter was mailed to each of the stakeholders identified through community meetings, door hanger letters, or personal contacts. The goals of the newsletter, created under the guidance of Fulton County Information and Public Affairs, were to keep interested residents updated on project findings, and to provide informative material related to project issues. This helped to ensure an informed and involved public throughout the project’s duration.

6.1.6 Watershed Issues Education Program

Ongoing and long-reaching involvement with the public to heighten awareness of watershed issues was seen as vital to the long-term success of the WRMP effort. Working with Fulton County Information and Public Affairs Staff, Fulton County Water Quality Program staff, and community leaders in the study area, BC coordinated efforts to create appropriate partnering programs.

6.1.6.1 Sandy Springs Revitalization

Sandy Springs Revitalization is a dynamic group of business and community leaders working to improve the quality of life in the Sandy Springs area. BC contacted this group early in the WRMP to establish dialogue and discuss mutual interests. The group was receptive to the work being undertaken by the project, and provided valuable feedback on approaches that were desirable for the local area. This group also included information about the project on its website, and worked to inform residents of water quality and quantity issues. Leaders of the group became active “watchdogs” within the community, reporting areas of concern to BC and Fulton County staff as they were spotted. This group is a critical link to the opinion leaders and decision-makers within Sandy Springs, and can serve a positive role in assisting with implementation of WRMP recommended solutions.

6.1.6.2 Sandy Springs Business Association

An organization closely linked to Sandy Springs Revitalization, the Sandy Springs Business Association (SSBA) represents business leaders actively involved in the local community. This group was also receptive to the WRMP, and expressed interest in providing input to the final plan. A partnership project, which grew out of the collaboration, was the Sandy Springs "Big Sweep." This initiative was spearheaded by SSBA to encourage businesses along Roswell Road to improve the appearances of their storefronts. This included litter control, lawn maintenance, and driveway sweeping. When BC informed the group of the problems identified with businesses in the area contributing to stream pollution through improper dumpster drainage and disposal of kitchen waste, the SSBA incorporated these issues into their cleanup effort. The "Big Sweep" event included visits by SSBA delegates to each business, providing educational materials and encouraging participation in the program. Businesses who complied with a list of improvements compiled by SSBA were awarded the distinction of an "EverGreen Business" emblem, and were featured in SSBA promotional materials.

6.1.6.3. Keep North Fulton/Sandy Springs Beautiful

This environmental organization, Keep North Fulton/Sandy Springs Beautiful, was a natural partner with the WRMP due to its concern over water quality issues. The group facilitated interaction with other key organizations within Sandy Springs, such as SSBA, and assisted in the "Big Sweep" event and the watershed festival, which will be discussed later in this report. Opportunities for ongoing partnerships with this group are extensive, and a connection already exists with Fulton County through funding which is received by the organization.

6.1.6.4. Big Trees Forest Preserve

Located in the heart of Sandy Springs, the Big Trees Forest Preserve is a tremendous asset to the local community and an excellent educational vehicle for watershed issues. A self-guided watershed tour takes residents along a wooded path through native vegetation and alongside Powers Branch. The Board of Directors of the Big Trees Forest Preserve consists of business and community leaders in the Sandy Springs area who are concerned about the local environment. Partially funded by Fulton County, the preserve is a resource for continuing education about the WRMP and watershed issues.

6.1.6.5 Earth Day Watershed Festival

Through its interaction with the organizations mentioned earlier in this section, BC coordinated a watershed festival as a fun and informative event for the local community. Held in conjunction with the Earth Day celebration at Big Trees Forest Preserve, the watershed festival attracted more than 300 residents on a sunny Saturday. Attendees were treated to t-shirts and hands-on interactive models demonstrating many of the issues identified through the WRMP study. Information stations included:

Turbidity Demonstration: Explanation of what turbidity is and what causes it through use of water samples with differing levels of turbidity. A hand-held meter was used to measure the level of turbidity in each sample.

Carrollton Reference Station vs. Sandy Springs Run-off Demonstration: Hands-on models of the two areas, one with vegetation and one with impervious surfaces. Using a watering can, "rainfall" was applied to each, and the amount of runoff in each example was measured. Also illustrated was how runoff collects debris and contributes to pollution.

Simulated Storm Drain: This model illustrated that run-off entering a storm drain flows directly to the stream rather than the sanitary sewer system which is treated.

Who Wants to Name Their Stream?: A map was provided of unnamed streams in the Sandy Springs area. Attendees were asked to locate their home on a map using a push- pin, and then to locate the unnamed stream nearest their home. Ballots were available to cast votes including the reason why the name was selected. Entries were forwarded to USGS for consideration.

Design A Stream: This activity was geared for younger attendees. A variety of items that contribute to a healthy stream environment were provided, such as plant life, trees, bugs, and snakes. Also provided were items unhealthy to a stream, such as soda cans, candy wrappers, etc. A "stream channel" was constructed in a large plastic pond and supplied with water. The children created their own stream by choosing the items that would promote a healthy stream environment.

Let's Talk About Streams: In the gathering area near Powers Branch, an educational, interactive talk was given periodically throughout the Festival.

6.2 Guidelines for Water Resources Management

6.2.1 Storm Water

6.2.1.1 Regulatory Requirements for Storm Water

Existing ordinance requirements were reviewed to determine their adequacy in providing the proper regulatory framework for stormwater management for the Sandy Springs area, Big Creek, Camp Creek, Johns Creek, and the Little River.

The existing 1995 Fulton County Comprehensive Stormwater Management Ordinance requires that "Should the subdivider fail to obtain an offsite easement for the purpose of drainage conveyance, then the design discharge at the outlet facilities of the subdivision shall be limited to the pre-developed conditions for all storm events, including the discharges and velocities, whichever is more restrictive shall apply." Because much of the Sandy Springs area was developed prior to 1995, less restrictive regulations were applied to those areas; accordingly, much of the Sandy Springs area has developed without storm water controls.

6.2.1.2 Community Values

The Sandy Springs area is a mix of low-density residential with pockets of high-density residential and corridors of commercial development along Roswell Road. Growth in the northern Atlanta suburbs has resulted in increased property values in the Sandy Springs area. This has made development possible in the remaining undeveloped parcels. This development is changing the character of the low-density neighborhoods. Community groups have organized to address concerns over such growth issues, e.g. the Long Island Creek Watershed Preservation Association, the Sandy Springs Coalition of Homeowners Associations. One potential way to deal with these community concerns is to better utilize existing organizations with development oversight to provide a forum to convey concerns from local neighborhood groups to Fulton County. One possible forum is Sandy Springs Revitalization, Inc., which works closely with Fulton County Planning staff.

6.2.1.3 Health and Safety Issues

Health and safety concerns related to storm water and water quality exists in the Sandy Springs area. Residents have expressed concerns regarding a number of issues, including flooding of roads at stream crossings, overflows of sanitary sewage from sanitary sewers, and erosion of stream banks and channels. Storm water monitoring data indicated the presence of heptaclor epoxide during high flow conditions. This chemical, a residual by-product of the termaticide heptaclor, could be causing water quality impacts for aquatic biota or health impacts to individuals using the streams. This potential problem should be investigated further. Recommended monitoring of heptachlor epoxide is provided in Section 6.6.6. The scenarios evaluated for each creek within the Sandy Springs area contain specific actions to address health and safety problems.

6.2.1.4 Recommended Storm Water Guidelines

A broad set of recommendations was developed that addressed the range of water resources management issues that exist within the five study areas. The list of recommended regulatory requirements is provided in volume II, the Methodology and Approach document. The recommendations of greatest interest to the Sandy Springs area relate to regulatory control of infill development and soil erosion controls for construction sites. Infill development is the construction of new homes or businesses on small lots (2-20 acres) in-between existing developed parcels. Often, the infill development site was not developed previously due to site constraints such as steep slopes, stream bisecting the property, or lack of infrastructure (sanitary sewers, water, etc.). Existing regulations for infill development provide waivers of stormwater management requirements for certain types of development. Management recommendations proposed for new infill development include stormwater management and erosion and sediment control for all developments with exposed soil areas exceeding 5,000 square feet.

Additional recommendations for improvement of County regulations include requirements to store 1.2 inches of runoff from impervious lands associated with new development. This storage requirement will provide peak flow reduction for a broad range of storms, including the frequent smaller events up to through the 100-year rainfall event.

6.2.2 Water Quality

6.2.2.1 Regulatory Requirements for Water Quality

The existing County regulations do not have specific water quality performance standards for new developments. This management plan recommends 80 percent removal of storm water pollutants for new development (see Volume II for details). The revised regulations would require new development proposals to include an evaluation of pollutant removal for proposed stormwater management facilities. The pollutant removal calculations may result in different storage requirements than the water quantity requirement to store 1.2 inches of runoff. The more restrictive requirement is recommended for new developments.

Erosion control for construction sites is a large potential source of pollutants to Sandy Springs streams. Sediment loads from uncontrolled construction sites are typically 100 to 1,000 times larger than sediment loads from undeveloped sites (Patric, 1976; Guy, et al, 1969). The recommendations for better enforcement of erosion control activities for construction sites will have significant benefits to Sandy Springs streams.

6.2.2.2 Community Values

The discussion in 6.2.1.2 describes the relationship of this plan to community values.

6.2.2.3 Correlation Analysis

No correlation analysis was conducted in this study to relate stream health to water quality or land use, as the number of samples of biological stream health was not large enough to conduct correlation analysis. As discussed in section 3.2, stream health in lesser-disturbed reference stations is better than stream health in Sandy Springs streams.

6.2.2.4 Recommended Water Quality Guidelines

The proposed stormwater management regulations described above in section 6.2.2.1 provide for additional water quality treatment of stormwater runoff to Fulton County streams. The watershed management plan will also include water quality monitoring recommendations for selected streams within the study areas. If water quality in the streams does not improve to desired levels (see Section 3.2 for the stream health improvement recommendations) after implementation of BMPs, then additional storm water control measures may be necessary.

Inspection of erosion control measures on construction sites has increased in Fulton County in recent years, however additional inspection is needed. For example, BC staff observed clearing of a steep site without erosion controls and removal of trees within the protected 25-foot stream buffer near Colquitt Road and Calvaderas Drive in Sullivan's Creek. The County was notified and a stop-work order was issued. Other problems were observed off Lake Forrest Road in Long Island Creek, off Powers Ferry Road in Long Island Creek, the Cherokee County Club near Hunt Cliff Lane, and Powers Ferry Road in Tributary 6. The County responded quickly to each of these problems, after notification, however additional resources will be needed to prevent these problems from taking place. Once the damage is done, the result is sediment deposition in downstream receiving waters. Removal of the accumulated sediments is costly and damaging to existing stream habitat. Additionally, more comprehensive soil erosion controls are needed in the remaining undeveloped land in the Sandy Springs area, due to the aforementioned site limitations of these undeveloped lots (steep slopes, close proximity to streams).

6.3 Management Frameworks and Selection of BMPs

The management framework utilized in the development of the watershed management plan improves water quality, reduces flooding problems, and minimizes stream erosion. The watershed management plan for the Sandy Springs area will primarily address existing problems rather than future problems because most of the study area is already developed. There will be some future development as small parcels of undeveloped land with site limitations are converted to urban land uses. As discussed earlier in Section 6.2.1.4, the plan will provide recommendations to address this in-fill development.

The management framework focuses on addressing problems in three stages. The most serious problems are addressed first, with the second and third stages addressing problems of gradually decreasing concern. The three stages are:

1. *Address health and safety problems*
   - flooded roads and water quality problems that threaten the health of the general public
2. *Address health and safety problems and meet water quality standards*
   - Address Stage 1, plus provide Best Management Practices (BMPs) that improve water quality conditions so that streams meet State water quality standards
3. *Address health and safety problems, meet water quality standards, and improve the quality of life for residents of the County*
   - Address Stages 1 and 2, plus provide BMPs that improve the quality of life, such as restoration of stream habitat

The three stages of watershed management will involve some actions that will be voluntary for residents, some regulated practices (e.g. more treatment of stormwater runoff to reduce flooding and stream erosion, and improve water quality), and some County-sponsored programs to address existing problems in the watersheds. Some of the problems identified are flooding problems of private roads and/or buildings. Current County policy does not generally provide for County-sponsored work on private land. Exceptions are when there is some over-riding public interest in County-sponsored work on private land or where previous County actions negatively affected the welfare of an individual. Who pays to resolve these cases will be based on the specifics of each situation. The three categories of management activities are described below.

6.3.1 Voluntary Practices

Certain activities are difficult, if not impossible, to regulate. Application of fertilizers to residential lawns is one example. It is possible to regulate this, however enforcement is quite difficult to achieve due to the high cost of inspection and the resistance from residents to excessive government controls. For this reason, reductions in fertilizer applications are often achieved through voluntary actions on the part of residents. The County can provide assistance to encourage reductions in fertilizer applications through public education efforts and site visits to train residents on approved application methods. Residents should be encouraged to take soil samples from their yard to the nearest soil test lab for nutrient analysis. There is usually a nominal fee for each sample. The lab can provide specific instructions for sample collection. A composite sample is normally recommended in which several samples of equal volume are collected from the same depth (0-6 inches for lawns) across the area to be treated. The samples are mixed thoroughly in a clean bucket and then a sub-sample is taken from the composite sample and submitted to the lab. Fertilizers should be applied only as recommended from soil test results.

There are other voluntary measures that citizens can take to protect water quality and reduce flooding in their watershed. If implemented by a significant number of homeowners within a watershed, there could be a significant beneficial effect at a minimal cost. These include:

- Keep all chemicals (including fertilizers, used oil, paint, grease, and other household chemicals) and other wastes (including yard clippings) as far away from environmentally sensitive areas as possible. Environmentally sensitive areas include streams, creeks, seepage areas, drainage ditches, storm drains, and other areas of concentrated flow. Ideally, a natural buffer should be left around these areas (excluding storm drains). The width of the buffer will vary according to site conditions.
- Divert stormwater runoff from gutter downspouts and driveways away from streams and drainage ways and into vegetated areas where it can soak into the ground and be naturally treated.
- Compost yard wastes for mulch. Observations were made in many locations throughout the Sandy Springs area of yard wastes that were piled in drainage ditches and around streams where it eventually gets washed into the stream during high flow events. This can and does add an unnatural amount of organic material to the stream. As this material breaks down, it puts an additional demand for oxygen on the stream and can cause additional stress to aquatic biota (fish and macroinvertebrates).
- Stabilize areas of exposed soil, particularly near streams. This may be accomplished simply by planting appropriate trees, shrubs, or grass. Trees and shrubs are recommended along stream banks to stabilize the banks and shade the stream. Areas with excessive erosion may require a combination of rip-rap (supplied by the county) and planting. The local county extension service and Fulton County Adopt-A-Stream can provide homeowners with techniques for restoring stream banks and suggestions for suitable species to plant. Nurseries that specialize in water gardening may also be helpful. The Internet is always another good source information.
- Citizens with local water quality concerns should be encouraged to organize and become involved as Adopt-A-Stream volunteers. In this manner, citizens can get to know their watershed, monitor streams, identify problem areas, and solve local problems such as illegal dumping and stream bank erosion.

6.3.2 Regulated (Required) Practices

There are other actions in urban areas that need to be regulated. Uncontrolled runoff from impervious surfaces causes problems in downstream areas, due to the increased volume of runoff and increased peak flows. Because streams in Fulton County are privately held, the general welfare of residents is enhanced by regulations for new development so that post-development runoff rates and velocities are no greater than pre-development conditions. Water quality treatment measures are also regulated since the State of Georgia has established water quality standards for streams, rivers, and lakes, however current County regulations do not mandate measures to maintain the quality of post-development urban runoff. The recommendations provided in Volume II address improvements in County storm water regulations.

6.3.3 County-sponsored Programs

County-sponsored programs can also provide benefits to the public. One example of this is a regional detention pond for an area of existing development. There are areas of Sandy Springs that are densely developed, for example, the commercial corridor on Roswell Road north and south of I-285. Upper Long Island Creek (upstream of Lake Forrest Drive) is one such area. There is little detention and treatment of runoff from approximately 630 acres of commercial and high-density residential land in upper Long Island Creek (total area = 1,260 acres). There are many individual businesses and apartment complexes within Upper Long Island Creek. As will be shown below in Section 6.4.1, it is much more cost effective to treat runoff at a small number of sites (less than 10) than to construct hundreds of individual storm water control facilities.

The effectiveness of implementing the stormwater retrofits in the Sandy Springs area will be enhanced if there is some level of involvement from the local neighborhoods and/or homeowners adjacent to the proposed retrofits. Potential ways to accomplish this would be to involve Sandy Springs Revitalization Inc. (a civic organization dedicated to the betterment of the Sandy Springs area) or a newly formed watershed management/maintenance task force.

Specific actions should be taken by the road maintenance crews to improve the function of curb inlets. Re-paving of roads has resulted in a build-up of pavement in front of the inlets. This has reduced the inlet flow capacity, which causes overflow of street runoff onto private yards. The pavement should be partially removed prior to re-paving so that the inlets can function as designed. Also, as mentioned below in the Long Island Creek watershed, there are numerous inlets that are undersized and should be replaced.

County-sponsored programs may also be appropriate to resolve drainage and/or erosion problems that result from previous County activities, such as road or sewer repair projects that cause elevated sediment loads.

6.4 Management Scenarios

A number of storm water best management practices (BMPs) were evaluated to determine the most cost-effective and environmentally beneficial scenarios to reduce flooding of roads and structures. Because the watersheds are almost entirely developed, limited sites were available for BMPs. In the Sandy Springs study area, field investigations were conducted to determine where BMPs could be constructed. No explicit actions are proposed to remediate heptaclor epoxide measurements observed in Sandy Springs streams. As discussed in Section 3.0, further sampling is recommended, and is described in Section 6.6.6.

The management scenarios were developed to address the water quantity and quality problems observed throughout the study area. These problems are summarized below:

- Flooding problems are significant. Over 20 bridges experience frequent flooding and may have to be replaced. Additionally, private residences and driveway bridges also experience flooding.
- Stream erosion problems are common. More than 5 miles of streams experience significant erosion. Some streams that were one-foot deep and two-feet wide have eroded to over 12-feet deep and 20-feet wide.
- Water quality during wet weather is poor, as described in Section 3. Water quality problems exist due to: sanitary sewer overflows, poor waste management of commercial facilities, poor construction practices for in-fill developments, dumping of yard waste into streams, lawn fertilizers, animal waste, and runoff from parking lots and roads.

- Steam reconnaissance and storm water sampling identified numerous overflows of untreated sewage from separate sanitary sewers and businesses. Some overflows were eliminated during the study and continuing infiltration/inflow reduction work will further reduce overflows. Certain areas continue to be served by individual septic systems. The impact of these septic systems on water quality is unknown.

The study found that all residents and businesses of the Sandy Springs study area contribute in one way or another to the flooding, stream erosion, and water quality problems. Lawns are fertilized, lawn clippings are dumped in streams, cars drip oil and grease, and parking lots and houses reduce infiltration and increase runoff. The old adage, "We have found the enemy, and he is us," illustrates that just as we are all part of the problem, we must be a part of the solution.

6.4.1 Scenario Development

Three management scenarios will be described in this section to address the three stages of watershed management described above in section 6.3. The water quality, flood control, and stream erosion benefits of each scenario will be described. Costs will also be provided. Specific plans will be described for the following Water Resource Management Units (WRMUs), ordered from south to north:

- Long Island Creek Water Resource Management Unit
- Heards Creek Water Resource Management Unit
- Marsh Creek Water Resource Management Unit
- Sullivan's Creek Water Resource Management Unit

6.4.1.1 Long Island Creek Water Resource Management Unit

The Long Island Creek WRMU includes Long Island Creek and Riverview Creek. These creeks will be discussed separately in the following sections.

6.4.1.1.1 Long Island Creek

Scenarios were evaluated for Long Island Creek to reduce flooding problems, stream erosion, and to reduce pollutant loads. As discussed previously in Section 3.0, water quality problems are due to both sanitary sewer overflows and non-point source pollutants associated with residential and commercial land uses. High fecal coliform values were observed during storm flow conditions (in excess of 1,000,000 organisms per 100 ml) and high phosphorus concentrations were observed during storms with both high and low fecal coliform levels. It is suspected that fertilizer additions may be responsible for the elevated phosphorus concentrations, although there is no direct evidence to support this hypothesis.

The pollutant load reduction goal is to reduce fecal coliform concentrations to meet the Fulton County target of 5,000 organisms per 100 ml. Most fecal coliforms appear to originate from sanitary sewer overflows, however the magnitude of this source is unknown since the volume and concentration of overflows is unknown. Non-point sources are believed to also be a significant source. Because the magnitude of the non-point source fecal coliforms is unknown, it is assumed that treatment of storm water runoff to achieve an acceptable phosphorus target will also achieve an acceptable fecal coliform concentration. The predicted long-term phosphorus concentration for upper Long Island Creek is approximately 0.13 mg/l, and the target concentration is 0.1 mg/l. Accordingly, the phosphorus concentration reduction target for upper Long Island Creek is 30 percent.

Three basic scenarios (levels of protection) were evaluated:

- Protection of Health and Safety
- Protection of Health and Safety and Attainment of Water Quality Standards
- Protection of Health and Safety, Water Quality Standards, and Improved Quality of Life

A number of options were evaluated within each scenario and are discussed below.

Protection of Health and Safety (Health and Safety)

Factors affecting health and safety in Long Island Creek include sanitary sewer overflows at a number of locations, and flooding. Locations bridges and culverts flood are listed below:

1. Highland Springs Apartments on Northwood Drive near Lake Forrest Drive
2. Stonebridge on Roswell Apartments upstream of Roswell Road
3. Fountain Lake Apartments on Roswell Road southeast of where Long Island Creek crosses Roswell Road
4. Long Island Drive as it crosses Long Island Creek
5. Private driveway just upstream of Long Island Drive
6. Jett Road
7. Private driveway downstream of Jett Road
8. Private driveway upstream of Northside Drive
9. Private driveway just upstream of Northside Drive

Seven of the 10 flooding locations are on either: 1) private interior roads within apartment complexes, or 2) private driveways across the main channel of lower Long Island Creek. The basic components of the protection of health and safety are listed below:

- Reduce the frequency of sanitary sewer overflows
- Consider constructing a siphon for the sanitary sewer crossing of Long Island Creek at Lake Forrest Drive. This crossing is approximately 2 feet above the low-flow depth of Long Island Creek, and debris accumulations raise the water surface elevation by approximately five feet during flood events. Flooding of Long Island Drive could be significantly reduced from this change. *Note that the proposed siphon should not be constructed without a careful engineering study to assure that the siphon will be self-cleansing or will have automatic injectors to cleanse the line.*
- Replace numerous curb inlets that no longer function to design conditions or were under-designed to begin with. Examples include: 455 Hammond Road, numerous inlets along Roswell Road north of Cliftwood Drive, and Northwoods Road near Highland Springs Apartments.
- Reduce flooding at three bridges in apartment complexes in upper Long Island Creek (upstream of Lake Forrest Drive)
- Reduce flooding on Long Island Creek at Long Island Drive, Powers Ferry Road, and Jett Road

- Reduce flooding on private driveways on Lower Long Island Creek where there is an overall public benefit to County-sponsored work on private property.

The most cost-effective solution to flooding can be accomplished by bridge replacements (see next scenario for a discussion of costs to solve flooding via upstream detention).

The cost of the sanitary sewer siphon at Long Island Drive ($350,000) and the bridge replacements is **$2,350,000**. The cost to reduce the frequency of sanitary sewer overflows is covered by existing County programs. There are a number of maintenance requests in Long Island Creek that have not been addressed due to budget limitations. Adequate implementation of an enhanced storm water management program will require significant interaction with residents adjacent to the streams.

There are a number of unresolved storm water management issues in Long Island Creek that should be resolved as part of the first stages of implementation. These cases are listed below:

ADDRESS	DESCRIPTION	FIX COST
455 Hammond Dr.	2 36" pipes run through property, hole in yard above pipe joint; curb inlet on Hammond Rd not working, yard erosion	$ 1,000
Jett Road	Sediment has accumulated in pond due to inadequate erosion control of upstream curb & gutter repair	$10,000
525 Carol Way	Laural Chase subdivision on Mt. Paran; 24" culvert installed 20 years ago-is clogged; 17 complaints, built $24K bridge	$24,000

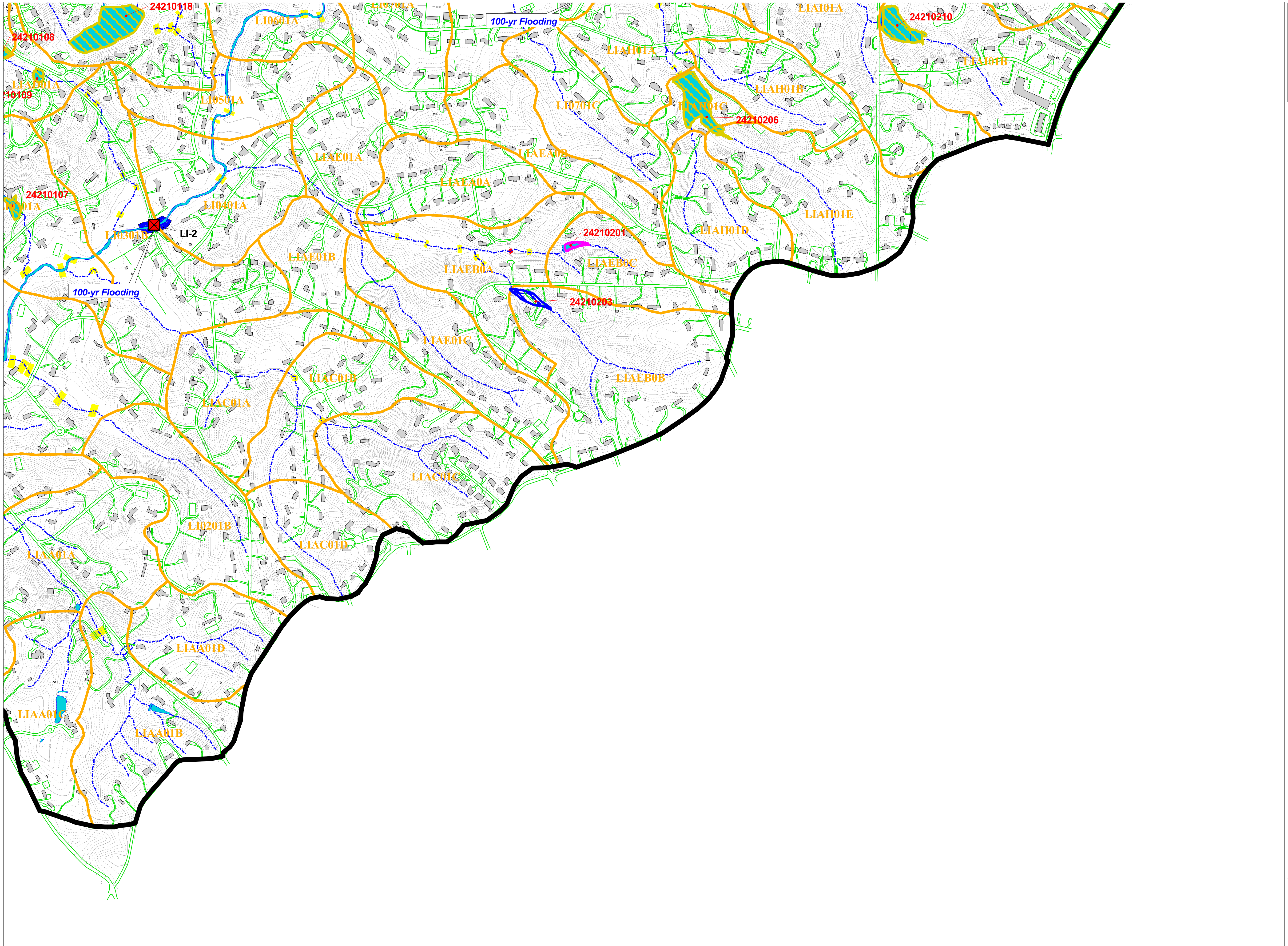
Protection of Health and Safety and Attainment of Water Quality Standards

This scenario includes protection measures discussed above and provides the additional benefit of reducing pollutant loads so that water quality standards can be attained. The flood control can (in some cases) be provided by upstream detention rather than by bridge replacements. The basic solutions considered are:

- detention of stormwater in detention ponds via retrofits of existing ponds and new ponds in locations along minor tributaries, and
- source reduction at the origin of increased runoff (cisterns at homes, eco-roofs at larger buildings, and edge-of-parking lot filters).

For clarity, Long Island Creek was divided into two sections for this discussion: upper Long Island Creek and mid/lower Long Island Creek.

On-site versus regional storm water management solutions were evaluated for the densely developed **upper Long Island Creek**. Both Federal and State programs promote stormwater best management practices that treat the problem at its source rather than constructing treatment facilities in-stream where existing aquatic habitats may be affected. However, as will be shown below, in Upper Long Island Creek, there is a lower cost and higher pollutant removal effectiveness for detention ponds. One pond can achieve the same benefit or provide increased benefits when compared to numerous on-site BMPs. Figure 6-1, Tiles 3 and 4, shows the location of recommended detention facilities.



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

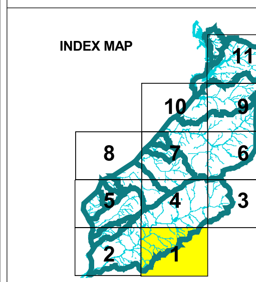
Figure 6.1 - Tile 1
Locations of Recommended Best Management Practices

Best Management Practice Type
- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type
- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

Erosion Severity
- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour
- 5 Foot Contour
- 25 Foot countour

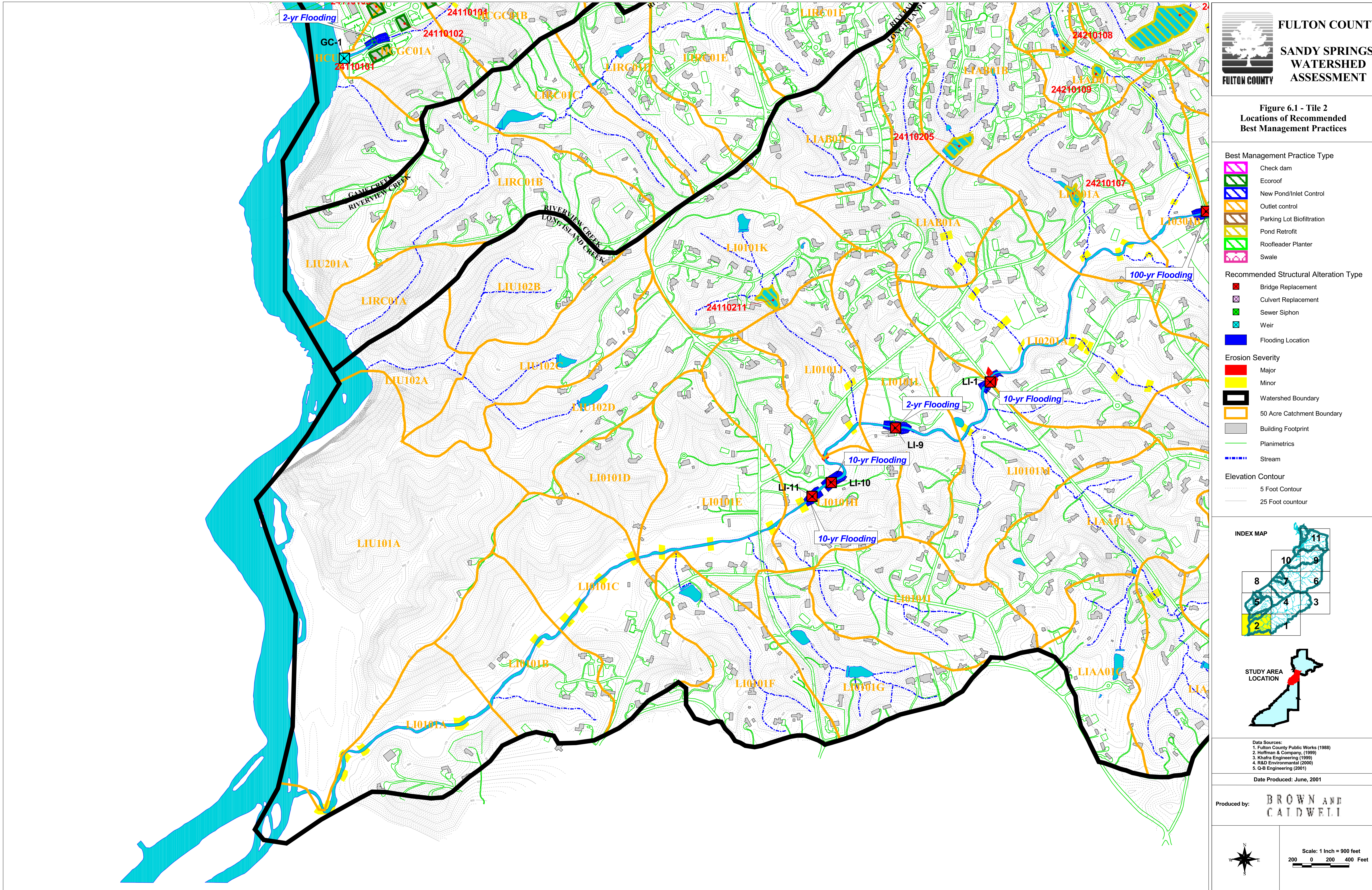


Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

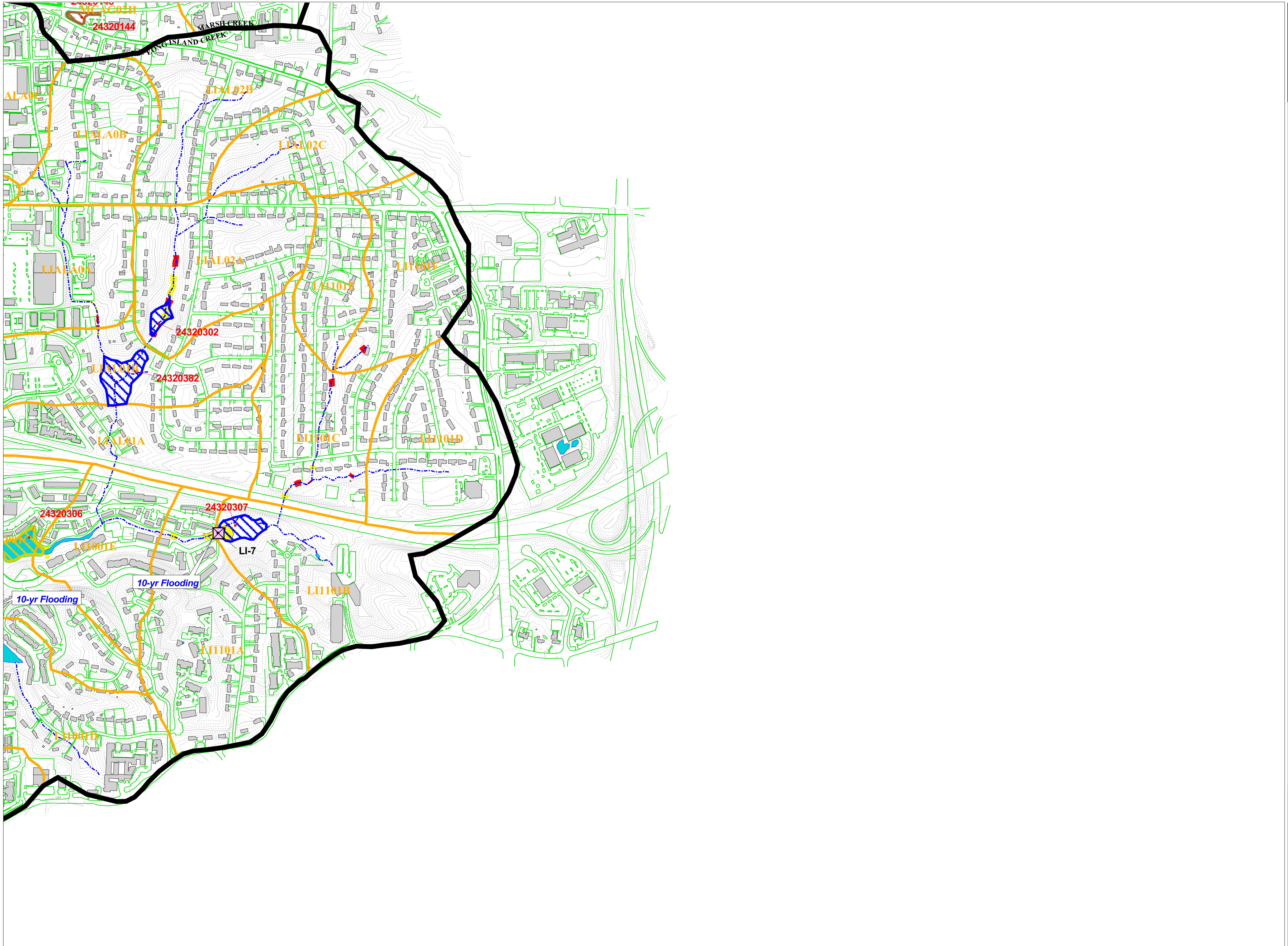
Scale: 1 Inch = 900 feet
200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 6.1 - Tile 2
Locations of Recommended Best Management Practices



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 6.1 - Tile 3
Locations of Recommended Best Management Practices

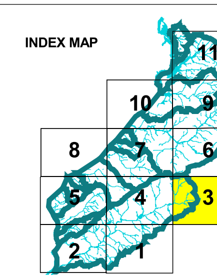
Best Management Practice Type
- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type
- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

Erosion Severity
- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour
- 5 Foot Contour
- 25 Foot countour

INDEX MAP



STUDY AREA LOCATION

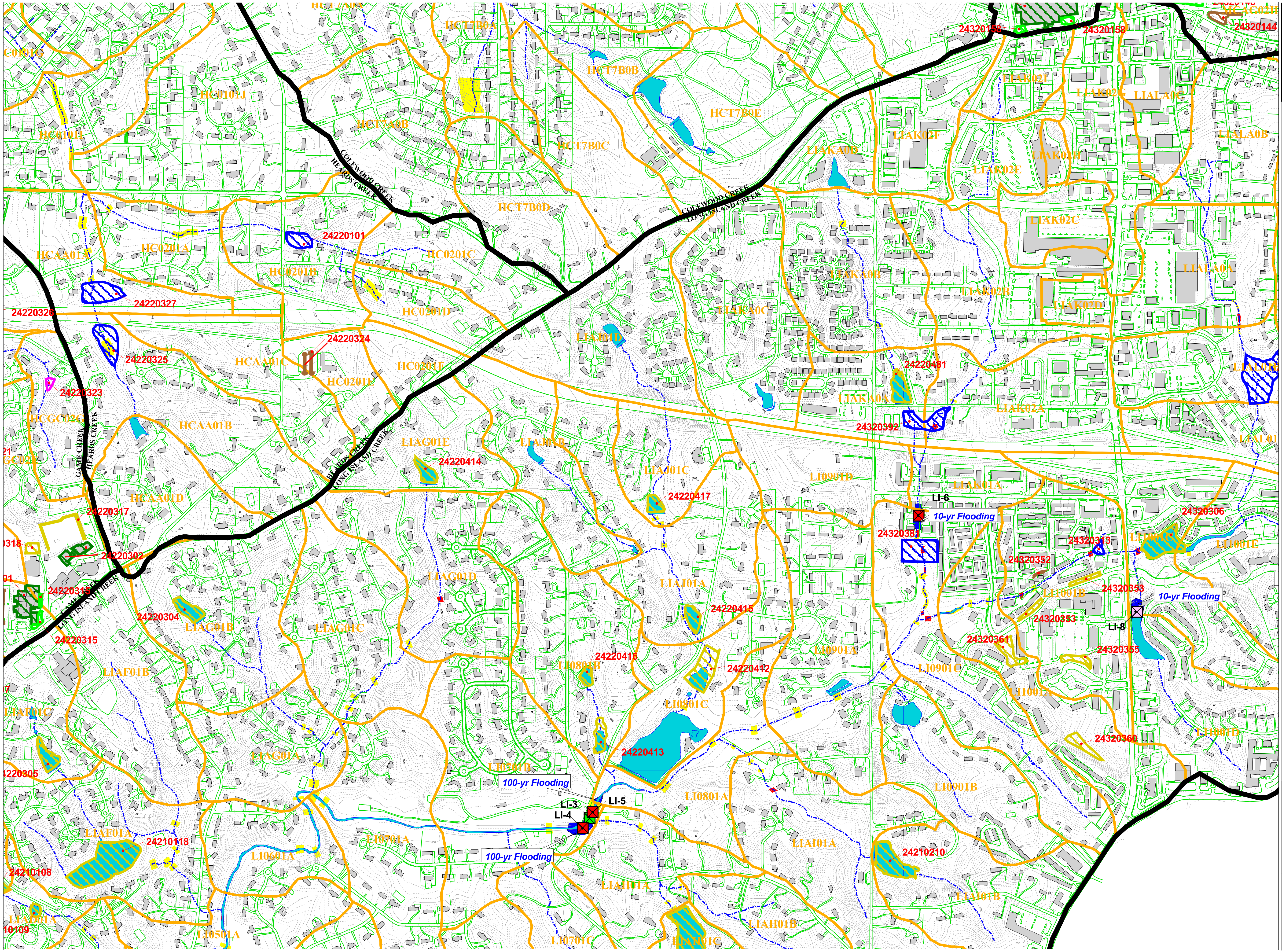
Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

Scale: 1 Inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 6.1 - Tile 4
Locations of Recommended
Best Management Practices

Best Management Practice Type
- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type
- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

Erosion Severity
- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour
- 5 Foot Contour
- 25 Foot countour

INDEX MAP

1 2 3 4 5 6 7 8 9 10 11

STUDY AREA LOCATION

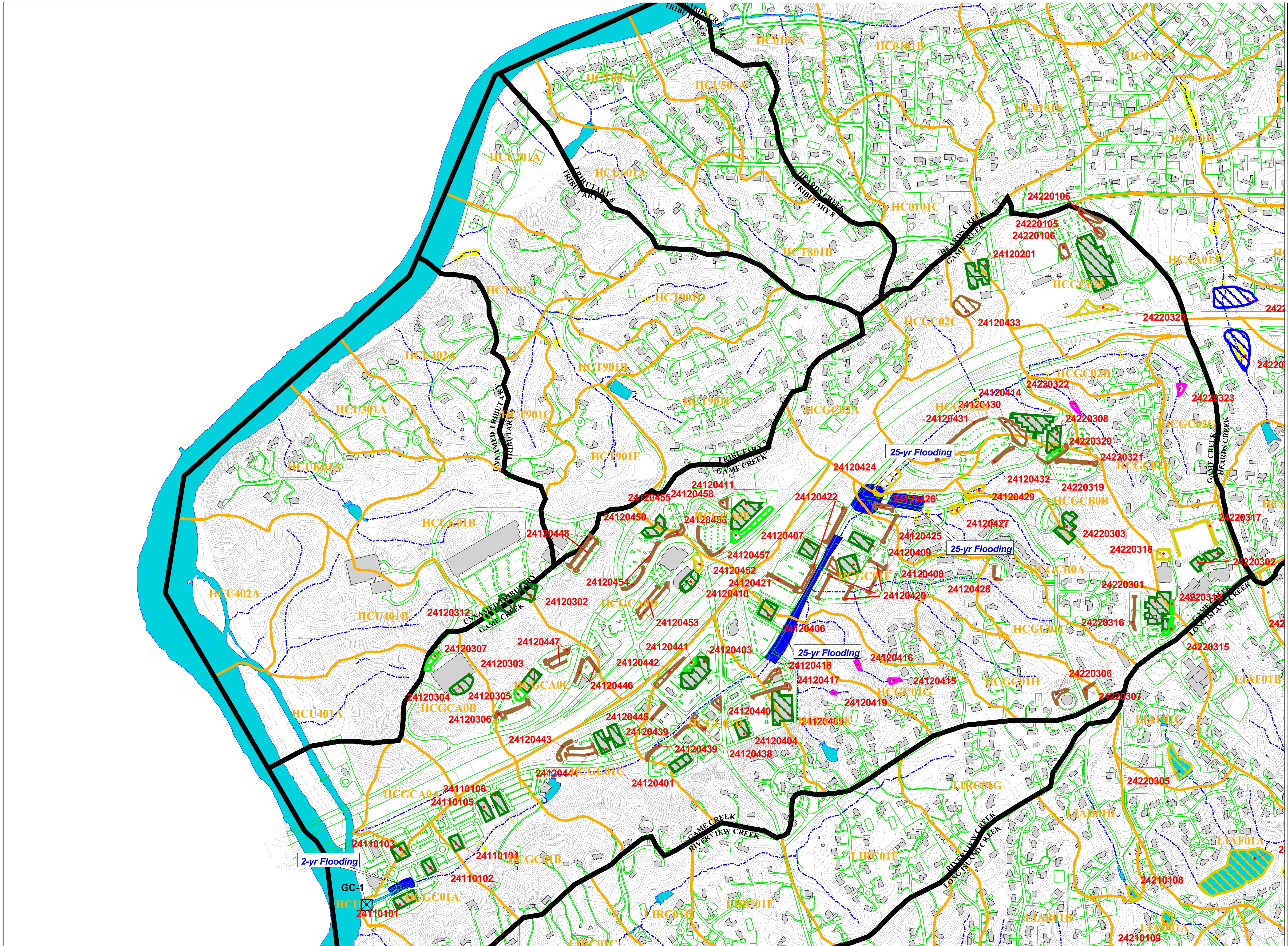
Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

N S E W

Scale: 1 Inch = 900 feet
200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

FULTON COUNTY

Figure 6.1 - Tile 5
Locations of Recommended Best Management Practices

Best Management Practice Type

- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type

- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

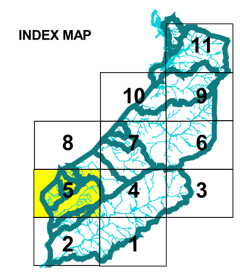
Erosion Severity

- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour

- 5 Foot Contour
- 25 Foot countour

INDEX MAP



STUDY AREA LOCATION

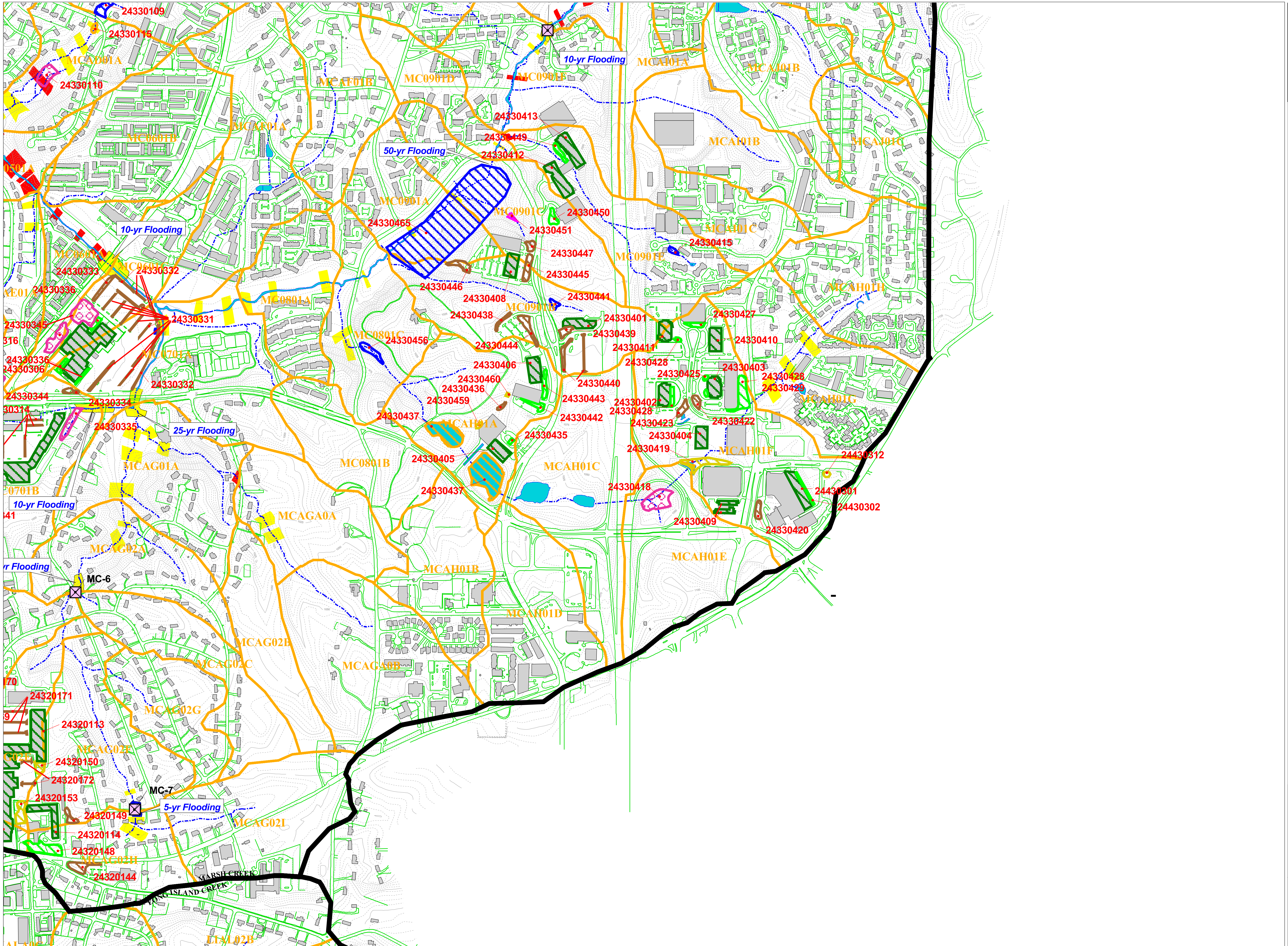
Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

Scale: 1 Inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

FULTON COUNTY

Figure 6.1 - Tile 6
Locations of Recommended Best Management Practices

Best Management Practice Type

- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type

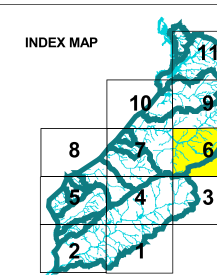
- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

Erosion Severity

- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour

- 5 Foot Contour
- 25 Foot countour



Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

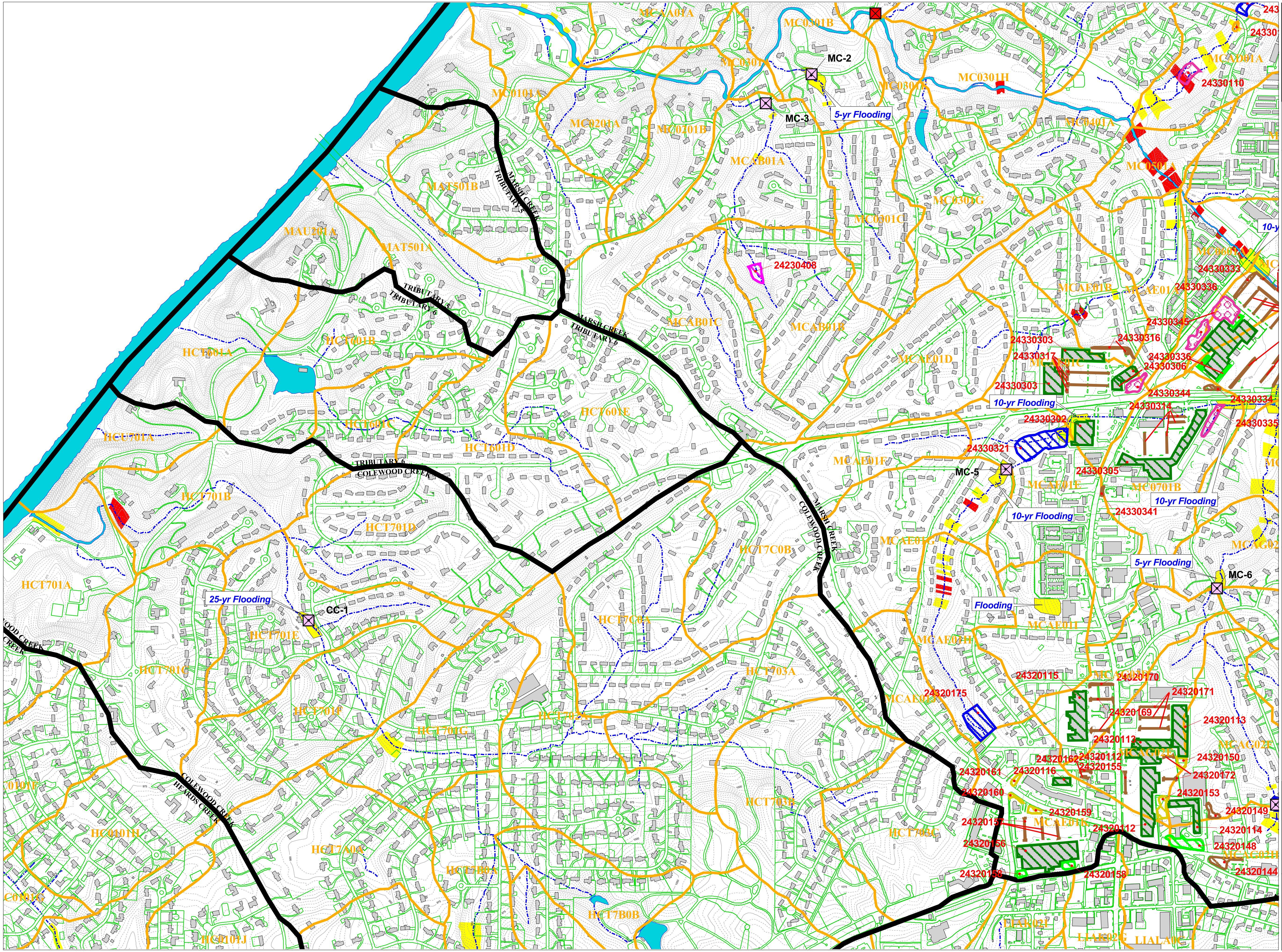
Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

N
W E
S

Scale: 1 Inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 6.1 - Tile 7
Locations of Recommended Best Management Practices

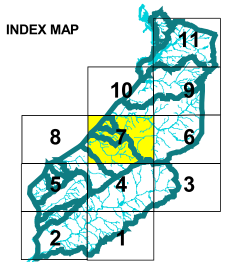
Best Management Practice Type
- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type
- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

Erosion Severity
- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour
- 5 Foot Contour
- 25 Foot countour

INDEX MAP



STUDY AREA LOCATION

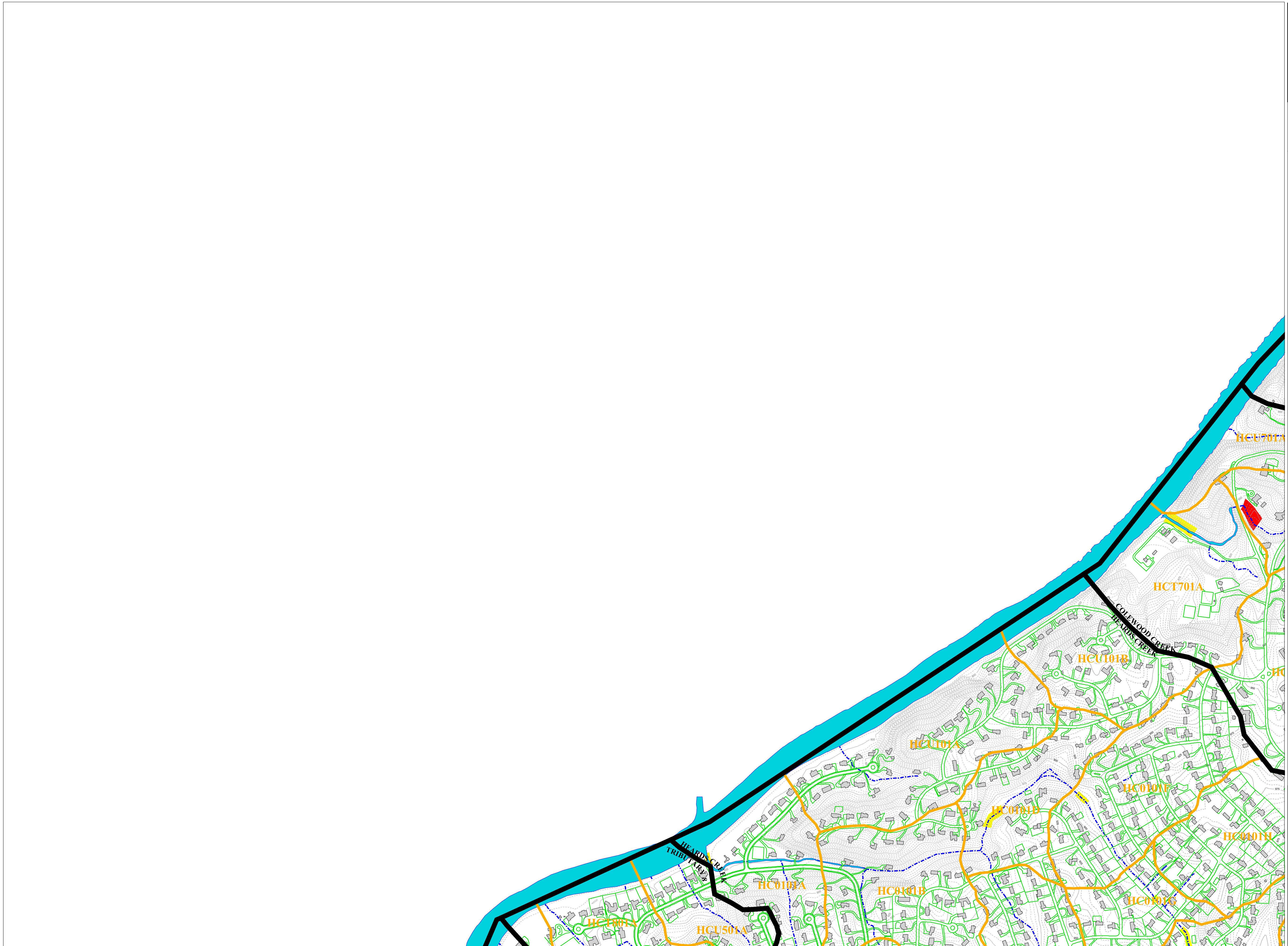
Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

Scale: 1 Inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 6.1 - Tile 8
Locations of Recommended Best Management Practices

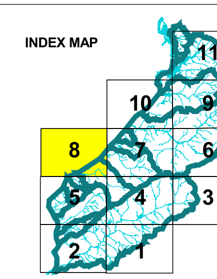
Best Management Practice Type
- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type
- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

Erosion Severity
- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour
- 5 Foot Contour
- 25 Foot countour

INDEX MAP



STUDY AREA LOCATION

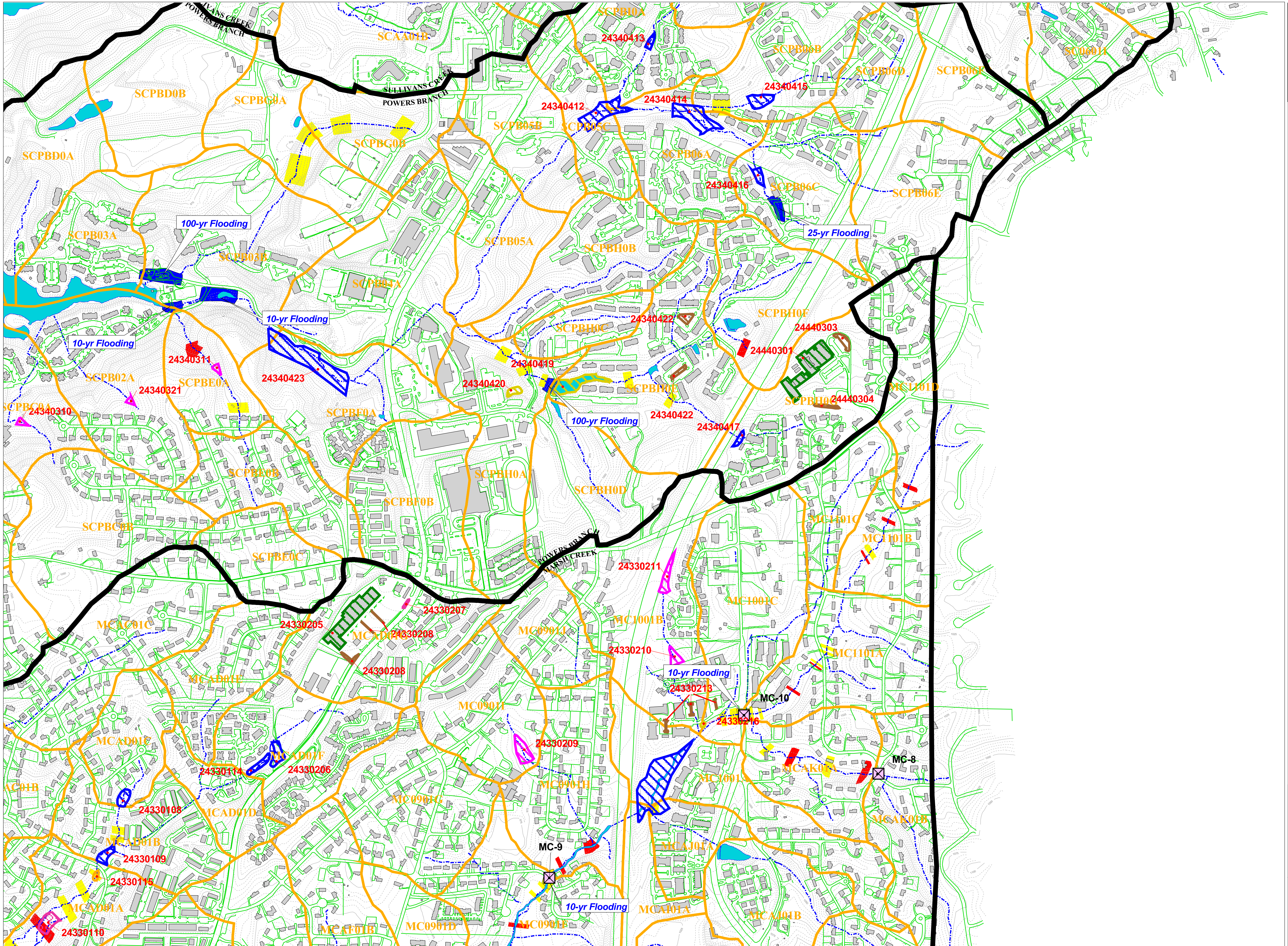
Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

Scale: 1 Inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 6.1 - Tile 9
Locations of Recommended Best Management Practices

Best Management Practice Type

- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type

- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

Erosion Severity

- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour

- 5 Foot Contour
- 25 Foot countour

INDEX MAP

11 10 9 8 7 6 5 4 3 2 1

STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

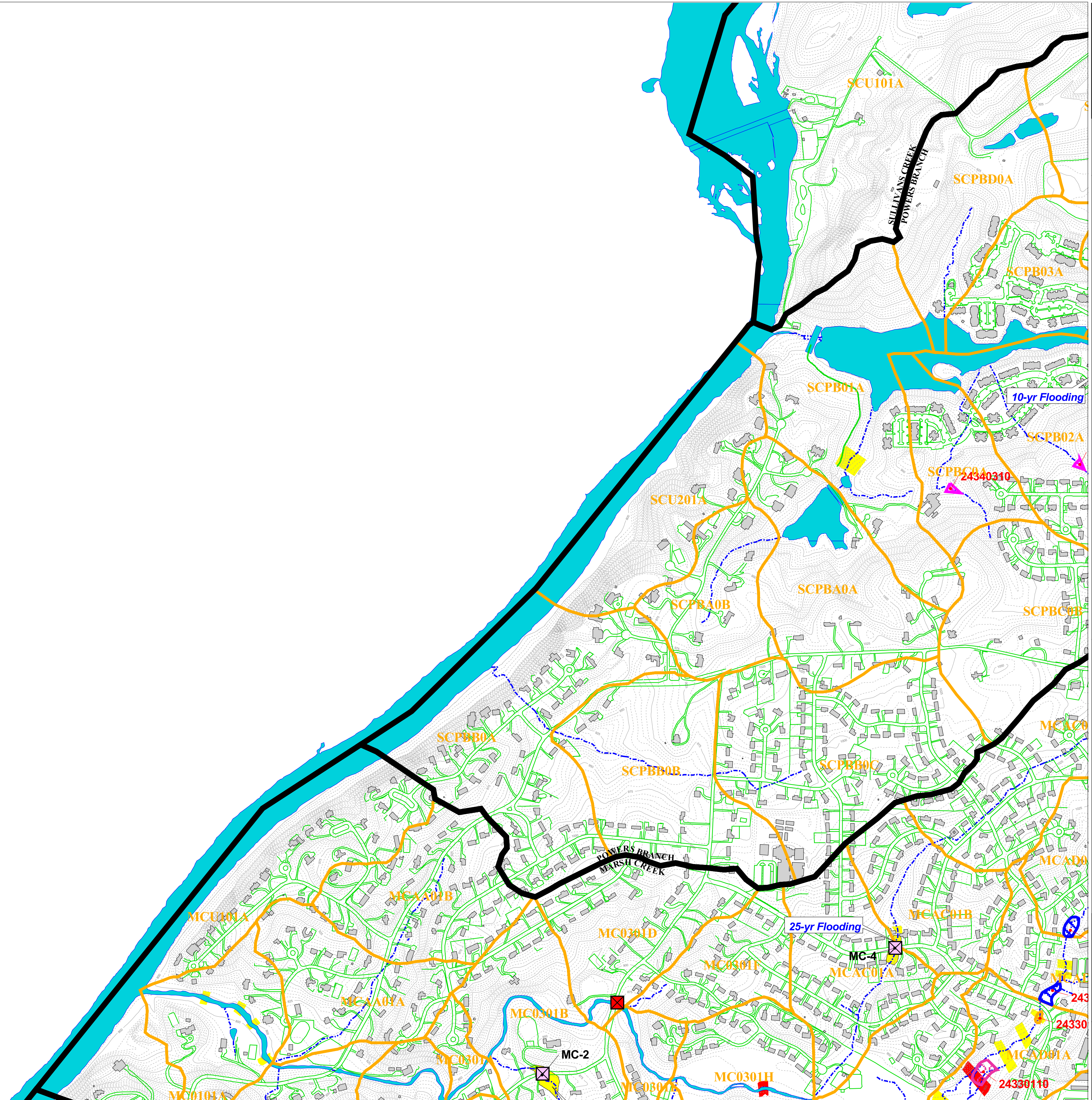
Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 Inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

Figure 6.1 - Tile 10
Locations of Recommended Best Management Practices

Best Management Practice Type
- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type
- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir

Flooding Location

Erosion Severity
- Major
- Minor

Watershed Boundary

50 Acre Catchment Boundary

Building Footprint

Planimetrics

Stream

Elevation Contour
- 5 Foot Contour
- 25 Foot countour

INDEX MAP

STUDY AREA LOCATION

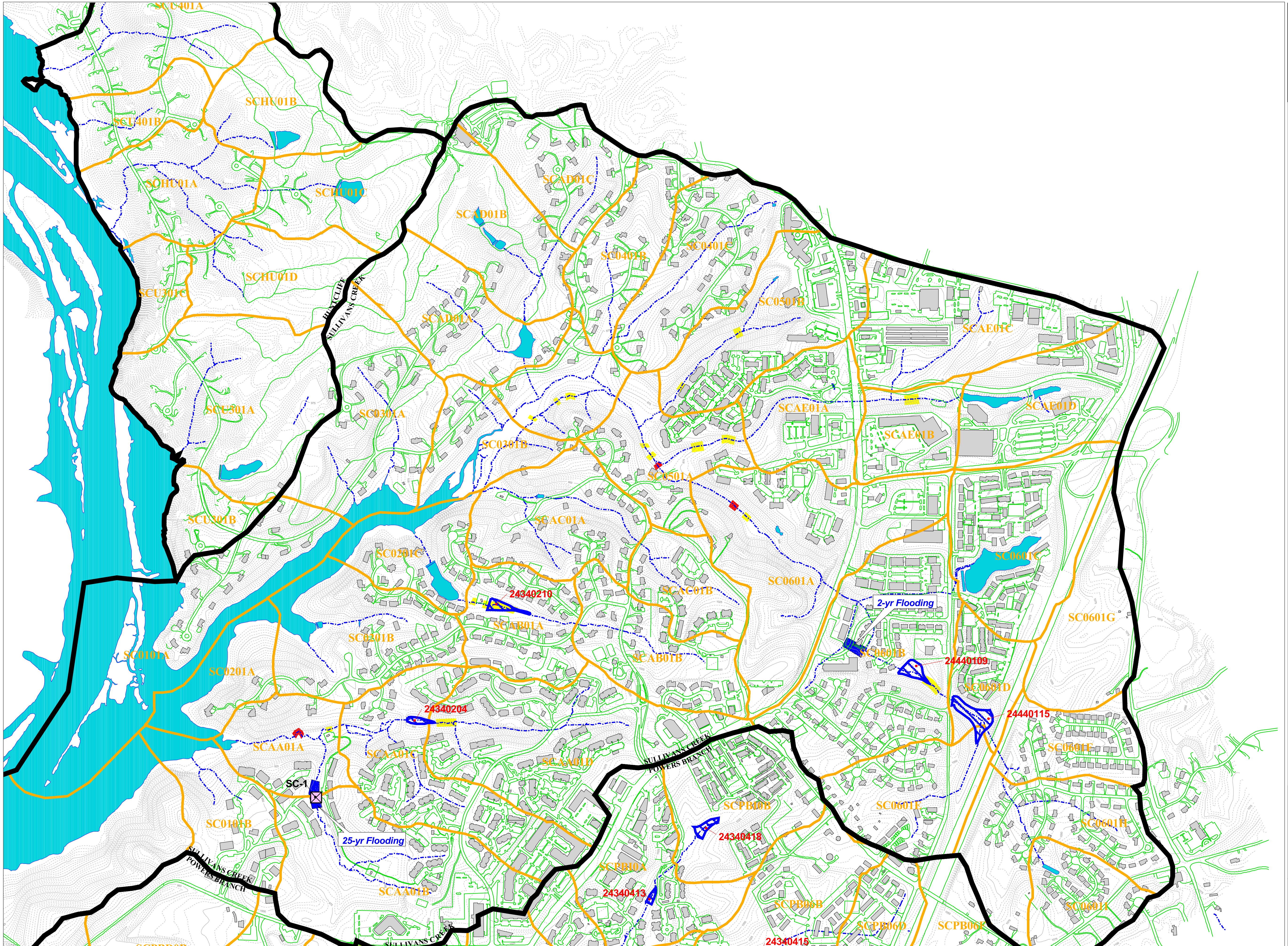
Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

Scale: 1 Inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

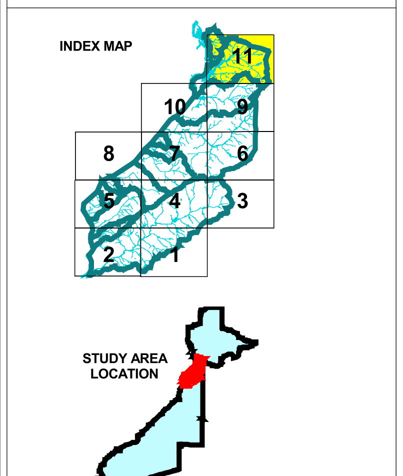
Figure 6.1 - Tile 11
Locations of Recommended Best Management Practices

Best Management Practice Type
- Check dam
- Ecoroof
- New Pond/Inlet Control
- Outlet control
- Parking Lot Biofiltration
- Pond Retrofit
- Roofleader Planter
- Swale

Recommended Structural Alteration Type
- Bridge Replacement
- Culvert Replacement
- Sewer Siphon
- Weir
- Flooding Location

Erosion Severity
- Major
- Minor
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Planimetrics
- Stream

Elevation Contour
- 5 Foot Contour
- 25 Foot countour



Data Sources:
1. Fulton County Public Works (1988)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmantal (2000)
5. Q-B Engineering (2001)

Date Produced: June, 2001

Produced by: BROWN AND CALDWELL

Scale: 1 Inch = 900 feet
200 0 200 400 Feet

Source Control in Upper Long Island Creek. Potential solutions include cisterns at homes, eco-roofs at larger buildings, and edge-of-parking lot biofiltration units. Cisterns are sized for storage of one inch of runoff for each residential home. The average 2,500 square foot home would have a 1,500-gallon cistern (storage = 1″ of rainfall). Eco-roofs are essentially a truck bed liner on a roof with two-inches of soil and grass. Runoff volumes can be reduced by 50 percent for a normal year. Edge-of-parking lot filters are concrete vaults with half of the storage capacity serving as a sand filter with under-drains. The first cell is a pre-treatment cell to remove a fraction of the sediment load. If the surface of the filter has a grate inlet, these bio-filters can provide treatment without any loss of parking lot space (see Figure 6-2). Infiltration can be effective in reducing the volume of runoff from impervious areas. There are a number of potential problems with infiltration, as described below:

- Soils in Fulton County can have low infiltration rates, especially if Georgia clays are present,
- Sediment from exposed soils can clog infiltration measures. Studies in Prince Georges County, MD of infiltration practices found high failure rates within five years of operation due to clogging. Grass buffer strips can enhance the life of infiltration measures.

These problems with infiltration devices limit their utility to areas where sediment loads are low or where an adequate grass buffer strip can be constructed to filter incoming sediment loads. Infiltration is not a part of the recommended plan for existing developed areas.

Regional Detention in Upper Long Island Creek. This option includes retrofits of two existing ponds and installation of six new detention ponds. The pond locations are shown on Figure 6-1, Tiles 3 and 4. At the retrofit sites, outlet control structure could be modified to enhance peak flow reduction and pollutant removal effectiveness. Also, some dredging may be required and in some cases, embankment stabilization may be necessary. In both retrofit locations, the weir elevations for existing outlet control structures are within one foot of the top of the embankment crest. These outlet control structures do not provide any storage of storm-generated runoff. Retrofit of these ponds could be a WIN-WIN solution for both Fulton County and local residents if implemented properly. The County could take over maintenance responsibility, thereby reducing the cost of maintenance to adjacent residences. Many existing ponds were built years ago when the level of development was considerably less than exists today, and the outlet control structures and/or the embankments are unsafe. Of 37 ponds surveyed in the Long Island Creek watershed, at least 20 ponds do not have adequate embankments and outlet facilities to withstand a major flood event.

Pond retrofits have been recommended for many of the existing ponds throughout the Long Island Creek watershed and in other parts of the study area. In general, these pond retrofits will provide multiple benefits for reduction of flooding, pollutant loads, and downstream erosion. Most existing ponds operate merely as water features with limited flood control and water quality benefits. It is common for these existing ponds to have a single outlet that does not provide for safe conveyance of peak flows, and the depth between the riser crest and the embankment crest is often less than two feet. Multiple openings for peak flow control of different design storms, 2-, 5-, 10-, and 25-year storms, are rare, as are emergency outlets for 100-year storms. Outlet protection is also rare, and seepage is common through the embankment. Sediment accumulations are common, which reduces the effectiveness of the pond for control of peak flows.

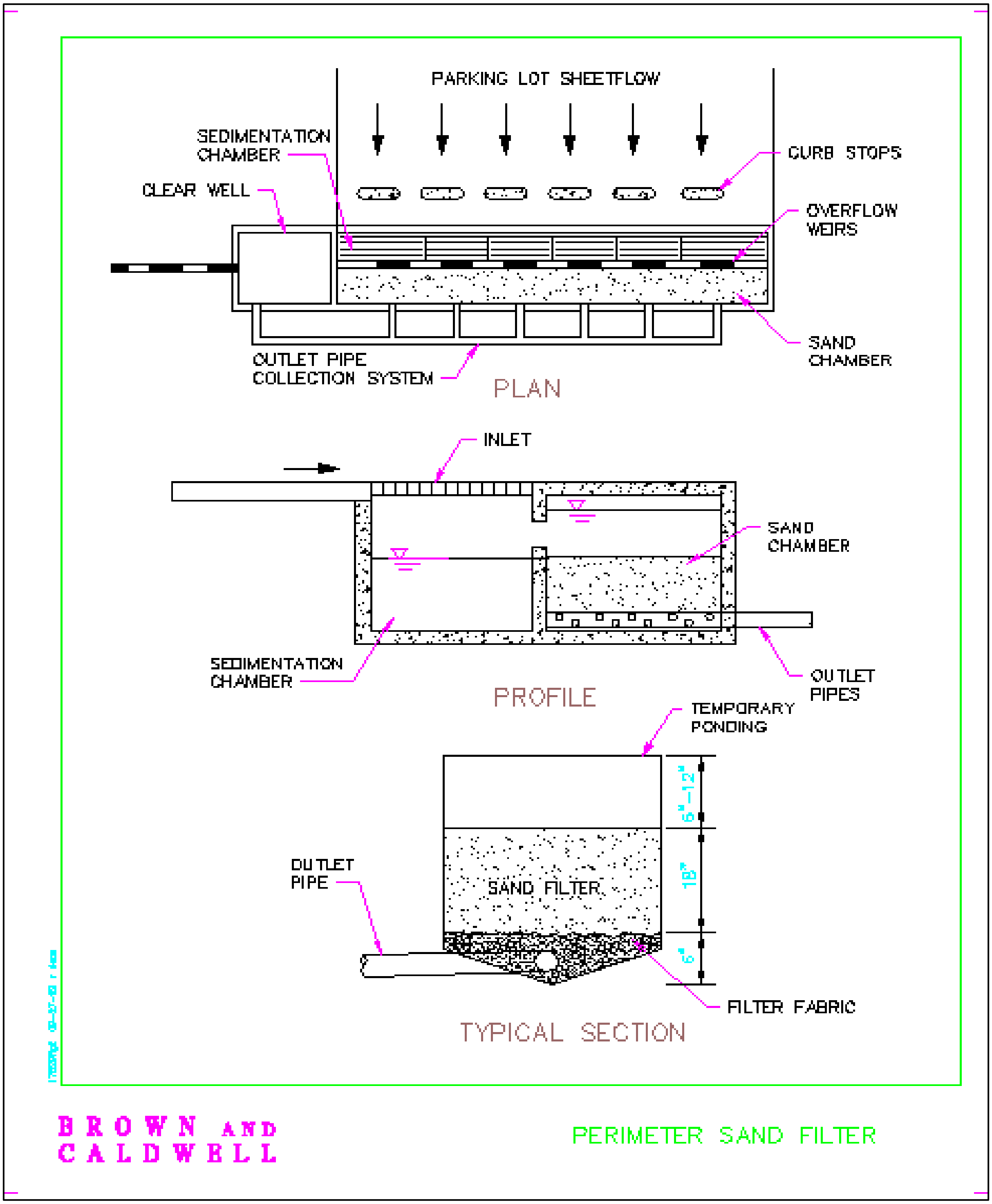


FIGURE 6-2
Edge of Parking Lot Sand filter

The typical pond retrofit will consist of:

- construction of a new riser with peak flow control for multiple design storms,
- lowering of the pond elevation to store a portion of incoming runoff
- removal of accumulated sediments
- channel protection downstream of the pond outlet
- construction of an emergency outlet.

The recommended pond retrofits provide multiple benefits for reduction of problems associated with flood control, water quality, and downstream stream erosion. A section view of the typical recommended pond retrofit is presented in Figure 6.3.

The anticipated benefits associated with the retrofit of one pond (BMP number 24220412) in upper Long Island Creek were calculated and are presented below. Similar benefits are expected for other recommended pond retrofit projects.

Current Conditions			
Existing Area (acres)	Existing Volume (acre-feet)	Existing Volume (cubic feet)	Phosphorus Removal Efficiency
1.51	3.02	131551.2	0.25
Recommended Conditions			
Proposed Area (acres)	Proposed Volume (acre-feet)	Proposed Volume (cubic feet)	Phosphorus Removal Efficiency
1.86	7.44	324086.4	0.55

The detention pond option for Upper Long Island Creek also includes seven new ponds. These ponds are all within the backyards of existing private residences. As with the retrofits, creativity will be required to obtain permission from the owners of these properties. In most cases, the ponds will be situated within the floodplain where development is not possible. In one location, there is no active use of the existing parcel, possibly due to access problems or because a significant portion of the property is in the floodplain. If the County assumes maintenance responsibility for the floodplain, the reduced cost of maintenance could be a benefit to the existing property owner. In the case of the undeveloped parcel, the County could arrange for a zoning modification or arrange for site access so the upland portion of the site could be developed. The backyard of a private residence may be impacted for the BMP identified as site 24320381. Higher land acquisition costs were used for this site.

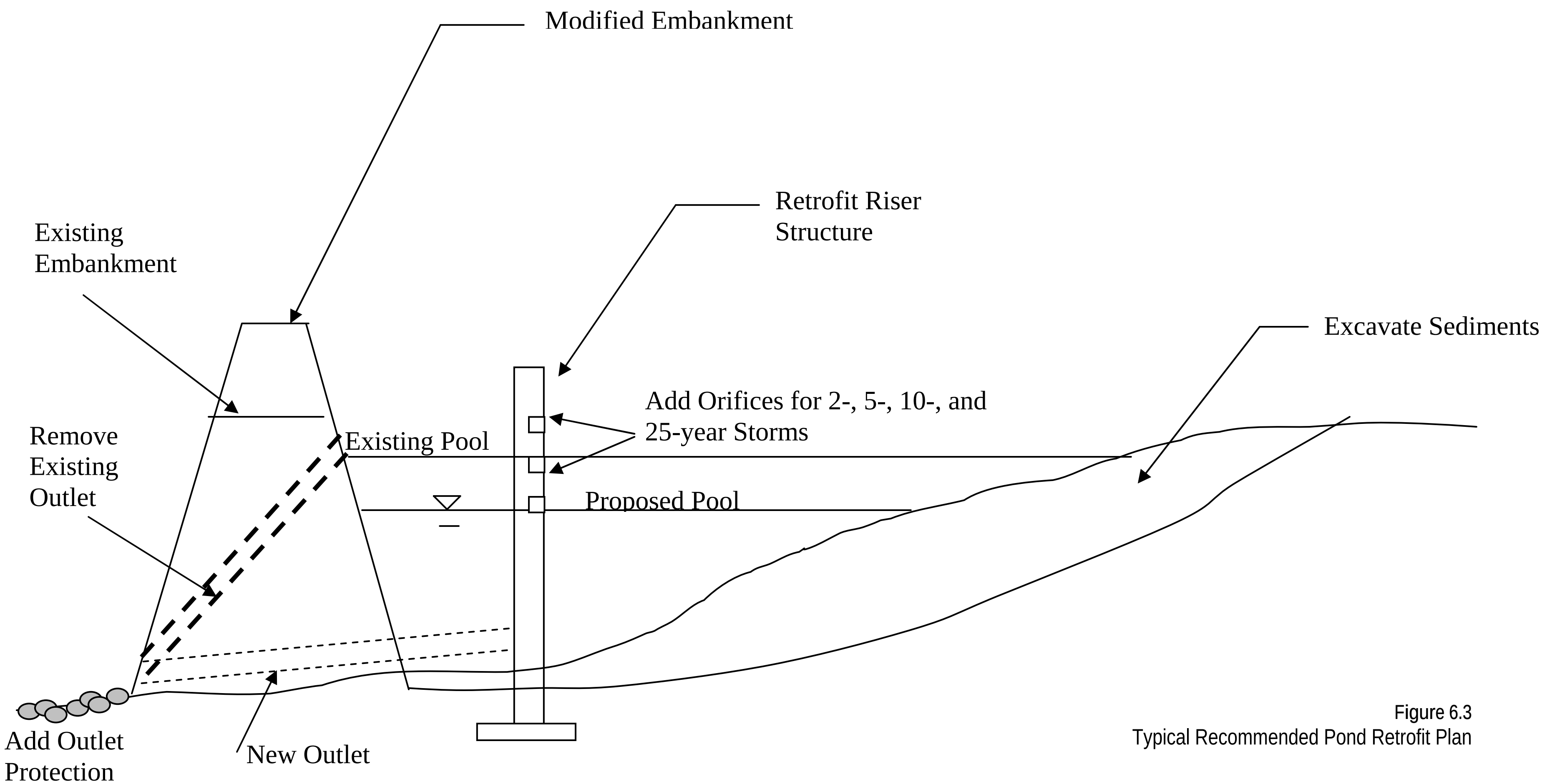


Figure 6.3
Typical Recommended Pond Retrofit Plan

The source control and detention control options for upper Long Island Creek are summarized below:

Option	Number of Structures	Percent Peak Flow Reduction[1]	Percent Annual Pollutant Load Reduction	Cost
Source Control	Cisterns – 1,409	2-year - <5%	TP - 13%	$7,000,000
	Ecoroofs – 21	100-yr – <1%		
	Sand filters – 39			
Detention Ponds	Retrofits – 2	2-year – 57%	TP – 48%	$3,479,000
	New Ponds – 7	100-yr – 25%		

[1] Calculated for 2-year and 100-year storms at Lake Forrest Drive bridge, Long Island Creek

The data presented above indicate that the source control option is significantly more expensive than the detention pond option. Benefits and liabilities are listed below for the two approaches.

Option	Benefits	Liabilities
Source Control	Control problem at source	More expensive
	Improve baseflow	Less effective
	Improve headwater habitat	O&M impact to many households and businesses
		Difficult maintenance
		Treatment of roads is difficult
Detention Ponds	Achieves pollutant reduction target	No control upstream of pond
	Better peak flow reduction	Significant impact to neighbors of pond
	Lower cost	Neighbors may say: “Heck no!”
	County maintenance of private ponds	Little baseflow re-establishment
	Easier maintenance	

The detention pond option has more benefits and fewer liabilities, however not all benefits and liabilities have equal weight. One of the most important needs is to reduce flooding in lower Long Island Creek where 100-year flood elevations are up to 5 feet higher than they were in the 1980’s. Another important need is to reduce pollutant loads to approximately 40 percent of existing loads. The source control option does not satisfy these objectives. Accordingly, if the source control option is selected, one or more of the detention ponds may need to be implemented to achieve the objectives. Given this consideration, the recommended strategy is detention ponds with implementation of source controls in those sub-areas where the ponds cannot be constructed due to neighbor opposition. The issue of neighbor opposition is significant and should not be over-looked. There is a significant risk that one or more of the ponds cannot be constructed. Street sweeping is another potential option for reducing pollutant loads. The cost to address health and safety and water quality problems is **$3,479,000** for the ponds in upper Long Island Creek and **$1,820,000** for bridge replacements and the sanitary sewer siphon (bridges in both upper and lower Long Island Creek watershed).

Retrofit Projects in Mid/Lower Long Island Creek. Storm water management retrofit recommendations for this area differ from upper Long Island because of the lower density land use in mid/lower Long Island Creek. There are numerous ponds within this area, many of which are in need of repair. Accordingly, the primary approach is to retrofit a number of these existing ponds. Figure 6-1, Tiles 1, 2, and 4 present the location of recommended BMPs in mid- and lower Long Island Creek, respectively. The retrofit has been assumed to consist of embankment replacement, installation of an adequate outlet weir to handle a range of flows (2-year through 100-year design storms), removal of any excess sediment, and maintaining the water elevation two feet lower than the existing level. The lower pond elevation provides for additional flood control and water quality treatment.

As discussed above, there is flooding at Long Island Drive, Powers Ferry Road, Jett Road, and at four private driveway bridges that cross Long Island Creek. In addition, numerous houses are subjected to flooding, in some cases at the 10-year flood. The effectiveness of the pond retrofits in mid/lower Long Island Creek and the upper Long Island Creek ponds was evaluated to determine if flooding frequency could be reduced at these bridges and houses. The frequency of flooding would not be substantially affected by the pond retrofits (see Figure 6-4).

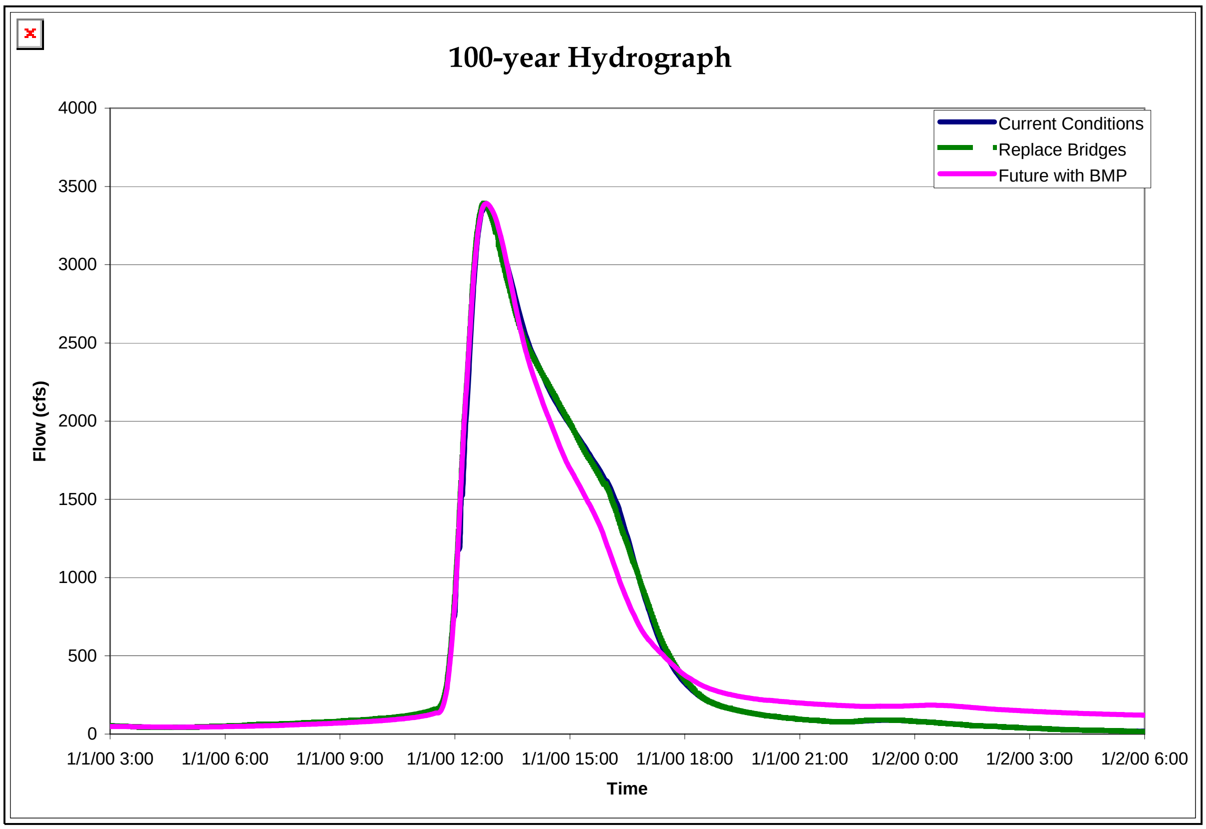


FIGURE 6-4
Comparison of BMP Options for Reducing Peak Flows in Long Island Creek at Jett Road

BC evaluated three additional locations along Long Island Creek to determine if flood control benefits could be achieved. All three locations were along the main-stem of Long Island Creek in locations that would cause significant disruptions in residential neighborhoods. All locations would require significant property acquisition. The main purpose of the evaluation was not to seriously consider construction of ponds at these locations, but simply to determine the maximum potential effectiveness of peak flow reductions. The surface area of the ponds was in the range of 5.3-7.3 acres with maximum water depths of at least 10 feet. None of these ponds, either separately or in combination, could eliminate the need to replace Powers Ferry or Jett Road bridges. Based on this analysis, it is concluded that bridge replacements will be needed at Powers Ferry and Jett Roads to provide for safe passage during the 10-100 year flood events.

The overall cost for protection of Health and Safety and water quality for the entire Long Island watershed is presented below:

Component	Cost	Pollutant Removal
Bridge Replacements	$ 1,850,000	Siphon cost replacement included
Detention Ponds	$13,400,000	TP – 511 lbs/yr, 31% reduction
Unresolved Maintenance	$ 35,000	
Total:	$15,285,000.00	

This plan eliminates flooding of County bridges and private bridges, but does not include protection of houses in the floodplain. The plan achieves pollutant load reductions to meet State water quality standards.

Protection of Health and Safety, Water Quality Standards, and Improved Quality of Life

This alternative provides for protection of health and safety, improvement of water quality, and improvement of quality of life. Improved quality of life is defined herein as stream bank stabilization and stream habitat improvement. The measures to address health and safety and attainment of water quality standards are the same as the previous option. The specific actions that are part of this option are listed below:

- Reduction of sanitary sewer overflows
- Detention of stormwater in new ponds and retrofits of existing ponds
- Street sweeping
- Stream bank stabilization and stream restoration at a number of locations.

The cost of this scenario is the same as the previous scenario plus the cost of stream bank stabilization. Two stream bank restoration projects should be completed immediately. One is located on Carpenter Branch ($386,600) and one is located on Glen Forest Branch ($564,800). Other stream bank stabilization/restoration projects can be completed later at a cost of $2,648,600.

Final recommendations for Long Island Creek are presented in the following table:

Final Recommendation	Estimated Cost
Bridge Replacements	$ 1,850,000
Detention Ponds	$13,400,000
Unresolved Maintenance	$ 35,000
Street sweeping	$ 1,000,000
Immediate stream bank stabilization/restoration	$ 951,400
Long term stream bank stabilization/restoration	$ 2,648,600
Final Cost:	$19,885,000.00

6.4.1.1.1 Riverview Creek

This watershed is exclusively low-density residential development, with lot sizes exceeding two acres. Forest cover is significant, and there are a number of ponds found in the watershed. No stream erosion or water quality problems were noted during the stream walks, and stream biota appeared to be healthy. No storm water management practices were considered for this watershed.

6.4.1.2 Heards Creek Water Resource Management Unit

The Heards Creek WRMU includes Game Creek, an unnamed tributary north of Game Creek, Tributary 9, Heards Creek, Tributary 7, and Tributary 6. Each of these creeks will be discussed separately below.

6.4.1.2.1 Game Creek

Hydrologic and hydraulic modeling did not indicate any flooding problems and few high-velocity reaches. Only one stream reach was observed to have streambank erosion. This watershed has a high fraction of commercial land uses and is bisected by I-285. All flows in Game Creek are conveyed in a large 10'x10' check box culvert for over 1000 feet under Northside and New Northside Drives. There is some control of peak runoff using underground storage tanks in the vicinity of Northside Drive both north and south of I-285.

During the field identification of the stormwater drainage structures, a significant daily discharge of raw sewage from a large hotel was discovered. This source of untreated sewage was eliminated after an inspection visit from Fulton County Department of Public Works staff. BC does not believe that removal of all illicit connections will bring the stream into compliance with water quality targets. Additional potential strategies to address the problem are discussed below.

There is a pond at the lower end of Game Creek that provides water quality treatment for this watershed. However, because of the high density of development, there are few potential sites for additional treatment of storm water runoff in the headwaters area. A number of existing dry ponds were also observed in Game Creek. BC evaluated the pollutant removal potential of the existing wet pond and of the dry ponds after retrofits. The predicted existing phosphorus concentration without sanitary sewer overflows is 0.15 mg/l. The retrofit dry ponds will reduce the TP concentration by 15 percent. Adding on-site BMPs will lead to an additional reduction of the pollutant load to Game Creek. The recommended plan for Game Creek is a combination of on-site BMPs and the retrofit of existing dry ponds and will result in a phosphorus load reduction of approximately 34 percent. Figure 6.1, Tile 6, shows recommended BMPs for implementation in the Game Creek Watershed. The plan is presented in the following table.

Final Recommendation		Estimated Cost
Detention Ponds (Retrofits)		$ 660,000
On-site BMPs		$3,540,000
	Final Cost:	$4,200,000.00

6.4.1.2.2 Heards Creek

Heards Creek is a small watershed of just over one square mile that drains directly to the Chattahoochee River. It is primarily medium to low density residential (83 percent) with a small proportion (8 percent) forest. I-285 comprises the remaining nine (9) percent of the watershed area. Similar to other areas in Sandy Springs, water quality monitoring at Heards Creek detected excessive levels of fecal coliform during both low and particularly during high flow periods. Extreme concentrations suggest direct discharges of sewage to the stream. Fulton County officials have documented sanitary sewer overflows near the mouth of the creek. Several citizen reports indicate that overflows are a regular occurrence.

High nutrient levels were also detected during the sampling period and are suspected to originate primarily from sewer overflows/leaks. Other sources may include residential gray water discharges and disposal of yard wastes (leaves, limbs, grass clippings) into streams and storm drains. The pesticide Heptachlor epoxide was detected near the mouth of the creek during sampling and suggests that contaminated sediments may also be a concern.

Although the amount of impervious area within the Heards Creek watershed is lower than other more highly developed areas in Sandy Springs, the hydrology has been altered to the degree that it does affect flow patterns in the watershed. Peak flows are higher and baseflows are generally lower than for an undeveloped watershed. Hydraulic modeling did not predict flooding for any given reach in Heards Creek and there have been no reports of flooding from residential property owners. However, high flows have scoured the stream channel in several locations along the main stem as well as the two main tributaries, leaving unstable eroded channel banks.

Table 6.1 provides a list of possible management options, their projected effectiveness in reducing peak flows and pollutant loadings, and the estimated cost. Following the “level of protection” approach, three scenarios were developed for Heards Creek Watershed:

1) protect health and safety,
2) protect health and safety and attain water quality standards, and
3) protect health and safety, attain water quality standards and improve the quality of life.

TABLE 6.1
Suite of Options for Heards Creek Watershed Management

Option	Number of Structures	Percent Peak Flow Reduction	Percent Annual Pollutant Load Reduction	Cost
Source Control	Control sanitary sewer overflows and repair leaky pipes	Unknown, but insignificant	Unknown but significant	Existing cost to county
Regional Control	New ponds - 3	< 5%	21 % - TSS 12 % - TP	$798,000
Incentive-based Residential Program	Grants to homeowners for voluntary on-site improvements	< 5%	10% to more than 25%	$519,000
In-Stream Flow Reduction	Riffles –9	Minimal	None	$95,400
Source Control	Sand filters – 2	< 1%	0.2 % - TSS 0.2 % - TP	$16,000
Source Control	Residential cisterns	Minimal	2% - TP 6 % - TP	$1,229,452
In-Stream Erosion Control	Channel restoration - 4,300 feet	Minimal	None	$400,000

Protection of Health and Safety

The primary health and safety concern for Heards Creek is the risk of contact with surface waters contaminated by sanitary sewer overflows and leaky sewer pipes. A countywide program to identify and correct such problems is underway. This corrective work is scheduled for 2001. However, findings of the watershed characterization of Heards Creek suggest that such corrective action will have the greatest effect to restore water quality and should be fundamental to the management of the watershed.

Protection of Health and Safety and Attainment of Water Quality Standards

While elimination of sanitary sewer overflows/leaks will afford protection of health and safety, it will also improve water quality. Installation of selected BMPs (Best Management Practices) will provide additional water quality benefits to assure Heards Creek will meet water quality standards. A field reconnaissance was performed to identify areas suitable for BMP installation for source and regional water quality/quantity control. Unfortunately, since the Heards Creek area is developed, there is limited open space available for such controls and thus management options are restricted.

Four potential BMP options are presented for additional future improvements to water quality for Heards Creek:

- detention ponds,
- riffle re-establishment,
- bioinfiltration, and
- cisterns.

Three potential locations were identified in the upper portion of the sub-basin for detention ponds, and multiple locations were identified along Heards Creek for in-stream velocity control via riffle re-establishments (Figure 6-1, Tiles 4, 5, and 8). One parking lot was identified in the upper portion of the watershed for the placement of two sand filters for bioinfiltration; and cisterns were hypothetically modeled for all residences. Model results are given in Table 6.1; benefits and liabilities are given in Table 6.2 and are considered to be additive to controlling sanitary sewer problems.

Protection of Health and Safety, Water Quality Standards, and Improved Quality of Life

The final watershed management scenario is the addition of channel restoration measures for improving the quality of life for adjacent property owners. High flows have scoured channels leaving banks of exposed soil devoid of vegetation. Channel erosion will continue until banks widen to a stable slope, or until they are stabilized via channel restoration measures. Channel restoration will prevent further loss of property and will reduce sediment loads to Heards Creek. Care will need to be taken to minimize the impact on residential yards since access is limited.

TABLE 6.2
Benefits and Liabilities of Watershed Management Options for Water Quality Improvement

Management Option	Benefits	Liabilities
New detention ponds (3)	• Moderate water quality improvement • Capture of highway pollutants	• Expensive • Access to I-285 ponds a limitation to maintenance • Limited flow reduction
Riffle re-establishments (9)	• Relatively inexpensive • Reduce downstream peak flows • Provide additional in-stream habitat benefits	• Intrusion to selected residents during installation • Limited water quality benefits
Bioinfiltration (2)	• Very limited water quality and flow reduction benefits	• Expensive relative to benefits • Treats small area
Residential cisterns	• Source control of runoff from rooftops • Minimize water usage if cistern used for lawn irrigation	• Expensive • Limited water quality benefit • Burden on all residents

Heards Creek Watershed Management Recommendations

Given the limited land area available in the Heards Creek subbasin, watershed management options for storm water control and water quality improvement are somewhat limited. Three scenarios, or levels of protection are presented. Protection of health and safety via elimination of sanitary sewer discharges to the creek is paramount to any and all other management scenarios. Brown and Caldwell recommends implementing a quarterly sampling program following system repair to re-evaluate and monitor water quality. Since fecal coliform can remain in stream sediments, water quality improvements may not be realized immediately, but should be detectable over time.

In addition to sewer line repair, Brown and Caldwell recommends the installation of the three storm water detention ponds at the following locations:

- Immediately upstream (south) of I-285 on the main north-south stem,
- Immediately downstream (north) of I-285 on the main north-south stem, and
- Immediately upstream (east) of Riverside Drive (north of I-285) on the east branch.

The pond upstream of the perimeter will capture the bulk of the volume of stormflow from southern-most portion of the sub-basin. The smaller pond north of the perimeter will capture direct runoff from I-285, filtering associated sediments and pollutants. The small pond east of Riverside will also capture road surface runoff originating in the easternmost end of the sub-basin. Detention ponds, are extremely efficient in controlling pollutant loadings to downstream waterbodies. Because of their proximity to residential properties, a landscaping plan is recommended for each pond to provide aesthetic value as well as additional filtration benefits. Ponds should be periodically inspected and maintained (i.e. sediment removal) for maximum long-term efficiency. Neighborhood acceptance is a key concern, and the proposed plan should only be implemented with local buy-in.

Because the ponds may not be able to be constructed, an incentive-based voluntary program may be used to reduce pollutant loads from residential neighborhoods. Water quality conditions in Heards Creek could be improved through a voluntary program of lawn fertilizer management coupled with reduced dumping of yard clippings in the stream corridor and redirecting downspout and driveway runoff to edge-of-yard biofilters. A grant program to enhance homeowner participation is estimated to cost **$519,000 ($750/residence for 692 housing units)**. The pollutant load reduction should exceed 10 percent and could exceed 25 percent.

In-stream flow reduction (riffle re-establishment) and channel restoration are lower-priority recommendations that can and should be accomplished simultaneously for their long-term water quality and quality of life benefits.

Potential difficulties in implementing detention ponds in the headwaters of this tributary created a need to identify to alternative approaches to watershed management for Heards Creek. These alternatives are presented in the following table.

Final Recommendation	Estimated Cost
Preferred Alternative	
Detention Ponds (new) and biofiltration	$ 782,000
Stream bank stabilization/restoration and riffle reestablishment	$ 400,000
Total Cost – Preferred Alternative:	$1,182,000.00
Alternative 2	
Voluntary Residential Grant Program	$ 519,000
Stream bank stabilization/restoration and riffle reestablishment	$ 400,000
Total Cost – Alternative 2:	$919,000.00

6.4.1.2.3 Tributary 7 (Colewood Creek)

This watershed is primarily medium density residential neighborhoods with a large cemetery in the headwaters north of Powers Ferry Road. This watershed suffers from elevated peak flows and there are significant flooding problems of an 8′x8′ driveway culvert on Tanacrest Drive. The flooding of this driveway culvert developed after two upstream road culverts were modified from single 8′x8′ box culverts to double 8′x8′ box culverts. The driveway culvert was overtopped with flooding of the private residence garage in 1992 and 1993. The location of this flooding problem and selected stream erosion problems are presented in Figure 6.1, Tile 7.

Three potential solutions were evaluated in this watershed to address the flooded driveway culvert:

1. Replacement of the driveway culvert
2. Upstream storage of building runoff in cisterns or gravel infiltration trenches.
3. Modification of four upstream detention ponds (three with permanent wet pools and one dry pond)

Each of these options was evaluated through hydrologic and hydraulic modeling. Also, options 2 and 3 were evaluated for potential water quality benefits. The primary evaluation criterion for the hydrologic/hydraulic modeling was the water level at the private driveway culvert. The water quality evaluation criterion was pollutant removal effectiveness, as measured by total phosphorus. No reduction is needed to achieve the phosphorus target, however it is expected that pollutant load reductions would be needed to achieve fecal coliform targets. Replacement of the driveway culvert would only address health and safety issues, while options 2 and 3 could potentially address health and safety, water quality and quality of life concerns.

The options are summarized below:

Option	Number of Structures	Percent Stream Depth Reduction[1]	Percent Annual Pollutant Load Reduction	Cost
Bridge Replacement	Culvert – 1	25-yr – 43%	0	$ 91,500
	Channel restoration – 200 feet	100-yr – 25%		
Source Control	Cisterns – 750	25-yr - <1%	11% - TP	$2,140,000
	Edge of parking lot infiltration – 3	100-yr – 0%		
Detention Ponds	Retrofits – 4	25-yr – <1%	11% - TP	$ 634,000
		100-yr – <1%		
Unresolved Maintenance				$ 2,000

[1] Calculated for 25-year and 100-year storms at driveway culvert, Tanacrest Drive

Benefits and liabilities of each option are listed below:

Option	Benefits	Liabilities
Driveway Culvert Replacement	Reduce flooding	No water quality benefits
	Less expensive	No improvement to baseflow
		Limited stream habitat benefit
Source Control	Control problem at source	No reduction in flooding
	Improve baseflow	More expensive
	Improve headwater habitat	O&M impact to many households and businesses
		Difficult maintenance
		No treatment of road runoff
Detention Ponds (retrofit 3 ponds on cemetery, one in steam corridor)	Better pollutant reduction	No reduction in flooding
	Moderate cost	Little baseflow re-establishment
	Easier maintenance	No water quality treatment downstream of ponds

The optimum approach would be to reduce the volume of runoff through source controls. Reduction of the volume of runoff would increase baseflow, reduce pollutant loads, and thereby improve stream habitat for aquatic biota. The problem is that source reduction does not have a significant reduction in the flooding frequency for the 100-year storm. This is because the storage volume associated with diverting rooftop rainwater to infiltration trenches only addresses a part of the problem. There is no treatment for street runoff. Street runoff cannot be effectively treated with infiltration devices because the sediment load along streets is often elevated due to:

- utility repairs (cable, storm drains, water lines, sanitary sewers),
- single-home construction projects, and
- residential dumping of yard clippings into the street or the nearest stream valley.

The particulate matter associated with these activities will quickly render a storm drain infiltration retrofit useless. For these reasons, source control of runoff was not found to be an effective method to reduce the frequency of flooding at the driveway culvert.

The detention pond retrofit option does not reduce peak flows at the area of flooding because the detention ponds are too far upstream.

Because the source control and detention pond options are not effective, the most appropriate solution is control of flooding by replacement of a driveway culvert. It is the most inexpensive alternative. Because it only addresses health and safety concerns, there are no alternatives for addressing water quality and health and safety concerns. Water quality conditions in Colewood Creek could be improved through a voluntary program of lawn fertilizer management coupled with reduced dumping of yard clippings in the stream corridor and redirecting downspout and driveway runoff to edge-of-yard biofilters. A grant program to enhance homeowner participation is estimated to cost **$750,000 ($750/residence for 968 housing units)**. The pollutant load reduction should exceed 10 percent and could exceed 25 percent.

Stream restoration is also recommended for Colewood Creek. There are a number of locations where stream erosion has undermined trees that have fallen into the creek. Excessive debris in the stream can cause downstream flooding and erosion problems.

Final recommendations for Colewood Creek are present in the table below.

Final Recommendations	Estimated Cost
Voluntary Residential Grant Program	$ 750,000
Stream Bank Stabilization/Restoration	$ 450,000
Culvert Replacement	$ 91,500
Total Cost:	$1,291,500.00

6.4.1.2.4 Tributary 6

This watershed is a small medium-density residential watershed just south of Marsh Creek. The drainage area is 224 acres, and there is a 3-acre lake just upstream of Riverside Drive. There are approximately 240 houses in the watershed. Water quality of the lake is the primary concern in this watershed. During the data collection phase of this study, inadequate soil erosion control was observed in a new residential development in the headwaters of this watershed and resulted in sediment accumulation in the lake. County staff met with the developers and were able to correct the on-site erosion problems, however there was a significant load of sediment delivered to the lake that has not yet been removed. It is estimated that dredging of the lake will cost approximately $50,000. Nutrient load modeling of the lake suggests that the lake will experience elevated chlorophyll a concentrations after sediment loads to the lake are reduced, due to higher light transmittance into the lake. There is no significant stream erosion in the watershed.

There are no immediate health and safety issues in the watershed. As discussed above, water quality concerns center around lake water quality. Nutrient load reductions would improve lake water quality. This lake is a candidate for on-site BMPs since there is no area for construction of detention ponds in the tributaries. Two options exist for this watershed. One option would be to construct cisterns for each house to store rooftop runoff. The cost of this is estimated to be approximately $360,000. Another option for this watershed is the incentive-based voluntary program consisting of lawn fertilizer management, elimination of dumping lawn clippings in streams, and redirecting downspout and driveway runoff to edge-of-yard biofilters. A grant program to enhance homeowner participation for the 245 homes in this watershed (Tributary 6) is estimated to cost $184,000. The pollutant load should exceed 10 percent and could exceed 25 percent.

Final recommendations for Tributary 6 are presented in the following table.

Final Recommendations	Estimated Cost
Voluntary Residential Grant Program	$184,000
Lake Dredging	$ 50,000
Total Cost:	$234,000.00

6.4.1.3 Marsh Creek Water Resource Management Unit

The Marsh Creek WRMU includes Marsh Creek and Tributary 5. Each of these streams is discussed separately below.

6.4.1.3.1 Marsh Creek

The Marsh Creek watershed is the second largest watershed in the Sandy Springs study area, with a drainage area of 4,343 acres. The headwater of the drainage area originates in Dekalb County. Land use in the watershed is a mix of land uses, ranging from high density residential and commercial to low density residential and some small pockets of forest. The watershed is bisected by Georgia Highway 400 and Roswell Road. The watershed of Marsh Creek was artificially enlarged in the 1970's with diversion of runoff from Colewood Creek into Marsh Creek near the intersection of Sandy Springs Circle and Johnsons Ferry Road. The area diverted into the Marsh Creek watershed is a commercial area with a Target store. This area is served by a number of small detention ponds that are insufficient to dissipate peak flows from the commercial area runoff. This tributary to Marsh Creek (hereinafter referred to as the Whispering Pines tributary) that receives runoff from the Target flows through the Whispering Pines subdivision. This tributary is eroding and has a deeply incised channel with near vertical to overhanging stream banks that exceed 10 feet high.

After flowing along this area of eroded stream and flooding Wright Circle, the stream is diverted into an underground 11 ft x 7 ft box culvert near the intersection of Abernathy and Roswell Roads and flows under a number of buildings, and discharges from a 7 ft x 7 ft box culvert east of Roswell Road south of Abernathy Road (see Figure 6.4-10). It is not known where the culvert reduces from 11x7 to 7x7, and the actual underground path is unknown because there are numerous blind underground junctions and changes in direction. Assuming no debris blockage of the culvert inlet (an unlikely assumption) this culvert overflows during the 25-year and 100-year events and the excess flow passes through the parking lots of numerous businesses and crosses over both Abernathy and Roswell Roads. If upstream detention is not possible, extensive work will be required to expand this underground box culvert, and the cost is almost impossible to calculate with any certainty since the path of the culvert is unknown.

Significant flooding exists in Marsh Creek. Numerous bridges and road culverts experience flooding. The plan for Marsh Creek includes both detention and bridge/culvert replacement to address the flooding problems.

Sanitary sewer overflows occur in the watershed along with direct piped discharges of untreated grey water (washing machine discharges) in areas that are still on septic systems. Stream erosion, water quality, and flooding problems have been observed throughout the watershed. Stream erosion is more severe in Marsh Creek than in any other watershed in Sandy Springs.

The predicted long-term phosphorus concentration for Marsh Creek is approximately 0.13 mg/l, and the target concentration is 0.1 mg/l. Accordingly, the phosphorus concentration reduction target for upper Marsh Creek is 23 percent.

Three basic scenarios (levels of protection) were evaluated:

- Protection of Health and Safety
- Protection of Health and Safety and Attainment of Water Quality Standards

- Protection of Health and Safety, Water Quality Standards, and Improved Quality of Life

Scenario analysis is discussed below.

Protection of Health and Safety

Factors affecting health and safety in Marsh Creek include sanitary sewer overflows at a number of locations, and flooding. The flooding locations are listed below:

1. Marsh Creek at Brandon Mill Road
2. Marsh Creek Tributary at North Mill Road (2 locations)
3. Marsh Creek Tributary at Spalding Drive
4. Marsh Creek at Roswell Road
5. Marsh Creek Whispering Pines Tributary at Wright Circle
6. Marsh Creek Whispering Pines Tributary at Staples store near Roswell and Abernathy Roads
7. Marsh Creek Tributary at Abernathy Road
8. Marsh Creek Tributary at Cherry Tree Road next to Abernathy Road
9. Marsh Creek Tributary at Cherry Tree Road near Vernon Woods Road
10. Marsh Creek Tributary at Carriage Drive near Vernon Woods Road
11. Marsh Creek at Mabry Road
12. Marsh Creek at Peachtree Dunwoody Road
13. Marsh Creek at Twin Branch Road (south location)

All flooding locations are on public roads. Four roads (Brandon Mill, Roswell, Abernathy, and Peachtree Dunwoody) are primary County roads that have the highest level of service. The basic components of the protection of health and safety are listed below:

- Reduce the frequency of sanitary sewer overflows (Currently under study by Metcalf and Eddy)
- Replace numerous curb inlets that no longer function to design conditions or were under-designed to begin with. Examples include: Chaseland Drive off Roswell Road and curb inlets on Cherry Tree Lane. The inlets at Chaseland Drive are part of an undersized storm drain network that has caused significant flooding of a home on Chaseland Drive.
- Reduce flooding on Marsh Creek at the locations listed above.

The most cost-effective solution of flooding can be accomplished by bridge replacements, except for the Whispering Pines tributary. This tributary will require upstream detention (see next scenario for a discussion of costs to solve flooding via upstream detention). The cost of the bridge replacements is estimated to be **$5,300,000.** This does not include replacement of the Whispering Pines 11′x7′ box culvert. The cost to reduce the frequency of sanitary sewer overflows is covered by existing County programs. There are a number of storm drainage maintenance requests in Marsh Creek that have not been addressed due to budget limitations. Adequate implementation of an enhanced storm water management program will require significant interaction with residents adjacent to the streams. There are a number of unresolved storm water management issues in Marsh Creek that should be resolved as part of the first stages of implementation. These cases are listed below:

ADDRESS	DESCRIPTION	FIX COST
395 Spalding Drive NE	Severe erosion problem due to runoff from Roswell Rd. Wants County to be more involved in erosion control and correction measures.	$ 50,000
7320 Hunters Branch Dr	Law suit by the Hidden Branches Community; Colonial pipeline spill; Piping of stream on Peachtree Dunwoody; Flooding of Westfair Townhomes	$ 10,000
7085 Northgreen Dr.	Left bank (facing downstream) is severely eroded-6 ft. vertical banks, SS manhole threatened. Stabilize banks with rip-rap & planting willow sprigs, should GA DOT pay?	$ 40,000
211 Devonwood Dr.	Channel running through lot lined with rip-rap and silt fence; need to call homeowner; make slopes flatter, will have to move trees back	$ 50,000
154 Chaseland Drive	Flooding problems from runoff from street onto property; specifically water in garage & basement (in early 80's); collapsed storm drain noted.	$200,000

There are a number of critical stream erosion problems that may threaten structures. These areas of erosion are included as part of the health and safety scenario and should be addressed immediately. The areas include:

- Marsh Creek downstream of GA 400,
- Whispering Pines tributary just east of Wright Road, and
- Marsh Creek (left bank facing downstream) west of Roswell Road to Spalding Branch.

The cost of the immediate action stream restorations for these areas is **$896,300**.

The total cost for the health and safety scenario is $5,300,000 for bridges, $300,000 for drainage problems, and $896,300 for stream restoration, or **$6,496,300**.

Protection of Health and Safety and Attainment of Water Quality Standards

This scenario includes health & safety protection measures discussed above, and provides the additional benefit of reducing pollutant loads so that water quality standards can be attained. In this scenario, the flood control protection is provided, where possible, by upstream detention rather than by bridge replacements. The basic solutions considered are:

- detention of stormwater in detention ponds via retrofits of existing ponds and new ponds in locations along minor tributaries, and
- source reduction at the origin of increased runoff (cisterns at homes, eco-roofs at larger buildings, and edge-of-parking lot filters).

The analysis of source control vs. regional detention in upper Long Island Creek indicates that source control is significantly more expensive and less effective at removing pollutant loads. Therefore, in Marsh Creek regional detention solutions were identified initially and source control solutions were considered in areas where headwater problems have caused stream erosion problems (e.g. Whispering Pines) or where regional detention solutions were not possible. As with all other watersheds in Sandy Springs, the sites for BMPs were selected by an inspection of maps followed by a field visit to each potential location. The sites discussed for Marsh Creek are only potential sites, and a complete feasibility study for each site will have to consider other factors, such as adjacent neighborhood concerns, underground utilities, etc.

Detention Option. The detention option considered is summarized below in Table 6.3. The detention option includes the cost of new ponds and pond retrofits. The cost for this option includes the cost of land purchase for two ponds at $400,000 per acre. This option did not provide an adequate degree of pollutant removal, nor did it address stream velocity concerns in critical stream reaches.

Pond/on-site Option. This option includes detention ponds, pond retrofits, sand filters for parking lots, and eco-roofs. This option is described in Table 6.3. The cost for this option includes the cost of land purchase for two ponds at $400,000 per acre. This option comes closer to the pollutant load reduction goal and provides superior peak flow reduction benefits.

Revised Plan Option. A third option (referred to as the Revised Plan) is included that utilizes the best components of each of the first two options. There are less eco-roofs and edge-of-parking lot sand filters, and more detention ponds. This option meets the pollutant load reduction goal, yet it costs less than the Pond/on-site Option. Peak flow reduction at Roswell Road is 58 percent for the two-year storm, which will result in decreased rates of stream erosion.

All options were checked to determine if upstream detention could eliminate the need for bridge replacements. One such assessment was conducted for Mabry Road on Marsh Creek just downstream of GA 400. An in-line dry pond was considered just upstream of Ga 400 (Note that this is within the limits of the Post Dunwoody Marsh Creek Nature Preserve, and feasibility issues may be a challenge. This area currently experiences flooding during large rainfall events). This pond would be dry during regular flow periods and would store water temporarily for up to 24 hours after a rainfall event. This dry pond could reduce the 2-year peak flow from 663 to 197 cfs and the 100-year peak flow from 2,071 to 1,613 cfs. Upstream flooding of Peachtree Dunwoody Road would be exacerbated by construction of this dry pond.

The design flow of the bridge at Mabry Road is 348 cfs. Upstream detention can reduce the flooding frequency from once every two years to once every five years. This analysis indicates that upstream detention cannot significantly reduce the frequency of flooding for Mabry Road.

The analysis of flood reduction for Wright Circle in the Whispering Pines subdivision provided similar results to the Mabry Road evaluation. A combination of upstream detention and on-site controls at commercial sites provided some peak flow reductions, but flooding still would occur for the 5-year through 100-year storms.

The preferred option for water quality improvement is the revised plan that combines regional detention ponds with selected on-site BMPs. The BMPs are presented in Figures 6.1, Tiles 6, 7, 9, and 10.

TABLE 6.3
Options for Protection of Health & Safety and Water Quality

Option	Number of Structures	Peak Flow Reduction[1], %	Annual Pollutant Load Reduction, %	Cost, $
Detention Ponds	Retrofits – 1 New Ponds – 3	**Mabry** 2-year – 50% 100-year – 37% **Brandon Mill** 2-year – 27% 100-year – 26%	TP – 15%	$10,260,000 $5,670,000 Health and Safety
Pond/on-site	Ecoroofs – 30 Sand filters – 85 Retrofits – 1 New Ponds – 3	**Mabry** 2-year – not run 100-year – not run **Brandon Mill** 2-year – not run 100-year – not run	TP – 28%	$24,420,000 $5,670,000 Health and Safety
Revised Plan	Ecoroofs – 25 Sand Filters – 39 Retrofits – 9 New Ponds – 17 Misc. – 6	**Mabry** 2-year – 58% 100-year – 32% **Brandon Mill** 2-year – 45% 100-year – 40%	TP – 28%	$18,637,000 $5,670,000 Health and Safety

The overall cost for protection of Health and Safety and water quality for the entire Marsh Creek watershed is presented below in Table 6.4**.**

TABLE 6.4
Recommended Plan Components for Marsh Creek

Component	Cost	Pollutant Removal
Bridge Replacements	$ 5,320,000	
Revised Plan Option	$18,637,000	TP – 393 lbs/yr, 28% reduction
Unresolved Maintenance	$ 350,000	
Immediate Action Stream Bank Restoration Projects	$ 896,300	
Total:	$25,203,300.00	

The stream velocity in critical reaches will be less with the revised plan than existing velocities. This is illustrated in Figure 6.5

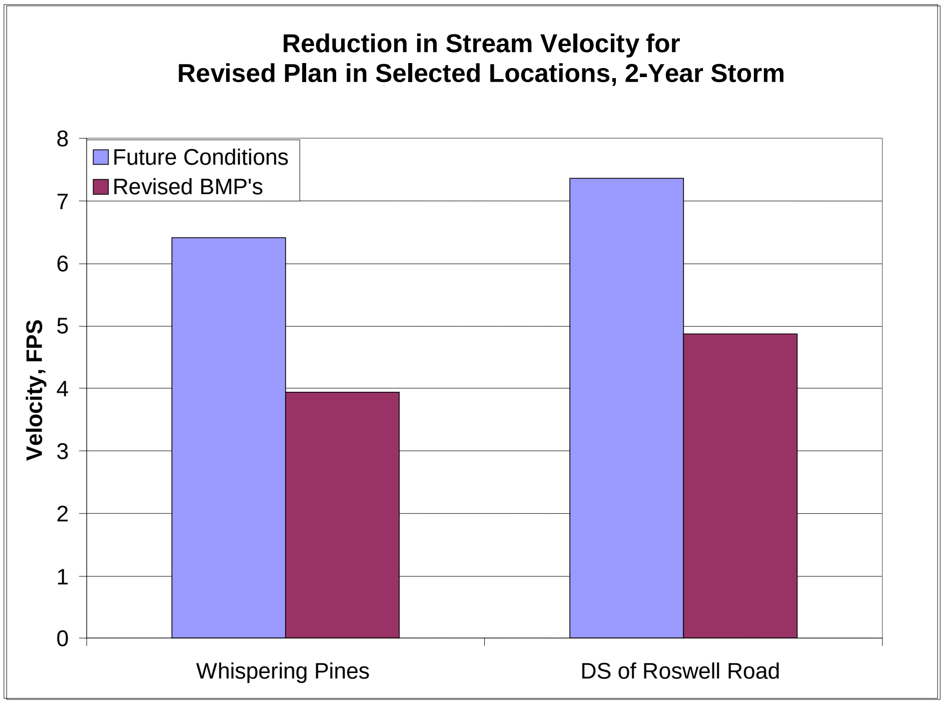


FIGURE 6.5
Reduction in Stream Velocity for Revised Plan in Selected Locations, 2-Year Storm

This plan eliminates flooding of County bridges, but does not include protection of private bridges and houses in the floodplain. The plan achieves pollutant load reductions to meet State water quality standards.

Protection of Health and Safety, Water Quality Standards, and Improved Quality of Life

This alternative provides for protection of health and safety, improvement of water quality, and improvement of quality of life. Improved quality of life is defined herein as stream bank stabilization and stream habitat improvement. The measures to address health and safety and attainment of water quality standards are the same as the previous option. The specific actions that are part of this option are listed below:

- Reduction of sanitary sewer overflows
- Detention of stormwater in new ponds and retrofits of existing ponds
- On-site BMPs at selected locations
- Stream bank stabilization and stream restoration at a number of locations.

The cost of this scenario is the same as the previous scenario plus the cost of stream bank stabilization. The final recommendations for Marsh Creek are presented in the table below.

Final Recommendations	Cost
Bridge Replacements	$ 5,320,000
Revised Plan Option	$18,637,000
Unresolved Maintenance	$ 350,000
Immediate Action Stream Bank Stabilization/Restoration	$ 896,300
Long Term Stream Bank Stabilization/Restoration	$ 1,812,700
Total:	$27,016,000.00

6.4.1.4 Sullivan's Creek Water Resource Management Unit

The Sullivan's Creek WRMU includes Powers Branch, Sullivan's Creek and the tributaries of Huntcliff. Each of these will be discussed separately below.

6.4.1.4.1 Powers Branch

Powers Branch is a small watershed (1.8 square miles) that drains to the Chattahoochee River. Land use is primarily a mix of medium density residential, high density residential, and commercial. The stream originates in a number of storm drainage systems near Georgia 400 that feed into a wetland/open field complex just east of Roswell Road and south of Northridge Road. Powers Branch then flows through the relatively mature forest in the Big Trees Forest Preserve next to the North County Annex. Powers Branch then flows under a car dealership and Roswell Road. After exiting the culvert under Roswell Road, Powers Branch flows through a small forest, through a townhouse complex, and then into a lake within the townhouse complex. The lake discharges to the Chattahoochee River. Daily discharges of sanitary sewage were identified and eliminated in the wetland complex upstream of Big Trees Forest Preserve. There is minor stream erosion within the Big Trees Forest Preserve. Pollutant load and peak flow reductions could improve stream habitat within the Preserve. Pollutant load reductions would improve water quality within the lake at the mouth of Powers Branch. No flooded roads were identified in the Powers Branch watershed.

Health and Safety Scenario. No actions are proposed to resolve bridge flooding. There are two storm drainage problems that have been reported to the County and have not been resolved. It is recommended that these issues be resolved as a high priority because the County appears to have some responsibility in each of these situations, they are minor in scope and could help to "clear the air." In addition, there are there are two stream bank stabilization/restoration projects that should be completed to remove threats to structures.

The recommendations under the Health and Safety Scenario include:

Recommendation	Estimated Cost
Repair collapsed and corroded storm drainage structure at 7460 Halfpenny Place	$ 5,000
Repair storm drains in yard that cause home flooding when blocked at 150 Old College Way	$ 5,000
Immediate Action Stream Bank Stabilization/Restoration	$130,000
Total Cost:	$140,000.00

Health and Safety/Water Quality Scenario. The purpose of this scenario is to reduce stream velocities and pollutant loads to the Big Trees Forest Preserve, a significant environmental habitat area worthy of special protection. In addition, source control options were considered for Trowbridge Lake upstream of Big Trees Forest preserve on Trowbridge Lake Drive to protect water quality in the Lake and to reduce peak flows to a stormdrain upstream of Half Penney Lane. Another objective is reduction of phosphorus loads to the lake at the mouth of the watershed (referred to hereinafter as Powers Lake). Two options for the watershed were considered:

1. detention BMPs, and
2. a mix of on-site and detention BMPs.

Regional detention. Regional detention BMPs are the primary BMP for pollutant removal upstream of Roswell Road since detention BMPs could be easily constructed within the wetland/open field area east of Roswell Road. The proposed BMPs will significantly reduce peak flows and velocities within the Big Trees Forest Preserve during flood events. This will reduce stream erosion and will improve stream habitat. The peak flow reduction potential for the BMPs is 79 percent for the 2-year storm and 62 percent for the 100-year storm.

The trapped TP load is 124.3 lbs/year, which will reduce the phosphorus load from Powers Branch by 19 percent. This reduction will reduce the inflow phosphorus concentration for the lake at the mouth of the Powers Branch to 0.1 mg/L. This reduction will not achieve the desired target of 0.05 mg/L in the lake, however the load reduction will be an improvement to water quality.

Mix of on-site and detention BMPs. This option was developed because the detention option does not meet the goal of an acceptable phosphorus load to Powers Lake. This option includes all the BMPs from the detention option plus selected on-site BMPS and additional detention ponds. One pond (PCPB02A-2-P) may have some permitting challenges because of it's location in a forested floodplain in the lower reaches of the watershed. Information on the BMPs is presented in Table 6.5. Locations of BMPs are presented in Figure 6.1, Tiles 9 and 10.

TABLE 6.5
BMPs for Powers Branch

Recommendation	Number	Estimated Cost
Check Dam	4	$ 43,200
Ecoroof	11	$ 1,543,214
Parking lot infiltration	18	$ 1,841,700
Cisterns	1084	$ 1,913,130
New Ponds/Inlet Control	17	$ 3,473,845
Pond Retrofit	6	$ 962,392
Land acquisition	3 acres	$ 450,000
Totals:		**$10,227,481.00**

Peak Flow Reduction: 2-yr: 79%, 100-yr: 62%

Protection of Health and Safety, Water Quality Standards, and Improved Quality of Life

The addition of stream restoration will improve stream habitat, which will improve the quality of life for residents near Powers Branch. The stream restoration cost for Powers Branch includes cost for restoration of stream habitat in Big Trees Forest Preserve, Powers Branch downstream of Roswell Road, and in a number of locations on tributaries. The cost of stream restoration is approximately $750,000. The total cost of this scenario is the sum of the detention pond cost ($1,311,500) and the stream restoration cost ($750,000), or $2,100,000. Final recommendations for Powers Branch are presented in the following table:

Final Recommendations	Estimated Cost
Check Dams	$ 43,200
Ecoroofs	$ 1,543,214
Parking lot infiltration	$ 1,841,700
Cisterns	$ 1,913,130
New Ponds/Inlet Control/Land Acquisition	$ 3,923,845
Pond Retrofit	$ 962,392
Unresolved Maintenance Issues	$ 10,000
Immediate Action Stream Bank Stabilization/Restoration	$ 130,000
Long-Term Stream Bank Stabilization/Restoration	$ 620,000
Totals:	**$10,987,481.00**

6.4.1.4.2 Sullivan's Creek

Sullivan's Creek is a small watershed (2.4 square miles) that drains to Bull Sluice Lake, which empties directly into the Chattahoochee River. Land use is primarily a mix of low and medium density residential and commercial. Sullivan's Creek was not selected for water quality monitoring because 1) there were no suitable sampling locations near the mouth of the basin due to the presence of the lake, and 2) Powers Branch, directly south of Sullivan's Creek is very similar in terms of size and land use patterns. Water quality modeling and hydraulic modeling were, however, performed for the sub-basin. Based on water quality results from neighboring watersheds, it is assumed that sanitary sewer leaks and overflows are also a primary water quality issue for Sullivan's Creek.

Similar to other highly developed areas in Sandy Springs, the hydrology in Sullivan's Creek has been altered to the degree that higher storm flows and lower baseflows are produced. High flows have scoured the stream channel leaving eroded stream banks in several locations along the main stem and tributaries. Hydraulic modeling predicted flooding in two areas in the watershed. Erosive velocities were predicted at several locations. Moderate stream erosion was observed along multiple stream segments throughout the watershed, severe erosion was observed at only one location.

Following the "level of protection" approach, three scenarios were developed for Sullivan's Creek:

- Protection of Health and Safety
- Protection of Health and Safety and Attainment of Water Quality Standards

- Protection of Health and Safety, Water Quality Standards, and Improved Quality of Life

A number of options were evaluated within each scenario and are discussed below.

Table 6.6 provides a list of possible management options, their projected effectiveness in reducing peak flows and pollutant loadings, and the estimated cost of each.

TABLE 6.6
Suite of Options for Sullivan's Creek Watershed Management

Management Option	**BMP**	**Problem Solved**	Cost **($)**
Source Control	Control sanitary sewer overflows and repair leaky pipes	primary source of contaminants eliminated	Existing cost to county
Regional Control	Culvert west of Brandon Mill Rd	Flooding	$ 73,000
Regional Control	Colquitt ponds (2) (west of GA 400)	flooding + erosive velocities	$1, 578,939
Regional Control	Wing Mill pond (1) Hadley Court pond (1)	erosive velocities + improved water quality	$ 1,269,606
Source Control	Check Dam	erosive velocities	$ 10,600
Source Control	Stream restoration	stream erosion	$ 723,000

Protection of Health and Safety

The primary health and safety concern for Sullivan's Creek is the risk of contact with surface waters contaminated by sanitary sewer overflows and leaky sewer pipes. A countywide program to identify and correct such problems is underway. The secondary health and safety concern is flooding. Hydraulic modeling predicted flooding in two locations:

- Along the southeast tributary between Colquitt Road and Roswell Road just upstream of Granite Ridge Place in the Northridge Crossing Apartment complex, and
- Along the southern-most tributary located inside the Harbor Point Apartment complex.

Recommended BMPs to solve identified flooding problems are shown in Figure 6.1, Tile 11.

The most basic watershed management plan for protection of health and safety includes correction of these problems. Flooding problems may be addressed by BMPs listed in the table below. Installation of a third culvert at the road crossing inside the Harbor Point Apartments will eliminate flooding for the 100-year storm event. However, the additional culvert will not provide any water quality benefits. Peak flow reduction and pollutant load removals for the ponds are given below in Table 6.7 along with the total cost for this scenario.

TABLE 6.7
Watershed Management Options for Health and Safety.

BMPs	Peak Flow Reduction (below ponds)	Pollutant Reduction	Cost
Culvert (Harbor Point Parkway)	39% - 2 yr 46% - 100 yr	None	$ 73,000
Ponds (Between Colquitt Rd. and Roswell Rd)	58% - 2 yr 62% - 100 yr	14% – TSS 8% - TP	$1, 578,939
TOTAL:			**$1,651,939.00**

Protection of Health and Safety and Attainment of Water Quality Standards

While elimination of sanitary sewer overflows/leaks will afford protection of health and safety, it will also improve water quality. The proposed flood-control ponds located between Colquitt Road and Roswell Road will also provide water quality benefits. The watershed was investigated to determine if additional water quality improvement could be achieved with additional BMPs. There is limited open space available for such controls and thus management options are restricted. In addition, the ability to implement on-site BMPs is limited in this watershed. Two additional locations that could be utilized for creation of new ponds were identified. These locations are identified in Figure 6.1, Tile 11. Pollutant load removal rates and costs for BMPs to meet Health and Safety requirements and attain water quality standards are presented in Table 6.8**.**

TABLE 6.8

Watershed Management Options for Health and Safety and Water Quality

BMPs	Peak Flow Reduction (at flooding points)	Cumulative Pollutant Reduction	Cost
Culvert (Harbor Point Parkway)	39% - 2 yr 46% - 100 yr	None	$ 73,000
Ponds (Between Colquitt Rd. and Roswell Rd)	58% - 2 yr 62% - 100 yr	14% – TSS 8% - TP	$1,578,939
Ponds for water quality		8% – TSS 4% - TP	$1, 269,606
TOTAL:			**$2,921,545.00**

Protection of Health and Safety, Water Quality Standards, and Improved Quality of Life

The final watershed management scenario is to implement BMPs to resolve Health and Safety concerns, meet Water Quality Standards, and improve the Quality of Life for residents of the watershed. This may be accomplished by executing the BMPs identified in previous scenarios and completing additional measures to reduce flow velocities and to restore and stabilize eroded stream channel segments.

High flows have scoured channels leaving banks of exposed soil devoid of vegetation. Channel erosion will continue until banks widen to a stable slope, or until they are stabilized via channel restoration measures. Erosive velocities of more than five (5) feet per second were modeled in several locations in this watershed and verified by field inspections.

The ponds recommended to solve health and safety issues and meet water quality requirements will reduce erosive velocities, reducing the need for additional in-stream BMPs to reduce stormflow velocity. Therefore, for this scenario, only streambank stabilization/restoration projects were added to previous scenarios. Stream restoration cost estimates are based on the assumption that all segments would be restored and considers individual site constraints. Components of this scenario are presented in Table 6.9. The final recommendations for Sullivan's Creek are presented in Table 6.10.

TABLE 6.9
Watershed Management Options for Quality of Life Improvement

BMPs	Peak Flow Reduction (at flooding points)	Cumulative Pollutant Reduction	Cost
Culvert (Harbor Point Parkway)	39% - 2 yr 46% - 100 yr	None	$ 73,000
Ponds (Between Colquitt Rd. and Roswell Rd)	58% - 2 yr 62% - 100 yr	14% – TSS 8% - TP	$1,578,939
Ponds for water quality		8% – TSS 4% - TP	$ 1,269,606
Stream restoration			$ 723,000
TOTAL:			**$3,644,545.00**

TABLE 6.10
Final Recommendations for Sullivans Creek

Final Recommendation	Estimated Cost
Culvert (Harbor Point Parkway)	$ 73,000
Ponds (Between Colquitt Rd. and Roswell Rd)	$1, 578,939
Ponds for water quality	$ 1,269,606
Stream restoration	$ 723,000
TOTAL:	**$3,644,545.00**

6.4.1.4.3 The Tributaries of Huntcliff

A number of small tributaries located north of Sullivan's Creek drain through the golf course operated at the Cherokee Country Club. These tributaries drain directly into the Chattahoochee River. Land use in this area consists of low density residential properties surrounding the golf course. These tributaries were not selected for water quality monitoring because of the small drainage area. Conversations with homeowners in the area led to identification of one stream that has been severely degraded. This stream segment is shown in Figure 6.1, Tile 11. This stream segment is extremely eroded. Residents reported that the stream channel had deepened by more than 12 feet and widened up to 20 feet. Brown and Caldwell recommend that this stream segment be restored. The proposed restoration strategy is to fill in the stream channel, flatten the stream banks, and restore sinuosity. The restoration would occur over approximately 200 feet of channel and is estimated to cost $49,600.

6.4.2 Scenario Evaluation

6.4.2.1 Effectiveness

The watershed management scenarios were presented and discussed in Section 6.4.1. Table 6.10 presents the recommended scenarios for each watershed in the Sandy Springs study area. Table 6.10 provides the recommended water quality improvement strategy for each study area, actions to reduce flooding, actions to address local drainage problems, and stream restoration. Pollutant load reduction effectiveness is for each recommended BMP was presented in Section 6.4.1. The recommended water quality improvement strategies reduce phosphorus loads from Sandy Springs streams by 25 percent. Coupled with existing sanitary sewer overflow reduction efforts by Fulton County, the recommended strategies are expected to significantly reduce fecal coliform levels in Sandy Springs streams so that water quality standards are achieved.

Table 6.10
Final Recommendations for the Sandy Springs Study Area

Final Recommendation	Estimated Cost
Long Island Creek	
Bridge Replacements	$ 1,850,000
Detention Ponds	$13,400,000
Unresolved Maintenance	$ 35,000
Street sweeping	$ 1,000,000
Immediate stream bank stabilization/restoration	$ 951,400
Long term stream bank stabilization/restoration	$ 2,648,600
Game Creek	
Detention Ponds (Retrofits)	$ 660,000
On-site BMPs	$3,540,000
Heards Creek	
Detention Ponds (new) and biofiltration	$ 782,000
Stream bank stabilization/restoration and riffle reestablishment	$ 400,000

Final Recommendation	Estimated Cost
Colewood Creek	
Voluntary Residential Grant Program	$ 750,000
Stream Bank Stabilization/Restoration	$ 450,000
Culvert Replacement	$ 91,500
Tributary 6	
Voluntary Residential Grant Program	$184,000
Lake Dredging	$ 50,000
Marsh Creek	
Bridge Replacements	$ 5,320,000
Revised Plan Option	$18,637,000
Unresolved Maintenance	$ 350,000
Immediate Action Stream Bank Stabilization/Restoration	$ 896,300
Long Term Stream Bank Stabilization/Restoration	$ 1,812,700
Powers Branch	
Check Dams	$ 43,200
Ecoroofs	$ 1,543,214
Parking lot infiltration	$ 1,841,700
Cisterns	$ 1,913,130
New Ponds/Inlet Control/Land Acquisition	$ 3,923,845
Pond Retrofit	$ 962,392
Unresolved Maintenance Issues	$ 10,000
Immediate Action Stream Bank Stabilization/Restoration	$ 130,000
Long-Term Stream Bank Stabilization/Restoration	$ 620,000
Sullivans Creek	
Culvert (Harbor Point Parkway)	$ 73,000
Ponds (Between Colquitt Rd. and Roswell Rd)	$1, 578,939
Ponds for water quality	$ 1,269,606
Stream restoration	$ 723,000
Tributaries of Huntcliff	
Restoration	$49,600
Totals:	**$68,490,126.00**

6.4.2.2 Cost

The costs for the proposed management actions are presented in Table 6.10. These costs are presented as 20-year present worth costs that include construction, operation and maintenance, and engineering design. Impervious surfaces are the primary source of runoff, and the cost of storm water treatment should be proportional to the amount of impervious area for each parcel within each watershed. Impervious area for each parcel was determined and the fraction of watershed imperviousness was determined for each parcel. This fraction was then multiplied by the total watershed storm water treatment cost to determine the cost for each parcel. This calculation was determined using ArcView and explicitly measured imperviousness for each site. Costs were apportioned to each parcel according to percent imperviousness. Table 6.11 provides median (50th percentile) values for each major land use category. One of the major categories used is Department of Transportation roads and highways since erosion problems were noted downstream of GA 400 and I-285 and no storm water management facilities have been constructed along these major roads.

Table 6.11
Distribution of Costs to Implement Management Plan

Median 20-year Present Worth **Parcel** Cost by Landuse Category				
Watershed	**Residential**	**Commercial**	**Institutional**	**Department of Transportation**
Long Island Creek	$3,498.52	$12,440.18	$50,774.45 (mean)	$983,024.03
Game Creek	$3,308.82	$15,854.05	$33,172.99	$792,676.76
Heards Creek	$1,458.57	$20,584.20	$0	$166,894.03
Tributary 7	$916.66	$5,385.35	$21,213.06	$0.00
Tributary 6	$555.90	$0.00	$0.00	$0.00
Marsh Creek	$2,752.49	$23,134.72	$12,909.65	$1,086,461.22
Powers Branch	$3,331.38	$24,870.21	$39,765.11	$214,480.32
Sullivans Creek	$488.36	$5,018.75	$0.00	$94,295.60
Tribs of Huntcliff	$428.51	$4,582.02	$0.00	$0.00
Tributary 9	$1,040.58	$5620.3 (mean)	$0.00	$0.00
Median Equivalent Annual Parcel Cost by Landuse Category				
Watershed	**Residential**	**Commercial**	**Institutional**	**Department of Transportation**
Long Island Creek	$330.24	$1,174.26	$4,772 (mean)	$92,790.51
Game Creek	$312.33	$1,496.51	$3,131.30	$74,823.08
Heards Creek	$137.68	$1,943.00	$0.00	$15,753.62
Tributary 7	$86.53	$508.34	$2,002.36	$0.00
Tributary 6	$52.47	$0.00	$0.00	$0.00
Marsh Creek	$259.82	$2,183.75	$1,218.58	$102,554.25
Powers Branch	$314.46	$2,347.57	$3,753.55	$20,245.42
Sullivans Creek	$46.10	$473.73	$0.00	$8,900.84
Tribs of Huntcliff	$40.45	$432.51	$0.00	$0.00
Tributary 9	$98.22	$528.22 (mean)	$0.00	$0.00

6.5 Water Resources Management Recommendations

6.5.1 County-wide Recommendations

Countywide recommendations were provided in Volume II. Volume II provides recommendations for management of storm water to reduce water quality and flooding impacts from future development. The most important recommendation for Sandy Springs is for better review of storm water management requirements for in-fill development.

6.5.2 Long Island Creek Water Resources Management Unit (WRMU)

The Long Island Creek WRMU includes Long Island Creek and Riverview Creek. No action is recommended for the undeveloped Riverview Creek, while extensive recommendations were developed for Long Island Creek due to extensive development in the headwaters. The recommended plan for Long Island Creek includes construction of detention ponds, retrofit of existing detention ponds, bridge replacements, and stream restoration. The details are provided in Section 6.4.1.2.

6.5.3 Heards Creek WRMU

The Heards Creek WRMU includes Game Creek, an unnamed tributary north of Game Creek, Tributary 9, Heards Creek, Tributary 7, and Tributary 6. No actions are proposed for tributaries 8 and 9 and the unnamed tributaries. Retrofit of existing detention facilities is recommended for Game Creek. Details are provided in Section 6.4.1.2..

Heards Creek is impacted from I-285 runoff and high stream velocities. Recommendations include three new detention ponds and selected stream riffles to reduce stream velocities. The details are provided in Section 6.4.1.2.2.

Colewood Creek (Tributary 7) is a residential watershed with significant flooding problem. The management plan for Colewood Creek recommends actions to resolve the flooding problem and the improve water quality. Voluntary incentive-based on-site management of runoff is recommended in this watershed. Details are provided in Section 6.4.1.2.3.

Tributary 6 has a lake at the mouth of the watershed adjacent to Riverside Drive. Voluntary incentive-based on-site management of runoff is recommended in this watershed. Details are provided in Section 6.4.1.2.4.

6.5.4 Marsh Creek WRMU

The Marsh Creek WRMU includes Marsh Creek and Tributary 5. No actions are recommended for Tributary 5. The Marsh Creek watershed is highly urbanized with very little storm water management. There are a number of challenges in this watershed, and the recommended plan includes a mix of detention ponds and on-site BMPs to correct the problems. The plan includes:

- 25 ecoroofs,
- 39 edge-of-parking lot sand filters,
- 9 pond retrofits,
- 17 new ponds, and

- 6 miscellaneous BMPs.

Details are provided in Section 6.4.1.3.

6.5.5 Sullivan's Creek WRMU

The Sullivan's Creek WRMU includes the Hunt Cliff tributaries, Sullivan' s Creek, and Powers Branch. Powers Branch is a mixed urban watershed with both low density and high-density urban development. There is a lake at the mouth of the watershed, and the Big Trees Forest Preserve is located just east of Roswell Road. This watershed has a more aggressive plan to meet a lower phosphorus concentration for protection of lake water quality. A mix of detention and on-site BMPs have been recommended to achieve a phosphorus concentration of 0.05 mg/l. Details are provided in Section 6.4.1.4.1.

Sullivan's Creek is a mixed urban watershed comprised primarily of more recent developments. There are storm water control facilities in the watershed for the newer developments. Flooding exists upstream of Roswell Road where an apartment complex filled across the creek. Upstream detention is proposed as a solution to this flooding problem. Other flooding problems will be solved with culvert replacements. Details are provided in Section 6.4.1.4.2.

6.6 Implementation Plan

6.6.1 Schedule

The schedule for implementation of the plan is a three-phase process. The first phase (1999-2003) is development of the County program to manage storm water, design contracts for specific bridge replacements and BMPS, and construction of selected high-priority projects to solve serious problems. Most projects will be scheduled for implementation during phases two and three. The health and safety projects will be in phase two (2004-2008), and water quality improvement projects will take place in phase three (2009-2014). The schedule for implementation of quality of life projects has not yet been determined.

Most of the projects recommended within this management plan have been prioritized for implementation based upon a cost-benefit analysis. Sites were ranked for implementation on a scale of 1 – 100, with 100 being the highest priority projects to implement. Table 6.12 provides the prioritization matrix for recommended projects in the Sandy Springs Study Area.

Table 6.12

Fulton County Water Resources Management Plan

Prioritization Matrix

BMP Identifier	Flood Control						Water Quality						Aquatic Integrity						Erosion Control						Public Acceptance and Recreation						Implementability						Benefit and Cost						Restore versus Protect								
	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Total	Normalized Total	Rounded Total
	10	5	3	18	12.9	13.0	5	10	3	18	12.9	13.0	0	10	3	13	9.4	9.0	10	10	5	25	18.0	18.0	0	0	5	5	3.6	4.0				25	18.0	18.0				25	18.0	18.0				10	7.2	7.0	139	100	100
24320307	10	5	3	18	12.9	13.0	5	10	3	18	12.9	13.0		10	3	13	9.4	9.0	10	10	5	25	18.0	18.0			5	5	3.6	4.0				20	14.4	14.0				23	16.5	17.0				7	5.0	5.0			93.0
24330321	10	5	3	18	12.9	13.0	5	10	3	18	12.9	13.0		10	3	13	9.4	9.0	10	10	5	25	18.0	18.0			5	5	3.6	4.0				20	14.4	14.0				20	14.4	14.0				8	5.8	6.0			91.0
24320392	9	5	3	17	12.2	12.0	5	9	3	17	12.2	12.0		9	3	12	8.6	9.0	9	9	5	23	16.5	17.0			5	5	3.6	4.0				25	18.0	18.0				18	12.9	13.0				7	5.0	5.0			90.0
24320306	7	5	3	15	10.8	11.0	2	8	2	12	8.6	9.0		8	3	11	7.9	8.0	10	10	5	25	18.0	18.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				8	5.8	6.0			86.0
24440115	10	5	3	18	12.9	13.0	5	10	3	18	12.9	13.0		10	3	13	9.4	9.0	10	10	5	25	18.0	18.0			4	4	2.9	3.0				20	14.4	14.0				17	12.2	12.0				5	3.6	4.0			86.0
24320381	9	5	3	17	12.2	12.0	4	7	3	14	10.1	10.0		10	3	13	9.4	9.0	10	10	5	25	18.0	18.0			5	5	3.6	4.0				20	14.4	14.0				19	13.7	14.0				7	5.0	5.0			86.0
24440109	10	5	3	18	12.9	13.0	5	10	3	18	12.9	13.0		10	3	13	9.4	9.0	10	10	5	25	18.0	18.0			4	4	2.9	3.0				20	14.4	14.0				17	12.2	12.0				5	3.6	4.0			86.0
24320175	8	4	3	15	10.8	11.0	5	10	3	18	12.9	13.0		10	3	13	9.4	9.0	10	10	5	25	18.0	18.0			5	5	3.6	4.0				20	14.4	14.0				17	12.2	12.0				5	3.6	4.0			85.0
24340423	7	5	3	15	10.8	11.0	5	10	3	18	12.9	13.0		10	3	13	9.4	9.0	8	8	4	20	14.4	14.0			4	4	2.9	3.0				15	10.8	11.0				24	17.3	17.0				7	5.0	5.0			83.0
24340419	7	4	3	14	10.1	10.0	4	9	3	16	11.5	12.0		9	3	12	8.6	9.0	9	9	5	23	16.5	17.0			5	5	3.6	4.0				20	14.4	14.0				15	10.8	11.0				8	5.8	6.0			83.0
24340204	7	3	2	12	8.6	9.0	5	8	3	16	11.5	12.0		7	3	10	7.2	7.0	6	5	3	14	10.1	10.0			5	5	3.6	4.0				25	18.0	18.0				22	15.8	16.0				5	3.6	4.0			80.0
24210206	7	5	3	15	10.8	11.0	2	9	3	14	10.1	10.0		9	3	12	8.6	9.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			75.0
24210210	5	5	2	12	8.6	9.0	2	9	3	14	10.1	10.0		9	3	12	8.6	9.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			73.0
24110205	5	5	2	12	8.6	9.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	10	4	17	12.2	12.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				5	3.6	4.0			69.0
24220325	5	3	2	10	7.2	7.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				15	10.8	11.0				25	18.0	18.0				10	7.2	7.0			67.0
24210118	7	5	3	15	10.8	11.0	2	5	2	9	6.5	6.0		5	2	7	5.0	5.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			67.0
24220481	7	5	3	15	10.8	11.0	2	9	3	14	10.1	10.0		9	3	12	8.6	9.0	5	5	3	13	9.4	9.0	0	0	2	2	1.4	1.0				5	3.6	4.0				25	18.0	18.0				5	3.6	4.0			66.0
24220412	7	5	3	15	10.8	11.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				5	3.6	4.0			66.0
24330220	8	4	3	15	10.8	11.0	3	7	2	12	8.6	9.0		8	3	11	7.9	8.0	3	7	3	13	9.4	9.0			3	3	2.2	2.0				15	10.8	11.0				17	12.2	12.0				5	3.6	4.0			66.0
24220414	1	5	2	8	5.8	6.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			66.0
24330465	10	5	3	18	12.9	13.0	3	10	3	16	11.5	12.0		8	3	11	7.9	8.0	3	8	3	14	10.1	10.0			3	3	2.2	2.0				5	3.6	4.0				17	12.2	12.0				5	3.6	4.0			65.0
24210201	1	3	1	5	3.6	4.0	1	5	2	8	5.8	6.0		5	2	7	5.0	5.0	3	10	4	17	12.2	12.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			65.0
24220415	3	5	2	10	7.2	7.0	2	5	2	9	6.5	6.0		6	2	8	5.8	6.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			64.0
24210108	1	3	1	5	3.6	4.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			64.0
24210109	1	3	1	5	3.6	4.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			64.0
24110211	5	5	2	12	8.6	9.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				5	3.6	4.0			64.0
24220324	3	5	2	10	7.2	7.0	1	7	2	10	7.2	7.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			4	4	2.9	3.0				15	10.8	11.0				25	18.0	18.0				5	3.6	4.0			64.0
24220413	5	4	2	11	7.9	8.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				5	3.6	4.0			63.0
24220302	3	5	2	10	7.2	7.0	2	5	2	9	6.5	6.0		5	2	7	5.0	5.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0				5	3.6	4.0			63.0
24220417	1	5	2	8	5.8	6.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				17	12.2	12.0					0.0	0.0			62.0
24220101	5	3	2	10	7.2	7.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				15	10.8	11.0				18	12.9	13.0				10	7.2	7.0			62.0
24220327	5	3	2	10	7.2	7.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				15	10.8	11.0				18	12.9	13.0				10	7.2	7.0			62.0
24220304	3	5	2	10	7.2	7.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				5	3.6	4.0			62.0
24340412	5	5	2	12	8.6	9.0	3	8	3	14	10.1	10.0		8	3	11	7.9	8.0	5	5	3	13	9.4	9.0			3	3	2.2	2.0				15	10.8	11.0				10	7.2	7.0				7	5.0	5.0			61.0
24340210	3	5	2	10	7.2	7.0	5	7	3	15	10.8	11.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				15	10.8	11.0				17	12.2	12.0				5	3.6	4.0			61.0
24330456	6	4	2	12	8.6	9.0	4	7	3	14	10.1	10.0		6	2	8	5.8	6.0	8	8	4	20	14.4	14.0			3	3	2.2	2.0				12	8.6	9.0				11	7.9	8.0				3	2.2	2.0			60.0
24210107	2	1	1	4	2.9	3.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				13	9.4	9.0				5	3.6	4.0			60.0
24220221	5	2	2	9	6.5	6.0	3	7	2	12	8.6	9.0		8	3	11	7.9	8.0	5	8	4	17	12.2	12.0			3	3	2.2	2.0				15	10.8	11.0				10	7.2	7.0				5	3.6	4.0			59.0
24340414	5	3	2	10	7.2	7.0	3	8	3	14	10.1	10.0		8	3	11	7.9	8.0	5	5	3	13	9.4	9.0			3	3	2.2	2.0				15	10.8	11.0				10	7.2	7.0				7	5.0	5.0			59.0
24220416	3	5	2	10	7.2	7.0	2	5	2	9	6.5	6.0		5	2	7	5.0	5.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				5	3.6	4.0			58.0
24330109	3	3	2	8	5.8	6.0	3	5	2	10	7.2	7.0		5	2	7	5.0	5.0	4	7	3	14	10.1	10.0			3	3	2.2	2.0				12	8.6	9.0				22	15.8	16.0				3	2.2	2.0			57.0
Infiltration	3	2	2	7	5.0	5.0	1	7	2	10	7.2	7.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			4	4	2.9	3.0				15	10.8	11.0				17	12.2	12.0				5	3.6	4.0			56.0
24220222	3	2	1	6	4.3	4.0	3	5	2	10	7.2	7.0		6	2	8	5.8	6.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				3	2.2	2.0			55.0
Ecoroofs	3	2	1	6	4.3	4.0	1	7	2	10	7.2	7.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			4	4	2.9	3.0				15	10.8	11.0				17	12.2	12.0				5	3.6	4.0			55.0
24330206	3	3	2	8	5.8	6.0	3	6	2	11	7.9	8.0		5	2	7	5.0	5.0	4	6	3	13	9.4	9.0			3	3	2.2	2.0				10	7.2	7.0				22	15.8	16.0				3	2.2	2.0			55.0
24330419	3	2	1	6	4.3	4.0	1	8	2	11	7.9	8.0		8	3	11	7.9	8.0	3	2	2	7	5.0	5.0			3	3	2.2	2.0				15	10.8	11.0				17	12.2	12.0				5	3.6	4.0			54.0
24330114	3	3	2	8	5.8	6.0	3	6	2	11	7.9	8.0		5	2	7	5.0	5.0	5	7	3	15	10.8	11.0			3	3	2.2	2.0				12	8.6	9.0				15	10.8	11.0				3	2.2	2.0			54.0
24220223	3	2	1	6	4.3	4.0	3	4	2	9	6.5	6.0		6	2	8	5.8	6.0	3	5	2	10	7.2	7.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				3	2.2	2.0			54.0
24330418	6	3	2	11	7.9	8.0	3	7	2	12	8.6	9.0		6	2	8	5.8	6.0	5	5	3	13	9.4	9.0			2	2	1.4	1.0				10	7.2	7.0				15	10.8	11.0				3	2.2	2.0			53.0
Long Island Road Bridge	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				25	18.0	18.0				0	0.0	0.0			53.0

Table 6.12

Fulton County Water Resources Management Plan

Prioritization Matrix

BMP Identifier	Flood Control						Water Quality						Aquatic Integrity						Erosion Control						Public Acceptance and Recreation						Implementability						Benefit and Cost						Restore versus Protect								
	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Health and Safety	Regulatory	Quality of Life	Total	Normalized Total	Rounded Total	Total	Normalized Total	Rounded Total
Brandon Mill Road Bridge	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				25	18.0	18.0				0	0.0	0.0			53.0
Peachtree Dunwoody Road Culvert	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				25	18.0	18.0				0	0.0	0.0			53.0
24340415	3	3	2	8	5.8	6.0	1	7	2	10	7.2	7.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				15	10.8	11.0				10	7.2	7.0				7	5.0	5.0			52.0
24210203	1	5	2	8	5.8	6.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			2	2	1.4	1.0				10	7.2	7.0				17	12.2	12.0				5	3.6	4.0			52.0
24330209	5	3	2	10	7.2	7.0	3	4	2	9	6.5	6.0		3	1	4	2.9	3.0	4	4	2	10	7.2	7.0			3	3	2.2	2.0				12	8.6	9.0				22	15.8	16.0				3	2.2	2.0			52.0
24340310	1	3	1	5	3.6	4.0	1	5	3	9	6.5	6.0		5	3	8	5.8	6.0	2	3	2	7	5.0	5.0			2	2	1.4	1.0				20	14.4	14.0				17	12.2	12.0				5	3.6	4.0			52.0
24340321	1	3	1	5	3.6	4.0	1	5	3	9	6.5	6.0		5	3	8	5.8	6.0	2	3	2	7	5.0	5.0			2	2	1.4	1.0				20	14.4	14.0				17	12.2	12.0				5	3.6	4.0			52.0
24340413	2	3	1	6	4.3	4.0	2	7	2	11	7.9	8.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				15	10.8	11.0				10	7.2	7.0				7	5.0	5.0			51.0
24320353	3	5	2	10	7.2	7.0	2	5	2	9	6.5	6.0		5	2	7	5.0	5.0	2	10	3	15	10.8	11.0			3	3	2.2	2.0				5	3.6	4.0				17	12.2	12.0				5	3.6	4.0			51.0
24330437	5	4	2	11	7.9	8.0	3	7	2	12	8.6	9.0		4	2	6	4.3	4.0	3	4	2	9	6.5	6.0			3	3	2.2	2.0				15	10.8	11.0				12	8.6	9.0				3	2.2	2.0			51.0
24340418	2	3	1	6	4.3	4.0	1	7	2	10	7.2	7.0		7	3	10	7.2	7.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				15	10.8	11.0				10	7.2	7.0				7	5.0	5.0			50.0
24320361	5	5	2	12	8.6	9.0	2	5	2	9	6.5	6.0		5	2	7	5.0	5.0	3	5	2	10	7.2	7.0			2	2	1.4	1.0				5	3.6	4.0				22	15.8	16.0				3	2.2	2.0			50.0
24330110	3	3	2	8	5.8	6.0	3	6	2	11	7.9	8.0		6	2	8	5.8	6.0	5	5	3	13	9.4	9.0			2	2	1.4	1.0				10	7.2	7.0				15	10.8	11.0				3	2.2	2.0			50.0
24320382	5	5	2	12	8.6	9.0	2	5	2	9	6.5	6.0		5	2	7	5.0	5.0	5	5	3	13	9.4	9.0			2	2	1.4	1.0				5	3.6	4.0				15	10.8	11.0				5	3.6	4.0			49.0
24320355	3	3	2	8	5.8	6.0	2	5	2	9	6.5	6.0		5	2	7	5.0	5.0	3	5	2	10	7.2	7.0			2	2	1.4	1.0				10	7.2	7.0				17	12.2	12.0				5	3.6	4.0			48.0
24320360	3	5	2	10	7.2	7.0	2	5	2	9	6.5	6.0		5	2	7	5.0	5.0	3	5	2	10	7.2	7.0			2	2	1.4	1.0				5	3.6	4.0				17	12.2	12.0				7	5.0	5.0			47.0
24340416	2	3	1	6	4.3	4.0	1	5	2	8	5.8	6.0		5	2	7	5.0	5.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				15	10.8	11.0				10	7.2	7.0				7	5.0	5.0			47.0
24340311	1	3	1	5	3.6	4.0	1	5	3	9	6.5	6.0		5	3	8	5.8	6.0	3	4	2	9	6.5	6.0			2	2	1.4	1.0				15	10.8	11.0				14	10.1	10.0				3	2.2	2.0			46.0
North Mill Road (2)	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				15	10.8	11.0				0	0.0	0.0			46.0
Spalding Drive	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				15	10.8	11.0				0	0.0	0.0			46.0
Wright Circle Culvert	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				15	10.8	11.0				0	0.0	0.0			46.0
Cherry Tree Road Culvert	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				15	10.8	11.0				0	0.0	0.0			46.0
Carriage Drive Culvert	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				15	10.8	11.0				0	0.0	0.0			46.0
Mabry Road Culvert	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				15	10.8	11.0				0	0.0	0.0			46.0
Twin Branch Road Culvert (south site)	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				15	10.8	11.0				0	0.0	0.0			46.0
24230408	3	3	2	8	5.8	6.0	2	3	1	6	4.3	4.0		4	2	6	4.3	4.0	3	5	2	10	7.2	7.0			3	3	2.2	2.0				12	8.6	9.0				15	10.8	11.0				3	2.2	2.0			45.0
24330210	4	3	2	9	6.5	6.0	3	3	2	8	5.8	6.0		2	1	3	2.2	2.0	3	3	2	8	5.8	6.0			3	3	2.2	2.0				12	8.6	9.0				15	10.8	11.0				3	2.2	2.0			44.0
24330211	4	3	2	9	6.5	6.0	3	3	2	8	5.8	6.0		2	1	3	2.2	2.0	3	3	2	8	5.8	6.0			3	3	2.2	2.0				12	8.6	9.0				15	10.8	11.0				3	2.2	2.0			44.0
24320302	3	1	1	5	3.6	4.0	1	4	1	6	4.3	4.0		6	2	8	5.8	6.0	2	2	1	5	3.6	4.0			2	2	1.4	1.0				5	3.6	4.0				22	15.8	16.0				5	3.6	4.0			43.0
24330108	3	4	2	9	6.5	6.0	2	5	2	9	6.5	6.0		3	1	4	2.9	3.0	4	4	2	10	7.2	7.0			3	3	2.2	2.0				12	8.6	9.0				11	7.9	8.0				3	2.2	2.0			43.0
Tanacrest Drive Culvert	10	5	3	18	12.9	13.0	0	0	0	0	0.0	0.0		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0			5	5	3.6	4.0				25	18.0	18.0				10	7.2	7.0				0	0.0	0.0			42.0
24340417	2	1	1	4	2.9	3.0	1	5	2	8	5.8	6.0		5	2	7	5.0	5.0	3	5	2	10	7.2	7.0			1	1	0.7	1.0				10	7.2	7.0				10	7.2	7.0				3	2.2	2.0			38.0
24320313	1	1	1	3	2.2	2.0	2	4	2	8	5.8	6.0		5	2	7	5.0	5.0	2	1	1	4	2.9	3.0			1	1	0.7	1.0				5	3.6	4.0				17	12.2	12.0				4	2.9	3.0			36.0

6.6.2 Cost

The costs associated with implementation of the management plan were provided above in Table 6.10. Costs for monitoring are provided below in Section 6.6.6.

6.6.3 Monitoring

The proposed plan is complex and expensive. While it was based on sound scientific and engineering principles, the stream flow and water quality monitoring period during the study was relatively short. The short flow and water quality monitoring period limited the calibration of both the water quantity and quality models. Also, in Sandy Springs streams, sanitary sewer overflows were common, which complicated the water quality analysis. It was not possible to separate the stream water quality responses from sanitary sewer overflows and non-point source urban runoff. Accordingly, it is not known what the total annual pollutant load is from urban runoff, nor is the sanitary sewer overflow load known. Continued monitoring is essential to refine the predictions of the relative contributions from each of these two major sources of pollutants. Efforts to reduce the frequency and magnitude of sanitary sewer overflows have already been accomplished and are currently underway in a number of Sandy Springs streams. Water quality monitoring of these streams can assist the County in refining the pollutant load estimates for non-point source runoff.

Stream flow records were not available for any of the streams within the Sandy Springs study area. The stream flow-monitoring period was only six months, and the response of the streams to low-frequency high rainfall events is unknown. Further monitoring is essential to refining the model predictions of Sandy Springs streams to high rainfall events.

Recommended stations for continued stream flow measurements and water quality sampling are provided below:

Station	Drainage Area, Acres	Land Use	Rationale
Long Island Creek at Lake Forrest Drive	1,260	Commercial, High Density Residential	Frequent overflows, high stream flow
Long Island Creek at Jett Road	3,400	Low/medium density residential	Determine in-stream processing
Heards Creek	826	Low-density residential	Frequent overflows
Marsh Creek	4,300	Low and high density residential, commercial	Large source of pollutants
Powers Branch	1,152	High density residential, commercial	Special habitats exist in watershed

The monitoring program recommended for the Sandy Springs area is described below:

- Installation of automatic monitoring equipment to measure water depth continuously
- Installation of automatic monitoring equipment to collect discrete water samples. Remote telemetry equipment to query sampler.

- Stream gauging during storms, 5 events/year. This will consist of instantaneous measurement of velocity and depth at multiple points across the stream at various depths so that a reliable stage discharge relationship can be developed.
- Sample collection during 10 storms/year, five discrete samples throughout the hydrograph
- Sample collection during baseflow conditions, one discreet sample/month
- Analysis of samples for total phosphorus, ortho-phosphate, nitrate, ammonia, total Kjeldahl nitrogen, total suspended solids, turbidity, fecal coliform bacteria, and BOD.
- Analysis of Heptaclor epoxide for both the particulate and the dissolved fractions (one discrete sample per storm for 10 storms and five baseflow events).

This sampling program should be conducted for at least 5 years, and possibly up to 15 years, depending on how long it takes to implement the management plan recommendations. The annual cost is estimated to be in the range of $400,000. A detailed cost estimate to execute this proposed monitoring plan is presented in Appendix M. Depending on the results from the Heptachlor epoxide monitoring results, it may be found that there is no ecological or human health risk from this constituent. This is because Heptaclor epoxide is largely bound to sediment in aquatic environments, and the screening level concentration for non-toxicity to organisms is 14 mg/Kg. If the particulate fraction concentration is less than 14 mg/Kg and the dissolved fraction is less than the detection limit, then Heptaclor epoxide is not expected to have a negative ecological impact.

6.6.4 Coordination with Other Programs

The Sandy Springs watershed management program will require significant coordination with other programs, such as coordination with the Department of Planning and Economic Development permitting procedure for new developments, sanitary sewer infiltration/inflow studies, and road construction projects. The County should establish a framework to facilitate coordination between these related programs. One framework that has worked well in the past is to have monthly coordination meetings (less than one hour in length) where each department involved in construction activities informs Public Works watershed management staff of projects where coordination will be appropriate.

APPENDICES

Appendix A	Existing Infrastructure Map and Structure Diagrams
Appendix B	Photolog
Appendix C	Cross-Sections Location Map
	Field Data Form
	Manning's Roughness Coefficient Calculations
Appendix D	Problem Sites Database
	Problem Sites Location Map
Appendix E	Sandy Springs Regsites Database
Appendix F	Facility Inspection Procedures
	Field Inspection Datasheet
Appendix G	Biological Monitoring Information
Section 1	Physical Habitat Assessment Forms
	DNR Physical Characterization/Water Quality Field Sheet
	Impairment Assessment Sheet
Section 2	Photos from Bioassessment
Section 3	Macroinvertebrate Data
Section 4	Fish Collection Data
Section 5	Fish Tissue Analytical Data
Appendix H	Node Diagrams
Appendix I	Hydraulic/Hydrologic Modeling Calibration Parameters
Appendix J	Water Quality Modeling Calibration Parameters
Appendix K	Introduction to LORELEI
Appendix L	Citizen Call Log Database
Appendix M	Budget for Long-term Monitoring Plan

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/16/99	**Firm:** Khafra	**Crew Initials:** NF, TW	**Photo #:**
Structure Number: MC- 06-10			
Nearest Street No:	**Street Name:** RIVERSIDE DR.		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
(06, 07, 08, 09, 10)

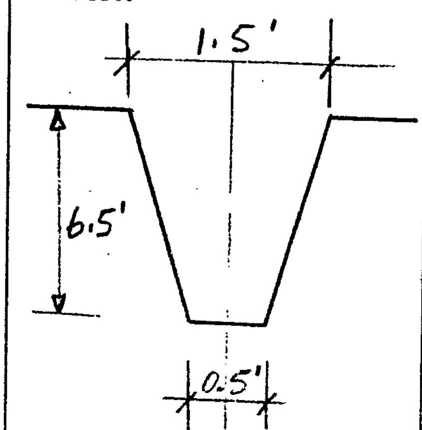
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

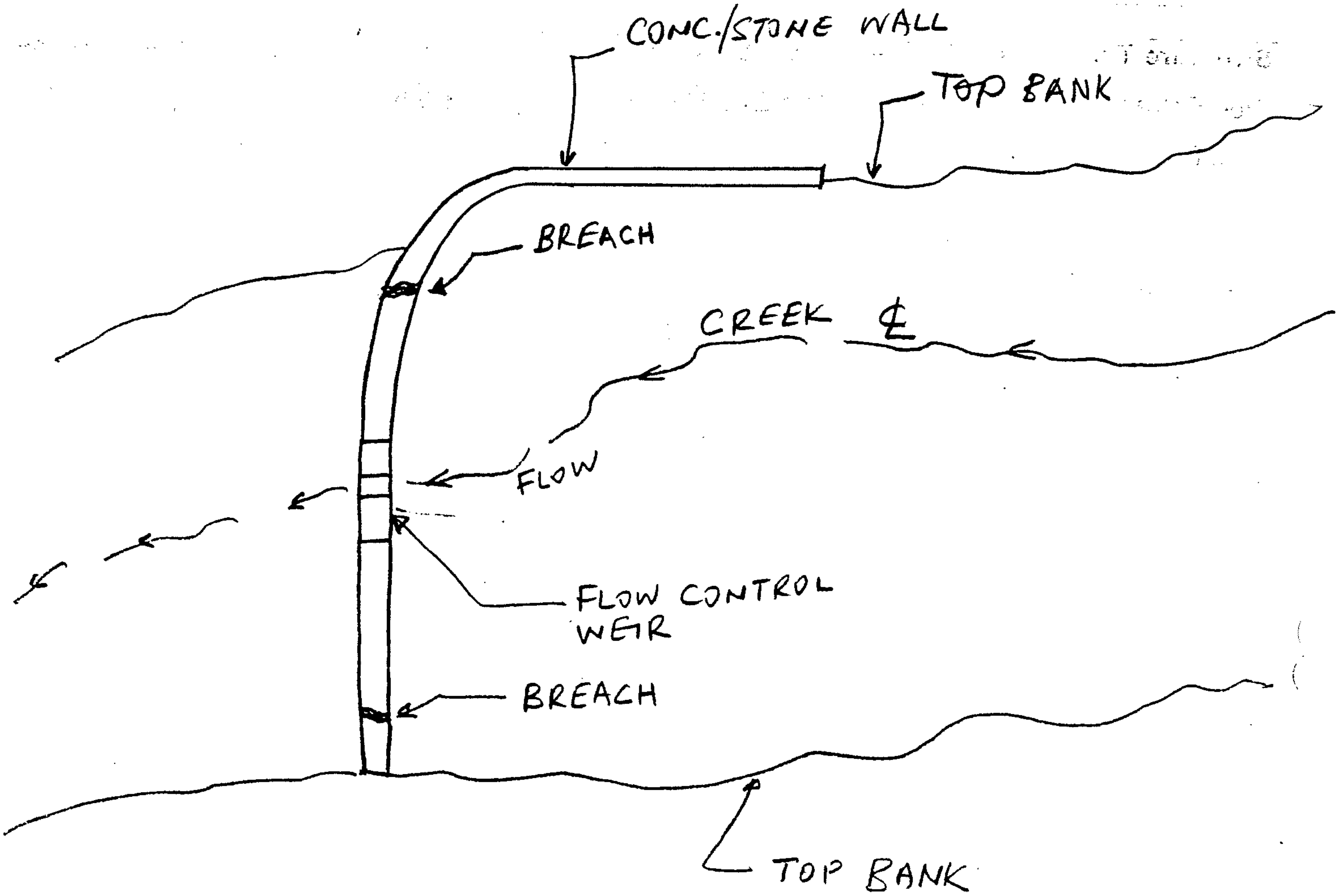
Comments: ASYMMETRIC CURVED STONE & MORTAR WALL BREACHED ON BOTH SIDES OF NOTCH. SEE BACK OF THIS PAGE

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC



NOTE: DAM BREAK, WALL WILL COLLAPSE ANY TIME.

DIAGRAM MC-0006

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/17/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:

Structure Number: MC- 53, 54, 55

Nearest Street No: | Street Name: BRANDON MILL RD. NEAR NORTH MILL RD

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

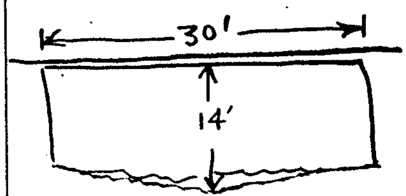
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/17/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC- 82, 83, 84, 85, 86			
Nearest Street No:	Street Name: NORTH MILL RD		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
82, 83, 84, 85, 86

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

SEE BACK

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments: ATLANTA COUNTRY DAY SCHOOL, BEHIND GRAVEL PARKING LOT. SURROUNDED BY SECURITY FENCE. ~~COULD NOT MEASURE.~~

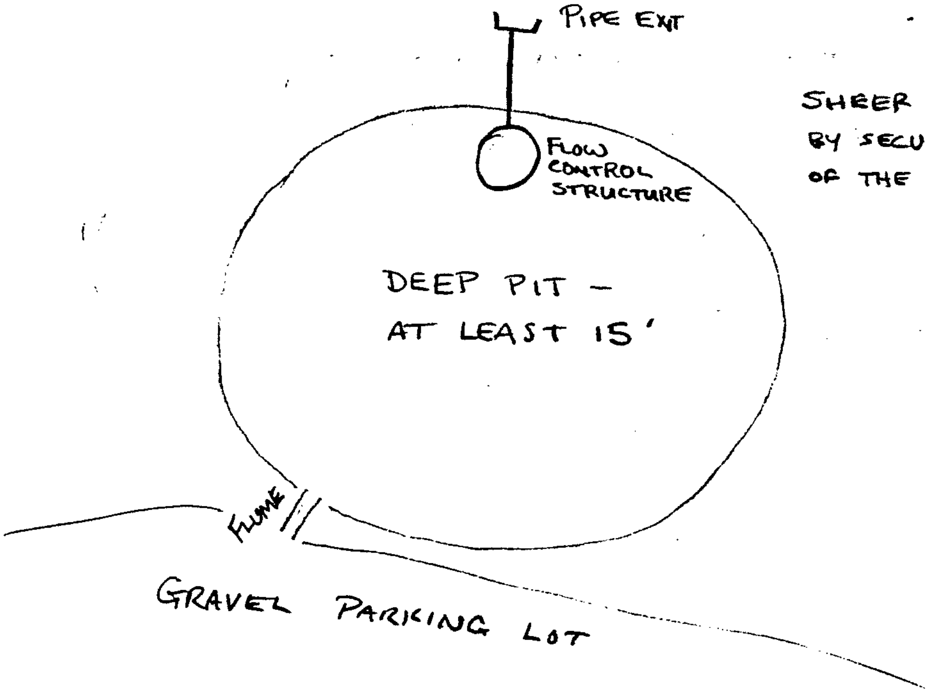
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

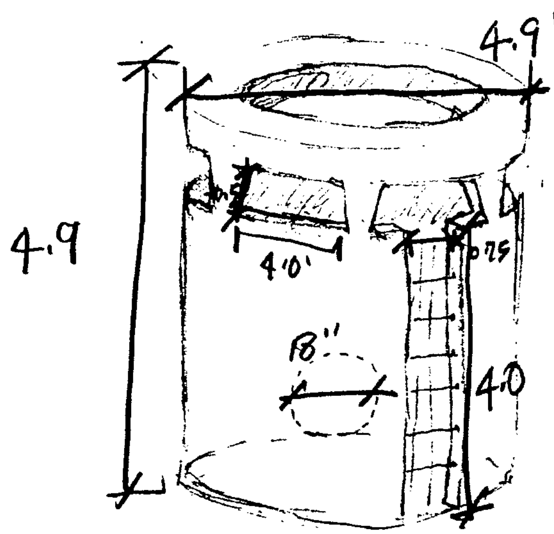
Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-87	18			X				

TOP VIEW



SHEER ROCK WALLS SURROUNDED BY SECURITY FENCE AT THE EDGE OF THE PRECIPICE.

FLOW CONTROL STRUCTURE



APPEARS OPEN AT TOP.

NOTCH PROTECTED BY IRON GRATE.

FOUR OPENINGS

DIAGRAM MC-0082

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 18 AUG 99 | Firm: Khafra | Crew Initials: NF, TW | Photo #:

Structure Number: MC- 128, ~~129, 130, 131, 132~~

Nearest Street No: 110 | Street Name: WYNDHAM DR.

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

128, 129, 130, 131, 132

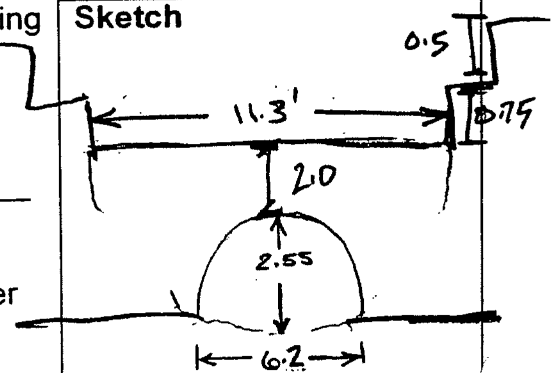
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: IMMEDIATELY DOWNSTREAM OF FLOW CONTROL STRUCTURE IS A WATERFALL.

In-Coming Pipe:
From

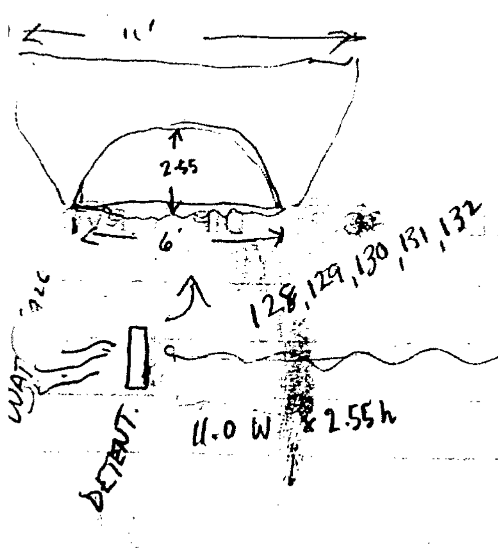
Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

E

MC 128-132



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 18 AUG 99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC- 152, ~~153, 154, 155, 156~~			
Nearest Street No: 235	Street Name: SPALDING DR.		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

152, 153, 154, 155, 156

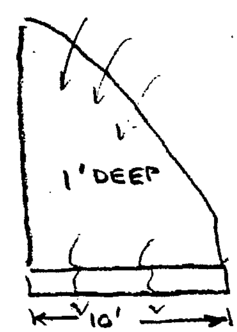
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: A STRUCTURE TO SLOW DOWN THE WATER FLOW. MORE LIKE A DAM FILLED BY SEDIMENT

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/20/99	**Firm:** Khafra	**Crew Initials:**	**Photo #:**

Structure Number: MC- 224, ~~225, 226, 227, 228~~

Nearest Street No: 405 **Street Name:** SPALDING DR

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

224, 225, 226, 227, 228

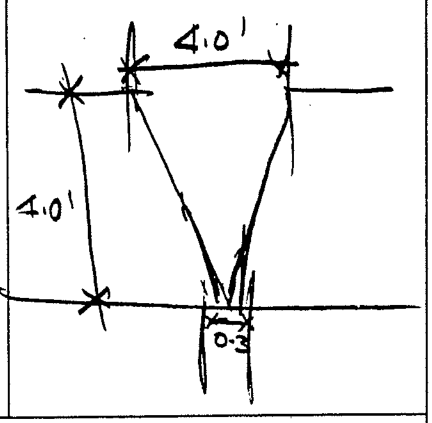
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/23/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 276, ~~277, 278, 279, 280~~

Nearest Street No: | Street Name: Abernathy Rd / Roswell Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box ~~Culvert Entrance~~ ~~Box~~ Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
276-277, 278, 279, 280

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel _____x_____ Flume _____x_____

Structural Damage: Severe Minor None

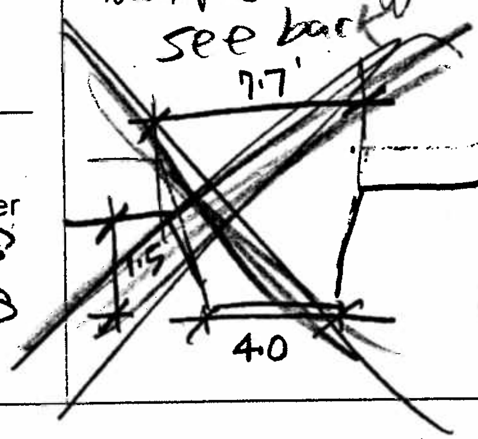
Dry-Weather Flow: Yes ~~No~~ Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% ~~Clear~~

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Sketch

~~next page is different~~



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC 286~~	30			X				
MC-281								

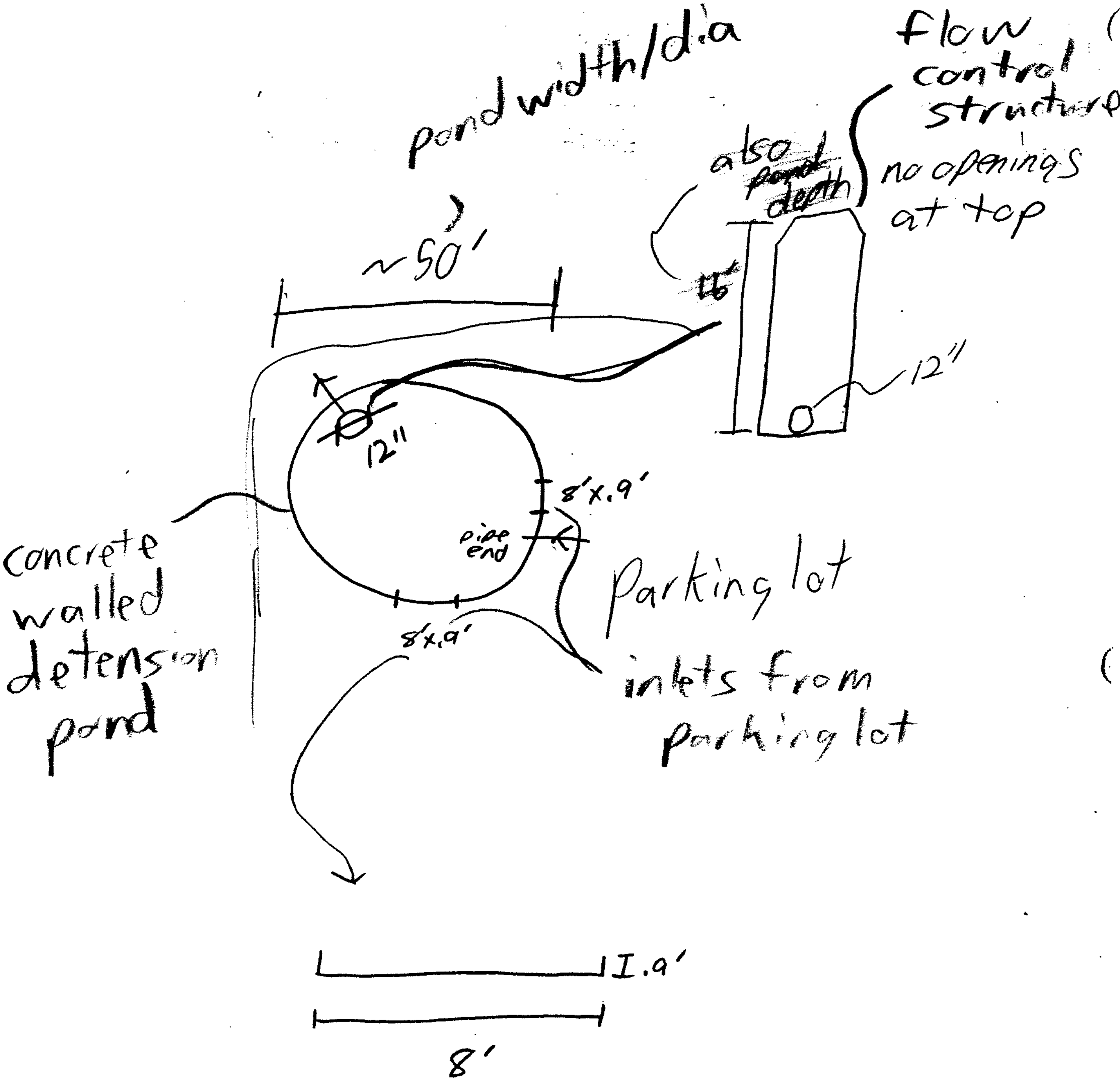


DIAGRAM MC-0276

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/23/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 276, ~~277, 278, 279, 280~~

Nearest Street No: | Street Name: Abernathy Rd / Roswell Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box ~~Culvert Entrance~~ ~~Box~~ Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
276-277, 278, 279, 280

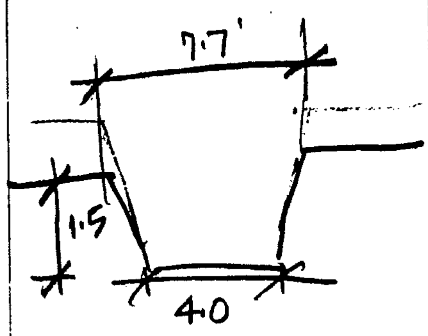
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC 286~~	30			X				
MC-281								

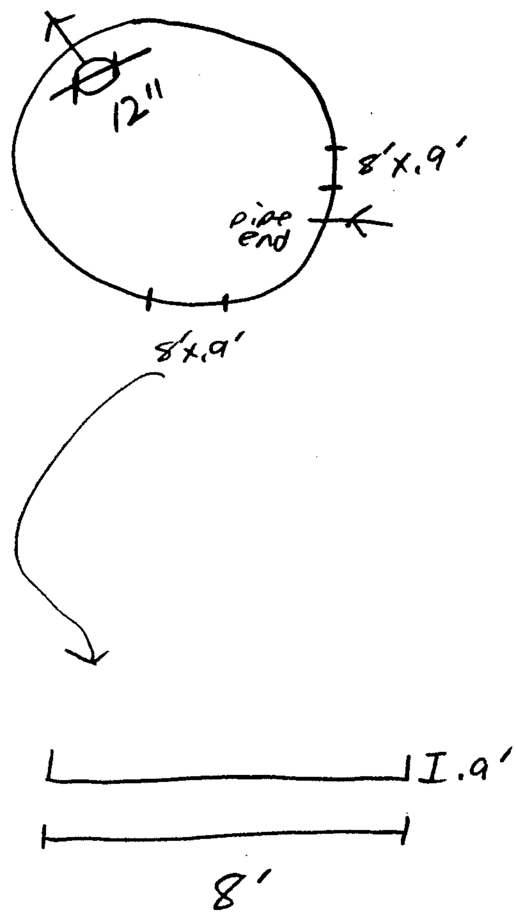


DIAGRAM MC-0276

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/25/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:

Structure Number: MC- 357, ~~358, 359, 360, 361~~

Nearest Street No: | Street Name: VERNON WOODS DR AT ROSWELL RD

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
357, 358, 359, 360, 361

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

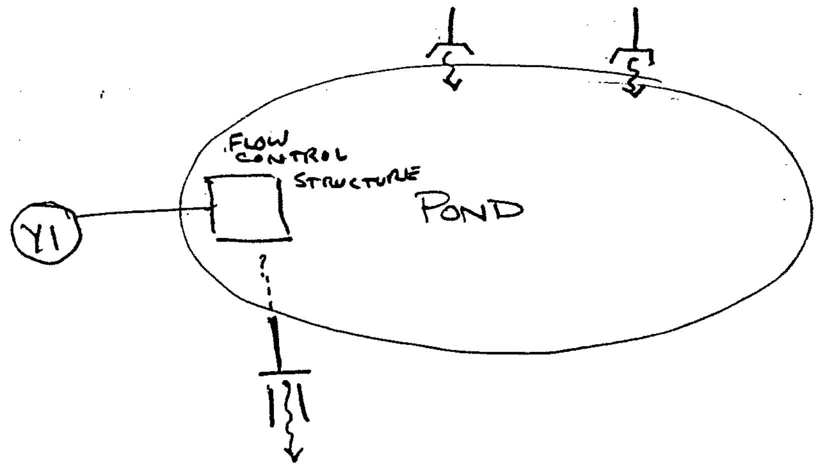
Comments: C/O POND + FLOW CONTROL STRUCTURE. OUTGOING PIPE NOT VISIBLE.

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-356	30	11.0	X					

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC-362~~	~~72~~							



FLOW CONTROL STRUCTURE

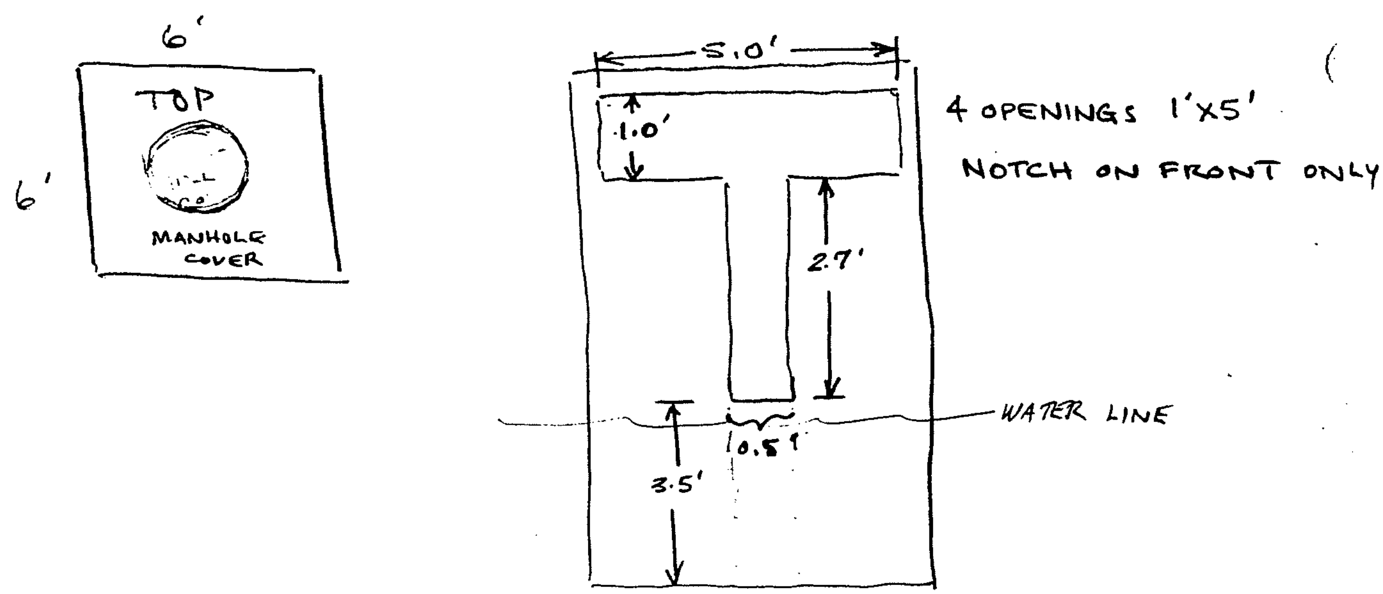


DIAGRAM MC-0357

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/26/99	Firm: Khafra	Crew Initials:	Photo #:
Structure Number: MC- 400, ~~401~~, ~~402~~, ~~403~~, ~~404~~			
Nearest Street No: 7155	Street Name: ROSWELL ROAD		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

400, 401, 402, 403, 404

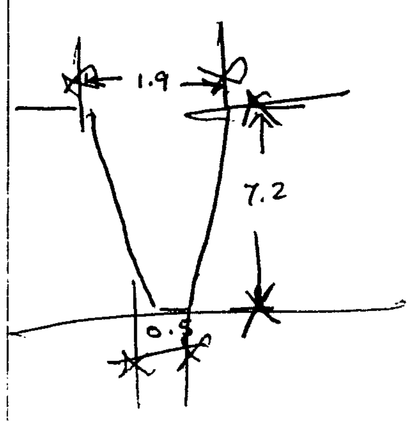
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/26/99	Firm: Khafra	Crew Initials: TW, NF	Photo #:
Structure Number: MC- 417, 418, 419, 420, 421			
Nearest Street No: 7200	Street Name: ROSWELL ROAD		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

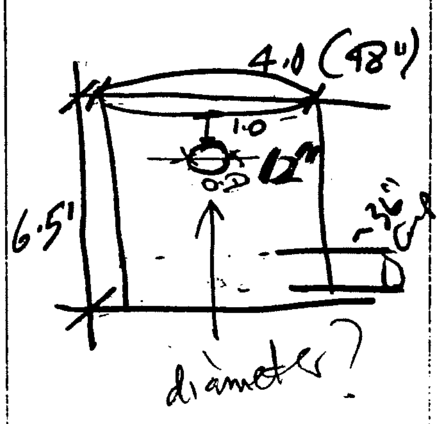
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
417, 418, 419, 420, 421

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel _____x_____ Flume _____x_____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-422	36"			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/26/99	Firm: Khafra	Crew Initials: TW, NF	Photo #:
Structure Number: MC- 417, 418, 419, 420, 421			
Nearest Street No: 7200	Street Name: ROSWELL ROAD		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

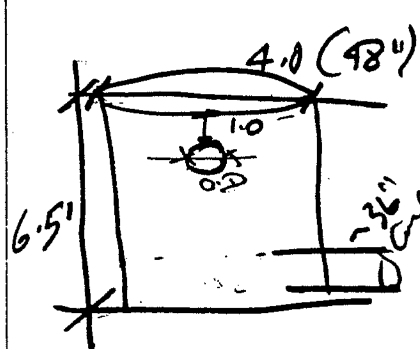
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
417, 418, 419, 420, 421

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-422	36"			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/26/99	Firm: Khafra	Crew Initials: TW, NF	Photo #:
Structure Number: MC- ~~432, 433, 434, 435, 436~~			
Nearest Street No:	Street Name:		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

432, 433, 434, 435, 436

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

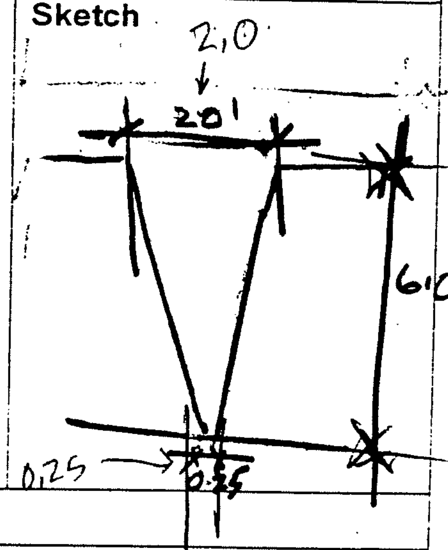
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/26/99	Firm: Khafra	Crew Initials: BT/mw	Photo #:
Structure Number: MC- 469-473			
Nearest Street No:	Street Name: Abernathy/Rosswell Rd		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
469, 470, 471, 472, 473

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ____x____ Flume ____x____

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch

see back

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-474	18		X					

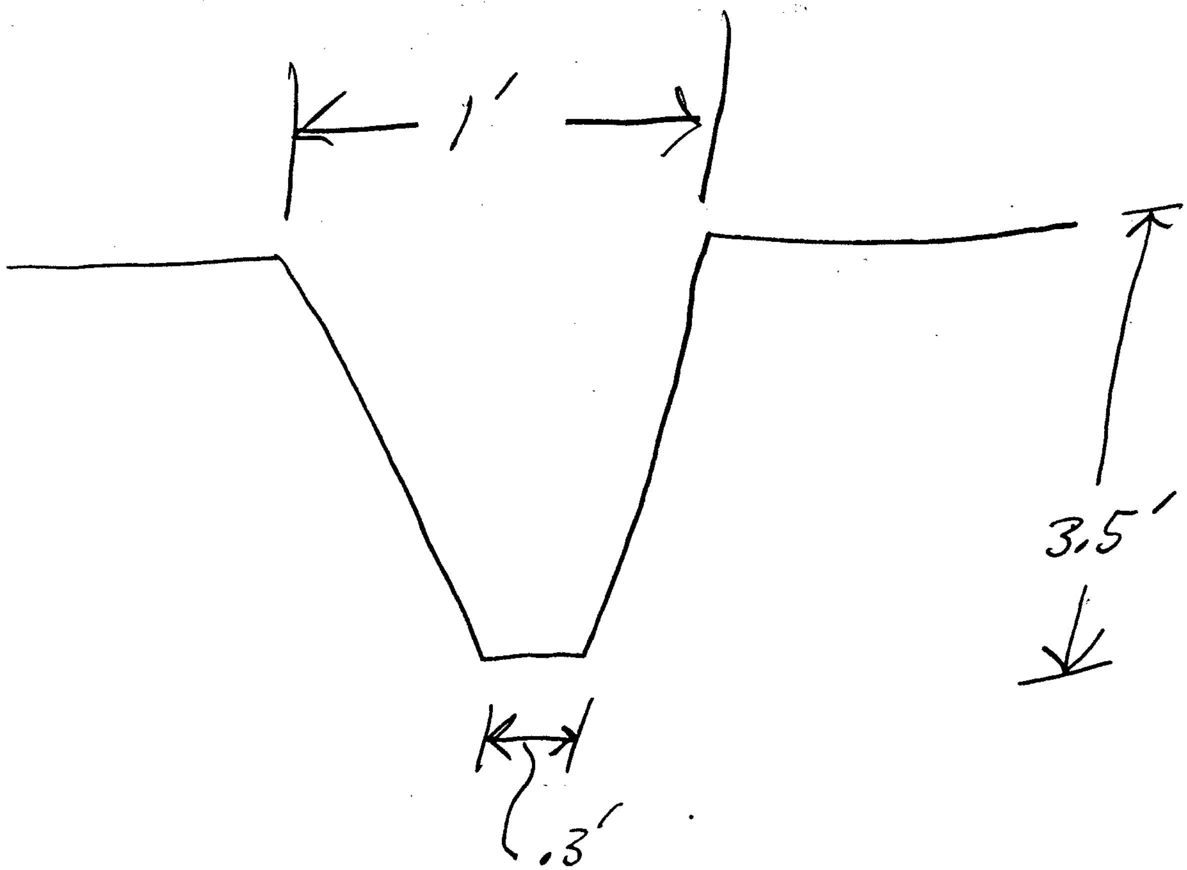


DIAGRAM MC-0469

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/27/99	Firm: Khafra	Crew Initials: TW, NF	Photo #:
Structure Number: MC- 506, ~~507, 508, 509, 510~~			
Nearest Street No: 9120	Street Name:		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

506, 507, 508, 509, 510

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

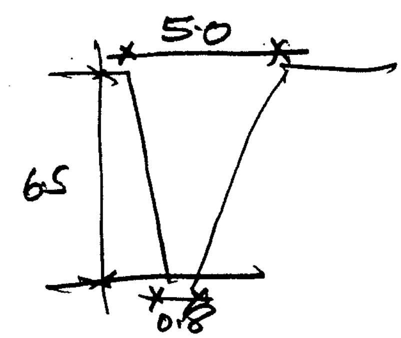
Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer ~~None~~

Sediment Odor

Sketch

DETENTION POND



Comments:

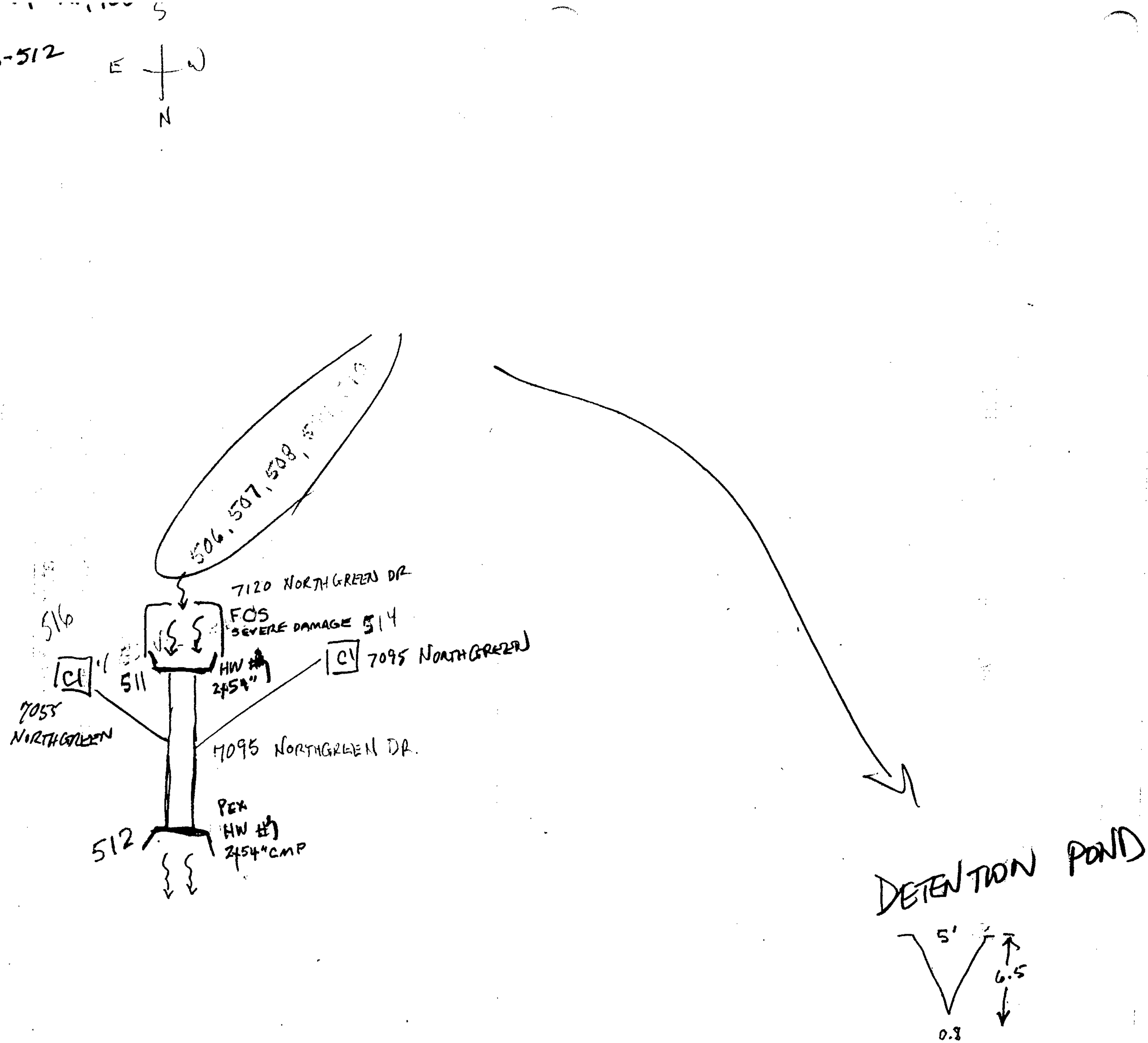
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

MC 506-512



S
E
W
N
506, 507, 508
7120 NORTHGREEN DR
FOS
SEVERE DAMAGE
514
516
511
HW #
24 54"
C1
7095 NORTHGREEN
C1
7055
NORTHGREEN
7095 NORTHGREEN DR.
PEX
HW #
24 54" CMP
512
DETENTION POND
5'
6.5
0.8

KHAFRA
Atlanta, Georgia

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

Date: 8/27/99	Firm: Khafra	Crew Initials: JT/MN	Photo #:
Structure Number: MC- 574, 575, 576, 578, 579			
Nearest Street No:	Street Name: Abernathy / Roswell Rd		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

574, 575, 576, 577, 578, 579

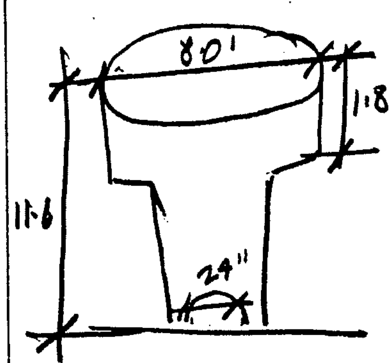
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel _____x_____ Flume _____x_____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: ~~Erosion around structure and blockage to the outlet may it difficult to measure Detention Pond opening~~

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 580	48		✓					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/30/99	Firm: Khafra	Crew Initials: TW/NF	Photo #:
Structure Number: MC- ~~595, 596, 597, 598, 599~~			
Nearest Street No:	Street Name: PEACHTREE DUNWOODY		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

595, 596, 597, 598, 599

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel _____x_____ Flume _____x_____

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments: UNDER CONSTRUCTION AND SO DEEP DIFFICULT TO MEASURE THE ~~AREA~~ IF DETENTION STRUCTURE

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-591 THRU UB	18"		X					
MC-606	12							X
MC 608								X

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-591	18'	9.0'	X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/30/99	Firm: Khafra	Crew Initials: TW, NF	Photo #:
Structure Number: MC- 653, 654, 655, 656, 657			
Nearest Street No:	Street Name:		

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

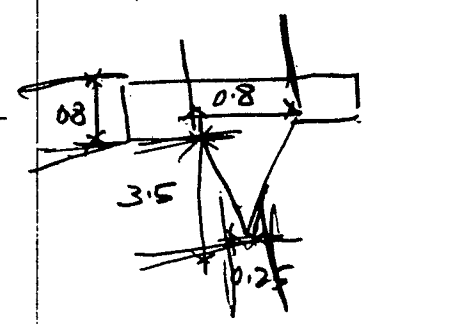
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
653, 654, 655, 656, 657

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch
DETENTION POND



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes. No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/30/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 685-~~684~~			
Nearest Street No:	Street Name: Abernathy Rd / Cherry Tree Ln		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

685, 686, 687, 688, 689

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

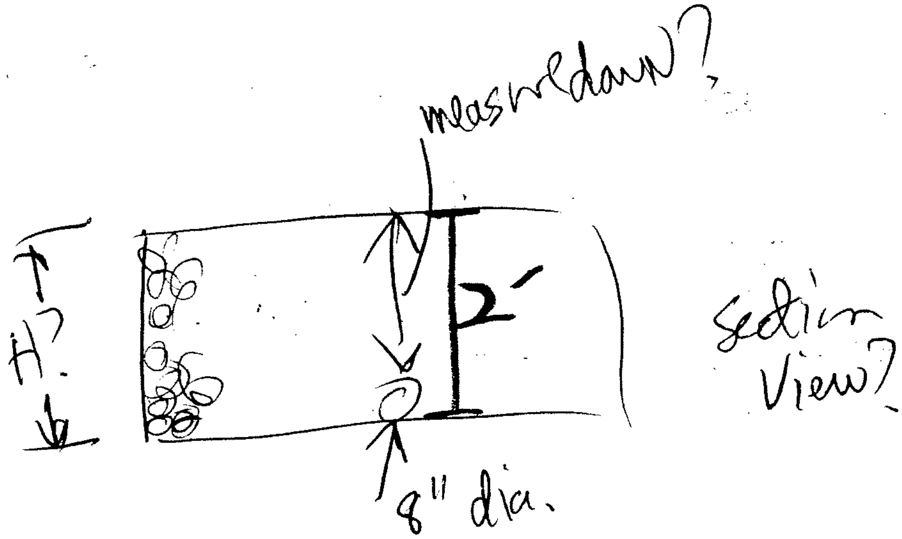
Comments: See Back

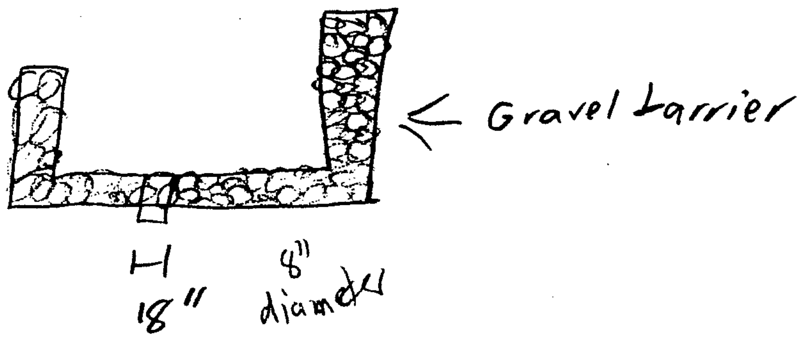
In-Coming Pipe:
From

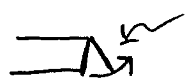
Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC







pressure lid + opens slowly with greater flows

DIAGRAM MC-0685

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/30/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 685-~~689~~			
Nearest Street No:	Street Name: Abernathy Rd / Cherry Tree Ln		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

685, 686, 687, 688, 689

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

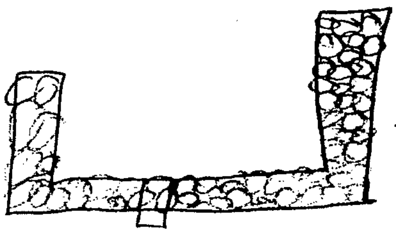
Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC



Gravel barrier

18"

8" diameter

pressure lid + opens slowly with greater flows

DIAGRAM MC-0685

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 08/31/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC- 760, ~~761, 762, 763, 764~~			
Nearest Street No:	Street Name:		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

760, 761, 762, 763, 764

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

ON BACK

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: MARTA CONSTRUCTION SITE. FLOW CONTROL STRUCTURE UNFINISHED (SKETCH ON BACK).

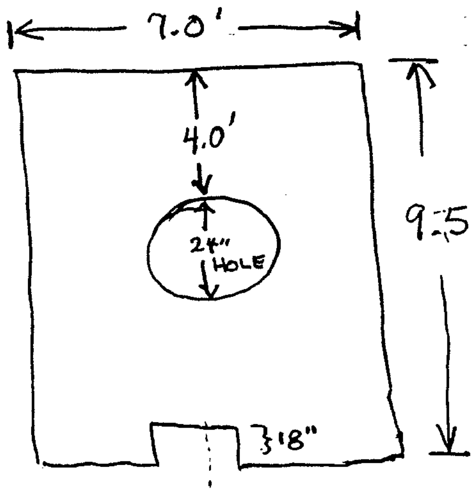
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~UNK~~	~~18~~		~~X~~					

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-765	36	9.5	X					

FRONT VIEW



UNDER CONSTRUCTION.

DIAGRAM MC-0760

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

5

Date: 8/31/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 808-810

Nearest Street No: | Street Name: Abernathy Rd / Roswell Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/01/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:

Structure Number: MC-840

Nearest Street No: | Street Name: MABRY RD AT WESSEX CT.

Structure Type: Inlet Grate Curb Combination Yard Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] ~~Pipe Exit~~ [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-839	18	5.8		X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-834	18	5.9		X				

A

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/1/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 840, ~~841, 842, 843, 844~~

Nearest Street No: | Street Name: Roswell Rd / Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

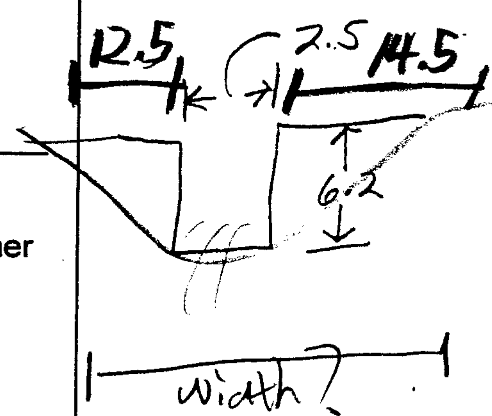
Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

840, 841, 842, 843, 844

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/01/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC-840			
Nearest Street No:	Street Name: MABRY RD AT WESSEX CT.		

Structure Type: Inlet Grate Curb Combination Yard Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes. No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-839	18	5.8		X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-834	18	5.9		X				

A

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/1/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 840, ~~841, 842, 843, 844~~

Nearest Street No: | **Street Name:** Roswell Rd / Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

840, 841, 842, 843, 844

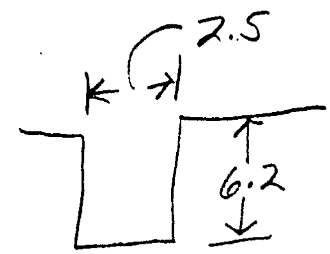
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/1/99	**Firm:** Khafra	**Crew Initials:** MN, BT	**Photo #:**

(A) **Structure Number:** MC- 858, 859, 860, 861, 862

Nearest Street No: | **Street Name:** Roswell Rd / Abernathy Rd

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

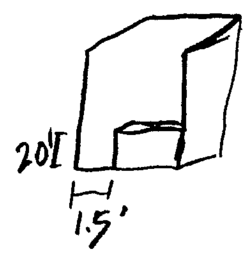
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
858, 859, 860, 861, 862

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch SEE BACK



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
(B) MC-863	48			x				

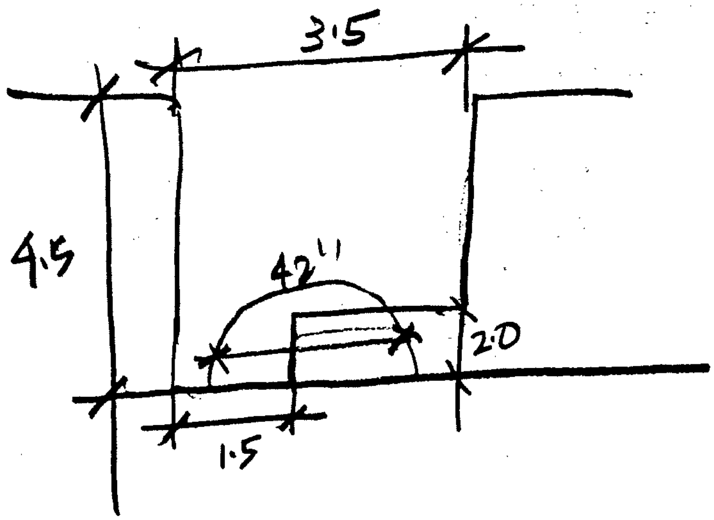


DIAGRAM MC-0858

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/03/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC- 970, 971, 972, 973, 974			
Nearest Street No: 6975	Street Name: HUNTERS KNOLL		

Structure Type: Inlet Grate Curb Combination Yard Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

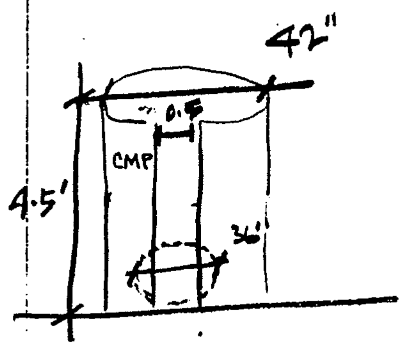
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

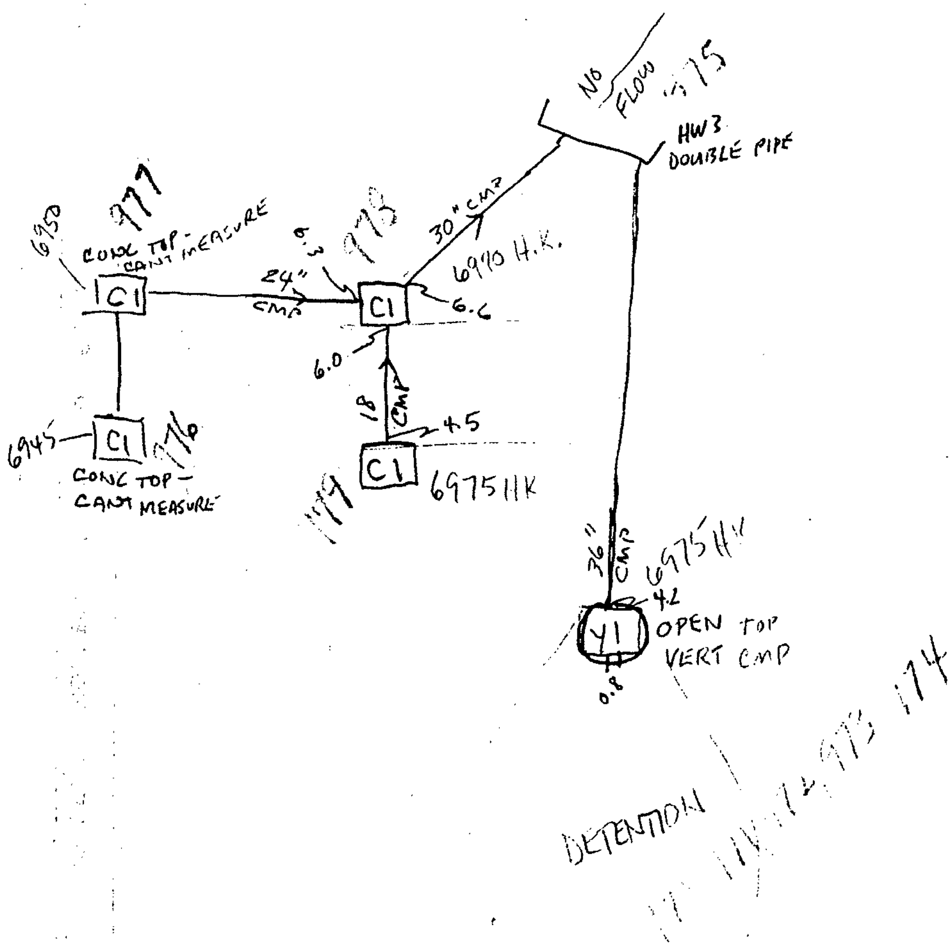
Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-975	36	4.2		X				

HUNTERS ~~BRANCH~~ KNOLL (5)

MC 970 – 179



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Geor.

Date: 9/2/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

(K) Structure Number: MC- 1013, ~~1014, 1015, 1016, 1017~~

Nearest Street No: Street Name: Roswell Rd / Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1013, 1014, 1015, 1016, 1017

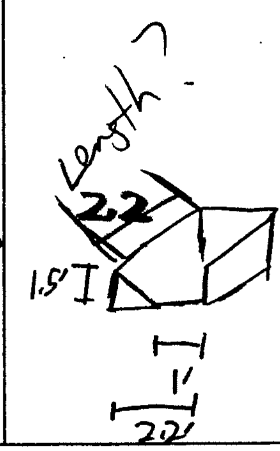
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor ~~None~~

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% ~~Clear~~

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe: From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe: To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC-1018~~	48			X				
MC-3607								

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

(K)

Date: 9/2/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1013, ~~1014, 1015, 1016, 1017~~

Nearest Street No: | Street Name: Roswell Rd / Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1013, 1014, 1015, 1016, 1017

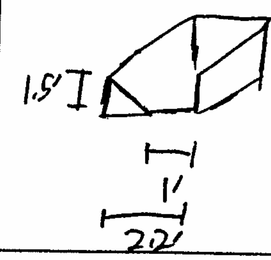
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor ~~None~~

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% ~~Clear~~

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC-1018~~	48			X				
MC-3607								

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/2/99	**Firm:** Khafra	**Crew Initials:** MN, BT	**Photo #:**

Structure Number: MC- 1021, ~~1022, 1023, 1024, 1025~~

Nearest Street No: **Street Name:** Roswell Rd
Abernathy Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

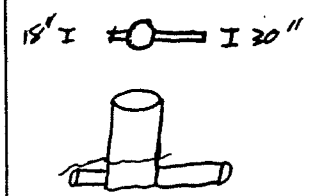
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1021, 1022, 1023, 1024, 1025

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch SEE BACK



completely buried

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1026	30			X				

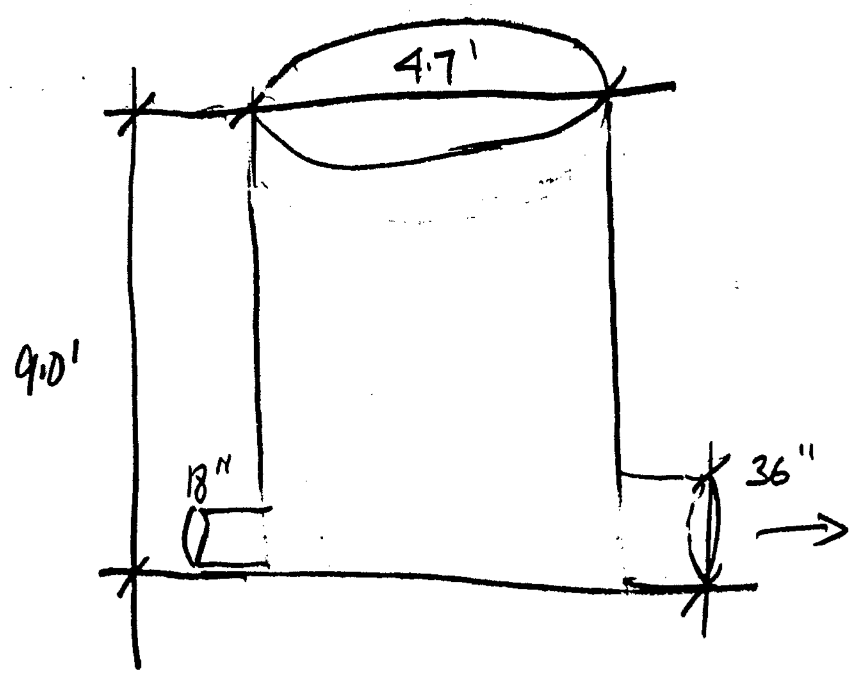


DIAGRAM MC- 1021

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgi-

Date: 9/2/99	**Firm:** Khafra	**Crew Initials:** MN, BT	**Photo #:**

T **Structure Number:** MC- 1030, ~~1031, 1032, 1033, 1034~~

Nearest Street No: **Street Name:** Roswell Rd / Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

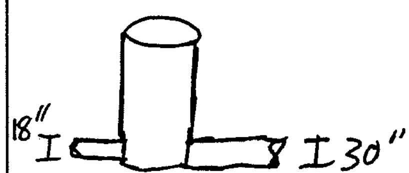
Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1030, 1031, 1032, 1033, 1034

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch
SEE 1021



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1035	30			X				

L

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/2/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1047, 1048, 1049

Nearest Street No: | Street Name: Glenlake

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel _______x_______ Flume _______x_______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/3/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1075, ~~1076, 1077~~

Nearest Street No: Street Name: Glenridge Dr Glenlake Pkw

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

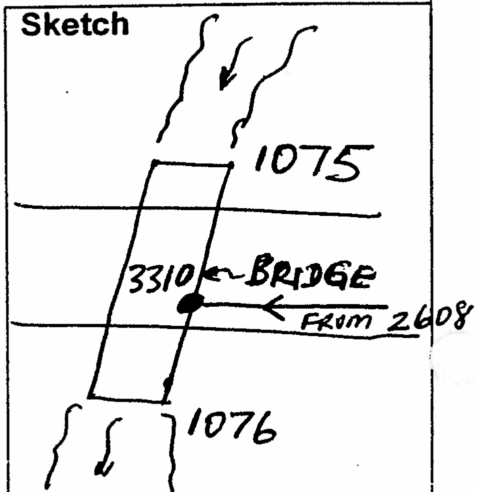
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- ~~1076~~	—	—						
3310								

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10-8-99	Firm: Khafra	Crew Initials: NCO	Photo #:
Structure Number: MC- 1076			
Nearest Street No:	Street Name: GLENLAKE PKWY AT GLENRIDGE DR		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

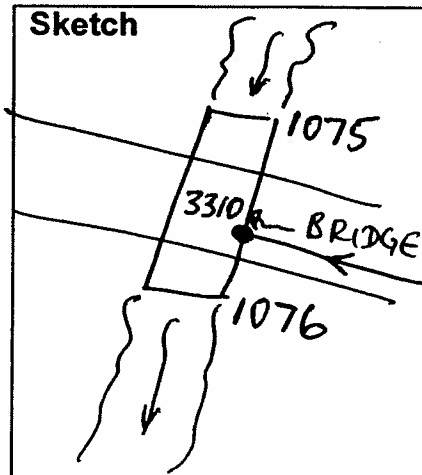
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments: UNDERGROUND JUNCTION BOX / PIPE TIE-IN

In-Coming Pipe: From

Structure No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- ~~[illegible]~~	—	-						
3310		-						
		-						
		-						

Out-Going Pipe: To

Structure No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
		-						
		-						
		-						

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georg...

Date: 9/3/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1100, ~~1101, 1102, 1103, 1104~~

Nearest Street No: | Street Name: Glenlake Pw
Abernathy Rd

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

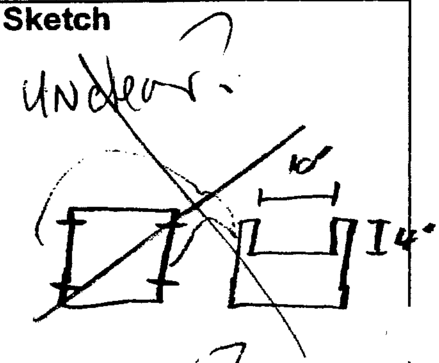
Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1100, 1101, 1102, 1103, 1104

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch

Underwater?



~~12'x12'~~
SEE BACK

Structural Damage: Severe Minor None

Dry-Weather Flow: ~~Yes~~ No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments: ~~NOT~~ REACHABLE LOCATED INSIDE LAKE

See Back

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- 1105	6.2x6.5							

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/3/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

T

Structure Number: MC- 1100, ~~1101~~, ~~1102~~, ~~1103~~, ~~1104~~

Nearest Street No: **Street Name:** Glenlake Pw
Abernathy Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

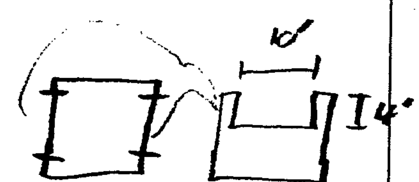
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1100, 1101, 1102, 1103, 1104

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments: NOT REACHABLE LOCATED INSIDE LAKE

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- 1105	6.2x6.5							

1

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/7/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 1128, ~~1129, 1130, 1131, 1132~~			
Nearest Street No:	Street Name: Abernathy Rd / Glenlake PK		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel ~~Sharp Square~~ Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1128, 1129, 1130, 1131, 1132

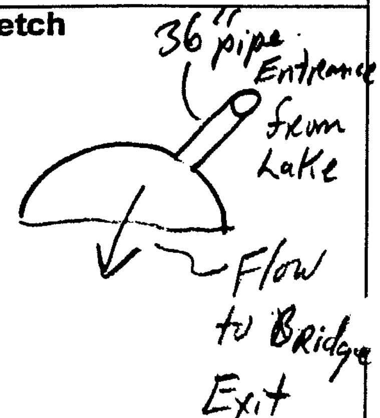
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



SEE BACK

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: There is a 36" RCP that drained the detention Pond. The detention Pond is a simi circle with a 7" Radius

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

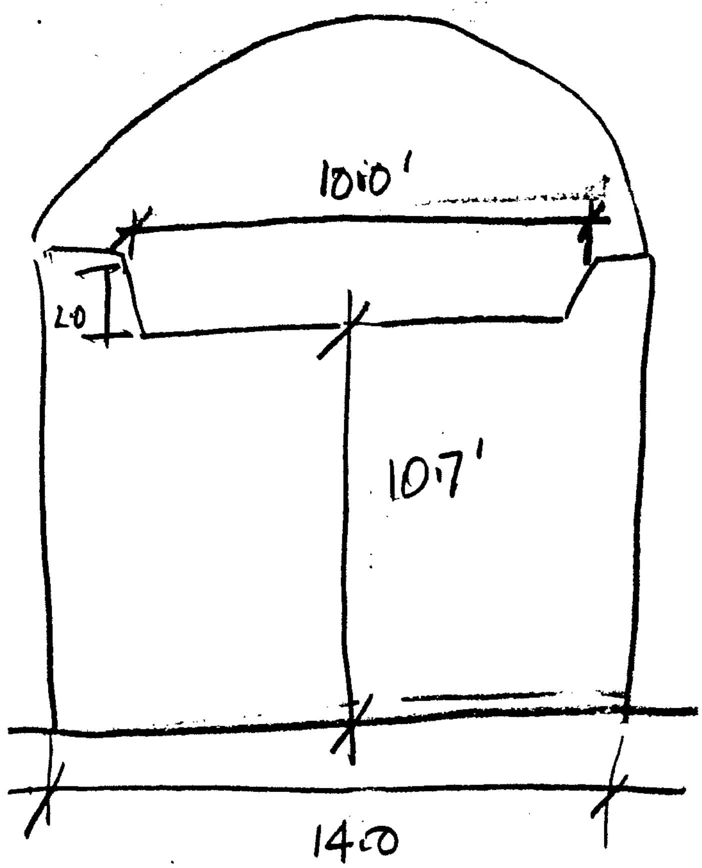


DIAGRAM MC-1128

✓

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/7/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1133, 1134, 1135

Nearest Street No: | Street Name: Abernathy Rd / Glenlake PK

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

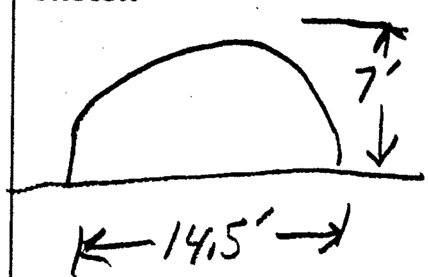
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

5)

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/8/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC- 1249, ~~1250, 1251, 1252, 1253~~

Nearest Street No: | Street Name: GA 400

Abernathy

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square ~~Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)~~

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1249, 1250, 1251, 1252, 1253

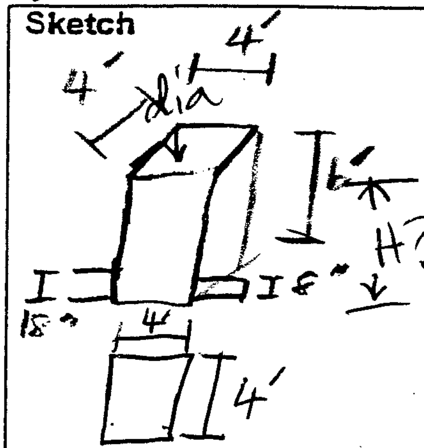
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes ~~No~~ Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments: LOACTED ON GA 400 ACESS ROAD AND DANGEROUS TO REACH

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1246	18		X					

KHAFRA
Atlanta, Georgia

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

Date: 9/8/99 | **Firm:** Khafra | **Crew Initials:** MN, BT | **Photo #:**

Structure Number: MC- 1249, ~~1250, 1251, 1252, 1253~~

Nearest Street No: | **Street Name:** GA 400
Abernathy

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

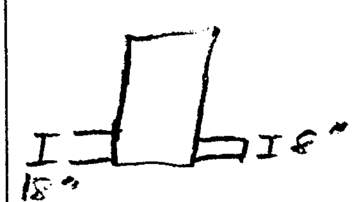
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square ~~Box Culvert Entrance Box Culvert Exit Bridge~~ (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1249, 1250, 1251, 1252, 1253

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments: LOACTED ON GA 400 ACESS ROAD
AND DANGEROUS TO REACH

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1246	18		X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/9/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1339, ~~1340, 1341, 1342, 1343~~

Nearest Street No: | **Street Name:** Peachtree Dunwoody Rd
Embassy Row

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1319P, 1340, 1341, 1342, 1343

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

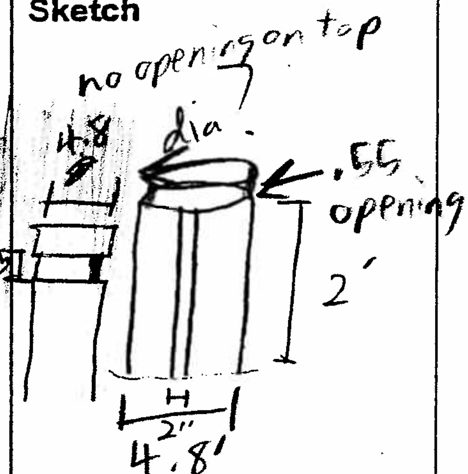
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
© MC-1344	18			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/9/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1339, ~~1340, 1341, 1342, 1343~~

Nearest Street No: | Street Name: Peachtree Dunwoody Rd
Embassy Row

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1339, 1340, 1341, 1342, 1343

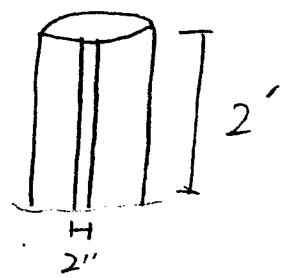
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
© MC-1344	18			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

G

Date: 9/9/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- ~~1348, 1349, 1350, 1351, 1352~~			
Nearest Street No:	Street Name: Peachtree Dunwoody Rd		
	Embassy Row		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square ~~Box Culvert Entrance Box Culvert Exit~~ Bridge (3 structure nos. per bridge)

Storage Detention ~~Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)~~

1348, 1349, 1350, 1351, 1352

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

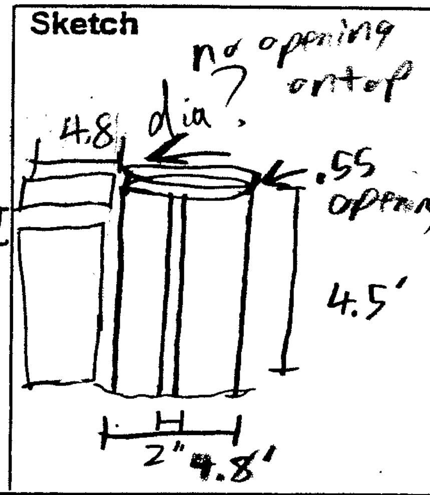
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
H MC- 1353	18			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/9/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- ~~1348, 1349, 1350, 1351, 1352~~

Nearest Street No: | Street Name: Peachtree Dunwoody Rd
Embassy Row

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond ~~(5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)~~

1348, 1349, 1350, 1351, 1352

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

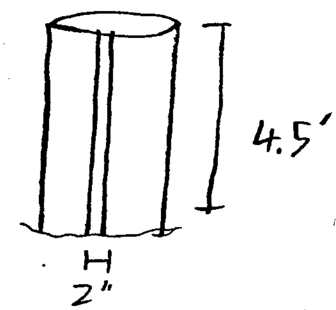
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
H MC- 1353	18			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/19/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1363, ~~1364~~, 1365, ~~1366~~, 1367

Nearest Street No: | Street Name: Peachtree Dunwoody Rd
Embassy Row

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

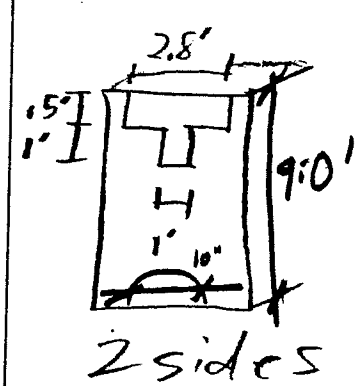
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1363, 1364, 1365, 1366, 1367

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ____x____ Flume ____x____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

ollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- 1362	60			X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- 1355	60			X				

F:\ENGINEER\99104\FIELDAT\DDTARC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Geo

Date: 9/10/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC- 1427, ~~1428, 1429, 1430, 1431~~

Nearest Street No: | Street Name: Peachtree Dunwoody Rd
Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1427, 1428, 1429, 1430, 1431

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel _____x_____ Flume _____x_____

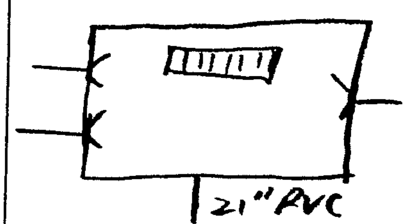
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch



Comments: Huge underground room

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1432	21							X

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/13/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC- ~~1465, 1466, 1467, 1468, 1469~~

Nearest Street No: | Street Name: Mount Vernon Rd
Abernathy Rd

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

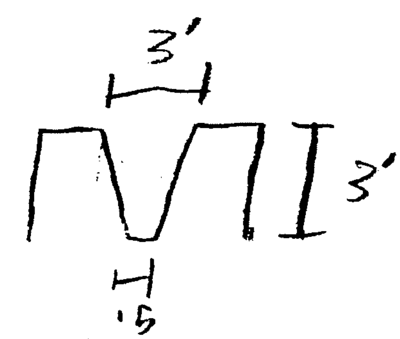
Pipe End Bevel Sharp Square Box Culvert Entrance ~~Box Culvert Exit~~ Bridge (3 structure nos. per bridge)

~~Storage~~ Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1465, 1466, 1467, 1468, 1469

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1470	30			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/14/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

(D) Structure Number: MC- 1493, ~~1494, 1495, 1496, 1497~~

Nearest Street No: | Street Name: Burnt Oak Ct
Otter Creek Ct

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1493, 1494, 1495, 1496, 1497

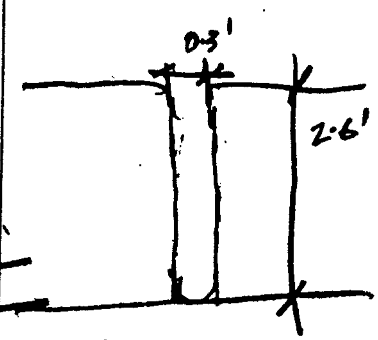
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
(E) MC- 1498	18			X				

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

L

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/14/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC- 1529, ~~1530, 1531, 1532, 1533~~

Nearest Street No: | Street Name: Mount Vernon Rd
Lisa Lane

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

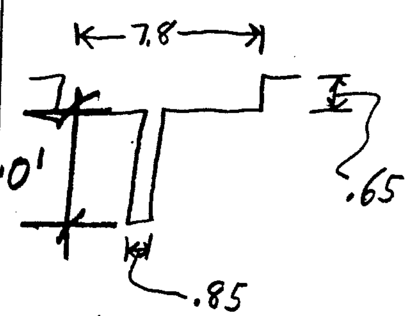
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1529, 1530, 1531, 1532, 1533

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

H

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Ge

Date: 9/14/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC- 1541, ~~1542, 1543, 1544, 1545~~

Nearest Street No: | Street Name: Mount Vernon Rd
Lisa Lane

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

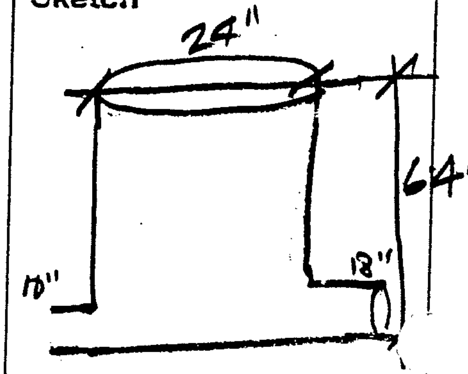
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1541, 1542, 1543, 1544, 1545

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ____x____ Flume ____x____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments: Detention Pond has a pipe with holes punch in the bottom of the pipe

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1546	18			✓				

0

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/14/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC- 1552, ~~1553, 1554, 1555, 1556~~

Nearest Street No: | Street Name: Mount Vernon Rd
Lisa Lane

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 strucutre numbers per pond. Draw a sketch with dimensions on back of this sheet)

1552, 1553, 1554, 1555, 1556

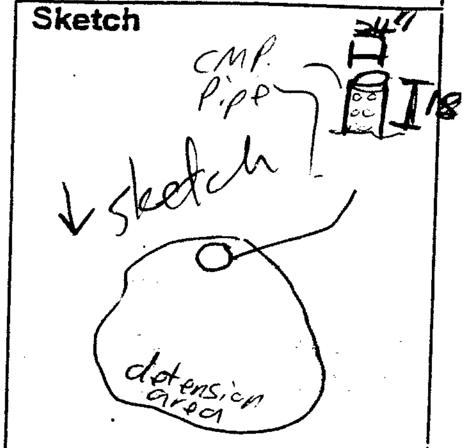
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments: Pipe exiting detention Pond - has a CMP with holes at the bottom of piping.

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1557	18			✓				

0

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, G[illegible] a

Date: 9/14/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC- 1552, ~~1553, 1554, 1555, 1556~~

Nearest Street No: | Street Name: Mount Vernon Rd
Lisa Lane

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1552, 1553, 1554, 1555, 1556

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments: Pipe exiting detention Pond - has a CMP with holes at the bottom of piping.

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1557	18			✓				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

C

Date: 9/15/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 1560, ~~1561, 1562, 1563, 1564~~			
Nearest Street No:	Street Name: Peachtree Dunwoody / Glen Meadow Ct		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

~~Storage Detention~~ Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1560, ~~1561, 1562, 1563, 1564~~

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel _____x_____ Flume _____x_____

Sketch

See back

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

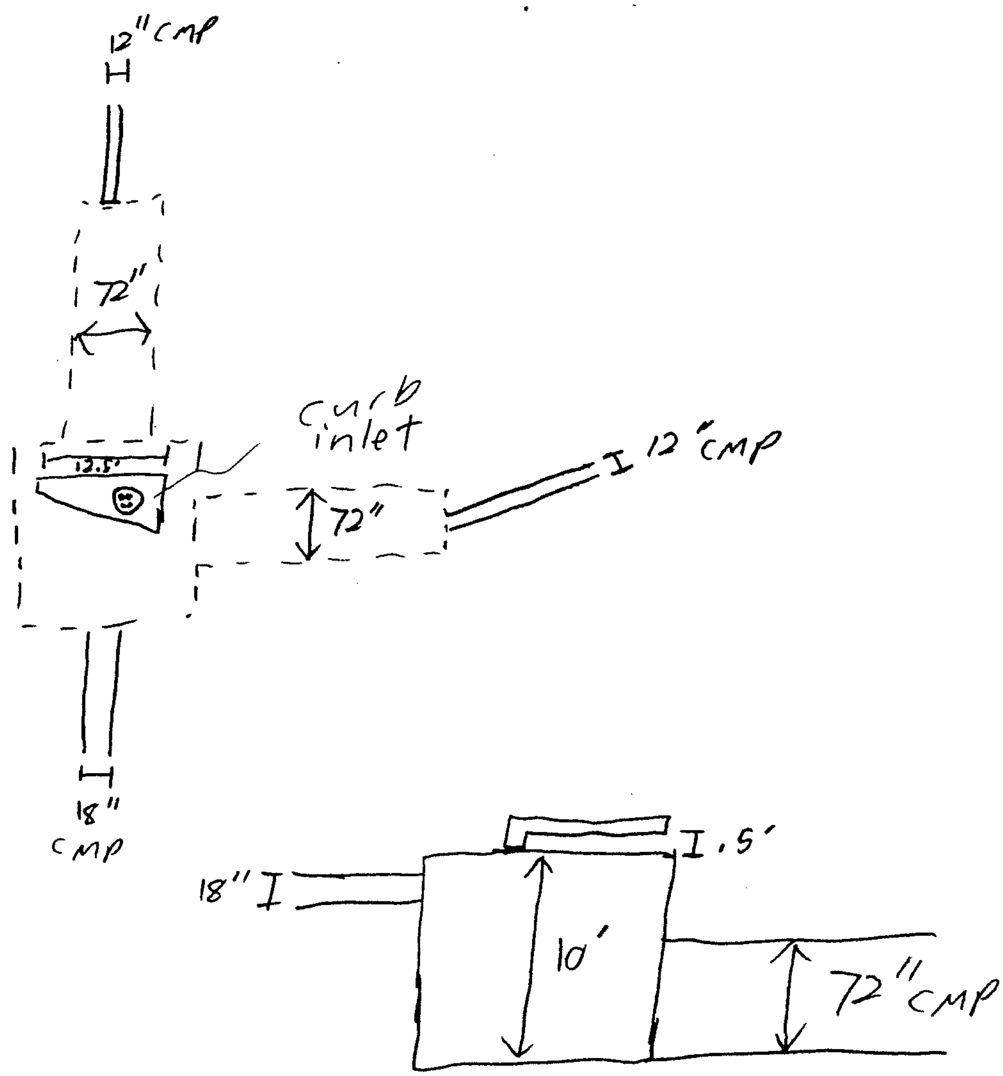
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
B MC- 1559	12			X				
D MC- 1565	12			X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
E MC- 1566	18			X				

DIAGRAM MC-1560



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/16/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1611, ~~1612, 1613, 1614, 1615~~

Nearest Street No: | Street Name: West Peachtree Dunwoody
Peachtree Dunwoody Rd

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box ~~Culvert Entrance Box Culvert Exit~~ Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1611, 1612, 1613, 1614, 1615

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ____x____ Flume ____x____

Structural Damage: Severe Minor None

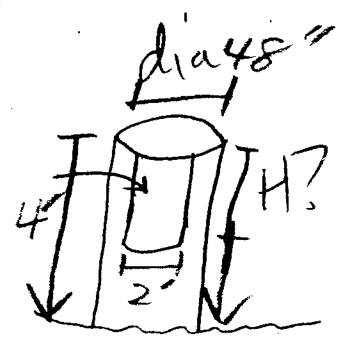
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



SEE BACK

Comments: cannot get to structure to measure

LOCATED IN THE MIDDLE OF LAKE

In-Coming Pipe:
From

See Back

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1620	?			?				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georg

Date: 9/16/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1611, ~~1612, 1613, 1614, 1615~~

Nearest Street No: | **Street Name:** West Peachtree Dunwoody
Peachtree Dunwoody Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

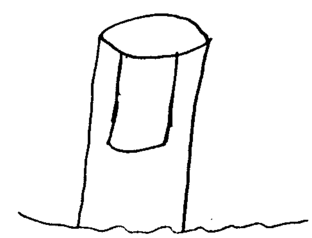
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance ~~Box Culvert~~ Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions ~~on back of~~ this sheet)
1611, 1612, 1613, 1614, 1615

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments: cannot get to structure to measure
LOCATED IN THE MIDDLE OF LAKE

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1620	?			?				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/16/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 1637, ~~1638~~, ~~1639~~, ~~1640~~, ~~1641~~			
Ne0arest Street No:	Street Name:		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1637, 1638, 1639, 1640, 1641

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ____x____ Flume ____x____

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments: underground detension structure
could not measure out going 24 inch piping

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1636	12			✓				
	2'							

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1642	12	13.7		✓				
* MC 1642	24			✓				

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/16/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- ~~1646, 1647, 1648, 1649, 1650~~

Ne0arest Street No: Street Name: ~~N. Peachtree Dunwoody~~ West Peachtree Dunwoody

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel / Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1646, 1647, 1648, 1649, 1650

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments: Note: underground detention structure. Also detention structure has two parallel 12 and 18 and inch piping leaving underground structure.

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1645	24	8.8		✓				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1642	18	8.1		✓				
MC 1642	12	12.35		✓				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/16/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- ~~1665, 1666, 1667, 1668, 1669~~

Ne0arest Street No: | Street Name: West Peachtree Dunwoody
Peachtree Dunwoody Rd

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with ~~dimensions on back~~ of this sheet)

1665, 1666, 1667, 1668, 1669

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

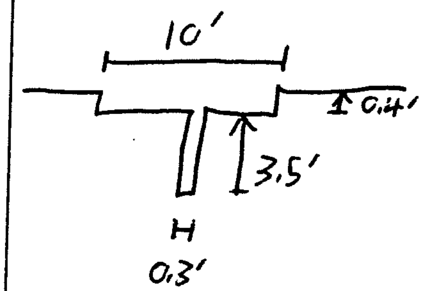
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/16/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1675, ~~1676, 1677, 1678, 1679~~

NeOarest Street No: | Street Name: West Peachtree Dunwoody
Peachtree Dunwoody Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1675, 1676, 1677, 1678, 1679

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

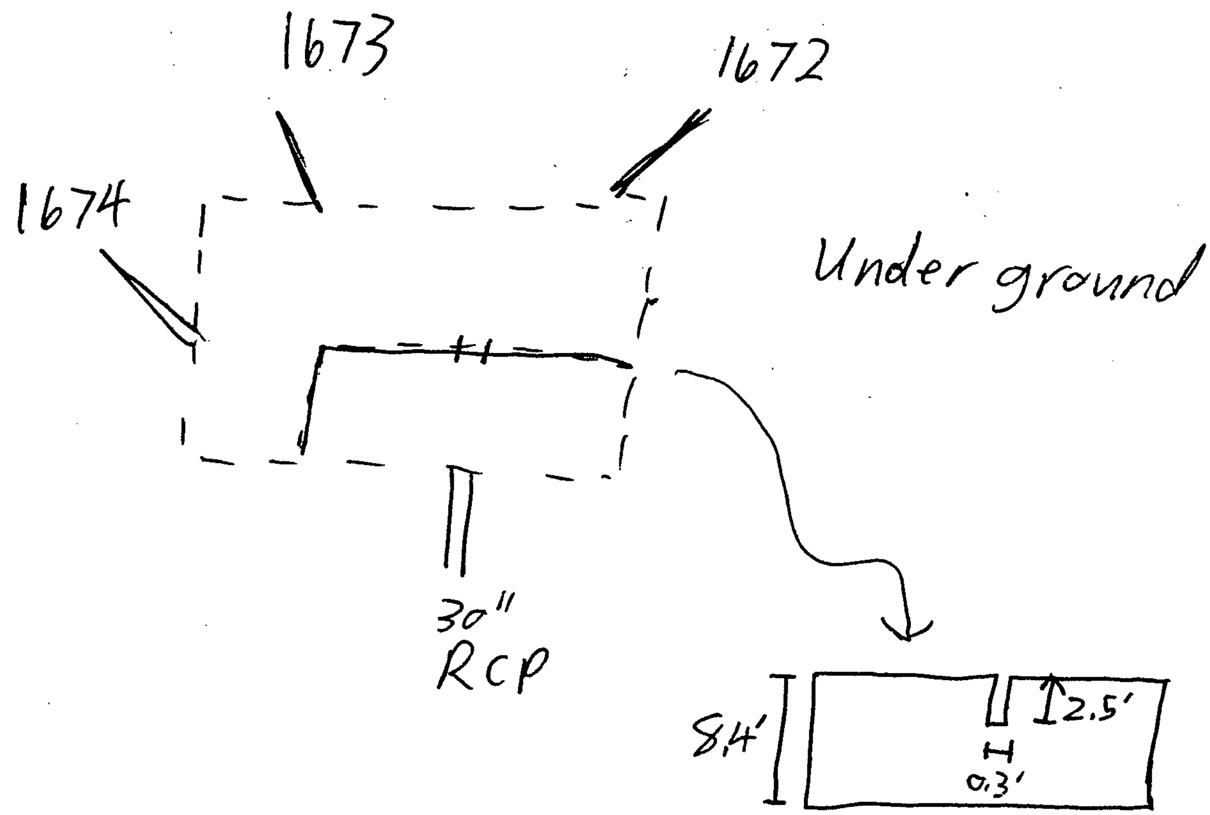


DIAGRAM MC-1675

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/16/99 | Firm: Khafra | Crew Initials: TW, NF | Photo #:

Structure Number: MC-1761

Nearest Street No: | Street Name:

Structure Type: Inlet Grate Curb Combination Yard Manhole | Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1761, 1762, 1763, 1764, 1765

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

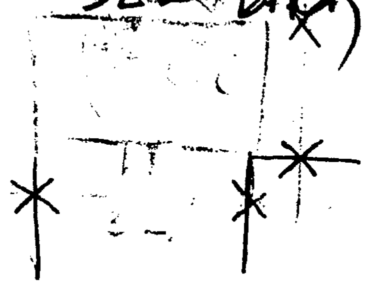
Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

3 SMALL PIPES

SEE BACK



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1766	18"		X					

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

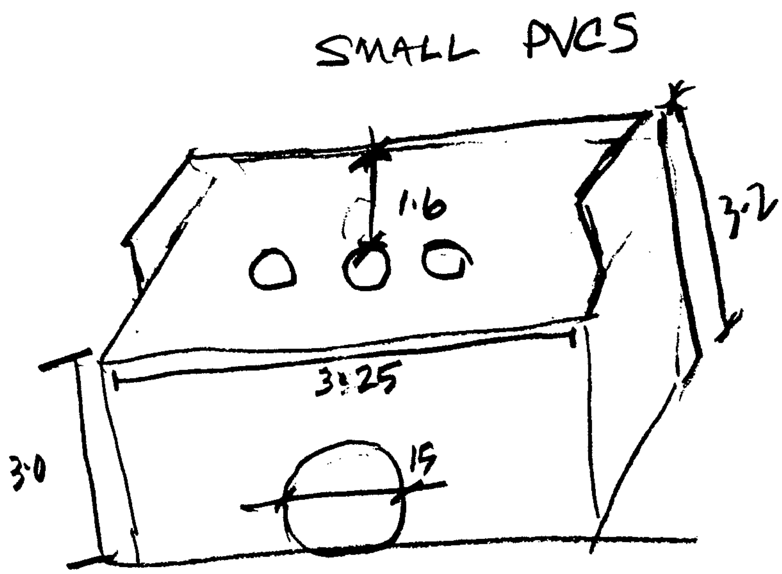


DIAGRAM MC-1761

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 11/9/99	**Firm:** Khafra	**Crew Initials:** MN, TW	**Photo #:**

Structure Number: MC- 1784

Nearest Street No: **Street Name:** Dalrymple Rd
Roswell Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Underground Junction Box

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-958	–	–	–					
MC-2935	24			X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- 2936	24			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/21/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 1836, ~~1837, 1838, 1839, 1840~~			
Ne0arest Street No:	Street Name: Peachtree Dunwoody Ct / Peachtree Dunwoody Rd		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

~~Storage Detention Pond~~ (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1836, 1837, 1838, 1839, 1840

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel _____x_____ Flume _____x_____

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes ~~No~~ Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments: Were informed of the structure's dimensions by an apartment employee

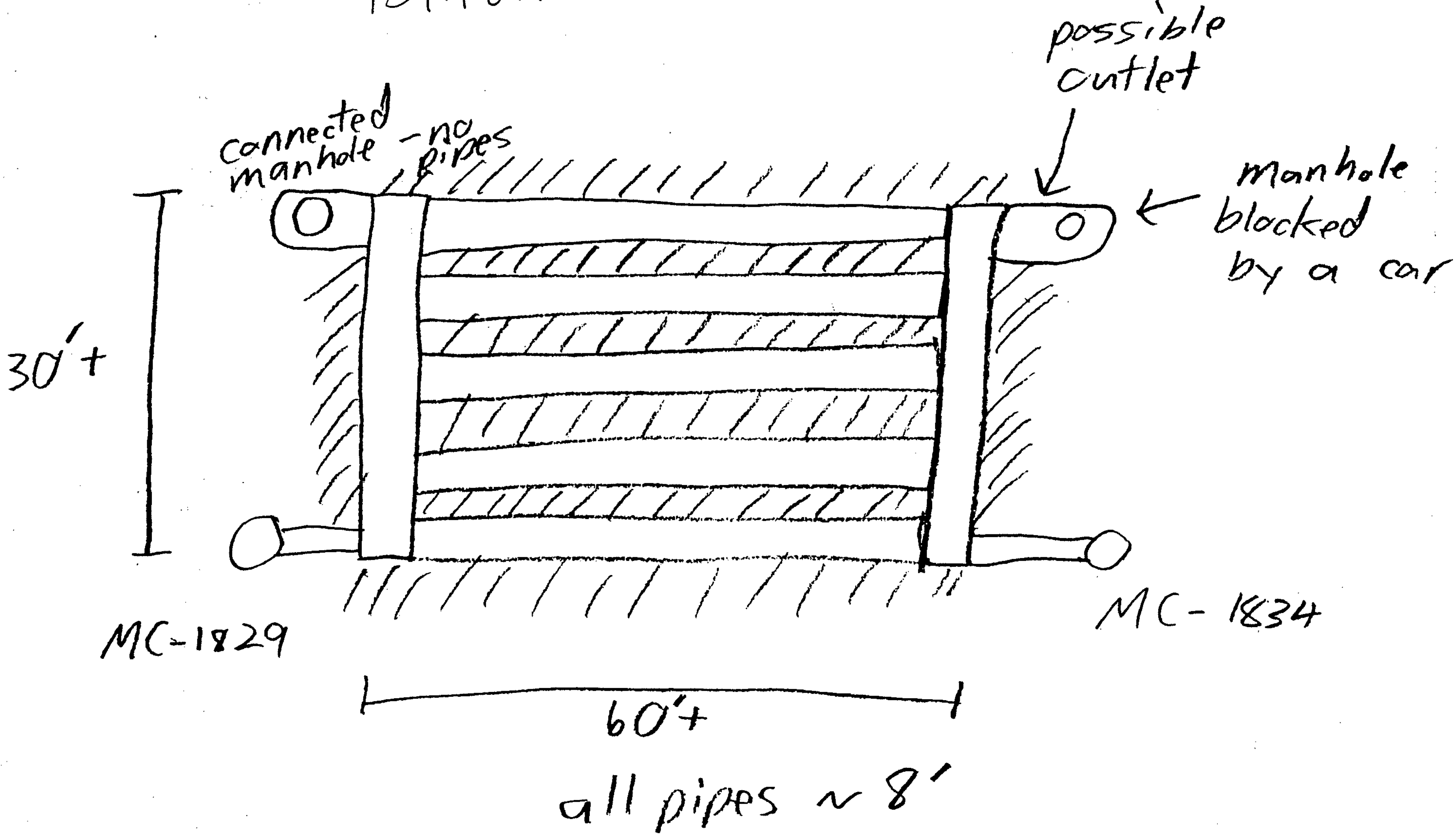
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-1829	66			X				
MC-1834	42			X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
?	?			?				

DIAGRAM MC-1836



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/21/99 | **Firm:** Khafra | **Crew Initials:** MN, BT | **Photo #:**

Structure Number: MC- 1845, ~~1846, 1847, 1848~~, 1849

Ne0arest Street No: | **Street Name:** Peachtree Hollow Ct
Peachtree Dunwoody Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1845, 1846, 1847, 1848, 1849

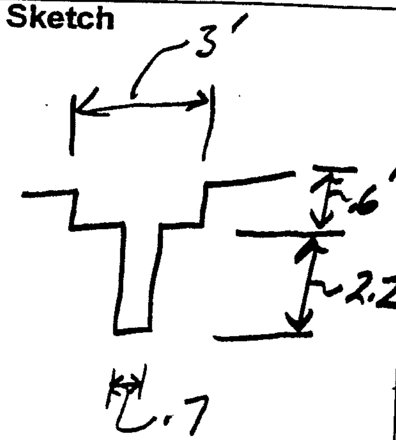
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/21/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- ~~1854, 1855, 1856, 1857, 1858~~

NeOarest Street No: | Street Name: Peachtree Hollow Ct
Peachtree Dunwoody Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (3 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
1854, 1855, 1856, 1857, 1858

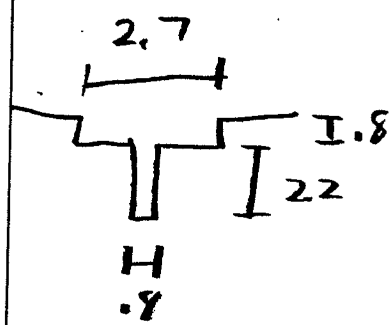
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1859	30			✓				

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/22/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC- 1884, 1885, 1886, 1887, 1888

Ne0arest Street No: | Street Name: ~~Embassy Row~~ PEACHTREE HOLLOW / Peachtree Dunwoody Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1884, 1885, 1886, 1887, 1888

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

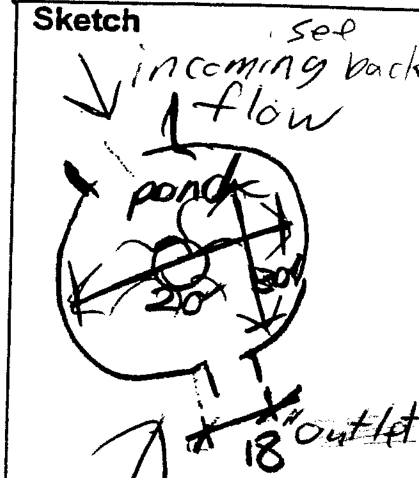
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments: FOUNTAIN See Back

CLARIFY

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1889	18			✓				

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/22/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 1884, 1885, 1886, 1887, 1888

NeOarest Street No: | Street Name: ~~Embassy Row~~ PEACHTREE HOLLOW
Peachtree Dunwoody Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1884, 1885, 1886, 1887, 1888

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

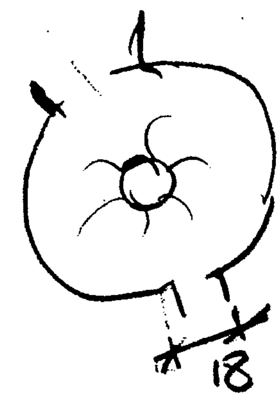
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments: FOUNTAIN

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1889	18			✓				

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

2

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/20/99 | Firm: Khafra | Crew Initials: TW, NF | Photo #:

Structure Number: MC- 1960

Nearest Street No: | Street Name: MARSH GLEN PT

Structure Type: | Inlet Grate Curb Combination Yard Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1960, 1961, 1962, 1963, 1964

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening | Sketch

Standard 12.5'x0.5' conc.

Non-Standard (snow measurements)

Channel ______x______ Flume ______x______

SEE BACK

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes. No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

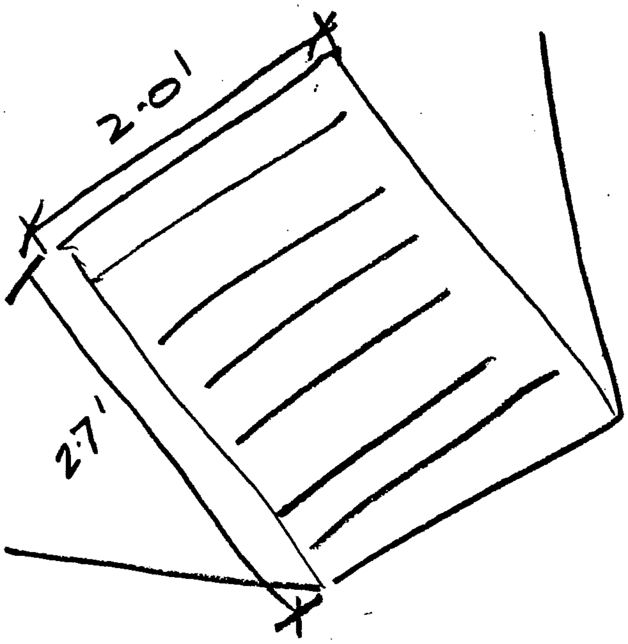
In-Coming Pipe:
From

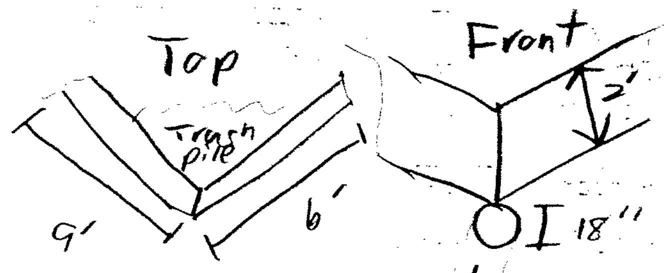
Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

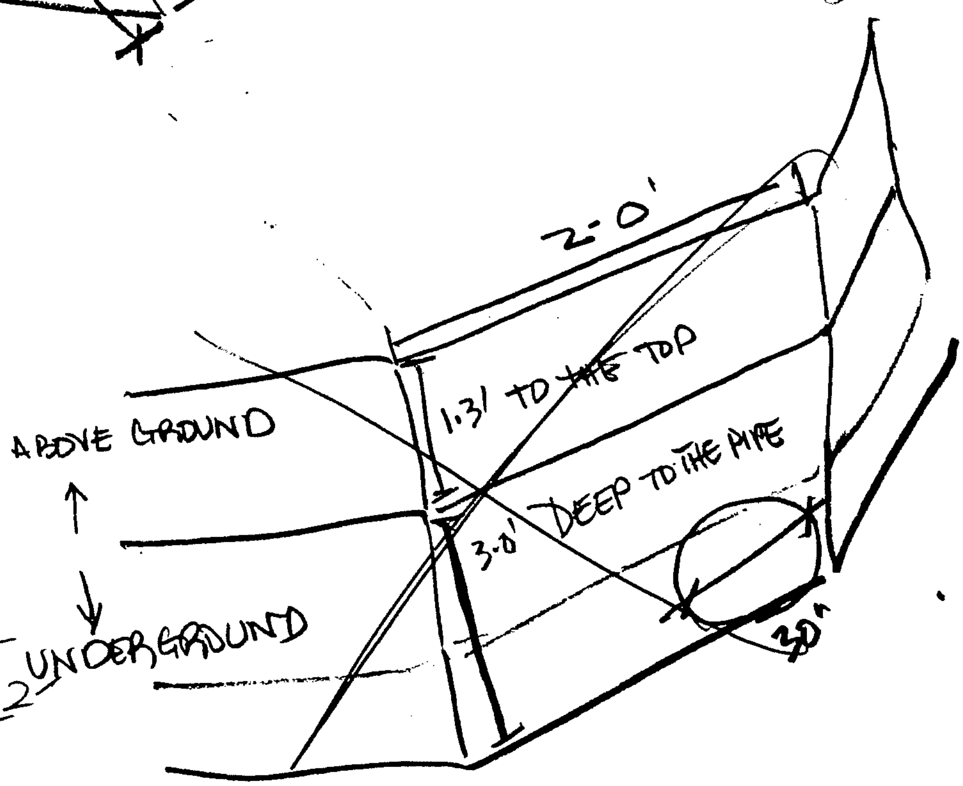
Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC-1965~~	~~24"~~			X				
MC-22	30"							

What is this?





Interesting drawings. Can it be explained better?



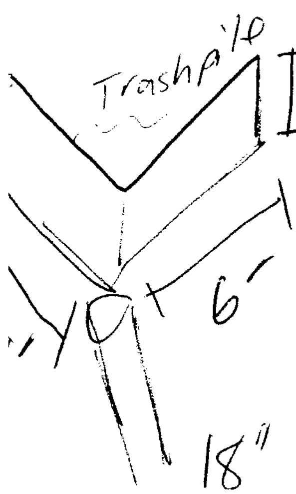


DIAGRAM MC-1960

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/20/99 | Firm: Khafra | Crew Initials: TW, NF | Photo #:

Structure Number: MC- 1960

Nearest Street No: | Street Name: MARSH GLEN PT

Structure Type: | Inlet Grate Curb Combination Yard Manhole | Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1960, 1961, 1962, 1963, 1964

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

SEE BACK

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

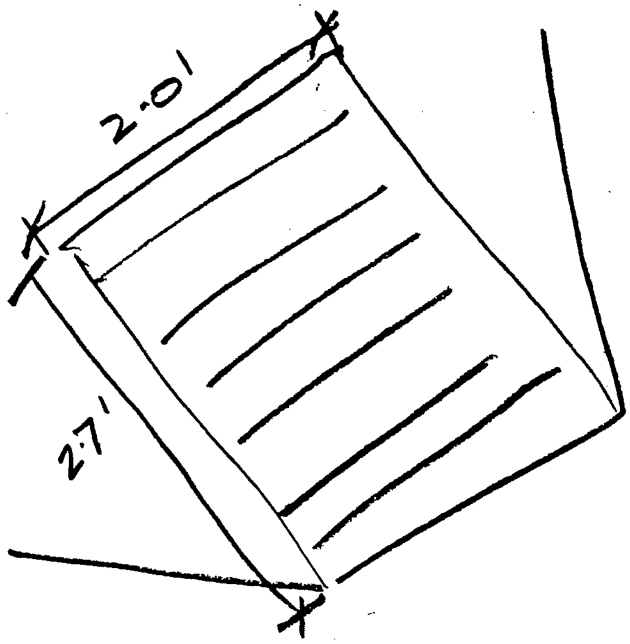
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC-1965~~	~~24"~~			X				
MC-22	30"							

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC



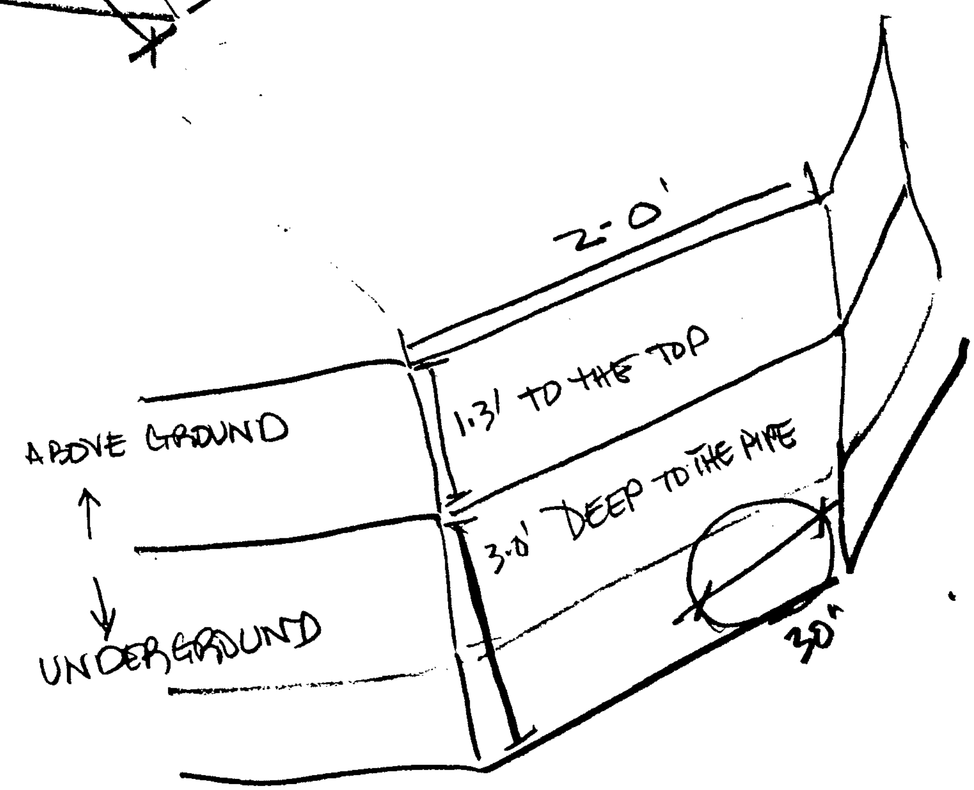


DIAGRAM MC-1960

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/22/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- ~~1900~~, 2001, 2002, 2003, 2004

NeOarest Street No: 2000 | Street Name: ~~Embassy Row~~ PEACHTREE HOLLOW
Peachtree Dunwoody Rd

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

~~Storage Detention Pond~~ (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

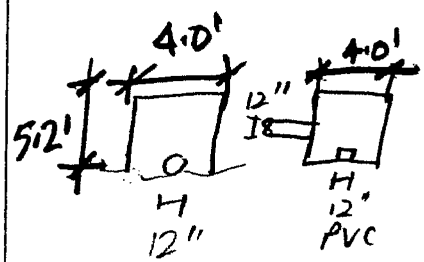
Structural Damage: Severe Minor ~~None~~

Dry-Weather Flow: Yes ~~No~~ Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% ~~Clear~~

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~Not Mapped~~ 2100	12							X

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/23/99 | **Firm:** Khafra | **Crew Initials:** MN, BT | **Photo #:**

Structure Number: MC- 2043, ~~2044, 2045, 2046~~, 2047

Ne0arest Street No: | **Street Name:** Embassy Row / Peachtree Dunwoody Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

2043, 2044, 2045, 2046, 2047

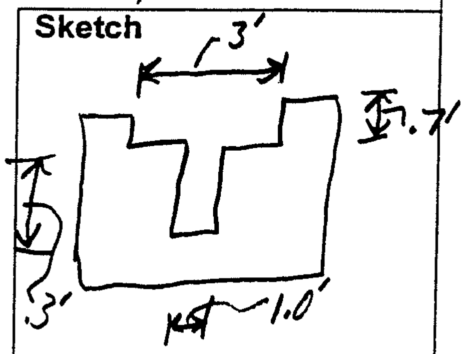
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel _____x_____ Flume _____x_____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/23/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2053, ~~2054, 2055, 2056, 2057~~

Ne0arest Street No: | Street Name: Peachtree Dunwoody Rd / Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

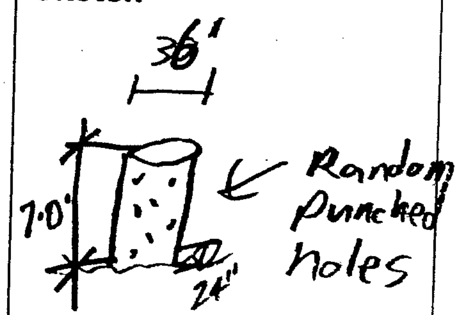
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
2053, 2054, 2055, 2056, 2057

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2050	24		X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Geo

Date: 9/22/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:

Structure Number: MC- 2153, 2154, 2155, 2156, 2157

Nearest Street No: | **Street Name:** FAUNSWORTH DR. DEAD END

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

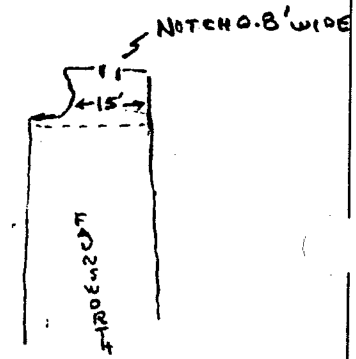
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch

SEE BACK



Comments:
CHOKED WITH DEAD WOOD.

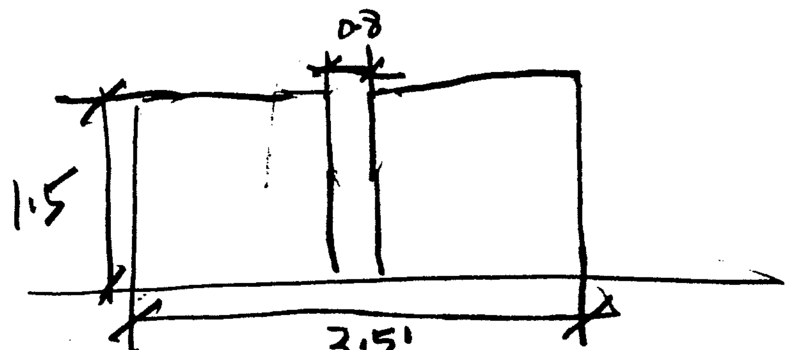
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

DIAGRAM MC-2153



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Geor...

Date: 9/22/99 | Firm: Khafra | Crew Initials: NF TW | Photo #:

Structure Number: MC- 2168, 2169, 2170, 2171, 2172

Nearest Street No: 40 | Street Name: SEVILLE CHASE

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

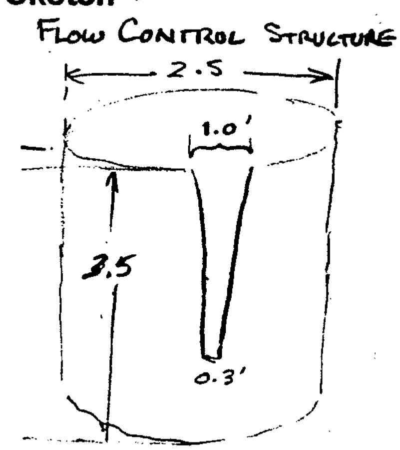
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch –



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2146	30	4.0		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/23/99 | Firm: Khafra | Crew Initials: NF, TW | Photo #:

Structure Number: MC- 2180, 2181, 2182, 2183, 2184

Nearest Street No: | Street Name: ROSWELL RD

"THE ENCLAVE"

Structure Type: Inlet Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] ~~HW type~~ 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ____x____ Flume ____x____

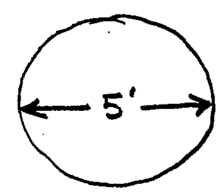
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch



Comments: COMPLETELY BURIED. YARD INLET

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2179	36			X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2185	36			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/24/99	**Firm:** Khafra	**Crew Initials:** MN, BT	**Photo #:**

Structure Number: MC- 2224, 2225, 2226, 2227, 2228

Ne0arest Street No: | **Street Name:** Barfield Rd
Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

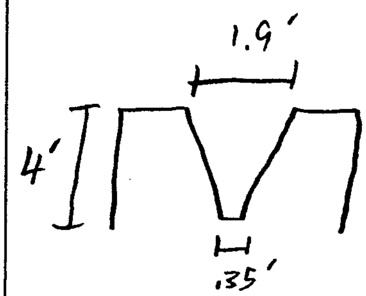
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2229	24		X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/27/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2275, 2276, 2277, 2278, 2279

NeOarest Street No: | Street Name: Barfield Rd
Abernathy Rd

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

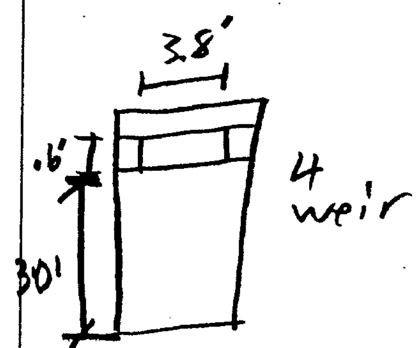
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2280	21		X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/23/99	Firm: Khafra	Crew Initials: TW/NF	Photo #:
Structure Number: MC- 2306			
Nearest Street No:	Street Name: STONINGTON CONDOS		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
2306, 2307, 2308, 2309, 2310

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

INSIDE DIMENSIONS

3'

3'

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: A SIMPLE OPEN WELL.

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2305	12	2.6		X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2311	12"	2.7		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/27/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- ~~2299, 2300~~, 2401, 2402, 2403

NeOarest Street No: | Street Name: Glenridge Dr

Abernathy Rd

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (3 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes ~~No~~ Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

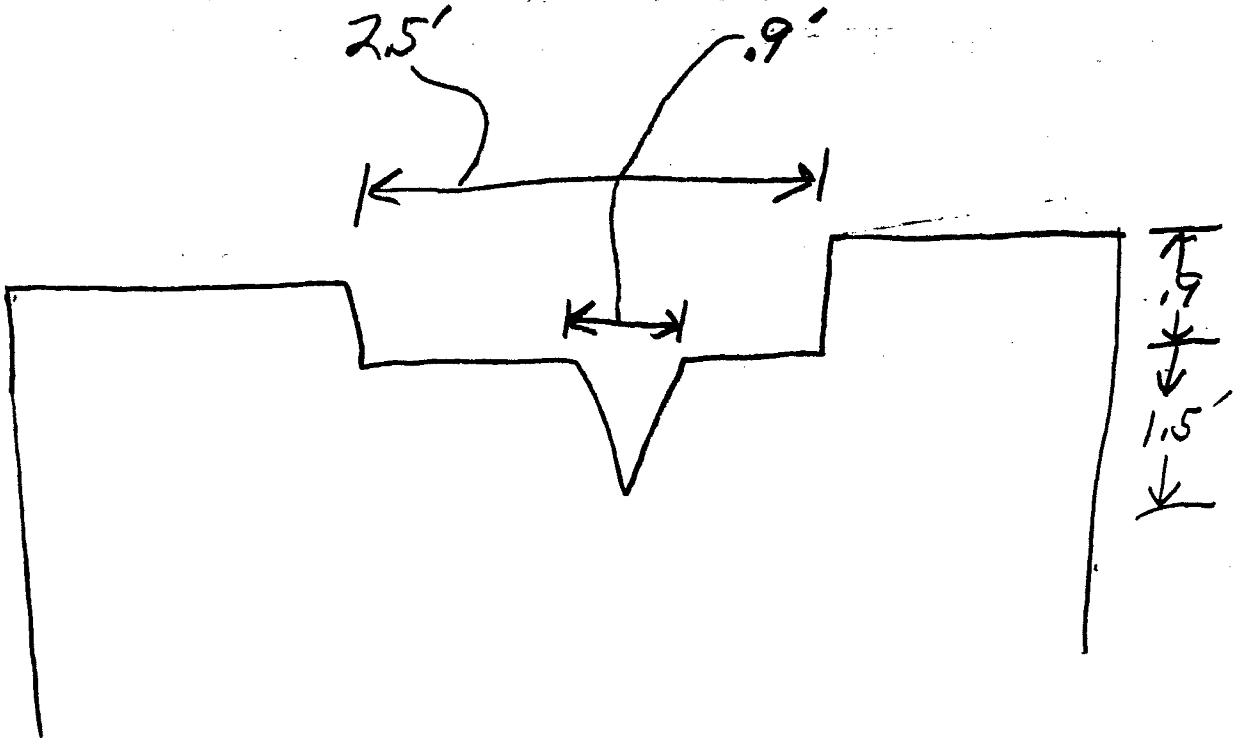


DIAGRAM MC-2401

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/27/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2407, 2408, 2409, 2410, 2411

NeOarest Street No: | Street Name: Glenridge Dr
Abernathy Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

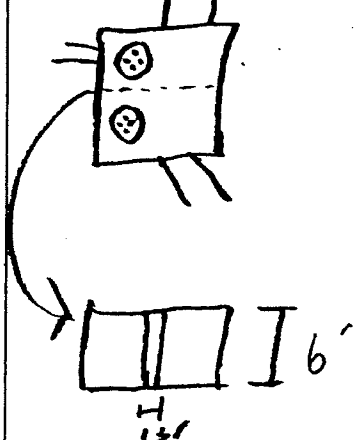
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (3 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
Under ground

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2406	12	5.2		X				
MC-2405	54	7.15		X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2412	24	7.25		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Geo

Date: 9/28/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC-2426, 2427, 2428, 2429, 2430			
Ne0arest Street No:	Street Name: Glenlake PW. / Abernathy Rd		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

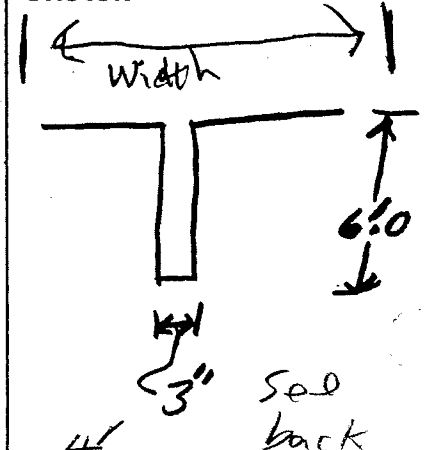
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

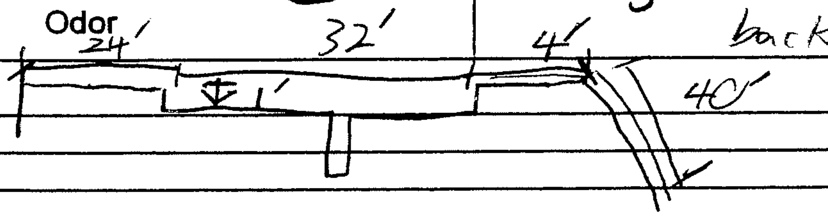
Dry-Weather Flow: Yes ~~No~~ **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% ~~Clear~~

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:



In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

KHAFRA
Atlanta, Georgia

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

Date: 9/28/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2426, 2427, 2428, 2429, 2430

Ne0arest Street No: | **Street Name:** Glenlake PW, Abernathy Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

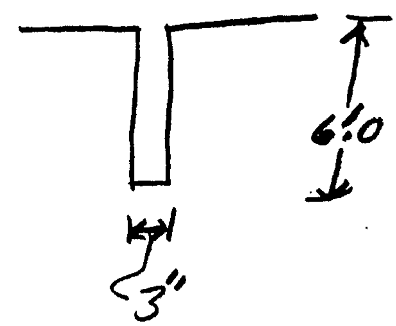
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes ~~No~~ **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% ~~Clear~~

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Ge

Date: 9/29/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2470, 2471, 2472, 2473, 2474

NeOarest Street No: | Street Name: Glenlake Pw / Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch

Underground detension structure- No access

Comments:

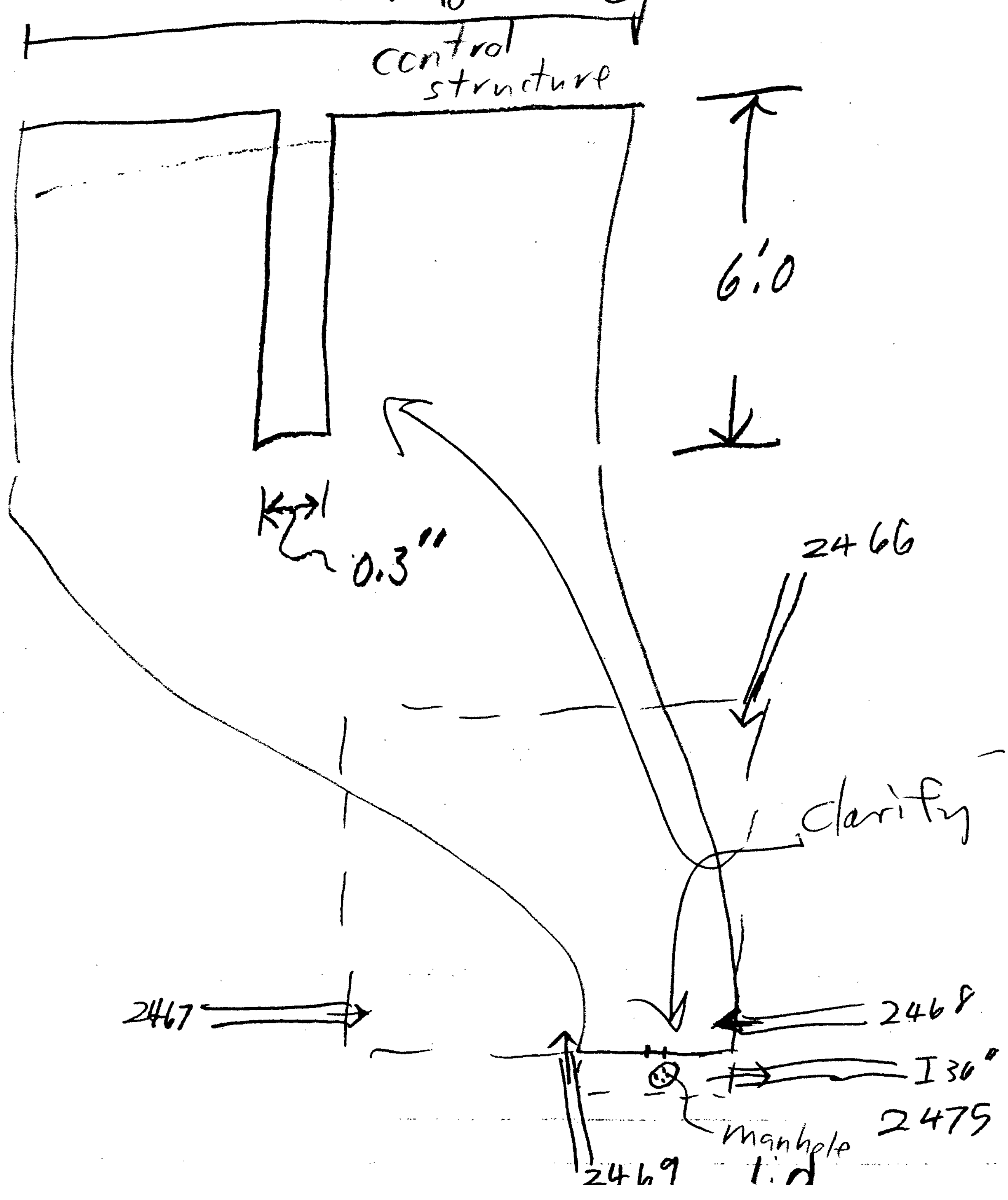
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2475	36	20.8		X				

DIAGRAM MC-2470



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georg

Date: 9/29/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 2470, 2471, 2472, 2473, 2474			
Ne0arest Street No:	Street Name: Glenlake Pw / Abernathy Rd		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

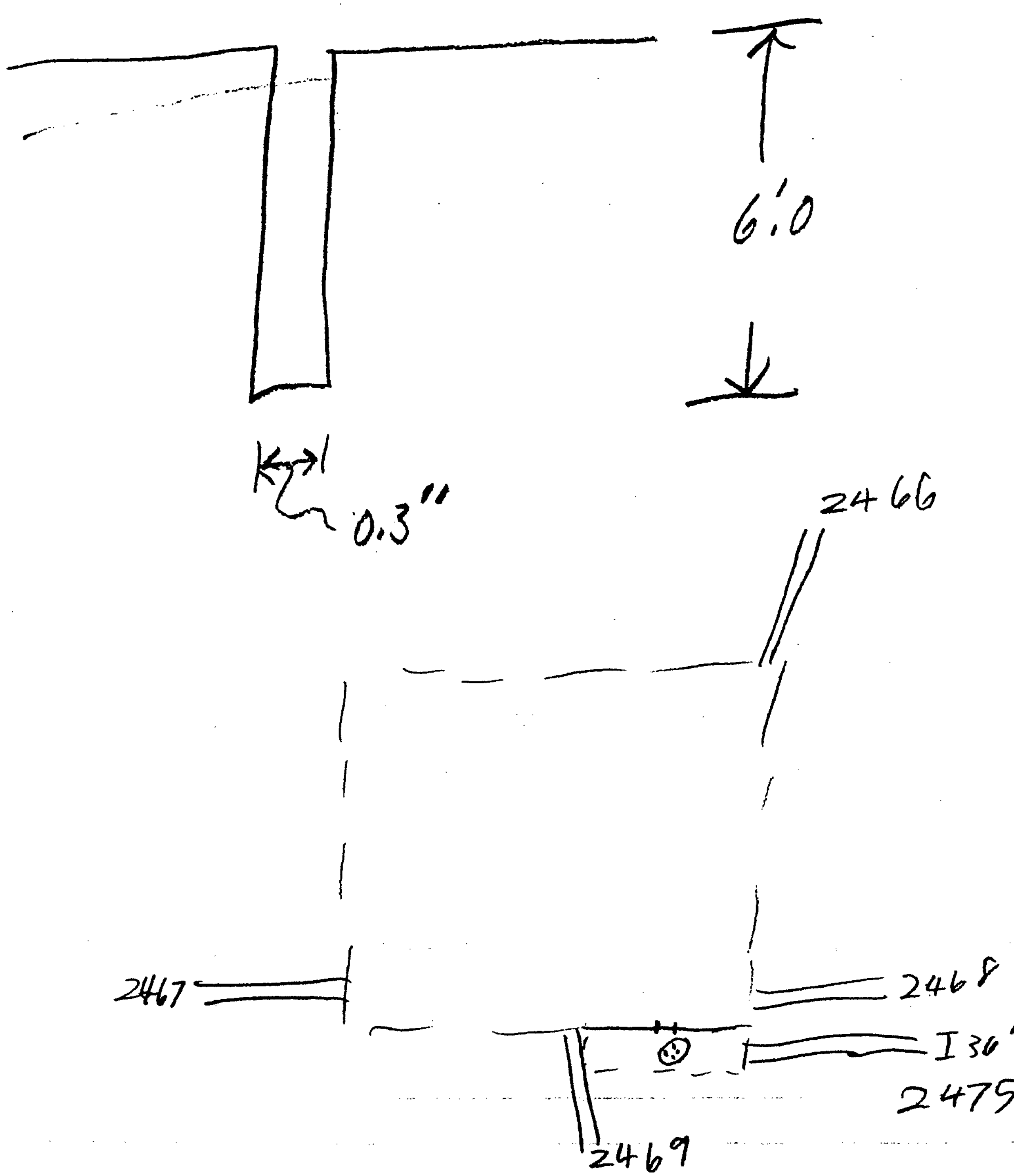
In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2475	36	20.8		X				

DIAGRAM MC-2470



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Geor...

Date: 9/27/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:

Structure Number: MC- 2531

Nearest Street No: 695 **Street Name:** SPALDING DR

ST. JUDE THE APOSTLE CATHOLIC CH.

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
2531, 2532, 2533, 2534, 2535

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

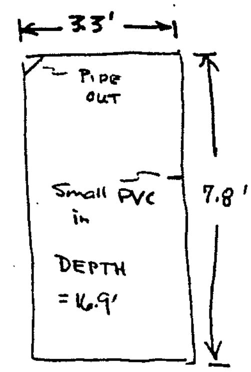
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch TOP VIEW



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2536	12	16.9	X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/28/99	Firm: Khafra	Crew Initials: TW/NF	Photo #:

Structure Number: MC- 2543

Nearest Street No: 695 **Street Name:** SPALDING DRIVE
ST JUDE THE APOSTLE

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

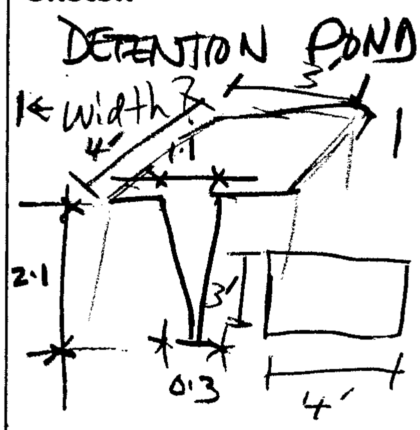
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
2543, 2544, 2545, 2546, 2547

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2548	12"	2.2		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 09/28/99	Firm: Khafra	Crew Initials: TW/NF	Photo #:

Structure Number: MC- 2543

Nearest Street No: 695 **Street Name:** SPALDING DRIVE
ST JUDE THE APOSTLE

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

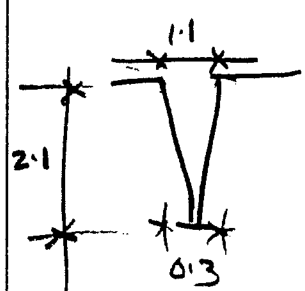
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
2543, 2544, 2545, 2546, 2547

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch
DETENTION POND



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2548	12"	2.2		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/30/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2614, 2615, 2616, 2617, 2618

Ne0arest Street No: | Street Name: Glenlake Pw / Abernathy Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ____x____ Flume ____x____

Structural Damage: Severe Minor None

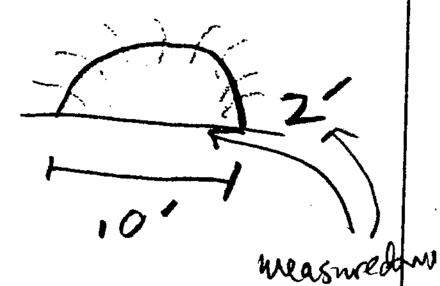
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch

constant flow



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2619	36		X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/30/99 | Firm: Khafra | Crew Initials: MN, BT | Photo #:

Structure Number: MC-2614, 2615, 2616, 2617, 2618

Ne0arest Street No: | Street Name: Glenlake Pw
Abernathy Rd

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

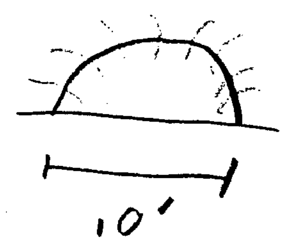
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch

constant flow



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2619	36		X					

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/5/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 2819, 2820, 2821, 2822, 2823			
Nearest Street No:	Street Name: Roswell Road and Abernathy Road		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

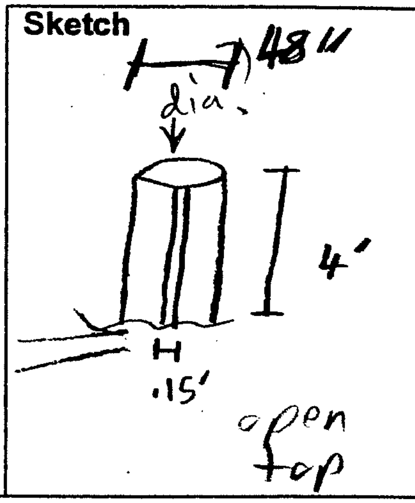
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2824	18			x				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/5/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2819, 2820, 2821, 2822, 2823

Nearest Street No: | **Street Name:** Roswell Road and Abernathy Road

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

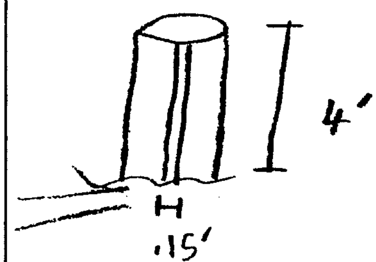
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2824	18			x				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/5/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2832, 2833, 2834, 2835, 2836

Nearest Street No: | Street Name: Roswell Road and Abernathy Road

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

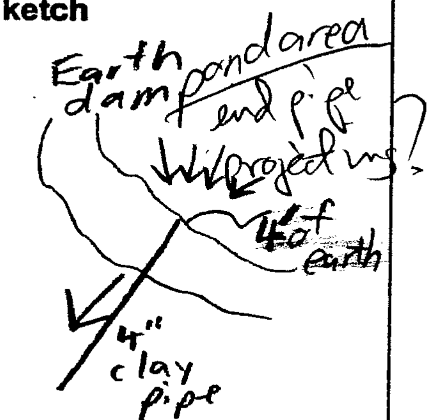
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes ~~No~~ Source: Creek Other

Blockage/Clogging: 25% 50% 75% ~~100%~~ Clear

Pollution: Oil/Grease Paint Sewer ~~None~~ Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/5/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 2832, 2833, 2834, 2835, 2836			
Nearest Street No:	Street Name: Roswell Road and Abernathy Road		

Structure Type: | **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% ~~100%~~ Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch

Comments:

In-Coming Pipe: From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe: To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/5/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2840, 2841, 2842, 2843, 2844

Nearest Street No: | Street Name: Roswell Road and Abernathy Road

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (90°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

~~Storage Detention Pond~~ (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

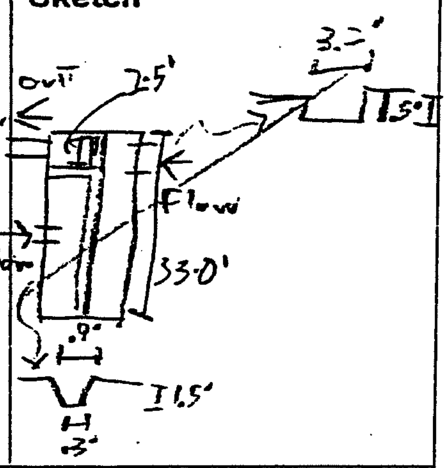
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments: SEE BACK PAGE

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2839	18			X				

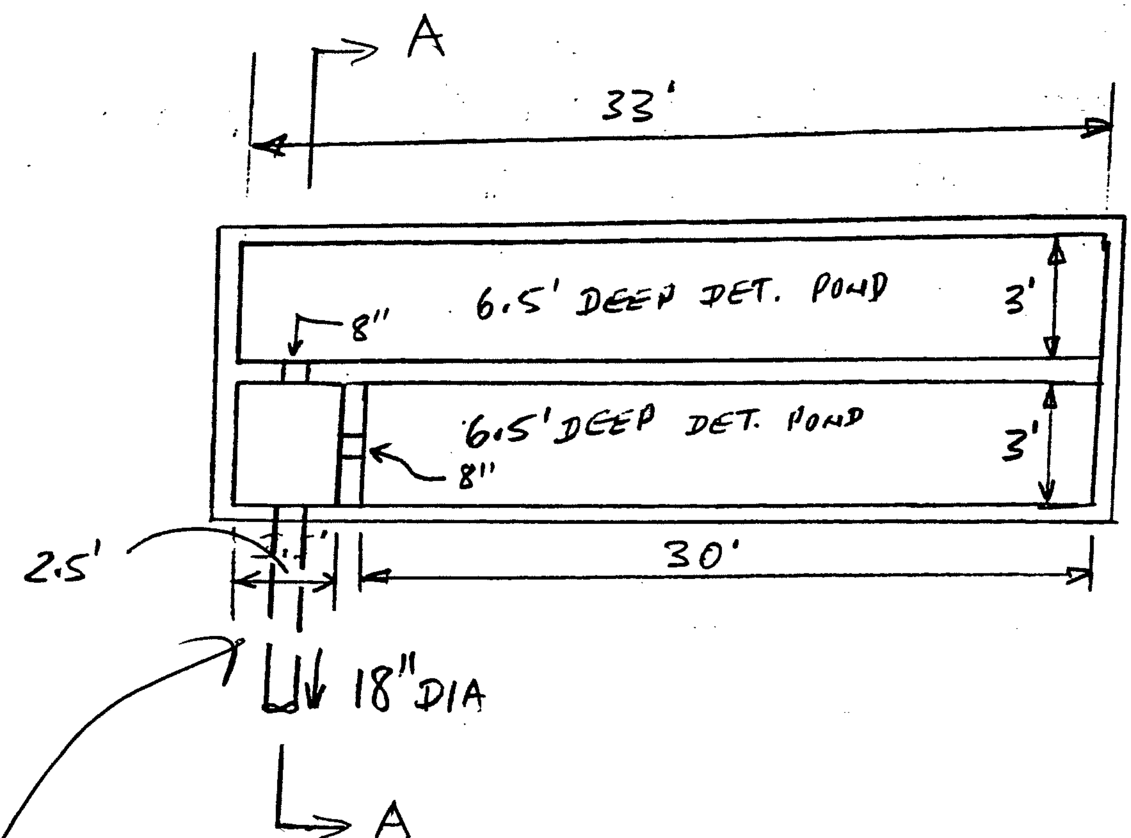
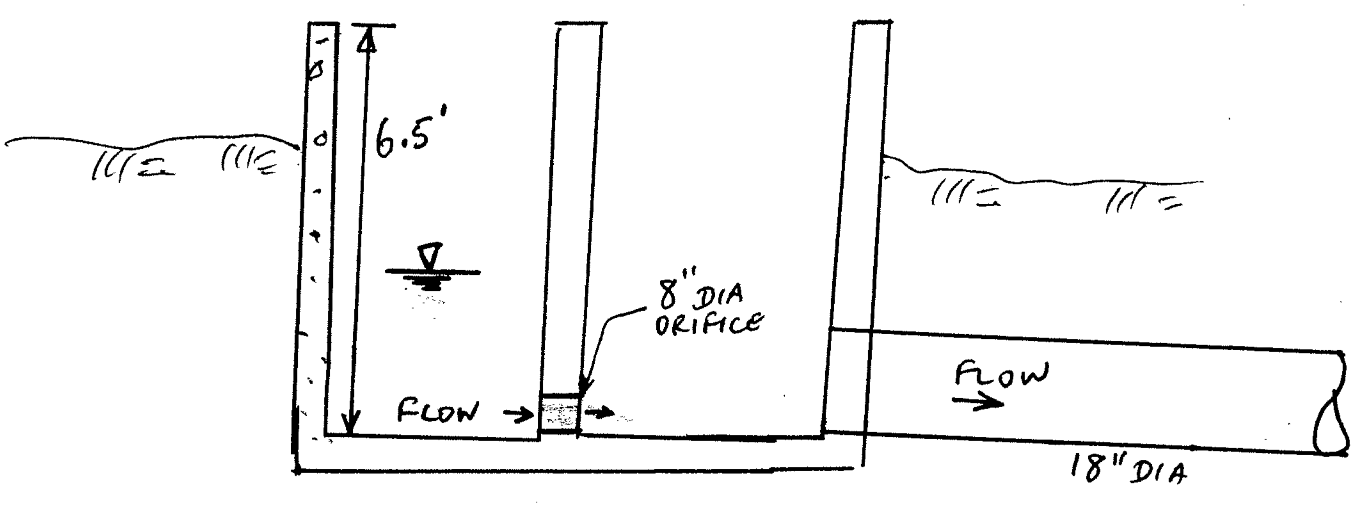


DIAGRAM MC-2840

measure down to 18" invert? 6.5'



NCO
01-19-01

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/5/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 2840, 2841, 2842, 2843, 2844

Nearest Street No: | Street Name: Roswell Road and Abernathy Road

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

~~Storage Detention Pond~~ (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

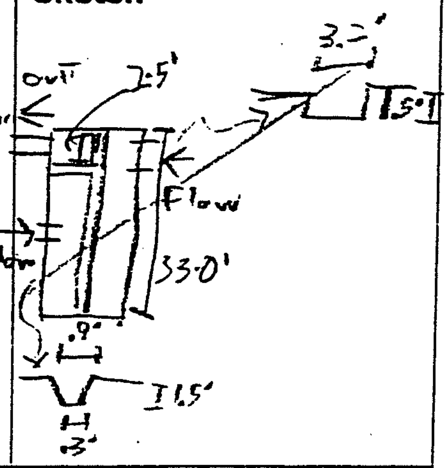
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments: SEE BACK PAGE

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2839	18			X				

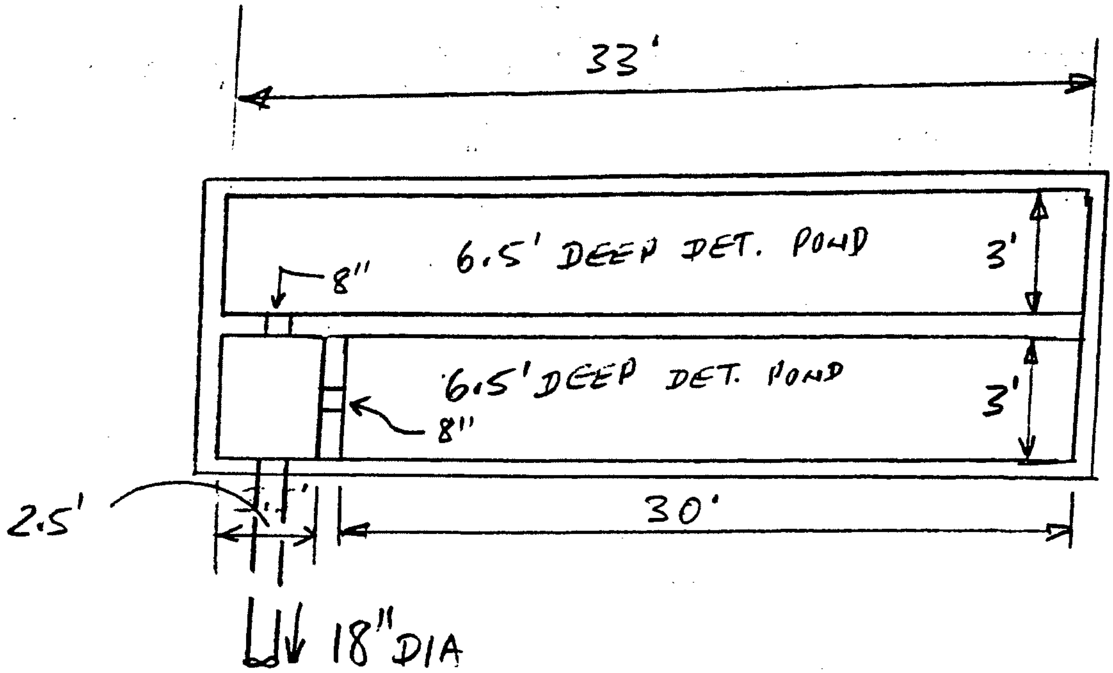


DIAGRAM MC-2840

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/01/99	Firm: Khafra	Crew Initials: TW/NF	Photo #:
Structure Number: MC- 2906			
Nearest Street No:	Street Name: WYNGATE AT SPALDING DAWE		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

2906, 2907, 2908, 2909, 2910

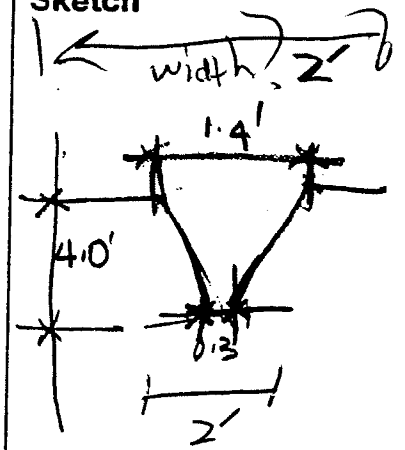
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2520	12"		~~X~~	X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/01/99	Firm: Khafra	Crew Initials: TW/NF	Photo #:
Structure Number: MC-2906			
Nearest Street No:	Street Name: WYNGATE AT SPALDING DRIVE		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

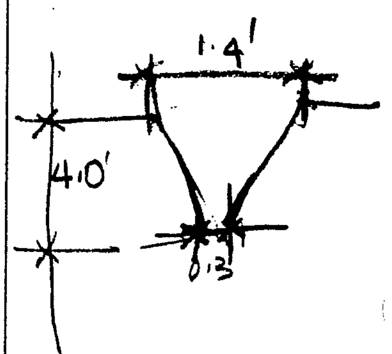
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
2906, 2907, 2908, 2909, 2910

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-2520	12"		X	X				

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/01/99	Firm: Khafra	Crew Initials: TW, NF	Photo #:
Structure Number: MC- 2923			
Nearest Street No: 237	Street Name: SPALDING GATES DRIVE		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

2923, 2924, 2925, 2926, 2927

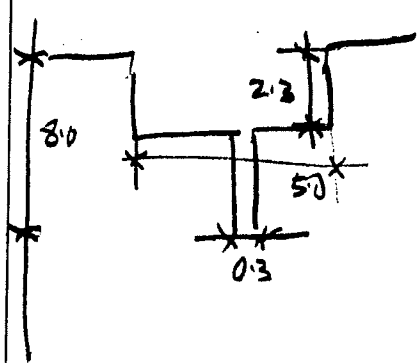
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, G[illegible]ia

Date: 10/05/99 | Firm: Khafra | Crew Initials: TW, NF | Photo #:

Structure Number: MC-2951

Nearest Street No: 7320 Street Name: ROSWELL ROAD

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

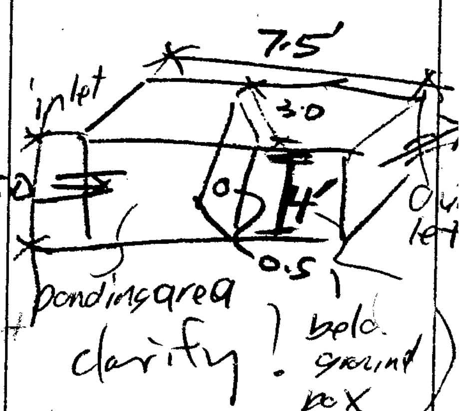
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (3 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
2951, 2952, 2953, 2954, 2955

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

box X box height

Comments:

wall/control height

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-~~2950~~ 3776	18"	4.7'		X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC-2937~~	18"	3.5'		X				
~~THRU 2735~~								
MC-2737								

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/05/99 | Firm: Khafra | Crew Initials: TW, NF | Photo #:

Structure Number: MC-2951

Nearest Street No: 7320 Street Name: ROSWELL ROAD

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

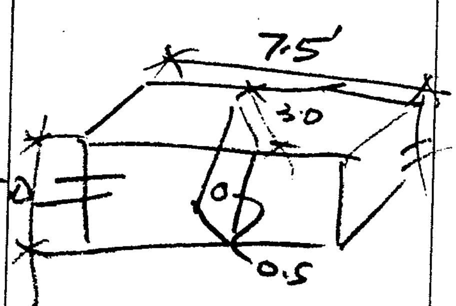
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
2951, 2952, 2953, 2954, 2955

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-~~2950~~ 3776	18"	4.7'		X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC-2937~~	18"	3.5'		X				
~~THRU 2735~~								
MC-2737								

KHAFRA
Atlanta, Georgia

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

Date: 10/6/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 3007, 3008, 3009

Nearest Street No: | Street Name: Roswell Rd / Abernathy Rd

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel _____x_____ Flume _____x_____

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/08/99	Firm: Khafra	Crew Initials:	Photo #:

Structure Number: MC- 3120 DUNWOODY ROAD

Nearest Street No: | Street Name:

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square ~~Box~~ Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

3120, 3121, 3122, 3123, 3124

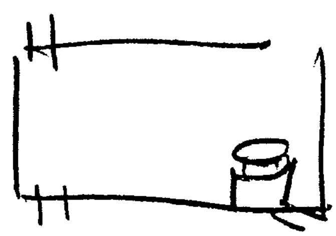
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe: From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3130	24			X				

Out-Going Pipe: To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3125	30"			X				

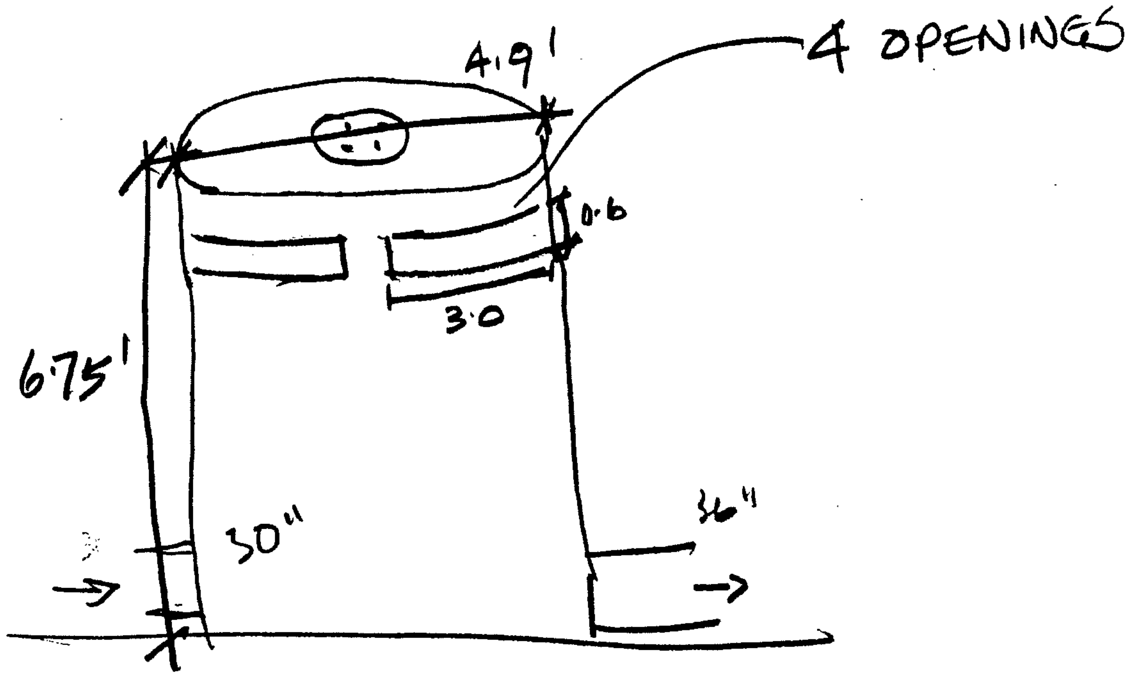


DIAGRAM MC-3120

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/08/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC- 3142			
Nearest Street No: 1027	Street Name: REDFIELD LANE		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square ~~Box Culvert Entrance~~ Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

3142, 3143, 3144, 3145, 3146

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

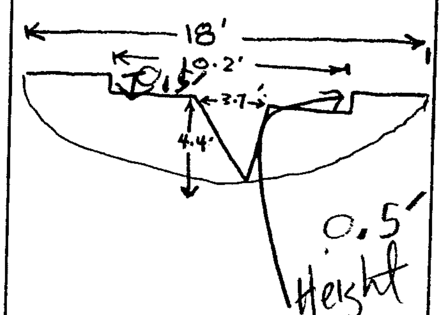
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch



Comments:

In-Coming Pipe: From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe: To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC - 3147	30			X				

F:\ENGINEER\99104\FIELD\...

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/08/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC- 3142			
Nearest Street No: 1027	Street Name: REDFIELD LANE		

Structure Type: **Inlet** Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square ~~Box~~ Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

3142, 3143, 3144, 3145, 3146

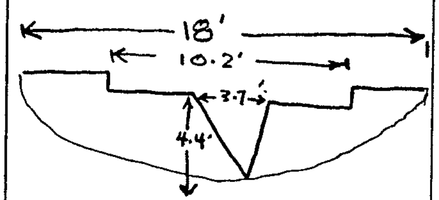
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC - 3147	30			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/11/99 | Firm: Khafra | Crew Initials: NF, TW | Photo #:

Structure Number: MC- 3185

Nearest Street No: | Street Name: MT. VERNON HWY

MT. VERNON PRESBYTERIAN SCHOOL

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

(#3185, 3186, 3187, 3188, 3189)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

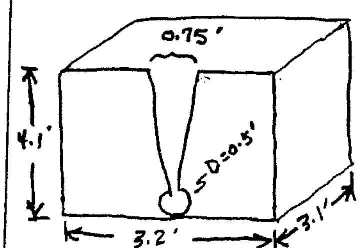
Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch

DETENTION POND OVER FLOW STRUCTURE



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3190	18	4.1		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/11/99	**Firm:** Khafra	**Crew Initials:** MN, BT	**Photo #:**

Structure Number: MC- 3252, 3253, 3254, 3255, 3256

Nearest Street No: | **Street Name:** Roswell Road
Abernathy Road

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

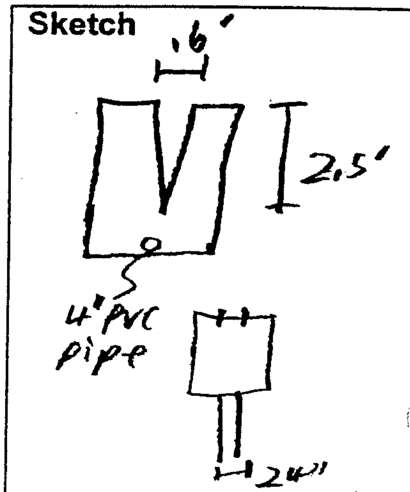
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Sketch



Comments: * Back-up from rainfall

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~UNK~~ MC-3462	24			X				

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/11/99	**Firm:** Khafra	**Crew Initials:** MN, BT	**Photo #:**

Structure Number: MC- 3257, 3258, 3259, 3260, 3261

Nearest Street No: **Street Name:** Johnson Ferry Road
Bonnie Lane

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

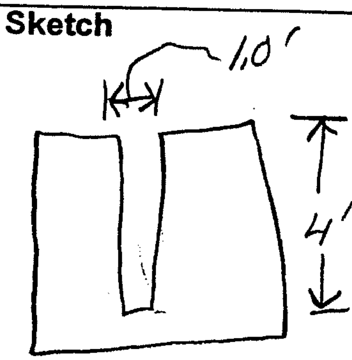
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 3264	18			✓				

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/12/99	**Firm:** Khafra	**Crew Initials:** NF, TW	**Photo #:**
Structure Number: MC- 3331			
Nearest Street No: 475	**Street Name:** MT. VERNON HWY		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

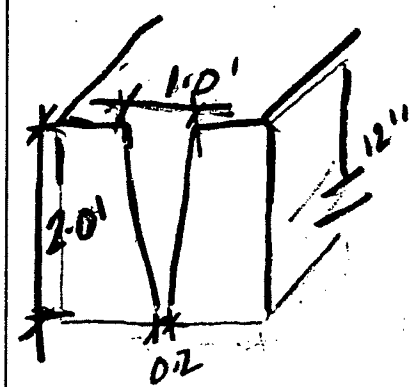
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
3331, 3332, 3333, 3334, 3335

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3336	15"	5.9		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/12/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC- 3337			
Nearest Street No: 509	Street Name: MT. VERNON HWY		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (3 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
3337, 3338, 3339, 3340, 3341

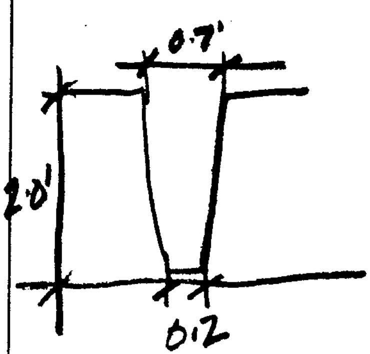
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: VERTICAL CRACK IN BRICKWORK. 15" SIZE USED THROUGHOUT COMPLEX.

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3336	15	4.2		X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3338	15	4.3		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/13/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:
Structure Number: MC- 3391			
Nearest Street No:	Street Name: MT. VERNON HWY		
MT. VERNON TOWERS – BEHIND PARKING DECK			

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

3391, 3392, 3393, 3394, 3395

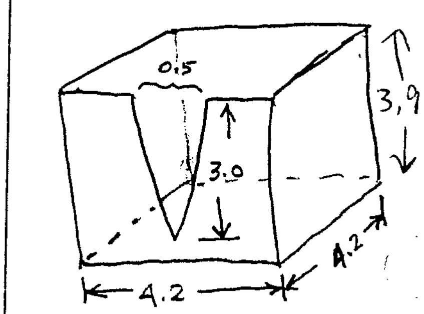
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

FLOW CONTROL

STRUCTURE OPEN AT TOP.

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC-3396 THRU UJB~~	30	3.9		X				
MC- 3614								

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/13/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 3434, 3435, 3436, 3437, 3438

Nearest Street No: | Street Name: Mount Vernon Hw
Glenridge Dr.

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

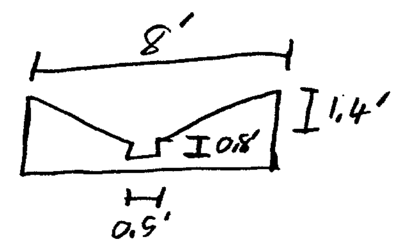
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

~~Storage Detention Pond~~ (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel _____x_____ Flume _____x_____

Sketch



Structural Damage: Severe Minor ~~None~~

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% ~~Clear~~

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3439	36			X				

KHAFRA
Atlanta, Georgia

Date: 10/14/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 3519, 3520, 3521, 3522, 3523

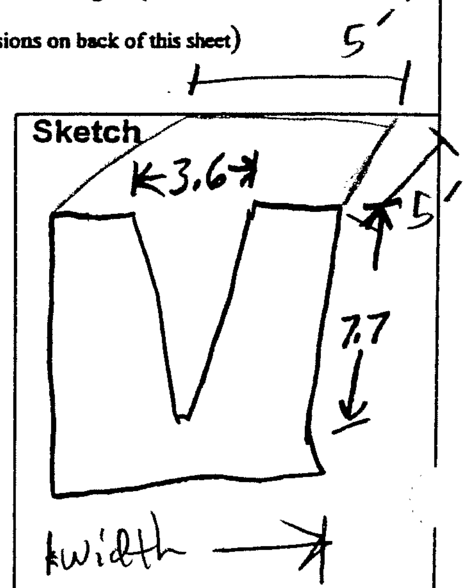
Nearest Street No: | Street Name: Peachtree Dunwoody Road
Westfair Court

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)



Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

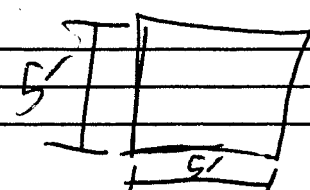
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:



In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~HIB~~	42			✓				
~~MC-3332~~								
M-3597								

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/14/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 3519, 3520, 3521, 3522, 3523

Nearest Street No: | Street Name: Peachtree Dunwoody Road
Westfair Court

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

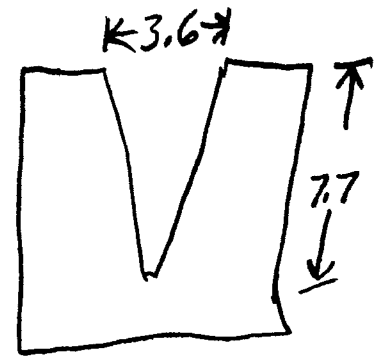
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ____x____ Flume ____x____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~HIB~~	42			✓				
~~MC-3332~~								
M-3597								

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/14/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 3535, 3536, 3537, 3538, 3539

Nearest Street No: | Street Name: Glenridge Drive / Mount Vernon Hw

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

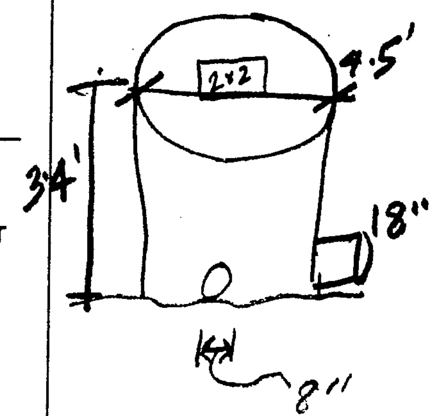
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: NEED COVER

In-Coming Pipe: From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe: To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 3540	18			✓				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/14/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- 3548, 3549, 3550, 3551, 3552			
Nearest Street No:	Street Name: Glenridge Drive		
	Mount Vernon Hw		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

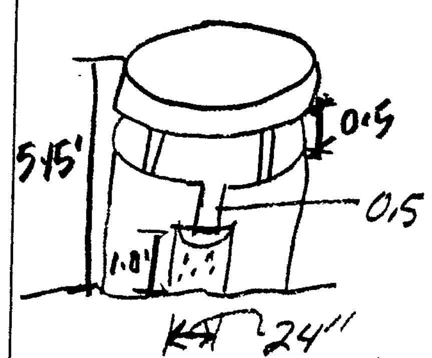
Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC3555	18			✓				

F:\ENGINEER\99104\FIELD\FLDDTARC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/14/99 | **Firm:** Khafra | **Crew Initials:** MN, BT | **Photo #:**

Structure Number: MC- 3563, 3564, 3565, 3566, 3567

Nearest Street No: | **Street Name:** Glenridge Drive
Mount Vernon Hw

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

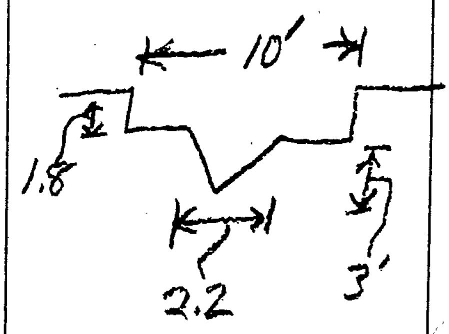
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/15/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: MC- 3586, ~~3587, 3588, 3589, 3590~~

Nearest Street No: Street Name: / Westfair Court

Peachtree Dunwoody Road

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

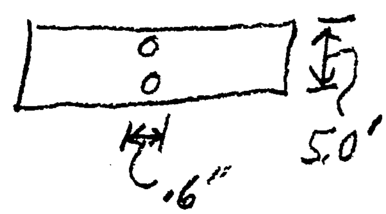
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments: *out going pipes, from detention Pond are two 6 inches PVC pipes. one pipe is one foot off floor, the other pipe is one foot from the top of wall.

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 3581	30			✓				
MC 3583	18			✓				
MC 3577	30			✓				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
*								

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

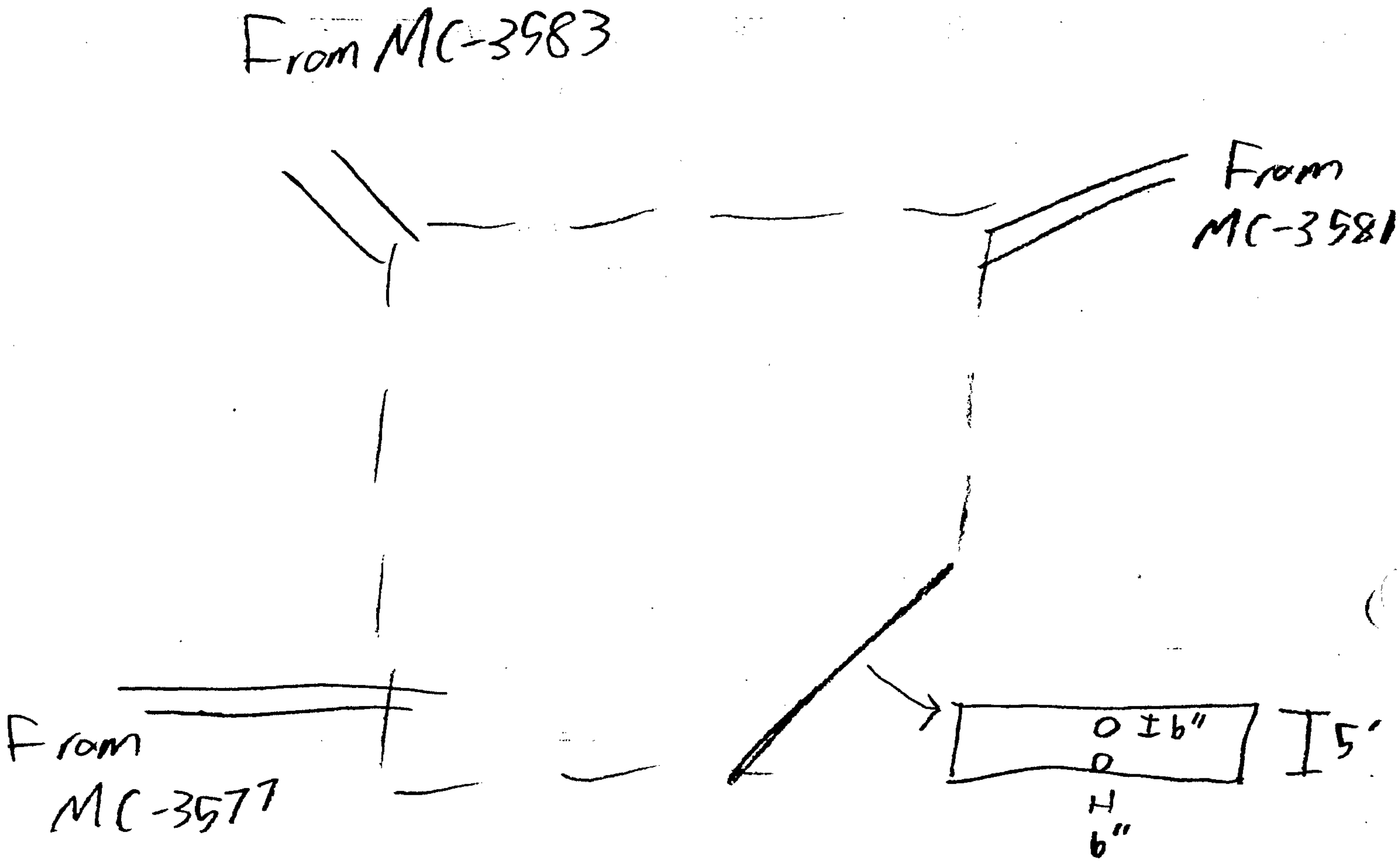


DIAGRAM MC-3586

Correction

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

I

Date: 10/19/99 | **Firm:** Khafra | **Crew Initials:** MN, BT | **Photo #:**

Structure Number: MC- 3599

Nearest Street No: | **Street Name:** Glenridge Road
Abernathy Road

Structure Type: Inlet Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments: pipe size reduces to a ~~12~~ 18", this Manhole ~~was~~ is used as flow control structure, and the 30 inch pipe is an underground detention pond

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- 3441	30	8.85		X				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC- 3442	~~12~~	9.2		X				
	18							

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Ge[illegible]

Date: 10/21/99	Firm: Khafra	Crew Initials: NF, TW	Photo #:

Structure Number: MC- 3677, 3678, 3679, 3680, 3681

Nearest Street No: 225 | Street Name: SANDY SPRINGS CIRCLE NEAR FIDELITY BANK

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

MC 3677, 3678, 3679, 3680, 3681

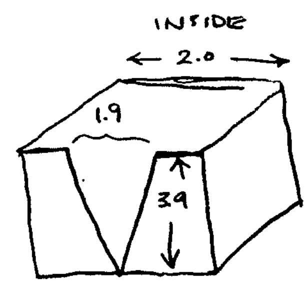
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ____x____ Flume ____x____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC ~~3668~~ THRU 3 UJBS	18	3.9		X				
MC-3767								

F:\ENGINEER\[illegible]

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/21/99 | Firm: Khafra | Crew Initials: NF, TW | Photo #:

Structure Number: MC- 3688

Nearest Street No: 200 | Street Name: JONSONS FERRY ROAD

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

MC-3688, 3689, 3690, 3691, 3692

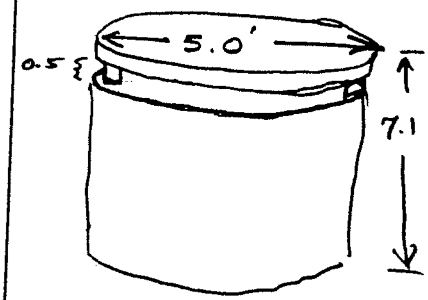
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~MC 3694 THRU~~ UJB MC-3765	24	7.1	X					

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/21/99 | Firm: Khafra | Crew Initials: NF, TW | Photo #:

Structure Number: MC-3695

Nearest Street No: 280 | Street Name: SANDY SPRINGS CIR.

SOUTH TRUST BANK

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

3695, 3696, 3697, 3698, 3699

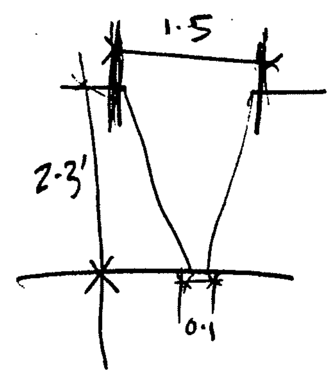
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3670	18"	4.1'	X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

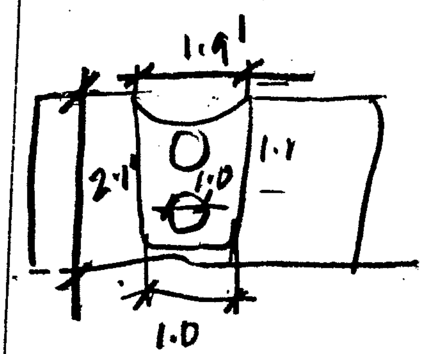
KHAFRA
Atlanta, Georgia

Date: 10/22/99 | Firm: Khafra | Crew Initials: TW, NF | Photo #:
Structure Number: MC- 3724
Nearest Street No: 230 | Street Name: MT VERNON HWY
BEHIND WAFFLE HOUSE

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume
Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)
Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)
Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)
3724, 3725, 3726, 3727, 3728

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No Source: Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/22/99 | Firm: Khafra | Crew Initials: TW, NF | Photo #:

Structure Number: MC- 3730, 3731, 3732, 3733, 3734

Nearest Street No: 230 | Street Name: MT VERNON HWY

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

3730, 3731, 3732, 3733, 3734

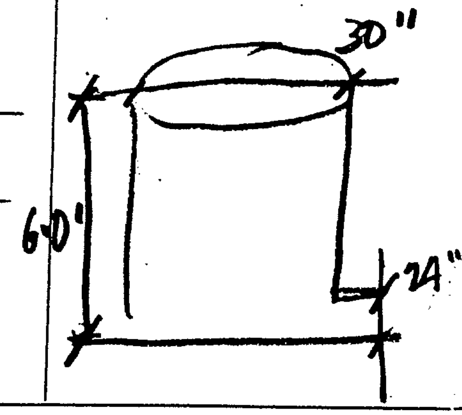
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: FILLED WITH TRASH

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-~~3736~~ THRU	24"	6.3		X				
MC-5769NTS								

F:\ENGINEER\99104\FIELD\FLDDTABC.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/22/99 | Firm: Khafra | Crew Initials: NF, TW | Photo #:

Structure Number: MC- 3748

Nearest Street No: 235 | Street Name: JOHNSON FERRY RD
TARGET LOT

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

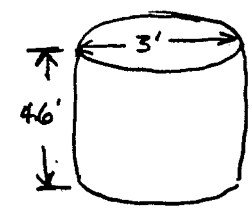
Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

MC 3748, 3749, 3750, 3751, 3752

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12.5'x0.5' conc.
Non-Standard (show measurements)
Channel ____x____ Flume ____x____

Sketch



FCS C/O A VERTICAL SECTION OF 36" CMP

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None
Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

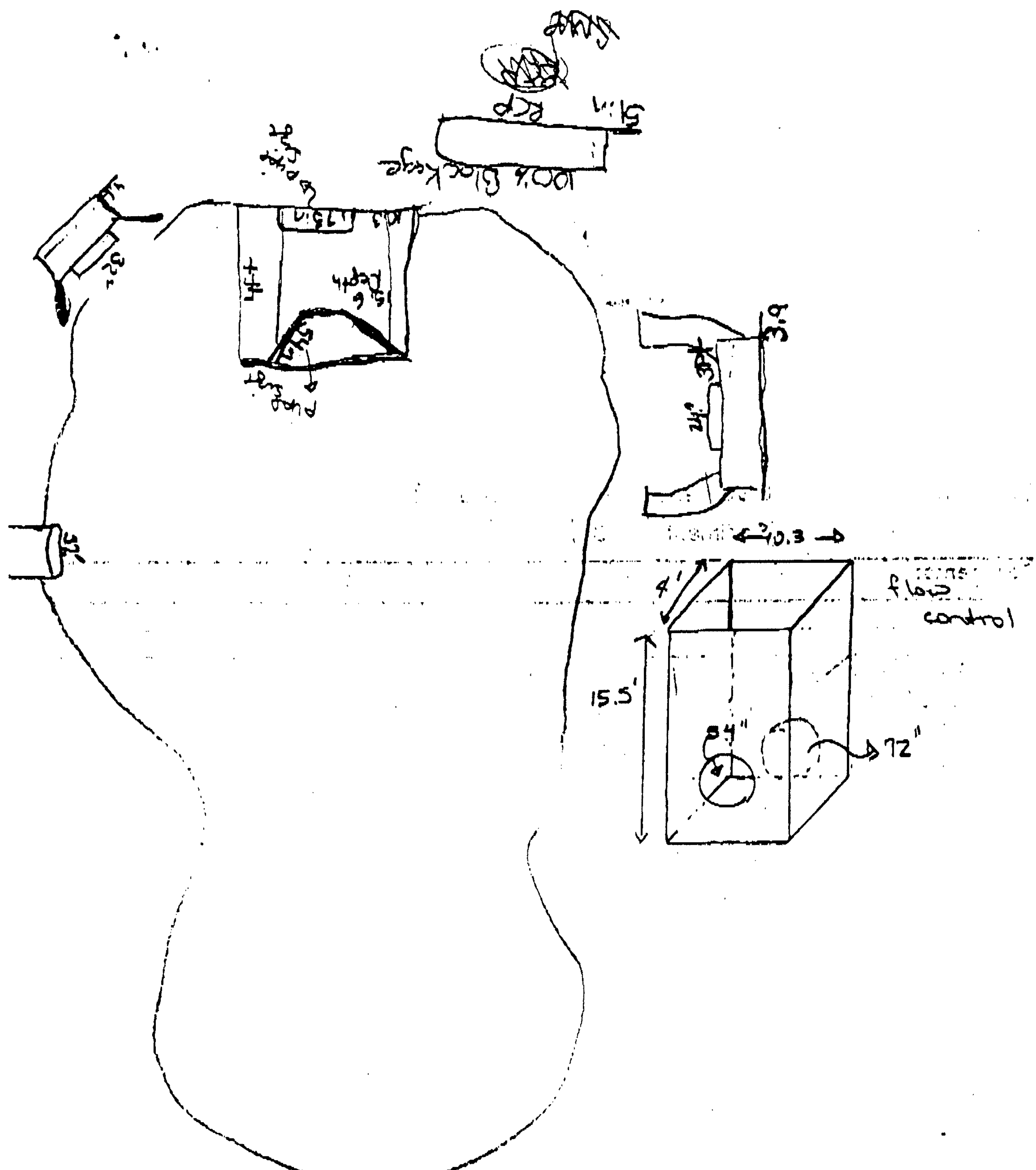
Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC-3756	24	4.6		X				

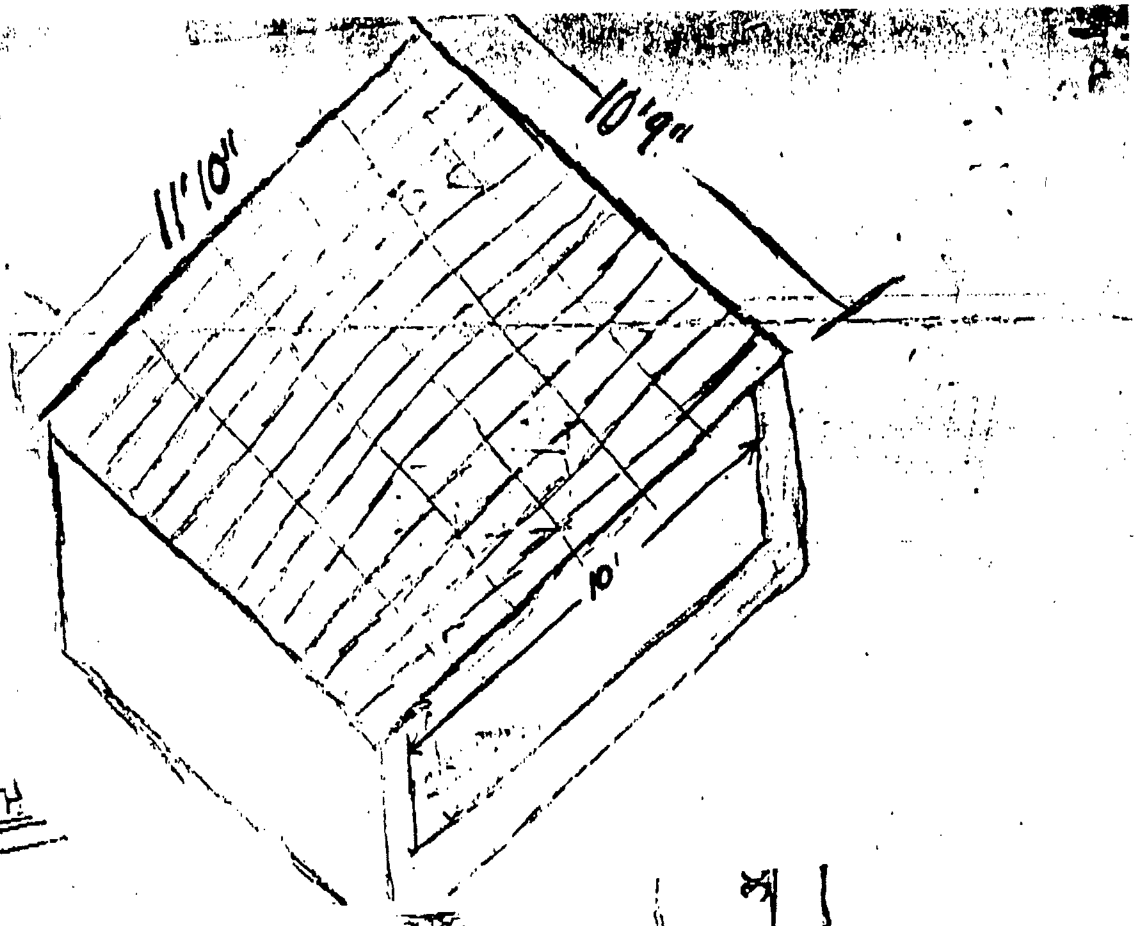
7b SC-015-019

12-27-99

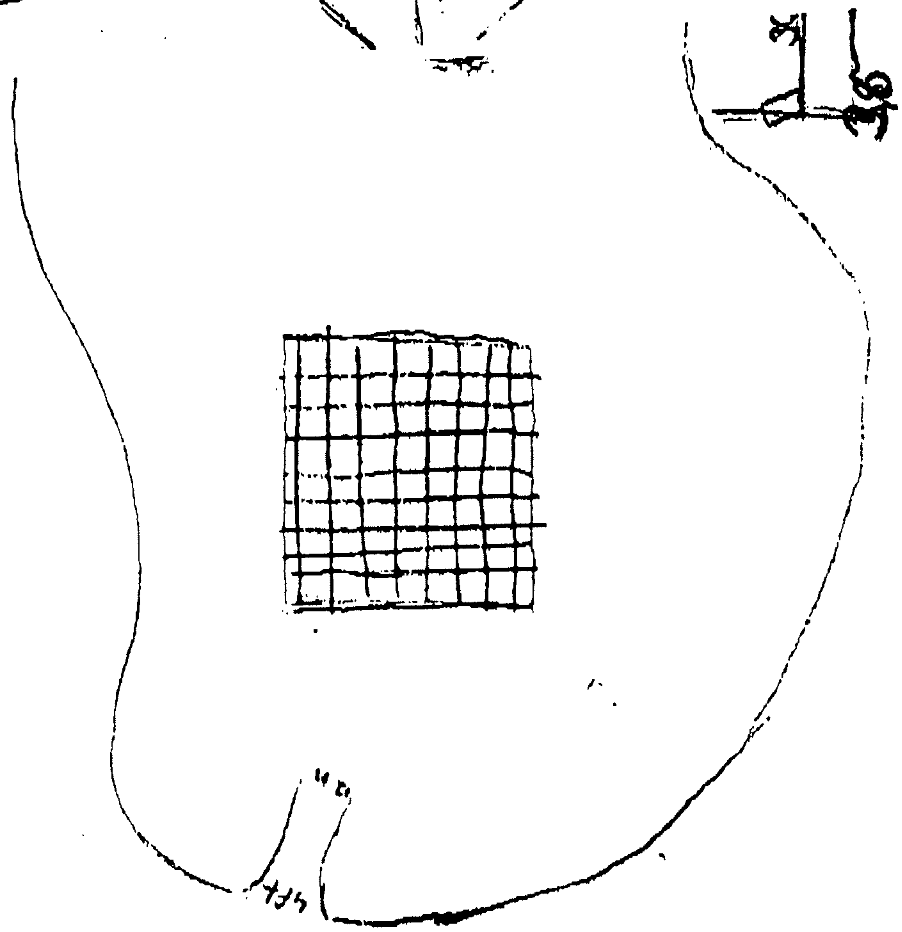
15-19 MB, AH



flow control



24'5" IS DEPTH

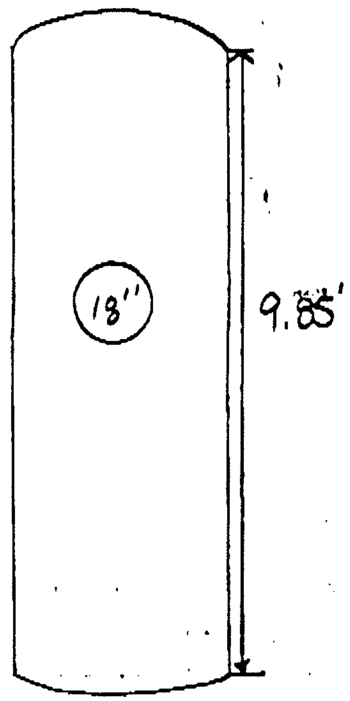


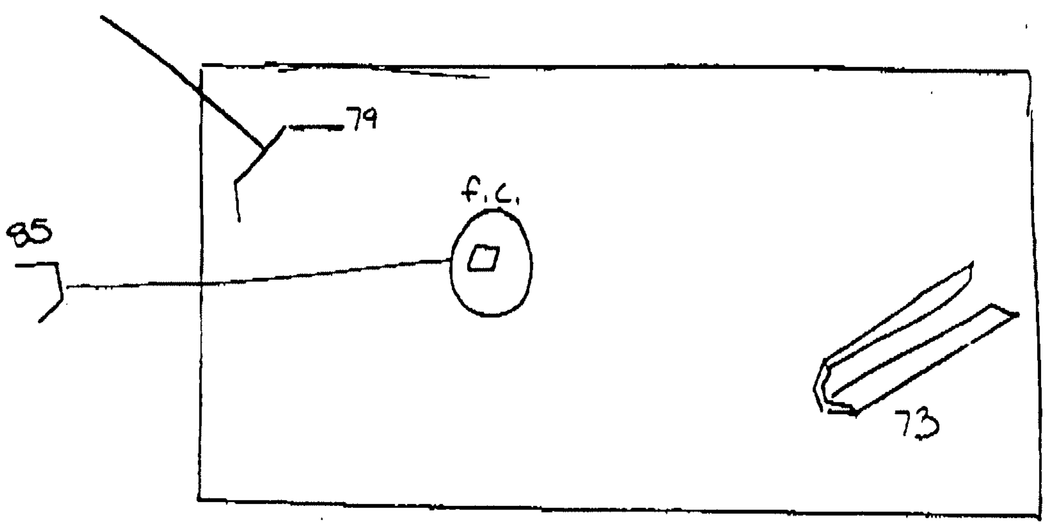
SC-025-029
MG, AH

SC023-029

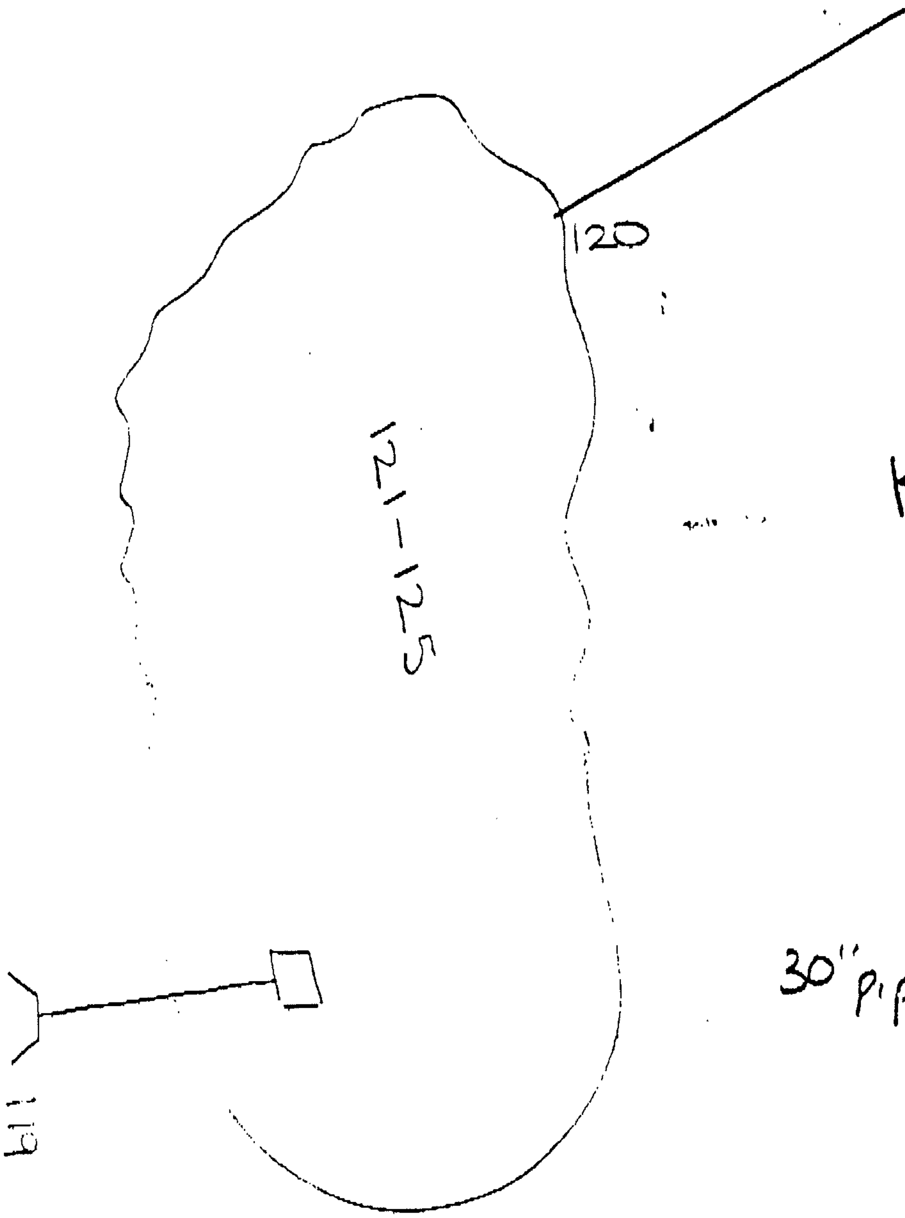
96 SC-074-078

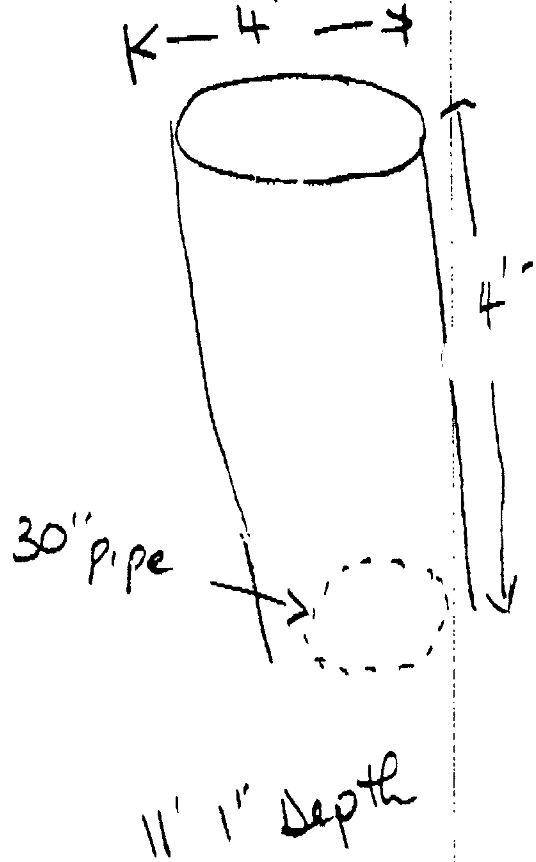
flow control





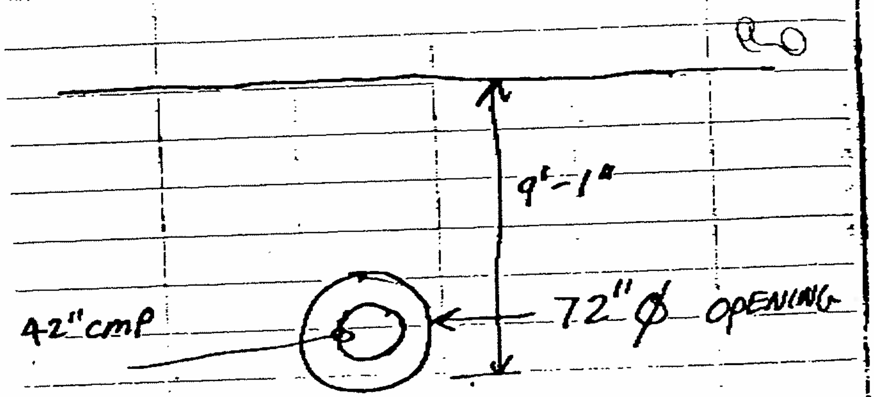
Windridge Apts. SC- 121, 122, 123, 124, 125

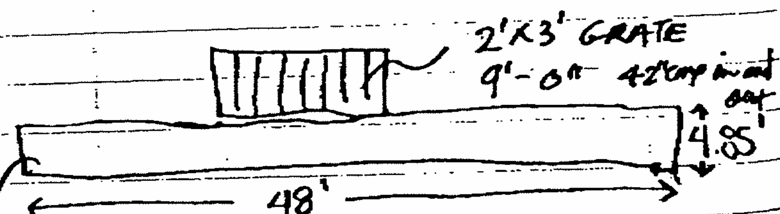




Sc - 238 - 242

#41 GROGANS ~~Ferry Road~~ Landing

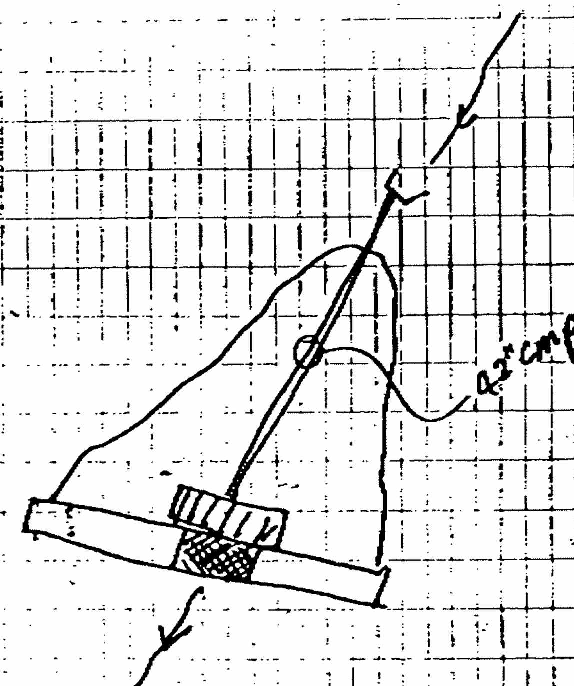




CONC. WALL AS DAM

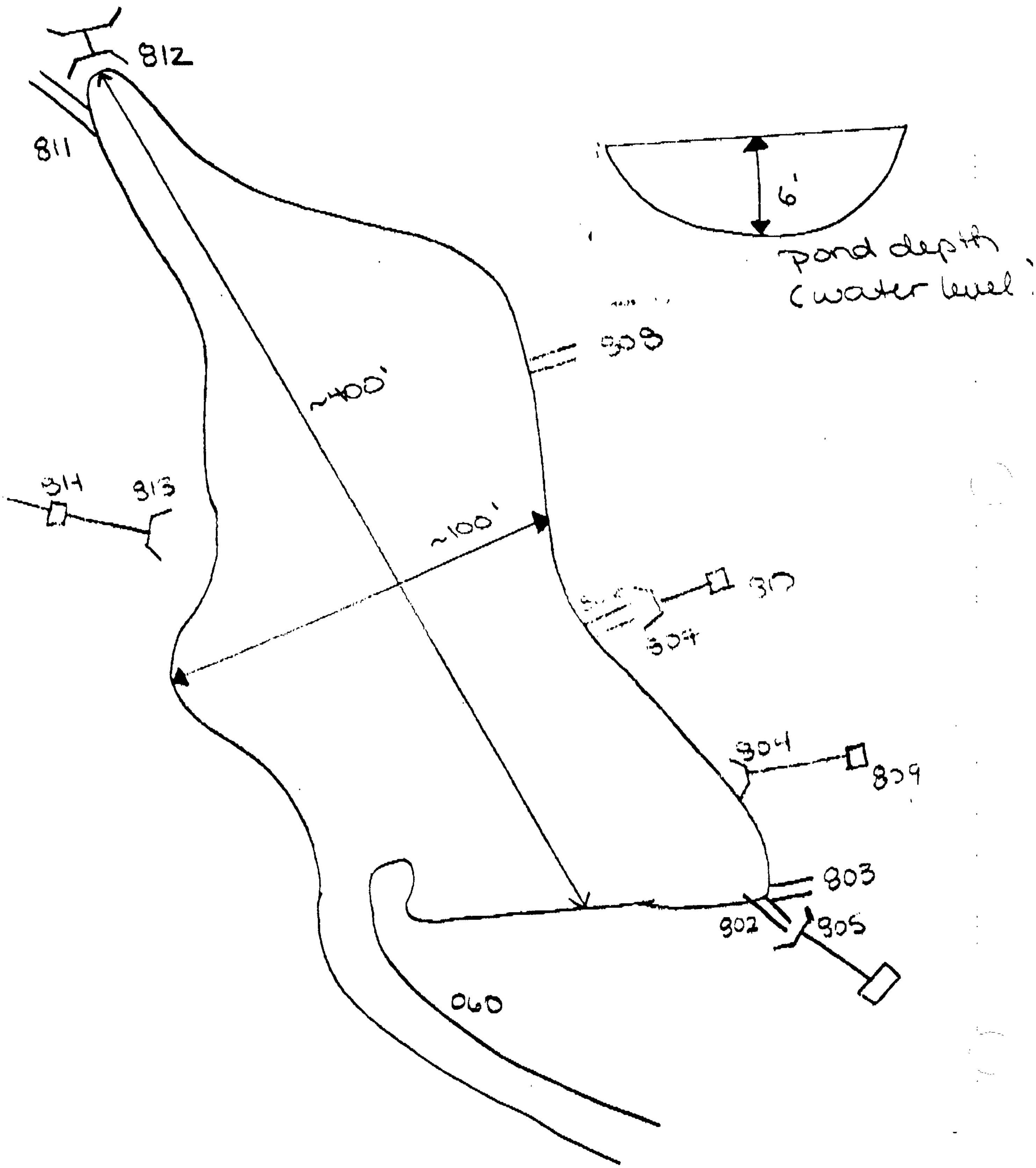
* DRY POND

#41



6b 8C-815-819

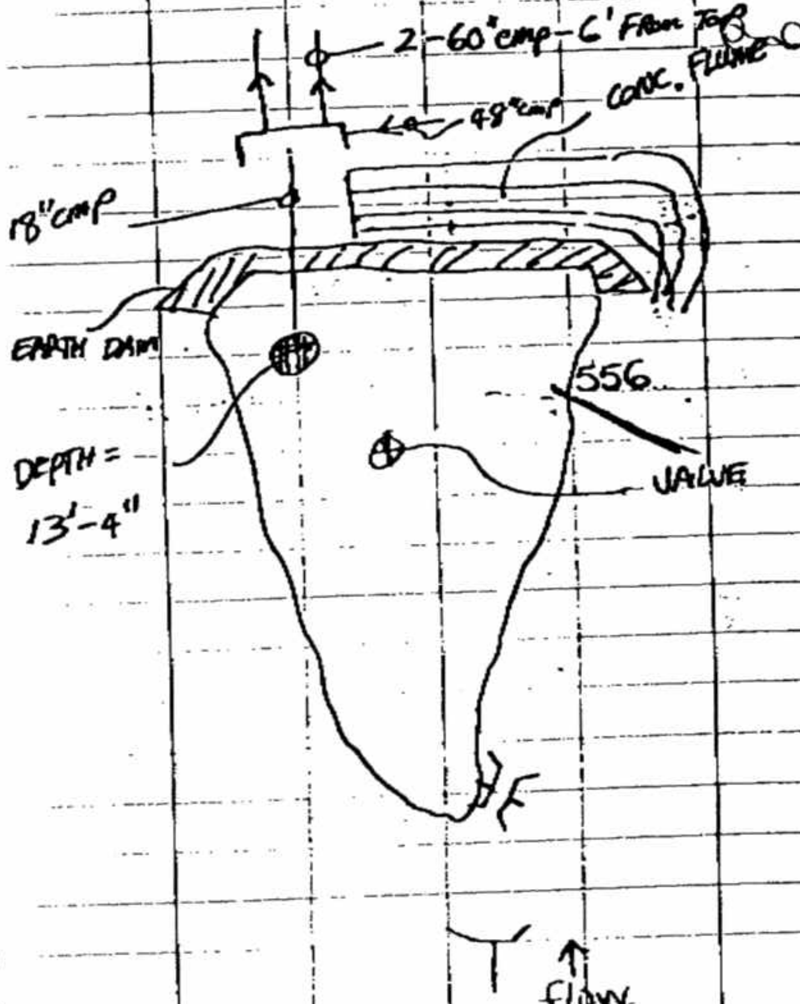
North ridge crossing



SC-558 - 562

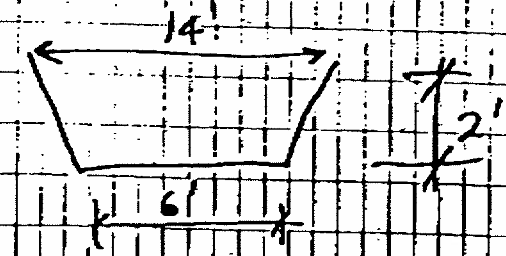
#42 9850 HUNT TRACE

* THIS LAKE AND DAM IS ON THE GULF COURSE



1b

#42



2-60" cmp @ 6' From Top

48" cmp @ 4'-10" From Top

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 4/5/99 **Crew:** RR MA

Structure Number: T9- 47, [illegible]

Nearest Street Address/Street Intersection:

NORTHSIDE DR

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: [illegible] area because of [illegible]

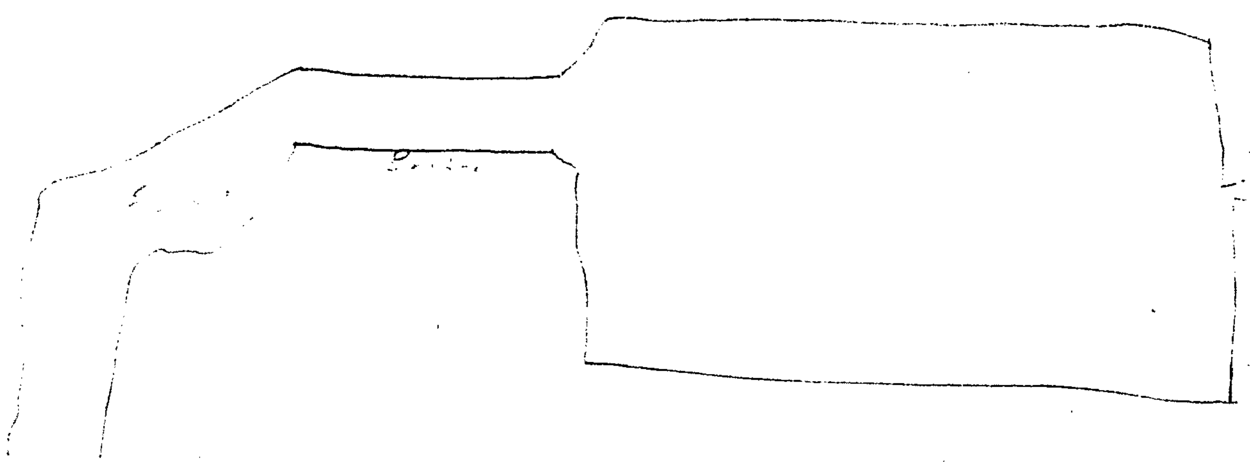
In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

DIAGRAM T9-147, 148, 149, 150, 151



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&I
Atlanta, Georgi

Date: 9/5/00 | **Crew:** RP MA

Structure Number: T9-156, 157, 158, 159, 160

Nearest Street Address/Street Intersection: RIVEREDGE PKWY

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: See Back

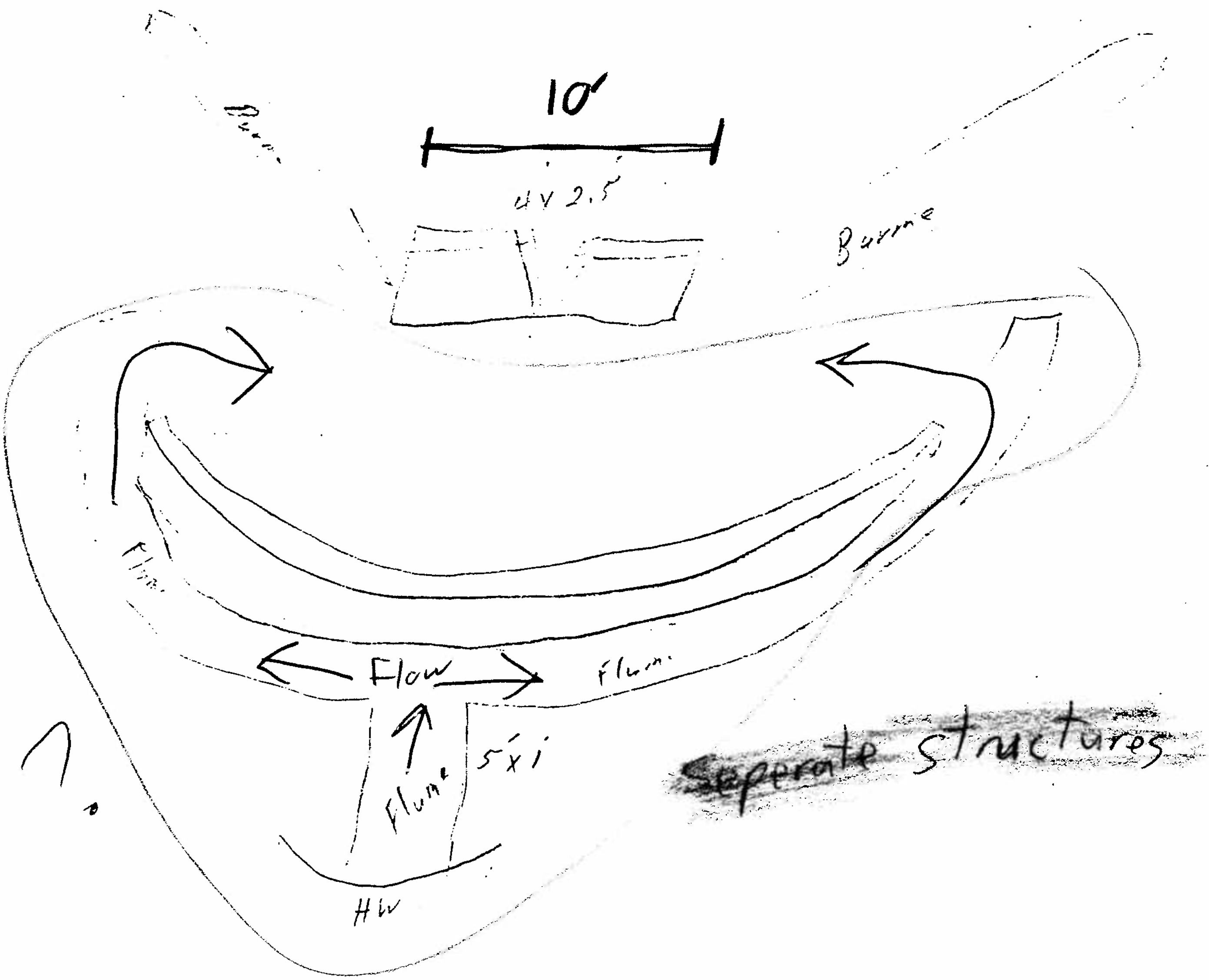
In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

DIAGRAM T9 - 156, 157, 158, 159, 160



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 9/ /00 | Crew: RP MA
Structure Number: T9-156, 157, 158, 159, 160
Nearest Street Address/Street Intersection: RIVEREDGE PKWY

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard

Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No Source: Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments:

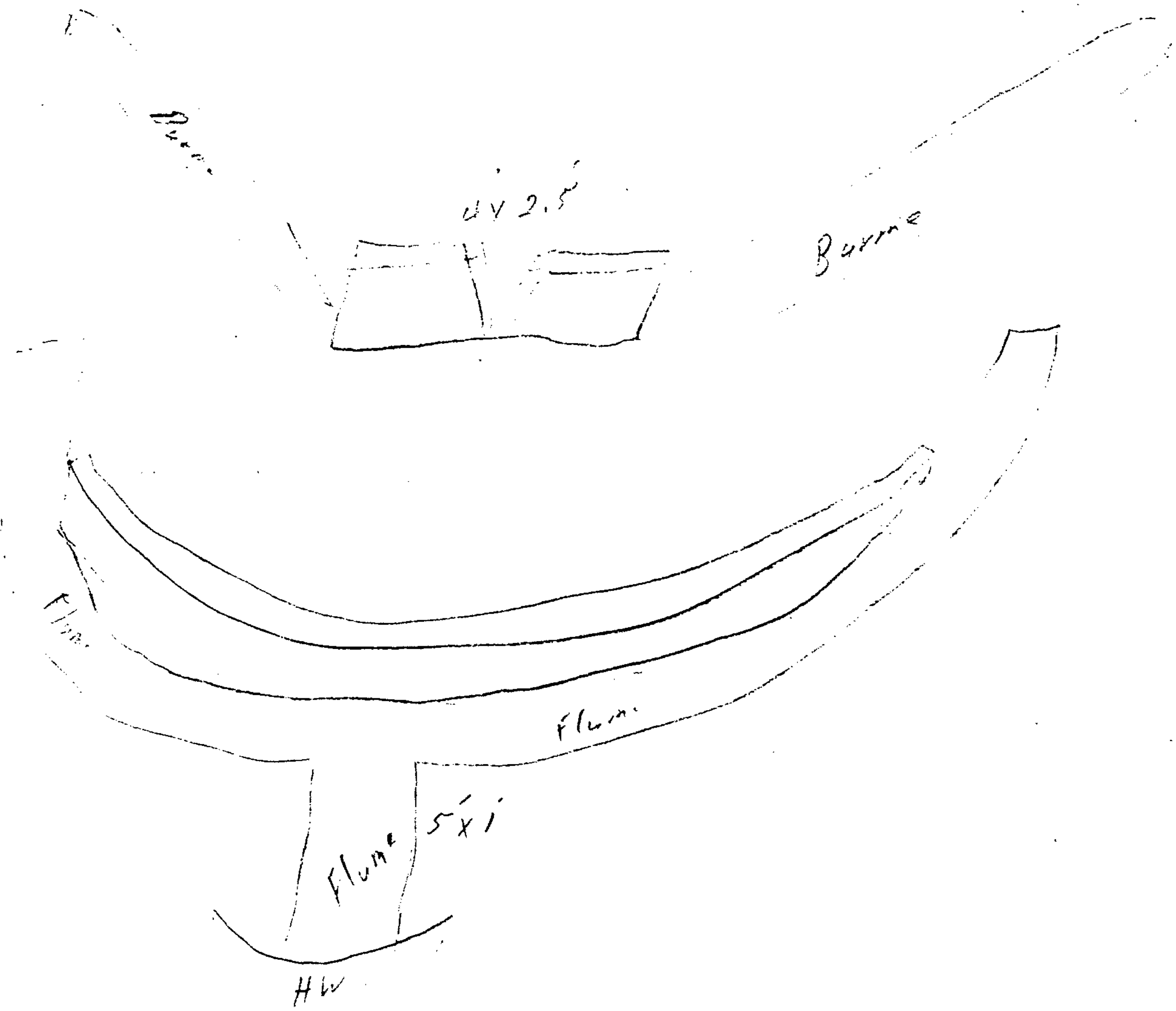
In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

DIAGRAM T9 - 156, 157, 158, 159, 160



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 4/5/99	**Crew:** RR MA
Structure Number: T9- 47, [illegible]	
Nearest Street Address/Street Intersection:	
NORTHSIDE DR	

Structure Type: Grate   Curb   Combination   Yard   Channel

Manhole   Flume   Pipe Entrance [hw / pipe end]   Pipe Exit [hw / pipe end]

Box Culvert Entrance   Box Culvert Exit   Bridge (3 structures per bridge)

Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard   2'x3' Grate   2.5' x 0.5' Weir Opening

Standard   12'x0.5' conc.

Non-Standard (show measurements)

Channel   Flume   SEE BACK

Structural Damage: Severe   Minor   None

Dry-Weather Flow: Yes   No   **Source:** Creek   Other

Blockage/Clogging: 25%   50%   75%   100%   Clear

Pollution: Oil/Grease   Paint   Sewer   None

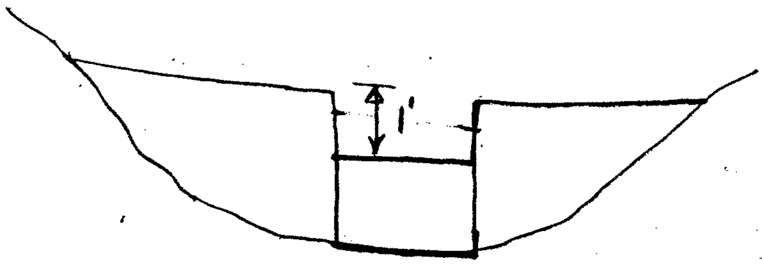
Comments: [illegible] area [illegible] of [illegible]

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

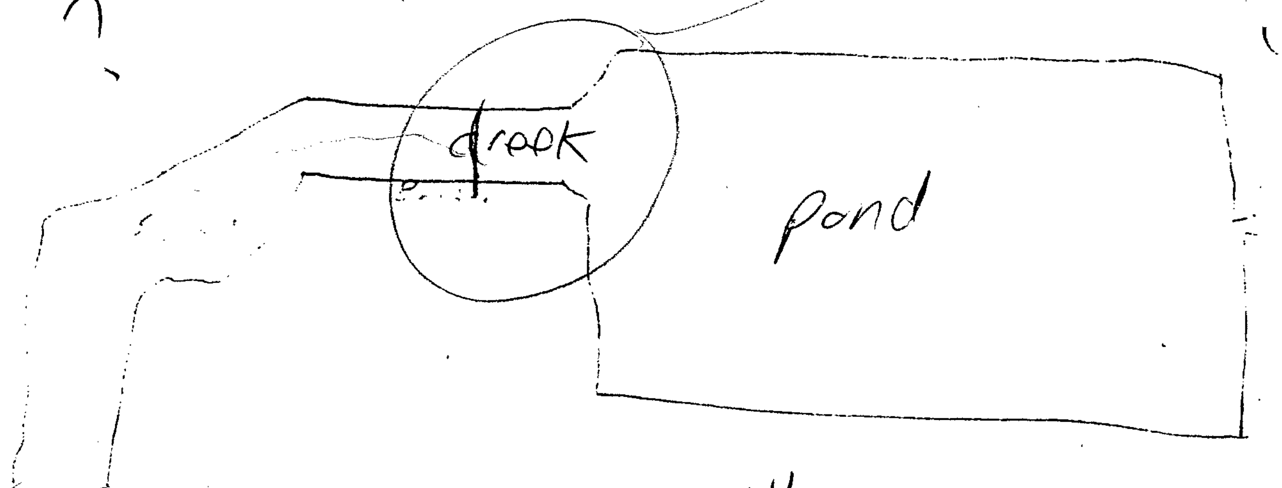
Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

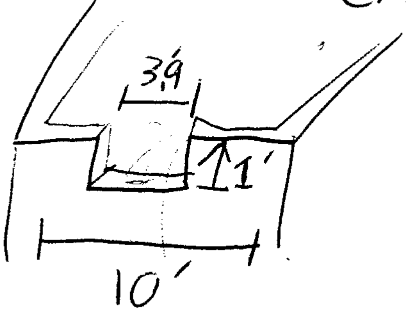


See Opposing Sheet

DIAGRAM T9-147, 148, 149, 150, 151



Creek spillway



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 4/2/99 **Crew:** RR MA

Structure Number: T9- 134, T9-135, T9-136

Nearest Street Address/Street Intersection:
WINTERTHUR RIDGE

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge) 134, 135, 136
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard (show measurements)
Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments:

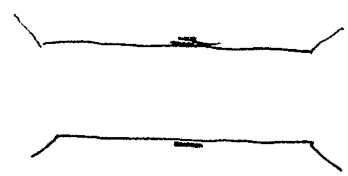
In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
	58"			x				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
	58"			x				

DIAGRAM T9-134 T9-135 T9-136



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA + R&D
Atlanta, Georgia

2422.02

D 7/1/00	Firm: Khafra / R&D	Crew initials: FA, AN	Photo #:
Structure Number:	TT-7020, 7021, 7022		
Nearest Street No: 6200	Street Name: Riverside Pkwy.		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance (HW / pipe end) Pipe Exit (HW / pipe end) HW type 1 (0°) 2 (45°), 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Storage Detention Pond (5 structures per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

Channel ______ x ______ Flume ______ x ______

Structural Damage: Severe Minor None

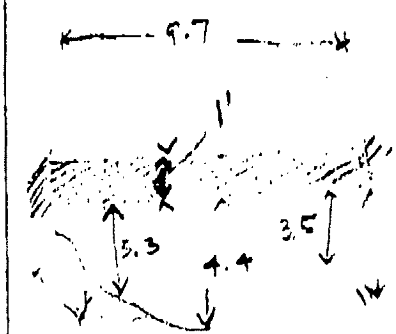
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

DEC-29-00 11:16 PM

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ✦ R&D
Atlanta, Georgia

2402.02

Date: 7/1/00	Firm: Khafra (R&D)	Crew Initials: FA, AN	Photo #:
Structure Number: T7-7023, 7024, 7025			
Nearest Street No: 6210	Street Name: Riverside Pkwy		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance (HW / pipe end) Pipe Exit (HW / pipe end) HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Storage Detention Pond (3 structures per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

Channel ______x______ Flume ______x______

Structural Damage: Severe Minor None

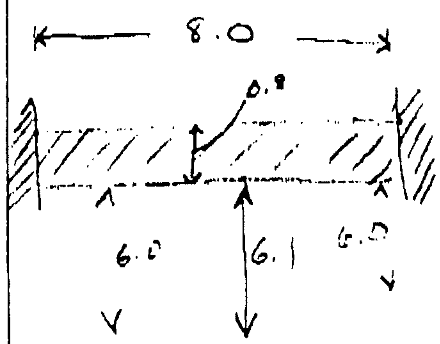
Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

2422.02.

D 7/1/00	Firm: Khafra / R&D	Crew initials:	Photo #:
Structure Number: T7-7026, 7027, 7028			
Nearest Street No: 6220	Street Name: Riverside Pkwy.		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance (HW / pipe end) Pipe Exit (HW / pipe end) HW type 1 (0°) 2 (45°) 3 (90°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Storage Detention Pond (5 structures per pond. Draw a sketch with dimensions on back of this sheet)

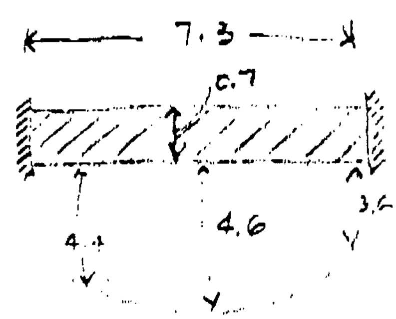
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

Channel _____ x _____ Flume _____ x _____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 10/19/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:

Structure Number: T5- 58, 59, 60, 61, 62

Nearest Street No: / Street Name: Johnson Ferry Road and Riverside Drive

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ____x____ Flume ____x____

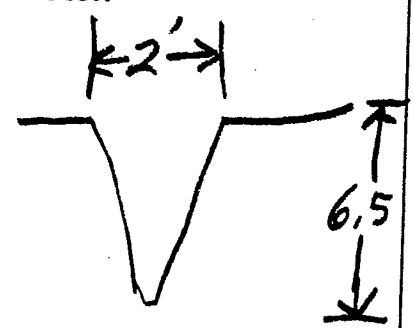
Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Sketch



Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 8/12/99	Firm: Khafra	Crew Initials: BLT/MN	Photo #:

Structure Number: T6- 40, 41, 42, 43, and 44

Nearest Street No: | Street Name: Riverside Dr / Harbor Dr

Structure Type: | Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

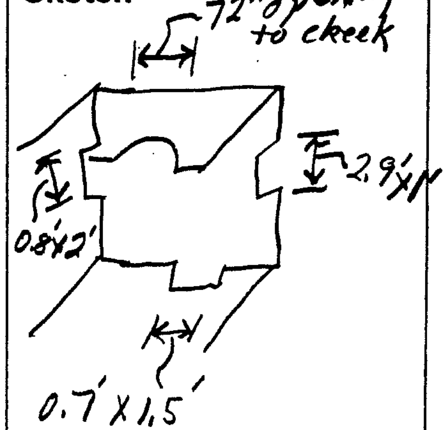
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel ____x____ Flume ____x____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: ~~Yes~~ No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments: flow outlet to (T6-45)

In-Coming Pipe: From

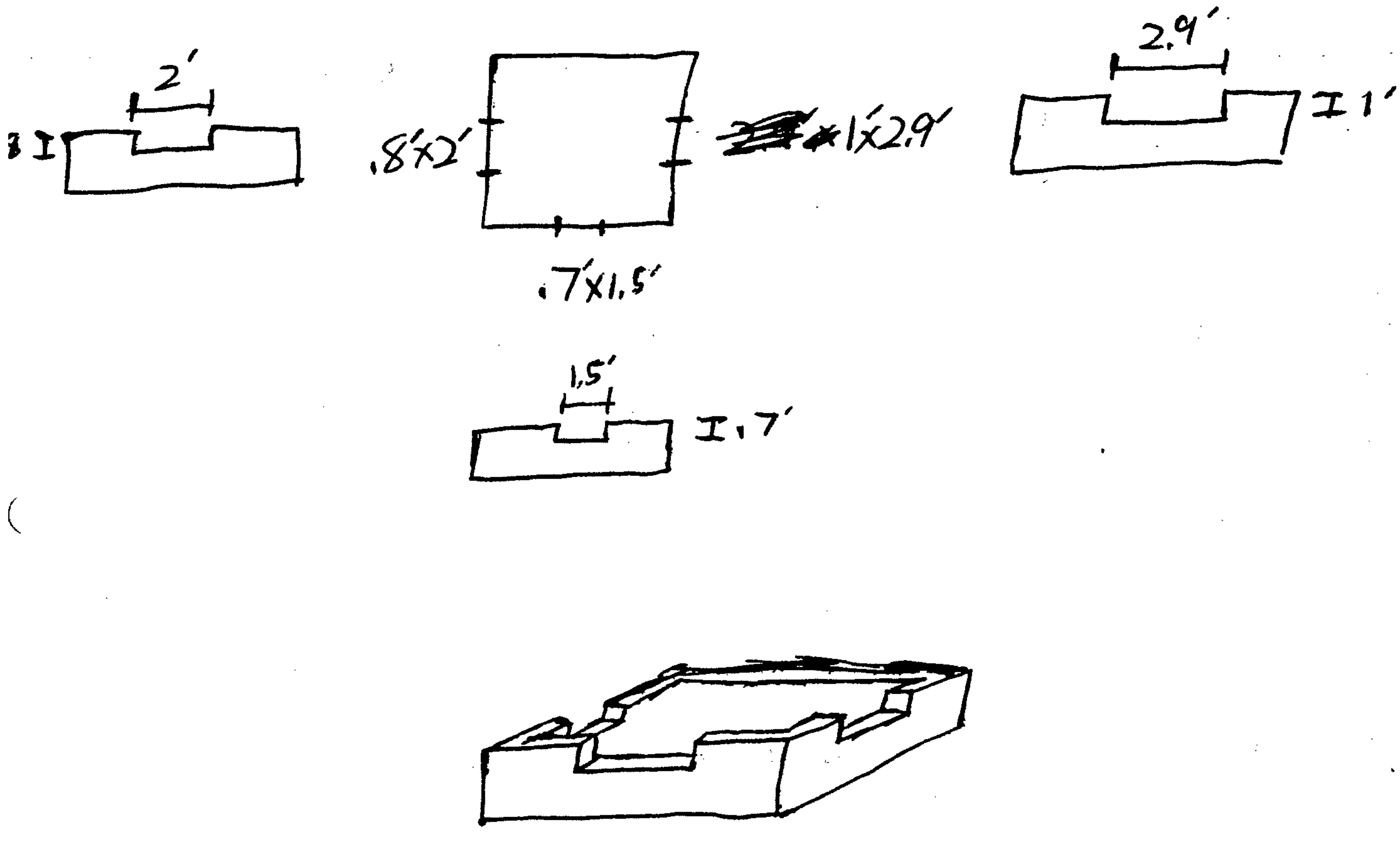
Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe: To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
see T6-45								

Drawing

T6-40-44



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 04/07/99 | Crew: J.G., T. W.

Structure Number: HC-90

Nearest Street Address/Street Intersection:
AT RIVERSIDE TRACE

Structure Type: Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 2 3

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

DOUBLE Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)
#90, 91, 92, 93, 94

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

Channel Flume

SEE BACK

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: THE WATER FLOW THROUGH THE LEFT SIDE OF THE DOUBLE DETENTION POND.

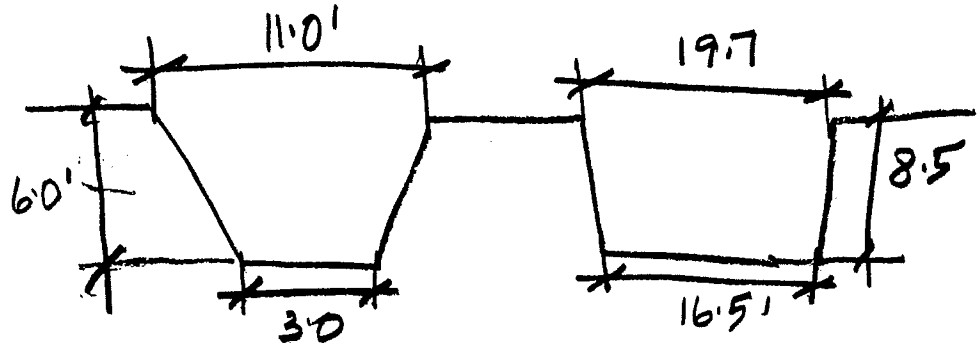
In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
HC-89								

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

DIAGRAM HC-90



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 04/15/99	**Crew: J.G., T. W.**
Structure Number: HC- 186	
Nearest Street Address/Street Intersection:	
AT HEARDS FY NEAR WEATHERLY DR	

Structure Type: Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 2 3

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge) (#186, 187, 188)

Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

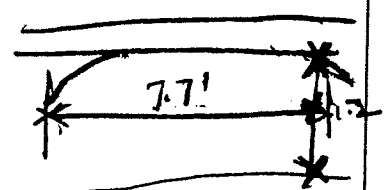
Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None



Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 04/15/99	**Crew:** J.G., T. W.
Structure Number: HC-172	
Nearest Street Address/Street Intersection:	
AT RILEY PLACE	

Structure Type: Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 2 3

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

(# 172, 173, 174, 175, 176)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

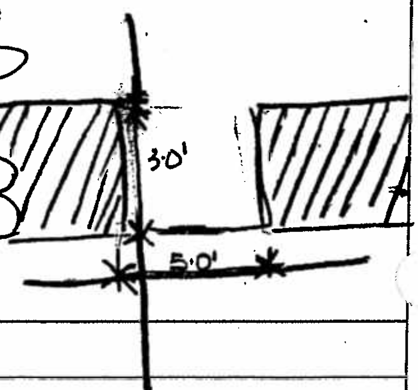
Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None



Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/8/99	**Crew:**
Structure Number: GC01	
Nearest Street Address/Street Intersection: PARKING LOT OF RAY'S ON THE RIVER NEAR MOUTH AT CHATTHOCHI	

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Culvert Entrance Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)
FLOW CONTROL / OUTFALL STRUCTURE

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Non-Standard
Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

SEE BACK
See Back

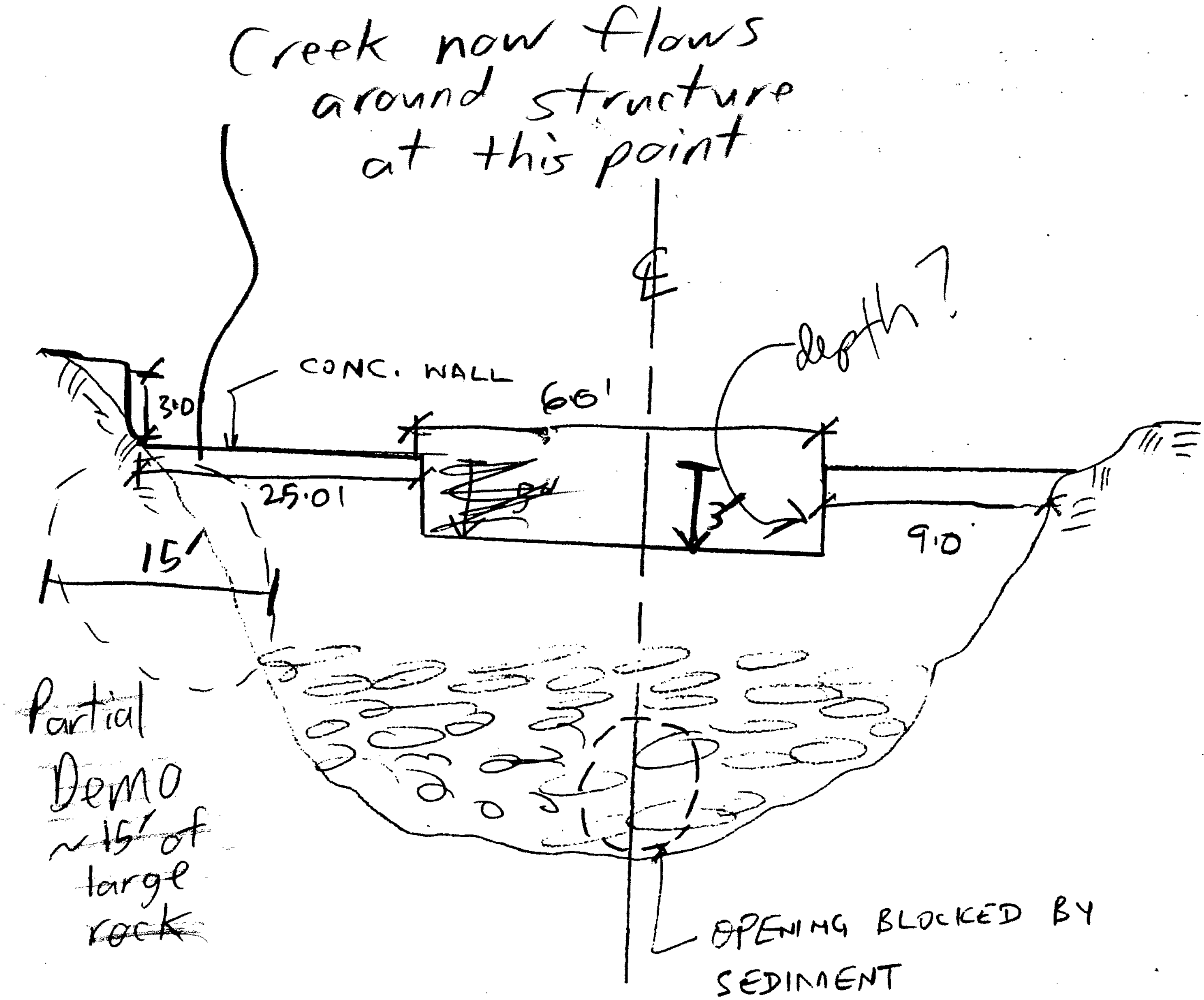
Comments: THIS IS GAME CREEK FLOW CONTROL STRUCTURE AT MOUTH AT CHATTAHOOCHI. MEASUREMENTS + DETAILS WILL BE PROVIDED BY SURVEYORS. SEVERE EROSION/WASHOUT

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC



VIEW OF UPSTREAM SIDE OF FLOW CONTROL STR.

SEE COMMENTS ON THE DOWNSTREAM SIDE.

DIAGRAM GC-0001

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/8/99 | Crew:

Structure Number: GC01

Nearest Street Address/Street Intersection: PARKING LOT OF RAY'S ON THE RIVER NEAR MOUTH AT CHATTHOCHI

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Culvert Entrance Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)
FLOW CONTROL / OUTFALL STRUCTURE

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Non-Standard
Channel Flume

Structural Damage: Severe Minor None

SEE BACK

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

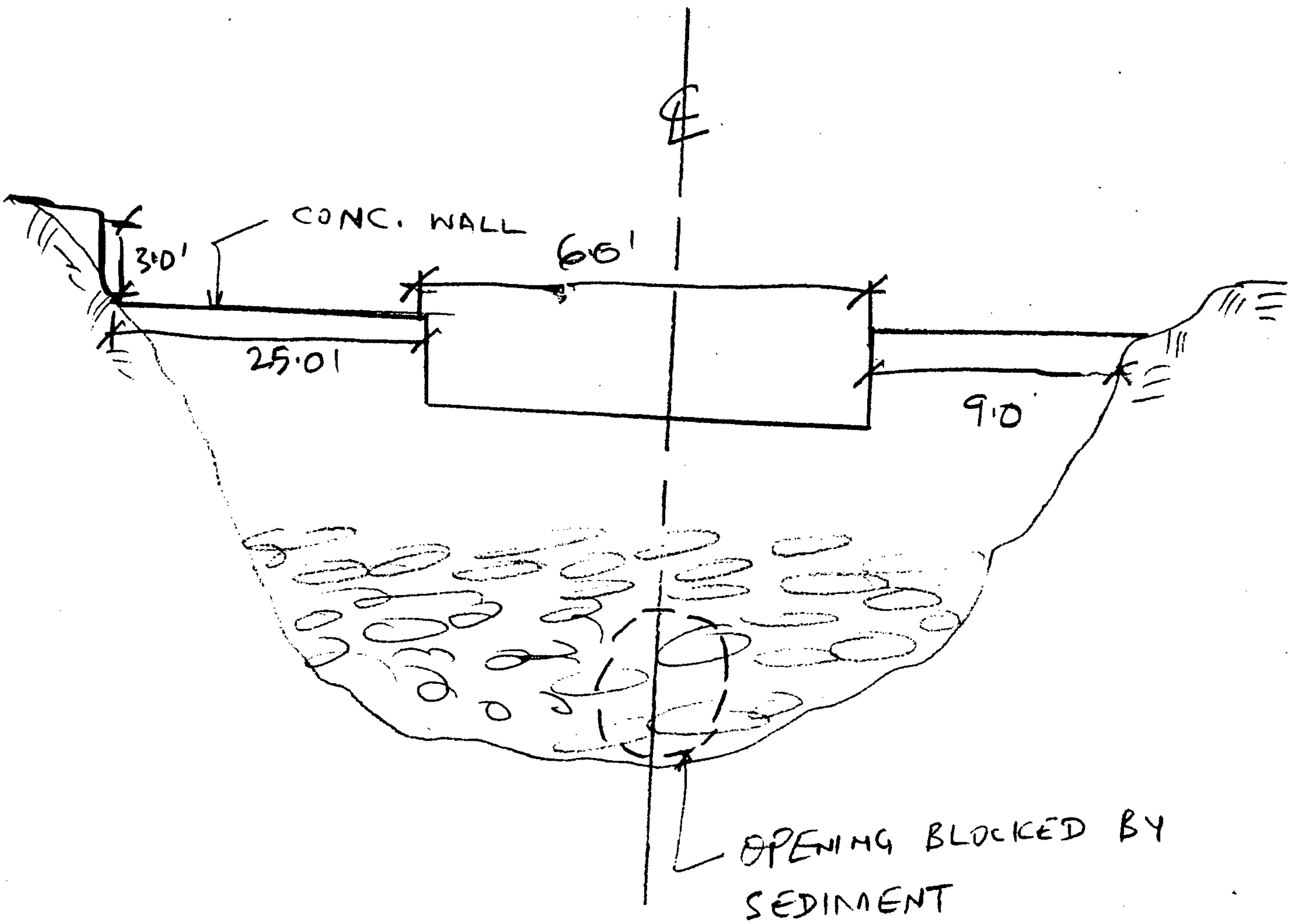
Comments: THIS IS GAME CREEK FLOW CONTROL STRUCTURE AT MOUTH AT CHATTAHOOCHI. MEASUREMENTS + DETAILS WILL BE PROVIDED BY SURVEYORS. SEVERE EROSION/WASHOUT

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC



VIEW OF UPSTREAM SIDE OF FLOW CONTROL STR.

SEE COMMENTS ON THE DOWNSTREAM SIDE.

DIAGRAM GC-0001

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/8/99 | Crew: RR, HP, EF
Structure Number: GC08
Nearest Street Address/Street Intersection: 6666 BUILDING LOT ON POWERS FERRY RD

Structure Type: Grate Curb Combination Yard Channel
Flume Pipe Entrance [hw/pipe end] Pipe Exit [hw/pipe end]
Culvert Entrance Culvert Exit Bridge
Detention Structure (draw a sketch with dimensions on back of this sheet)

inlet
Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Non-Standard
Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No Source: Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/9/99	**Crew:** FR, EF, HP
Structure Number: GC 37, 38, 39, 40, 41	
Nearest Street Address/Street Intersection: BEHIND CHART HOUSE (6450 BLDG)	

Structure Type: Grate Curb Combination Yard Channel
Flume Pipe Entrance [hw/pipe end] Pipe Exit [hw/pipe end]
Culvert Entrance Culvert Exit Bridge (3)
Detention Structure (5) (draw a sketch with dimensions on back of this sheet)

Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Non-Standard
Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

SEE BACK

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

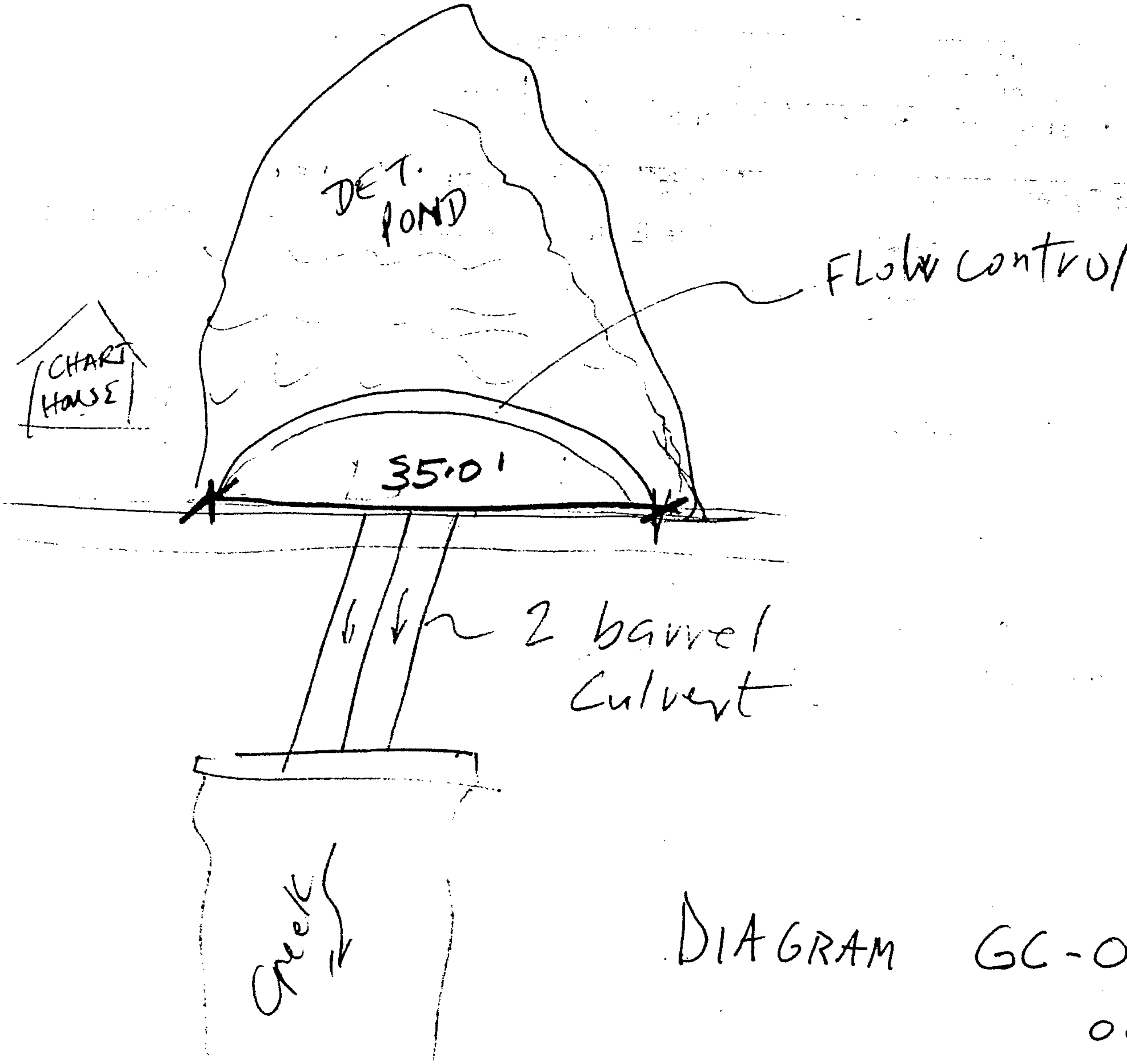


DIAGRAM GC-0037—0041

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/11/99 **Crew:**

Structure Number: GC112, 113, 114, 115, 116

Nearest Street Address/Street Intersection: POWERS FERRY & NORTHSIDE DR
WENDY'S PARKING LOT AT ENTRANCE DRIVE

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Culvert Entrance Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Non-Standard

Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: NOTE: THIS IS UNDERGROUND DET POND WITH 60" CMP. ORIFICE IS BLOCKED AND PIPE IS FILLED WITH STANDING WATER

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC111	36"			X				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 117	18"	8.5		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/11/99	**Crew:** RR HP CO
Structure Number: GC139, 140, 141 142, 143	
Nearest Street Address/Street Intersection: NORTHSIDE + POWERS FERRY BEHIND CHEVRON STATION'S CAR WASH	

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
~~Culvert Entrance~~ Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Non-Standard
Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

SEE BACK

Comments: THIS STRUCTURE IS ABOVE GROUND DET POND THAT IS DRY + 25% FILLED WITH LEAVES AND TRASH. ORIFICE IS BLOCKED

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC138	24"		X					

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 144	12"							X

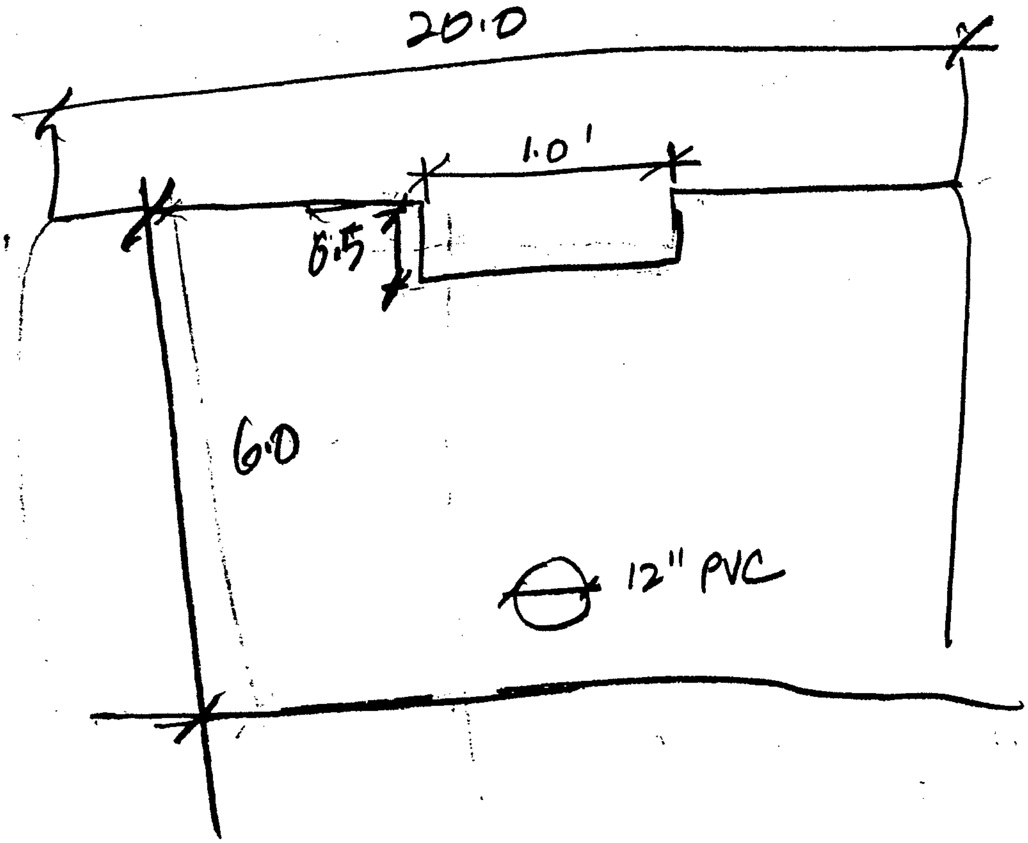


DIAGRAM GC-0139

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

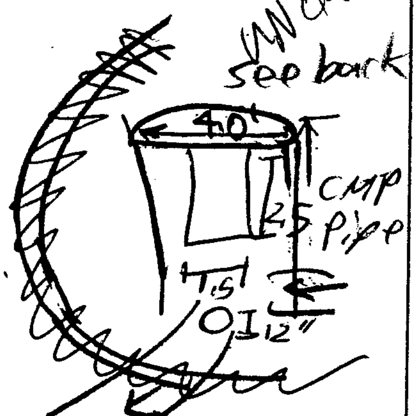
Date: 03/19/99 **Crew:** TW, JG

Structure Number: GC 363

Nearest Street Address/Street Intersection:
AT DUPREE ~~HERITAGE~~ OAKS

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: INCOMING IS COMING FROM THE CREEK

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
	2.5'	/		/				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 364	36"	12.2'		X				

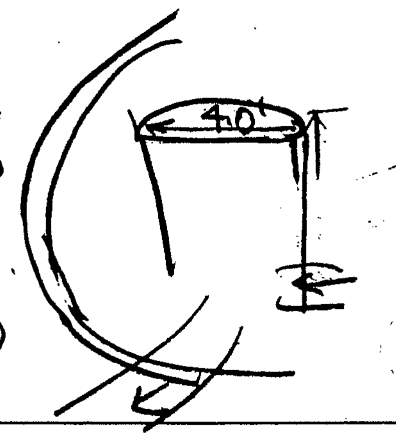
TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/19/99	Crew: TW, JG
Structure Number: GC 363	
Nearest Street Address/Street Intersection:	
AT DUPREE ~~HERITAGE~~ OAKS	

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: INCOMING IS COMING FROM THE CREEK

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
	2'8	/		/				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 364	36"	12.2'		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/19/99	Crew: TW, JG
Structure Number: GC 369	
Nearest Street Address/Street Intersection:	
AT DUPREE HERITAGE OAKS	

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (3 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard

Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

SEE BACK

Comments: 18" PIPE IS COMING FROM THE CREEK AND BAD EROSION IS GOING ON. THE SLAM IS 3.0' X 7.0' CONCRETE STRUCTURE

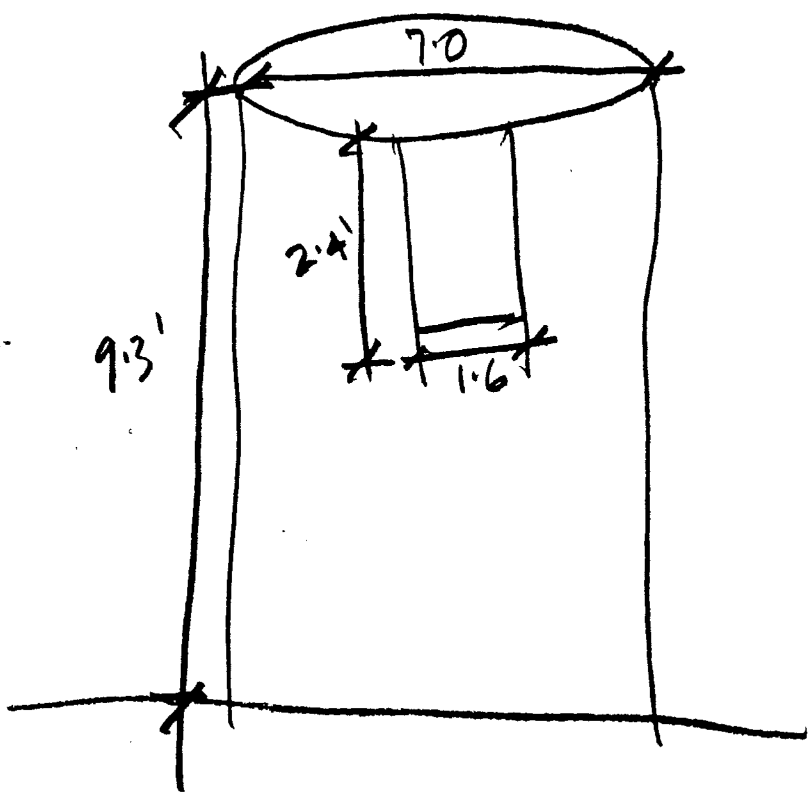
In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
	18"	6.5'		X				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 368	36"	9.0'		X				

DIAGRAM GC-0369



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/22/99 | Crew: TW, JG

Structure Number: GC 395

Nearest Street Address/Street Intersection:
AT POWERS OVERLOOK CT

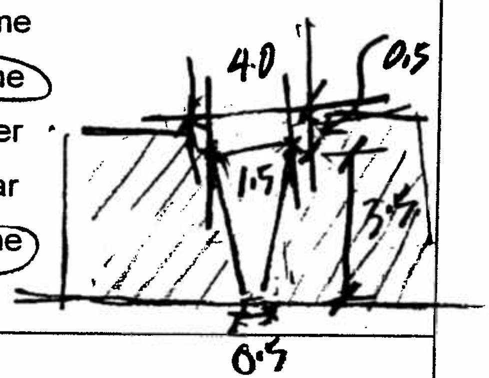
Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard

DETENTION POND

Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No Source: Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None



Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

F:\ENGINEER\99104\FIELD\FIELDDTA.DOC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/22/99	**Crew:** TW/JG
Structure Number: GC 400	
Nearest Street Address/Street Intersection: AT POWERS BRIDGE CT	

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond DAM (3 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

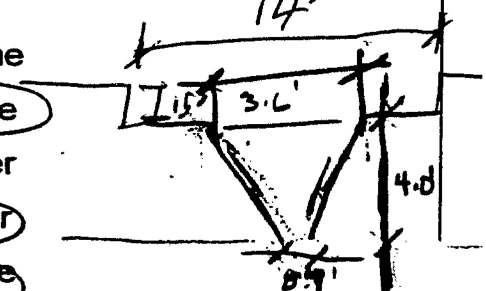
Standard 12'x0.5' conc.

Non-Standard

Channel Flume

Width to bank?

14'

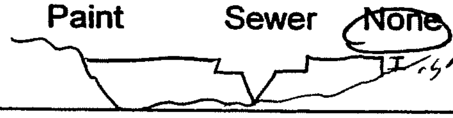


Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None



See back

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
3/00								

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

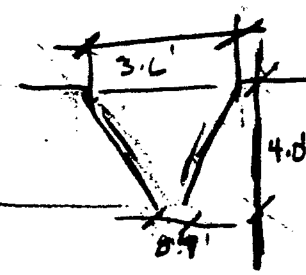
KHAFRA ◆ R&D
Atlanta, Georgia

Date: 03/22/99 **Crew:** TW/JG
Structure Number: GC 400
Nearest Street Address/Street Intersection:
AT POWERS BRIDGE CT

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond DAM (3 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None



Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/23/99 Crew: TW / JG
Structure Number: GC 410
Nearest Street Address/Street Intersection:
AT POWERS RIDGE PL / POWERS POINT CT.

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No Source: Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

SEE BACK

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

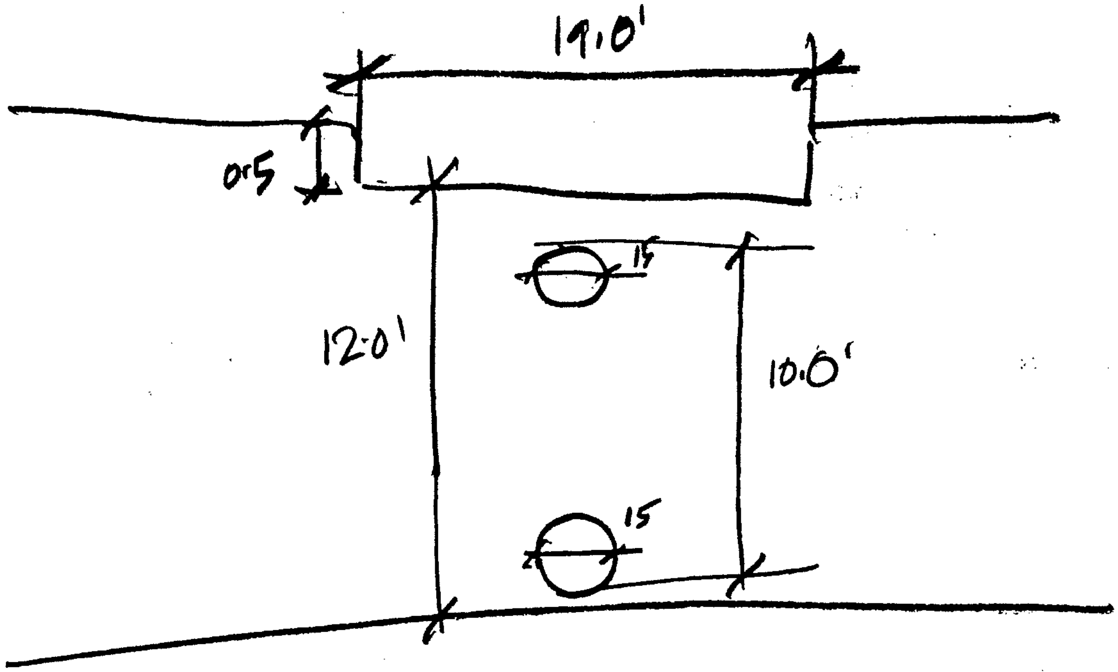


DIAGRAM GC-0410

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT KHAFRA ♦ R&D
Atlanta, Georgia

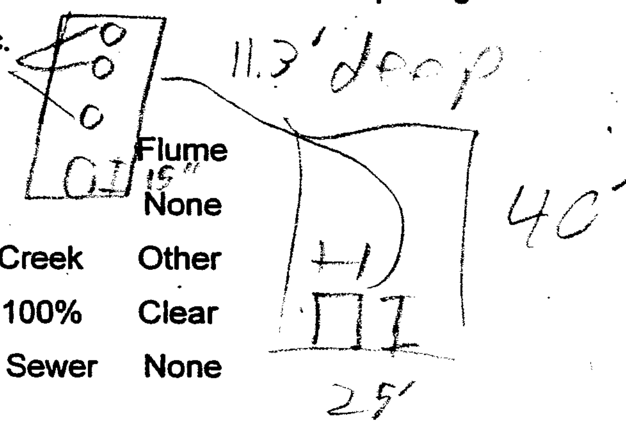
Date: 03/24/99 **Crew:** TW, JG

Structure Number: GC 454

Nearest Street Address/Street Intersection:
AT FIRST DATA BULD LOT

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume



Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments: THIS IS A DETENTION POND, VERY VERY DEEP AND NO MEASURMENTS TO BE MADE

In-Coming Pipe: From See Back

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC-438								

Out-Going Pipe: To ? No structure found

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/24/99	Crew: TW, JG
Structure Number: GC 454	
Nearest Street Address/Street Intersection: AT FIRST DATA BULD LOT	

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No Source: Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments: THIS IS A DETENTION POND, VERY VERY DEEP AND NO MEASURMENTS TO BE MADE

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC-438								

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

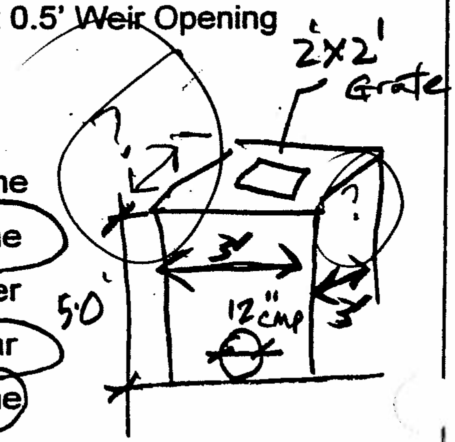
KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/25/99	Crew: TW, JG
Structure Number: GC 458	
Nearest Street Address/Street Intersection: AT NEW NORTHSIDE DR NEAR TEXACO	

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None



Comments: GRATE - CONCRETE STRUCTURE SITTING ON DETENTION POND AND BAD EROSION

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

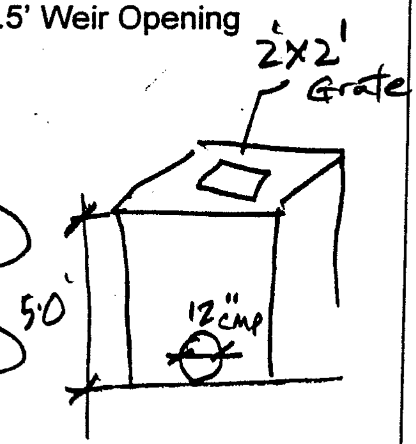
TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/25/99	**Crew:** TW, JG
Structure Number: GC 458	
Nearest Street Address/Street Intersection:	
AT NEW NORTHSIDE DR NEAR TEXACO	

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard



Channel Flume
Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments: GRATE - CONCRETE STRUCTURE SITTING ON DETENTION POND AND BAD EROSION

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ◆ R&D
Atlanta, Georgia

Date: 03/26/99	Crew: TW, JE
Structure Number: EC478	
Nearest Street Address/Street Intersection:	
AT 5505 INTERSTATE NORTH PKWY	

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

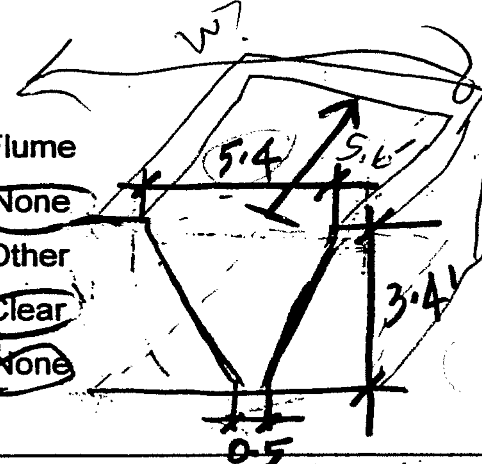
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard

Channel Flume



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: see back

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/26/99 **Crew:** TW, JE

Structure Number: GC478

Nearest Street Address/Street Intersection:

AT 5505 INTERSTATE NORTH PKWY

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

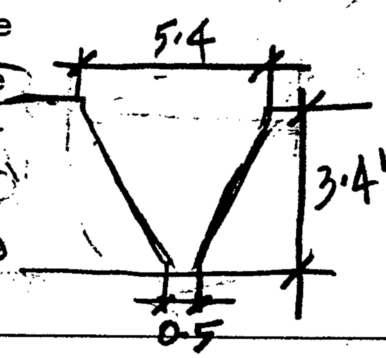
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard

Channel Flume



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/26/99 **Crew:** TN, JG

Structure Number: GC 492

Nearest Street Address/Street Intersection:

AT 5505 INTERSTATE NORTH PKWY

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

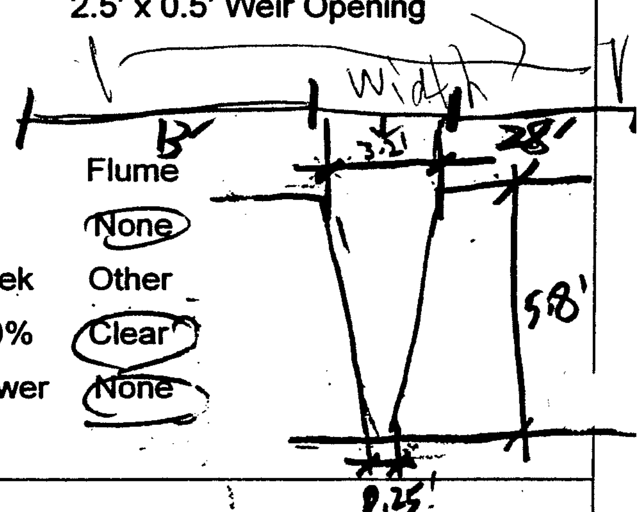
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)
WALL

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard

Channel Flume



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 491								

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 493								

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/26/99	Crew: TN, JG
Structure Number: GC 492	
Nearest Street Address/Street Intersection:	
AT 5505 INTERSTATE NORTH PKWY	

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)
WALL

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard

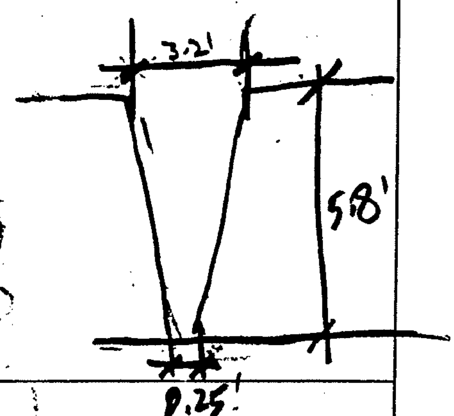
Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None



Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
492								

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
to 100								

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/26/99	Crew: TW, JG
Structure Number: GC 493	
Nearest Street Address/Street Intersection:	
AT 5565 INTERSTATE NORTH PKWY	

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc. 0.4' x 2.5'

Non-Standard

Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 492								

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 499	0.4'x 2.5'							

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/17/99 **Crew:** RR HP

Structure Number: GC557, 558, 559, 560, 561

Nearest Street Address/Street Intersection: POWERS FERRY ROAD AND MT VERN HW

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard

Channel Flume

Structural Damage: Severe Minor None SEE BACK
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None See Back

Comments: ~~NO MEASUREMENTS COULD BE MADE BECAUSE WALLS WERE TO HIGH. BOTTOM ORIFICES [illegible] WAS VERY LARGE ABOUT 72" DIA~~

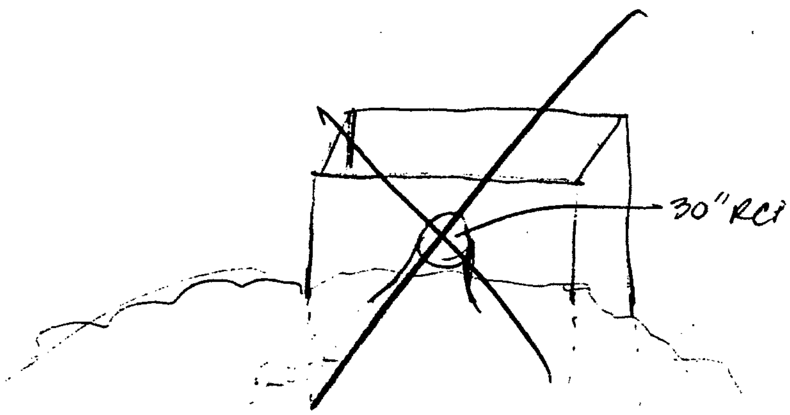
In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC556	30"		X					

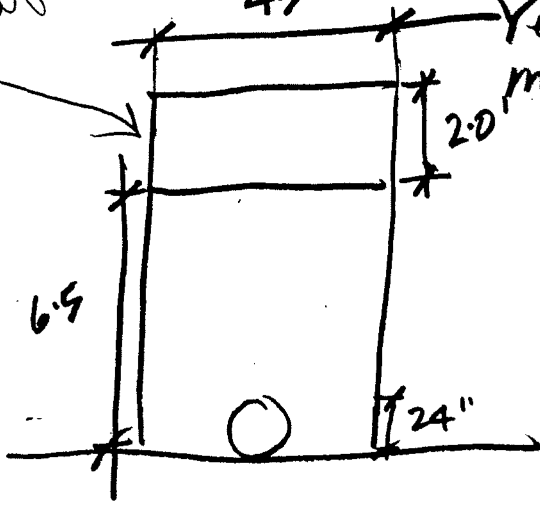
Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC562	36"		X					

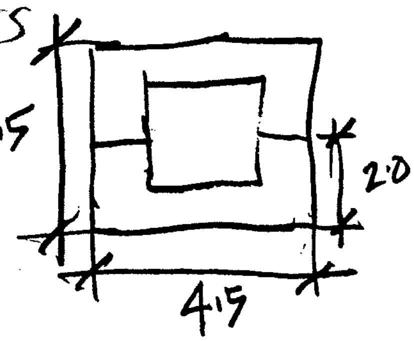
DIAGRAM 6C-0557, 0558, 0559, 0560, 0561



What is this? An opening?



Yes, measurements as shown



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/17/99 **Crew:** RR HP

Structure Number: GC557, 558, 559, 560, 561

Nearest Street Address/Street Intersection: POWERS FERRY ROAD AND MT VERNON HWY

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard

Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

SEE BACK

Comments: ~~NO MEASUREMENTS COULD BE MADE BECAUSE WALLS WERE TO HIGH. BOTTOM ORIFICES [illegible] WAS VERY LARGE ABOUT 72" DIA~~

In-Coming Pipe:
From

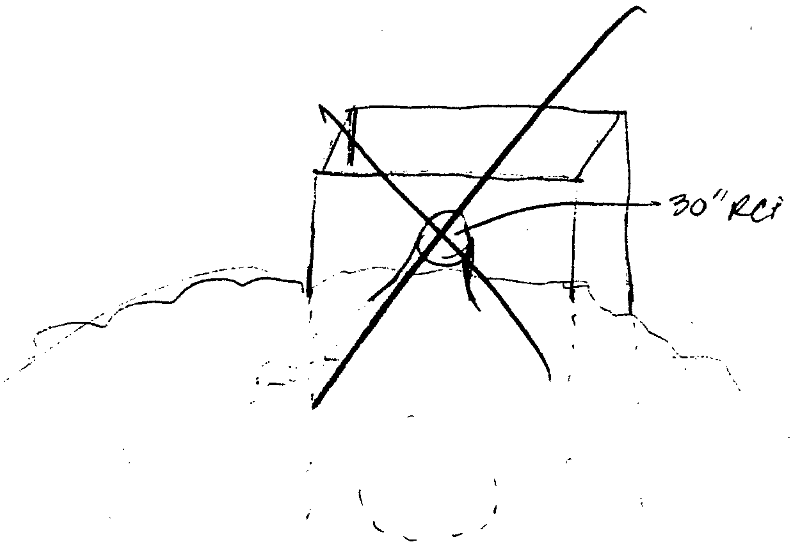
Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC556	30"		X					

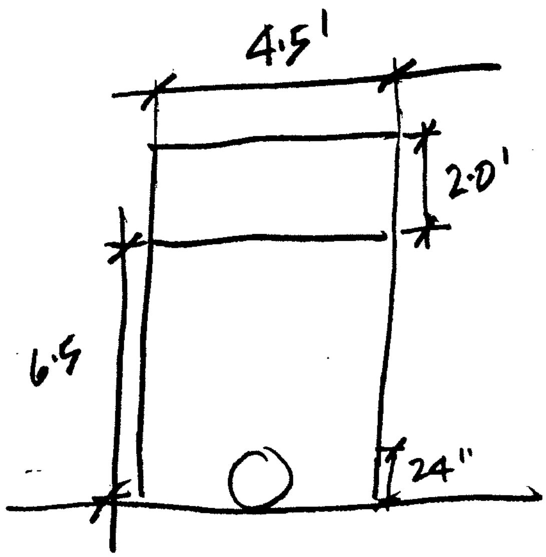
Out-Going Pipe:
To

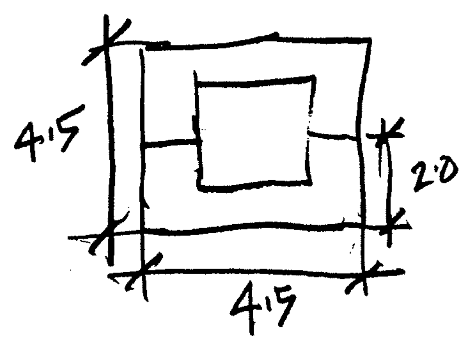
Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC562	36"		X					

F:\ENGINEER\99104\FIELD\FIELDDTA.DOC

DIAGRAM GC-0557, 0558, 0559, 0560, 0561







TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/18/99	Crew: KR HP
Structure Number: GC 578, 579, 580, 581, 582	
Nearest Street Address/Street Intersection:	

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard

Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

SEE NOTE ON 577

Comments: ORIFICE IS 75% BLOCKED, 12" DIA. ORIFICE

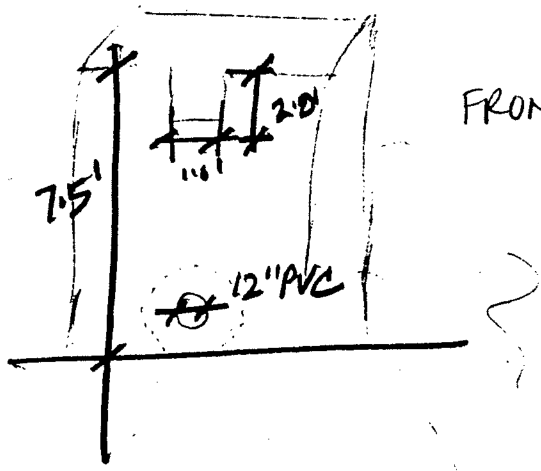
In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
								X

Out-Going Pipe:
To

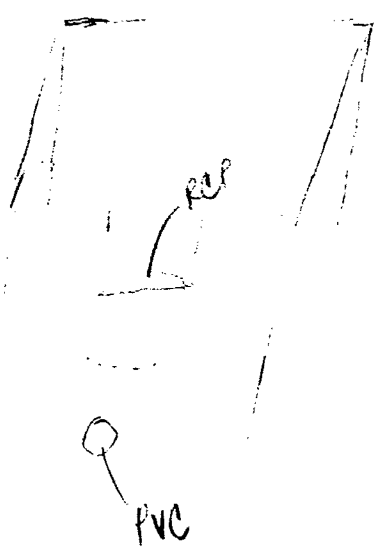
Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
UNK	24"	8.33	X					

DIAGRAM GC-0578 — 0582



FRONT

TOP



TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/22/95	Crew: RR MA
Structure Number: GC 642, GC643, GC 644, GC 645 & GC 646	
Nearest Street Address/Street Intersection: behind 925 Marseilles Dr.	

Structure Type: Grate Curb Combination Yard Channel
Flume Pipe Entrance [hw/pipe end] Pipe Exit [hw/pipe end]
Culvert Entrance Culvert Exit Bridge
Detention Structure (5 draw a sketch with dimensions on back of this sheet)

Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Non-Standard
Channel Flume

SEE BACK

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments: No manhole cover. INLET PIPE IS COMPLETELY COVERED WITH DIRT BUT WATER IS STILL GETTING THROUGH FOR FLOW

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~GC 643~~ GC-647	30"	8.4	X					

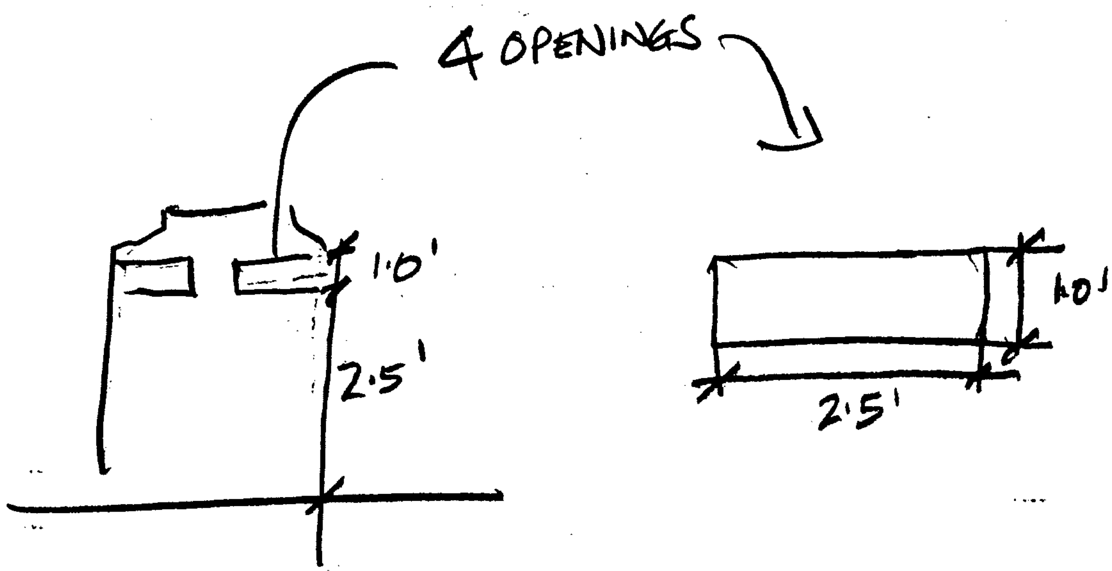


DIAGRAM GC-0642 - 0646

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/23/99 Crew: RR MA

Structure Number: GC 693

Nearest Street Address/Street Intersection:

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Culvert Entrance Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Non-Standard
Channel Flume 4' x 1'

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC-692	36"		X					

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/24/99 **Crew:** RR MA

Structure Number: GC 708

Nearest Street Address/Street Intersection:

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Culvert Entrance Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Non-Standard
Channel Flume 2.25' x 9'

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 707			X					

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/24/99 **Crew:** RR MA

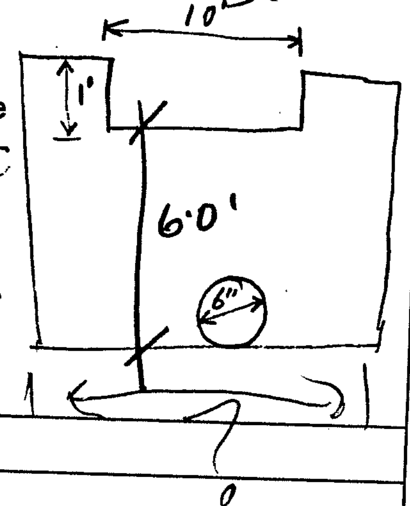
Structure Number: GC 726 , GC727, GC 728, GC 729 , GC730

Nearest Street Address/Street Intersection: HEARDS FY RD BEHIND RIVERWOOD HIGH SCHOOL

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard

See back



Channel Flume

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~O.f.s.~~	~~6"~~							
~~Top Opening~~	~~1'x10'~~							

F:\ENGINEER\99104\FIELD\FIELDDTA.DOC

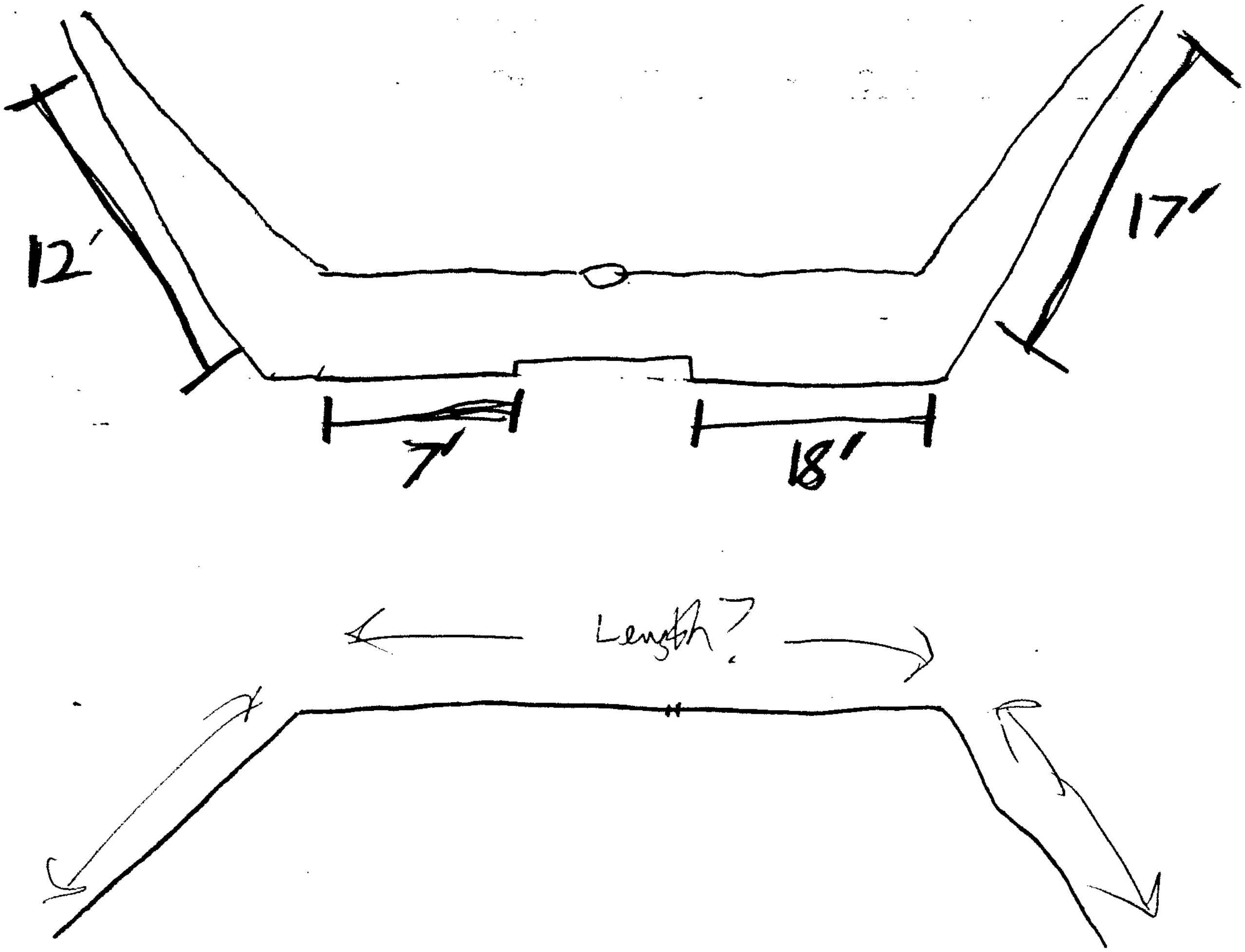


DIAGRAM GC-0726-0730

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT KHAFRA ♦ R&D
Atlanta, Georgia

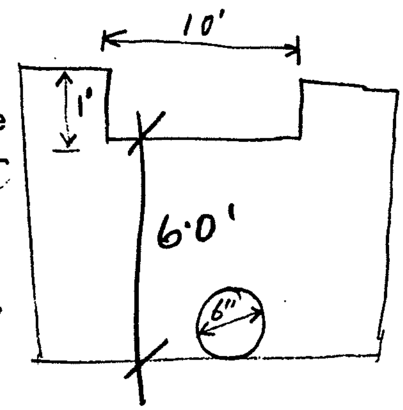
Date: 3/24/99 **Crew:** RR MA

Structure Number: GC 726, GC727, GC 728, GC 729, GC730

Nearest Street Address/Street Intersection: HEARDS FY RD BEHIND RIVERWOOD HIGH SCHOOL

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume



Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No **Source:** Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~C.f.s.o.~~	~~6"~~							
~~Top Opening~~	~~1'x10'~~							

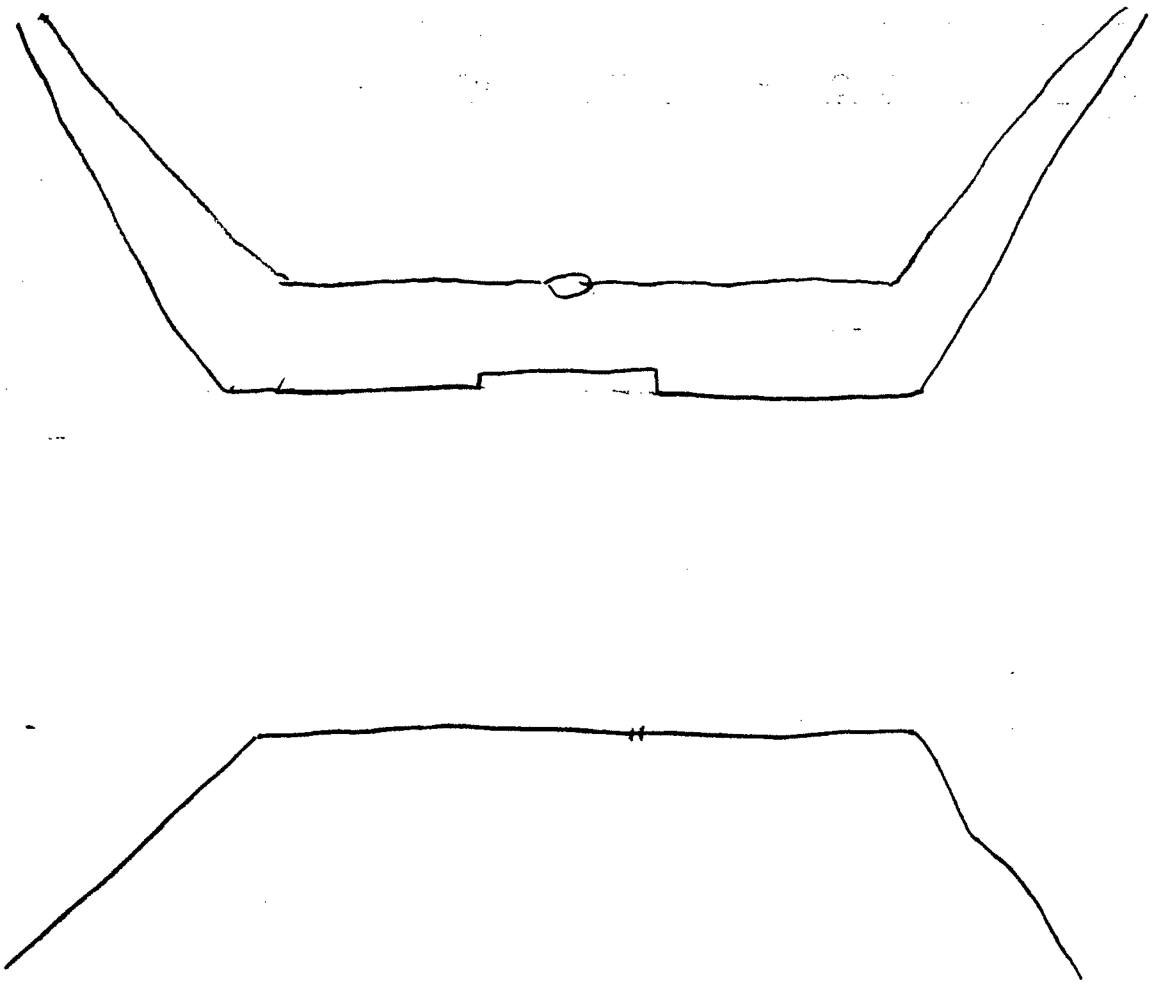


DIAGRAM GC-0726-0730

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 3/30/99 | Crew: RR MA

Structure Number: GC 772 GC 773, GC 774, GC 775, GC 776

Nearest Street Address/Street Intersection: HEARDS FY RD BEHIND RIVERWOOD HIGH SCHOOL

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard

Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

SEE BACK

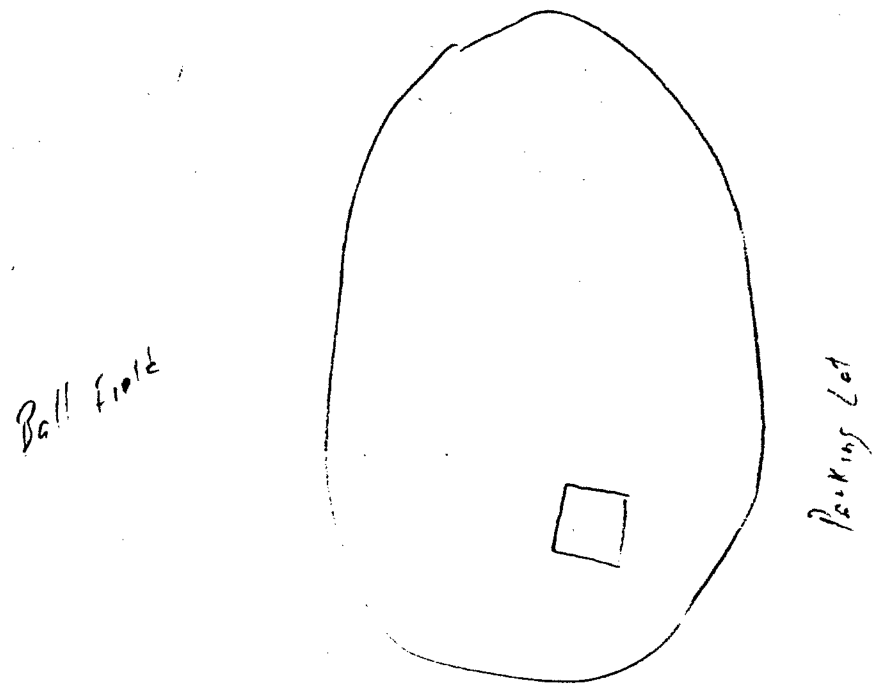
Comments: Inside fenced in area could not get inside

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 779				X				



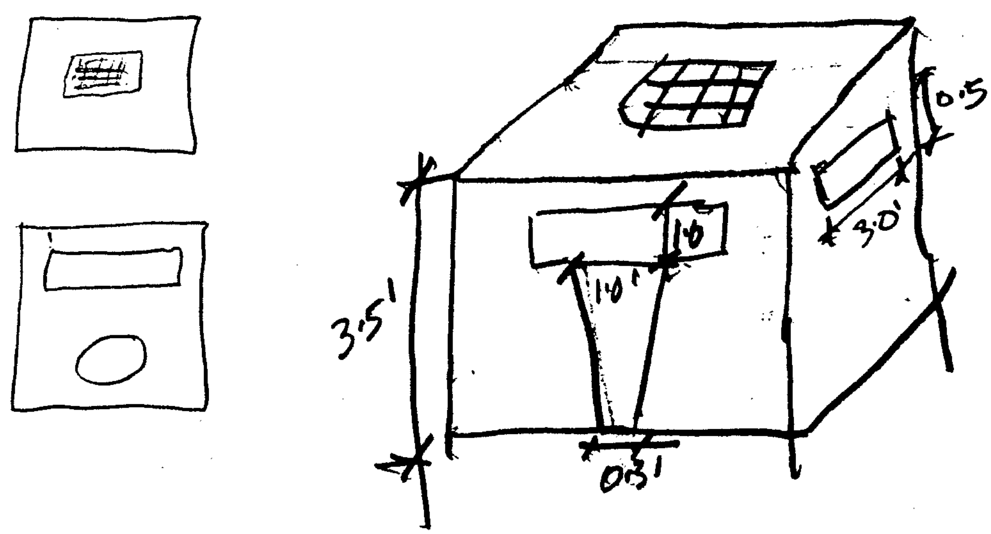


DIAGRAM GC-0772 — 0776

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ◆ R&D
Atlanta, Georgia

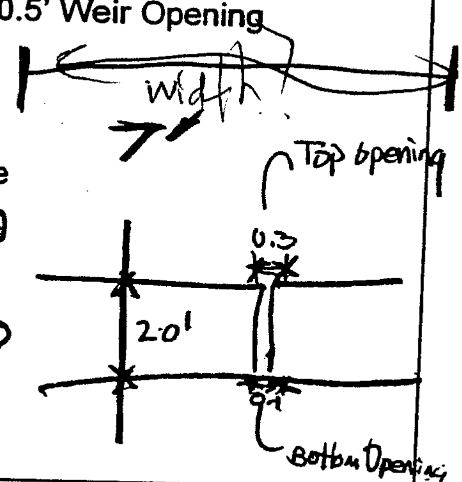
Date: 03/31/99 | Crew: TW, JG

Structure Number: GC 810

Nearest Street Address/Street Intersection:
AT MEGAPOWER BULD LOT RIVEREDGE PKWY

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard



Channel Flume
Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No Source: Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments: ON THE BACKSIDE OF THIS STRUCTURE THERE IS A RIP RAP

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 03/31/99 **Crew:** TW, JG

Structure Number: GC 810

Nearest Street Address/Street Intersection:

AT MEGAPOWER BULD LOT RIVEREDGE PKWY

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard

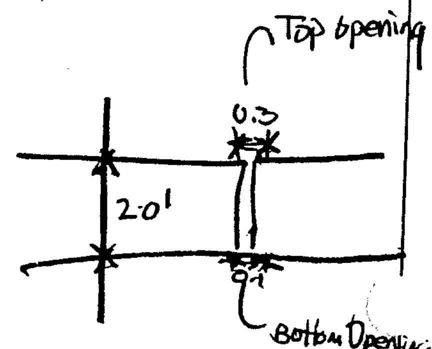
Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None



Comments: ON THE BACKSIDE OF THIS STRUCTURE THERE IS A RIP RAP

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 04/02/99 | Crew: TW, JG

Structure Number: GC 857

Nearest Street Address/Street Intersection:
AT POWERS FY NEAR RAY'S ON THE RIVER

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
JUNCTION BOX
Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard

Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: THE STRUCTURE IS DAMAGED, TOP HAS BROKEN IN ON IT

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 856	18"	4.3'		X				
GC 859	24"	4.2'		Y				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 858	36"	7.5'		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 04/05/99 | Crew: TW, JG

Structure Number: GC 4896

Nearest Street Address/Street Intersection:
At Riveredge Pkwy Near Edx 97

Structure Type: Grate Curb Combination Yard Channel
Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)
Detention Pond (3 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
Standard 12'x0.5' conc.
Non-Standard
Channel Flume

Width?
6.25
0.25
3.6'
0.25

Structural Damage: Severe Minor None
Dry-Weather Flow: Yes No Source: Creek Other
Blockage/Clogging: 25% 50% 75% 100% Clear
Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 915	48"			X				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 04/05/99 **Crew:** TW, JG

Structure Number: GC 4896

Nearest Street Address/Street Intersection:

AT RIVEREDGE PKWY/NEAR EDX 97

Structure Type: Grate Curb Combination Yard Channel

Manhole Flume Pipe Entrance [hw / pipe end] Pipe Exit [hw / pipe end]

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (3 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard

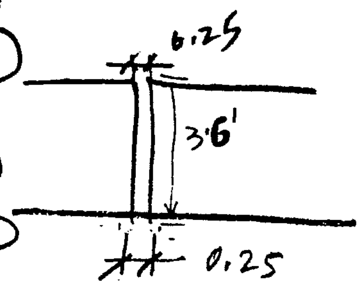
Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None



Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC915	48"			X				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT KHAFRA ♦ R&D Atlanta, Georgia

Date: 07/05/99 **Crew:** CO, TW

Structure Number: GC- 897

Nearest Street Address/Street Intersection:

AT 2000 RIVEREDGE PKWY

Structure Type: Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 2 3

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

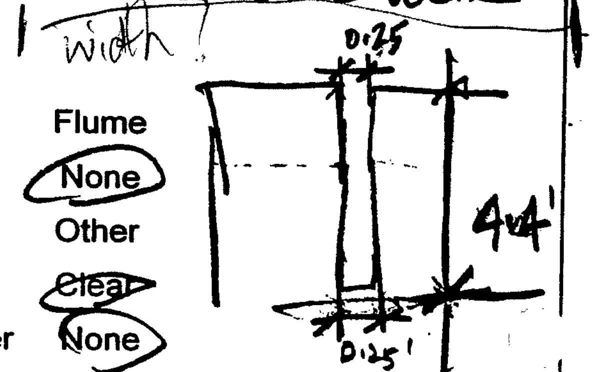
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

FLOOD CONTROL WEIR

Standard 12'x0.5' conc.

Non-Standard (show measurements)

Channel Flume



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

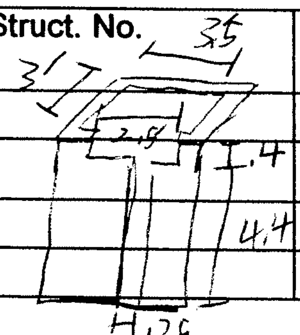
Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe: From Flow Control Structure

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC



Out-Going Pipe: To interior invert - 6.3'

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 902	30"			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT KHAFRA ♦ R&D
Atlanta, Georgia

Date: 07/05/99 | Crew: CO, TW

Structure Number: GC- 897

Nearest Street Address/Street Intersection:
AT 2000 RIVEREDGE PKWY

Structure Type: Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 2 3

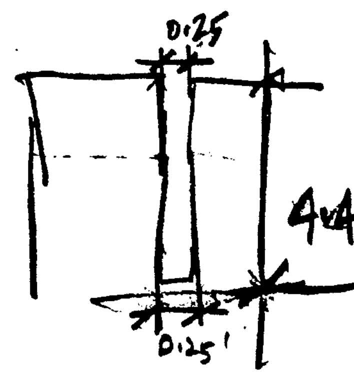
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening
FLOOD CONTROL WEIR

Standard 12'x0.5' conc.

Non-Standard (show measurements)



Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No Source: Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments:

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 902	30"			X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Ge

Date: 05/07/99 **Crew:** CD, TW

Structure Number: GC- 923

Nearest Street Address/Street Intersection:

AT INTERSTATE NORTH NEAR RIVEREDGE PKWY

Structure Type: Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 2 3

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

Channel Flume

Drawing?

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

See Back

Comments: #0 IS A DETENTION POND WITH 12" DIAMETER ORFICE

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 911	60"	9.3'		X				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 922	24"	9.7'		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date: 05/07/99 **Crew:** CD, TW

Structure Number: GC- 923

Nearest Street Address/Street Intersection:
AT INTERSTATE NORTH NEAR RIVEREDGE PKWY

Structure Type: Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 2 3

Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond,.draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)

Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: #0 IS A DETENTION POND WITH 12" DIAMETER ORFICE.

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 911	60"	9.3'		X				

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
GC 922	24"	9.7'		X				

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA ♦ R&D
Atlanta, Georgia

Date:	Crew:
Structure Number: GC- 940, 941, 942, 943, 944	
Nearest Street Address/Street Intersection:	

Structure Type: Grate Curb Combination Yard Manhole Channel Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 2 3

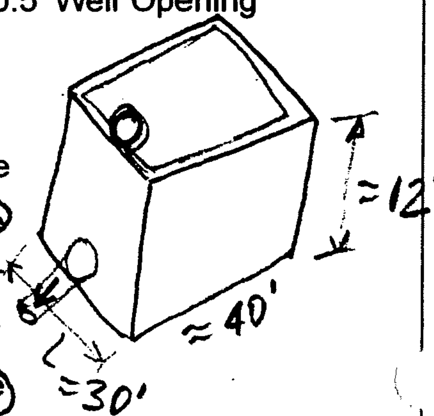
Box Culvert Entrance Box Culvert Exit Bridge (3 structures per bridge)

Detention Pond (5 structures per pond, draw a sketch with dimensions on back of this sheet)

Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12'x0.5' conc.

Non-Standard (show measurements)



Channel Flume

Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None

Comments: NOTE: THIS STRUCTURE IS UNDERGROUND DETENTION POND MEASURING APPROX. 40FT LONG, 30FT WIDE, 12FT HIGH.

In-Coming Pipe:
From

Struct. No.	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
UJ-950	30		X					

Out-Going Pipe:
To

Struct. No	Size	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
~~GC-050~~	36"		X					
UJ-948								

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
GC-0000026	GC#2	Weir at mouth of Game Creek	looking upstream	US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000026.JPG
GC-0000027	GC#1	Concrete pad downstream of weir at mouth of Game Creek	Failed concrete, just DS of weir		RB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000027.JPG
GC-0000028	GC#3	Centerline of stream	just US of weir	US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000028.JPG
GC-0000029	GC#3	24" inlet pipe (corrugated) run of from parking lot of building		DS	LB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000029.JPG
GC-0000030	GC#3	24" (?) inlet pipe	washout under concrete	DS	RB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000030.JPG
GC-0000031	GC#4	Rocks on DS side of bridge		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000031.JPG
GC-0000032	GC#5	US of bridge	RB & DS filled in	US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000032.JPG
GC-0000033	GC#9	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000033.JPG
GC-0000034	GC#9	Inlet pipe	failing support structure	DS	RB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000034.JPG
GC-0000035	GC#9	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000035.JPG
GC-0000036	GC#10	8" inlet	badly eroded channel from discharge	DS	RB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000036.JPG
GC-0000037	GC#11	Concrete inlet channel	Failed concrete, just US of GC-11	DS	RB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000037.JPG
GC-0000038	GC#11	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000038.JPG
GC-0000039	GC#12	32" corrugated pipe inlet	Just US of GC-12	US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000039.JPG
GC-0000040	GC#12	CL of stream 60' US		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000040.JPG
GC-0000042	GC#13	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000042.JPG
GC-0000043	GC#14	Streambank @ 32" inlet	eroded, US of GC-13	DS	RB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000043.JPG
GC-0000044	GC #15	18" culvert w/channel	channel eroding, DS of GC-15	DS		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000044.JPG
GC-0000046	GC#16	CL of pond (by Chart House Restaurant)		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000046.JPG
GC-0000047	GC#22	US of GC-22		DS	LB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000047.JPG
GC-0000048	GC#22	US of GC-22		US	LB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000048.JPG
GC-0000049	GC#24	US of GC-24, CL of stream				03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000049.JPG
GC-0000050	GC#27	US of GC-27, CL of stream		DS		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000050.JPG
GC-0000051	GC#27	US of GC-27, CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000051.JPG
GC-0000052	GC#27, GC#28	half way b/w GC-27 and GC-28, 24" culvert		DS	LB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000052.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
GC-0000053	GC#28	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000053.JPG
GC-0000054	GC#29	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000054.JPG
GC-0000055	GC#30	Retention basin (b/w McDonalds and Wendys)				03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000055.JPG
GC-0000056	GC#32	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000056.JPG
GC-0000057	GC#36	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000057.JPG
GC-0000058	GC#36	36" corrugated pipe	taken looking S from RB DS	DS	LB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000058.JPG
GC-0000059	GC#39	CL of stream	US of GC-38, just DS of GC-39, looking US			03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000059.JPG
GC-0000060	GC#42	CL of stream	looking DS, at bridge, just US of GC-42	DS		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000060.JPG
GC-0000061	GC#48	CL of stream		DS		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000061.JPG
GC-0000062	GC#50	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000062.JPG
GC-0000063	GC#51	30" corrugated pipe outfall	between GC-50 and GC-51	DS	RB	03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000063.JPG
GC-0000064	GC#51	CL of stream, double corrugated pipe culvert	just DS of Dupree Dr.			03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000064.JPG
GC-0000065	GC#55	CL of stream	just US of GC-55	US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000065.JPG
GC-0000066	GC#55, GC#56	CL of stream	b/w GC-55 and GC-56	US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000066.JPG
GC-0000067	GC#60	CL of stream		DS		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000067.JPG
GC-0000068	GC#61	CL of stream		DS		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000068.JPG
GC-0000069	GC#61	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000069.JPG
GC-0000070	GC#64	Drainage culvert (30") and creek culvert		DS		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000070.JPG
GC-0000071	GC#64	stormwitch (2 culvert) retention structure				03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000071.JPG
GC-0000072	GC#65	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000072.JPG
GC-0000073	GC#66	CL of stream		US		03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000073.JPG
GC-0000074	GC#67	18" culvert and channel	channel eroded, N of GC-67			03/02/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000074.JPG
GC-0000075	GC#75	CL of stream looking DS at culvert (48") twin		DS		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000075.JPG
GC-0000076	GC#77	CL of stream, looking US of drain	just US of GC-77	US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000076.JPG
GC-0000077	GC#78	just DS of GC-78		US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000077.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
GC-0000078	GC#79	just DS of GC-79	looking US of drainage to trib	US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000078.JPG
GC-0000079	GC#81	facing US of GC-81 (trib)		US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000079.JPG
GC-0000081	GC#82	CL facing DS of trib just US of GC-82	obstruction in trib	DS		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000081.JPG
GC-0000082	GC#83	CL facing US of trib		US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000082.JPG
GC-0000083	GC#84	CL facing US of trib	DS of GC-84	US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000083.JPG
GC-0000084	GC#84	CL facing US	just US of GC-84			03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000084.JPG
GC-0000085	GC#84	Obstruction near pipe	US of GC-84	US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000085.JPG
GC-0000086	GC#85	looking S from GC-85, pipe is 36"				03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000086.JPG
GC-0000087	GC#85	looking S from GC-85, pipe is 36"				03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000087.JPG
GC-0000088	GC#86	(back on GC)		DS		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000088.JPG
GC-0000089	GC#86	facing US @ blockage	just US of GC-86			03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000089.JPG
GC-0000090	GC#87	pipe and heavy erosion		US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000090.JPG
GC-0000091	GC#87	close up of erosion				03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000091.JPG
GC-0000092	GC#88	looking US of trib		US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000092.JPG
GC-0000093	GC#89	facing DS in trib		DS		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000093.JPG
GC-0000094	GC#90, GC#91	facing US in trib @ GC-90	looking at GC-91	US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000094.JPG
GC-0000095	GC#90	facing US, up drainage into trib from under I-285		US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000095.JPG
GC-0000096	GC#91	facing US at culvert that goes under I-285		US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000096.JPG
GC-0000097	GC#92	CL of stream	just US of GC-92	US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000097.JPG
GC-0000098	GC#93	close-up shot	near GC-93			03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000098.JPG
GC-0000099	GC#93	shot of wetlands	near GC-93			03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000099.JPG
GC-0000100	GC#93	drainage into wetlands and structure, culvert @ top	near GC-93			03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000100.JPG
GC-0000101	GC#94	CL of stream facing DS	at GC-94	DS		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000101.JPG
GC-0000102	GC#94	structure US of GC-94	US of GC-94	DS		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000102.JPG
GC-0000103	GC#95	CL at GC-95	facing US, very severe erosion	US		3/399	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000103.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
GC-0000104	GC#95	at GC-95, facing road, structure	facing road			03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000104.JPG
GC-0000105	GC#96	CL at GC-96 facing DS	channel-like flow	DS		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000105.JPG
GC-0000106	GC#96	Looking at culvert	erosion	US		03/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000106.JPG
T9-0000106	T9#1	CL at T9-1 looking DS at Chattahoochee River	at T9-1	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000106.JPG
T9-0000107	T9#1	CL at T9-1	at T9-1	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000107.JPG
T9-0000108	T9#2	CL at T9-2	at T9-2, red clay, no gravel	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000108.JPG
T9-0000109	T9#2	CL at T9-2	at T9-2	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000109.JPG
T9-0000110	T9#3	CL at T9-3, sand and some gravel	at T9-3	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000110.JPG
T9-0000111	T9#3	CL at T9-3	obstruction of large rocks, small trees & leaves	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000111.JPG
T9-0000112	T9#4	CL at T9-4	looking DS at right branch	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000112.JPG
T9-0000113	T9#4	CL at T9-4	looking DS at left branch, both branches reconnect after 75 feet	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000113.JPG
T9-0000114	T9#4	CL at T9-4	major rocks & tree obstruction	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000114.JPG
T9-0000115	T9#5	CL at T9-5	large rocks in stream	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000115.JPG
T9-0000116	T9#5	CL at T9-5	large rocks in stream	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000116.JPG
T9-0000117	T9#6	CL at T9-6		DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000117.JPG
T9-0000118	T9#6	CL at T9-6	obstruction, small tree with leaves	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000118.JPG
T9-0000119	T9#7	CL at T9-7	large rocks & sand	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000119.JPG
T9-0000120	T9#7	CL at T9-7	showing split	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000120.JPG
T9-0000121	T9#8	CL at T9-8	another split	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000121.JPG
T9-0000122	T9#8	CL at T9-8		DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000122.JPG
T9-0000123	T9#8	CL at T9-8		US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000123.JPG
T9-0000124	T9#13	T9-13 looking @ US right branch	survey needs to include left and right branches	US	RB	03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000124.JPG
T9-0000125	T9#13	T9-13 looking @ US left branch	down out of sight below stop sign	US	LB	03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000125.JPG
T9-0000126	T9#14	T9-14 looking back @ US right branch	culvert shown is under Winterthur Dr.	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P000012.6.JPG
T9-0000127	T9#15	CL at T9-15 culvert	under Northside Dr.	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000127.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T9-0000128	T9#15	CL at T9-15	clay and leaves	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000128.JPG
T9-0000129	T9#16	CL at T9-16	DS RB undercut by erosion	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000129.JPG
T9-0000130	T9#17	CL at T9-17		DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000130.JPG
T9-0000131	T9#18	CL at T9-18	small drainage route enters on right side of photo	US	RB	03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000131.JPG
T9-0000132	T9#19	CL at T9-19	big trees in stream	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000132.JPG
T9-0000133	T9#19	CL at T9-19	culverts under Northside Dr.	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000133.JPG
T9-0000134	T9#23	CL at T9-23 looking at structure in bend	Northside Dr. in the background			03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000134.JPG
T9-0000135	T9#23	CL at T9-23 looking @ structure w/ waterfall	goes US under a driveway			03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000135.JPG
T9-0000136	T9#27	CL at T9-27 looking across lake w/ back to Northside Dr.	slightly DS @ driveway bridge			03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000136.JPG
T9-0000137	T9#27	CL at T9-27 looking across lake w/ back to Northside Dr.	slightly US			03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000137.JPG
T9-0000138	T9#28	sewer manhole, looking in SW direction	taken w/ back to pond, Northside Dr. to cameras right			03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000138.JPG
T9-0000139	T9#29	CL at T9-29	very marshy, wetland area, standing water	US	LB	03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000139.JPG
T9-0000140	T9#29	CL at T9-29	same as #139	US	RB	03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000140.JPG
T9-0000141	T9#30	CL at T9-30	lots of algae, still water, wide but only 1-2" deep, <6" in all areas	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000141.JPG
T9-0000142	T9#34	CL at T9-34 looking @ culvert under Northside Dr.		DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000142.JPG
T9-0000143	T9#34	CL at T9-34 looking right above culvert in #142	erosion caused by runoff from storm gutter on Northside Dr.	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000143.JPG
T9-0000144	T9#35	CL at T9-35		DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000144.JPG
T9-0000145	T9#35	CL at T9-35	CMP 22" diameter	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000145.JPG
T9-0000146	T9#36	CL at T9-36	stream is dry, sandy bottom and leaves, indications of water flow, like stream bed, flow-marked soil in stream bed and water-marked vegetation are present	DS		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000146.JPG
T9-0000147	T9#36	CL at T9-36	stream has very little, standing water, stream is channeled underneath home-owner's tennis court and at T9-35 water enters stream through 22" culvert	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000147.JPG
T9-0000148	T9#37	CL at T9-37	steeper bank on left side, sandy bottom and leaves	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000148.JPG
T9-0000149	T9#37	CL at T9-37	looking at heavy erosion and major tree in trib	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000149.JPG
T9-0000150	T9#37	CL at T9-37	looking at heavy erosion and major tree in trib	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000150.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T9-0000151	T9#37	CL at T9-37	looking at heavy erosion and major tree in trib	US		03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000151.JPG
T9-0000152	T9#34	on Northside Dr. shot of curb that is draining Trib 9	curb is causing erosion shown in photo 143 (cross-section GC#34)			03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000152.JPG
T9-0000153		pictures of Jennifer and James on Northside Dr.				03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000153.JPG
T9-0000154		pictures of Jennifer and James on Northside Dr.				03/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Trib 9\P0000154.JPG
GC-0000198	GC#98	CL @ GC-98 looking at graduated weir		DS		03/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000198.JPG
GC-0000199	GC#98	CL @ GC-98	large amount of sediment deposited and eroding banks	US		03/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000199.JPG
GC-0000200	GC#99	CL @ GC-99	steeper banks, eroding	US		03/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000200.JPG
GC-0000201	GC#100	CL @ GC-100 at 48"(?) culvert	rock and leaf debris noteworthy	US		03/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000201.JPG
GC-0000202	GC#101	CL @ GC-101 at 48"(?) culvert		DS		03/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000202.JPG
GC-0000203	GC#101	CL @ GC-101	heavily eroding banks	US		03/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000203.JPG
GC-0000204	GC#102	looking at RB from LB	heavily eroding bank	US	RB	03/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000320.JPG
HC-0000205	HC#1	CL @ HC-1		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000205.JPG
HC-0000206	HC#1	CL @ HC-1	steep bank on US right side	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000206.JPG
HC-0000207	HC#2	CL @ HC-2		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000207.JPG
HC-0000208	HC#2	CL @ HC-2 looking @ bridge		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000208.JPG
HC-0000209	HC#2	CL @ HC-2 looking at left side of creek	erosion of clay banks	DS	LB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000209.JPG
HC-0000210	HC#3	CL @ HC-3 looking @ bridge		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000210.JPG
HC-0000211	HC#3	CL @ HC-3 looking @ bridge @ Ferry Landing		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000211.JPG
HC-0000212	HC#7	culvert just DS of HC-7 on DS right hand side of bank	approx. 24"	DS	RB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000212.JPG
HC-0000213	HC#7	CL @ HC-7 looking @ bridge @ Ferry Landing Rd.		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000213.JPG
HC-0000214	HC#7	CL @ HC-7		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000214.JPG
HC-0000215	HC#8	CL @ HC-8		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000215.JPG
HC-0000216	HC#8	CL @ HC-8	personal driveway bridge in far background of picture	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000216.JPG
HC-0000217	HC#8	oval-shaped culvert just US of HC-8		US	RB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000217.JPG
HC-0000218	HC#9, HC#10, HC#11	driveway bridge that will be located in HC-9,10, and 11				03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000218.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000219	HC#11	US of HC-11, 18"(?) sanitary sewer line over creek				03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000219.JPG
HC-0000220	HC#11	manholes on US left side of creek @ site of photo 219	manholes overflows during flood events, approx. 2 times a year	US	LB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000220.JPG
HC-0000221	HC#12	CL @ HC-12 looking DS at SS pipe 18"(?)		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000221.JPG
HC-0000222	HC#12	CL @ HC-12		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000222.JPG
HC-0000223	HC#13, HC#14, HC#15	driveway @ HC-13, 14, and 15, picture of bridge		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000223.JPG
HC-0000224	HC#16	CL @ HC-16 looking DS @ bridge in #223 w/ concrete structure on DS right hand side		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000224.JPG
HC-0000225	HC#16	CL@HC-16		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000225.JPG
HC-0000226	HC#17, HC#18, HC#19	driveway bridge looking US @ HC-17, 18, and 19		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000226.JPG
HC-0000227	HC#20	CL @ HC-20looking DS @ driveway bridge		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000227.JPG
HC-0000228	HC#20	CL @ HC-20	big log across creek	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000228.JPG
HC-0000229	HC#21	CL @ HC-21		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000229.JPG
HC-0000230	HC#21	CL @ HC-21	large rock cut steep US RB	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000230.JPG
HC-0000231	HC#22	CL @ HC-22		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000231.JPG
HC-0000232	HC#22	CL @ HC-22 looking @ structure on US LB		US	LB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000232.JPG
HC-0000233	HC#22	CL @ HC-22 looking @ structure on US RB	little trib feeds behind structure	US	RB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000233.JPG
HC-0000234	HC#23	CL @ HC-23 sanitary sewer	lots of obstructions			03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000234.JPG
HC-0000235	HC#23	CL @ HC-23 pipe shown in # 234		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000235.JPG
HC-0000236	HC#23	CL @ HC-23 a different (log) obstruction		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000236.JPG
HC-0000237	HC#24	CL @ HC_24	some obstructions	DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000237.JPG
HC-0000238	HC#24	CL @ HC-24 sanitary sewer @ HC-24 w/buried pipe crossing the stream		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000238.JPG
HC-0000239	HC#25	CL @ HC-25	ss pipe crossing the stream	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000239.JPG
HC-0000240	HC#25	CL @ HC-25		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000240.JPG
HC-0000241	HC#25	trib coming in on US right side	just US of HC-25	US	RB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000241.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000242	HC#26	CL @ HC-26		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000242.JPG
HC-0000243	HC#26	CL @ HC-26		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000243.JPG
HC-0000244	HC#27	CL @ HC-27		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000244.JPG
HC-0000245	HC#27	CL @ HC-27 footbridge over creek		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000245.JPG
HC-0000246	HC#27	retaining wall @ HC-27		US	RB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000246.JPG
HC-0000247	HC#27	shot of US LB erosion	US of HC-27	US	LB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000247.JPG
HC-0000248	HC#28	CL @ HC-28		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000248.JPG
HC-0000249	HC#28	CL @ HC-28	wide sandy area is at HC-28	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000249.JPG
HC-0000250	HC#28, HC#29	CL of creek, gravel bed in-between HC-28 and HC-29	gravel bed is wide and coarse	DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000250.JPG
HC-0000251	HC#29	CL @ HC-29		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000251.JPG
HC-0000252	HC#29	CL @ HC-29	Peter's yellow boots in pictures	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000252.JPG
HC-0000253	HC#30	CL @ HC-30		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P000023.JPG
HC-0000254	HC#30	CL @ HC-30		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000254.JPG
HC-0000255	HC#31	CL @ HC-31		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000255.JPG
HC-0000256	HC#31	CL @ HC-31		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000256.JPG
HC-0000257	HC#32	CL @ HC-32	big tree over stream	DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000257.JPG
HC-0000258	HC#32	CL @ HC-32		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000258.JPG
HC-0000259	HC#33	CL @ HC-33		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000259.JPG
HC-0000260	HC#33	CL @ HC-33	SS line crossing creek	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000260.JPG
HC-0000261	HC#34	CL @ HC-34	some obstructions w/logs and leaves	DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000261.JPG
HC-0000262	HC#34	CL @ HC-34	erosion on US RB	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000262.JPG
HC-0000263	HC#34	facing DS @ HC-34	stone wall shown is on either side of the creek	DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000263.JPG
HC-0000264	HC#35	CL @ HC-35		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000264.JPG
HC-0000265	HC#35	CL @ HC-35		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000265.JPG
HC-0000266	HC#36	CL @ HC-36		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000266.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000267	HC#36	CL @ HC-36	large concrete blocks on US LB	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000267.JPG
HC-0000268	HC#37	CL @ HC-37		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000268.JPG
HC-0000269	HC#37	CL @ HC-37		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000269.JPG
HC-0000270	HC#38	CL @ HC-38		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000270.JPG
HC-0000271	HC#38	CL @ HC-38	branches in stream	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000271.JPG
HC-0000272	HC#39	CL @ HC-39	footbridge over creek	DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000272.JPG
HC-0000273	HC#39	CL @ HC-39		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000273.JPG
HC-0000274	HC#40	CL @ HC-40		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000274.JPG
HC-0000275	HC#40	CL @ HC-40	Roger in picture	DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000275.JPG
HC-0000276	HC#40	erosion control wall on DS LB, US of HC-40	wall made of an aluminum ladder and landscape timbers	DS	LB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000276.JPG
HC-0000334	HC#41	CL @ HC-41, brick and mortar culvert		US	RB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000277.JPG
HC-0000335	HC#41	CL @ HC-41, bridge over Old Creek Trail Rd.		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000278.JPG
HC-0000336	HC#41	CS @ HC-41		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000279.JPG
HC-0000337	HC#45	CL @ HC-45, bridge at Old Creek Trail Rd.		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000280.JPG
HC-0000338	HC#45	CS @ HC-45		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000281.JPG
HC-0000339	HC#46	cross section shot of bank and gravel deposit @ HC-46	bank is steep and gravel is fine	US	LB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000282.JPG
HC-0000340	HC#46	CL @ HC-46		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000283.JPG
HC-0000341	HC#46	CL, US of HC-46	SS pipe crossing the stream	US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000284.JPG
HC-0000342	HC#47	CL @ HC-47		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000285.JPG
HC-0000343	HC#47	CL @ HC-47		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000286.JPG
HC-0000344	HC#48	CL @ HC-48		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000287.JPG
HC-0000345	HC#48	CL @ HC-48, brick structure and pipe US		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000288.JPG
HC-0000346	HC#48	close-up of brick structure and pipe	US of HC-48			03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000289.JPG
HC-0000347	HC#49	pipe across creek	DS of HC-49	US	LB	03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000290.JPG
HC-0000348	HC#49	CL @ HC-49 looking at pipe		DS		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000291.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000349	HC#49	CL @ HC-49		US		03/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000292.JPG
GC-0000296	GC#103	cross section shot @ GC-103 of culvert draining into trib on US left side		US	LB	03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000296.JPG
GC-0000297	GC#103	CL @ GC-103, structure under Powers Ferry Rd.		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000297.JPG
GC-0000298	GC#103	CL @ GC-103, structure under Powers Ferry Rd.		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000298.JPG
GC-0000299	GC#103	cross section shot @ GC-103 of structure on US right side		US	RB	03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000299.JPG
GC-0000300	GC#103	wooden footbridge US of GC-103		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000300.JPG
GC-0000301	GC#104	CL @ GC-104		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000301.JPG
GC-0000302	GC#104	CL @ GC-104		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000302.JPG
GC-0000303	GC#105	CL @ GC-105		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000303.JPG
GC-0000304	GC#105	CL @ GC-105, culvert in background		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000304.JPG
GC-0000305	GC#106	CL @ GC-106		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000305.JPG
GC-0000306	GC#106	CL @ GC-106, several structures (parking lot runoff gutter, culvert, box culvert)		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000306.JPG
GC-0000307	GC#107	CL just DS of GC-107	lots of grass clippings on water	DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000307.JPG
GC-0000308	GC#107	CL @ GC-107		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000308.JPG
GC-0000309	GC#107	CL @ GC-107		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000309.JPG
GC-0000310	GC#108	cross section of drainage from parking lot into trib @ GC-108				03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000310.JPG
GC-0000311	GC#107	CL @ GC-107		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000311.JPG
GC-0000312	GC#108	CL @ GC-108		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000312.JPG
GC-0000313	GC#109	CL @ GC-109		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000313.JPG
GC-0000315	GC#109	CL @ GC-109		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000315.JPG
GC-0000316	GC#109	close-up of culvert	US of GC-109			03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000316.JPG
GC-0000317	GC#67	CL @ GC-67	rock outcrop	DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000317.JPG
GC-0000318	GC#67	CL @ GC-67	large sediment deposit	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000318.JPG
GC-0000319	GC#68	CL @ GC-68		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000319.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
GC-0000320	GC#68	CL @ GC-68	rock outcrop	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000320.JPG
GC-0000321	GC#69	CL @ GC-69		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000321.JPG
GC-0000322	GC#69	CL @ GC-69	large coarse gravel sediment deposits	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000322.JPG
GC-0000323	GC#70	CL @ GC-70	fallen tree w/tire & brush caught in channel- significant blockage of flow	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000323.JPG
GC-0000324	GC#71	CL @ GC-71		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000324.JPG
GC-0000325	GC#71	CL @ GC-71	badly undercut bank just DS of 36" culvert running underneath Powers Ferry	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000325JPG
GC-0000326	GC#71	36" culvert from Powers Ferry Rd.				03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000326.JPG
GC-0000327	GC#71	eroding banks @ GC-71				03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000327.JPG
GC-0000328	GC#72	CL @ GC-72		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000328.JPG
GC-0000329	GC#72	CL @ GC-72	rock outcrop and high sinuosity of stream, high degree of meandering under	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000329.JPG
GC-0000330	GC#73	CL @ GC-73	high sinuosity and banks undercut	DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000330.JPG
GC-0000331	GC#73	CL @ GC-73	DS of GC-73 small trib feeding into GC	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000331.JPG
GC-0000332	GC#74	CL @ GC-74		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000332.JPG
GC-0000333	GC#74	CL @ GC-74 @ double culvert	large deposit of rip-rap and rock outcrop	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Game Creek\P0000333.JPG
HC-0000350	HC#50	CL @ HC-50		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000350.JPG
HC-0000351	HC#50	CL @ HC-50	Steep banks, erosion on right bank (US)	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000351.JPG
HC-0000352	HC#51	CL @ HC-51		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000352.JPG
HC-0000353	HC#51	CL @ HC-51		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000353.JPG
HC-0000354	HC#51	Trib @ HC-51	Cross-section @ HC-51 looking @ trib on LB (US)	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000354.JPG
HC-0000355	HC#52	CL @ HC-52	Heavy erosion on RB looking DS	DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000355.JPG
HC-0000356	HC#52	CL @ HC-52		US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000356.JPG
HC-0000357	HC#53	CL @ HC-53		DS		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000357.JPG
HC-0000358	HC#53	CL @ HC-53	Culvert under Heards Ferry Rd (brick)	US		03/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000358.JPG
HC-0000372	HC#57	CL @ HC-57		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000372.JPG
HC-0000373	HC#57	CL @ HC-57		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000373.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000374	HC#58	CL @ HC-58		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000374.JPG
HC-0000375	HC#58	CL @ HC-58		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000375.JPG
HC-0000376	HC#58	HC-58	Cement rip-rap on RB looking US; Stone wall acting as dam on small trib	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000376.JPG
HC-0000377	HC#58		Three corrugated PVC drain pipes (may be drain drains from pool @ adjacent home	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000377.JPG
HC-0000378	HC#59	CL @ HC-59	NOTE erosion @ base of 2 trees	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000378.JPG
HC-0000379	HC#59	CL @ HC-59	NOTE corrugated drain piping	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000379.JPG
HC-0000380	HC#60	CL @ HC-60	Change in channel shape	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000380.JPG
HC-0000381	HC#60	CL @ HC-60	Change in channel shape	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000381.JPG
HC-0000382	HC#61	Just DS of HC-61	Note undercut bank	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000382.JPG
HC-0000383	HC#61	CL @ HC-61		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000383.JPG
HC-0000384	HC#61	CL @ HC-61	NOTE PVC drain pipe in left hand side of picture	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000384.JPG
HC-0000385	HC#62	CL @ HC-62		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000385.JPG
HC-0000386	HC#62	CL @ HC-62	NOTE Fallen log making dam with debris; black pool drain pipe	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000386.JPG
HC-0000387	HC#63	CL @ HC-63	NOTE cut throat due to rip-rap and another constriction DS of rip-rap	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000387.JPG
HC-0000388	HC#63	CL @ HC-63		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000388.JPG
HC-0000389	HC#64	CL @ HC-64	Heavy sediment in channel	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000389.JPG
HC-0000390	HC#64	CL @ HC-64		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000390.JPG
HC-0000391	HC#65	CL @ HC-65		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000391.JPG
HC-0000392	HC#65	CL @ HC-65	NOTE fallen tree; eroded and undercut LB	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000392.JPG
HC-0000393	HC#66	CL @ HC-66	NOTE erosion around roots and undercut	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000393.JPG
HC-0000394	HC#66	CL @ HC-66	NOTE exposed rock channel and low base flow conditions	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000394.JPG
HC-0000395	HC#67	CL @ HC-67		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000395.JPG
HC-0000396	HC#67	CL @ HC-67	NOTE 48" culvert looking US	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000396.JPG
HC-0000397	HC#69	CL @ HC-69	NOTE 48" culvert looking DS	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000397.JPG
HC-0000398	HC#69	CL @ HC-69	NOTE heavy vegetation on banks	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000398.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000399	HC#69	CL upstream of HC-69	NOTE debris creating obstruction	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000399.JPG
HC-0000400	HC#70	CL @ HC-70	NOTE debris in channel and undercut banks on right	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000400.JPG
HC-0000401	HC#71	CL @ HC-71	NOTE heavy vegetation in channel	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000401.JPG
HC-0000402	HC#71	CL @ HC-71	heavy vegetation in channel	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000402.JPG
HC-0000403	HC#71	CL @ HC-71	Looking US @ 60" culvert	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000403.JPG
HC-0000404	HC#71	US from HC-71, storm drain to 60" culvert		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000404.JPG
HC-0000405	HC#71	US from HC-71, looking at brick wall that would constrict flow				03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000405.JPG
HC-0000406	HC#72	CL @ HC-72, restriction from wall and 60" culvert		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000406.JPG
HC-0000407	HC#72	CL @ HC-72	heavy vegetation in channel	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000407.JPG
HC-0000408	HC#72	CL @ HC-72	vegetation in channel			03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000408.JPG
HC-0000409	HC#73	CL @ HC-73, Riverside Dr structure	construction on RB	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000409.JPG
HC-0000410	HC#72	HC-72 on LB	downed silt fence & MH		LB	03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000410.JPG
HC-0000411	HC#72	HC-72	NOTE split		LB	03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000411.JPG
HC-0000412	HC#73	CL @ HC-73		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000412.JPG
HC-0000413	HC#73	CL @ HC-73 48" culvert under Riverside Dr.		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000413.JPG
HC-0000414	HC#77	CL @ HC-77 48" culvert	NOTE blockage of culvert	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000414.JPG
HC-0000415	HC#77	CL @ HC-77	heavy vegetation on banks	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000415.JPG
HC-0000416	HC#77	US from HC-77	stone wall of LB			03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000416.JPG
HC-0000417	HC#78	CL @ HC-78	downed log creating obstruction	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000417.JPG
HC-0000418	HC#78	CL @ HC-78	much anaerobic activity, methane gas	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000418.JPG
HC-0000419	HC#79	CL @ HC-79 36" culvert	part blockage	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000419.JPG
HC-0000420	HC#79	CL @ HC-79	split of trib on LB	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000420.JPG
HC-0000421	HC#79	US of HC-79 24" culvert under drive		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000421.JPG
HC-0000422	HC#79	US of HC-79	note log jam and debris	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000422.JPG
HC-0000423	HC#80	CL @ HC-80	yard clippings and blockage	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000423.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000424	HC#80	CL @ HC-80	yard clippings & steep bank on RB	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000424.JPG
HC-0000425	HC#80	US of HC-80	undercut of bank, heavy algae growth, stagnant water	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000425.JPG
HC-0000426	HC#81	CL @ HC-81		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000426.JPG
HC-0000427	HC#81	CL @ HC-81		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000427.JPG
HC-0000428	HC#81	US of HC-81, shot of culvert under 285, drain from runoff from 285		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000428.JPG
HC-0000429	HC#82	CL @ HC-82	undercut on RB	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000429.JPG
HC-0000430	HC#82	CL @ HC-82	blockage in channel	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000430.JPG
HC-0000431	HC#82	US from HC-82	blockage and heavy debris	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000431.JPG
HC-0000432	HC#82	US from HC-82, 10" dip sewer stream crossing		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000432.JPG
HC-0000433	HC#83	CL @ HC-83	steep channel banks and erosion	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000433.JPG
HC-0000434	HC#83	CL @ HC-83	ox bow & steep bank	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000434.JPG
HC-0000435	HC#84	CL @ HC-84	rip rap banks	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000435.JPG
HC-0000436	HC#84	CL @ HC-84	rip-rap on RB, wood retaining wall on LB, not 6" dip san sewer crossing & angle of deflection @ bell & spigot joint. Slight smell of sewage. No visual evidence of leakage	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000436.JPG
HC-0000437	HC#85	CL @ HC-85	rip-rap & retaining wall	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000437.JPG
HC-0000438	HC#85	CL @ HC-85	failing retaining wall on LB creating restriction	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000438.JPG
HC-0000439	HC#86	CL @ HC-86	much eroded bank	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000439.JPG
HC-0000440	HC#86	CL @ HC-86 60" culvert over Wesley Oak Rd.	fallen tree and partial blockage	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000440.JPG
HC-0000441	HC#90	CL @ HC-90	heavily blocked entrance to 60" culvert	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000441.JPG
HC-0000442	HC#90	CL @ HC-90	vegetation in channel	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000442.JPG
HC-0000443	HC#91	CL @ HC-91	vegetation in channel	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000443.JPG
HC-0000444	HC#91	CL @ HC-91	fallen limbs create obstruction of flow, heavily eroded RB	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000444.JPG
HC-0000445	HC#92	CL @ HC-92	heavy obstruction of vegetation and dead branches	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000445.JPG
HC-0000446	HC#92	CL @ HC-92	almost complete obstruction	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000446.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000447	HC#92	CL @ HC-92 trib on right hand side	stagnant water, algae growth	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000447.JPG
HC-0000448	HC#93	CL @ HC-93	z dip san sewer lines, one in foreground in not connected, water by it is fouled	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000448.JPG
HC-0000449	HC#93	CL @ HC-93	heavy vegetation	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000449.JPG
HC-0000450	HC#93	DS of HC-93 close up of disconnected dip line	showing pipe connection, leaking into stream, PVC pipe section laying in stream	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000450.JPG
HC-0000451	HC#93	DS of HC-93 looking down @ disconnected pipe				03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000451.JPG
HC-0000452	HC#93	culvert under 285 US of HC-93		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000452.JPG
HC-0000453	HC#96	CL @ HC-96		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000453.JPG
HC-0000454	HC#96	CL @ HC-96	very dense vegetation	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000454.JPG
HC-0000455	HC#97	CL @ HC-97	heavy vegetation	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000454.JPG
HC-0000456	HC#97	CL @ HC-97	heavy vegetation and debris	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000456.JPG
HC-0000457	HC#98	CL @ HC-98	heavy vegetation on banks	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000457.JPG
HC-0000458	HC#98	CL @ HC-98	grass on LB, many trees on RB	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000458.JPG
HC-0000459	HC#98	US of HC-98 2 PVC pipes drain from pool				03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000459.JPG
HC-0000460	HC#99	CL @ HC-99	stone wall of LB	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000460.JPG
HC-0000461	HC#99	CL @ HC-99	small water	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000461.JPG
HC-0000462	HC#100	CL @ HC-100	vegetation in channel	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000462.JPG
HC-0000463	HC#100	CL @ HC-100	water comes down terrace structure	US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000463.JPG
HC-0000464	HC#101	DS HC-101 CL of HYD Control to 2 drain inlets	downed silt fence @ home under construction	DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000464.JPG
HC-0000465	HC#101	CL @ HC-101 Hyd Control		DS		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000465.JPG
HC-0000466	HC#101	CL @ HC-101 looking at 1 of 2 inlets, culvert & AER fountain		US		03/23/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000466.JPG
HC-0000467	HC#102	CL @ HC-102 confluence of trib & HC	blockage at trib mouth	DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000467.JPG
HC-0000468	HC#102	CL @ HC-102	6" dip in stream crossing	US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000468.JPG
HC-0000469	HC#103	CL @ HC-103	rocky channel	DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000469.JPG
HC-0000470	HC#103	CL @ HC-103	rocky channel w/debris obstruction	US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000470.JPG
HC-0000471	HC#104	CL @ HC-104	rocky channel, steep chainage	DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000471.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
HC-0000472	HC#104	CL @ HC-104	channel of cut rock & significant variance(?)	US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000472.JPG
HC-0000473	HC#106	CL @ HC-106 36" culvert	partially obstructed by ivy	DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000473.JPG
HC-0000474	HC#106	CL @ HC-106 36" culvert		US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000474.JPG
HC-0000475	HC#107	CL @ HC-107		DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000475.JPG
HC-0000476	HC#107	CL @ HC-107 46" culvert	major blockage	US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000476.JPG
HC-0000477	HC#109	CL @ HC-109 36" culvert		DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000477.JPG
HC-0000478	HC#109	CL @ HC-109 elevated 36" culvert w/stilling pool below		US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000478.JPG
HC-0000479	HC#111	CL @ HC-111 36" culvert	12" corr drain pipe	DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000479.JPG
HC-0000480	HC#111	CL @ HC-111 looking at next driveway		US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000480.JPG
HC-0000481	HC#112	CL @ HC-112 looking DS @ HC-111		DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000481.JPG
HC-0000482	HC#112	CL @ HC-112 36" culvert w/ 24" culvert to LB		US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000482.JPG
HC-0000483	HC#114	CL @ HC-114		DS		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000483.JPG
HC-0000484	HC#114	CL @ HC-114		US		03/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Heards Creek\P0000484.JPG
SC-0000743	SC#1	CL @ SC-1		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000743.JPG
SC-0000744	SC#1	wetland area around SC-1		US	RB	05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000744.JPG
SC-0000745	SC#2	CL @ SC-2 Beaver Dam		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000745.JPG
SC-0000746	SC#2	CL @ SC-2 towards SC-1		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000746.JPG
SC-0000747	SC#3	CL @@ SC-3 towards SC-2 @ Beaver Dam		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000747.JPG
SC-0000748	SC#3	sewer manhole, US SC-3		US	RB	05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000748.JPG
SC-0000749	SC#4	sewer manhole @ SC-4		US	RB	05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000749.JPG
SC-0000750	SC#4	CL @ SC-4		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000750.JPG
SC-0000751	SC#4	CL @ SC-4		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000751.JPG
SC-0000752	SC#5	CL @ SC-5		US	RB	05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000752.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
SC-0000753	SC#5	manhole		US	RB	05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000753.JPG
SC-0000754	SC#6	CL @ SC-6	Beaver Dam obstructing channel in wetland area, wide floodplain	DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000754.JPG
SC-0000755	SC#6	CL @ SC-6	Beaver Dam	US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000755.JPG
SC-0000756	SC#7	CL @ SC-7		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000756.JPG
SC-0000757	SC#7	manhole just US from SC-7		US	RB	05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000757.JPG
SC-0000758	SC#8	manhole just DS from SC-8		US	RB	05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000758.JPG
SC-0000759	SC#8	CL @ SC-8 manhole		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000759.JPG
SC-0000760	SC#8	CL @ SC-8		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000760.JPG
SC-0000761	SC#9	CL @ SC-9	Beaver Dam	DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000761.JPG
SC-0000762	SC#10	CL @ SC-10		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000762.JPG
SC-0000763	SC#10	CL @ SC-10		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000763.JPG
SC-0000764	SC#11	CL @ SC-11		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000764.JPG
SC-0000765	SC#11	CL @ SC-11		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000765.JPG
SC-0000766	SC#11	just US of SC-11, control device	large logs may be part of erosion	US	LB	05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000766.JPG
SC-0000767	SC#12	CL @ SC-12		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000767.JPG
SC-0000768	SC#12	CL @ SC-12		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000768.JPG
SC-0000769	SC#13	CL @ SC-13		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000769.JPG
SC-0000770	SC#13	CL @ SC-13		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000770.JPG
SC-0000771	SC#14	CL @ SC-14		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000771.JPG
SC-0000772	SC#14	CL @ SC-14		DS		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000772.JPG
SC-0000773	SC#15	CL @ SC-15		US		05/11/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000773.JPG
SC-0000774	SC#16	CL @ SC-16		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000774.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
SC-0000775	SC#16	looking @ channel & RB @ SC-16		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000775.JPG
SC-0000776	SC#17	CL @ SC-17 where stream splits around small island				05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000776.JPG
SC-0000777	SC#17	LB of SC-17		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000777.JPG
SC-0000778	SC#17	BR of SC-17		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000778.JPG
SC-0000779	SC#17	just US of SC-17	downed logs and litter blacking channel	DS		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000779.JPG
SC-0000780	SC#18	CL @ SC-18		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000780.JPG
SC-0000781	SC-1#1	trib SC-1 feeding from LB		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000781.JPG
SC-0000782	SC#18	RB @ SC-18		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000782.JPG
SC-0000783	SC#19	CL @ SC-19		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000783.JPG
SC-0000784	SC#19	LB @ SC-19		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000784.JPG
SC-0000785	SC#19	RB @ SC-19		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000785.JPG
SC-0000786	SC#20	drainage pipe 15ft DS of SC-20		DS		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000786.JPG
SC-0000787	SC#20	CL @ SC-20		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000787.JPG
SC-0000788	SC#20	channel and LB @ SC-20		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000788.JPG
SC-0000789	SC#20	12" pipe crossing stream, 15ft US of SC-20	manhole on LB (not shown)	US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000789.JPG
SC-0000790	SC#21	CL @ SC-21		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000790.JPG
SC-0000791	SC#21	channel and RB @ SC-21	house behind debris	US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000791.JPG
SC-0000792	SC#21	channel and LB @ SC-21		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000792.JPG
SC-0000793	SC#22	CL @ SC-22 w/pipe (8") crossing stream		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000793.JPG
SC-0000794	SC#22	looking @ RB @ SC-22		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000794.JPG
SC-0000795	SC#22	looking @ LB @ SC-22	cleanout pipe	US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000795.JPG
SC-0000796	SC#24	CL @ SC-24		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000796.JPG
SC-0000797	SC#24	LB @ SC-24		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000797.JPG
SC-0000798	SC#24	RB @ SC-24		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000798.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
SC-0000799	SC#24	20' US of SC-24		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000799.JPG
SC-0000800	SC#25	CL @ SC-25		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000800.JPG
SC-0000801	SC#25	LB @ SC-25		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000801.JPG
SC-0000802	SC#25	RB @ SC-25		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000802.JPG
SC-0000803	SC#26	CL @ SC-26		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000803.JPG
SC-0000804	SC#26	LB @ SC-26		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000804.JPG
SC-0000805	SC#26	RB @ SC-26		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000805.JPG
SC-0000806	SC#27	CL @ SC-27		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000806.JPG
SC-0000807	SC#27	RB @ SC-27		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000807.JPG
SC-0000809	SC#28	CL @ SC-28		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000809.JPG
SC-0000810	SC#28	LB @ SC-28		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000810.JPG
SC-0000811	SC#28	RB @ SC-28		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000811.JPG
SC-0000812	SC#29	CL @ SC-29		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000812.JPG
SC-0000813	SC#29	RB @ SC-29		US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000813.JPG
SC-0000816	SC#29	outfall & headwall on LB, US from SC-29		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000816.JPG
SC-0000817	SC#30	CL @ SC-30		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000817.JPG
SC-0000818	SC#30	LB @ SC-30		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000818.JPG
SC-0000819	SC#31	CL @ SC-31		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000819.JPG
SC-0000820	SC#31	RB US of SC-31	orange sediment	US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000820.JPG
SC-0000821	SC#32	CL @ SC-32 w/culvert		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000821.JPG
SC-0000822	SC#32	RB @ SC-32	culvert 2 boxes 5.5h x 5w	US	RB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000822.JPG
SC-0000823	SC#34	cracked manhole @ SC-34				05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000823.JPG
SC-0000824	SC#34	weir and gap @ SC-34		DS		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000824.JPG
SC-0000825	SC#34	looking into concrete retention pond on LB, just DS of SC-34		DS	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000825.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
SC-0000827	SC#34	CL @ SC-34 w/culvert & outlet	orange sediment on rocks	US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000827.JPG
SC-0000828	SC#36	CL @ SC-36	RB erosion	DS		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000828.JPG
SC-0000829	SC#36	6' x 5' culvert & sediment @ GA 400		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000829.JPG
SC-0000830	SC#36	failed bank, GA 400 undermined pipe		DS		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000830.JPG
SC-0000831	SC#37	CL @ SC-37		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000831.JPG
SC-0000832	SC#37	LB @ SC-37		US	LB	05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000832.JPG
SC-0000833	SC#35	CL @ SC-35		US		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000833.JPG
SC-0000834	SC#35	CL @ SC-35		DS		05/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000834.JPG
SC-0000842	SC-1#1	CL @ SC-1#1 w/24" culvert				05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000842.JPG
SC-0000843	SC-1#1	RB of SC-1#1		US	RB	05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000843.JPG
SC-0000844	SC-1#3	CL @ SC-1#3				05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000844.JPG
SC-0000845	SC-1#3	CL @ SC-1#3		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000845.JPG
SC-0000846	SC-1#4	CL @ SC-1#4 w/36" culvert		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000846.JPG
SC-0000847	SC-1#5	CL @ SC-1#5	fecal matter in stream US	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000847.JPG
SC-0000848	SC-1#6	CL @ SC-1#6				05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000848.JPG
SC-0000849	SC-1#6	RB of SC-1#6		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000849.JPG
SC-0000850	SC-1#7	CL @ SC-1#7	channel submerges and reappears not far DS	DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000850.JPG
SC-0000851	SC-1#7	CL @ SC-1#7		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000851.JPG
SC-0000852	SC-1#8	CL @ SC-1#8		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000852.JPG
SC-0000853	SC-1#8	CL @ SC-1#8		DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000853.JPG
SC-0000854	SC-1#9	CL @ SC-1#9		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000854.JPG
SC-0000855	SC-1#9	CL @ SC-1#9		DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000855.JPG
SC-0000856	SC-2#1	CL @ SC-2#1		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000856.JPG
SC-0000857	SC-2#1	CL @ SC-2#1		DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000857.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
SC-0000858	SC-2#1	pipe across stream	sewage odor, murky water, vertical LB roots exposed	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000858.JPG
SC-0000859	SC-2#2	pipe above SC-2#2				05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000859.JPG
SC-0000860	SC-2#2	below pipe @ SC-2#2				05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000860.JPG
SC-0000861	SC-2#2					05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000861.JPG
SC-0000862	SC-2#2	RB US of SC-2#2	undercut	DS	RB	05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000862.JPG
SC-0000863	SC-2#3	CL @ SC-2#3		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000863.JPG
SC-0000864	SC-2#3	CL @ SC-2#3		DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000864.JPG
SC-0000865	SC-2#3	vertical RB	roots exposed	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000865.JPG
SC-0000866	SC-2#4	rock fall & sanitary sewer pipe across stream	just DS of SC-2#4	DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000866.JPG
SC-0000867	SC-2#4	CL @ SC-2#4 w/5' culvert		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000867.JPG
SC-0000869	SC-2#4	CL @ SC-2#4		DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000869.JPG
SC-0000870	SC-2#6	CL @ SC-2#6		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000870.JPG
SC-0000871	SC-2#6	CL @ SC-2#6 w/ 5' culvert DS	2-3' fall in elevation across culvert			05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000871.JPG
SC-0000872	SC-2#6	just US of SC-2#6 24" culvert		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000872.JPG
SC-0000873	SC-2#7	CL @ SC-2#7	sanitary sewer pipe across stream & support column manhole on LB	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000873.JPG
SC-0000874	SC-2#7	CL @ SC-2#7		DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000874.JPG
SC-0000875	SC-2#7	SC-2#7	note failing support of column			05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000875.JPG
SC-0000876	SC-2#7	US of SC-2#7 30" culvert on LB, sewer pipe across channel	orange sediment on rocks in channel	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000876.JPG
SC-0000877	SC-2#7	US of SC-2#7	orange sediment on rocks	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000877.JPG
SC-0000878	SC-2#7	US of SC-2#7	orange sediment getting more pronounced as approaching Roswell Rd.			05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000878.JPG
SC-0000879	SC-2#8	24" culvert and manhole on LB of SC-2#8		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000879.JPG
SC-0000880	SC-2#8	CL @ SC-2#8		DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000880.JPG
SC-0000881	SC-2#8	CL @ SC-2#8		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000881.JPG
SC-0000882	SC-2#8	US of SC-2#8	thick orange sediment on rocks	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000882.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
SC-0000884	SC-2#8	18" culvert on LB about 150' US of SC-2#8		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000884.JPG
SC-0000885	SC-2#9	CL @ SC-2#9 w/12"culvert on L, 60" culverts center & R		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000885.JPG
SC-0000886	SC-2#9	close-up view of 3 culverts		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000886.JPG
SC-0000888	SC-2#9	close-up view of 60" square culvert, US of Roswell Rd		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000888.JPG
SC-0000889	SC-2#9	view of manhole		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000889.JPG
SC-0000890	SC-2#11	SC-2#11	orange sediment	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000890.JPG
SC-0000891	SC-2#12	SC-2#12 looking at culvert		US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000891.JPG
SC-0000892	SC-2#12	SC-2#12	orange sediment	DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000892.JPG
SC-0000893	SC-2#12	SC-2#12	orange sediment	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000893.JPG
SC-0000894	SC-2#12	100 ft past SC-2#12	much debris (boards, trees) clogging creek	DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000894.JPG
SC-0000895	SC-2#13	SC-2#13	severe undercutting	DS		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000895.JPG
SC-0000896	SC-2#13	SC-2#13	lots of debris in stream	US		05/13/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000896.JPG
SC-0000897	SC-3#1	CL @ SC-3#1 w/sanitary sewer pipe crossing the channel		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000897.JPG
SC-0000898	SC-3#1	CL @ SC-3#1	50' US of retention pond	DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000898.JPG
SC-0000899	SC-3#1	sanitary sewer pipe crossing channel w/old support structure no longer in use on RB				05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000899.JPG
SC-0000900	SC-3#2	CL @ SC-3#2		DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000900.JPG
SC-0000901	SC-3#2	RB @ SC-3#2	bank seriously undercut, roots exposed	DS	RB	05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000901.JPG
SC-0000902	SC-3#2	CL @ SC-3#2	undercut bank, roots exposed, stream veers to R	US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000902.JPG
SC-0000903	SC-3#3	CL @ SC-3#3 w/42" culvert		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000903.JPG
SC-0000904	SC-3#3	CL @ SC-3#3	undercut banks, exposed roots	DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000904.JPG
SC-0000905	SC-3#3	30" culvert on RB US of SC-3#3	channel diverted, high flat wetland area which does not appear to be main channel	US	RB	05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000905.JPG
SC-0000906	SC-3#4	CL @ SC-3#4		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000906.JPG
SC-0000907	SC-3#4	CL @ SC-3#4		DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000907.JPG
SC-0000908	SC-3#5	CL @ SC-3#5 w/2 48" culverts	R culvert partially blocked by sediment	US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000980.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
SC-0000909	SC-3#5	30" culvert that empties from LB to SC-3#5				05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000909.JPG
SC-0000910	SC-3#5	CL @ SC-3#5		DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000910.JPG
SC-0000913	SC-4#1	CL @ SC-4#1	milky water	US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000913.JPG
SC-0000914	SC-4#1	CL @ SC-4#1	stagnant water	US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000914.JPG
SC-0000915	SC-4#1	RB @ SC-4#1		DS	RB	05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000915.JPG
SC-0000916	SC-4#1	rock falls w/ JM & SK				05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000916.JPG
SC-0000917	SC-4#2	CL @ SC-4#2		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000917.JPG
SC-0000918	SC-4#2	CL @ SC-4#2	significant obstruction, downed trees	DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000918.JPG
SC-0000919	SC-4#2	steep vertical LB	severely eroded, exposed roots, milky water	US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000919.JPG
SC-0000920	SC-4#3	CL @ SC-4#3		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000920.JPG
SC-0000921	SC-4#3	CL @ SC-4#3	stairs coming down near water on LB (not shown)	DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000921.JPG
SC-0000922	SC-4#4	CL @ SC-4#4		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000922.JPG
SC-0000923	SC-4#4	CL @ SC-4#4	severe undercutting on RB	DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000923.JPG
SC-0000924	SC-4#4	US of SC-4#4, stream starts to meander, 12" pipe comes in		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000924.JPG
SC-0000925	SC-4#5	CL @ SC-4#5		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000925.JPG
SC-0000926	SC-4#5	CL @ SC-4#5	undercut RB US and downed trees across stream both US and DS	DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000926.JPG
SC-0000927	SC-4#5	36" culvert which drains to stream from LB		US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000927.JPG
SC-0000928	SC-4#6	CL @ SC-4#6 w/60" culvert	brown sediment in channel	US		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000928.JPG
SC-0000929	SC-4#6	CL @ SC-4#6		DS		05/14/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000929.JPG
SC-0000930	SC-4#8	CL @ SC-4#8 w/concrete retention pond structure		DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000930.JPG
SC-0000931	SC-4#8	CL @ SC-4#8		US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000931.JPG
SC-0000932	SC-4#9	CL @ SC-4#9		DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000932.JPG
SC-0000933	SC-4#9	CL @ SC-4#9	trib coming in from RB, LB undercut	US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000933.JPG
SC-0000934	SC-5#1	CL @ SC-5#1		US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000934.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
SC-0000935	SC-5#1	looking from LB at confluence of stream & trib @ SC-5#1		DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000935.JPG
SC-0000936	SC-5#2	CL @ SC-5#2		DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000936.JPG
SC-0000937	SC-5#2	CL @ SC-5#2	long bedrock run down to SC-5#2	US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000937.JPG
SC-0000938	SC-5#3	CL @ SC-5#3		DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000938.JPG
SC-0000939	SC-5#3	CL @ SC-5#3	construction site above LB, note orange-brown sludge on rocks	US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000939.JPG
SC-0000940	SC-5#3	concrete retaining wall	failed silt fencing, heavy sedimentation US of SC-5#3			05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000940.JPG
SC-0000941	SC-5#3	CL @ SC-5#3 w/48" culvert		US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000941.JPG
SC-0000942	SC-5#3	CL @ SC-5#3		DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000942.JPG
SC-0000943	SC-5#3	looking US @ 3 culverts, and 24" culvert at far right	R-hand culvert partially clogged w/silt	US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000943.JPG
SC-0000944	SC-5#6	2 48" culverts @ SC-5#6		DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000944.JPG
SC-0000945	SC-5#6	CL @ SC-5#6		US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000945.JPG
SC-0000946	SC-5#7	CL @ SC-5#7		US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000946.JPG
SC-0000947	SC-5#7	CL @ SC-5#7		DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000947.JPG
SC-0000948	SC-5#8	CL @ SC-5#8		US		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000948.JPG
SC-0000949	SC-5#8	CL @ SC-5#8	dense vegetation	DS		05/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Sullivans Creek\P0000949.JPG
PB-0000950	PB#1	CL @ PB-1 w/3 culverts, 2 5' culverts @ left, 3' culverts @ R		US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000950.JPG
PB-0000951	PB#1	CL @ PB-1		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000951.JPG
PB-0000952	PB#2	CL @ PB-2		US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000952.JPG
PB-0000953	PB#2	CL @ PB-2 w/2 5' culverts		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000953.JPG
PB-0000954	PB#3	CL @ PB-3		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000954.JPG
PB-0000955	PB#3	CL @ PB-3 w/2 5' culverts		US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000955.JPG
PB-0000956	PB#5	CL @ PB-5 w/2 5' culverts		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000956.JPG
PB-0000957	PB#5	CL @ PB-5	man-made weir comprised of rip-rap & fencing material	US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000957.JPG
PB-0000958	PB#5	weir just US of PB-5		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000958.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0000959	PB#5	24" culvert on LB US of PB-5	partially blocked w/sediment	US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000959.JPG
PB-0000961	PB#6	CL @ PB-6 w/24" culvert on LB		US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000961.JPG
PB-0000962	PB#6	close-up of 24" on LB		US	LB	05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000962.JPG
PB-0000964	PB#6	CL @ PB-6		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000964.JPG
PB-0000965	PB#6	looking from LB across channel at seven line w/support structure and manhole on other side	manhole also on LB, not shown	US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000965.JPG
PB-0000966	PB#7	PB-7 w/sewer pipe crossing channel and manhole on LB		DS	RB	05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000966.JPG
PB-0000967	PB#7	CL @ PB-7		US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000967.JPG
PB-0000968	PB#7	36" and 18" culverts & construction on RB	just US of PB-7	US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000968.JPG
PB-0000969	PB#8	CL @ PB-8 w/ 6' culvert @ Roswell Rd		US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000969.JPG
PB-0000970	PB#8	CL @ PB-8		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000970.JPG
PB-0000971	PB-1#1	CL @ PB-1#1 w/60" culvert		US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000971.JPG
PB-0000972	PB-1#1	CL @ PB-1#1 w/60" culvert	lots of debris and garbage in channel	DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000972.JPG
PB-0000973	PB-1#1	4' culvert US of PB-1#1		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000973.JPG
PB-0000974	PB-1#2	CL @ PB-1#2		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000974.JPG
PB-0000975	PB-1#2	CL @ PB-1#2		US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000975.JPG
PB-0000976	PB-1#2	failing silt fence US of PB-1#2	orange sludge in channel			05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000976.JPG
PB-0000977	PB-1#3	CL @ PB-1#3	orange sludge in channel	US		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000977.JPG
PB-0000978	PB-1#3	CL @ PB-1#3		DS		05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000978.JPG
PB-0000979	PB-1#3	36" culvert		US	RB	05/18/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000979.JPG
PB-0000980	PB-1#4	CL @ PB-1#4 w/48" culvert & silt fence behind		DS		05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000980.JPG
PB-0000981	PB-1#4	CL @ PB-1#4		US		05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000981.JPG
PB-0000982	PB-1#4	makeshift weir crossing channel US of PB-1#4				05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000982.JPG
PB-0000983	PB-1#5	CL @ PB-1#5	orange sludge on rocks in channel	US		05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000983.JPG
PB-0000984	PB-1#5	CL @ PB-1#5	undercut RB, roots exposed	DS		05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000984.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0000985	PB-1#5	24" pipe inlet (from Morgan Falls landfill)	severely eroded LB, trib of PB-1			05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000985.JPG
PB-0000986	PB-1#6	CL @ PB-1#6	severe undercutting on RB	DS		05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000986.JPG
PB-0000987	PB-1#6	CL @ PB-1#6	undercut RB, roots exposed	US		05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000987.JPG
PB-0000988	PB-1#7	CL @ PB-1#7		US		05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000988.JPG
PB-0000989	PB-1#7	CL @ PB-1#7 w/18" pipe coming from RB	pipe segment broken off in channel	DS		05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000989.JPG
PB-0000990	PB-1#7	drainage channel, just US of PB-1#7		US	RB	05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000990.JPG
PB-0000991	PB-1#7	view from top of drainage channel	note photo #990	US	RB	05/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000991.JPG
PB-0000995	PB#9	CL @ PB-9 w/10'h x 9'w culvert		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000995.JPG
PB-0000996	PB#9	taken at bend just US of culvert @ PB-9		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000996.JPG
PB-0000997	PB#10	CL @ PB-10		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000997.JPG
PB-0000998	PB#10	CL @ PB-10 w/trib coming in from RB		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0000998.JPG
PB-0001000	PB#11	CL @ PB-11		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001000.JPG
PB-0001001	PB#11	CL @ PB-11 w/man-made rock footbridge		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001001.JPG
PB-0001002	PB#12	CL @ PB-12		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001002.JPG
PB-0001003	PB#12	CL @ PB-12		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001003.JPG
PB-0001004	PB#12	drainage channel into main branch on LB	sediment deposited in aquatic plants	US	LB	05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001004.JPG
PB-0001005	PB#13	CL @ PB-13 w/downed trees against fencing creating significant blockage		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001005.JPG
PB-0001006	PB#13	CL @ PB-13		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001006.JPG
PB-0001007	PB#14	CL @ PB-14 w/silt fence crossing stream creating make-shift weir		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001007.JPG
PB-0001008	PB#14	CL @ PB-14		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001008.JPG
PB-0001009	PB#15	CL @ PB-15 w/12' bridge		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001009.JPG
PB-0001010	PB#15	CL @ PB-15	downed tree crossing channel	DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001010.JPG
PB-0001011	PB#17	CL @ PB-17	12' bridge	DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001011.JPG
PB-0001012	PB#17	CL @ PB-17	increased sediment on rocks	US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001012.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0001013	PB#18	CL @ PB-18		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001013.JPG
PB-0001014	PB#18	CL @ PB-18		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001014.JPG
PB-0001015	PB-2#1	CL @ PB-2#1	concrete weir	US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001015.JPG
PB-0001016	PB-2#1	CL @ PB-2#1		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001016.JPG
PB-0001017	PB-2#2	CL @ PB-2#2	weir on LB, diverted and obstructed channel irregular	DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001017.JPG
PB-0001018	PB-2#2	CL @ PB-2#2		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001018.JPG
PB-0001019	PB-2#1	inside of open manhole	just US of PB and PB-2 split			05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001019.JPG
PB-0001020	PB-2#1	open manhole w/concrete weir in background	see photos #1015, #1019			05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001020.JPG
PB-0001021	PB#18	2nd open manhole w/apartment building in rear	just US of PB-18			05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001021.JPG
PB-0001022	PB#19	CL @ PB-19		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001022.JPG
PB-0001023	PB#19	CL @ PB-19		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001023.JPG
PB-0001024	PB#20	CL @ PB-20 w/48" culvert	murky water & sediment on rocks in channel	US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001024.JPG
PB-0001025	PB#20	CL @ PB-20 w/24" pipe on RB		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001025.JPG
PB-0001026	PB#21	CL @ PB-21		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001026.JPG
PB-0001027	PB#21	CL @ PB-21 w/48" culvert		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001027.JPG
PB-0001028	PB#22	pond and wetland at PB-22		US	RB	05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001028.JPG
PB-0001029	PB#22	open manhole in wetland area		US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001029.JPG
PB-0001030	PB#22	wetland area		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001030.JPG
PB-0001031	PB#22	weir/ hydraulic control		US	RB	05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001031.JPG
PB-0001032	PB#23	CL @ PB-23	overgrown 72" culvert, thick orange sludge in channel	US		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001032.JPG
PB-0001033	PB#23	CL @ PB-23	heavily overgrown	DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001033.JPG
PB-0001034	PB#23	24" pipe coming in on RB across from PB-23		DS		05/20/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001034.JPG
PB-0001035	PB#24	CL @ PB-24		DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001035.JPG
PB-0001036	PB#24	CL @ PB-24		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001036.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0001037	PB#25	culvert US of PB-25	36" at ground level and 18" coming in above L			05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001037.JPG
PB-0001038	PB#25	CL @ PB-25		DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001038.JPG
PB-0001039	PB#26	CL @ PB-26 w/stone weir		DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001039.JPG
PB-0001040	PB#26	CL @ PB-26 w/stone weir		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001040.JPG
PB-0001041	PB-2#3	weir at PB-2#3	just DS of double 36" culvert (round) w/weir	DS	LB	05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001041.JPG
PB-0001042	PB-2#3	double 36" culvert w/weir		US	RB	05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001042.JPG
PB-0001043	PB-2#3	CL @ PB-2#3 double 36" culvert w/weir		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001043.JPG
PB-0001044	PB-2#4	CL @ PB-2#4		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001044.JPG
PB-0001045	PB-2#4	CL @ PB-2#4 double 36" culvert		DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001045.JPG
PB-0001046	PB-2#5	CL @ PB-2#5 w/36" culvert in concrete wall		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001046.JPG
PB-0001047	PB-2#5	CL @ PB-2#5		DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001047.JPG
PB-0001048	PB-2#5	retaining wall and hydraulic control		US	RB	05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001080.JPG
PB-0001049	PB-2#5	48" culvert and small pond on US side of hydraulic control	wetland area	US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001049.JPG
PB-0001050	PB-2#7	CL @ PB-2#7 w/48" culvert		DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001050.JPG
PB-0001051	PB-2#7	close-up of sludge in channel at PB-2#7				05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001051.JPG
PB-0001052	PB-2#7	CL @ PB-2#7		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001052.JPG
PB-0001053	PB-2#8	CL @ PB-2#8 w/36" culvert		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001053.JPG
PB-0001054	PB-2#8	CL @ PB-2#8	orange sludge on rocks in channel	DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001054.JPG
PB-0001055	PB-3#1	CL @ PB-3#1		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001055.JPG
PB-0001056	PB-3#1	CL @ PB-3#1	no base flow	DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001056.JPG
PB-0001057	PB#01	CL @ PB-01		US	LB	05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001057.JPG
PB-0001058	PB#01	CL @ PB-01		DS	RB	05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001058.JPG
PB-0001059	PB#01	Morgan Falls weir		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001059.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0001060	PB#01	CL of Morgan Falls Lake	US of PB-01	US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001060.JPG
PB-0001061	PB#03	36" culvert just US of PB-03	not visible due to sediment island w/plants	US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001061.JPG
PB-0001062	PB#04	CL @ PB-04		DS	LB	05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001062.JPG
PB-0001063	PB#04	CL @ PB-04	water very murky and orange	US	RB	05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001063.JPG
PB-0001064	PB-4#1	CL @ PB-4#1	looking out at Morgan Falls Lake	DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001064.JPG
PB-0001065	PB-4#1	CL @ PB-4#1	rip-rap weir obstructing channel	US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001065.JPG
PB-0001066	PB-4#1	weir formed of wetland plants	tree debris just US of PB-4#1	US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001066.JPG
PB-0001067	PB-4#2	CL @ PB-4#2		US		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001067.JPG
PB-0001068	PB-4#2	CL @ PB-4#2		DS		05/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001068.JPG
PB-0001069	PB-4#3	CL @ PB-4#3 24" culvert		DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001069.JPG
PB-0001070	PB-4#3	pond w/fountain		DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001070.JPG
PB-0001071	PB-4#3	large pond	shot across pond	US	RB	05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001071.JPG
PB-0001072	PB-4#5	CL @ PB-4#5	manhole on LB looking US	US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001072.JPG
PB-0001073	PB-4#5	CL @ PB-4#5		DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001073.JPG
PB-0001074	PB-5#1	CL @ PB-5#1		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001074.JPG
PB-0001075	PB-5#1	CL @ PB-5#1 w/60" culvert		DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001075.JPG
PB-0001076	PB-6#1	CL @ PB-6#1 w/36" culvert	dry channel, lots of debris	DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001076.JPG
PB-0001077	PB-6#1	CL @ PB-6#1 w/failed silt fence		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001077.JPG
PB-0001078	PB-6#1	fallen rocks covering channel w/silt fence & mound of soil for new home construction		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001078.JPG
PB-0001079	PB-7#1	CL @ PB-7#1 w/48" culvert		DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001079.JPG
PB-0001080	PB-7#1	CL @ PB-7#1		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001080.JPG
PB-0001081	PB-7#2	CL @ PB-7#2	top of steep grade, large rocks obstruction channel	DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001081.JPG
PB-0001082	PB-7#2	CL @ PB-7#2		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001082.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0001083	PB-7#2	severely eroded LB at bend in channel US of PB-7#2	exposed roots	US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001083.JPG
PB-0001084	PB-7#3	CL @ PB-7#3	mound of soil in background	DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001084.JPG
PB-0001085	PB-7#3	CL @ PB-7#3		DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001085.JPG
PB-0001086	PB-7#3	60" culvert under soil mound @ construction site US of PB-7#3				05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001086.JPG
PB-0001087	PB-7#5	CL @ PB-7#5 w/silt fence & 60" culvert		DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001087.JPG
PB-0001088	PB-7#5	CL @ PB-7#5		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001088.JPG
PB-0001089	PB-7#6	CL @ PB-7#6 w/60" culvert		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001089.JPG
PB-0001090	PB-7#6	CL @ PB-7#6 w/60" culvert	vertical banks	DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001090.JPG
PB-0001091	PB-7#7	CL @ PB-7#7 w/36" culvert		DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001091.JPG
PB-0001092	PB-7#7	CL @ PB-7#7		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001092.JPG
PB-0001093	PB-6#2	CL @ PB-6#2	shows construction site, no apparent culvert, stagnant water	DS		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001093.JPG
PB-0001094	PB-6#2	CL @ PB-6#2 w/24" culvert		US		05/24/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001094.JPG
PB-0001096	PB-8#1	CL @ PB-8#1		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001096.JPG
PB-0001097	PB-8#1	CL @ PB-8#1		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001097.JPG
PB-0001098	PB-8#2	CL @ PB-8#2 w/ sewer line (8") crossing channel		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001098.JPG
PB-0001099	PB-8#2	CL @ PB-8#2	eroded banks, exposed roots	DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001099.JPG
PB-0001100	PB-8#3	just DS of PB-8#3	severely eroded banks, undercut, exposed roots	US	RB	05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001100.JPG
PB-0001101	PB-8#3	CL @ PB-8#3	60" culvert and trees crossing channel	US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001101.JPG
PB-0001102	PB-8#3	CL @ PB-8#3		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001102.JPG
PB-0001103	PB-8#4	CL @ PB-8#4 w/2 60" culverts		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001103.JPG
PB-0001104	PB-8#4	CL @ PB-8#4w/60" culvert		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001104.JPG
PB-0001105	PB-8#4	close up of double 60" culverts	US of PB-8#4			05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001105.JPG
PB-0001106	PB-8#4	48" culvert which drains from RB	just DS of double 60" culverts	US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001106.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0001107	PB-8#6	CL @ PB-8#6 w/double 60" culvert & cascade		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001107.JPG
PB-0001108	PB-8#6	CL @ PB-8#6 w/double 60" culvert in background	other side of culvert in photo #1105	DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001108.JPG
PB-0001109	PB-8#6	close-up of double 60" culvert	cascade and broken concrete in channel	US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001109.JPG
PB-0001110	PB-8#8	from peninsula on LB jutting out into pond w/double 60" culverts and smaller 1/2 submerged		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001110.JPG
PB-0001111	PB-8#8	from peninsula on LB jutting out into pond @ PB-8#8		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001111.JPG
PB-0001112	PB-8#9	CL @ PB-8#9	lots of rocks in channel	DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001112.JPG
PB-0001113	PB-8#9	PB-8#9	fallen rocks in channel, failed rock weir	US	RB	05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001113.JPG
PB-0001114	PB-8#10	PB-8#10		DS	RB	05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001114.JPG
PB-0001115	PB-8#10	PB-8#10		US	RB	05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001115.JPG
PB-0001116	PB-8#11	CL @ PB-8#11 w/36"culvert & semi-submerged pipe		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001116.JPG
PB-0001117	PB-8#11	CL @ PB-8#11		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001117.JPG
PB-0001118	PB-8#12	drainage structure DS of PB-8#12 seen from above				05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001118.JPG
PB-0001119	PB-8#13	close-up view of 4'x4' culvert w/low weir just US of PB-8#13	concrete drainage channels coming down to bank on either side of culvert (not shown)			05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001119.JPG
PB-0001120	PB-8#13	CL @ PB-8#13	water fairly clean, some orange sediment in channel	DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001120.JPG
PB-0001121	PB-8#12	CL @ PB-8#12		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001121.JPG
PB-0001122	PB-8#12	CL @ PB-8#12 w/drainage structure seen in photo #1118		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001122.JPG
PB-0001123	PB-8#14	CL @ PB-8#14 no visible culvert		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001123.JPG
PB-0001124	PB-8#15	CL @ PB-8#15 w/36" culvert	eroded RB	US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001124.JPG
PB-0001125	PB-8#15	CL @ PB-8#15	no base flow, dry channel	DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001125.JPG
PB-0001126	PB-8#15	PB-8#15	stone weir blocking channel	US	RB	05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001126.JPG
PB-0001127	PB-8#15	concrete structure- blocked culvert?		DS	LB	05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001127.JPG
PB-0001129	PB-8#17	CL @ PB-8#17		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001129.JPG
PB-0001130	PB-8#17	CL @ PB-8#17 w/36" culvert		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001130.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0001131	PB-8#18	CL @ PB-8#18 w/silt fence along LB		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001131.JPG
PB-0001132	PB-8#18	CL @ PB-8#18		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001132.JPG
PB-0001133	PB-8#18	PB-8#18	concrete wall holding back soil on RB	US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001133.JPG
PB-0001134	PB-9#1	CL @ PB-9#1		US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001134.JPG
PB-0001135	PB-9#1	CL @ PB-9#1	dry channel	DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001135.JPG
PB-0001136	PB-9#2	CL @ PB-9#2	rock fall & collapsed silt fence	US		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001136.JPG
PB-0001137	PB-9#2	CL @ PB-9#2		DS		05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001137.JPG
PB-0001139	RB looking US is new apartment/ho	RB looking US is new apartment/home construction		US	RB	05/25/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001139.JPG
Stewart-00011	36" pipe draining into stream	36" pipe draining into stream		US		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001140.JPG
Stewart-00011	LB new home construction	LB new home construction	steep bank guarded w/silt fences	DS	LB	05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001141.JPG
Stewart-00011	LB new home construction	LB new home construction	steep bank guarded w/silt fences	DS	LB	05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001142.JPG
Stewart-00011	trib gulley that drains below	trib gulley that drains below possible pond location		US		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001143.JPG
Stewart-00011	confluence of trib w/main channel	confluence of trib w/main channel, looking US towards possible pond location		US		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001144.JPG
Stewart-00011	possible pond location II	possible pond location II	this site is where used to be naturally wide floodplain	US		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001145.JPG
Stewart-00011	CL of channel	CL of channel		DS		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001146.JPG
Stewart-00011	CL of channel	CL of channel		US		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001147.JPG
Stewart-00011	CL looking at possible pond location	CL looking at possible pond location II		DS		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001148.JPG
Stewart-00011	CL looking at rip-rap weir @ possible	CL looking at rip-rap weir @ possible pond location II		US		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001149.JPG
Stewart-00011	CL at possible pond location	CL at possible pond location II, RB large house	just US + up the bank from Quarry Pond	US		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001150.JPG
Stewart-00011	Quarry Pond	Quarry Pond	significant sediment deposit @ point where culvert drains into pond	DS		05/27/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001151.JPG
PB-0001153	PB-5#2	CL @ PB-5#2	pond extends out to R	DS		05/28/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001153.JPG
PB-0001154	PB-5#2	CL @ PB-5#2		US		05/28/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001154.JPG
PB-0001155	PB-5#3	CL @ PB-5#3 w/fence drainage channel coming in from RB		US		05/28/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001155.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
PB-0001156	PB-5#3	CL @ PB-5#3	stream splits around small island w/uprooted tree	US		05/28/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Powers Branch\P0001156.JPG
LI-00001190	LI-1#1	LI-1#1		DS	LB	06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001190.JPG
LI-00001191	LI-1#1	LI-1#1	steep drop-off, failing concrete, trash in channel	US	LB	06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001191.JPG
LI-00001192	LI-1#2	LI-1#2	island in middle of lake, bridge at far end	DS	LB	06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001192.JPG
LI-00001193	LI-1#2	LI-1#2	fork in channel	US	LB	06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001193.JPG
LI-00001194	LI-1#2	LI-1#2	culvert feeding into channel	US	LB	06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001194.JPG
LI-00001195	LI-1#3	CL @ LI-1#3	confluence of LI and small lake	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001195.JPG
LI-00001196	LI-1#3	CL @ LI-1#3		US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001196.JPG
LI-00001197	LI-1#3	US of LI-1#3 36" culvert	large debris	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001197.JPG
LI-00001198	LI-1#4	LI-1#4	shallow, orangish bottom	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001198.JPG
LI-00001199	LI-1#4	LI-1#4 bridge and slope	Ford 555C in channel	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001199.JPG
LI-00001200	LI-1#4	US of LI-1#4	brige with drop beneath	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001200.JPG
LI-00001201	LI-1#4	US of LI-1#4 4 36" culverts on US LB		US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001201.JPG
LI-00001202	LI-1#5	CL @ LI-1#5	small island in middle just US of bridge	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001202.JPG
LI-00001203	LI-1#5	CL @ LI-1#5		US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001203.JPG
LI-00001204	LI-1#5	US of LI-1#5	grayish-white water	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001204.JPG
LI-00001205	LI-1#6	CL @ LI-1#6	channel is very small, earth pile w/roots in the middle	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001205.JPG
LI-00001206	LI-1#6	CL @ LI-1#6	v-shaped weir, murky water	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001206.JPG
LI-00001207	LI-1#7	LI-1#7	change in channel slope, vertical bakns w/ exposed roots	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001207.JPG
LI-00001208	LI-1#7	LI-1#7	concrete block in channel, smalle culverts on both sides	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001208.JPG
LI-00001209	LI-1#7	US of LI-1#7 48" culvert and small trib		US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001209.JPG
LI-00001210	LI-1#8	LI-1#8	double 4ft culverts & sediment deposit in channel	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001210.JPG
LI-00001211	LI-1#8	LI-1#8	sediment deposits in channel forming islands, vertical banks & exposed roots	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001211.JPG
LI-00001212	LI-1#8	close-up of double 4ft culvert clogged with debris and sediment		DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001212.JPG
LI-00001213	LI-1#10	CL @ LI-1#10		DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001213.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001214	LI-1#10	CL @ LI-1#10	rocks in channel coated with sediment	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001214.JPG
LI-00001215	LI-1#10	CL US from LI-1#10	outfall from I-285 on RB	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001215.JPG
LI-00001217	LI-1#11	CL @ LI-1#11	culvert under I-285	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001217.JPG
LI-00001218	LI-1#11	CL @ LI-1#11	rocks and vegetation in channel coated with sediment	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001218.JPG
LI-00001219	LI-1#12	CL @ LI-1#12	culvert & fence going under I-285, heavily eroded banks andlits of blockage in channel	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001219.JPG
LI-00001220	LI-1#12	CL @ LI-1#12		US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001220.JPG
LI-00001221	LI-1#13	CL @ LI-1#13	sharp bend to R in channel	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001221.JPG
LI-00001222	LI-1#14	CL @ LI-1#14	vertical bank @ far side and 90* bend in channel	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001222.JPG
LI-00001223	LI-1#15	CL @ LI-1#15	gravel bottom	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001223.JPG
LI-00001224	LI-1#15	CL @ LI-1#15 confluence of LI & trib	sediment island & obstruction @ confluence			06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001224.JPG
LI-00001225	LI-1#16	CL @ LI-1#16	obstruction blocking 70.5 of channel width, rip-rap on RB LDS	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001225.JPG
LI-00001226	LI-1#16	CL @ LI-1#16	culvert (48" pipe) & broken concrete pipe in channel	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001226.JPG
LI-00001227	LI-1-1#1	CL @ LI-1-1#1	vegetation on bank & rip-rap in channel	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001227.JPG
LI-00001228	LI-1-1#1	CL @ LI-1-1#1	culvert 60" & rip-rap below outfall of culvert	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001228.JPG
LI-00001229	LI-1-1#3	CL @ LI-1-1#3	5' culvert	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001229.JPG
LI-00001230	LI-1-1#3	CL @ LI-1-1#3	heavy veg on banks of small trib	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001230.JPG
LI-00001231	LI-1-1#3	upstream 150' from xs LI-1-1#3	transition from rip-rap to grassed bank	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001231.JPG
LI-00001232	LI-1-1#4	CL @ LI-1-1#4		DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001232.JPG
LI-00001233	LI-1-1#4	CL @ LI-1-1#4		US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001233.JPG
LI-00001234	LI-1-1#5	CL @ LI-1-1#5	vertical banks ivy covered	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001234.JPG
LI-00001235	LI-1-1#5	CL @ LI-1-1#5	heavy ivy coverage on banks, gravel bottom	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001235.JPG
LI-00001236	LI-1-1#6	CL @ LI-1-1#6	vert. Banks gravel bottom	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001236.JPG
LI-00001237	LI-1-1#6	rip-rap 36" culvert	obstructions	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001237.JPG
LI-00001238	LI-1-2#1	CL @ LI-1-2#1	heavy veg on bank	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001238.JPG
LI-00001239	LI-1-2#1	CL @ LI-1-2#1	pipe crossing, heavy veg on bank	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001239.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001240	LI-1-2#2	CL @ LI-1-2#2	narrow channel, vert banks, heavy veg on banks	DS		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001240.JPG
LI-00001241	LI-1-2#2	CL @ LI-1-2#2	log obstruction blocking channel, channel dry above log obstruction	US		06/21/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001241.JPG
LI-00001242	LI-1#31	LI-1-31	culverts blocked w/ trash, oily water, bad smell	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001242.JPG
LI-00001243	LI-1#31	LI-1-31	culverts blocked w/ trash, oily water, bad smell	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001243.JPG
LI-00001244	LI-1#32	LI-1-32	dense vegetation	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001244.JPG
LI-00001245	LI-1#32	LI-1-32	looking @ concrete culvert under I-285	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001245.JPG
LI-00001246	LI-1-3#3	LI-1-3#3	culvert open (runs under I-285)	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001246.JPG
LI-00001247	LI-1-3#3	LI-1-3#3	rocks & sediment	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001247.JPG
LI-00001248	LI-1-3#4	LI-1-3#4	rocks & sediment	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001248.JPG
LI-00001249	LI-1-3#4	LI-1-3#4	upper culvert	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001249.JPG
LI-00001250	LI-1-3#4	LI-1-3#4	lower culvert, rocks & sediment	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001250.JPG
LI-00001251	LI-1-3#6	LI-1-3#6	rocks, pieces of concrete, flows into double culvert, debris	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001251.JPG
LI-00001252	LI-1-3#6	LI-1-3#6	rocks, pieces of concrete	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001252.JPG
LI-00001253	LI-1-3#7	LI-1-3#7	sedimentation	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001253.JPG
LI-00001254	LI-1-3#7	LI-1-3#7	sedimentation, rocks, farthest stream	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001254.JPG
LI-00001255	LI-1-3#7	LI-1-3#7	lower stream, rocks	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001255.JPG
LI-00001256	LI-1-3#8	LI-1-3#8	bend in stream, rocks, sediment rocks	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001256.JPG
LI-00001257	LI-1-3#8	LI-1-3#8	rock outcrops, stream flows over rocks, sedimentation	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001257.JPG
LI-00001258	LI-1-3#9	LI-1-3#9	rocks, vegetation, sedimentation	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001258.JPG
LI-00001259	LI-1-3#9	LI-1-3#9	rocks, vegetation, debris	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001259.JPG
LI-00001260	LI-1-3#10	LI-1-3#10	rocks, sedimentation, debris	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001260.JPG
LI-00001262	LI-1-3#10	LI-1-3#10	rocks, sedimentation	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001262.JPG
LI-00001263	LI-1-3#10	LI-1-3#10		US	LB	06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001263.JPG
LI-00001264	LI-1-3#10	LI-1-3#10		US	RB	06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001264.JPG
LI-00001265	LI-1-3#10	US of LI-1-3#10	RB erosion	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001265.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001266	LI-1-3#10	US of LI-1-3#10	debris, shopping cart	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001266.JPG
LI-00001267	LI-1-3#11	LI-1-3#11	rocks, debris	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001267.JPG
LI-00001268	LI-1-3#11	LI-1-3#11	rocks, debris	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001268.JPG
LI-00001269	LI-1-3#12	LI-1-3#12	debris, rock island, shopping cart	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001269.JPG
LI-00001270	LI-1-3#13	LI-1-3#13	culvert sedimentation	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001270.JPG
LI-00001271	LI-1-2#1	LI-1-2#1	heavy vegetation (kudzu) on banks	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001271.JPG
LI-00001272	LI-1-2#1	LI-1-2#1	5' culvert	US		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001272.JPG
LI-00001273	LI-1-2#3	LI-1-2#3	4' culvert	DS		06/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001273.JPG
LI-00001274	LI-1-2#3	LI-1-2#3		US			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001274.JPG
LI-00001275	LI-1-2#3	LI-1-2#3		US			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001275.JPG
LI-00001276	LI-1-2#4	LI-1-2#4	thick bank vegetation (kudzu)	DS			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001276.JPG
LI-00001277	LI-1-2#4	LI-1-2#4	thick bank vegetation (kudzu)	US			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001277.JPG
LI-00001278	LI-1-2#4	shot of LB	undercutting and erosion	US	LB		\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001278.JPG
LI-00001279	LI-1-2#5	LI-1-2#5		US			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001279.JPG
LI-00001281	LI-1-2#5	LI-1-2#5		DS			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001281.JPG
LI-00001282	LI-1-2#6	LI-1-2#6		US			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001282.JPG
LI-00001283	LI-1-2#6	LI-1-2#6		DS			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001283.JPG
LI-00001284	LI-1-2#6	just US of LI-1-2#6	4' culvert	US			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001284.JPG
LI-00001285	LI-1-2#7	LI-1-2#7		DS			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001285.JPG
LI-00001286	LI-1-2#7	LI-1-2#7	4' culvert	US			\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001286.JPG
LI-00001448	LI-2#1	LI-2#1		DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001448.JPG
LI-00001449	LI-2#1	LI-2#1		US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001449.JPG
LI-00001450	LI-2#1	US-SHOT OF LB	lined with Kudzu	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001450.JPG
LI-00001451	LI-2#1	DS-OF LI-2#1	failing supports of apartment complex (lake forrest apts)	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001451.JPG
LI-00001452	LI-2#1	DS-OF LI-2#1	failing supports of apartment complex (lake forrest apts)	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001452.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001453	LI-2#1	DS OF LI-2#1	rip-rap lined outfall- unstable	DS	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001453.JPG
LI-00001454	LI-2#2	LI-2#2		DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001454.JPG
LI-00001455	LI-2#2	LI-2#2	DS of hydraulic control and concrete wall with drainage structures	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001455.JPG
LI-00001456	LI-2#2	RB looking DS	concrete wall with drains	DS	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001456.JPG
LI-00001457	LI-2#2	LB looking DS	undercut	DS	LB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001457.JPG
LI-00001458	LI-2#2	DS OF LI-2#2	looking DS headwall 24" CMP DS of LI-2#2	DS	LB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001458.JPG
LI-00001459	LI-2#3	LI-2#3	eroded RB looking US	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001459.JPG
LI-00001463	LI-2#3	DS OF LI-2#3	RB looking DS eroding bank with unstable rip-rap	DS	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001463.JPG
LI-00001464	LI-2#4	looking DS at LI-2#4	bridge appears unstable due to erosion	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001464.JPG
LI-00001465	LI-2#4	LI-2#4	unstable under bridge	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001465.JPG
LI-00001466	LI-2#4	LI-2#4		US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001466.JPG
LI-00001468	LI-2#4	at LI-2#4	CMP (24") draining to creek	DS	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001468.JPG
LI-00001470	LI-2#4	DS of LI-2#4	erosion and exposed roots	DS	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001470.JPG
LI-00001471	LI-2#5	US of LI-2#5	exposed roots	DS	LB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001471.JPG
LI-00001472	LI-2#5	LI-2#5		US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001472.JPG
LI-00001473	LI-2#5	LI-2#5		DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001473.JPG
LI-00001474	LI-2#5	RB looking US	rip-rap lined 42" culvert	US	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001474.JPG
LI-00001475	LI-2#5	DS of LI-2#5	Kudzu lined area, floodplain area	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001475.JPG
LI-00001476	LI-2#6	LI-2#6	heavy vegetation	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001476.JPG
LI-00001477	LI-2#6	LI-2#6		US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001477.JPG
LI-00001478	LI-2#6	shot of RB	no exposed roots and undercutting, vertical banks	US	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001478.JPG
LI-00001479	LI-2#7	LI-2#7	rocky island, meander to right	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001479.JPG
LI-00001480	LI-2#7	LI-2#7	rocky embankment	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001480.JPG
LI-00001481	LI-2#8	LI-2#8	log fallen across stream	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001481.JPG
LI-00001482	LI-2#8	LI-2#8	sampling site, overpass above	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001482.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001483	LI-2#9	LI-2#9	tree branches hanging low	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001483.JPG
LI-00001484	LI-2#9	LI-2#9		DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001484.JPG
LI-00001485	LI-2#10	LI-2#10	fairly rocky	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001485.JPG
LI-00001486	LI-2#10	LI-2#10	very sandy	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001486.JPG
LI-00001487	LI-2#10	DS of LI-2#10	24" outfall DS of LI-2#10			08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001487.JPG
LI-00001488	LI-2#11	LI-2#11	fallen branches blocking stream	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001488.JPG
LI-00001490	LI-2#11	LI-2#11		DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001490.JPG
LI-00001491	LI-2#12	LI-2#12	sanitary sewer line crossing the stream	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001491.JPG
LI-00001492	LI-2#12	LI-2#12	eroded LB, meander to left	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001492.JPG
LI-00001493	LI-2#12	shot of LB	trib	US	LB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001493.JPG
LI-00001494	LI-2#13	LI-2#13	bank is vertical, stone & concrete	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001494.JPG
LI-00001495	LI-2#13	LI-2#13	low hanging branches	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001495.JPG
LI-00001496	LI-2#13	DS of LI-2#13	car overpass	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001496.JPG
LI-00001497	LI-2#13	shot of RB	concrete and wire fence	DS	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001497.JPG
LI-00001498	LI-2#14	LI-2#14	very rocky	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001498.JPG
LI-00001499	LI-2#14	LI-2#14	still rocky, some meandering	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001499.JPG
LI-00001500	LI-2#14	DS of LI-2#14	drainage structure feeding into creek channel	DS	RB	08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001500.JPG
LI-00001501	LI-2#15	LI-2#15	very sandy, tributary to the left	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001501.JPG
LI-00001502	LI-2#15	LI-2#15	fallen log across stream	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001502.JPG
LI-00001503	LI-2#16	LI-2#16	heavily vegetated	US		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001503.JPG
LI-00001504	LI-2#16	LI-2#16	very rocky	DS		08/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001504.JPG
LI-00001505	LI-2#16	DS of LI-2#16	bridge near Long Island Drive	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001505.JPG
LI-00001506	LI-2#17	LI-2#17		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001506.JPG
LI-00001507	LI-2#17	LI-2#17		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001507.JPG
LI-00001508	LI-2#18	LI-2#18		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001508.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001509	LI-2#18	LI-2#18		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001509.JPG
LI-00001510	LI-2#19	US of LI-2#19	small trib feeding in from RB, somewhat incised	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001510.JPG
LI-00001511	LI-2#19	LI-2#19		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001511.JPG
LI-00001512	LI-2#19	LI-2#19		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001512.JPG
LI-00001513	LI-2#19	DS of LI-2#19	Oil sheen on water surface--indicative of entire stretch of creek	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001513.JPG
LI-00001514	LI-2#20	LI-2#20		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001514.JPG
LI-00001515	LI-2#20	LI-2#20		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001515.JPG
LI-00001516	LI-2#20	DS of LI-2#20	draining into creek	DS	LB	08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001516.JPG
LI-00001517	LI-2#20	DS of LI-2#20	looking at footbridge made out of telephone poles	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001517.JPG
LI-00001518	LI-2#21	DS of LI-2#21		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001518.JPG
LI-00001519	LI-2#21	DS of LI-2#21		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\P0001519.JPG
LI-00001520	LI-2-1#1	LI-2-1#1		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001520.JPG
LI-00001521	LI-2-1#1	LI-2-1#1		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001521.JPG
LI-00001522	LI-2-1#1	near LI-2-1#1	severly eroded and undercut	US	LB	08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001522.JPG
LI-00001523	LI-2-1#2	LI-2-1#2		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001523.JPG
LI-00001524	LI-2-1#2	LI-2-1#2		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001524.JPG
LI-00001525	LI-2-1#2	Looking US of LI-2-1#2	outfall from apartment complex	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001525.JPG
LI-00001526	LI-2-1#2	US of LI-2-1#2	sanitary sewer line	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001526.JPG
LI-00001527	LI-2-1#2	US of LI-2-1#2	distinct wastewater smell and stagnant water with white bubbles	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001527.JPG
LI-00001528	LI-2-1#2	US of LI-2-1#2	upstream of sewer line white bubbles on water surface	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001528.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001529	LI-2-1#3	LI-2-1#3	footbridge	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001529.JPG
LI-00001530	LI-2-1#3	LI-2-1#3	RB looking US reinforced with stones & fencing	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001530.JPG
LI-00001531	LI-2-1#4	LI-2-1#4		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001531.JPG
LI-00001532	LI-2-1#4	LI-2-1#4		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001532.JPG
LI-00001533	LI-2-1#4	Looking US of LI-2-1#4	trib feeding into creek from leftbank	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001533.JPG
LI-00001534	LI-2-1#4	LI-2-1#4	severe vertical bank with exposed roots evidence of high velocities	US	LB	08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001534.JPG
LI-00001535	LI-2-1#5	LI-2-1#5		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001535.JPG
LI-00001536	LI-2-1#5	LI-2-1#5	36"cmp drain	US	RB	08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001536.JPG
LI-00001537	LI-2-1#5	LI-2-1#5		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001537.JPG
LI-00001538	LI-2-1#6	LI-2-1#6	US @ culvert bridge at willow brook apartment complex	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001538.JPG
LI-00001539	LI-2-1#6	LI-2-1#6		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001539.JPG
LI-00001540	LI-2-1#8	LI-2-1#8		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001540.JPG
LI-00001541	LI-2-1#8	LI-2-1#8		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001541.JPG
LI-00001542	LI-2-1#9	LI-2-1#9	5 ft culvert& 42" cmp & 24" CMP	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001542.JPG
LI-00001543	LI-2-1#9	LI-2-1#9		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001543.JPG
LI-00001544	LI-2-2#1	LI-2-2#1	5 ft culvert from I-285	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001544.JPG
LI-00001545	LI-2-2#1	LI-2-2#1		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001545.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001546	LI-2-2#2	LI-2-2#2	culvert under Allen road & drainage pipe	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001546.JPG
LI-00001547	LI-2-2#2	LI-2-2#2	oil sheen on water surface	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001547.JPG
LI-00001548	LI-2-2#4	LI-2-2#4	pond off of Allen Road	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001548.JPG
LI-00001549	LI-2-2#4	LI-2-2#4	drain in pond	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001549.JPG
LI-00001550	LI-2-2#5	LI-2-2#5		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001550.JPG
LI-00001551	LI-2-2#5	LI-2-2#5	42" culvert	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001551.JPG
LI-00001552	LI-2-2#6	LI-2-2#6	42" culvert	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001552.JPG
LI-00001553	LI-2-2#6	LI-2-2#6	high sinuosity sediment noted on channel rocks	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001553.JPG
LI-00001554	LI-2-2#7	LI-2-2#7	48"cmp culvert, note erosion on top	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001554.JPG
LI-00001555	LI-2-2#7	LI-2-2#7		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001555.JPG
LI-00001556	LI-2-1#10	LI-2-1#10	5 ft culvert from I-285	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001556.JPG
LI-00001557	LI-2-1#10	LI-2-1#10	note sheer left bank with exposed roots	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001557.JPG
LI-00001558	LI-2-1#10	US of LI-2-1#10	severe erosion & exposed roots	US	LB	08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001558.JPG
LI-00001559	LI-2-1#11	LI-2-1#11	6 ft wide culvert	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001559.JPG
LI-00001560	LI-2-1#11	LI-2-1#11		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001560.JPG
LI-00001561	LI-2-1#12	LI-2-1#12	6 ft wide culvert	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001561.JPG
LI-00001562	LI-2-1#12	LI-2-1#12	note failing hydraulic control	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001562.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001563	LI-2-1#13	LI-2-1#13		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001563.JPG
LI-00001564	LI-2-1#13	LI-2-1#13		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001564.JPG
LI-00001565	LI-2-1#14	LI-2-1#14	double 42" culvert	DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001565.JPG
LI-00001566	LI-2-1#14	LI-2-1#14		US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001566.JPG
LI-00001567	LI-2-1#15	LI-2-1#15	double 5 ft culvert construction site	US		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001567.JPG
LI-00001568	LI-2-1#15	LI-2-1#15		DS		08/10/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001568.JPG
LI-00001742	LI-2-4#10	LI-2-4#10	inside of weir			09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001742.JPG
LI-00001743	LI-2-4#10	LI-2-4#10	view of lake	US		09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001743.JPG
LI-00001744	LI-2-4#10	LI-2-4#10	view across lake with weir on RB			09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001744.JPG
LI-00001745	LI-2-9#9	LI-2-9#9		US		09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001745.JPG
LI-00001746	LI-2-9#9	LI-2-9#9	culvert under Lake Forest Rd	US	LB	09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001746.JPG
LI-00001747	LI-2-9#9	LI-2-9#9	collapsed structure in foreground	DS		09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001747.JPG
LI-00001748	LI-2-4#8	LI-2-4#8		US		09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001748.JPG
LI-00001749	LI-2-4#8	LI-2-4#8		DS		09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001749.JPG
LI-00001750	LI-2-4#7	LI-2-4#7	center of channel	DS		09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001750.JPG
LI-00001751	LI-2-4#8	LI-2-4#8	cement crossing over channel	US		09/09/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001751.JPG
LI-00001765	LI-2-4#7	LI-2-4#7	low bridge across channel	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001765.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001766	LI-2-4#7	LI-2-4#7		DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001766.JPG
LI-00001767	LI-2-4#6	LI-2-4#6	failed silt fence in channel	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P00017.JPG
LI-00001768	LI-2-4#6	LI-2-4#6	bank severely eroded	DS	LB	09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001768.JPG
LI-00001769	LI-2-4#6	LI-2-4#6	small channel feeding in from LB, coming from construction site, w/ failed silt fences & lots of sediment in main channel	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001769.JPG
LI-00001770	LI-2-4#5	LI-2-4#5		US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001770.JPG
LI-00001771	LI-2-4#5	LI-2-4#5	42" culvert under driveway	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001771.JPG
LI-00001772	LI-2-4#4	LI-2-4#4	42" culvert under driveway and undercutting of brick foundation	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001772.JPG
LI-00001773	LI-2-4#4	LI-2-4#4		DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001773.JPG
LI-00001774	LI-2-4#3	LI-2-4#3	ladder bridge crossing stream	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001774.JPG
LI-00001775	LI-2-4#3	LI-2-4#3	42" culvert	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001775.JPG
LI-00001776	LI-2-4#2	LI-2-4#2	42" culvert	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001776.JPG
LI-00001777	LI-2-4#2	LI-2-4#2	turn in channel w/ severely undercut RB & exposed roots	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001777.JPG
LI-00001778	LI-2-4#1	LI-2-4#1	trib LI-2-4 joins LI-2 narrow, deep channel	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001778.JPG
LI-00001779	LI-2-4#1	LI-2-4#1	channel turns to R, w/ lots of trees crossing channel & debris in channel	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001779.JPG
LI-00001780	LI-2-5#3	LI-2-5#3	looking across pond			09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001780.JPG
LI-00001781	LI-2-5#3	pond	view from DS end of lake, algae bloom toward US end	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001781.JPG
LI-00001782	LI-2-5#3	pond	clogged culvert, failing brick structure at DS end of lake			09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001782.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001783	LI-2-5#2	LI-2-5#2	failing outfall/weir from pond US	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001783.JPG
LI-00001784	LI-2-5#2	LI-2-5#2	severely eroded bank w/failing culverts; house on LB in danger of losing deck, etc	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001784.JPG
LI-00001785	LI-2-5#2	LI-2-5#2	heavy orange sediment	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001785.JPG
LI-00001786	LI-2-5#2	LI-2-5#2	failing channel rock wall & diverted channel path	US	RB	09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001786.JPG
LI-00001787	LI-2-5#1	LI-2-5#1	24" culvert passing under road w/ undermined structure	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001787.JPG
LI-00001788	LI-2-5#1	LI-2-5#1	lots of sedimentation	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001788.JPG
LI-00001789	LI-2-3#15	LI-2-3#15	looking across the pond			09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001789.JPG
LI-00001790	LI-2-3#15	LI-2-3#15	looking across the pond	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P00017990.JPG
LI-00001791	LI-2-3#15	LI-2-3#15	channel next to pond w/ 24" culvert under bridge & concrete weir in foreground	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001791.JPG
LI-00001792	LI-2-3#15	LI-2-3#15	channel next to pond	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001792.JPG
LI-00001793	LI-2-3#1	LI-2-3#1	36" culvert draining in from direction of I-285, lots of reddish sedimentation, debris & garbage	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001793.JPG
LI-00001794	LI-2-3#1	LI-2-3#1	reddish sediment in channel, garbage & debris	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001794.JPG
LI-00001795	LI-2-3#16	LI-2-3#16		US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001795.JPG
LI-00001796	LI-2-3#16	LI-2-3#16	right-hand turn in channel	DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001796.JPG
LI-00001797	LI-2-3#14	LI-2-3#14	Just US of LI-2-3#14, 36" culvert w/water pooling DS, blocked by downed trees	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001797.JPG
LI-00001798	LI-2-3#14	LI-2-3#14	looking US @LI-2-3#14 from CL pond at LI-2-3#15, drains down to channel on LB (US)	US		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001798.JPG
LI-00001799	LI-2-3#14	LI-2-3#14		DS		09/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001799.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001800	LI-2A#1	LI-2A#1	36" culvert and riprap	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001800.JPG
LI-00001801	LI-2A#2	LI-2A#2	channel dry US of pool, clothes and materials in channel	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001801.JPG
LI-00001802	LI-2A#2	LI-2A#2	waterfall draining into channel on RB (US)			09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001802.JPG
LI-00001803	LI-2A#2	LI-2A#2		DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001803.JPG
LI-00001808	LI-2-3#13	LI-2-3#13	tree down in channel	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001808.JPG
LI-00001809	LI-2-3#13	LI-2-3#13		DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001809.JPG
LI-00001810	LI-2-3#12	LI-2-3#12	42" culvert	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001810.JPG
LI-00001811	LI-2-3#12	LI-2-3#12	brick structure (manhole?) on LB (DS)	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001811.JPG
LI-00001812	LI-2-3#11	LI-2-3#11		US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001812.JPG
LI-00001813	LI-2-3#11	LI-2-3#11		DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001813.JPG
LI-00001814	LI-2-3#10	LI-2-3#10		US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001814.JPG
LI-00001815	LI-2-3#10	LI-2-3#10	2 x 36" culverts passing under driveway	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001815.JPG
LI-00001816	LI-2-3#9	LI-2-3#9	2 x 36" culverts, RH culvert hidden behind branches	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001816.JPG
LI-00001817	LI-2-3#9	LI-2-3#9	wetland area located between RB (US) and Long Island Dr.	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001817.JPG
LI-00001818	LI-2-3#8	LI-2-3#8	water has carved a deep pool in the earth	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001818.JPG
LI-00001819	LI-2-3#8	LI-2-3#8	stream runs along toward the right then doubles back to the left	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001819.JPG
LI-00001821	LI-2-3#7	LI-2-3#7	stream bends to R toward wetland, channel ahead appears to be previous course of waterway	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001821.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001823	LI-2-3#7	LI-2-3#7	lots of aggregate and concrete debris in channel, 36" culvert	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001823.JPG
LI-00001824	LI-2-3#5	LI-2-3#5	36" culvert under Long Island Drive	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001824.JPG
LI-00001825	LI-2-3#5	LI-2-3#5		DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001825.JPG
LI-00001826	LI-2-3#4	LI-2-3#4	wetland area with 24" culvert at end	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001826.JPG
LI-00001827	LI-2-3#4	LI-2-3#4	2 x 12" culverts under driveway that drain wetland area	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001827.JPG
LI-00001828	LI-2-3#4	LI-2-3#4	outfall from driveway to channel	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001828.JPG
LI-00001829	LI-2-3#4	LI-2-3#4	bottom of outfall from driveway, collapsed and undermined	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001829.JPG
LI-00001830	LI-2-3#4	LI-2-3#4	low bridge crossing channel, lots of debris	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001830.JPG
LI-00001831	LI-2-3#2	LI-2-3#2	stream splits L and R after fence and pond is visible in the background	DS		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001831.JPG
LI-00001832	LI-2-3#2	LI-2-3#2	dry, coming in from LB (DS)	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001832.JPG
LI-00001833	LI-2-3#2	LI-2-3#2	R hand split (DS)	US		09/16/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001833.JPG
LI-00001834	LI-2-6#12	LI-2-6#12	looking US across the lake from CL	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001834.JPG
LI-00001835	LI-2-6#12	LI-2-6#12	cement channel from lake	DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001835.JPG
LI-00001836	LI-2-6#12	LI-2-6#12	outfall from lake to end of concrete. Undercut LB(DS) sharp drop			09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001836.JPG
LI-00001837	LI-2-6#11	LI-2-6#11	lots of overgrowth & red sediment	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001837.JPG
LI-00001838	LI-2-6#11	LI-2-6#11		DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001838.JPG
LI-00001839	LI-2-6#11	LI-2-6#11	close-up of sewer line just DS of LI-2-6#11, where part of the cast iron piping has been replaced with PVC			09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001839.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001840	LI-2-6#10	LI-2-6#10	lots of reddish sediment in channel	DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001840.JPG
LI-00001841	LI-2-6#10	LI-2-6#10	sewer line taken in photo #1839	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001841.JPG
LI-00001842	LI-2-6#10	LI-2-6#10	close up of sediment buildup in center of channel w/ oily sheen			09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001842.JPG
LI-00001843	LI-2-6#10	LI-2-6#10	close up of bubbles/froth DS of sewer line. Oily sheen			09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001843.JPG
LI-00001844	LI-2-6#9	LI-2-6#9	LB looking US severely undercut	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001844.JPG
LI-00001845	LI-2-6#9	LI-2-6#9		DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001845.JPG
LI-00001846	LI-2-6#8	LI-2-6#8	sharply cut RB (US)	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001846.JPG
LI-00001847	LI-2-6#8	LI-2-6#8	36" x 36" culvert under Burdette	DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P00018470.JPG
LI-00001848	LI-2-6#6	LI-2-6#6	36"x 36" culvert with stone walls along the channel	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001848.JPG
LI-00001849	LI-2-6#6	LI-2-6#6		DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001849.JPG
LI-00001850	LI-2-6#5	LI-2-6#5	stone wall along RB	DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001844.JPG
LI-00001851	LI-2-6#5	LI-2-6#5	large wall forming weir across channel	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001851.JPG
LI-00001852	LI-2-6#4	LI-2-6#4	channel curves to the R	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001852.JPG
LI-00001853	LI-2-6#4	LI-2-6#4		DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001853.JPG
LI-00001854	LI-2-6#3	LI-2-6#3	8" sewer line crossing channel	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001854.JPG
LI-00001856	LI-2-6#3	LI-2-6#3		DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001856.JPG
LI-00001857	LI-2-6#2	LI-2-6#2		US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001857.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001858	LI-2-6#2	LI-2-6#2	water level low	DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001858.JPG
LI-00001859	LI-2-6#1	LI-2-6#1	8" sewer line crossing channel, strong smell of sewage	US		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001859.JPG
LI-00001860	LI-2-6#1	LI-2-6#1	LI-2-6 joins LI-2, 18' sewer line crossing LI-2 just US of join	DS		09/17/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001860.JPG
LI-00001882	LI-2#22	LI-2#22		US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001882.JPG
LI-00001883	LI-2#22	LI-2#22	24" sewer line crossing channel	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001883.JPG
LI-00001884	LI-2#22		24" sewer line & logs blocking channel; construction going on LB looking US (not shown)	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001884.JPG
LI-00001885	LI-2#23	LI-2#23	24" pipe is visible on R of channel	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001885.JPG
LI-00001886	LI-2#23	LI-2#23	LB looking DS is undercut w/roots exposed	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001886.JPG
LI-00001887	LI-3#1	LI-3#1	RB (US) is undercut, roots exposed	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001887.JPG
LI-00001888	LI-3#1	LI-3#1	12" sewer line crossing channel	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001888.JPG
LI-00001889	LI-3#1	LI-3-1	where it joins LI-3; 24" culvert coming in on LB (US)	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001889.JPG
LI-00001890	LI-3#1		close up of 24" culvert, completely blocked, w/8" sewer line crossing chanel			09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001890.JPG
LI-00001891	LI-3-1#1	LI-3-1#1	large rock in center of channel, both banks severely undercut	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001891.JPG
LI-00001892	LI-3-1#1	LI-3-1#1	8" sewer line crossing channel & culvert on RB	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001892.JPG
LI-00001893	LI-3-1#2	LI-3-1#2	cement wall on RB (DS) severely undercut; just DS of LI-3-1#2	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001893.JPG
LI-00001894	LI-3-1#2	LI-3-1#2	rocks in channel just DS of LI-3-1#2	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001894.JPG
LI-00001895	LI-3-1#2	LI-3-1#2	60" culvert under driveway	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001895.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001896	LI-3-1#2	LI-3-1#2		DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001896.JPG
LI-00001897	LI-3-1#1	LI-3-1-1	where it joins LI-3-1; 18" culvert coming on R,48" culvert on L	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001897.JPG
LI-00001898	LI-3-1#3	LI-3-1#3		US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001898.JPG
LI-00001899	LI-3-1#3	LI-3-1#3	60" culvert on L & 42" on R	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001899.JPG
LI-00001900	LI-3-1-1#1	LI-3-1-1#1		DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001900.JPG
LI-00001901	LI-3-1-1#1	LI-3-1-1#1	wooden shoring collapsing & undercut on LB (US); RB (US) undercut w/exposed roots	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001901.JPG
LI-00001902	LI-3-1-1#2	LI-3-1-1#2	both banks undercut w/exposed roots	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001902.JPG
LI-00001903	LI-3-1-1#2	LI-3-1-1#2	channel curves to the L	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001903.JPG
LI-00001904	LI-3-1#4	LI-3-1#4	culverts under W. Idlewood in background	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001904.JPG
LI-00001905	LI-3-1#4	LI-3-1#4	2 x 60' culverts under driveway; small bridge over channel	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001905.JPG
LI-00001906	LI-3-1#5	LI-3-1#5	2 x 72" culverts under road; walls on either bank, covered in ivy	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001906.JPG
LI-00001907	LI-3-1#5	LI-3-1#5	low bridge in distance	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001907.JPG
LI-00001908	LI-3-1#7	LI-3-1#7	10" sewer line crossing channel	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001908.JPG
LI-00001909	LI-3-1#7	LI-3-1#7	2x 72" culverts under road; lots of reddish sediment	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001909.JPG
LI-00001910	LI-3-1#8	LI-3-1#8	36" culvert & several pipes draining runoff into channel	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001910.JPG
LI-00001911	LI-3-1#8	LI-3-1#8	both banks undercut, roots exposed	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001911.JPG
LI-00001912	LI-3-1#9	LI-3-1#9	36" culvert in stone headwall & wooden shoring on RB (US)	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001912.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001913	LI-3-1#9	LI-3-1#9	some undercutting & exposed roots	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001913.JPG
LI-00001914	LI-3-1#9	LI-3-1#9	foam on surface of water	DS	RB	09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001914.JPG
LI-00001915	LI-3-1#10	LI-3-1#10	undercut banks & roots exposed	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001915.JPG
LI-00001916	LI-3-1#10	LI-3-1#10	channel bends to R	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001916.JPG
LI-00001917	LI-3-1#10	LI-3-1#10	several cement bags supporting severly undercut bank	US	LB	09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001917.JPG
LI-00001918	LI-3-1#11	LI-3-1#11	60" culvert; lots of red sediment	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001918.JPG
LI-00001919	LI-3-1#11	LI-3-1#11	construction site above culvert	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001919.JPG
LI-00001920	LI-3-1#13	LI-3-1#13	wetland area, 18" culvert enters stream from RB (DS) beside main structure	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001920.JPG
LI-00001921	LI-3-1#13	LI-3-1#13		US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001921.JPG
LI-00001922	LI-3-1#14	LI-3-1#14		US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001922.JPG
LI-00001923	LI-3-1#14	LI-3-1#14	wetland area	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001923.JPG
LI-00001924	LI-3-1#14	LI-3-1#14	split in river, downed tree, erosion, exposed roots, stream splits around island	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001924.JPG
LI-00001925	LI-3-1#15	LI-3-1#15	stream splits into several small channels	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001925.JPG
LI-00001926	LI-3-1#15	LI-3-1#15	24" culvert & brick structure			09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001926.JPG
LI-00001927	LI-3-1#15	LI-3-1#15		DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001927.JPG
LI-00001928	LI-3-1#16	LI-3-1#16	severely undercut RB	US		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0001928.JPG
LI-00001929	LI-3-1#16	LI-3-1#16	stream curves to R	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001929.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001930	LI-3-1#16	LI-3-1#16	culvert draining in on RB (US)	DS		09/30/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001930.JPG
LI-00001978	LI-3#2	LI-3#2	LB (US) undercut, exposed roots, channel curves to R	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001978.JPG
LI-00001979	LI-3#2	LI-3#2	small dry channel entering LI-3 on LB (US), undercut bank	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001979.JPG
LI-00001980	LI-3#2	LI-3#2	eroded RB (DS), roots exposed, channel curves to L	DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001980.JPG
LI-00001981	LI-3#2		30" sewer line crossing channel w/manhole on LB (DS)			10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001981.JPG
LI-00001982	LI-3#2		close up of manhole on bank; cracks in foundation, some moisture around pipe			10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001982.JPG
LI-00001983	LI-3#3	LI-3#3	30" sewer line across channel	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001983.JPG
LI-00001984	LI-3#3	LI-3#3		DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001984.JPG
LI-00001985	LI-3#3	LI-3#3	rock outcropping forms dam on RB (US) of channel	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001985.JPG
LI-00001986	LI-3#4	LI-3#4		DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001986.JPG
LI-00001987	LI-3#4		oil sheen on water surface			10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001987.JPG
LI-00001988	LI-3#5	LI-3#5	channel curves to the L	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001988.JPG
LI-00001989	LI-3#5	LI-3#5	channel curves to R; sharply cut LB, roots exposed	DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001989.JPG
LI-00001990	LI-3#6	LI-3#6	30" sewer line crossing channel	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001990.JPG
LI-00001991	LI-3#6	LI-3#6		DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001991.JPG
LI-00001992	LI-3#7	LI-3#7	12" sewer line crossing channel	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001992.JPG
LI-00001993	LI-3#7	LI-3#7		DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001993.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001995	LI-3#8	LI-3#8	dry channel of small trib entering LI-3 on LB (US)	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001995.JPG
LI-00001996	LI-3#8	LI-3#8	sewer line reinforced by steel I-beams, crossing channel	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001996.JPG
LI-00001997	LI-3#8	LI-3#8		DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001997.JPG
LI-00001998	LI-3#9	LI-3#9		US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001998.JPG
LI-00001999	LI-3#9	LI-3#9		DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0001999.JPG
LI-00002000	LI-3-2#1	LI-3-2#1	sharply cut 6' banks, exposed roots; house on LB (US)	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002000.JPG
LI-00002001	LI-3-2#1	LI-3-2#1	LI-3-2 joins LI-3	DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002001.JPG
LI-00002002	LI-3-2#2	LI-3-2#2	60" culvert under Mt. Paran PW; bricks & debris blocking channel, milky water poo just DS of culvert	US		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002002.JPG
LI-00002003	LI-3-2#2	LI-3-2#2		DS		10/08/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002002.JPG
LI-00002004			downed tree, eroding bank w/exposed roots; Marsh Creek; DS of Spalding shot (395 Spalding Dr)	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002004.JPG
LI-00002005			under Spalding; sowned tree w/sewer line crossing stream	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002004.JPG
LI-00002006			large tree w/exposed roots; eroding undercut R bank (DS) lined w/rip-rap	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002006.JPG
LI-00002007			rip-rap lined banks	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002007.JPG
LI-00002008			left bank under shoring missing w/ metal supports still in place	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002008.JPG
LI-00002009			exposed sewer pipe ~8" line, rip-rap around it	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002009.JPG
LI-00002010			downed trees, rip-rap lined bed	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002010.JPG
LI-00002011			undercut w/exposed roots	DS	RB	10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002011.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002012			Abernathy stream (between Lucent & Tennis center); down tree	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002012.JPG
LI-00002013			road deterioration right @ bank; bank covered w/kudzu-close up			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002013.JPG
LI-00002014			same as 2013; stream in background			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002014.JPG
LI-00002015			dam-earthen debris ?	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002015.JPG
LI-00002016			left bank vertical w/exposed	US	LB	10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002016.JPG
LI-00002017			exposed sewer line; oily sheen, bubbles, smell of sewage	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002017.JPG
LI-00002018			exposed sewer line; oily sheen, bubbles, smell of sewage	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002018.JPG
LI-00002019			downed tree w/exposed roots; other side of Abernathy	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002019.JPG
LI-00002020			R bank eroded	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002020.JPG
LI-00002021			rip-rap at a trib; looking up towards Abernathy	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002021.JPG
LI-00002022			same as 2021; more towards culvert; concrete slabs on bank			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002022.JPG
LI-00002023			tree, eroding bank	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P00020223.JPG
LI-00002024	LI-3-2#4	LI-3-2#4	5' culvert w/1' on left, lots of debris & downed trees; sewer pipe crossing, exposed	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002024.JPG
LI-00002025	LI-3-2#4	LI-3-2#4	downed trees, debris	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002025.JPG
LI-00002026	LI-3-2#5	LI-3-2#5	boulder in side of stream (left bank)	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002026.JPG
LI-00002027	LI-3-2#5	LI-3-2#5	downed tree & fence failing	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002027.JPG
LI-00002028	LI-3-2#5		close up of fence			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002028.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002029	LI-3-2#5	LI-3-2#5	rocks w/fencing exposed; sewer line	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002029.JPG
LI-00002030	LI-3-2#6	LI-3-2#6	eroded RB, exposed roots	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0002030.JPG
LI-00002031	LI-3-2#6	LI-3-2#6	close up of under cut bank			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002031.JPG
LI-00002032	LI-3-2#6	LI-3-2A	exposed sewer line			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002032.JPG
LI-00002034	LI-3-2#7	LI-3-2#7	manhole sticking out of ground ~ 3'; right at split			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002034.JPG
LI-00002035	LI-3-2#7	LI-3-2#7	fallen trees; R bank-a little undercut, exposed roots	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002035.JPG
LI-00002036	LI-3-2#8	LI-3-2#8	fallen trees;undercut R bank, exposed roots	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002036.JPG
LI-00002037	LI-3-2#8	LI-3-2#8	undercut bank, exposed roots; large tree above stream ~ 4'			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002037.JPG
LI-00002038	LI-3-2#8	LI-3-2#8	severely undercut bank, exposed roots of large tree on R bank	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002038.JPG
LI-00002039	LI-3-2#8		fallen trees, exposed roots, undercut bank	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002039.JPG
LI-00002040	LI-3-2A#1	LI-3-2A	2 manholes w/ stream of liquid bubbling up between manholes-red, brown sediment, pretty appreciable flow; close up			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002040.JPG
LI-00002041	LI-3-2A#1	LI-3-2A	same as 2040--larger view			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002041.JPG
LI-00002042	LI-3-2A#1	LI-3-2A#1	just downhill of leaking sewer pipe described in 2041 & 2041	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002042.JPG
LI-00002043	LI-3-2A#1	LI-3-2A#1	red brown sediment	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002043.JPG
LI-00002044	LI-3-2A#1	LI-3-2A#1	downed silt fence w/exposed sewer pipe in background			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002044.JPG
LI-00002045	LI-3-2A#2	LI-3-2A#2	downed silt fence	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002045.JPG
LI-00002046	LI-3-2A#2	LI-3-2A#2	exposed sewer pipe	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002046.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002047	LI-3-2A#2	LI-3-2A#2	2-8" culvert, red sediment	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002047.JPG
LI-00002048	LI-3-2A#3	LI-3-2A#3	DS of lake on the dam	DS		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002048.JPG
LI-00002049	LI-3-2A#3	LI-3-2A#3	US @ lake	US		10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002049.JPG
LI-00002050	LI-3-2A#3	LI-3-2A#3	same as 2049			10/12/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002050.JPG
LI-00002051	LI-3#10	LI-3#10		US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002051.JPG
LI-00002052	LI-3#10	LI-3#10	eroded LB, roots exposed	DS		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002052.JPG
LI-00002053	LI-3#10		plywood shoring on RB (US) homeowners attempt to slow erosion of bank	US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002053.JPG
LI-00002054	LI-3#11	LI-3#11	stream curves to R	US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002054.JPG
LI-00002055	LI-3#11	LI-3#11		DS		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002055.JPG
LI-00002057	LI-3#11		Brownie Troup 6396			10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002057.JPG
LI-00002058	LI-3#11		Susan Farrell, 5265 Mt. Vernon PW, Atlanta, GA 30327			10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002058.JPG
LI-00002056	LI-3#11	LI-3#11	undercut bank	DS	LB	10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002056.JPG
LI-00002059	LI-3#12	LI-3#12	30"sewer line crossing stream	US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002059.JPG
LI-00002068	LI-3-3#1	LI-3-3#1	Just US of join w/ LI-3	DS		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002068.JPG
LI-00002069	LI-3-3#2	LI-3-3#2	72" culvert under Londonberry Rd	US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002069.JPG
LI-00002070	LI-3-3#2	LI-3-3#2	10" sewer line crossing channel	DS		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002070.JPG
LI-00002071	LI-3-3#4	LI-3-3#4	5" culvert	DS		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002071.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002072	LI-3-3#4	LI-3-3#4		US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002072.JPG
LI-00002073	LI-3-3#5	LI-3-3#5		DS		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002073.JPG
LI-00002074	LI-3-3#5	LI-3-3#5		US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002074.JPG
LI-00002075	LI-3-3#5	LI-3-3#5	oily sheen			10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002075.JPG
LI-00002076	LI-3-3#5	LI-3-3#5	6" sewer line crossing channel	US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002076.JPG
LI-00002077	LI-3-3#5	LI-3-3#5	obstructions in stream	US		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002077.JPG
LI-00002078	LI-3-3#6	LI-3-3#6		DS		10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002078.JPG
LI-00002079	LI-3-3#6	LI-3-3#6				10/15/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002079.JPG
LI-00002080	LI-3-3#6	LI-3-3#6	about a 90 degree bend			10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002080.JPG
LI-00002081	LI-3-3#7	LI-3-3#7	7' culvert	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002081.JPG
LI-00002082	LI-3-3#7	LI-3-3#7		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002082.JPG
LI-00002083	LI-3-3#11	LI-3-3#11	7' culvert under driveway	DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002083.JPG
LI-00002084	LI-3-3#11	LI-3-3#11	driveway @ bridge	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002084.JPG
LI-00002085	LI-3-3#12	LI-3-3#12		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002085.JPG
LI-00002086	LI-3-3#12	LI-3-3#12	66" culvert	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002086.JPG
LI-00002087	LI-3-3#16	LI-3-3#16	5.5" culvert, 24" culvert dumping into channel	DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002087.JPG
LI-00002088	LI-3-3#16	LI-3-3#16				10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002057.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002089	LI-3-3#17	LI-3-3#17	right at trib			10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002089.JPG
LI-00002090	LI-3-3#17	LI-3-3#17	US in the trib	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002090.JPG
LI-00002091	LI-3-3#17	LI-3-3#17		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002091.JPG
LI-00002092	LI-3-3#18	LI-3-3#18		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002092.JPG
LI-00002093	LI-3-3#18	LI-3-3#18	US-right bank is concrete	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002093.JPG
LI-00002094	LI-3-3#19	LI-3-3#19		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002094.JPG
LI-00002095	LI-3-3#19	LI-3-3#19		US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002095.JPG
LI-00002096	LI-3-3#19	LI-3-3#19	trib			10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002096.JPG
LI-00002097	LI-3-3#20	LI-3-3#20	right bank undercut	DS	RB	10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002097.JPG
LI-00002098	LI-3-3#20	LI-3-3#20		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002098.JPG
LI-00002099	LI-3-3#20	LI-3-3#20		US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0002099.JPG
LI-00002100	LI-3-3#21	LI-3-3#21		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002100.JPG
LI-00002101	LI-3-3#21	LI-3-3#21	exposed roots & crooked banks	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002101.JPG
LI-00002102	LI-3-3#21	LI-3-3#21	eroded banks, downed trees	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002102.JPG
LI-00002103	LI-3-3#22	LI-3-3#22		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002103.JPG
LI-00002104	LI-3-3#22	LI-3-3#22	eroded banks, exposed roots	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002104.JPG
LI-00002105	LI-3-3#23	LI-3-3#23	serious erosion & exposed roots in some cases half trees exposed	DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002105.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002106	LI-3-3#23	LI-3-3#23		US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002106.JPG
LI-00002107	LI-3-3A#1	LI-3-3A		US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002107.JPG
LI-00002108	LI-3-3#24	LI-3-3#24	eroded banks, exposed roots	DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002108.JPG
LI-00002109	LI-3-3#24	LI-3-3#24	same as 2108	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002109.JPG
LI-00002110	LI-3-3#25	LI-3-3#25	24" culvert, 3' culvert @ LI3-3-25	US		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002110.JPG
LI-00002111	LI-3-3#25	LI-3-3#25		DS		10/19/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002111.JPG
LI-00002112	LI-3#13	LI-3#13		DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002112.JPG
LI-00002113	LI-3#13	LI-3#13	fallen log across channel, LI-3-3#3 just past log on RB (US)	US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002113.JPG
LI-00002114	LI-3#14	LI-3#14	fallen log in distance,sand bar	DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002114.JPG
LI-00002115	LI-3#14	LI-3#14		US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002115.JPG
LI-00002116	LI-3#15	LI-3#15	sandbar in creek,fallen log across channel	DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002116.JPG
LI-00002117	LI-3#15	LI-3#15	low branches, sandbar causes slight split in creek	US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002117.JPG
LI-00002119	LI-3#16	LI-3#16	rocky channel, stream curves to left	US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002119.JPG
LI-00002120	LI-3#16	LI-3#16	stream curves to R	DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002120.JPG
LI-00002121	LI-3#17	LI-3#17	very low branches hanging over creek	DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002121.JPG
LI-00002122	LI-3#17	LI-3#17		US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002122.JPG
LI-00002123	LI-3#18	LI-3#18	road crossing channel	DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002123.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002124	LI-3#18	LI-3#18	large rocks across channel	US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002124.JPG
LI-00002125	LI-3#20	LI-3#20	fallen log & pipe crossing stream in distance	DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002125.JPG
LI-00002126	LI-3#20	LI-3#20	right after Powers Ferry Rd	US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002126.JPG
LI-00002127	LI-3#20		24" CMP crossing stream just DS of LI-3#20	DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002127.JPG
LI-00002128	LI-3#21	LI-3#21		DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002128.JPG
LI-00002129	LI-3#21	LI-3#21	rock "island" in middle of stream,smells of sewage	US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002129.JPG
LI-00002130	LI-3#22	LI-3#22	8" pipe crossing stream	DS		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002130.JPG
LI-00002131	LI-3#22	LI-3#22		US		10/22/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002131.JPG
LI-00002132	LI-3-3A#1	LI-3-3A#1	stream meanders severely,erosion of LB-6 ft. undercut bank w/ exposed roots	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002132.JPG
LI-00002133	LI-3-3A#1	LI-3-3A#1	winding stream,undercut eroded banks	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002133.JPG
LI-00002134	LI-3-3#2	LI-3-3#2	fence across channel & several downed trees	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002134.JPG
LI-00002135	LI-3-3#2	LI-3-3#2	erosion of LB (US), exposed roots	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002135.JPG
LI-00002136	LI-3-4#1	LI-3-4#1	narrow channel, steep banks	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002136.JPG
LI-00002137	LI-3-4#1	LI-3-4#1		DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002137.JPG
LI-00002138	LI-3-4#2	LI-3-4#2	deep channel	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002138.JPG
LI-00002139	LI-3-4#2	LI-3-4#2	RB (US) eroded, roots exposed	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002139.JPG
LI-00002140	LI-3-4#3	LI-3-4#3	36" culvert under Crest Valley Rd	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002140.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002141	LI-3-4#3	LI-3-4#3	lots of debris in channel	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002141.JPG
LI-00002142	LI-3-4#7	LI-3-4#7	36" x 36" culvert	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002142.JPG
LI-00002143	LI-3-4#7	LI-3-4#7	eroded RB (US) replaced by cement wall just US	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002143.JPG
LI-00002144	LI-3-4#8	LI-3-4#8	house on LB (DS) w/ cement wall forming bank	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002144.JPG
LI-00002145	LI-3-4#8	LI-3-4#8	channel overgrown,appears to curve to R	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002145.JPG
LI-00002146	LI-3-4#9	LI-3-4#9	channel curves to L	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002146.JPG
LI-00002147	LI-3-4#9	LI-3-4#9	heavily overgrown	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002147.JPG
LI-00002150	LI-3-4#10	LI-3-4#10	48" culvert under driveway	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002150.JPG
LI-00002151	LI-3-4#10	LI-3-4#10	channel overgrown	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002151.JPG
LI-00002152	LI-3-4#12	LI-3-4#12		US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002152.JPG
LI-00002153	LI-3-4#12	LI-3-4#12	almost completely clogged 48" culvert under driveway	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002153.JPG
LI-00002154	LI-3-4#13	LI-3-4#13	36"culvert overgrown by ivy	US		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002154.JPG
LI-00002155	LI-3-4#13	LI-3-4#13	channel drops off approx. 30 ft.	DS		10/26/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002155.JPG
LI-00002168	LI-3-4#17	LI-3-4#17	2' x 4' culvert under Johnson Ferry Rd	DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002168.JPG
LI-00002169	LI-3-4#17	LI-3-4#17	rock fall area	US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionII\P0002169.JPG
LI-00002170	LI-3-4#18	LI-3-4#18	channel obstructed with debris	DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002170.JPG
LI-00002171	LI-3-4#18	LI-3-4#18	right bank eroded with exposed roots	DS	RB	10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002171.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002172	LI-3-4#18	LI-3-4#18		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002172.JPG
LI-00002173	LI-3-4#19	LI-3-4#19		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002173.JPG
LI-00002174	LI-3-4#19	LI-3-4#19		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002174.JPG
LI-00002175	LI-3-4#20	LI-3-4#20	dense vegetation	DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002175.JPG
LI-00002176	LI-3-4#20	LI-3-4#20	2' x 4' culvert under Johnson Ferry Rd; dense vegetation	US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002176.JPG
LI-00002177	LI-3-4#26	LI-3-4#26		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002177.JPG
LI-00002178	LI-3-4#26	LI-3-4#26	just DS of culvert running under Powers Chase Circle	US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002178.JPG
LI-00002179	LI-3-4#24	LI-3-4#24		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002179.JPG
LI-00002180	LI-3-4#24	LI-3-4#24	just US of Powers Ferry Rd & culvert	DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002180.JPG
LI-00002181	LI-3-4#25	LI-3-4#25		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002181.JPG
LI-00002182	LI-3-4#25	LI-3-4#25		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002182.JPG
LI-00002183	LI-3#22	LI-3#22		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002183.JPG
LI-00002184	LI-3#22	LI-3#22	just US of trib LI-3-5	DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002184.JPG
LI-00002185	LI-3-5#1	LI-3-5#1		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002185.JPG
LI-00002186	LI-3-5#1	LI-3-5#1	where it meets channel	DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002186.JPG
LI-00002187	LI-3-5#1		24" CMP just US of LI-3-5#1			10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002187.JPG
LI-00002188	LI-3-5#2	LI-3-5#2		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002188.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002189	LI-3-5#2	LI-3-5#2		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002189.JPG
LI-00002190	LI-3-5#3	LI-3-5#3		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002190.JPG
LI-00002191	LI-3-5#3	LI-3-5#3	just US of small bridge	DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002191.JPG
LI-00002192	LI-3-5#4	LI-3-5#4		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002192.JPG
LI-00002193	LI-3-5#4	LI-3-5#4		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002193.JPG
LI-00002194	LI-3-5#5	LI-3-5#5		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002194.JPG
LI-00002195	LI-3-5#5	LI-3-5#5		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002195.JPG
LI-00002196	LI-3-5#6	LI-3-5#6		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002196.JPG
LI-00002197	LI-3-5#6	LI-3-5#6		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002197.JPG
LI-00002198	LI-3-5#7	LI-3-5#7		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002198.JPG
LI-00002199	LI-3-5#7	LI-3-5#7		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002199.JPG
LI-00002200	LI-3-5#7		drainage pipes (plastic) just US of LI-3-5#7			10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002200.JPG
LI-00002201	LI-3-5#8	LI-3-5#8		US		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002201.JPG
LI-00002202	LI-3-5#8	LI-3-5#8		DS		10/29/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002202.JPG
LI-00002203	LI-3-5#9	LI-3-5#9	small wooden bridge crossing channel and 24" culvert coming in from LB (US)	US		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002203.JPG
LI-00002204	LI-3-5#9	LI-3-5#9	channel becomes densely overgrown	DS		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002204.JPG
LI-00002205	LI-3-5#10	LI-3-5#10	2- 48" culverts under Rebel Rd	US		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002205.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002206	LI-3-5#10	LI-3-5#10		DS		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002206.JPG
LI-00002207	LI-3-5#17	LI-3-5#17	channel curves to R; banks undercut	US		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002207.JPG
LI-00002208	LI-3-5#17	LI-3-5#17		DS		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002208.JPG
LI-000004	LI-3-5#18	LI-3-5#18		US		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\EX000004.JPG
LI-000005	LI-3-5#18	LI-3-5#18	24" culvert coming in just DS on LB (US)	DS		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\EX000005.JPG
LI-00002209	LI-3-5#18		close-up of culvert under Carol Ln.,60" w/ 18" culvert on R; just US of LI-3-5#18			11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002209.JPG
LI-00002210	LI-3-5#22	LI-3-5#22	60" culvert under road, covered by ivy, and 48" culvert in stone wall on R	DS		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002210.JPG
LI-00002211	LI-3-5#22	LI-3-5#22	narrow channel, lots of rip-rap, overgrown	US		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002211.JPG
LI-00002212	LI-3-5#22		10" pipe draining into creek from LB (US) w/ rust colored sediment below it, vague odor of sewage, steady flow			11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002212.JPG
LI-00002213	LI-3-5#23	LI-3-5#23	LB (US) severely undercut, lots of debris in channel	US		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002213.JPG
LI-00002214	LI-3-5#23	LI-3-5#23		DS		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002214.JPG
LI-00002215	LI-3-5A#1	LI-3-5A#1	18" culvert under driveway	US		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002215.JPG
LI-00002216	LI-3-5A#1	LI-3-5A#1	stream appears to go underground at embankment to join LI-3-5	DS		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002216.JPG
LI-00002217	LI-3-5A#5	LI-3-5A#5	18" culvert under driveway	DS		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002217.JPG
LI-00002218	LI-3-5A#5	LI-3-5A#5	toward next driveway	US		11/03/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002218.JPG
LI-00002230	LI-3#24	LI-3#24		US		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002230.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002231	LI-3#24	LI-3#24	obstructions, limbs, etc. piled up in stream, really curved bend w/ a sediment deposit along R-bank looking DS	DS		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002231.JPG
LI-00002232	LI-3#25	LI-3#25	12" sewer line crossing channel	US		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002232.JPG
LI-00002233	LI-3#25	LI-3#25	exposed roots, erosion	DS		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002233.JPG
LI-00002234	LI-3-6#1	LI-3-6#1	24" sewer pipe crossing overgrown, eroded roots showing	US		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002234.JPG
LI-00002235	LI-3-6#1	LI-3-6#1	trib enters main stream	DS		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002235.JPG
LI-00002236	LI-3#26	LI-3#26		US		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002236.JPG
LI-00002237	LI-3#26	LI-3#26		DS		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002237.JPG
LI-00002238	LI-3#27	LI-3#27	debris in stream (leaves & small trash)	US		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002238.JPG
LI-00002239	LI-3#27	LI-3#27	tree across stream	DS		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002239.JPG
LI-00002240	LI-3#27		sewer line 8" across pipe, trees on sewer line, looking DS, DS from LI-3#27			11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002240.JPG
LI-00002241	LI-3#28	LI-3#28	looking at sewer pipe crossing stream	US		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002241.JPG
LI-00002242	LI-3#28	LI-3#28	channel splits and goes aroudn an "island" in the stream	DS		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002242.JPG
LI-00002243	LI-3-7#1	LI-3-7#1		US		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002243.JPG
LI-00002244	LI-3-7#1	LI-3-7#1		DS		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002244.JPG
LI-00002245	LI-3-7#2	LI-3-7#2		US		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002245.JPG
LI-00002246	LI-3-7#2	LI-3-7#2	sewer pipe crossing stream	DS		11/04/99	\\Bcatl02\Projects\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\SectionIII\P0002246.JPG
MC-00002254	MC-4D#9	MC-4D#9		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002254.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002253	MC-4D#9	MC-4D#9	looking at double 48" culvert	DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002253.JPG
MC-00002255	MC-4D#10	MC-4D#10		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002255.JPG
MC-00002256	MC-4D#10	MC-4D#10	looking at failing stone wall put in by county	US	LB	11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002256.JPG
MC-00002257	MC-4D#11	MC-4D#11		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002257.JPG
MC-00002258	MC-4D#11	MC-4D#11	stone wall lining bank on LB (US); strong sewer odor	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002258.JPG
MC-00002259	MC-4D#12	MC-4D#12		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002259.JPG
MC-00002260	MC-4D#12	MC-4D#12	stone wall lining bank on LB (US)	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002260.JPG
MC-00002261	MC-4D#13	MC-4D#13	leak from sewer line directly into stream			11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002261.JPG
MC-00002262	MC-4D#13	MC-4D#13		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002262.JPG
MC-00002263	MC-4D#13	MC-4D#13		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002263.JPG
MC-00002264	MC-4D#14	MC-4D#14		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002264.JPG
MC-00002265	MC-4D#14	MC-4D#14		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002265.JPG
MC-00002266	MC-4D#14	MC-4D#14		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002266.JPG
MC-00002267	MC-4D#14	MC-4D#14	repaired sewer pipe on LB (US)	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002267.JPG
MC-00002268	MC-4D#15	MC-4D#15		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002268.JPG
MC-00002269	MC-4D#15	MC-4D#15	railroad tie retaining wall on right side of stream looking US	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002269.JPG
MC-00002270	MC-4D#16	MC-4D#16		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002270.JPG
MC-00002271	MC-4D#16	MC-4D#16	storm drains enter creek on both sides of creek	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002271.JPG
MC-00002272	MC-4D#16	MC-4D#16	sewer line from home crossing stream ~ 100 yds US of MC-4D#16			11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002272.JPG
MC-00002273	MC-4D#17	MC-4D#17		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002273.JPG
MC-00002274	MC-4D#17	MC-4D#17	36" culvert	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002274.JPG
MC-00002275	MC-4D#17	MC-4D#17		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002275.JPG
MC-00002276	MC-4D#18	MC-4D#18		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002276.JPG
MC-00002277	MC-4D#18	MC-4D#18		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002277.JPG
MC-00002278	MC-4D#18		dishwasher pipe discharging directly to stream channel			11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002278.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002279	MC-4D#18		dishwasher pipe discharging directly to stream channel			11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002279.JPG
MC-00002280	MC-4D#18		dishwasher pipe discharging directly to stream channel			11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002280.JPG
MC-00002281	MC-4D#19	MC-4D#19		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002281.JPG
MC-00002282	MC-4D#19	MC-4D#19	wall on LS looking US	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002282.JPG
MC-00002283	MC-4D#19		24" storm pipe entering stream-drains Wright Cir.,US of MC-4D#19; wall on left ends ~ 100 ft.			11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002283.JPG
MC-00002284	MC-4D#20	MC-4D#20		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002284.JPG
MC-00002285	MC-4D#20	MC-4D#20	bank on right side (US) ~ 30 ft. high	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002285.JPG
MC-00002286	MC-4D#21	MC-4D#21		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002286.JPG
MC-00002287	MC-4D#21	MC-4D#21		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002287.JPG
MC-00002288	MC-4D#21	MC-4D#21		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002288.JPG
MC-00002289	MC-4D#21		loosely repaired sewer line- 8 months ago; did not repair bank after work; Michael Smith (404) 257-8717			11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002289.JPG
MC-00002290	MC-4D#21		same as #2289			11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002290.JPG
MC-00002291	MC-4D#22	MC-4D#22		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002291.JPG
MC-00002292	MC-4D#22	MC-4D#22		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002292.JPG
MC-00002293	MC-4D#23	MC-4D#23		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002293.JPG
MC-00002294	MC-4D#23	MC-4D#23		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002294.JPG
MC-00002295	MC-4D#23	MC-4D#23		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002295.JPG
MC-00002296	MC-4D#24	MC-4D#24	looking at waterfall from DS	DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002296.JPG
MC-00002297	MC-4D#24	MC-4D#24		DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002297.JPG
MC-00002298	MC-4D#24	MC-4D#24		US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002298.JPG
MC-00002299	MC-4D#25	MC-4D#25	6' wall obstructing stream	DS		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002299.JPG
MC-00002300	MC-4D#25	MC-4D#25	above wall	US		11/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002300.JPG
MC-00002301	MC#1	MC#1	exposed roots, eroded steep banks	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002301.JPG
MC-00002302	MC#1	MC#1		DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002302.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002304	MC#2	MC#2	exposed roots, eroded banks	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002304.JPG
MC-00002305	MC#2		eroded banks w/tree overhanging			11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002305.JPG
MC-00002306	MC#2	MC#2	exposed roots, eroded banks	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002306.JPG
MC-00002307	MC#3	MC#3		US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002307.JPG
MC-00002308	MC#3	MC#3	4' culvert at Twin Branch Rd.	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002308.JPG
MC-00002309	MC#7	MC#7		US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002309.JPG
MC-00002310	MC#7	MC#7	tree in stream blocking flow	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002310.JPG
MC-00002311	MC#8	MC#8		US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002311.JPG
MC-00002312	MC#8	MC#8		DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002312.JPG
MC-00002313	MC#8	MC#8	just DS of MC#8, two 7' culverts @ a driveway	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002313.JPG
MC-00002314	MC#8		7390 Twin Branch Rd. (resident) gully where road washout drains; unlined, creates a lot of erosion; bridge washed out a couple of years ago			11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002314.JPG
MC-00002315	MC#10	MC#10		US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002315.JPG
MC-00002316	MC#10	MC#10		DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002316.JPG
MC-00002317	MC#10		tree in corner of Allen Rd.; eroded banks, exposed roots			11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002317.JPG
MC-00002319	MC#11	MC#11		US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002319.JPG
MC-00002320	MC#11	MC#11		DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002320.JPG
MC-00002321	MC#12	MC#12		US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002321.JPG
MC-00002322	MC#12	MC#12	3 culverts blocked partially w/ debris; two 3' culverts, one 1' culvert	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002322.JPG
MC-00002323	MC#16	MC#16	looking at 3 culverts covered w/ kudzu	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002323.JPG
MC-00002324	MC#16	MC#16	rocks along stream	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002324.JPG
MC-00002325	MC#17	MC#17	bank lined w/ rocks	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002325.JPG
MC-00002326	MC#17	MC#17	banks lined w/ rocks	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002326.JPG
MC-00002327	MC#19	MC#19	looking @ two 3' culverts	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002327.JPG
MC-00002328	MC#19	MC#19		DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002328.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002329	MC#20	MC#20	4" sewer pipe	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002329.JPG
MC-00002330	MC#20	MC#20	two 5' culverts covered w/ ivy	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002330.JPG
MC-00002331	MC-1#2	MC-1#2	channel meanders, log crossing channel just DS	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002331.JPG
MC-00002332	MC-1#2	MC-1#2	channel curves to R(US), crosses under entrance to apts.	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002332.JPG
MC-00002333	MC-1#1	MC-1#1		DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002333.JPG
MC-00002334	MC-1#1	MC-1#1	fallen log, channel curves to R	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002334.JPG
MC-00002335	MC#28	MC#28	exposed roots, undercut banks	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002335.JPG
MC-00002336	MC#28	MC#28	MC-1#1 enters channel just DS	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002336.JPG
MC-00002337	MC#27	MC#27	channel curves to R	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002337.JPG
MC-00002338	MC#27	MC#27		DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002338.JPG
MC-00002339	MC#27		just US of MC# 27, fallen tree & broken pipe crossing channel			11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002339.JPG
MC-00002341	MC#26	MC#26		US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002341.JPG
MC-00002342	MC#26	MC#26		DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002342.JPG
MC-00002343	MC#25	MC#25	steep, undercut banks w/ exposed roots		RB	11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002343.JPG
MC-00002344	MC#25	MC#25	fallen logs crossing channel	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002344.JPG
MC-00002345	MC#25	MC#25	8" pipe crossing channel	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002345.JPG
MC-00002346	MC#24	MC#24	channel crosses under Hunters Branch Rd	US		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002346.JPG
MC-00002347	MC#24	MC#24	channel curves to L	DS		11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002347.JPG
MC-00002348	MC#24	MC#24	5' culvert coming under Hunters Branch Rd			11/09/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002348.JPG
MC-00002349	MC#81	MC#81	4 x 96" culverts under Roswell Rd., lots of sediment in channel bed	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002349.JPG
MC-00002350	MC#81	MC#81	stone banks, little vegetation	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002350.JPG
MC-00002351	MC#80	MC#80	thick, light brown sediment in channel	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002351.JPG
MC-00002352	MC#80	MC#80	culverts under Roswell Rd.	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002352.JPG
MC-00002353	MC#79	MC#79		US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002353.JPG
MC-00002354	MC#79	MC#79		DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002354.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002355	MC#78	MC#78	10" sewer line crossing channel	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002355.JPG
MC-00002356	MC#78	MC#78	2 of 4 96" x 72" culverts NB; MC-4 enters on R (US) just US	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002356.JPG
MC-00002357	MC#78		18" pipe running along R bank (US) just DS of MC#77			11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002357.JPG
MC-00002358	MC#77	MC#77	stream splits around small island	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002358.JPG
MC-00002359	MC#77		MC-3A entering channel from RB (US)			11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002359.JPG
MC-00002360	MC#77	MC#77		DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002360.JPG
MC-00002361	MC#76	MC#76	stream curves around to R	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002361.JPG
MC-00002362	MC#76	MC#76		DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002362.JPG
MC-00002363	MC#75	MC#75	18" pipe along RB (US), severely eroded RB, roots exposed	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002375.JPG
MC-00002364	MC#75	MC#75		DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002364.JPG
MC-00002365	MC#75	MC#75	closeup of exposed manhole on RB (US) at MC # 75, 6' bank eroded			11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002365.JPG
MC-00002366	MC#74	MC#74	8" sewer line crossing channel	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002366.JPG
MC-00002367	MC#74	MC#74	severely eroded banks & exposed roots	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002367.JPG
MC-00002368	MC#73	MC#73	overgrown, eroded banks	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002368.JPG
MC-00002370	MC#73	MC#73		DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002370.JPG
MC-00002371	MC#73		trib MC-3, sewer line			11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002371.JPG
MC-00002372	MC#73		bridge @ Glenridge Rd.	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002372.JPG
MC-00002373	MC#68	MC#68		DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002373.JPG
MC-00002374	MC#68	MC#68		US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002374.JPG
MC-00002375	MC#67	MC#67	tree down across channel	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002375.JPG
MC-00002376	MC#67	MC#67		DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002376.JPG
MC-00002377	MC#66	MC#66	RB severely eroded	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002377.JPG
MC-00002378	MC#66	MC#66	tree down across channel	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002378.JPG
MC-00002379	MC#65	MC#65	tree down across channel, eroded banks	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002379.JPG
MC-00002380	MC#65	MC#65	tree down across channel	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002380.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002381	MC#64		closeup of cloudy pool alongside sewer line on RB (US); 50' DS of MC#64			11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002381.JPG
MC-00002382	MC#64	MC#64	stream meanders, tree down across channel, eroded banks	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002382.JPG
MC-00002383	MC#64	MC#64	tree down across channel	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002383.JPG
MC-00002384	MC#63	MC#63		US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002384.JPG
MC-00002385	MC#63	MC#63	channel curves to R	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002385.JPG
MC-00002386	MC#62	MC#62	2 x 84" culverts under Glenridge Rd	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002362.JPG
MC-00002387	MC#62	MC#62	lots of trees down across channel	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002387.JPG
MC-00002388	MC#58	MC#58		US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002388.JPG
MC-00002389	MC#58	MC#58	10" sewer line crossing channel; US of 2 x 84" culverts	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002389.JPG
MC-00002390	MC#57	MC#57	channel narrows US	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002390.JPG
MC-00002391	MC#57	MC#57	eroded RB (DS)	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002391.JPG
MC-00002392	MC#57	MC#57	channel curves around to R	DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002392.JPG
MC-00002393	MC#56	MC#56	fine, light red sediment in channel	US		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002393.JPG
MC-00002394	MC#56	MC#56		DS		11/10/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002394.JPG
MC-00002395	MC#55	MC#55	exposed roots on RB & LB; sheer bank walls	DS		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002395.JPG
MC-00002396	MC#55	MC#55	10"sewer crossing	US		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002396.JPG
MC-00002397	MC#54	MC#54	exposed roots, eroded bank	DS		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002397.JPG
MC-00002398	MC#54	MC#54		US		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002398.JPG
MC-00002399	MC#53	MC#53		DS		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002399.JPG
MC-00002400	MC#53	MC#53	~ 15 ft. crossing culvert, exposed roots on LB, bedrock on RB	US		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002400.JPG
MC-00002401	MC#49	MC#49	LB concrete retaining wall, RB rip-rap	DS		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002401.JPG
MC-00002402	MC#49	MC#49	rock @ RB, erosion on LB	US		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002402.JPG
MC-00002403	MC#48	MC#48	not mc in channel & 18" line crossing stream	DS		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002403.JPG
MC-00002404	MC#48	MC#48	bridge over creek, concrete sand bars on LB for stabilization	US		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002404.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002405	MC#48	US of MC#48	MH in stream, continued erosion around MH; Jim George; 7085 Northgreen Dr., 770-804-8232, 5 yr. Resident, water w/ in 4' of house, MH not visable when moved in, ~ 6' of bank loss in 5 yrs.			11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002405.JPG
MC-00002406	MC#46	MC#46		DS		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002406.JPG
MC-00002407	MC#46	MC#46	10' culvert under GA 400, rip rap on LB & RB	US		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002407.JPG
MC-00002408	MC#47	MC#47		DS		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002408.JPG
MC-00002409	MC#47	MC#47		US		11/11/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002409.JPG
LI-00002410	LI-3-6#5	LI-3-6#5	6" pipe entering on LB (US)	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002410.JPG
LI-00002411	LI-3-6#5	LI-3-6#5	24" culvert under Crest Valley Rd	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002411.JPG
LI-00002412	LI-3-6#6	LI-3-6#6	looking across pond from LB (US); murky water, no visible structure			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002412.JPG
LI-00002413	LI-3-6#6	LI-3-6#6	pond narrows, house located right on RB (US)			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002413.JPG
LI-00002414	LI-3-7#3	LI-3-7#3	48" concrete culvert under N. Island Dr.	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002414.JPG
LI-00002415	LI-3-7#3	LI-3-7#3	eroded banks, roots exposed	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002415.JPG
LI-00002416	LI-3-7#7	LI-3-7#7	narrow channel w/ steep banks (1'-2')	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002416.JPG
LI-00002417	LI-3-7#7	LI-3-7#7	48" culvert under N. Island Dr. overgrown by ivy & obstructed w/ debris	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002417.JPG
LI-00002418	LI-3-7#8	LI-3-7#8	narrow channel, 3' banks	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002418.JPG
LI-00002419	LI-3-7#8	LI-3-7#8	small bridge crossing channel	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002419.JPG
LI-00002420	LI-3-7#9	LI-3-7#9	6' RB (US), exposed roots	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002420.JPG
LI-00002421	LI-3-7#9	LI-3-7#9	stream winds back and forth, eroded walls on both sides	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002421.JPG
LI-00002422	LI-3-7#10	LI-3-7#10	fence across channel collecting debris	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002422.JPG
LI-00002423	LI-3-7#10	LI-3-7#10	eroded banks, roots exposed	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002423.JPG
LI-00002424	LI-3-7#1	LI-3-7#1	collapsed brick sewer support	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002424.JPG
LI-00002425	LI-3-7#1	LI-3-7#1	where LI-3-7 meets LI-3	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002425.JPG
LI-00002426	LI-3#28	LI-3#28		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002426.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002428	LI-3#28	LI-3#28	LI-3-7 coming in on LB (DS)	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002428.JPG
LI-00002429	LI-3-7#2	LI-3-7#2	eroded banks, roots exposed	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002429.JPG
LI-00002430	LI-3-7#2	LI-3-7#2	chain link fence across channel down	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002430.JPG
LI-00002431	LI-3#29	LI-3#29	lots of debris in channel	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002431.JPG
LI-00002432	LI-3#29	LI-3#29		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002432.JPG
LI-00002433	LI-3#30	LI-3#30	large sandbar in channel	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002433.JPG
LI-00002434	LI-3#30	LI-3#30		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002434.JPG
LI-00002435	LI-3#31	LI-3#31		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002435.JPG
LI-00002436	LI-3#31	LI-3#31	debris in channel along banks	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002436.JPG
LI-00002437	LI-3#32	LI-3#32		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002437.JPG
LI-00002438	LI-3#32	LI-3#32	debris in channel	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002438.JPG
LI-00002439	LI-3#33	LI-3#33		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002439.JPG
LI-00002440	LI-3#33	LI-3#33	just US of Jett Rd.	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002440.JPG
LI-00002441	LI-3#37	LI-3#37	Just DS of Jett Rd.	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002441.JPG
LI-00002442	LI-3#37	LI-3#37		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002442.JPG
LI-00002443	LI-3#38	LI-3#38		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002443.JPG
LI-00002444	LI-3#38	LI-3#38		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002444.JPG
LI-00002445	LI-3-8#1	LI-3-8#1		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002445.JPG
LI-00002446	LI-3-8#1	LI-3-8#1		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002446.JPG
LI-00002447	LI-3-8#1		eroding support of 10" sewer line			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002447.JPG
LI-00002448	LI-3-8#2	LI-3-8#2		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002448.JPG
LI-00002449	LI-3-8#2	LI-3-8#2		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002449.JPG
LI-00002450	LI-3-8#2		large eroding tree just US of LI-3-8#2			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002450.JPG
LI-00002451	LI-3-8#3	LI-3-8#3		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002451.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002452	LI-3-8#3	LI-3-8#3		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002452.JPG
LI-00002453	LI-3-8#4	LI-3-8#4		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002453.JPG
LI-00002454	LI-3-8#4	LI-3-8#4		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002454.JPG
LI-00002455	LI-3-8#4		fence post just US of LI-3-8#4			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002455.JPG
LI-00002456	LI-3-8#4		16" drain pipe across from LI-3-8#4			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002456.JPG
LI-00002457	LI-3-8#8	LI-3-8#8	just US of Crest Valley Rd.	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002457.JPG
LI-00002458	LI-3-8#8	LI-3-8#8	US of large culvert under Crest Valley Rd.	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002458.JPG
LI-00002459	LI-3-8#9	LI-3-8#9	eroding bank			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002459.JPG
LI-00002460	LI-3-8#9	LI-3-8#9		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002460.JPG
LI-00002461	LI-3-8#9	LI-3-8#9		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002461.JPG
LI-00002462	LI-3-8#10	LI-3-8#10		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002462.JPG
LI-00002463	LI-3-8#10	LI-3-8#10		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002463.JPG
LI-00002464	LI-3-8#10	US of LI-3-8#10	24" drain pipe			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002464.JPG
LI-00002465	LI-3-8#11	US of LI-3-8#11	just DS of LI-3-8 & LI-3-8A split			11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002465.JPG
LI-00002466	LI-3-8#11	DS of LI-3-8#11				11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002466.JPG
LI-00002467	LI-3-8#12	LI-3-8#12		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002467.JPG
LI-00002468	LI-3-8#12	LI-3-8#12		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002468.JPG
LI-00002469	LI-3-8#14	LI-3-8#14	driveway	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002469.JPG
LI-00002470	LI-3-8#14	LI-3-8#14		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002470.JPG
LI-00002471	LI-3-8#15	LI-3-8#15		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002471.JPG
LI-00002472	LI-3-8#15	LI-3-8#15		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002472.JPG
LI-00002473	LI-3A#1	LI-3A#1		US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002473.JPG
LI-00002474	LI-3A#1	LI-3A#1		DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002474.JPG
LI-3-8#16DS	LI-3-8#16	LI-3-8#16	lake	DS		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\LI-3-8#16DS.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-3-8#16US	LI-3-8#16	LI-3-8#16	drain in lake	US		11/12/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\LI-3-8#16US.JPG
MC-00002475	MC-4#1	MC-4#1	LB (US) lined w/ stones, erosion, exposed roots	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002475.JPG
MC-00002476	MC-4#1	MC-4#1	where MC-4 meets MC, 18" sewer line crosses MC-4 damming channel--twigs & leaves blocked in behind it	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002476.JPG
MC-00002477	MC-4#2	MC-4#2	steep L wall of channel, lots of sediment	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002477.JPG
MC-00002478	MC-4#2	MC-4#2	dam across channel covered in leaves & branches, causing 3' drop in water elevation	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002478.JPG
MC-00002479	MC-4#3	MC-4#3	film on water, sediment	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002479.JPG
MC-00002480	MC-4#3	MC-4#3	shopping cart in stream	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002480.JPG
MC-00002481	MC-4#4	MC-4#4	10' culvert under Abernathy Rd., 10" sewer line crossing channel undermined cement structure	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002481.JPG
MC-00002482	MC-4#4	MC-4#4		DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002482.JPG
MC-00002483	MC-4#8	MC-4#8	cement banks, culvert under Cherry Tree lane in distance	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002483.JPG
MC-00002484	MC-4#8	MC-4#8	trib curves to L to culvert under Abernathy, MC-4A enters at R	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002484.JPG
MC-00002485	MC-4#9	MC-4#9	6' x 10' culvert under Cherry Tree Ln.	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002485.JPG
MC-00002486	MC-4#9	MC-4#9	cement banks	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002486.JPG
MC-00002487	MC-4#13	DS of MC-4#13	looking US from RB (US) just US of culvert under Cherry Tree Ln., collapsed concrete & overgrowth	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002487.JPG
MC-00002488	MC-4#13	MC-4#13	downed tree & collapsed concrete shoring	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002488.JPG
MC-00002489	MC-4#13	MC-4#13	concrete shoring collapsed in places	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002489.JPG
MC-00002490	MC-4#14	MC-4#14	small tree growing across channel; 6' x 10' culvert just behind	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002490.JPG
MC-00002491	MC-4#14	MC-4#14	lots of light brown sediment	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002491.JPG
MC-00002492	MC-4C#1	MC-4C#1	heavily overgrown, light brown sediment	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002492.JPG
MC-00002493	MC-4C#1	MC-4C#1		US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002493.JPG
MC-00002494	MC-4C#2	MC-4C#2	channel filled in w/ grass clippings and leaves, 48" culvert	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002494.JPG
MC-00002495	MC-4C#2	MC-4C#2	lots of sediment, rip-rap in channel	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002495.JPG
MC-00002496	MC-4A#1	MC-4A#1	channel curves off to R, dark brown algae in channel	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002496.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002497	MC-4A#1	MC-4A#1	joining MC-4 from L; to culvert under Abernathy @ R	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002497.JPG
MC-00002498	MC-4A#2	MC-4A#2	dark water, thick underbrush, severely eroded banks	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002498.JPG
MC-00002499	MC-4A#2	MC-4A#2	stream winds back and forth	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002499.JPG
MC-00002500	MC-4A#3	MC-4A#3	eroded banks, exposed roots	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002500.JPG
MC-00002501	MC-4A#3	MC-4A#3	3' eroded banks, exposed roots	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002501.JPG
MC-00002502	MC-4A#4	MC-4A#4	both banks eroded, undercut	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002502.JPG
MC-00002503	MC-4A#4	MC-4A#4	channel drops several feet	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002503.JPG
MC-00002504	MC-4A#5	MC-4A#5	small trib enters at R	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002504.JPG
MC-00002505	MC-4A#5	MC-4A#5		DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002505.JPG
MC-00002506	MC-4A#6	MC-4A#6	48" culvert under driveway & road; severely eroded	US		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002506.JPG
MC-00002507	MC-4A#6	MC-4A#6	eroded, undercut LB (US)	DS		11/16/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002507.JPG
LI-00002508	LI-3#39	LI-3#39		US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002508.JPG
LI-00002509	LI-3#39	LI-3#39		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002509.JPG
LI-00002510	LI-3-9#1	DS of LI-3-9#1	dam in trib; 24" sewer pipe in background			11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002510.JPG
LI-00002511	LI-3-9#1	LI-3-9#1	lots of branches across stream	US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002511.JPG
LI-00002512	LI-3-9#1	LI-3-9#1	heavily vegetated	DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002512.JPG
LI-00002513	LI-3-9#2	LI-3-9#2		US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002513.JPG
LI-00002514	LI-3-9#2	LI-3-9#2	fallen tree across stream	DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002514.JPG
LI-00002515	LI-3-9#4	LI-3-9#4		US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002515.JPG
LI-00002516	LI-3-9#4	LI-3-9#4	just after driveway	DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002516.JPG
LI-00002517	LI-3-9#5	LI-3-9#5	foot bridge across stream	US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002517.JPG
LI-00002518	LI-3-9#5	LI-3-9#5		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002518.JPG
LI-00002519	LI-3-9#7	LI-3-9#7	driveway crossing stream	US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002519.JPG
LI-00002520	LI-3-9#7	LI-3-9#7	driveway & 8" pipe crossing stream	DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002520.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002521	LI-3-9#9	LI-3-9#9		US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002521.JPG
LI-00002522	LI-3-9#9	LI-3-9#9		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002522.JPG
LI-00002523	LI-3-9#10	LI-3-9#10		US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002523.JPG
LI-00002524	LI-3-9#10	LI-3-9#10		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002524.JPG
LI-00002525	LI-3-9#10	US of LI-3-9#10	sluice gate	DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002525.JPG
LI-00002526	LI-3-9#11	LI-3-9#11	36" pipe coming under driveway	US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002526.JPG
LI-00002527	LI-3-9#11	LI-3-9#11		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002527.JPG
LI-00002528	LI-3-9#12	LI-3-9#12	driveway crossing stream	US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002528.JPG
LI-00002529	LI-3-9#12	LI-3-9#12		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002529.JPG
LI-00002530	LI-3-9#14	LI-3-9#14		US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002530.JPG
LI-00002531	LI-3-9#14	LI-3-9#14	driveway crossing stream	DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002531.JPG
LI-00002532	LI-3-9#15	LI-3-9#15		US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002532.JPG
LI-00002533	LI-3-9#15	LI-3-9#15		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002533.JPG
LI-00002534	LI-3-9#16	LI-3-9#16		US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002534.JPG
LI-00002535	LI-3-9#16	LI-3-9#16		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002535.JPG
LI-00002536	LI-3-9#17	LI-3-9#17	undercut banks	US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002536.JPG
LI-00002537	LI-3-9#17	LI-3-9#17		DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002537.JPG
LI-00002538	LI-3-9#18	LI-3-9#18	2 culverts (36") coming from under Jett Rd.	US		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002538.JPG
LI-00002539	LI-3-9#18	US of LI-3-9#18	3rd culvert coming from under driveway			11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002539.JPG
LI-00002540	LI-3-9#18	LI-3-9#18	no visible culvert under driveway	DS		11/18/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002540.JPG
MC-00002541	MC-4A#10	MC-4A#10	24" culvert under Williamson Dr.	DS		11/23/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002541.JPG
MC-00002542	MC-4A#10	MC-4A#10	trees cut in channel & brown algae on bottom	US		11/23/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002542.JPG
MC-00002543	MC-4A#12	MC-4A#12		US		11/23/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002543.JPG
MC-00002544	MC-4A#12	MC-4A#12	undercut banks	DS		11/23/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002544.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002545	MC-4A#13	MC-4A#13	sinuous channel	US		11/23/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002545.JPG
MC-00002546	MC-4A#13	MC-4A#13	undercut banks	DS		11/23/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002546.JPG
MC-00002547	MC-4A#14	MC-4A#14		US		11/23/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002547.JPG
MC-00002548	MC-4A#14	MC-4A#14		DS		11/23/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002548.JPG
MC-00002550	MC-4A#14		looking across wetland/dry pond area next to Abernathy Rd. @ GA Veterinary Specialists			11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002550.JPG
MC-00002551	MC-4A#14		DS from rip-rap structure to where drainage of wetland/dry pond meets MC-4A	DS		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002551.JPG
MC-00002552	MC-4B#1	MC-4B#1	lots of vegetation	US		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002552.JPG
MC-00002553	MC-4B#1	MC-4B#1	where MC-4B meets MC-4A	DS		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002553.JPG
MC-00002554	MC-4B#1	US of MC-4B#1	manhole on RB (US); some cracks, sewage odor		RB	11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002554.JPG
MC-00002555	MC-4B#2	MC-4B#2	channel bends to R	US		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002555.JPG
MC-00002556	MC-4B#2	MC-4B#2		DS		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002556.JPG
MC-00002557	MC-4B#3	MC-4B#3		US		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002557.JPG
MC-00002558	MC-4B#3	MC-4B#3	severely eroded 5' RB (US) & collapsed chain link fencing	DS		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002558.JPG
MC-00002559	MC-4B#5	MC-4B#5		US		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002559.JPG
MC-00002560	MC-4B#5	MC-4B#5	manhole on RB (US); sewer line crossing channel covered on L w/ rocks & debris; small trib comes in just DS on RB(DS), w/manhole on RB (US) & 6' sewer line crossing channel	DS		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002560.JPG
MC-00002561	MC-4B#5	US of MC-4B#5	10" sewer line crossing channel causing 2' drop in water level			11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002561.JPG
MC-00002562	MC-4B#6	MC-4B#6	collapsed wall,once forming dam (?) to stream	US		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002562.JPG
MC-00002563	MC-4B#6	MC-4B#6		DS		11/29/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002563.JPG
MC-0000256	MC-4B#22	MC-4B#22		US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000256.JPG
MC-0000257	MC-4B#22	MC-4B#22	fence across channel forming major obstruction	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000257.JPG
MC-0000258	MC-4B#22	MC-4B#22	closeup of fence across channel & debris backed up			11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000258.JPG
MC-0000259	MC-4B#23	MC-4B#23	exposed 8" sewer line crossing channel	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000259.JPG
MC-0000260	MC-4B#23	MC-4B#23	lots of vegetation in channel	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000260.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-0000261	MC-4B#24	MC-4B#24		US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000261.JPG
MC-0000262	MC-4B#24	MC-4B#24	8" sewer line crossing channel	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000262.JPG
MC-0000263	MC-4B#25	MC-4B#25	fence across channel	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000263.JPG
MC-0000264	MC-4B#25	MC-4B#25	5' eroded banks, roots exposed; 6' sewer line crossing channel	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000264.JPG
MC-0000265	MC-4B#26	MC-4B#26	48" culvert hidden behind vegetation. Stone wall for LB	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000265.JPG
MC-0000266	MC-4B#26	MC-4B#26	channel widens slightly when stone wall ends; 6" sewer line just DS not shown	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000266.JPG
MC-0000267	MC-4B#30	MC-4B#30	sheer RB covered in vegetation	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000267.JPG
MC-0000268	MC-4B#30	MC-4B#30	48" culvert under Carriage Way	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000268.JPG
MC-0000269	MC-4B#31	MC-4B#31	stream splits, highly eroded banks, roots exposed	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000269.JPG
MC-0000270	MC-4B#31	MC-4B#31	stone wall for RB	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000270.JPG
MC-0000271	MC-A#1	MC-A#1	lots of vegetation, eroded banks	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000271.JPG
MC-0000272	MC-A#1	MC-A#1	soap bubbles in stream, eroded banks	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000272.JPG
MC-0000273	MC-A#1	MC-A#1	closeup of 12" culvert & eroded area on RB (US) across from MC-A#1		RB	11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000273.JPG
MC-0000274	MC-A#2	MC-A#2	eroded banks, exposed roots, highly overgrown	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000274.JPG
MC-0000275	MC-A#2	MC-A#2	fence crossing channel; lots of trees down across channel	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000275.JPG
MC-0000276	MC-A#3	MC-A#3	channel widens briefly then narrows again; dense vegetation; severely eroded banks, exposed roots	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000276.JPG
MC-0000277	MC-A#3	MC-A#3	2 X 72" culverts under Peachtree Dunwoody	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000277.JPG
MC-0000279	MC-1#6	MC-1#6	eroded, steep banks, 4" sewer line crossing channel	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000279.JPG
MC-0000278	MC-1#6	MC-1#6	eroded, steep banks	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000278.JPG
MC-0000280	MC-1#7	MC-1#7		US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000280.JPG
MC-0000281	MC-1#7	MC-1#7	6' eroded LB (DS) along curve in channel, roots exposed	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000281.JPG
MC-0000282	MC-1#8	MC-1#8	5' eroded banks on both sides, exposed roots	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000282.JPG
MC-0000283	MC-1#8	MC-1#8	wooden shoring on both banks, channel narrows DS	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000283.JPG
MC-0000284	MC-1#9	MC-1#9	72" culvert, eroded banks, exposed roots	US		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000284.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-0000285	MC-1#9	MC-1#9	severely eroded 8' banks	DS		11/30/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P000285.JPG
LI-00001318	LI-3#40	LI-3#40	large rip rap on LB	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001318.JPG
LI-00001319	LI-3#40	LI-3#40	LB (DS) slightly undercut	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001319.JPG
LI-00001322	LI-3#41	LI-3#41	channel curves to R	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001322.JPG
LI-00001323	LI-3#41	LI-3#41	channel curves to L	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001323.JPG
LI-00001324	LI-3#42	LI-3#42	channel curves to L	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001324.JPG
LI-00001325	LI-3#42	LI-3#42	8" sewer pipe crossing stream, channel curves to R	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001325.JPG
LI-00001326	LI-3#43	LI-3#43	rip rap on LB	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001326.JPG
LI-00001327	LI-3#43	LI-3#43	driveway crosses channel	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001327.JPG
LI-00001328	LI-3#44	LI-3#44	LB eroded, roots exposed, 8" sewer pipe crossing channel	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001328.JPG
LI-00001329	LI-3#44	LI-3#44	some undercutting of RB	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001329.JPG
LI-00001330	LI-3#45	LI-3#45	LB eroded, roots exposed	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001330.JPG
LI-00001331	LI-3#45	LI-3#45	RB severely eroded, 10' bank	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001331.JPG
LI-00001332	LI-3#46	LI-3#46	stream meanders L then R, L banks severely eroded 10'	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001332.JPG
LI-00001333	LI-3#46	LI-3#46	LB eroded, roots exposed, channel curves to L	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001333.JPG
LI-00001334	LI-3#47	LI-3#47	channel curves around to L & splits around an island, LB eroded, roots exposed	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001334.JPG
LI-00001335	LI-3#47	LI-3#47	driveway crosses channel	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001335.JPG
LI-00001336	LI-3#48	LI-3#48	channel curves to R, driveway crosses channel, eroded LB, exposed roots	US		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001336.JPG
LI-00001337	LI-3#48	LI-3#48	eroded banks, exposed roots	DS		12/01/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001337.JPG
LI-00001338	LI-3-11#8	LI-3-11#8	between two 24" culverts overgrown	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001338.JPG
LI-00001339	LI-3-11#8	LI-3-11#8	just beside Davis Rd.	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001339.JPG
LI-00001340	LI-3-11#4	LI-3-11#4	culvert blocked ~ 90% w/ rocks & leaves	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001340.JPG
LI-00001341	LI-3-11#4	LI-3-11#4	steep banks, high vegetation for this time of year	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001341.JPG
LI-00001342	LI-3-11#3	LI-3-11#3	debris in stream, rock cut streambed	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001342.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001343	LI-3-11#3	LI-3-11#3	sloping banks	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001343.JPG
LI-00001344	LI-3-11#2	LI-3-11#2	DS of a sharp bend, rocks in stream, some debris, slightly eroded banks	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001344.JPG
LI-00001345	LI-3-11#2	LI-3-11#2	rocks in stream	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001345.JPG
LI-00001346	LI-3#49	LI-3#49	debris across channel, rocks in stream bed	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001346.JPG
LI-00001347	LI-3#49	LI-3#49	just up stream of Northside Dr., erosion, exposed roots	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001347.JPG
LI-00001348	LI-3-11#1	LI-3-11#1	slightly eroded, roots exposed	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001348.JPG
LI-00001349	LI-3-11#1	LI-3-11#1	same as above	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001349.JPG
LI-00001352	LI-3-11#1		Fulton Co. work crew dumping cement into stream			12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001352.JPG
LI-00001353	LI-3#53	LI-3#53	at SS-1; rocks in stream	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001353.JPG
LI-00001354	LI-3#53	LI-3#53	8" sewer line crossing channel	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001354.JPG
LI-00001355	LI-3-12#1	LI-3-12#1	steep banks	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001355.JPG
LI-00001356	LI-3-12#1	LI-3-12#1	overgrown	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001356.JPG
LI-00001357	LI-3-12#2	LI-3-12#2	lots of vegetation,shallow, rocks line	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001357.JPG
LI-00001358	LI-3-12#2	LI-3-12#2	same as above	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001358.JPG
LI-00001359	LI-3-12#5		close up of culvert, DS @ Harris Trail, 2 culverts-24" & 36"			12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001359.JPG
LI-00001360	LI-3-12#6	LI-3-12#6	pond	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001360.JPG
LI-00001361	LI-3-12#6	LI-3-12#6	dam then culvert under road, dam overflow runs to culvert under road	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001361.JPG
LI-00001362	LI-3#54	LI-3#54	sediment islands split the stream, eroded banks w/ exposed roots	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001362.JPG
LI-00001363	LI-3#54	LI-3#54	eroded banks, exposed roots	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001363.JPG
LI-00001364	LI-3#55	LI-3#55	wide channel, sedimentary deposits	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001364.JPG
LI-00001365	LI-3#55	LI-3#55		DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001365.JPG
LI-00001366	LI-3#56	LI-3#56	sediment & large rocks in stream	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001366.JPG
LI-00001367	LI-3#56	LI-3#56	eroded LB (DS), RB also slightly eroded	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001367.JPG
LI-00001368	LI-3#57	LI-3#57	eroded banks, exposed roots, large rocks on bank	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001368.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00001369	LI-3#57	LI-3#57	eroded banks, exposed roots	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001369.JPG
LI-00001370	LI-3#58	LI-3#58	eroded banks, exposed roots, rocks in stream bed	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001370.JPG
LI-00001371	LI-3#58	LI-3#58	same as above	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001371.JPG
LI-00001372	LI-3#59	LI-3#59	sediment deposits directing flow, eroded banks	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001372.JPG
LI-00001373	LI-3#59	LI-3#59	sediment constricting flow, eroded, steep L bank, exposed roots	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001373.JPG
LI-00001374	LI-3#60	LI-3#60	fallen tree, sediment deposits, eroded banks	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001374.JPG
LI-00001375	LI-3#60	LI-3#60	fallen trees & debris,eroded RB (DS)	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001375.JPG
LI-00001376	LI-3#61	LI-3#61	sediment deposits, eroded banks especially the left, exposed roots	US		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001376.JPG
LI-00001377	LI-3#61	LI-3#61	sediment deposit splits stream, fallen log causing sediment to dam up	DS		12/02/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0001377.JPG
LI-00002571	LI-3#62	LI-3#62		US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002571.JPG
LI-00002572	LI-3#62	LI-3#62		DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002572.JPG
LI-00002573	LI-3#63	LI-3#63		US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002573.JPG
LI-00002574	LI-3#63	LI-3#63		DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002574.JPG
LI-00002575	LI-3#64	LI-3#64		US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002575.JPG
LI-00002576	LI-3#64	LI-3#64		DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002576.JPG
LI-00002577	LI-3#65	LI-3#65		US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002577.JPG
LI-00002578	LI-3#65	LI-3#65	sheer bank on RHS, sand deposit on LHS	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002578.JPG
LI-00002579	LI-3#66	LI-3#66	island of sediment on RHS, fallen trees & debris			12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002579.JPG
LI-00002580	LI-3#66	LI-3#66	constriction due to log and debris			12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002580.JPG
LI-00002581	LI-3#67	LI-3#67	fallen log creates obstruction, lots of sediment on LB	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002581.JPG
LI-00002582	LI-3#67	LI-3#67	large eroded area on RB	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002582.JPG
LI-00002583	LI-3#68	LI-3#68	note undercut RB	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002583.JPG
LI-00002584	LI-3#68	LI-3#68		DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002584.JPG
LI-00002585	LI-3#69	LI-3#69	sheer bank, both RB & LB	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002585.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002586	LI-3#69	LI-3#69	undercut on RB, debris blocking channel	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002586.JPG
LI-00002587	LI-3#70	LI-3#70	sheer banks	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002587.JPG
LI-00002588	LI-3#70	LI-3#70		DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002588.JPG
LI-00002589	LI-3#71	LI-3#71	rocks on RB	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002589.JPG
LI-00002590	LI-3#71	LI-3#71	fallen tree, eroded RB	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002590.JPG
LI-00002591	LI-3#72	LI-3#72	fallen log, sheer RB	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002591.JPG
LI-00002592	LI-3#73	LI-3#73	at mouth of Chatahoochee			12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002592.JPG
LI-00002593	LI-3-10#1	LI-3-10#1	36" culvert	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002593.JPG
LI-00002594	LI-3-10#1	LI-3-10#1	twin culverts	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002594.JPG
LI-00002595	LI-3-10#5	LI-3-10#5	twin culverts	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002595.JPG
LI-00002596	LI-3-10#5	LI-3-10#5	ivy covered banks, steep, sloped banks	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002596.JPG
LI-00002597	LI-3-10#6	LI-3-10#6	48" culvert crossing drive	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002597.JPG
LI-00002598	LI-3-10#6	LI-3-10#6	rip-rap dam @ bottom of picture	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002598.JPG
LI-00002599	LI-3-10#8	LI-3-10#8	lake			12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002599.JPG
LI-00002600	LI-3-10#8	LI-3-10#8	48" culvert			12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002600.JPG
LI-00002601	LI-3-10#8	DS of LI-3-10	outlet control to pond			12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002601.JPG
LI-00002602	LI-3-10#8	US of LI-3-10	rock dam above lake			12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002602.JPG
LI-00002603	LI-3-10#9	LI-3-10#9	taken on top of rock dam in 2603	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002603.JPG
LI-00002604	LI-3-10#9	LI-3-10#9	lake below	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002604.JPG
LI-00002605	LI-3-10#10	LI-3-10#10	above pond	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002605.JPG
LI-00002606	LI-3-10#10	LI-3-10#10	pond	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002606.JPG
LI-00002607	LI-3-10#11	LI-3-10#11	pond @ top of hill	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002607.JPG
LI-00002608	LI-3-10#11	LI-3-10#11		DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002608.JPG
LI-00002609	LI-3-10#11	US of LI-3-10	knife gate valve @ bottom of dam			12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002609.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
LI-00002610	LI-3-10#12	LI-3-10#12	pond	US		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002610.JPG
LI-00002611	LI-3-10#12	LI-3-10#12	overflow to right of pond	DS		12/06/99	P:\Fulton\17529\300 Data Collection\Photographs\Long Island Creek\Section III\P0002611.JPG
MC-00002612	MC#32	MC#32	twin 8' box culverts, steep, vertical banks	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002612.JPG
MC-00002613	MC#32	MC#32		DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002613.JPG
MC-00002614	MC#33	MC#33		US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002614.JPG
MC-00002615	MC#33	MC#33		DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002615.JPG
MC-00002616	MC#34	MC#34	note bank stabilization on RB & 12" sewer crossing	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002616.JPG
MC-00002617	MC#34	MC#34	bank stabilization on LB	DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002617.JPG
MC-00002618	MC#35	MC#35	not much of note	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002618.JPG
MC-00002619	MC#35	MC#35		DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002619.JPG
MC-00002620	MC#36	MC#36	concrete	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002620.JPG
MC-00002621	MC#36	MC#36		DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002621.JPG
MC-00002622	MC-2#1	MC-2#1	steep banks, almost rectangular channel	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002622.JPG
MC-00002623	MC-2#1	MC-2#1	where trib joins main channel	DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002623.JPG
MC-00002624	MC-2#2	MC-2#2	towards culvert	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002624.JPG
MC-00002625	MC-2#2	MC-2#2	springs feeds in high iron content in water	DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002625.JPG
MC-00002626	MC-2#6	MC-2#6	drainage outlet structure; one inlet culvert to left & one on right			12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002626.JPG
MC-00002627	MC-3A#1	MC-3A#1	berm impending water flow to pipe in distance	DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002627.JPG
MC-00002628	MC-3A#1	MC-3A#1		US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002628.JPG
MC-00002629	MC-3#4	MC-3#4	rectangular 12" culvert	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002629.JPG
MC-00002630	MC-3#4	MC-3#4		DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002630.JPG
MC-00002631	MC-3#3	MC-3#3	undercut on RB	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002631.JPG
MC-00002632	MC-3#3	MC-3#3		DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002632.JPG
MC-00002633	MC-3#2	MC-3#2	bank stabilization on RB	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002633.JPG
MC-00002634	MC-3#2	MC-3#2	log crossing,not an obstruction	DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002634.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002635	MC-3#1	MC-3#1	confluence w/ MC	DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002635.JPG
MC-00002636	MC-3#2	MC-3#2	cement in bottom of channel	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002636.JPG
MC-00002637	MC-3#8	MC-3#8	12' rectangular culvert beneath BC truck	DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002637.JPG
MC-00002638	MC-3#8	MC-3#8	SS crossing aerial	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002638.JPG
MC-00002640	MC-3#9	MC-3#9	rock cut channel	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002640.JPG
MC-00002641	MC-3#9	MC-3#9	living room of stone on LHS	DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002641.JPG
MC-00002642	MC-3#10	MC-3#10	rock bank on LHS	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002642.JPG
MC-00002643	MC-3#10	MC-3#10		DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002643.JPG
MC-00002644	MC-3#11	MC-3#11		DS		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002644.JPG
MC-00002645	MC-3#11	MC-3#11	split in trib	US		12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002645.JPG
MC-00002646	MC-3#15	pond of MC-3#15	outlet control structure			12/07/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002646.JPG
MC-00002648	MC#85		7' culverts under Roswell Rd.	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002648.JPG
MC-00002649	MC#85	MC#85	4 7' culverts under Roswell Rd.; concrete wall forms RB	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002649.JPG
MC-00002650	MC#85	MC#85	RB (DS) eroded, LB cement bag & concrete wall	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002650.JPG
MC-00002651	MC#85	DS of MC#85	24" culvert emptying into MC from RB (US)			12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002651.JPG
MC-00002652	MC#85	DS of MC#85	tree on LB (US) of MC completely undercut			12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002652.JPG
MC-00002653	MC#86	MC#86	RB of cement bags has section fallen away; LB severely eroded (8'), roots exposed	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002653.JPG
MC-00002654	MC#86	MC#86	LB (DS) continues as concrete wall	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002654.JPG
MC-00002655	MC#87	MC#87	concrete wall for RB	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002655.JPG
MC-00002656	MC#87	MC#87	erosion, exposed roots continue on RB (DS)	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002656.JPG
MC-00002657	MC#88	MC#88		US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002657.JPG
MC-00002658	MC#88	MC#88	concrete wall for LB (DS) undermined	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002658.JPG
MC-00002659	MC#88	DS of MC#88	severe erosion, exposed roots on LB (US)			12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002659.JPG
MC-00002660	MC#89	MC#89	4' culvert on RB where MC-5 joins	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002660.JPG
MC-00002661	MC#89	MC#89	channel widens to form pool	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002661.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002662	MC#90	MC#90	LB (US) taken looking DS	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002662.JPG
MC-00002663	MC#90	MC#90	channel pool area, just DS form riffle area	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002663.JPG
MC-00002664	MC#91	MC#91	vertical eroded RB, undercut LB	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002664.JPG
MC-00002665	MC#91	MC#91	tree down across channel, wider section of channel, sediment buildup on R side (DS)	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002665.JPG
MC-00002666	MC#92	MC#92	several trees across channel	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002666.JPG
MC-00002667	MC#92	MC#92	18" sewer line across channel	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002667.JPG
MC-00002668	MC-5#2	MC-5#2	narrow channel, vertical overgrown banks	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002668.JPG
MC-00002669	MC-5#2	MC-5#2	60" culvert joining MC	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002669.JPG
MC-00002670	MC-5#3	MC-5#3	LB vertical	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002670.JPG
MC-00002671	MC-5#3	MC-5#3	both banks very eroded (4')	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002671.JPG
MC-00002672	MC-5#4	MC-5#4	channel bends sharply to R; bridge over channel, rip-rap on both banks	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002672.JPG
MC-00002673	MC-5#4	MC-5#4	rip-rap banks, overgrown; wider section of channel	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002673.JPG
MC-00002674	MC-5#5	MC-5#5	rip-rap banks, narrow channel	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002674.JPG
MC-00002675	MC-5#5	MC-5#5	rip-rap along banks, channel bends to L (DS)	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002675.JPG
MC-00002676	MC-5#6	MC-5#6	48" culvert under driveway; deep, narrow channel	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002676.JPG
MC-00002677	MC-5#6	MC-5#6	48" culvert under driveway	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002677.JPG
MC-00002678	MC-5#7	MC-5#7	36" culvert under driveway	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002678.JPG
MC-00002679	MC-5#7	MC-5#7	48" culvert under driveway around bend to L	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002679.JPG
MC-00002680	MC-5#8	MC-5#8	60" culvert under Sunny Brook Lane	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002680.JPG
MC-00002681	MC-5#8	MC-5#8	4" sewer line across channel; dense vegetation	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002681.JPG
MC-00002682	MC-5#13	MC-5#13	channel curves to R slightly; 6" PVC sewer line damming channel	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002682.JPG
MC-00002683	MC-5#13	MC-5#13	60" culvert under Sunny Brook Lane	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002683.JPG
MC-00002684	MC-5#14	MC-5#14	narrow channel, 3'deep; wooden shoring on both banks	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002684.JPG
MC-00002685	MC-5#14	MC-5#14	stream curves to L; wooden shoring on both banks	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002685.JPG
MC-00002686	MC-5#15	MC-5#15	channel curves to R; wooden shoring	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002686.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002687	MC-5#15	MC-5#15	48" culvert under driveway; cement banksaround culvert	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002687.JPG
MC-00002688	MC-5#16	MC-5#16	severely eroded LB with rip-rap	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002688.JPG
MC-00002689	MC-5#16	MC-5#16	15' eroded RB(DS) at bend in channel to L.	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002689.JPG
MC-00002690	MC-5#17	MC-5#17	60" culvert under driveway	US		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002690.JPG
MC-00002691	MC-5#17	MC-5#17	Severely eroded RB with rip-rap; 8-10' bank	DS		12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002691.JPG
MC-00002692	MC-5#17	eroded bank at MC-5#17	Closeup of erosion and house and wall above			12/15/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002692.JPG
MC-00002697	MC-6#1	MC-6#1	looking at a 24" sewer pipe obstructing flow	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002697.JPG
MC-00002698	MC-6#1	MC-6#1	looking at the main channel; eroded banks, exposed roots	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002698.JPG
MC-00002699	MC-6#2	MC-6#2	4-5' vertical banks, severely eroded; debris in stream	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002699.JPG
MC-00002700	MC-6#2	MC-6#2	4-5' vertical banks, severely eroded, undercut, exposed roots with a sediment buildup in the channel	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002700.JPG
MC-00002701	MC-6#3	MC-6#3	L side of split, 3-4' vertical banks on left side just US of a sharp curve	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002701.JPG
MC-00002702	MC-6#3	MC-6#3	R side of split, smaller and less erosion than L. side.	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002702.JPG
MC-00002703	MC-6#3	MC-6#3	4-6' eroded banks with exposed roots, especially L side looking DS	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002703.JPG
MC-00002704	MC-6#4	MC-6#4	6-7' eroded banks, R side undercut, L side vertical	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002704.JPG
MC-00002705	MC-6#4	MC-6#4	4-6' vertical eroded banks with roots exposed	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002705.JPG
MC-00002706	MC-6#5	MC-6#5	eroded banks, exposed roots	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002706.JPG
MC-00002707	MC-6#5	MC-6#5	washout on LB 4-5' deep	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002707.JPG
MC-00002708	MC-6#5	MC-6#5	RB undercut, 4' vertical with exposed roots. LB undercut about 3' vertical with lots of exposed roots	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002708.JPG
MC-00002709	MC-6#6	MC-6#6	3-5' vertical eroded banks with exposed roots	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002709.JPG
MC-00002710	MC-6#6	MC-6#6	eroded banks with debris in stream; 4' sewer pipe crossing stream; sediment deposits on sides of stream bed	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002710.JPG
MC-00002711	MC-6#7	MC-6#7	Looking at a 48" culvert; lots of debris in stream bed; vertical banks and exposed roots around Spalding Drive	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002711.JPG
MC-00002712	MC-6#7	MC-6#7	Looking at 24" culvert that dumps into stream; exposed roots, vertical banks	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002712.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002713	MC-6#11	MC-6#11	Rocks line both sides of channel - erosion does not look as bad as the rest of the channel	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002713.JPG
MC-00002714	MC-6#11	MC-6#11	Looking at 48" culvert under Spalding Dr. Both sides of bank are lined with rocks	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002714.JPG
MC-00002715	MC-6#12	MC-6#12	looking at a 10" sewer pipe crossing channel, both sides of bank are lined with rock	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002715.JPG
MC-00002716	MC-6#12	MC-6#12	Both sides of channel are lined with rock	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002716.JPG
MC-00002717	MC-6#13	MC-6#13	just US of a sharp bend, L bank eroded with exposed roots; 3' vertical	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002717.JPG
MC-00002718	MC-6#13	MC-6#13	RB eroded with exposed roots	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002718.JPG
MC-00002719	MC-6#14	MC-6#14	looking at a 5' culvert under Valley Field Dr. 3-6' vertical banks, severely eroded with exposed roots. Shoring at headwall is failing and erosion is occurring on both sides of the headwall.	US		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002719.JPG
MC-00002720	MC-6#14	MC-6#14	vertical banks and exposed roots	DS		12/20/99	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002720.JPG
MC-00002749	MC#93	MC#93		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002749.JPG
MC-00002750	MC#93	MC#93		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002750.JPG
MC-00002751	MC#94	MC#94		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002751.JPG
MC-00002752	MC#94	MC#94		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002752.JPG
MC-00002753	MC#95	MC#95	8+ feet above channel floor	LB(DS)		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002753.JPG
MC-00002754	MC#95	MC#95		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002754.JPG
MC-00002755	MC#95	MC#95		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002755.JPG
MC-00002756	MC#96	MC#96		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002756.JPG
MC-00002757	MC#96	MC#96		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002757.JPG
MC-00002758	MC-7#1	MC-7#1		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002758.JPG
MC-00002759	MC-7#1	MC-7#1		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002759.JPG
MC-00002760	MC-7#2	MC-7#2		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002760.JPG
MC-00002761	MC-7#2	MC-7#2		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002761.JPG
MC-00002762	MC-7#4	MC-7#4		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002762.JPG
MC-00002763	MC-7#4	MC-7#4		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002763.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002764	MC-7#5	MC-7#5		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002764.JPG
MC-00002765	MC-7#5	MC-7#5		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002765.JPG
MC-00002766	MC-7#6	MC-7#6		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002766.JPG
MC-00002767	MC-7#6	MC-7#6		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002767.JPG
MC-00002768	MC-7#8	MC-7#8	5 ft. CMP	DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002768.JPG
MC-00002769	MC-7#8	MC-7#8		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002769.JPG
MC-00002770	MC-7#9	MC-7#9		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002770.JPG
MC-00002771	MC-7#9	MC-7#9		uS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002771.JPG
MC-00002772	MC-7#10	MC-7#10		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002772.JPG
MC-00002773	MC-7#10	MC-7#10		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002773.JPG
MC-00002774	MC-7#11	MC-7#11		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002774.JPG
MC-00002775	MC-7#11	MC-7#11		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002775.JPG
MC-00002776	MC-7#13	MC-7#13		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002776.JPG
MC-00002777	MC-7#13	MC-7#13		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002777.JPG
MC-00002778	MC-7#14	MC-7#14		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002778.JPG
MC-00002779	MC-7#14	MC-7#14	eroding RB(US) 3 ft	US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002779.JPG
MC-00002780	MC-7#15	MC-7#15		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002780.JPG
MC-00002781	MC-7#15	MC-7#15		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002781.JPG
MC-00002783	MC-7#16	MC-7#16		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002783.JPG
MC-00002784	MC-7#16	MC-7#16		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002784.JPG
MC-00002785	MC-7#17	MC-7#17		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002785.JPG
MC-00002786	MC-7#17	MC-7#17		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002786.JPG
MC-00002787	MC#97	MC#97		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002787.JPG
MC-00002788	MC#97	MC#97		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002788.JPG
MC-00002789	MC#98	MC#98		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002789.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002790	MC#98	MC#98		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002790.JPG
MC-00002791	MC#98	eroded bank at MC#98	>15 foot bank	US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002791.JPG
MC-00002792	MC#99	MC#99		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002792.JPG
MC-00002793	MC#99	MC#99		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002793.JPG
MC-00002794	MC#100	MC#100		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002794.JPG
MC-00002795	MC#100	MC#100		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002795.JPG
MC-00002796	MC#101	MC#101		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002796.JPG
MC-00002797	MC#101	MC#101		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002797.JPG
MC-00002798	MC#102	MC#102		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002798.JPG
MC-00002799	MC#102	MC#102		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002799.JPG
MC-00002800	MC#103	MC#103		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002800.JPG
MC-00002801	MC#103	MC#103		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002801.JPG
MC-00002802	MC#104	MC#104		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002802.JPG
MC-00002803	MC#104	MC#104		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002803.JPG
MC-00002804	MC#108	MC#108		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002804.JPG
MC-00002805	MC#108	MC#108		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002805.JPG
MC-00002806	MC#109	MC#109		DS		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002806.JPG
MC-00002807	MC#109	MC#109		US		01/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002807.JPG
MC-00002808	MC-4#6	MC-4#6	minor erosion	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002808.JPG
MC-00002809	MC-4#6	MC-4#6		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002809.JPG
MC-00002810	MC-4#5	MC-4#5	minor erosion	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002810.JPG
MC-00002811	MC-4#5	MC-4#5		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002811.JPG
MC-00002812	MC-4#4	MC-4#4		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002812.JPG
MC-00002813	MC-4#4	MC-4#4		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002813.JPG
MC-00002814	MC-4#3	MC-4#3	Trib branches off of MC-4#4 (a trib of the trib)	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002814.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002815	MC-4#3	MC-4#3		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002815.JPG
MC-00002816	MC-4#2	MC-4#2		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002816.JPG
MC-00002817	MC-4#2	MC-4#2		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002817.JPG
MC-00002818	MC-4#1	MC-4#1		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002818.JPG
MC-00002819	MC-4#1	MC-4#1		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002819.JPG
MC-00002820	MC-8#1	MC-8#1		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002820.JPG
MC-00002821	MC-8#1	MC-8#1		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002821.JPG
MC-00002822	MC-8#2	MC-8#2		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002822.JPG
MC-00002823	MC-8#2	MC-8#2		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002823.JPG
MC-00002824	MC-8#3	MC-8#3	Lake at MC-8#3	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002824.JPG
MC-00002825	MC#110	MC-110		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002825.JPG
MC-00002826	MC#110	MC-110		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002826.JPG
MC-00002827	MC#111	MC-111		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002827.JPG
MC-00002828	MC#111	MC-111		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002828.JPG
MC-00002829	MC#112	MC-112	Pipe across stream	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002829.JPG
MC-00002830	MC#112	MC-112		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002830.JPG
MC-00002831	MC#113	MC-113		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002831.JPG
MC-00002832	MC#113	MC-113		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002832.JPG
MC-00002833	MC#114	MC-114		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002833.JPG
MC-00002834	MC#114	MC-114		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002834.JPG
MC-00002835	MC-9#1	MC-9#1	On private property, between two bridges.	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002835.JPG
MC-00002836	MC-9#1	MC-9#1		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002836.JPG
MC-00002837	MC-9#2	MC-9#2	Between bridge and pipe under driveway	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002837.JPG
MC-00002838	MC-9#2	MC-9#2		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002838.JPG
MC-00002839	MC-9#3	MC-9#3		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002839.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002840	MC-9#3	MC-9#3		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002840.JPG
MC-00002841	MC-9#7	MC-9#7		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002841.JPG
MC-00002842	MC-9#7	MC-9#7		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002842.JPG
MC-00002843	MC-9#8	MC-9#8	minor erosion	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002843.JPG
MC-00002844	MC-9#8	MC-9#8		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002844.JPG
MC-00002845	MC-9#9	MC-9#9		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002845.JPG
MC-00002846	MC-9#9	MC-9#9		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002846.JPG
MC-00002847	MC-9#13	MC-9#13		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002847.JPG
MC-00002848	MC-9#13	MC-9#13		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002848.JPG
MC-00002849	MC#115	MC-115		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002849.JPG
MC-00002850	MC#115	MC-115		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002850.JPG
MC-00002851	MC#116	MC-116		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002851.JPG
MC-00002852	MC#116	MC-116		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002852.JPG
MC-00002853	MC#117	MC-117		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002853.JPG
MC-00002854	MC#117	MC-117		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002854.JPG
MC-00002855	MC#118	MC-118	Pipe across stream	US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002855.JPG
MC-00002856	MC#118	MC-118		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002856.JPG
MC-00002857	MC#119	MC-119		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002857.JPG
MC-00002858	MC#119	MC-119	Pipe across stream	DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002858.JPG
MC-00002859	MC#120	MC-120		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002859.JPG
MC-00002860	MC#120	MC-120		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002860.JPG
MC-00002861	MC#121	MC-121		US		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002861.JPG
MC-00002862	MC#121	MC-121		DS		01/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002862.JPG
MC-00002863	MC-10#1	MC-10#1		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002863.JPG
MC-00002864	MC-10#1	MC-10#1		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002864.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002865	MC-10#2	MC-10#2		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002865.JPG
MC-00002866	MC-10#2	MC-10#2		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002866.JPG
MC-00002867	MC-10#3	MC-10#3		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002867.JPG
MC-00002868	MC-10#3	MC-10#3		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002868.JPG
MC-00002869	MC-10#5	MC-10#5		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002869.JPG
MC-00002870	MC-10#5	MC-10#5		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002870.JPG
MC-00002871	MC-10#6	MC-10#6	Minor erosion	US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002871.JPG
MC-00002872	MC-10#6	MC-10#6		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002872.JPG
MC-00002873	MC-10#7	MC-10#7		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002873.JPG
MC-00002874	MC-10#7	MC-10#7		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002874.JPG
MC-00002875	MC-10#8	MC-10#8	Minor erosion	US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002875.JPG
MC-00002876	MC-10#8	MC-10#8		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002876.JPG
MC-00002877	MC-10#9	MC-10#9		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002877.JPG
MC-00002878	MC-10#9	MC-10#9		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002878.JPG
MC-00002879	MC-10#10	MC-10#10		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002879.JPG
MC-00002880	MC-10#10	MC-10#10		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002880.JPG
MC-00002881	MC#125	MC-125		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002881.JPG
MC-00002882	MC#125	MC-125		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002882.JPG
MC-00002883	MC#126	MC-126	Minor erosion	US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002883.JPG
MC-00002884	MC#126	MC-126		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002884.JPG
MC-00002885	MC#127	MC-127		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002885.JPG
MC-00002886	MC#127	MC-127		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002886.JPG
MC-00002887	MC#128	MC-128	Minor erosion	US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002887.JPG
MC-00002888	MC#128	MC-128		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002888.JPG
MC-00002889	MC#129	MC-129	Minor erosion	US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002889.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
MC-00002890	MC#129	MC-129		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002890.JPG
MC-00002891	MC#130	MC-130	Minor erosion	US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002891.JPG
MC-00002892	MC#130	MC-130		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002892.JPG
MC-00002893	MC#131	MC-131		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002893.JPG
MC-00002894	MC#131	MC-131		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002894.JPG
MC-00002895	MC-11#1	MC-11#1		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002895.JPG
MC-00002896	MC-11#1	MC-11#1		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002896.JPG
MC-00002897	MC-11#2	MC-11#2		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002897.JPG
MC-00002898	MC-11#2	MC-11#2		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002898.JPG
MC-00002899	MC-11#3	MC-11#3		US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002899.JPG
MC-00002900	MC-11#3	MC-11#3		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002900.JPG
MC-00002901	MC-10#11	MC-10#11	Forgot to take pictures earlier and had to come back to this site.	US		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002901.JPG
MC-00002902	MC-10#11	MC-10#11		DS		01/21/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002902.JPG
T7-00002923	T7#1	T7#1	minor erosion	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002923.JPG
T7-00002924	T7#1	T7#1	minor erosion	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002924.JPG
T7-00002925	T7-1#1	T7-1#1	looking at pipe under Fulton Co. access rd.	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002925.JPG
T7-00002926	T7-1#1	T7-1#1		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002926.JPG
T7-00002927	T7-1#2	T7-1#2		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002927.JPG
T7-00002928	T7-1#2	T7-1#2		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002928.JPG
T7-00002929	T7#1	Erosion US of T7#1	RB eroded -5ft.		RB	02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002929.JPG
T7-00002930	T7#2	T7#2	cliff on LB, rock 20'	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002930.JPG
T7-00002931	T7#2	T7#2		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002931.JPG
T7-00002932	T7#3	T7#3		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002932.JPG
T7-00002933	T7#3	T7#3	looking at culvert with elevated pipe running under the road	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002933.JPG
T7-00002934	T7#5	T7#5	looking at elevated pipe and culvert	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002934.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T7-00002935	T7#5	T7#5	6' erosion right at stake but not for extended lengths	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002935.JPG
T7-00002936	T7#6	T7#6		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002936.JPG
T7-00002937	T7#6	T7#6		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002937.JPG
T7-00002938	T7#7	T7#7		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002938.JPG
T7-00002939	T7#7	T7#7	looking under Riverside Dr.	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002939.JPG
T7-00002940	T7#9	T7#9	looking under Riverside Dr.	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002940.JPG
T7-00002941	T7#9	T7#9		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002941.JPG
T7-00002942	T7#10	T7#10		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002942.JPG
T7-00002942	T7#10	T7#10		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002942.JPG
T7-00002943	T7#11	T7#11	looking at elevated 8" pipe across stream	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002943.JPG
T7-00002944	T7#11	T7#11		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002944.JPG
T7-00002947	T7#12	T7#12		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002947.JPG
T7-00002948	T7#12	T7#12	looking at elevated 10" pipe across stream	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002948.JPG
T7-00002949	T7#13	T7#13		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002949.JPG
T7-00002950	T7#13	T7#13	with stone wall banks and driveway across stream	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002950.JPG
T7-00002951	T7#14	T7#14		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002951.JPG
T7-00002952	T7#14	T7#14	looking under Tanacrest Rd	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002952.JPG
T7-00002953	T7#16	T7#16	looking under Tanacrest Rd, leaves built up	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002953.JPG
T7-00002954	T7#16	T7#16		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002954.JPG
T7-00002955	T7#17	T7#17		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002955.JPG
T7-00002956	T7#17	T7#17		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002956.JPG
T7-00002957	T7#18	T7#18		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002957.JPG
T7-00002958	T7#18	T7#18	looking under River Valley Rd	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002958.JPG
T7-00002959	T7#20	T7#20	looking under River Valley Rd	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002959.JPG
T7-00002960	T7#20	T7#20		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002960.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T7-00002961	T7#21	T7#21	erosion 5' on DSRB	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002961.JPG
T7-00002962	T7#21	T7#21		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002962.JPG
T7-00002963	T7#22	T7#22	Looking at footbridge over creek	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002963.JPG
T7-00002964	T7#22	T7#22		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002964.JPG
T7-00002965	T7-2#1	T7-2#1		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002965.JPG
T7-00002966	T7-2#1	T7-2#1	looking under Riverwood Dr.	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002966.JPG
T7-00002967	T7-2#3	T7-2#3	looking under Riverwood Dr.	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002967.JPG
T7-00002968	T7-2#3	T7-2#3		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002968.JPG
T7-00002969	T7-2#4	T7-2#4	Looking at footbridge over creek	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002969.JPG
T7-00002970	T7-2#4	T7-2#4	looking under Rivercliff Dr.	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002970.JPG
T7-00002971	T7-2#6	T7-2#6	looking under Rivercliff Dr.	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002971.JPG
T7-00002972	T7-2#6	T7-2#6	looking at footbridge both pictures here have stone vertical banks	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002972.JPG
T7-00002973	T7-2A#1	T7-2A#1	grass and stone lined creek	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002973.JPG
T7-00002974	T7-2A#1	T7-2A#1	under Rivershore Ct.	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002974.JPG
T7-00002975	T7-2A#3	T7-2A#3	Looking under Rivershore Ct.	DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002975.JPG
T7-00002976	T7-2A#3	T7-2A#3		US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002976.JPG
T7-00002977	T7-2A#4	T7-2A#4		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002977.JPG
T7-00002978	T7-2A#4	T7-2A#4	minor 2-3' erosion on US RB	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002978.JPG
T7-00002979	T7-2A#5	T7-2A#5		DS		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002979.JPG
T7-00002980	T7-2A#5	T7-2A#5	branches in front of 24" CMP under Riverside PW	US		02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002980.JPG
T7-00002981	T7-2A#7	T7-2A#7	Stream is gone. Depression, wetland-like area, running water can be heard in an underground pipe			02/01/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 7\P0002981.JPG
T7-00002982	D#1	D#1	looking US at waterfall	US		02/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002982.JPG
T7-00002983	D#1	D#1	Looking DS at erosion and severe meandering	DS		02/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002983.JPG
T7-00002984	D#2	D#2	severe erosion	US		02/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002984.JPG
T7-00002985	D#2	D#2	severe erosion	DS		02/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002985.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T7-00002986	D#3	D#3	before start of erosion	US		02/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002986.JPG
T7-00002987	D#3	D#3	before start of erosion	DS		02/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002987.JPG
T7-00002988	D#3	D#3	before start of erosion	DS		02/07/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002988.JPG
T7-00002989	T7-2#7	T7-2#7	stone banks	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002989.JPG
T7-00002990	T7-2#7	T7-2#7	pipe (CMP)	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002990.JPG
T7-00002991	T7-2#9	T7-2#9	CMP	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002991.JPG
T7-00002992	T7-2#9	T7-2#9	concreted banks	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002992.JPG
T7-00002993	T7-2#10	T7-2#10		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002993.JPG
T7-00002994	T7-2#40	T7-2#40	pipe under Riverwood Dr.	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002994.JPG
T7-00002995	T7-2#12	T7-2#12		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002995.JPG
T7-00002996	T7-2#12	T7-2#12		US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002996.JPG
T7-00002997	T7-2#12	CMP US of T7-2#12	orange sludge coming out			02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002997.JPG
T7-00002998	T7-2#13	T7-2#13	looking out across pond			02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002998.JPG
T7-00002999	T7-2#14	T7-2#14	looking out across next pond			02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0002999.JPG
T7-00003000	T7-2#15	T7-2#15	pond in picture	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003000.JPG
T7-00003001	T7-2#15	T7-2#15	rock outlet	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003001.JPG
T7-00003002	T7-2#16	T7-2#16	looking across third pond, outlet pipe in upper right hand corner of picture			02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003002.JPG
T7-00003003	T7#23	T7#23		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003003.JPG
T7-00003004	T7#24	T7#24	CMP under Riverwood PW	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003004.JPG
T7-00003005	T7#25	T7#25	CMP under Riverwood PW	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003005.JPG
T7-00003006	T7#25	T7#25		US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003006.JPG
T7-00003007	T7#26	T7#26	under footbridge, built up DSLB	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003007.JPG
T7-00003008	T7#26	T7#26		US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003008.JPG
T7-00003009	T7#27	T7#27		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003009.JPG
T7-00003010	T7#27	T7#27	small trib splits off of main channel	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003010.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T7-00003011	T7-3#1	T7-3#1		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003011.JPG
T7-00003012	T7-3#1	T7-3#1	pipe under road	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003012.JPG
T7-00003013	T7-3#3	T7-3#3	pipe under road	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003013.JPG
T7-00003014	T7-3#3	T7-3#3	lots of ivy, footbridge	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003014.JPG
T7-00003015	T7-3#4	T7-3#4	under driveway CMP and brick	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003015.JPG
T7-00003016	T7-3#4	T7-3#4	under roadway	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003016.JPG
T7-00003017	T7-3#6	T7-3#6	under roadway	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003017.JPG
T7-00003018	T7-3#6	T7-3#6		US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003018.JPG
T7-00003019	T7-3#7	T7-3#7		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003019.JPG
T7-00003020	T7-3#7	T7-3#7	culvert under road	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003020.JPG
T7-00003021	T7-3#9	T7-3#9		US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003021.JPG
T7-00003021	T7-3#9	T7-3#9	under road, pipe and concrete	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003021.JPG
T7-00003022	T7-3#10	T7-3#10		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003022.JPG
T7-00003023	T7-3#10	T7-3#10	under road, ivy covering pipe	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003023.JPG
T7-00003024	T7#28	T7#28		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003024.JPG
T7-00003025	T7#28	T7#28	footbridge	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003025.JPG
T7-00003026	T7#29	T7#29	footbridges	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003026.JPG
T7-00003027	T7#29	T7#29	fence across stream, pipe entering stream @ this location, not in picture	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003027.JPG
T7-00003028	T7#30	T7#30	severe erosion on US LB- 5'	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003028.JPG
T7-00003029	T7#30	T7#30		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003029.JPG
T7-00003030	T7#31	T7#31		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003030.JPG
T7-00003031	T7#31	T7#31	30" CMP	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003031.JPG
T7-00003032	T7#32	T7#32	fence across stream, pipe entering stream @ this location, not in picture	DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003320.JPG
T7-00003033	T7#32	T7#32	CMP with stone	US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003033.JPG
T7-00003034	T7#34	T7#34		DS		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003034.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T7-00003035	T7#34	T7#34		US		02/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Marsh Creek\P0003035.JPG
T6-00003119	T6#22	T6#22	Centerline	US		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003119.JPG
T6-00003120	T6#22	T6#22	Centerline	DS		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003120.JPG
T6-00003121	T6#21	T6#21	Centerline	US		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003121.JPG
T6-00003122	T6#21	T6#21	Centerline	DS		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003122.JPG
T6-00003123	T6#20	T6#20	Centerline	US		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003123.JPG
T6-00003124	T6#20	T6#20	Centerline	DS		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003124.JPG
T6-00003125	T6#19	T6#19	Centerline	US		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003125.JPG
T6-00003126	T6#19	T6#19	Centerline	DS		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003126.JPG
T6-00003127	T6#26	T6#26	Centerline	US		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003127.JPG
T6-00003128	T6#26	T6#26	Centerline; Looking under Seamarsh Ct. Rd.	DS		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003128.JPG
T6-00003129	T6#27	T6#27	Centerline	US		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003129.JPG
T6-00003130	T6#27	T6#27	Centerline	DS		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003130.JPG
T6-00003131	T6#28	T6#28	Centerline, CMP	US		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003131.JPG
T6-00003132	T6#28	T6#28	Centerline, lots of limbs	DS		03/17/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003132.JPG
T6-00003102	T6#1	T6#1	Centerline, photos taken from atop 36" DIP sanitary main, approx. 4-6 ft clearance. Piers on either side of channel two 1 ft thick rect. Concrete piers separated by 1 ft space.	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003102.JPG
T6-00003103	T6#1	T6#1	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003103.JPG
T6-00003104	T6#1	T6#1	36" DIP sanitary main	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003104.JPG
T6-00003105	T6#2	T6#2	Centerline, two 36-48" trees fallen just US	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003105.JPG
T6-00003106	T6#2	T6#2	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003106.JPG
T6-00003107	T6#2	T6#2	Approx. 100' US of T6-2 stone weir structure. Most flow appears to flow under and through weir (two lines 6" iron pipe and 12" RCP. Weir is 2 ft below top and 20' wide. Top is 8' above DS w.s.	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003107.JPG
T6-00003108	T6#3	T6#3	Centerline	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003108.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T6-00003109	T6#3	T6#3	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003109.JPG
T6-00003110	T6#4	T6#4	Centerline	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003110.JPG
T6-00003111	T6#4	T6#4	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003111.JPG
T6-00003112	T6#4	T6#4	Creek drops on 1:! Slope just DS for approx. 30 v ft	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003112.JPG
T6-00003113	T6#5	T6#5	Centerline, culvert approx 6 ft wide with 18" CMP above it.	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003113.JPG
T6-00003114	T6#5	T6#5	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003114.JPG
T6-00003115	T6#8	T6#8	Centerline	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003115.JPG
T6-00003116	T6#8	T6#8	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003116.JPG
T6-00003117	T6#8	T6#8	Lake has 6' X 6' overflow structure leading to culvert under road.	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003117.JPG
T6-00003118	T6#9	T6#9	Centerline, channel very rocky, US slopes @ 4:!	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003118.JPG
T6-00003119	T6#9	T6#9	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003119.JPG
T6-00003120	T6#10	T6#10	Centerline, SLIGHT SHEEN ON STANDING WATER. Twin 48" CMP culverts, 8" sanitary DIP runs parallel to creek	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003120.JPG
T6-00003121	T6#10	T6#10	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003121.JPG
T6-00003122	T6#10	T6#10	36" RCP DS approx 100' appears to be silted up (50% at this end)	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003122.JPG
T6-00003123	T6#13	T6#13	Centerline, Twin 48" CMP	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003123.JPG
T6-00003124	T6#13	T6#13	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003124.JPG
T6-00003125	T6#14	T6#14	Centerline, Twin 48" CMP	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003125.JPG
T6-00003126	T6#14	T6#14	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003126.JPG
T6-00003127	T6#15	T6#15	Centerline	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003127.JPG
T6-00003128	T6#15	T6#15	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003128.JPG
T6-00003129	T6#16	T6#16	Centerline	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003129.JPG
T6-00003130	T6#16	T6#16	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003130.JPG
T6-00003131	T6#17	T6#17	Centerline	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003131.JPG
T6-00003132	T6#17	T6#17	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003132.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
T6-00003133	T6#18	T6#18	Centerline	US		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003133.JPG
T6-00003134	T6#18	T6#18	Centerline	DS		03/09/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003134.JPG
T6-00003100	T6#29	T6#29	Centerline	US		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003100.JPG
T6-00003101	T6#29	T6#29	Centerline	DS		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003101.JPG
T6-00003098	T6#30	T6#30	Centerline, just DS of confluence	US		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003098.JPG
T6-00003099	T6#30	T6#30	Centerline	DS		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003099.JPG
T6-00003096	T6#31	T6#31	Centerline	US		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003096.JPG
T6-00003097	T6#31	T6#31	Centerline	DS		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003097.JPG
T6-00003094	T6#32	T6#32	Centerline	US		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003094.JPG
T6-00003095	T6#32	T6#32	Centerline	DS		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003095.JPG
T6-00003092	T6#33	T6#33	Centerline, Twin 36" CMP culverts	US		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003092.JPG
T6-00003093	T6#33	T6#33	Centerline	DS		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003093.JPG
T6-00003090	T6#34	T6#34	Centerline	US		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003090.JPG
T6-00003091	T6#34	T6#34	Centerline	DS		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003091.JPG
T6-00003088	T6#35	T6#35	Centerline	US		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003088.JPG
T6-00003089	T6#35	T6#35	Centerline, 36" CMP culvert with wing wall haed wall, channel depth approx. 3' with vertical banks	DS		03/08/00	P:\Fulton\17529\300 Data Collection\Photographs\Trib 6\P0003089.JPG
RC-00003165	RC#1	RC#1	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003165.JPG
RC-00003166	RC#1	RC#1	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003166.JPG
RC-00003167	RC#2	RC#2	Centerline, VERY ROCKY	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003167.JPG
RC-00003168	RC#2	RC#2	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003168.JPG
RC-00003169	RC#3	RC#3, VERY ROCKY	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003169.JPG
RC-00003170	RC#3	RC#3	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003170.JPG
RC-00003171	RC#7	RC#7	Centerline, 30" CULVERT UNDER Riverview Rd	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003171.JPG
RC-00003172	RC#7	RC#7	Centerlin, blocked culvert	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003172.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
RC-00003174	RC#7	RC#7	Centerline, brick/stone retaining wall; muddy water due to blocked culvert	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003174.JPG
RC-00003175	RC#7	RC#7	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003175.JPG
RC-00003176	RC#8	RC#8	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003176.JPG
RC-00003177	RC#8	RC#8	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003177.JPG
RC-00003178	RC#9	RC#9	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003178.JPG
RC-00003179	RC#9	RC#9	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003179.JPG
RC-00003180	RC#10	RC#10	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003180.JPG
RC-00003181	RC#10	RC#10	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003181.JPG
RC-00003182	RC#10	RC#10	Failing retaining wall by house (US)	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003182.JPG
RC-00003183	RC#11	RC#11	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003183.JPG
RC-00003184	RC#11	RC#11	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003184.JPG
RC-00003185	RC#11	RC#11	US of RC-11	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003185.JPG
RC-00003186	RC#12	RC#12	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003186.JPG
RC-00003187	RC#12	RC#12	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003187.JPG
RC-00003188	RC#13	RC#13	JUST DS OF RC-13, Looking @ pond with 20' drop retaining wall with water spewing over top	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003188.JPG
RC-00003189	RC#14	RC#14	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003189.JPG
RC-00003190	RC#14	RC#14	Centerline, looking @ wall of pond	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003190.JPG
RC-00003191	RC#15, RC#16, RC#17	RC#15,16,17	driveway with 30" culvert	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003191.JPG
RC-00003192	RC#18	RC#18	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003192.JPG
RC-00003193	RC#18	RC#18	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003193.JPG
RC-00003194	RC#19	RC#19	Centerline, looking @ driveway	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003194.JPG
RC-00003195	RC#20	RC#20	Centerline, looking @ retaining wall of pond	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003195.JPG
RC-00003196	RC#20	RC#20	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003196.JPG

Appendix B
Sandy Springs Photolog

Photo_ID	Cross-section ID	Subject	Comments	Direction	Bank	Photo_Date	File_Name
RC-00003197	RC#21	RC#21	Centerline, two 30" CMP from pond	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003197.JPG
RC-00003198	RC#21	RC#21	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003198.JPG
RC-00003199	RC#22	RC#22	Centerline, pond	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003199.JPG
RC-00003200	RC#22	RC#22	POND		RB	04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003200.JPG
RC-00003201	RC#22	RC#22	outfall of pond	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003201.JPG
RC-00003202	RC#23	RC#23	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003202.JPG
RC-00003203	RC#23	RC#23	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003203.JPG
RC-00003204	RC#27	RC#27	Centerline	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003204.JPG
RC-00003205	RC#27	RC#27	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003205.JPG
RC-00003206	RC#28	RC#28	Centerline, 4 ft CMP	US		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003206.JPG
RC-00003207	RC#28	RC#28	Centerline	DS		04/19/00	P:\Fulton\17529\300 Data Collection\Photographs\Riverview Creek\P0003207.JPG

Appendix C

TASK 4, SANDY SPRINGS WATERSHED ASSESSMENT

KHAFRA
Atlanta, Georgia

Date: 9/22/99	Firm: Khafra	Crew Initials: MN, BT	Photo #:
Structure Number: MC- ~~1866, 1867, 1868, 1869, 1870~~			
Ne0arest Street No:	Street Name: Peachtree Hollow / Peachtree Dunwoody Rd		

Structure Type: Inlet Grate Curb Combination Yard | Manhole | Channel | Flume

Pipe Entrance [HW / pipe end] Pipe Exit [HW / pipe end] HW type 1 (0°) 2 (45°) 3 (60°)

Pipe End Bevel Sharp Square Box Culvert Entrance Box Culvert Exit Bridge (3 structure nos. per bridge)

Storage Detention Pond (5 structure numbers per pond. Draw a sketch with dimensions on back of this sheet)

1866, 1867, 1868, 1869, 1870

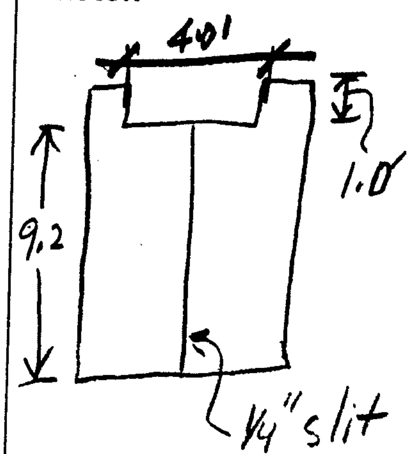
Inlet Dimensions: Standard 2'x3' Grate 2.5' x 0.5' Weir Opening

Standard 12.5'x0.5' conc.

Non-Standard (show measurements)

Channel _____x_____ Flume _____x_____

Sketch



Structural Damage: Severe Minor None

Dry-Weather Flow: Yes No **Source:** Creek Other

Blockage/Clogging: 25% 50% 75% 100% Clear

Pollution: Oil/Grease Paint Sewer None Sediment Odor

Comments:

In-Coming Pipe:
From

Struct. No.	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1862	72			✓				
~~UJB~~ MC-1875	66			✓				

Out-Going Pipe:
To

Struct. No	Size (in.)	Depth (ft.)	RCP	CMP	CLAY	CIP	DIP	PVC
MC 1873	18			✓				

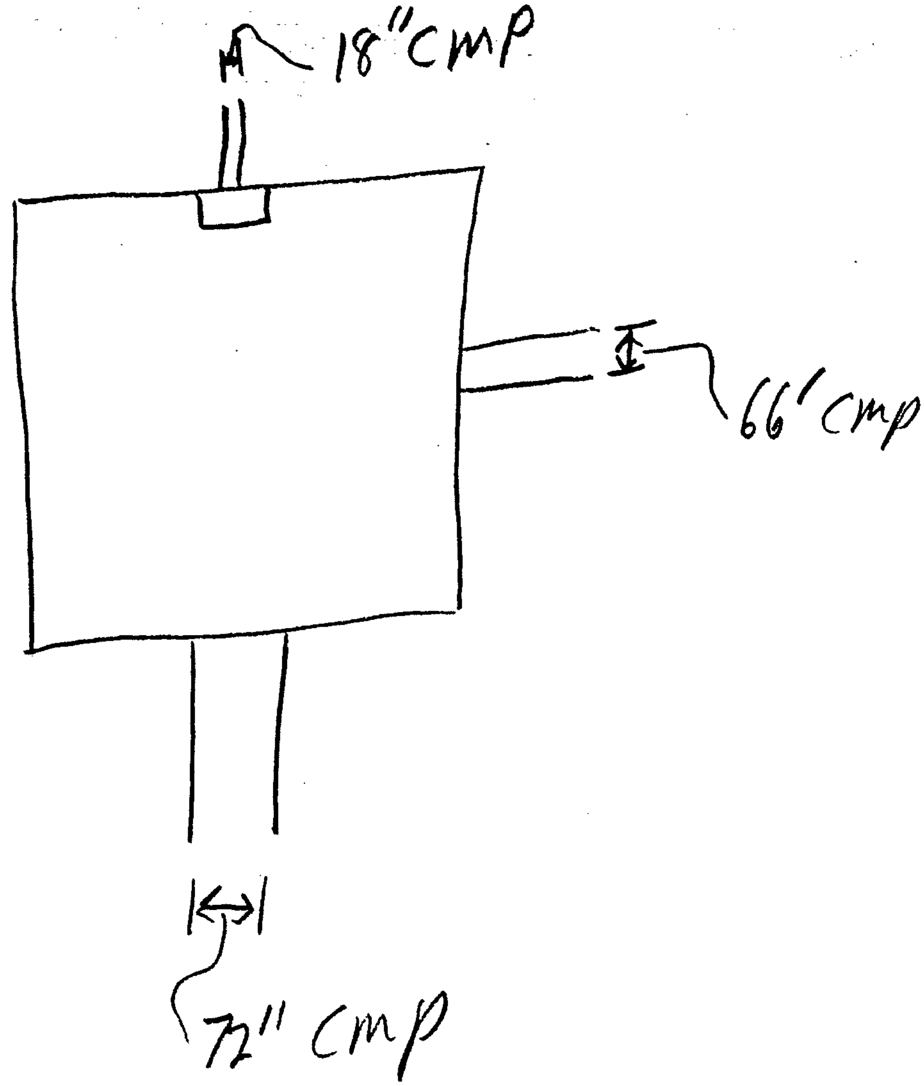
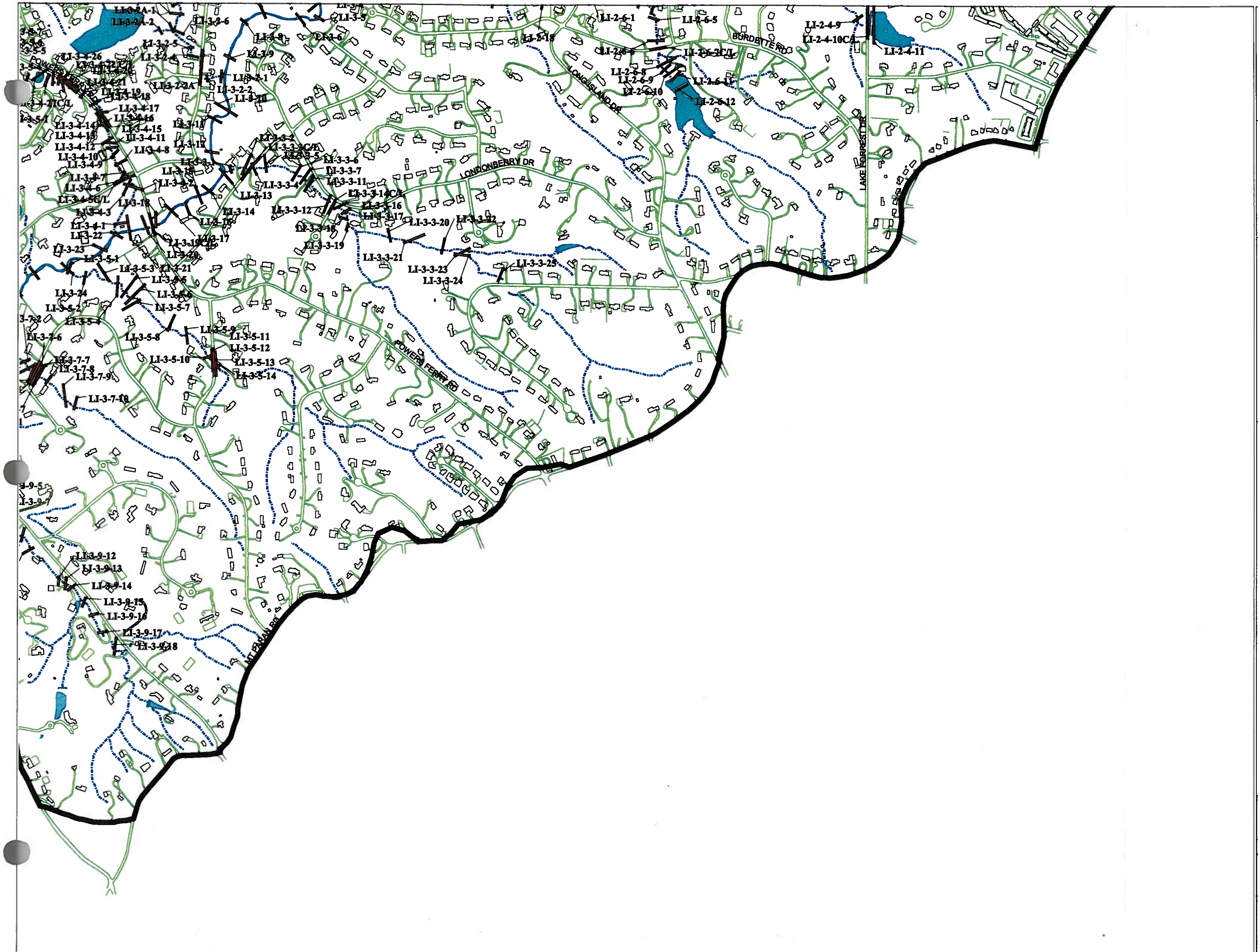


DIAGRAM MC-1866

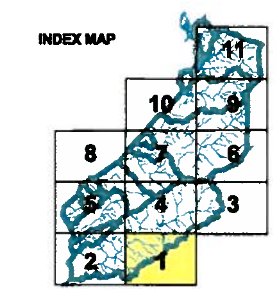


FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX C: Figure 1, Tile 1
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream



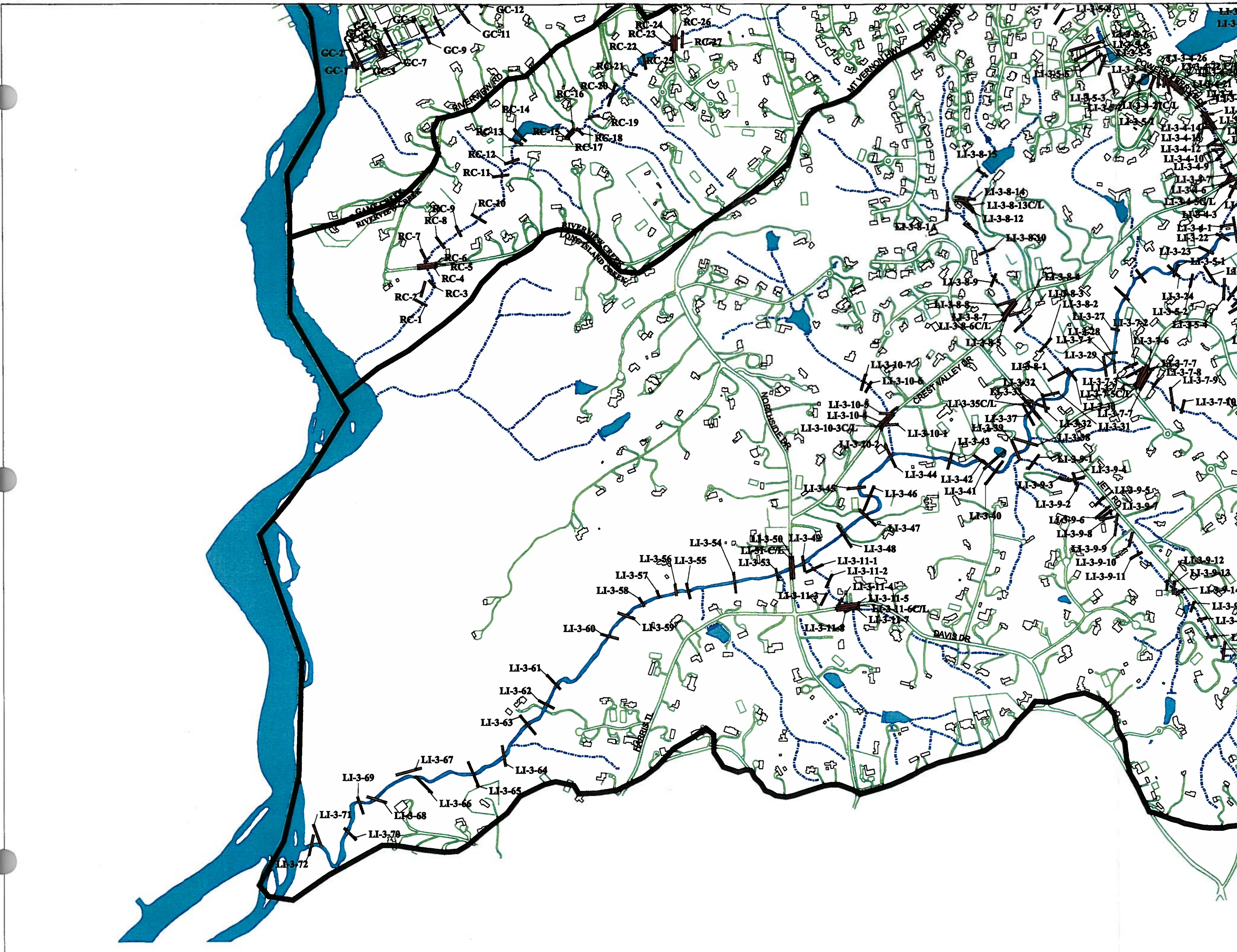
Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet

400 0 400 Feet



FULTON COUNTY

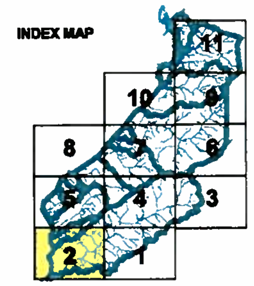
SANDY SPRINGS WATERSHED ASSESSMENT

FULTON COUNTY

APPENDIX C: Figure 1, Tile 2
Cross Section Location Map

- Cross Section
- Watershed Boundary
- Building Footprint
- Planimetrics
- Stream

INDEX MAP



STUDY AREA LOCATION

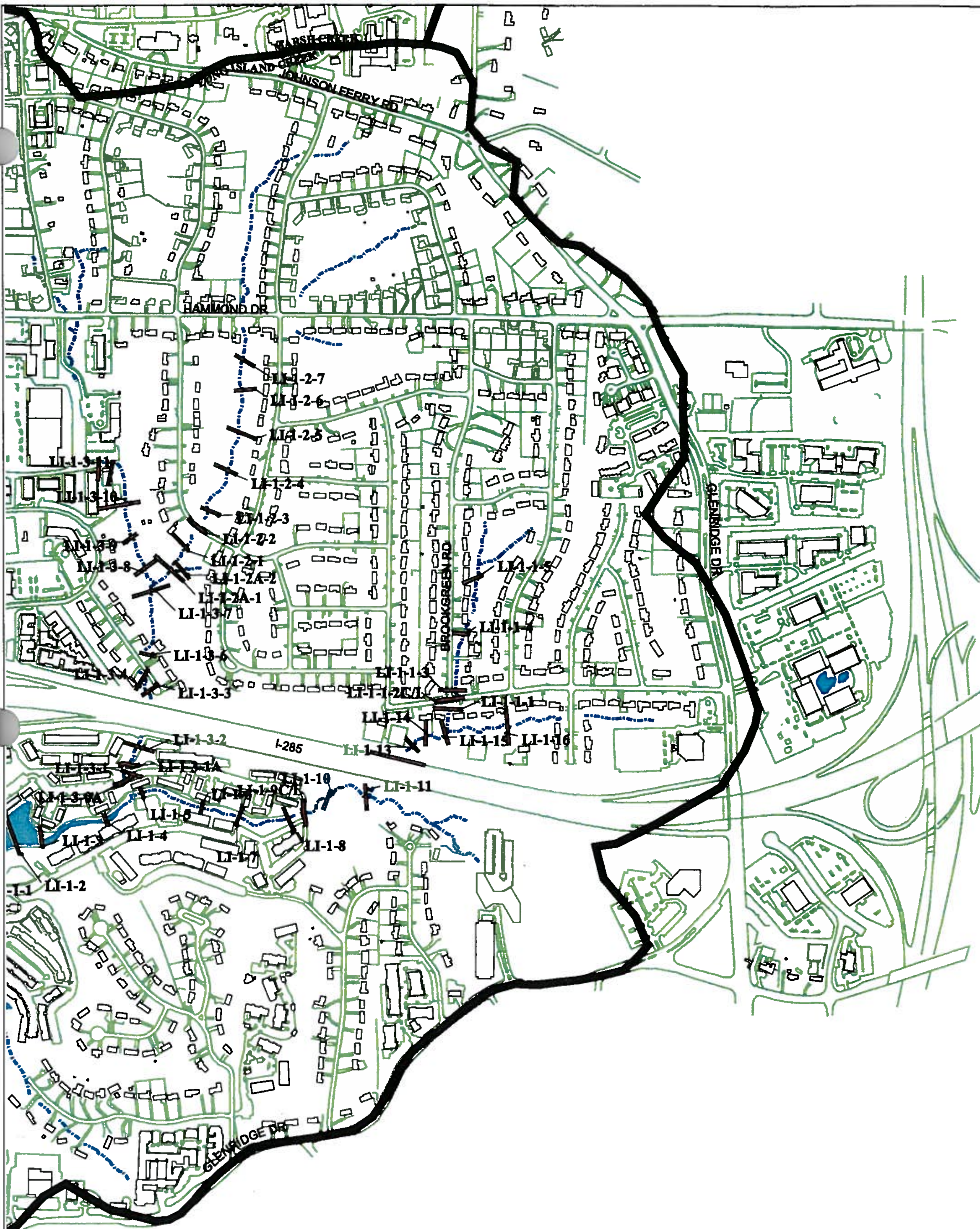
Data Sources:
1. Fulton County Public Works (1999)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Data Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet

400 0 400 Feet

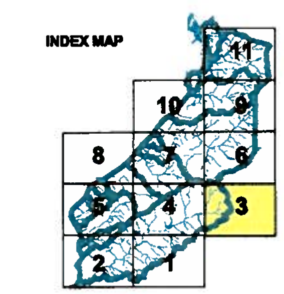


FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX C: Figure 1, Tile 3
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream

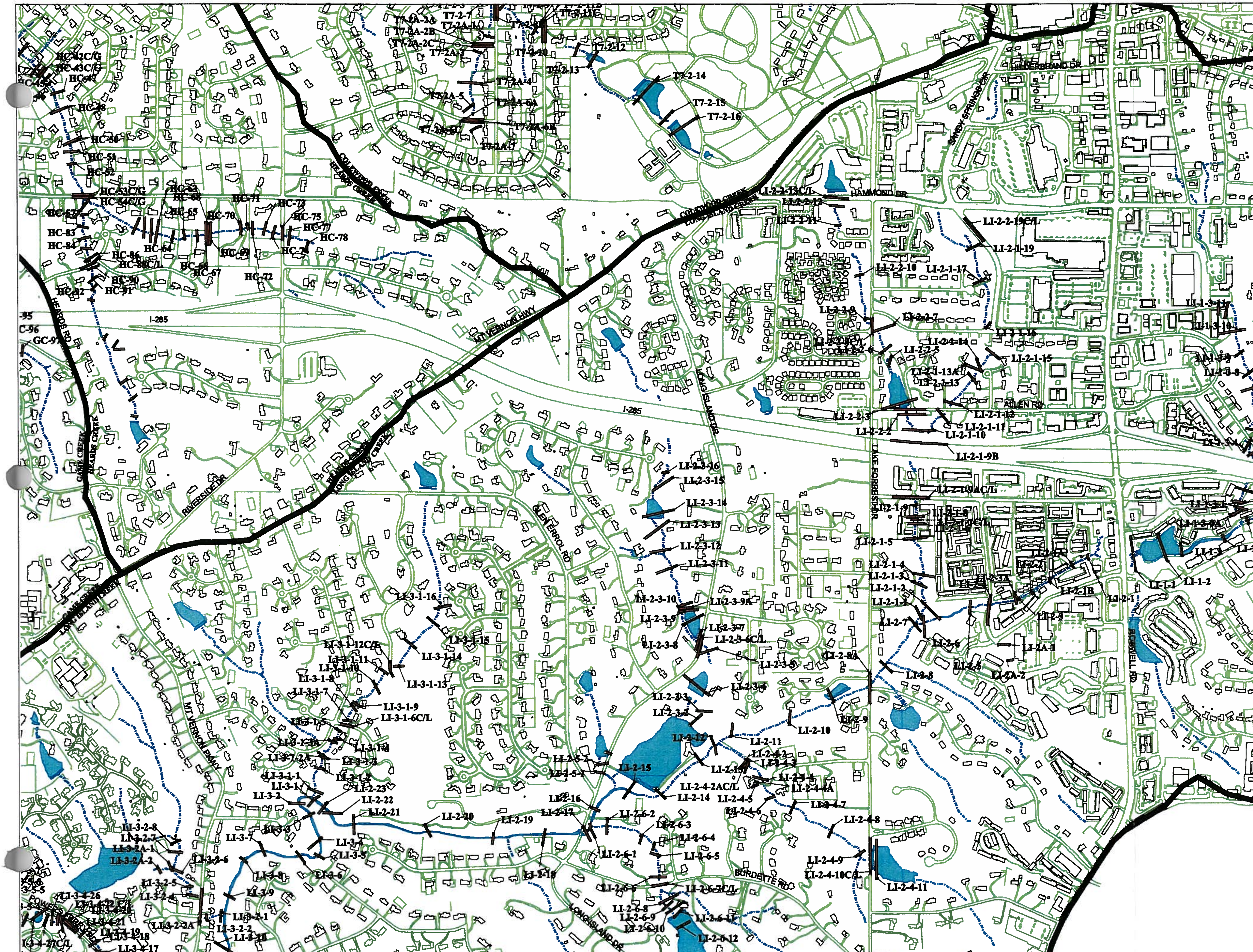


Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company, (1998)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet
400 0 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

FULTON COUNTY

APPENDIX C: Figure 1, Tile 4
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream

INDEX MAP

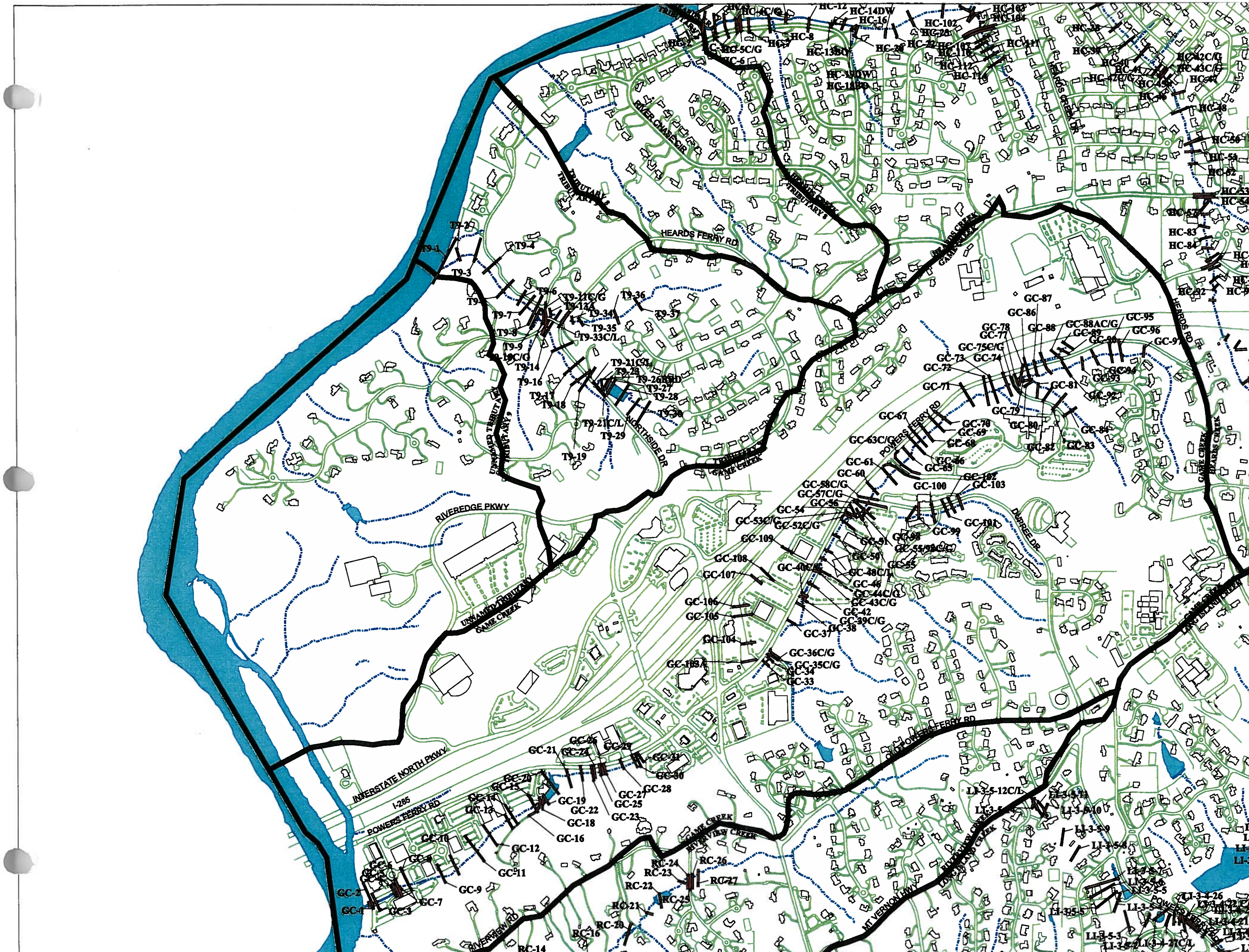
STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Data Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet
400 0 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX C: Figure 1, Tile 5
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream

INDEX MAP

STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1968)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Date Produced: June 2001

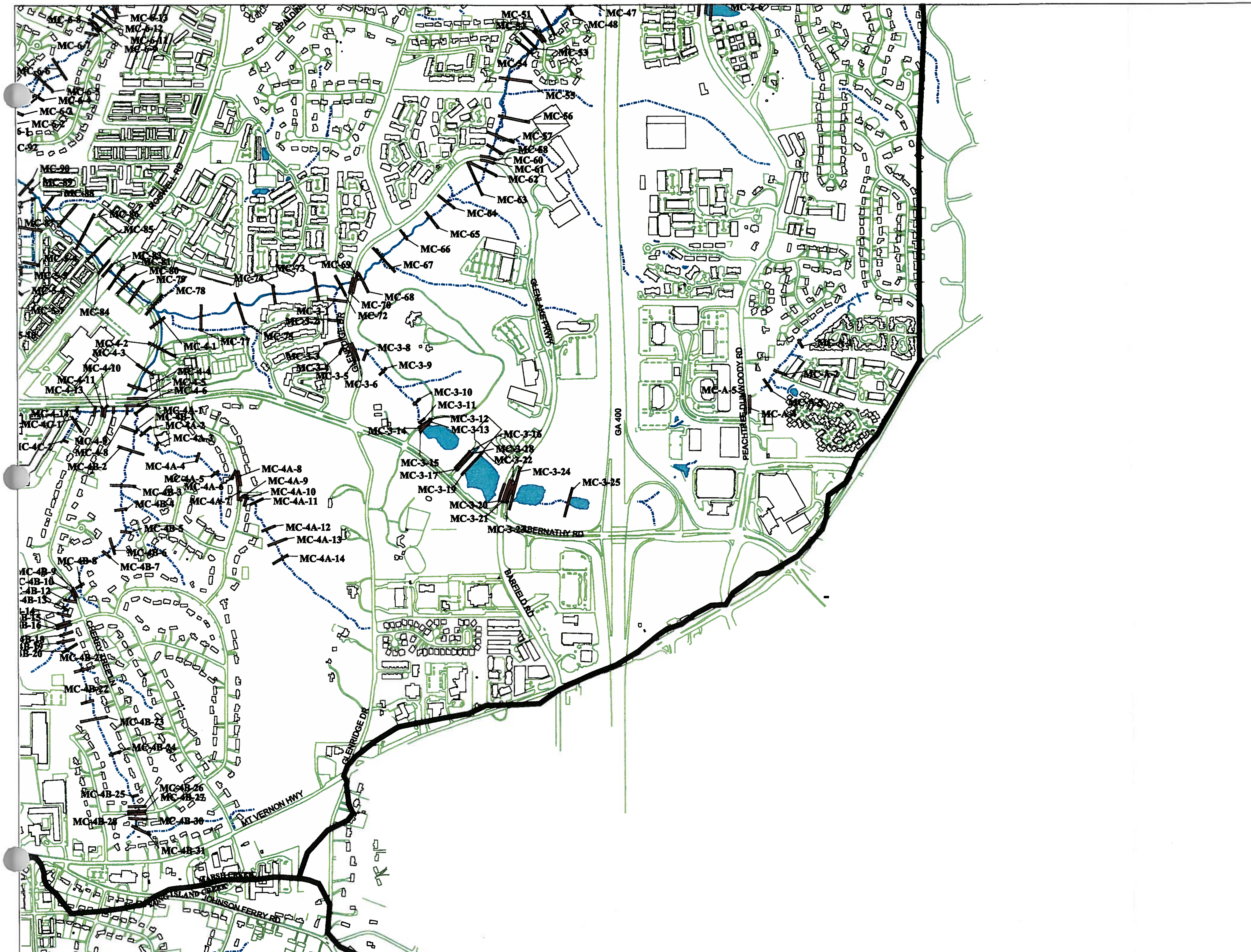
Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet
400 0 400 Feet

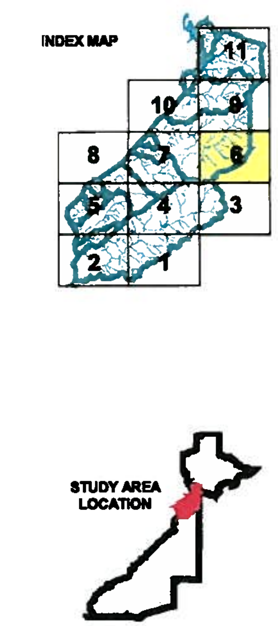
FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX C: Figure 1, Tile 6
Cross Section Location Map



Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream



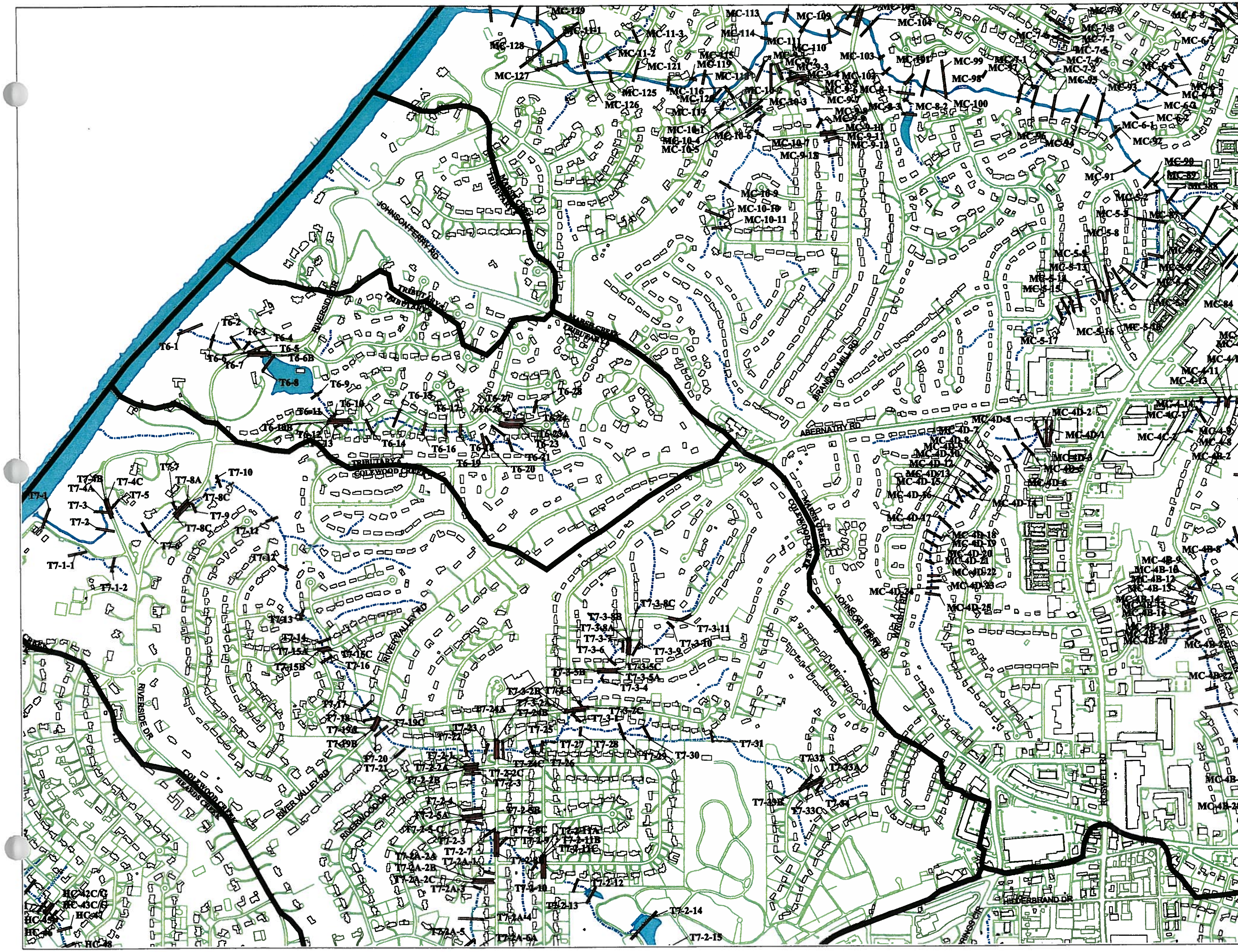
Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company, (1998)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Data Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet

400 0 400 Feet



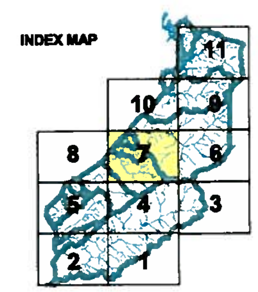
FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX C: Figure 1, Tile 7
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

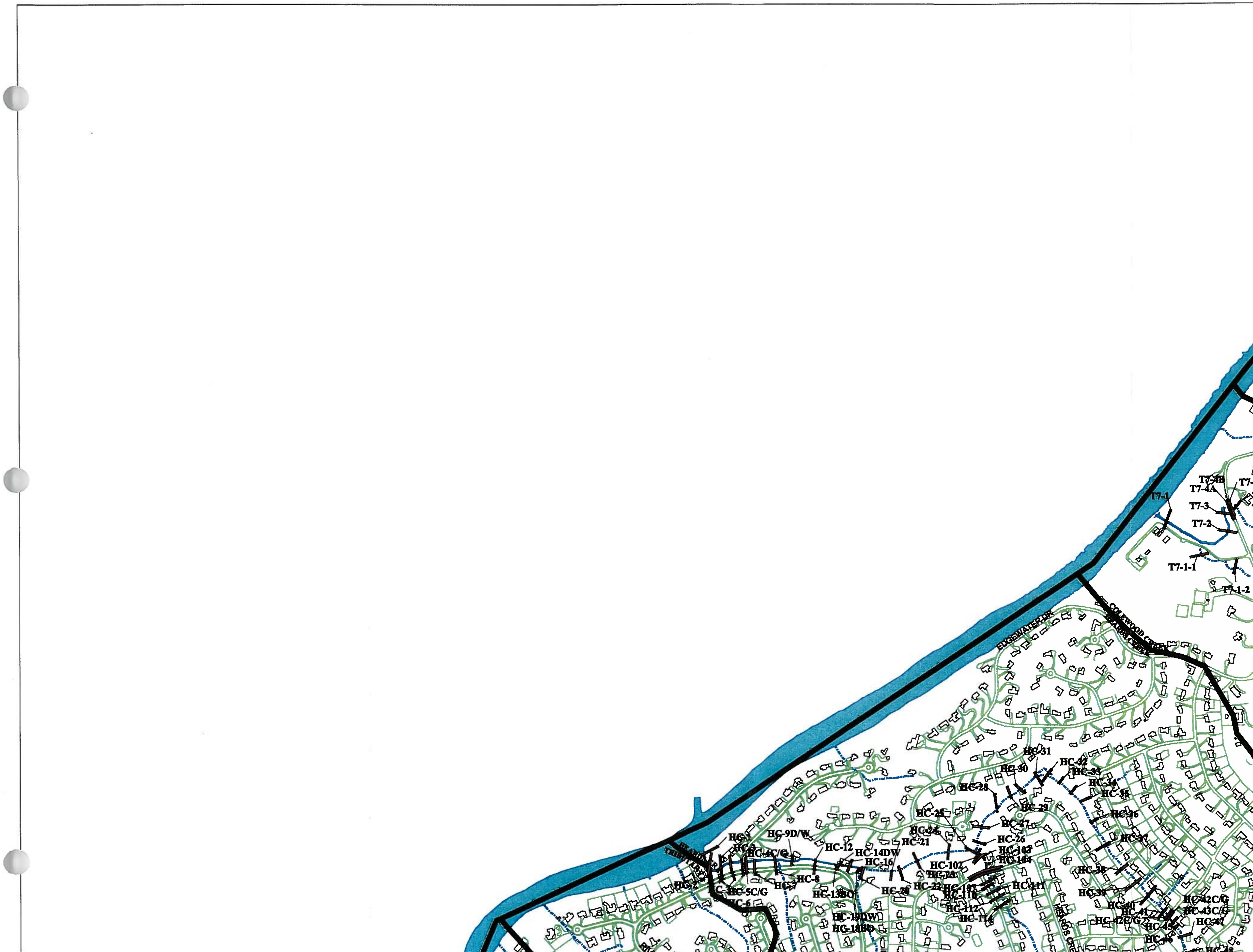
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = 900 feet

400 0 400 Feet

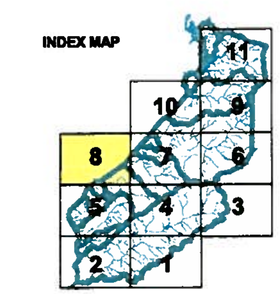


FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX C: Figure 1, Tile 8
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream



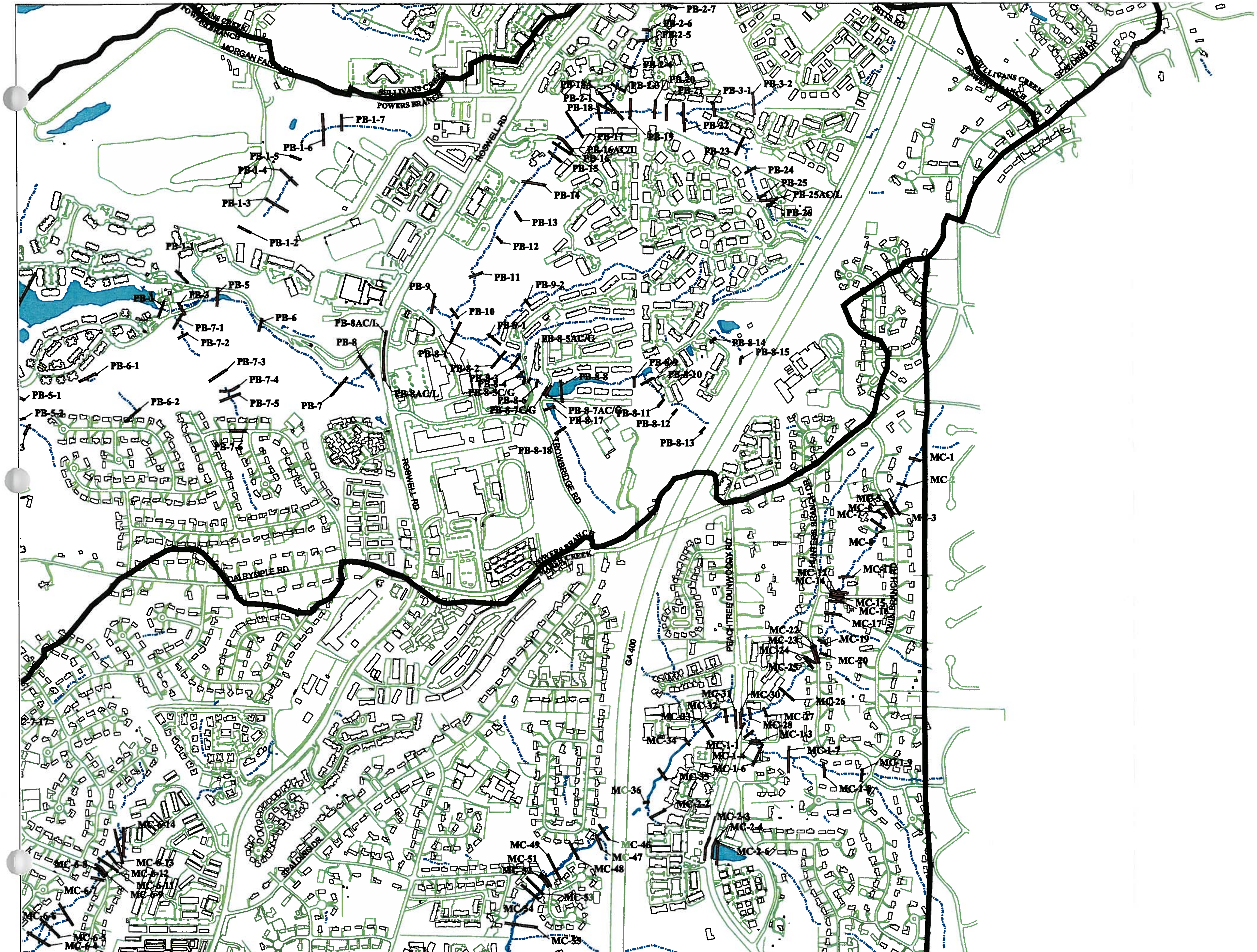
Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet

400 0 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

FULTON COUNTY

APPENDIX C: Figure 1, Tile 9
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream

INDEX MAP

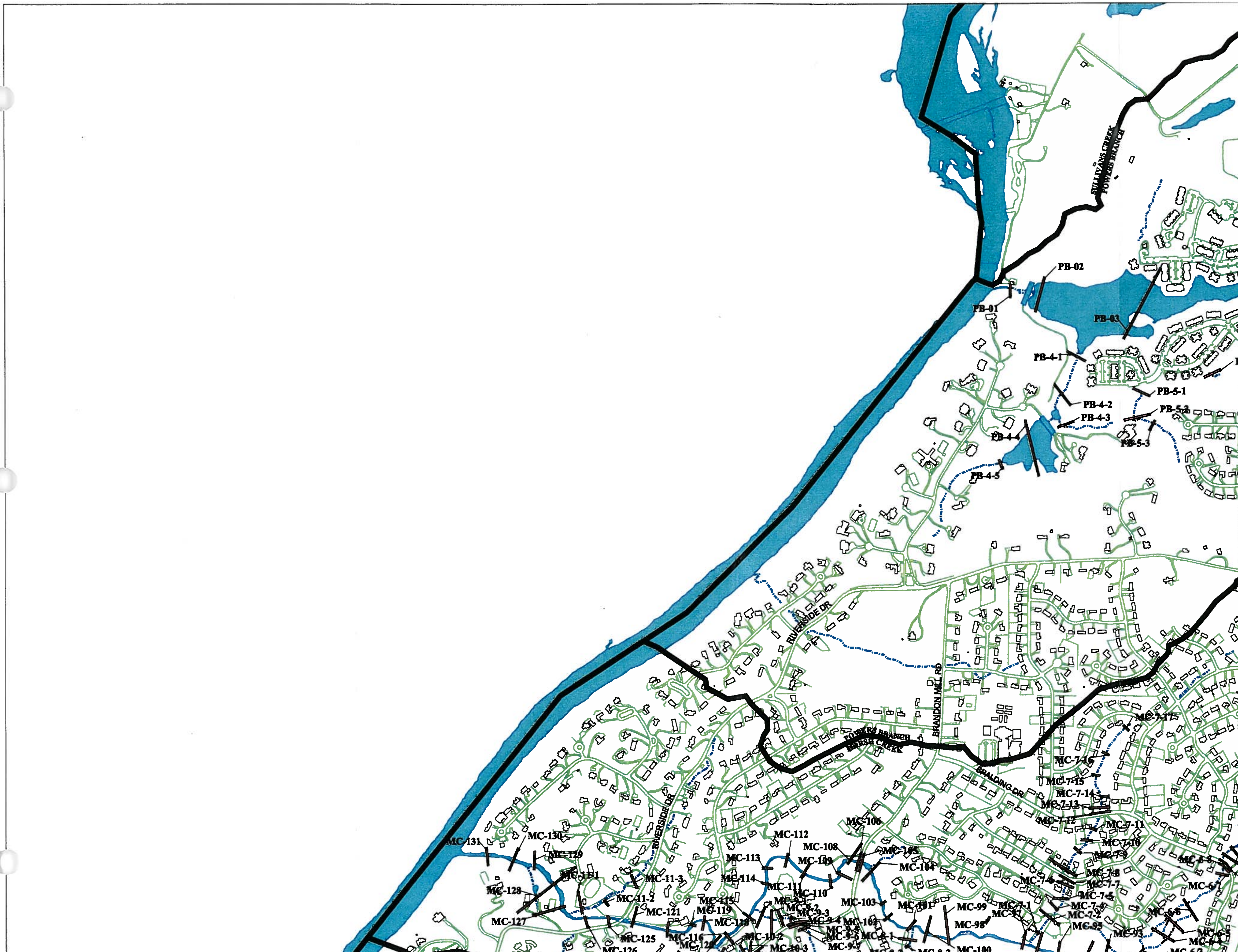
STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet
400 0 400 Feet



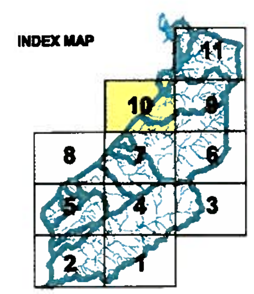
FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX C: Figure 1, Tile 10
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream

INDEX MAP



STUDY AREA LOCATION

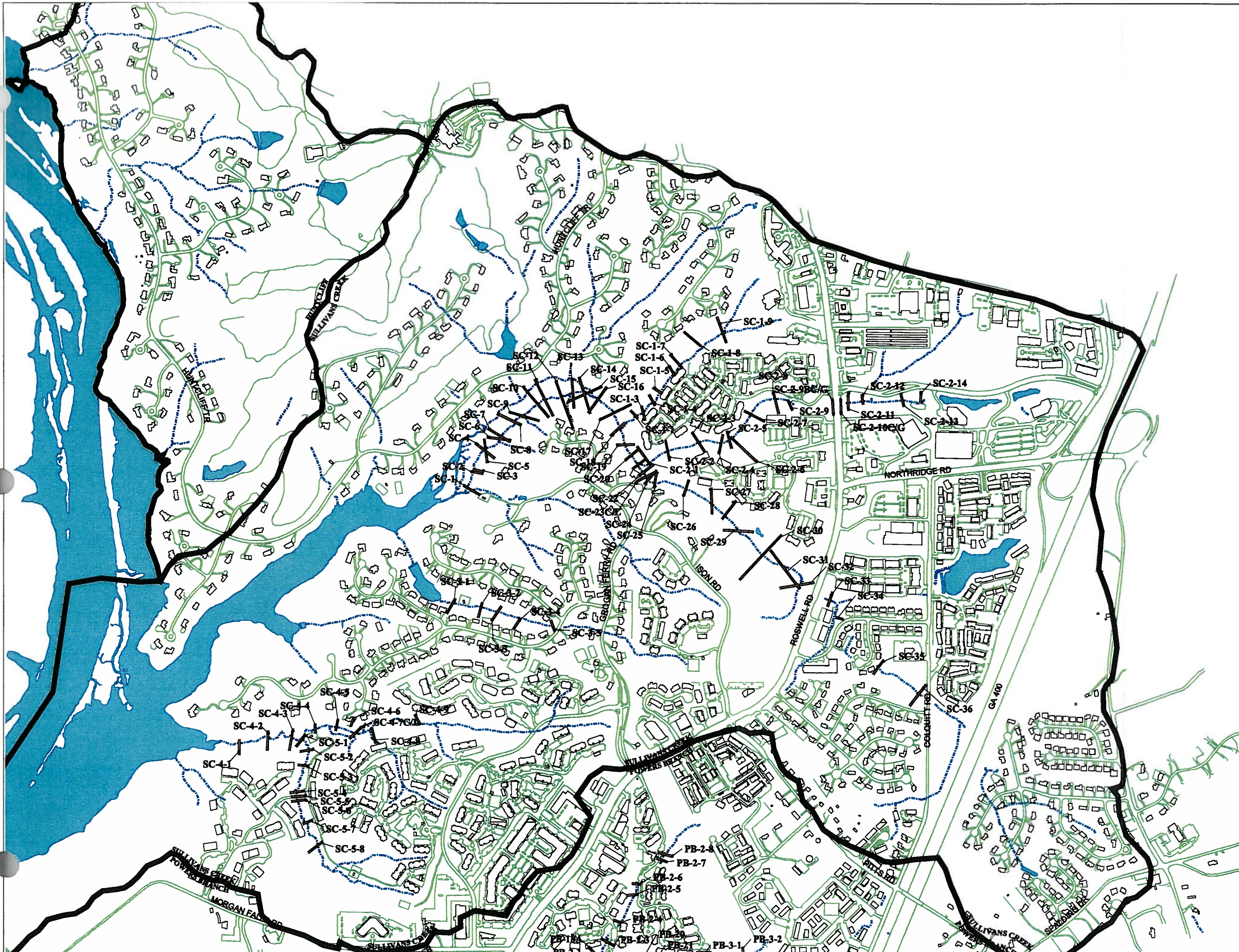
Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company (1998)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-S Engineering (2001)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet

400 0 400 Feet



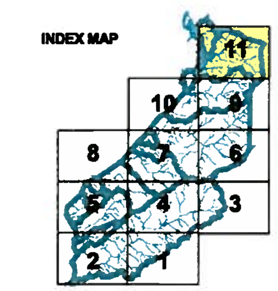
FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

FULTON COUNTY

APPENDIX C: Figure 1, Tile 11
Cross Section Location Map

Cross Section
Watershed Boundary
Building Footprint
Planimetrics
Stream



Data Sources:
1. Fulton County Public Works (1998)
2. Hoffman & Company, (1999)
3. Khafra Engineering (1999)
4. R&D Environmental (2000)
5. Q-B Engineering (2001)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = 900 feet

400 0 400 Feet

Appendix C
Form For Calculating Mannings Roughness Coefficients

Channel Conditions		Values			
Material Involved	Earth	n_0		0.020	
	Rock cut			0.025	
	Fine gravel			0.024	
	Coarse gravel			0.028	
Degree of Irregularity	Smooth	n_1		0.000	
	Minor			0.005	
	Moderate			0.010	
	Severe			0.020	
Variations of channel cross section	Gradual	n_2		0.000	
	Alternating occasionally			0.005	
	Alternating frequently		0.010	0.0125	0.015
Relative effect of obstructions	Negligible	n_3		0.000	
	Minor		0.010	0.0125	0.015
	Appreciable		0.020	0.025	0.030
	Severe		0.040	0.050	0.060
Vegetation	Low	n_4	0.005	0.0075	0.010
	Medium		0.010	0.0175	0.025
	High		0.025	0.0375	0.050
	Very high		0.050	0.075	0.100
Degree of meandering	Minor	n_5		1.000	
	Appreciable			1.150	
	Severe			1.300	

Appendix C
Average Channel Manning's Coefficients

Site	(RB, LB, C)	n_0	n_1	n_2	n_3	n_4	n_5	Site n	Date	Observations
HC-1	C	0.02	0	0.005	0	0.005	1.15	0.0345	3/18/1999	
HC-2	C	0.028	0.005	0.005	0	0.005	1	0.043	3/18/1999	
HC-3	C	0.028	0	0.005	0.01	0.005	1	0.048	3/18/1999	
HC-7	C	0.028	0.005	0	0	0.005	1	0.038	3/18/1999	
HC-8	C	0.028	0.01	0.005	0.02	0.005	1.15	0.0782	3/18/1999	
HC-12	C	0.028	0.005	0.005	0.025	0.005	1	0.068	3/18/1999	
HC-20	C	0.024	0	0.005	0.025	0.005	1	0.059	3/18/1999	
HC-21	C	0.028	0.005	0.005	0.01	0.005	1.15	0.06095	3/18/1999	
HC-16	C	0.028	0.005	0.005	0.02	0.005	1.15	0.07245	3/18/1999	
HC-22	C	0.02	0	0	0	0.005	1	0.025	3/18/1999	
HC-23	C	0.028	0.01	0.005	0.06	0.005	1	0.108	3/18/1999	
HC-24	C	0.028	0.01	0.005	0.025	0.005	1	0.073	3/18/1999	
HC-25	C	0.024	0.02	0.005	0.05	0.005	1.15	0.1196	3/18/1999	
HC-26	C	0.025	0.02	0.005	0.04	0.005	1.15	0.10925	3/18/1999	
HC-27	C	0.024	0.01	0	0.02	0.005	1.15	0.06785	3/18/1999	
HC-28	C	0.028	0.01	0.0125	0.05	0.005	1.15	0.121325	3/18/1999	
HC-29	C	0.024	0.01	0.01		0.005	1.15	0.05635	3/18/1999	
HC-30	C	0.024	0.01	0.005	0.015	0.005	1.15	0.06785	3/18/1999	
HC-31	C	0.024	0.02	0.005	0.03	0.01	1	0.089	3/18/1999	
HC-32	C	0.028	0.01	0	0.02	0.0075	1	0.0655	3/18/1999	
HC-33	C	0.025	0.01	0	0.03	0.005	1	0.07	3/18/1999	
HC-34	C	0.028	0.01	0	0.03	0.0075	1	0.0755	3/18/1999	
HC-35	C	0.028	0.005	0	0.0125	0.0075	1.15	0.06095	3/18/1999	
HC-36	C	0.028	0.005	0	0.0125	0.0075	1	0.053	3/18/1999	
HC-37	C	0.028	0	0	0.0125	0.0075	1	0.048	3/18/1999	
HC-39	C	0.028	0.01	0	0.0125	0.0075	1	0.058	3/18/1999	
HC-40	C	0.024	0.01	0	0.0125	0.0075	1	0.054	3/18/1999	
HC-41	C	0.024	0.01	0	0.0125	0.0175	1	0.064	3/18/1999	
HC-45	C	0.024	0.005	0	0.0125	0.0075	1	0.049	3/18/1999	
HC-46	C	0.024	0.01	0.005	0.125	0.005	1.15	0.19435	3/18/1999	
HC-47	C	0.028	0	0.005	0.01	0.005	1	0.048	3/18/1999	
HC-48	C	0.025	0.01	0.0125	0.05	0.005	1	0.1025	3/18/1999	
HC-49	C	0.025	0.01		0.04	0.005	1	0.08	3/18/1999	
HC-50	C	0.028	0.01	0.0125	0.04	0.01	1.3	0.13065	3/19/1999	
HC-51	C	0.024	0.01	0.0125	0.0125	0.01	1.15	0.07935	3/19/1999	
HC-52	C	0.028	0.02	0.0125	0.01	0.005	1.15	0.086825	3/19/1999	
HC-53	C	0.028	0.005	0	0.015	0.005	1	0.053	3/19/1999	
HC-57	C	0.028	0.005	0.005	0.01	0.01	1.3	0.0754	3/23/1999	creek split; lots of sediment deposited on rocks of channel/ perhaps from construction US
HC-58	C	0.024	0.005	0.005	0.015	0.0075	1.15	0.064975	3/23/1999	sediment on channel rocks, RB facing reinforced w/concrete

Appendix C
Average Channel Manning's Coefficients

Site	(RB, LB, C)	n_0	n_1	n_2	n_3	n_4	n_5	Site n	Date	Observations
HC-59	C	0.028	0.005	0.005	0.01	0.0075	1.15	0.063825	3/23/1999	coarse gravel sediment deposit in channel forming island; heavy undercutting of RB looking US, pipe discharge into creek
HC-60	C	0.02	0.01	0.01	0.01	0.005	1.15	0.06325	3/23/1999	channel gravel in sediment, severe bank undercutting on LB looking US; erosion significant undercutting
HC-61	C	0.02	0.01	0.005	0.02	0.01	1.15	0.07475	3/23/1999	sediment on channel rocks, gravel deposits in channel constricting flow rip-rap on LB looking US, pipe (from yard @ pole) into stream
HC-62	C	0.024	0.01	0.01	0.04	0.005	1.15	0.10235	3/23/1999	erosion of LB and RB, gravel deposited on bank for stabilization, sediment deposits in channel
HC-63	C	0.028	0.01	0.01	0.015	0.005	1.3	0.0884	3/23/1999	LB and RB line w/rip-rap, just US of significant obstruction (rock & tree)
HC-64	C	0.025	0.005	0.005	0.0125	0.01	1.15	0.066125	3/23/1999	LB & RB dense vegetation, behind tennis court (RB), not as steep as DS
HC-65	C	0.028	0.005	0.005	0.015	0.01	1	0.063	3/23/1999	severe erosion and undercutting on LB looking US, sediment deposits in channel
HC-66	C	0.028	0.01	0.005	0.02	0.0075	1	0.0705	3/23/1999	wider channel, eroding LB looking US, sediment deposits in stream
HC-67	C	0.028	0.005	0	0.015	0.005	1	0.053	3/23/1999	just DS of 48" culvert; vertical banks DS on RB looking US
HC-69	C	0.028	0.005	0	0.0125	0.005	1	0.0505	3/23/1999	rip-rap banks, trapezoidal channel
HC-70	C	0.028	0.02	0.005	0.04	0.005	1	0.098	3/23/1999	large rocks deposited in channel
HC-71	C	0.028	0.02	0.005	0.04	0.005	1	0.098	3/23/1999	large rock deposited in channel - sig. Destruction; rip-rap lined banks, just DS from 60" current
HC-72	C	0.028	0.005	0.005	0.0125	0.0075	1	0.058	3/23/1999	lots of sediment deposited on rocks in channel; sig. Algae growth in channel, just US of wall structure
HC-73	C	0.028	0.02	0.01	0.05	0.01	1.15	0.1357	3/23/1999	rip-rap lined banks, creek splits w/eroding banks, house construction on LB looking US- lined w/ silt fence-> somewhat failing
HC-74	C	0.028	0.01	0	0.02	0.005	1	0.063	3/23/1999	banks lined w/ rip-rap

Appendix C
Average Channel Manning's Coefficients

Site	(RB, LB, C)	n_0	n_1	n_2	n_3	n_4	n_5	Site n	Date	Observations
HC-77	C	0.024	0.01	0.005	0.02	0.005	1	0.064	3/23/1999	LB looking US tennis court in floodplain, just US from culvert that is blocked with debris (extending from LB); RB wide floodplain w/ no development
HC-78	C	0.028	0.02	0.01	0.04	0.005	1.3	0.1339	3/23/1999	smells like sewage, high sinuosity of stream, HC-78 just DS of culvert (36"?), rocks in channel coated w/ sediment, algae growth in channel
HC-79	C	0.024	0.005	0.01	0.01	0.005	1.3	0.0702	3/23/1999	creek split just US from culvert under Coldstream Ct., ivy-lined and monkey grass lined bank @ split
HC-80	C	0.024	0.01	0.005	0.05	0.01	1.15	0.11385	3/23/1999	very low water level, creek blocked w/ debris from I-285 runoff
HC-81	C	0.024	0	0	0.04	0.005	1	0.069	3/23/1999	dry channel; litter & debris (leaves)
HC-82	C	0.02	0.01	0.005	0.025	0.005	1	0.065	3/23/1999	large amount of debris in channel, badly eroding banks- vertical
HC-83	C	0.024	0.01	0.005		0.005	1.15	0.0506	3/23/1999	large amount of sediment/ debris in channel -> forming islands in channel
HC-84	C	0.028	0.01	0.005	0.02	0.005	1	0.068	3/23/1999	banks lined w/ rock rip-rap, moderate current, DS from sanitary sewer pipe crossing creek
HC-85	C	0.02	0.01	0.01	0.015	0.005	1.15	0.069	3/23/1999	LB looking US is failing wooden wall - reinforced by rip-rap (wooden beams in channel), RB vertical; eroding banks
HC-86	C	0.02	0.01	0.01	0.04	0.005	1	0.085	3/23/1999	vertical banks, badly eroding, large sediment deposit island just DS of culvert (60"), large downed tree blocking culvert
HC-90	C	0.02	0.02	0.005	0.06	0.005	1	0.11	3/23/1999	just US from 60" culvert & that is BADLY blocked by dead trees/ limbs
HC-91	C	0.024	0.01	0.01	0.02	0.0175	0.015	0.001223	3/23/1999	low turbidity, banks badly eroding w/ exposed roots
HC-92	C	0.028	0.01	0.01	0.04	0.01	1.15	0.1127	3/23/1999	large amount of debris in channel, downed trees- sediment deposits forming islands, algae growth in channel, small trib feeding from LB looking US

Appendix C
Average Channel Manning's Coefficients

Site	(RB, LB, C)	n_0	n_1	n_2	n_3	n_4	n_5	Site n	Date	Observations
HC-93	C	0.024	0.02	0.01	0.06	0.01	1.15	0.1426	3/23/1999	terrible backage from I-285 culvert (US of HC-93), channel rich with obstructions- limbs, logs, leaves, sediment deposits in channel forming islands, eroding banks, Possible Emergency- broken pipe leaking into stream, white-grey water color and smell of sewage
HC-96	C	0.024	0.01	0.01	0.03	0.01	1.15	0.0966	3/23/1999	high sinuosity, undercut banks, underbrush is very thick, machete necessary, dense thickets
HC-97	C	0.024	0.01	0.01	0.04	0.01	1.15	0.1081	3/23/1999	badly eroding banks w/ exposed roots, LB looking US vertical, wooden beams & limbs in the channel
HC-98	C	0.028	0.01	0.005	0.02	0.01	1	0.073	3/23/1999	vertical RB, steep banks, low turbidity, US of HC-98, small foot bridge and waterfall
HC-99	C	0.028	0.005	0	0.02	0.075	1	0.128	3/23/1999	low turbidity, channel lined w/ large rocks- rip-rap, creek splits
HC-100	C	0.028	0.02	0.005	0.04	0.01	1.15	0.11845	3/23/1999	vegetation & large rocks in channel, litter, debris in channel creating sig. Blockage
HC-101	C	0.02	0.005	0	0.01	0.005	1	0.04	3/23/1999	retention pond w/ fountain, LB looking US lined w/ rip-rap *new home construction on pond
HC-102	C	0.02	0.01	0	0.03	0.01	1	0.07	3/24/1999	debris in channel coated w/ sediment, low turbidity, algae growth, major obstruction (downed tree & limbs & leaves) where trib feeds into Heards Creek, LB progressively steeper, RB ivy-covered US
HC-103	C	0.028	0.02	0.005	0.05	0.005	1	0.108	3/24/1999	major obstruction in channel- large rocks, leaf packs & downed trees
HC-104	C	0.025	0.01	0.0125	0.05	0.005	1	0.1025	3/24/1999	rock cut waterfall down steep bank
HC-106	C	0.02	0.005	0.005	0.01	0.005	1	0.045	3/24/1999	small channel w/ vertical bank incised, ivy-covered banks
HC-107	C	0.02	0.02	0.005	0.05	0.0075	1	0.1025	3/24/1999	narrow channel w/ ivy covered banks, culvert significantly blocked by debris (leaf packs/ pine needles)

Appendix C
Average Channel Manning's Coefficients

Site	(RB, LB, C)	n_0	n_1	n_2	n_3	n_4	n_5	Site n	Date	Observations
HC-109	C	0.02	0.005	0.01	0.015	0.0075	1	0.0575	3/24/1999	small channel w/ pooling just US from HC-109, algae growth & sediment
HC-111	C	0.024	0.01	0.0125	0.02	0.0075	1.15	0.0851	3/24/1999	significant algae growth & sediment deposits, debris in channel, sinuous channel reach
HC-112	C	0.024	0	0	0.01	0.0075	1.15	0.047725	3/24/1999	algae growth very prevalent, low turbidity
HC-114	C	0.02	0.005	0.005	0.0125	0.005	1	0.0475	3/24/1999	channel lined with square shaped stones, very low turbidity., sig. Algae growth, sediment deposit US forming islands

Appendix D

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
5295	MT VERNON PKWY		30327		CHERRY	TOBIA	E	R	19930223	FALSE
215	River North Court	Atlanta	30328		Leslie	Chalk	E	R	19930401	FALSE
5275	Mount Vernon Parkway	Atlanta	30327		Margaret	Fox	E	X	19920908	FALSE
5295	Mount Vernon Pkwy	Atlanta	30327		Cherry	Tobia	E	X		FALSE
522	Londonberry Raod	Atlanta			Charles	Berger	E	X	19930629	FALSE
5930	Kayron Drive	Atlanta	30328		Dorothy	Goodwin	E	X	19920805	FALSE
990	Riverside Trce				Judy	Parks	E	X	19980121	FALSE
215	River North Court	Atlanta	30328		Leslee	Chalk	E	X	19921124	FALSE
6385	Riverside Drive	Atlanta	30328		Fred	Hahn	E		19930512	FALSE
515	River Valley Drive	Atlanta	30328		Robert	Perez	E		19920917	FALSE
235	RIVERWOOD COURT		30328		LEE	MCCLARY	E		19930915	FALSE
7445	wildercliff drive					russ	E		19990325	TRUE
315	Wilderlake Court	Atlanta	30328		Louis	Centofanti	E		19920706	FALSE
315	WILDERLAKE COURT		30328		LOUIS	CENTOFANTI	E		19920706	FALSE
980	Crest Valley Rd						E		19990519	TRUE
640	TANGLEWOOD TRAIL		30327		STAN	MOGELNICKI	E		19970611	FALSE
665	Londonberry Road	Atlanta	30327		Leonard	Barkan	E		19920914	FALSE
4944	Carol Lane	Atlanta	30327		Steve	Juke	E		19921008	FALSE
399	Glencastle Drive	Atlanta	30327		John	Ogden	E		19910301	FALSE
333	Glencastle Drive	Atlanta	30327		Dudley	Moore	E		19920824	FALSE
5190	LONG ISLAND DRIVE		30327		LAUREL	BURROWS	E		19980612	FALSE

Street_no	Ma_street	Action_req	Basin
5295	MT VERNON PKWY	SINK HOLES ON PROPERTY; STORM DRAIN CAUSING EROSION	Long Island Creek
215	River North Court	erosion along march creek and standing water in yard	Marsh Creek
5275	Mount Vernon Parkway	upstream prop.owner built dam eroding yard - Long Island Cr	Long Island Creek
5295	Mount Vernon Pkwy	sink holes forming on prop.draining pipe causing erosion.	Long Island Creek
522	Londonberry Raod	creek eroding on the banks due to increased volume of water diverted by co	Long Island Creek
5930	Kayron Drive	drainage ditch eroding away - too shallow-wants CO to deepen	Long Island Creek
990	Riverside Trce	erosion around catchbasin	Trib 8
215	River North Court	massive erosion occurring along rear of property	Marsh Creek
6385	Riverside Drive	storm pipe under lawn possible collasping	Trib 7
515	River Valley Drive	concerns related to erosion and runoff problems	Trib 7
235	RIVERWOOD COURT	SINK HOLE IN FRONT OF YARD	Trib 7
7445	wildercliff drive	Install sandbags and riprap around headwall to prevent falling off	Powers Branch (Fulto
315	Wilderlake Court	a storm sewer drains on property causing erosion	Powers Branch (Fulto
315	WILDERLAKE COURT	STORM SEWER @ CORNER OF DALSEYMPLE AND DUNRAVEN PL IS CAUSING EROSION.	Powers Branch (Fulto
980	Crest Valley Rd	need rip rap	Long Island Creek
640	TANGLEWOOD TRAIL	STORMWATER CAUSING EROSION	Long Island Creek
665	Londonberry Road	drive washed away - erosion of creek banks - creek flooded	Long Island Creek
4944	Carol Lane	driveway is washed out - may be caused from dev. In area	Long Island Creek
399	Glencastle Drive	erosion in rear yard - long island creek	Long Island Creek
333	Glencastle Drive	wash problems near Long Island Creek	Long Island Creek
5190	LONG ISLAND DRIVE	STORM FLOW THRU CULVERT CAUSING EROSION	Long Island Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
5245	Green Oak Court	Atlanta	30342		Yvonne	Rizzo	E		19920401	FALSE
80	FORREST WOOD LANE				BEVERLEY	STONE	E		19920828	FALSE
5600	Roswell Rd, The Prado	Atlanta	30328		Gary	Brumage	E		19930930	FALSE
50	Old Vermont Place					Crumpler	E		19980518	FALSE
6205	Old Hickory Point				Gary	Richman	E			TRUE
770	Wesley Oak Road	Atlanta	30328		Ragan	Defreese	E		19911107	FALSE
6210	River Chase Circle	Atlanta	30328		Ben	Turnipseed	E		19920805	FALSE
7060	Riverside Drive	Atlanta	30328		Glenda	Holbrook	E		19921130	FALSE
230	River Springs Drive	Atlanta	30328		N	Hartley	E		19930617	FALSE
275	MARCHAND COURT		30328		JOHN	RYAN	E		19930421	FALSE
6880	Castletow Drive				John	Stengin	E			FALSE
6990	Brandon Mill Road	Atlanta	30328		J.	Ruys	E		19920529	FALSE
6520	Wright Circle	Atlanta	30328			Weller	E		19920824	FALSE
205	Seville Chase	Atlanta	30328		Carl	Newberry	E		19920826	FALSE
165	STONE MILL TRAIL		30328		JOSH	TOLCHIN	E		19990204	FALSE
110	CATINA CT		30328		THOMAS	BARR	E		19920813	FALSE
6980	Northgreen Drive						E		19980527	FALSE
480	hunter Crossing				David	Luther	E			FALSE
7390	TWIN BRANCH RD		30328		BILL	HELMS	E		19920901	FALSE
745	Amster Green Drive	Dunwoody	30350		Noah	Levy	E		19920902	FALSE
5270	Riverview Road				Mrs	Rose	E		19971124	TRUE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
5245	Green Oak Court	water comes from Burdett Rd.eroding prop.creating pathway	Long Island Creek
80	FORREST WOOD LANE	EROSION PROBLEM IN BACKYARD	Long Island Creek
5600	Roswell Rd, The Prado	soil/backfill erosion adjacent to storm sewer alon lake placid road	Long Island Creek
50	Old Vermont Place	sinkhole over storm drain line	Trib 8
6205	Old Hickory Point	Erosion at headwall	Trib 8
770	Wesley Oak Road	severe creek erosion along Heards Creek	Trib 8
6210	River Chase Circle	storm pipe being washed away	Trib 9
7060	Riverside Drive	H2O main broke - excess water washed dirt away - no support	Marsh Creek
230	River Springs Drive	dirt giving away and sink hole appearing 3'to4' deep	Marsh Creek
275	MARCHAND COURT	EROSION PROBLEMS	Marsh Creek
6880	Castletow Drive	Drainge Pipe repaired by co.last year,pipe is eroding prop again	Marsh Creek
6990	Brandon Mill Road	water flowing off street into yard - collected 18" of silt in yard	Marsh Creek
6520	Wright Circle	bank of creek is eroding away	Marsh Creek
205	Seville Chase	ditches eroding away. Structures may be damaged	Marsh Creek
165	STONE MILL TRAIL	SINKHOLE	Marsh Creek
110	CATINA CT	EROSION IN SIDE YARD SWALE	Marsh Creek
6980	Northgreen Drive	Sinkhole.	Marsh Creek
480	hunter Crossing	drainage emt runs to junction box that is leaking, ground sinking	Marsh Creek
7390	TWIN BRANCH RD	EROSION AROUND BRIDGE AND SANITARY SEWER LINE IN FRONT YARD	Marsh Creek
745	Amster Green Drive	two weir type drop inlets have eroded badly - safety hazard	Sullivans Creek
5270	Riverview Road	Trnch out from drainage pipe	Game Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
110	Lamelouise Lane		0		Lauri	Robbins	E		19920324	FALSE
5800	POWERS FERRY RD		30327		CHARLES	FEUSS	E			FALSE
105	RIVERWOOD PLACE					GRILLI	E		19920824	FALSE
6405	TANACREST CT		30328		GENE	BARBER	F	R	19910827	FALSE
6405	Tanacrest Court	Atlanta	30328		Gene	Barber	F	X	19920828	FALSE
150	Old College Way	Atlanta	30328		Carol	Schechter	F	X	19921008	FALSE
541	Londonberry Raod	Atlanta	30327		Marty	Barnes	F	X	19920923	FALSE
5930	KAYRON DRIVE		30324		LORAN	GOODWIN	F	X	19970702	FALSE
5818	Timberlane Terrace	Atlanta	30328		Elaine	Bailey	F	X	19920914	FALSE
154	Chaseland Road	Atlanta	30328		Warren	Jahnckie	F	X	19921223	FALSE
6850	LISA LANE		30338		SCOTT	LIVINGER	F	X	19980112	FALSE
6270	Rivershore Parkway	Atlanta	30328		Eren	Fesko	F		19910723	FALSE
6230	Rivershore Parkway				John	Balsam	F		19921001	FALSE
6230	RIVERSHORE PARKWAY		30328		JOHN	BALSAM	F		19921020	FALSE
205	Colewood Way	Atlanta	30328		Alice	Rogers	F		19920824	FALSE
75	Bonnie Lane	Atlanta	30328		Harriet	Grant	F		19920824	FALSE
7460	Half Penny Place				Ravine	Caplans	F			FALSE
7460	HALF PENNY PLACE				RAYNIE	CAPLANS	F		19930305	FALSE
780	Crest Valley Drive	Atlanta	30327			Kreisberg	F		19920824	FALSE
4660	Jett Road NW	Atlanta	30327		Thomas	Cole	F		19921211	FALSE
5265	Mount Vernon Parkway	Atlanta	30328		John	Darnell	F		19920914	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
110	Lamelouise Lane	D.P. for Holy Innocents is eroding creek at outlet	Game Creek
5800	POWERS FERRY RD	EROSION, SETTLING DRIVEWAY	Game Creek
105	RIVERWOOD PLACE	EROSION	Riverview Creek
6405	TANACREST CT	FLOODING IN YARD	Trib 7
6405	Tanacrest Court	H2O from pipe overflows ditch & floods crawl space & yard	Trib 7
150	Old College Way	storm drain structure is being closed - causing flooding	Powers Branch (Fulto
541	Londonberry Raod	flooding problem now and futur development upstream	Long Island Creek
5930	KAYRON DRIVE	STORMWATER FROM FC PIPE CAUSING PONDING	Long Island Creek
5818	Timberlane Terrace	too much water coming through pipe - is overflowing banks	Long Island Creek
154	Chaseland Road	flood problems from Cromwell Road to his street into basement	Marsh Creek
6850	LISA LANE	FLOODING AND EROSION	Marsh Creek
6270	Rivershore Parkway	standing H2O in R-O-W won't drain	Trib 7
6230	Rivershore Parkway	creek overtopping bank - flooding basement	Trib 7
6230	RIVERSHORE PARKWAY	CREEK OVERTOPPING BANK, OWNER'S RESPONSIBILITY	Trib 7
205	Colewood Way	flooding in basement - storm drain can't carry H2O	Trib 7
75	Bonnie Lane	pipes are undersized & can't take amount of H2O coming DN	Trib 7
7460	Half Penny Place	stormsewer is causing unusual amount of ground water in basement	Powers Branch (Fulto
7460	HALF PENNY PLACE	STORM SEWER RUNNING ALONG SIDE OF PROPERTY HAS UNUSUAL AMOUNT OF GROUND WATER IN BASEMENT	Powers Branch (Fulto
780	Crest Valley Drive	house & property flooded - washed out bridge on Powers Ferry Rd.	Long Island Creek
4660	Jett Road NW	flooding in the lake behind his house.sent letter to commisioners	Long Island Creek
5265	Mount Vernon Parkway	flooding problems on his property due to heavy rainfall	Long Island Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
5265	MT. VERNON PARKWAY		30328		JOHN	DARNELL	F		19920914	FALSE
665	LONDON BERRY RD, NW		30327		LEONARD	BARKAN	F		19920914	FALSE
5865	Long Island drive	Atlanta	30328		Douglas	Duggan	F		19920902	FALSE
5845	Long Island Drive				Jeanette	Gage	F			FALSE
5615	Cross Gate dr				Jean	Bryan	F		19980415	FALSE
5780	BROOK GREEN ROAD						F		19940928	FALSE
5815	Timberlane Terrace	Atlanta	30328		Elaine	Bailey	F		19910628	FALSE
140	River Springs Drive	Atlanta	30328		Charles	Green	F		19920302	FALSE
6731	Castlelon Drive	Atlanta	30328		Bryan	Timberlake	F		19921008	FALSE
6731	CASTLETON DR		30328		BRYAN	TIMBERLAKE	F		19921008	FALSE
73	ABERHATNY RD		30328		EARL	WINDERWEEDLE	F		19940728	FALSE
160	Belmont Trace	Atlanta	30328		Helen	Parker	F		19910805	FALSE
6488	Whispering Trail	Atlanta	30328		John	Harley	F		19920903	FALSE
6488	WHISPERING TRAIL		30328		JOHN	HARTLEY	F		19920903	FALSE
6520	Whispering Trail	Atlanta	30328		Margaret	Blackley	F		19920828	FALSE
6520	WHISPERING TRAIL		328		MARGARET	BLACKLEY	F		19920826	FALSE
204	Cromwell Road	Atlanta	30328		David	Ben-Moshe	F		19920428	FALSE
6810	SUNNYBROOK LANE		30201		FAY	COX	F		19920827	FALSE
225	WESSEX COURT		30328		GRACE	KING	F		19931026	FALSE
585	Tahoma Drive	Dunwoody	30350			Sadri	F		19910924	FALSE
6262	FERRY DRIVE	ATLANTA	30328	770	MARYANNE	REEVES	M	R	19950918	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
5265	MT. VERNON PARKWAY	FLOODING ON PROPERTY FROM CREEK	Long Island Creek
665	LONDON BERRY RD, NW	FLOODING IN HOME AND EROSION OF DRIVEWAY	Long Island Creek
5865	Long Island drive	new S/D detention pond is destroying back yard	Long Island Creek
5845	Long Island Drive	flooding on property due to adjacent property detention pond	Long Island Creek
5615	Cross Gate dr	Flooding from Eden Roc Lane	Long Island Creek
5780	BROOK GREEN ROAD	FLOODING OF YARD	Long Island Creek
5815	Timberlane Terrace	too much H2O comin through pipe	Long Island Creek
140	River Springs Drive	drainage from upstream dev. Topping banks of stream on prop	Marsh Creek
6731	Castlelon Drive	storm water is flooding house - wants to install storm pipe	Marsh Creek
6731	CASTLETON DR	STORM WATER FLOODING HOUSE	Marsh Creek
73	ABERHATNY RD	CARPORT FLOODING	Marsh Creek
160	Belmont Trace	standing H2O in R-O-W, flooding driveway	Marsh Creek
6488	Whispering Trail	water coming from road and flooded basement	Marsh Creek
6488	WHISPERING TRAIL	FLOODING IN YARD	Marsh Creek
6520	Whispering Trail	front yard is flooded. Possible leakage from drain pipe	Marsh Creek
6520	WHISPERING TRAIL	FLOODING IN FRONT YARD DUE TO BLOCKED OR DETERIORATED STORM DRAIN	Marsh Creek
204	Cromwell Road	water from culvert from shopping center floods out basement	Marsh Creek
6810	SUNNYBROOK LANE	FLOODING OF BACK YARD	Marsh Creek
225	WESSEX COURT	EROSION AROUND HOUSE FOUNDATION AND FLOODING	Marsh Creek
585	Tahoma Drive	storm drain floods property evertime it rains	Sullivans Creek
6262	FERRY DRIVE	DIG OUT AND REPAIR SECTION OF STORM DRAIN CAUSING SINK HOLE AT 6262 FERRY DRIVE.	Trib 7

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
4711	Harris Trail	Atlanta	30327		Bertram	Levy	M	R	19910819	FALSE
7000	RIVERSIDE DRIVE		30328		EVERETT	ROYAL	M	R	19930221	FALSE
282	Underwood Drive	Atlanta	30328		Elizabeth	Benning	M	X	19920914	FALSE
110	WILDERBLUFF CT		30328		DONNA	AYCOCK	M	X	19930406	FALSE
5245	Mount Vernon Parkway	Atlanta	30328		William	Pierce	M	X	19920501	FALSE
		ALPHARETTA	30201	404	CATHLENE	BROWN	M	X	19950414	FALSE
7000	Riverside Drive	Atlanta	30328		Everett	Royal	M	X	19930702	FALSE
141	PRYOR STREET	ATLANTA	30303	404	LARRY	ADAMS	M	X	19951010	FALSE
		ALPHARETTA	30201	404		COCHRAN	M		19951226	FALSE
350	Riverhill Drive	Atlanta	30328		Dawn	Ledbetter	M		19921124	FALSE
295	River Valley Road	Atlanta	30328		David	Ursey	M		19920828	FALSE
7290	Duncourtney Drive	Atlanta	30328		Cecil	Johnson	M		19930519	FALSE
7290	Duncourtney Drive	Atlanta	30328		Cecil	Johnson	M		19930519	FALSE
1240	spalding drive				Margie	cook	M		19980529	FALSE
750	Crest Valley Drive	Atlanta	30327		Robert	Nixon	M		19910730	FALSE
4680	Jett Road	Atlanta	30327		Helen	Hexter	M		19920501	FALSE
		ALPHARETTA	30201			TORCH	M		19950115	FALSE
		ALPHARETTA	30201		ROY	COBB	M		19950220	FALSE
5800	Mitchell Road	Atlanta	30328		Joyce	Hartley	M		19930622	FALSE
5655	Long Island Drive	Atlanta	30327		Dorothy	Knight	M		19920828	FALSE
		ALPHARETTA	30201	404	LUCY	MANAVI	M		19950320	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
4711	Harris Trail	catch basin cover is broken	Long Island Creek
7000	RIVERSIDE DRIVE	POND "BLOW OUT" AND SILTING UP	Marsh Creek
282	Underwood Drive	storm drain which goes under street is clogged	Trib 7
110	WILDERBLUFF CT	THE DETENTION POND IS COMPLETELY SILTED IN	Powers Branch (Fulto
5245	Mount Vernon Parkway	storm drain pipe clogged causing banks of creek to erode	Long Island Creek
		REPAIR STORM DRAIN SUCKING DIRT AT 455 HAMMOND DRIVE.	Long Island Creek
7000	Riverside Drive	pond needs to be cleaned of silt	Marsh Creek
141	PRYOR STREET	EXTEND APRON AND WING WALL ON HEADWALL AT MARCHAND COURT PER LARRY ADAMS FROM H. HUMPHREY.	Marsh Creek
		303 COLEWOOD WAY - CLEAN OUT STOPPED UP C/B'S AT 303 COLEWOOD	Trib 7
350	Riverhill Drive	drainage ditch in rear yard needs to be piped	Trib 7
295	River Valley Road	clogged storm drain	Trib 6
7290	Duncourtney Drive	debris clogging county pipr in his backyard	Powers Branch (Fulto
7290	Duncourtney Drive	debris blocking co pipe in his backyard	Powers Branch (Fulto
1240	spalding drive	Drainage ditch needs to be dug out	Powers Branch (Fulto
750	Crest Valley Drive	storm structure not draining runoff	Long Island Creek
4680	Jett Road	culvert blocked with silt	Long Island Creek
		5555 WHITNER DR - CLEAN/CLEAR C/B AT THIS ADDRESS	Long Island Creek
		CLEAN AND CLEAR CATCH BASINS AS NEEDED AT 405 AND 415 LONDONBERRY.	Long Island Creek
5800	Mitchell Road	weir inlet may be blocked.inlet has fixed 4" concrete lid blocked access	Long Island Creek
5655	Long Island Drive	storm drain adjacent to street is clogged	Long Island Creek
		CATCH BASIN ON THE CORNER OF CARPENTER STOPPED UP WITH KUDZU AT 5825 MOUNTAIN CREEK DRIVE - CLEAN AS NEEDED.	Long Island Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
5770	Kayron Drive	Atlanta	30328		Ben	Zieg	M		19930629	FALSE
		ALPHARETTA	30201	404	F.	BOCKMAN	M		19940928	FALSE
141	Pryor Street	Atlanta	30303	404			M		19950606	FALSE
11575-B	MAXWELL ROAD	ALPHARETTA	30201	770	COTTON	ALBERTSON	M		19960315	FALSE
325	Benita Trace				Barbra		M		19980211	FALSE
		ALPHARETTA	30201	770	WARREN	FOGLE	M		19960309	FALSE
6055	Riverside Drive	Atlanta	30328		Jean	Morris	M		19911104	FALSE
1450	NORTH RIVERSIDE DRIVE	ATLANTA	30328		ROSS	NICHOLAS	M		19950104	FALSE
141	Pryor Street	Atlanta	30303	404	Larry	Adams	M		19950329	FALSE
185	Lansdowne Drive	Atlanta	30328		Carl	Johnston	M		19920824	FALSE
155	North Mill Road				William	Winslow	M		19980323	FALSE
115	North Mill Road	Atlanta	30328		Rejane	Mittelstady	M		19921223	FALSE
115	NORTH MILL ROAD		30328		REJANE	MITTELSTADT	M		19921223	FALSE
6503	WHISPERING TRAIL	ALPHARETTA	30201	404	NANCY	WORDEN	M		19950615	FALSE
		ALPHARETTA	30201	404	Larry	Adams	M		19950615	FALSE
		ALPHARETTA	30201	404	GREG	PEOPLES	M		19960305	FALSE
6535	Wright Road				Jim	Garrison	M			FALSE
6565	Wright Road	Atlanta	30328		Don	Fowler	M			FALSE
11575-B	MAXWELL ROAD	ALPHARETTA	30201	404	ROY	COBB	M		19950530	FALSE
6810	Sunnybrook Lane	Alpharetta	30201		Fay	Cox	M		19920826	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
5770	Kayron Drive	fell into a hole over a storm pipe from CB off roadway	Long Island Creek
		NEED A LOAD OF DIRT TO COVER DRAINAGE PIPE AT 5930 KAYRON DRIVE.	Long Island Creek
141	Pryor Street	CLEAN INLET IN BACKYARD OF 5815 TIMBERLANE TERRACE	Long Island Creek
11575-B	MAXWELL ROAD	6015 RIVER CHASE CIRCLE - REPLACE BROKEN DOUBLE WING C/B TOP	Trib 8
325	Benita Trace	Clear out Ditch	Trib 8
		CLEAN STORM SEWER FLUME AT 945 IVY FALLS DRIVE FLUME IS IN BACKYARD - SEE COMMENTS	Trib 8
6055	Riverside Drive	wants to extend storm drain pipe to serve property	Trib 8
1450	NORTH RIVERSIDE DRIVE	1). FILL-IN RIGHT OF WAY SHOULDERS UP TO THE NEXT PROPERTY OWNER'S PROPERTY LINE. 2). REPLACE CATCH BASIN LID.	Marsh Creek
141	Pryor Street	CHECK AND CLEAN CATCH BASIN AT 7075 RIVERSIDE DRIVE.	Marsh Creek
185	Lansdowne Drive	storm sewer line broken - cavern forming 8'x8'	Marsh Creek
155	North Mill Road	Drainage ditch stopped up	Marsh Creek
115	North Mill Road	culvert in front of house no built to handle water	Marsh Creek
115	NORTH MILL ROAD	CULVERT IN FRONT OF HOUSE CANNOT HANDLE WATER	Marsh Creek
6503	WHISPERING TRAIL	6503 WHISPERING TRL. PATCH AND REPAIR HOLE IN D.I. BOX W/ CONCRETE. FILL IN SINK HOLE BEHIND D.I W/DIRT SEED AND HAY AREA.D.I. IN YARD ABOUT 60' BEHIND CURB.	Marsh Creek
		6411 - 6421 WRIGHT RD. - CLEAN STORM DRAIN BETWEEN THESE ADDRESSES.	Marsh Creek
		6426 WRIGHT ROAD - PATCH BROKEN C/B TOP	Marsh Creek
6535	Wright Road	catch basin/pipe too small extra water has created hole in dr.way	Marsh Creek
6565	Wright Road	bad drainage problem in the rear of prop due to the creek.wants pipe extension	Marsh Creek
11575-B	MAXWELL ROAD	6615 WRIGHT CIRCLE- CLEAN C/B'S AT THIS ADDRESS	Marsh Creek
6810	Sunnybrook Lane	S/D upstream causing flooding. Part of culvert blocked off	Marsh Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
7241	Thornhill Lane	Atlanta	30328			Jarahian	M		19920423	FALSE
410	SPALDING DR		30328		BARBARA	DUTSON	M		19930728	FALSE
6358	Vernon Woods Drive	Atlanta	30328		John	Williams	M		19920914	FALSE
565	WYNCOURTNEY DRIVE	ALPHARETTA	30201	404	JIM	STROUP	M		19950505	FALSE
7060	Northgreen Drive	Dunwoody	30228		Stephen	Conklin	M		19911011	FALSE
		ALPHARETTA	30201	770	EVERETT	COPELAND	M		19960215	FALSE
935	HIGHTOWER TRL	ALPHARETTA	30201			BRADY	M		19950926	FALSE
105	Riverwood Place	Atlanta	30327			Grille	M		19920824	FALSE
105	Riverwood Place	Atlanta	30328			Grille	M		19920824	FALSE
11575-B	MAXWELL ROAD	ALPHARETTA	30201	404	C.	REID	M		19950122	FALSE
6535	Wright Road	Atlanta	30328		Jim	Garrison	O	R	19930201	FALSE
541	Londonberry Road	Atlanta	30327		Marty	Barnes	O	R?	19920723	FALSE
5185	Long Island Drive	Atlanta	30327		Ken	Johns	O	X	19921222	FALSE
6535	Wright Road	Atlanta	30328		Jim	Garrision	O	X	19921008	FALSE
1250	Crest Valley Drive	Atlanta	30327		Billy	Mimms	O		19920708	FALSE
5495	East Idlewood Lane	Atlanta	30328		John	Burden	O		19930630	FALSE
320	Ivy Brook Court	Atlanta	30327		Jim	Barnhart	O		19930607	FALSE
66	Copeland Road	Atlanta	30342		Duzy	Sinack	O		19910318	FALSE
5815	Brookgreen Road	Atlanta	30328		Joan	Walsh	O		19920522	FALSE
671	Heards Ferry Raod	Atlanta	30328		Zabean	Lynum	O		19930607	FALSE
671	Heards Ferry Road	Atlanta	30328		Zabeau	Small	O		19930607	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
7241	Thornhill Lane	system overtaxed - upgrade possible	Marsh Creek
410	SPALDING DR	PIPE EXTENSION	Marsh Creek
6358	Vernon Woods Drive	drainage system inadequate to handle water from street	Marsh Creek
565	WYNCOURTNEY DRIVE	TOP (LID) IS IN CATCH BASIN AT 565 WYNCOURTNEY DRIVE. GET TOP OUT OF CATCH BASIN AND PLACE BACK ON LID.	Marsh Creek
7060	Northgreen Drive	storm drain pipe being undermined. Band grouted improper	Marsh Creek
		7400 HUNTERS BRANCH DR - CLEAN OUT STOPPED UP C/B'S. THESE C/B'S ARE ON SPALDING DR. BETWEEN HALF PENNY AND P'TREE DUNWOODY RD NEAR DRIVEWAY ENTRANCE	Marsh Creek
935	HIGHTOWER TRL	935 HIGHTOWER TRL - CLEAN C/B'S AND REPAIR SINK HOLE BESIDE DRIVEWAY	Sullivans Creek
105	Riverwood Place	CB on Old Powers Ferry Rd. stopped up	Riverview Creek
105	Riverwood Place	CB stopped up - CB in front yard discharges onto prop.and erode	Riverview Creek
11575-B	MAXWELL ROAD	9345 HUNTCLIFF TRSCE- CLEAN SILT AND DEBRIS FROM OPEN CHANNEL TO FIRST STUMP. REMOVE/HAUL AWAY SILT AND PLACE ROCKS AT END OF HEADWALL APRON	
6535	Wright Road	drain in street not catching water.believies street to high for CB.paved severalxs.	Marsh Creek
541	Londonberry Road	concerned that future development will cause flooding	Long Island Creek
5185	Long Island Drive	drainage problem due to concrete pipe at D/W & other pipes	Long Island Creek
6535	Wright Road	CB has become to small because of successive paving	Marsh Creek
1250	Crest Valley Drive		Long Island Creek
5495	East Idlewood Lane	wants to know detail of work scheduled for headwall	Long Island Creek
320	Ivy Brook Court	verify detention markers are located as shown and no cut or fill in fp	Long Island Creek
66	Copeland Road	parking lot collapsed due to pipe	Long Island Creek
5815	Brookgreen Road	drainage problem caused by creek in rear yard	Long Island Creek
671	Heards Ferry Raod	Possible stagnatoin and mosquitoes.possible pipe ext	Trib 8
671	Heards Ferry Road	Possible stagnatoin and mosquitoes.possible pipe ext	Trib 8

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
205	Stone Mill Trail	Atlanta	30328		Dennis	Fish	O		19930507	FALSE
		ALPHARETTA	30201				O		19950414	FALSE
7241	Thornhill Lane	Atlanta	30328		Neil	Mabry	O		19920716	FALSE
6241	VERNON WOODS DRIVE	SANDY SPRINGS	30328	404	TRACY	ROGERS	O		19951212	FALSE
510	Granite Ridge Place	Atlanta	30350		Doug	Mansfield	O		19920824	FALSE
5625	Dupree Drive	Atlanta	30327		Kenneth	Brown	O		19900816	FALSE
425	Londonberry Raod	Atlanta			Kevin	Pfannes	R	R	19930518	FALSE
9340	Huntcliff Trace	Atlanta	30350		Paul	Dillon	R	R	19921222	FALSE
4928	Carol Lane	Atlanta	30327		Brian	Walter	R	X	19920309	FALSE
605	PATRICK PLACE					HOLTZCLAW	R	X	19940928	FALSE
9340	Huntcliff Trace	Atlanta	30350		Diane	Dillon	R	X	19930629	FALSE
6400	Riverside Drive	Atlanta	30328		Fred	Randle	R		19920302	FALSE
435	NORTH HARBOR DRIVE		30328		EARL	WASSERMAN	R		19940718	FALSE
110	Wilderbluff Court	Dunwoody	30328		Donna	Aycock	R		19930405	FALSE
1067	Pitts Road	Dunwoody	30350		Wendy	Pakton	R		19930511	FALSE
4660	JETT RD NW		30327		THOMAS	COLE	R		19921204	FALSE
5495	EAST IDLEWOOD LN		30327		JOHN	BERGEN	R		19930921	FALSE
270	Burdette Road	Atlanta	30328		David	Shainker	R			FALSE
5625	Eden Roc Lane	Atlanta	30342		Barbara	Wise	R		19920901	FALSE
5831	LAKE FOREST DRIVE				FRED	RITCHIE	R		19930715	FALSE
5831	Lake Forrest Drive	Atlanta	30328		Fred	Ritchie	R		19930715	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
205	Stone Mill Trail	pipe aimed towards house	Marsh Creek
			Marsh Creek
7241	Thornhill Lane		Marsh Creek
6241	VERNON WOODS DRIVE		Marsh Creek
510	Granite Ridge Place	6 ft. drain w/inlet HW on prop. 5 ft. of silt at outlet at detpd	Sullivans Creek
5625	Dupree Drive	neighbor filled in detention pond w/pool	Game Creek
425	Londonberry Raod	windship place s/d putting silt into his backyard.	Long Island Creek
9340	Huntcliff Trace	drainge from golf course at Cherokee County Club	
4928	Carol Lane	curb at roadway is very low-water from street entering prop.	Long Island Creek
605	PATRICK PLACE	DRAIN DISCHARGES INTO YARD	Long Island Creek
9340	Huntcliff Trace	excess flows on her prop causing erosion.new development	
6400	Riverside Drive	open ditch in R-O-W in front of his and neighbors property	Trib 7
435	NORTH HARBOR DRIVE	WATER RUNOFF FLOODING PROPERTY	Trib 6
110	Wilderbluff Court	drop inlet does not drain properly-causing detention pd not to drain	Powers Branch (Fulto
1067	Pitts Road	large storm drain pipe dumping into property	Powers Branch (Fulto
4660	JETT RD NW	LAKE FLOODING BEHIND HIS HOUSE BECAUSE OF DEVELOPMENT THAT SHOULD NOT HAVE BEEN APPROVED ACCORDING TO COLE	Long Island Creek
5495	EAST IDLEWOOD LN	FLOODING IN BASEMENT DUE TO SILT FROM UPSTREAM CONSTRUCTION FILLING CREEK	Long Island Creek
270	Burdette Road	Single Family home construction causing runoff onto his problem	Long Island Creek
5625	Eden Roc Lane	upstream development dumping water on property	Long Island Creek
5831	LAKE FOREST DRIVE	ADJACENT DEVELOPMENT CAUSING TOO MUCH RUNOFF;STORM LINE TOO SMALL	Long Island Creek
5831	Lake Forrest Drive	adjacent dev causing to nuch runoff.storm lines not adequately sized	Long Island Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
5831	Lake Forrest Drive	Atlanta	30328		Fred	Ritchie	R		19930715	FALSE
80	Forrest Wood Lane	Atlanta			Beverly	Stone	R		19920828	FALSE
357	Tall Oaks Drive	Atlanta	30342		Earnest	robertson	R		19910806	FALSE
40	Old Vermont Place	Atlanta	30328		Ann	Hip	R		19921008	FALSE
375	Crosstree Lane	Atlanta	30328		William	Segal	R		19930325	FALSE
265	Marchland Court	Atlanta	30328		Rob	Ruinen	R		19930707	FALSE
36	Brandon Bridge Road	Atlanta	30328		Ingrid	Blankenship	R		19930111	FALSE
6520	ROSWELL ROAD		30328		TED	JUDKINS	R		19940426	FALSE
6358	Roswell Road-Cromwell Sq	Atlanta	30328		Caroline	Hendee	R		19920708	FALSE
110	Catina Court	Atlanta	30328		Thomas	Barr	R		19920828	FALSE
		ALPHARETTA	30302	404			M		19940505	FALSE
4711	HARRIS TRAIL	SANDY SPRINGS	30328	404	BERY	LEVEY	M	X	19951017	FALSE
11575	MAXWELL ROAD	ALPHARETTA	30201		LARRY	TIMMONS	M		19980616	FALSE
11575-B	MAXWELL ROAD	ALPHARETTA	30201	770	BEN	CUMMINGS	M	R	19980723	FALSE
		SANDY SPRINGS	30201	404	LYNN	BENSON	M		19980403	FALSE
		ALPHARETTA	30201	404		FREEDOM	M		19980804	FALSE
		ALPHARETTA	30201	404	PHILLIP	BECTON	M		19980814	FALSE
11575-B	MAXWELL ROAD	ALPHARETTA	30201	770	ROY	COBB	M		19980618	FALSE
		ALPHARETTA	30201	404	CHARLES	BALCH	M		19980605	FALSE
141	Pryor Street	Atlanta	30303	404	Larry	Adams	M		19990101	FALSE
		ALPHARETTA	30201				M		19990101	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
5831	Lake Forrest Drive	adjacent dev causing to much runoff.flooding his yd.ck pipe siz	Long Island Creek
80	Forrest Wood Lane	water from condos being directed onto her property	Long Island Creek
357	Tall Oaks Drive	heavy flow of water from upstream apts.	Long Island Creek
40	Old Vermont Place	yard becoming detention pond for S/D	Trib 8
375	Crosstree Lane	severe drainage problem from county owned prop	Trib 5
265	Marchland Court	pipe off J ferry drains on prop.damaging curb and stands in cul-de-sac	Marsh Creek
36	Brandon Bridge Road	excessiove runoff from neibor's prop-2 doors up at 28 Brandon Ridge Road	Marsh Creek
6520	ROSWELL ROAD	WATER FROM ROSWELL ROAD (SANDY SPRING TOYOTA) CAUSING PROBLEMS	Marsh Creek
6358	Roswell Road-Cromwell Sq	runoff from shopping center affecting property across street	Marsh Creek
110	Catina Court	neighbor is piping runoff from under drive onto his property	Marsh Creek
		REPAIR STORM DRAIN AT 6190 RIVERWOOD DRIVE.	Trib 7
4711	HARRIS TRAIL	REPLACE BROKEN 4 X 4 CATCH BASIN TOP AT 4711 HARRIS TRAIL.	Long Island Creek
11575	MAXWELL ROAD	6980 NORTH GREEN DRIVE - REPAIR SINKHOLE. 3 BAGS OF CEMENT .20 TON OF SAND. 6-15-98.	Marsh Creek
11575-B	MAXWELL ROAD	550 MOUNT PARAN ROAD - REPAIR CATCH BASIN TOP AT DRIVEWAY TO CHURCH DRIVEWAY THAT IS BROKEN.	Long Island Creek
		6175 BLACKWATER TRAIL - CLEAN CLOGGED UP STORM DRAINS.	Trib 6
		75 FINCH FOREST TRAIL - REPLACE LEFT WING CATCH BASIN TOP.	Long Island Creek
		4723 JETT ROAD - REDUCE TWO STORM DRAIN CATCH BASINS TO 5 1/2" TO MATCH COUNTY STANDARDS. CEMENT 3 BAGS SAND 1/2 TON	Long Island Creek
11575-B	MAXWELL ROAD	241 LONDONBERRY - CLEAN OUT CROSSDRAIN.	Long Island Creek
		6070 HEARDS CREEK AT RIVERSIDE - CLEAR BLOCKED CATCH BASIN - THIS IS SOUTH OF 6070 HEARDS CREEK.	Trib 8
141	Pryor Street	INSTALL DOUBLE-WING CATCH BASIN ON BOTH SIDES OF THE STREET AT 35 WYNDHAM DRIVE.	Marsh Creek
		235 BRACKENWOOD CIRCLE-REPAIR SINK HOLE OVER STORM DRAIN. ALSO PLACE RIP-RAP AROUND HEADWALL AND IN CHANNEL NOT TO EXCEED 6X'S DIAMETER OF PIPE	Marsh Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
540	LONDONBERRY ROAD				BARBARA	HUTTO	M		19980710	FALSE
11575-B	MAXWELL ROAD	ALPHARETTA	30201	770	ROY	COBB	M		19980616	FALSE
		ALPHARETTA	30201	404	JOHN	SIMS	M		19980401	FALSE
555	SPINDLEWICK DRIVE				JOY	PERCIVAL	M		19980721	FALSE
		ALPHARETTA	30201	404			M		19941020	FALSE
		ALPHARETTA	30201	404			M		19941221	FALSE
11575-B	MAXWELL ROAD	ALPHARETTA	30201	404	ROY	COBB	M		19951016	FALSE
5555	WHITNER DRIVE	ALPHARETTA	30201	404	EVAN	TORCH	M		19950120	FALSE
620	HUNTERS BRANCH LANE				JACK	ELDRIDGE	F		19930226	FALSE
290	FRANCYNE COURT				ARTHUR	TATUM	R		19970123	FALSE
130	GRANTLEY				DAVID	ARKIN	F		19961007	FALSE
5410	VERNON WALK		30327		SUSAN	SHAFFER	F		19971114	FALSE
625	GLEN FOREST ROAD				JOANN	RINER	M		19970903	FALSE
55	GLENLAKE PARKWAY				CHRIS	TROMBLEY	O		19980127	FALSE
6075	HEARDS CREEK DRIVE				KENNETH	VOELKER	M		19961227	FALSE
150	OLD COLLEGE WAY				CAROL	TURNER	M	X	19980507	FALSE
150	OLD COLLEGE WAY				CAROL	TURNER	M	R	19980608	FALSE
6420	TANACREST COURT				MICHAEL	MCGUINN	E		19970616	FALSE
750	CREST VALLEY DRIVE				ROBERT	NIXON	R	R	19980310	FALSE
6845	CASTLETON DRIVE		30328		CHRISTIAN	DRIVER	E		19971119	FALSE
997	DAVIS DRIVE, NW				HAROLD	SHAW	O	X	19970512	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
540	LONDONBERRY ROAD		Long Island Creek
11575-B	MAXWELL ROAD	6980 NORTH GREEN DRIVE - PLASTER THE WALLS INSIDE PRE-CAST STORM DRAIN. THE THROAT ALSO NEEDS TO BE JACK HAMMERED OUT.	Marsh Creek
		295 FRANCYNE COURT - BROKEN CATCH BASIN LID LOCATED ON GLENRIDGE SOUTH OF HAMMOND DRIVE ACROSS FROM HAMMOND PARK.	Long Island Creek
555	SPINDLEWICK DRIVE		Sullivans Creek
		REPAIR CATCH BASIN TOP ACROS FROM 5690 LAKE FOREST DRIVE.	Long Island Creek
		CLEAN AND CLEAR STORM DRAIN AT 600 DALRYMPLE ROAD - NORTH SPRINGS	Marsh Creek
11575-B	MAXWELL ROAD	REPLACE 18" CROSS CRAIN PIPE AT 997 DAVIS DRIVE. THE BOTTOM OF THE PIPE HAS RUSTED OUT.	Long Island Creek
5555	WHITNER DRIVE	CLEAN STORM DRAIN AND GUTTER NEAR 5555 WHITNER DRIVE.	Long Island Creek
620	HUNTERS BRANCH LANE		Marsh Creek
290	FRANCYNE COURT		Long Island Creek
130	GRANTLEY		Sullivans Creek
5410	VERNON WALK	STANDING WATER	Riverview Creek
625	GLEN FOREST ROAD		Long Island Creek
55	GLENLAKE PARKWAY		Marsh Creek
6075	HEARDS CREEK DRIVE		Trib 8
150	OLD COLLEGE WAY		Powers Branch (Fulto
150	OLD COLLEGE WAY		Powers Branch (Fulto
6420	TANACREST COURT		Trib 7
750	CREST VALLEY DRIVE		Long Island Creek
6845	CASTLETON DRIVE		Marsh Creek
997	DAVIS DRIVE, NW		Long Island Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
605	BRIDGEWATER DRIVE				LYDIA	WATKINS	E		19970708	FALSE
5530	LONG ISLAND DRIVE				N/A	N/A	M		19970305	FALSE
6385	RIVERSIDE DRIVE				FRED	HAHN	M	X	19970123	FALSE
945	East Paces Ferry Rd, Suite 1410 Resurgens Plaza	Atlanta		404-237-2502	Carl	Crowley	F		19990903	FALSE
95	FOREST WOOD LANE	Atlanta		404-256-1653	LYNN	MAHOUSKY	Q		19990831	FALSE
7460	Halfpenny Place	Atlanta		770-394-1787	Ronnie	Kaplan	M		19990831	FALSE
35	Wyndham Drive	Atlanta				BC	M		19991011	FALSE
	Spalding Drive at the Wall that says "Spalding Cove" east of Duncourtney	Atlanta				BC	M		19991011	FALSE
	E. of Roswell Road, N of Johnson Ferry Road intersection	Atlanta				BC	M		19991011	FALSE
4660	Jett Road	Atlanta		404-843-9242		Smith	M		20000124	FALSE
541	Londonberry Road	Atlanta		404-252-8886	Bill	Barnes	R		19930226, 19920923, 19920723, 19930226, 19930708, 19930714	FALSE
390	Ferry Landing	Atlanta		770-955-9338	Melinda	Gertz, Riverchase	E			FALSE
9340	Huntcliff Trace	Atlanta		770-992-3830	Diane & Paul	Dillon	E		19921222, 19930629	TRUE
9350	Huntcliff Trace	Atlanta		770-993-5816	Cecilia	LeClair	E			FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
605	BRIDGEWATER DRIVE		Trib 7
5530	LONG ISLAND DRIVE		Long Island Creek
6385	RIVERSIDE DRIVE		Trib 7
945	East Paces Ferry Rd, Suite 1410 Resurgens Plaza	Concerned about new floodplain definition by County (4" higher). This new parameter will affect homeowners' building rights. Also, concerned that computer models used in this study will call for the straightening of Long Island Creek. He wants the sinuosity of the creek preserved for wildlife habitat and aesthetic reasons.	Long Island
95	FOREST WOOD LANE	sewage smell and foamy water flowing through creek in back yard. Occassionally notes raw sewage in stream	Marsh Creek
7460	Halfpenny Place	storm drainage on property. Collapsed and corroded structure. Severe erosion	Marsh Creek
35	Wyndham Drive	missing vertical grate on oversized storm drain inlet; grate has fallen into chamber and needs to be retrieved and reset	
	Spalding Drive at the Wall that says "Spalding Cove" east of Duncourtney	DS channel & culvert has sanitary sewer embedded in concrete channel bottom; concrete has broken/eroded, is severely undercut & sewer is exposed & unsupported; exposed joint could be leaking sewage directly into stream	Marsh Creek
	E. of Roswell Road, N of Johnson Ferry Road intersection	leaking, unbermed garbage can directly behind Mandarin Cove restaurant in large strip mall	
4660	Jett Road	Siltation of pond in backyard is a growing concern. Copp's assessment is that siltation is from recent road construction and possibly upstream development activities. Copp recommended that residents talk to their homeowners association before paying for dredging (estimated to cost $60,000).	Long Island Creek
541	Londonberry Road	runoff problems since tornado & uphill new subdivision development (1.5 yrs. Old); dikes and detention pond insufficient for amount of runoff, blasting with dynamite done by upstream developer that has caused new springs to surface on Barnes' property	
390	Ferry Landing	concerned about erosion along banks of Chattahoochee River; provide info on bushes for stabilizing bank, coconut root mat, check river velocity at peak flow	Chatt. River
9340	Huntcliff Trace	severe erosion, vertical banks & exposed roots & trees falling into creek: $8,000 spent on rip-rap, on-going struggle with both Cherokee Country Club & Fulton Co to take responsibility for the erosion and sediment run-off.	Huntcliff/Sullivans Creek
9350	Huntcliff Trace	neighbor of Diane & Paul Dillon	Huntcliff/Sullivans Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
990	Riverside Trace	Atlanta		404-256-4333	Judy	Parks	E		19980121	FALSE
522	Londonberry	Atlanta		404-255-4859	Shirley	Berger	E		19930629	TRUE
605	Patrick Place	Atlanta		404-255-4920	William	Holzclaw	E		19940928	FALSE
5930	Kayron Drive	Atlanta			Dorothy	Goodwin	E		19920805, 19970702	FALSE
555	Bridgewater Drive	Atlanta		404-256-2709	Dennis	Tharp	Mosquito control			FALSE
510	Londonberry	Atlanta		404-252-4707	Cynthia	Mokal	Q/F		19991019	FALSE
455	Hammond Drive	Atlanta			Cathlene	Brown	M		19950414	FALSE
	Harris Trail	Atlanta		404-843-9755	D.	Chandler	M		19991103	FALSE
4928	Carol Lane	Atlanta			Brian	Walter	E		19920309	FALSE
525	Carol Way	Atlanta		404-255-3426		Parris	E		19950210, 19960201	FALSE
215	River North Court	Atlanta			Leslie	Chalk	E		19921124, 19930401	FALSE
27	Wing Mill Road	Atlanta		770-552-1440	Bill	Oliver	E		19950801, 19930600	FALSE
5640	Long Island Drive	Atlanta		770-435-5973	Julian	Carnes	E		19960201	FALSE
750	Crest Valley Drive	Atlanta		404-364-2901 (fax)	John	West	F		19971117, 19980310	FALSE
7000	Riverside Drive	Atlanta		404-256-3397	Lori	Cole	F		19930702, 19930221	FALSE
154	Chaseland Road	Atlanta		404-255-6081	Warren	Jahncke	F		19921223, 19920911, 19930511	FALSE
325	Brook Drive	Atlanta		physician's office	Claude	Greshman	F/E		19920928, 19950303	FALSE
997	Davis Drive	Atlanta			Harold	Shaw	M		19970512	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
990	Riverside Trace	water seeping into side of vertical side of manhole for yard inlet	Heards Creek
522	Londonberry	since April 1997 tornado, island forming in middle channel-concerned that other banks will erode; LB (DS) lined w/rip-rap donated by county; possible project for local boy scout troop	Long Island Creek
605	Patrick Place	lay back slope at outfall on LB facing DS; 12' x 5' of 12" rock; RB could use some work; numerous springs in front & back yard	Long Island Creek
5930	Kayron Drive	8-10' vertical banks DS of outfall at Kayron & valley Ln.; Co. put rock on slopes DS of outfall but the rock falls into stream channel & further erodes stream bank	Long Island Creek
555	Bridgewater Drive	stagnant water breeds mosquitoes & snakes; "Mosquito Control for Homeowners"; stagnant water could be piped directly down to creek, might erode opposite bank b/c water would be mixing @ higher velocity	Trib 7
510	Londonberry	reports fish kill in summer 1999 and water brown and foamy, Flooded up to her house one time b/c neighbor pipes run-off	Long Island Creek
455	Hammond Drive	2 36" pipes run through property, hole suspected to be caused by joint in pipes-joint needs to be sealed; runoff problems from Hammond Rd-curb inlet on road not working	Long Island Creek
	Harris Trail	Broken catch basin complaint, but nothing noted during site visit.	
4928	Carol Lane	need wing wall for driveway culvert; banks eroding US of inlet; homeowner responsibility	
525	Carol Way	Laurel Chase subdivision on Mt. Paran; 24" culvert installed 20 years ago-it clogged; 17 complaints, built $24K bridge; US neighbor put in small culvert just US of his house-claims it's too small	
215	River North Court	erosion along Marsh Creek; neighbor of Lori Cole	Marsh Creek
27	Wing Mill Road	curb inlet on right side facing house appears to be causing bank erosion; neighbor has also complained	Powers Branch
5640	Long Island Drive	Complaint: Storm flow from County drain is causing severe erosion. House under construction and problem appears to be fixed. Spoke with Construction Engineer project manager.	Long Island Creek
750	Crest Valley Drive	problem from previous owner; backyard was flooded when Powers Ferry Bridge caused a backup; wants a postcard when draft plan is ready; fax map of sewer replacement to 404-364-2901	
7000	Riverside Drive	put pond in yard to control runoff & drainage problems, spent $40, 000 to control on-site flooding; put on mailing list	
154	Chaseland Road	flooding problems from runoff from street onto property; specifically water in garage & basement (in early 80's); collapsed stormwater pipe noted; Copp thinks water could be surging storm drain	
325	Brook Drive	complaint from previous owner, no problem	
997	Davis Drive	inlet too small at base of property near Davis Dr.; make inlet opening larger so water does not flow over road & erode bank on east side of water, maybe add rip-rap on downstream pipe outlet	

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
6385	Riverside Drive	Atlanta		404-252-6004	Fred	Hahn	M		19970123, 19961125	FALSE
1170	Winding Creek Trail	Atlanta		404-843-9062	Harry	Watts	M		19951231	FALSE
6535	Wright Road	Atlanta		404-843-9093	Jim	Garrison	M		19921008, 19930201	FALSE
550	Mt. Paran Road	Atlanta			Ben	Cumming	M		19980504, 19980723	FALSE
150	Old College Way	Atlanta		770-393-9960	Carol	Turner	M/F		19921008, 19980507, 19980511, 09980806	FALSE
	Roswell Road (across from Cimmaron Pkwy)	Atlanta		404-730-8006	Sharon	Cowden	Q		19991105	FALSE
5495	Glen Errol Road	Atlanta		(404) 943-9733	Kenna	Davis	M		19990923	FALSE
590	Coldstream Court	Atlanta		404-252-5601	Al	Finley	Q		19990326	FALSE
	Calaveras Drive & Colquitt Drive	Atlanta				BC	E		19990818	FALSE
7085	Northgreen Drive	Atlanta		404-804-8232	Barbara	George	E		19980811, 19950316	FALSE
6658	Brandon Mill Road	Atlanta		404-252-4225	Ethel	Porter	E		19940825, 19941012	FALSE
6850	Lisa Lane	Atlanta			Scott	Livinger	F			FALSE
55	Glenlake Pkwy	Atlanta			Chris	Trombley	M		19971002	FALSE
120	Seville Chase, NW	Atlanta		770-394-3403	William & Nancy	Moss	M		19990924	FALSE
	Bayvale Court & Mabry Court	Atlanta				BC	Other			FALSE
7171	Glenridge Drive	Atlanta			Al	Stasko	R		19950623	FALSE
7015	Brandon Mill Road	Atlanta			Chuck	Quigg	R			FALSE
211	Devonwood Drive	Atlanta		404-828-4104	Kaj	Engberg	E		19970710, 19970808, 1997022[illegible]	TRUE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
6385	Riverside Drive	curb inlet was broken; county fixed already	
1170	Winding Creek Trail	appears to be fixed	
6535	Wright Road	complaint that catch basin too small; appears to be solved, new catch basin installed, much larger than older CB's on road	
550	Mt. Paran Road	Cross drain pipe needs to be replaced. It has been damaged by log trucks and completely stopped up; outside of our study area	
150	Old College Way	3 yard drains in back of property that cause basement to flood when blocked; neighbor's basement (Mr. Wolfe) also floods; wants to know if developer (Charles Devore) is responsible for fixing it; also inquired about sanitary sewer blockage problem; Copp's solution is to widen or enlarge storm drain pipe so more water can get down into pipes; Mrs. Turner would also like for others to have storm drains on their property	
	Roswell Road (across from Cimmaron Pkwy)	Foam in Powers Branch coming from Stonebrook apartment complex on Pitts Rd. Cowden reported problem to Fulton County and tested water. The phosphate level of the sample was 0.3 and was collected about 12 hours after a rainstorm.	Powers Branch
5495	Glen Errol Road	Failing Spillway and predicted future failure of pond just upstream. Severe erosion of embankment	Long Island Creek
590	Coldstream Court	Reports that debris accumulates in the stream in his backyard.	
	Calaveras Drive & Colquitt Drive	Field crew noted construction site that did not seem to be in compliance with county buffer standards. Steep sloped lots and clear-cut to about 10 ft. from stream channel.	Powers Branch
7085	Northgreen Drive	manhole causing problem; RB (US) is severely eroded-6 ft. vertical banks. Copp recommends rip-rap & planting willow sprigs, thinks GA DOT is responsible & should pay to fix	Marsh Creek
6658	Brandon Mill Road	pipe inlet from B. M. Rd. leading on to property; Copp suggests small rocks lining channel from back corner of her house DS	Marsh Creek
6850	Lisa Lane	severe flooding & erosion; nothing noted during visit	Marsh Creek
55	Glenlake Pkwy	UPS building w/ failing stormwater culvert; nothing found during visit	Marsh Creek
120	Seville Chase, NW	accumulation of debris & trash in storm drain on Brandon Mill between North Mill Rd. & Seville Chase; nothing significant noted	
	Bayvale Court & Mabry Court	Kilpatrick direct Atlantic engineers to model area with & without pond	Marsh Creek
7171	Glenridge Drive	St. Jude Catholic Church; runoff is coming from parking lot into Brackenwood Circle	Marsh Creek
7015	Brandon Mill Road	channel forming from Brandon Mill Rd. & leading down to property; brick cracked inside of storm water drain coming from Brandon Mill Rd.	Marsh Creek
211	Devonwood Drive	channel running through lot lined with rip-rap and silt fence; need to call homeowner; make slopes flatter, will have to move trees back	Marsh Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
6295	RIVERSHORE PKWY				PAPSY	GRANT	O		19980330	FALSE
5245	MT VERNON PARKAY				BILL	PIERCE	M	R	19930714	FALSE
6358	ROSWELL RD				CAROLINE	HENDER	E		19920709	FALSE
541	LONDONBERRY ROAD				MARTY	BARNES	R	R?	19930714	FALSE
	Wright Road South of Abernathy in Whispering Pines Development	Atlanta			Judy	BC	M/E			FALSE
105	Dunhill Court	Atlanta		404-370-3477	Alan	Simon	E		19960311	FALSE
5480	East Idlewood Lane	Atlanta		404-256-5088	Roberts	Boschan	E		19920922, 19930910	FALSE
110	Wilderbluff Court	Atlanta		770-394-3122	Donna	Aycock	M		19930406	FALSE
265	Marchand Court	Atlanta			J	Godbout	M		19951010	FALSE
282	Underwood Drive	Atlanta			Elizabeth	Benning	M		19920914	FALSE
6262	Ferry Drive	Atlanta		404-705-8351	Mary	Reeves	M		19950510, 19950918	FALSE
9745	Huntcliff Trace	Atlanta		404-256-5350	Mike	Holland	Q		19990817	FALSE
395	Spalding Drive NE	Atlanta		770-804-0747	Dave	Heltebran	E		19991005	FALSE
655	Glen Forest Road	Atlanta		404-252-4235	Beryl	Sloan	E			FALSE
4925	Jett Road	Atlanta			Ray	Inglett	E			FALSE
5005	Jett Road	Atlanta		404-843-1812	Barbara & Harold	Carlson	M		19991004	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
6295	RIVERSHORE PKWY		Trib 7
5245	MT VERNON PARKAY		Long Island Creek
6358	ROSWELL RD	EROSION PROBLEM	Marsh Creek
541	LONDONBERRY ROAD		Long Island Creek
	Wright Road South of Abernathy in Whispering Pines Development	Field crew noted suspected sanitary sewer leak and an illicit discharging pipe into stream while walking stream with homeowners	Marsh Creek
105	Dunhill Court	Stream passing through property eroding away trees. During visit noted eroding left bank (US), rip-rap not working too well. There is a concrete flume conducting runoff from upstream school and neighborhood into channel through Mr. Simon's yard. Long-term solution: slow water down by retaining water upstream, perhaps at school.	Powers Branch
5480	East Idlewood Lane	Headwall of culvert has broken away and is causing erosion in her yard; very serious erosion and siltation problem. Upon site visit saw BC marked cross-sections LI-3-1#4 and LI-3-1#5, noted significant amount of sediment on channel rocks, 5 ft vertical banks lined with ivy	Long Island Creek
110	Wilderbluff Court	Detention pond is completely silted in. Found Storm drainage system with 36" pipe w/ headwall, concrete flume leading to open-sided manhole. 48" CMP (vertical) drain, completely covered with silt and leaf debris. Assessment : clean out and maintain storm drains so clogging will not occur. Responsibility lies with homeowner or homeowner's association.	Powers Branch
265	Marchand Court	Extend apron and wing wall on headwall at Marchand Court per Larry Adams from H. Humphrey. New homeowner who complains of standing water in backyard due to drainage from Johnson Ferry Rd. Solution: rip-rap/gravel bed in front of culvert leading into yard.	Marsh Creek
282	Underwood Drive	Storm drain which goes under street is clogged. Upon site visit found drain is not clogged. Problem solved.	Trib 7
6262	Ferry Drive	Dig out and repair section of storm drain causing sink hole beside house. Upon site visit found problem already fixed.	Trib 7
9745	Huntcliff Trace	Water quality problem (chemical and sewage pollutants entering Bull Sluice Lake	Sullivans Creek
395	Spalding Drive NE	Severe erosion problem due to runoff from Roswell Rd. Wants County to be more involved in erosion control and correction measures.	Marsh Creek
655	Glen Forest Road	vertical 12' ft banks. Severe erosion. Sloan blames GE building	Long Island
4925	Jett Road	concerned with erosion as a result of neighbor lining bank w/rip-rap	
5005	Jett Road	Undermining of Jett Road and severe erosion of bank supporting road way	

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
515	River Valley Road	Atlanta			Robert	Perez	E			FALSE
5295	Mt. Vernon Pkwy	Atlanta		404-255-4957	Vito	Tobla	E		19930223	FALSE
5285	Mt. Vernon Pkwy	Atlanta		404-252-1850	Nancy	Sobelman	E			FALSE
	Mt. Vernon Pkwy & Langford Lane	Atlanta				BC	M		19991019	FALSE
	Abernathy Rd. crosses Marsh Creek	Atlanta		404-730-8006	Sharon	Cowden	Q		19990421	FALSE
290	Colewood Way	Atlanta		404-255-2248	William	Harris	M		19990908	FALSE
22	Huntington Place	Atlanta		770-998-3475	Cere	Pendarvis	Q		19990819	FALSE
	Woodcliff	Atlanta			John	Lunday	E			FALSE
145	Seville Chase	Atlanta			Marsha	Davis	E		19991007	FALSE
5265	Mt Vernon Parkway	Atlanta	30328	404-255-1775	Susan	Farrell	E		19990800	FALSE
575	Glenforest Road	Atlanta	30328	404-256-9422	Alex	Smirnov	E		19990700	
795	OLD CREEK TRAIL	Atlanta		404-255-7833	Tom	Ustad	E		19990317	FALSE
780	Old Creek Trail	Atlanta		404-252-7271	Barbara	Goldman	E		19990330	TRUE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
515	River Valley Road		Trib 7
5295	Mt. Vernon Pkwy	severe erosion over past 6 years; flooding of back yard from main channel of Long Island Creek-stream degradation; 5' vertical banks	Long Island Creek
5285	Mt. Vernon Pkwy	lost 10' of property in back of house; water flowing over Mt.Vernon Pkwy due to development on Whitner about 30 yrs ago, neighbor of Mr. Tobia. She is constructing cinder block wall along right bank of streambordering her house to stop bank erosion and portect her home.	Long Island Creek
	Mt. Vernon Pkwy & Langford Lane	pond seepage near manhole by DS embankment	Long Island Creek
	Abernathy Rd. crosses Marsh Creek	Has been notified that there is a "sewer odor" occasionally in the area where Abernathy crosses Marsh Creek (behind Lucent Technology and the Tennis Center)	
290	Colewood Way	Storm drain located behind his house (Between 320 and 330 Riverhill Rd) is not tied into storm water conveyance system and water pours into his yard. The water from the drain goes into a ditch that is channeled to his yard.	
22	Huntington Place	smell of sewage coming from stream. Water has an oily sheen to it which she believes to be coming from car detailing shop, "Diamond Detail." She thinks they are illegally discharging to stream.	Sullivans Creek
	Woodcliff		
145	Seville Chase	Very large trees have fallen into stream behind her home due to erosion. The trees are causing a tremendous amount of blockage in the stream, which she believes is contributing to repeated breaks in the sewer line just upstream. She has live in her home for 15 years and has used stream water for irrigation, but not this year due to green slime around pump.	Marsh Creek
5265	Mt Vernon Parkway	Concerned about the water quality of Long Island Creek. Also noticed that the water velocity in the stream has increased. She is also worried about erosion and is interested in learning effective erosion control measures. Would like to know when the next public meeting about the Fulton County WRMP is scheduled.	Long Island Creek
575	Glenforest Road	Extremely concerned about the encroachment of the stream towards his house. The banks are 8-10 feet steep with severe erosion, exposed roots and high sinuosity. Says water flow has increased since the I-285 expansion.	Long Island Creek
795	OLD CREEK TRAIL	Channel elevation has dropped 6ft since the I-285 expansion 15-18 years ago	Heards Creek
780	Old Creek Trail	Water in creek has increased since construction of 285. Fulton County put in rip-rap on her side of the creek up to 60 feet and she paid to have additional riprap put above this. Erosion on her side has been controlled, but the other side has started to	

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
	NEAR WEATHERLY LANE & WEATHERLY DRIVE	Atlanta			ALICE	BALL	F		19990318	FALSE
	Riverchase Circle & Ferry Landing	Atlanta	30328	770-953-6423	Laura	Still	M		19990317	
	JUST US OF BIG TREES FOREST PRESERVE	Atlanta				BC	M		19990603	FALSE
9845	Trace Valley Drive	Atlanta			KATHY	ZAMER	M		19990511	FALSE
5760	MOUNTAIN CREEK ROAD	Atlanta		404-843-2435	CRAWFORD	VANHOOK	M		19990621	FALSE
	New Northside Drive	Atlanta				BC	M		19990415	FALSE
135	Grogan's Landing	Atlanta		770-390-9015	Mary	Maher	M		19990510	FALSE
8450	Valemont Drive (Ridgemont subdivision)	Atlanta		770-594-2293	Catherine	Crosby	M		19990608	FALSE
5605	Claire Rose Lane	Atlanta		404-851-1931	Ron	Williams	M		19990930	FALSE
	Brentwood Village & Brandon Mills Farm	Atlanta				BC	M		19990603	FALSE
680	Weatherley Drive	Atlanta		404-255-7489	Kelly	Simmons	Q		19990319	FALSE
6400	Riverchase Circle	Atlanta		(770) 612-3381	Jim	Field	Q		19990512	FALSE
	Grantley Court	Atlanta				BC	Q		19990603	FALSE
195	Seville Chase	Atlanta			Teresa	Niebur	E		19991007	FALSE

Appendix D
Problem Sites Database

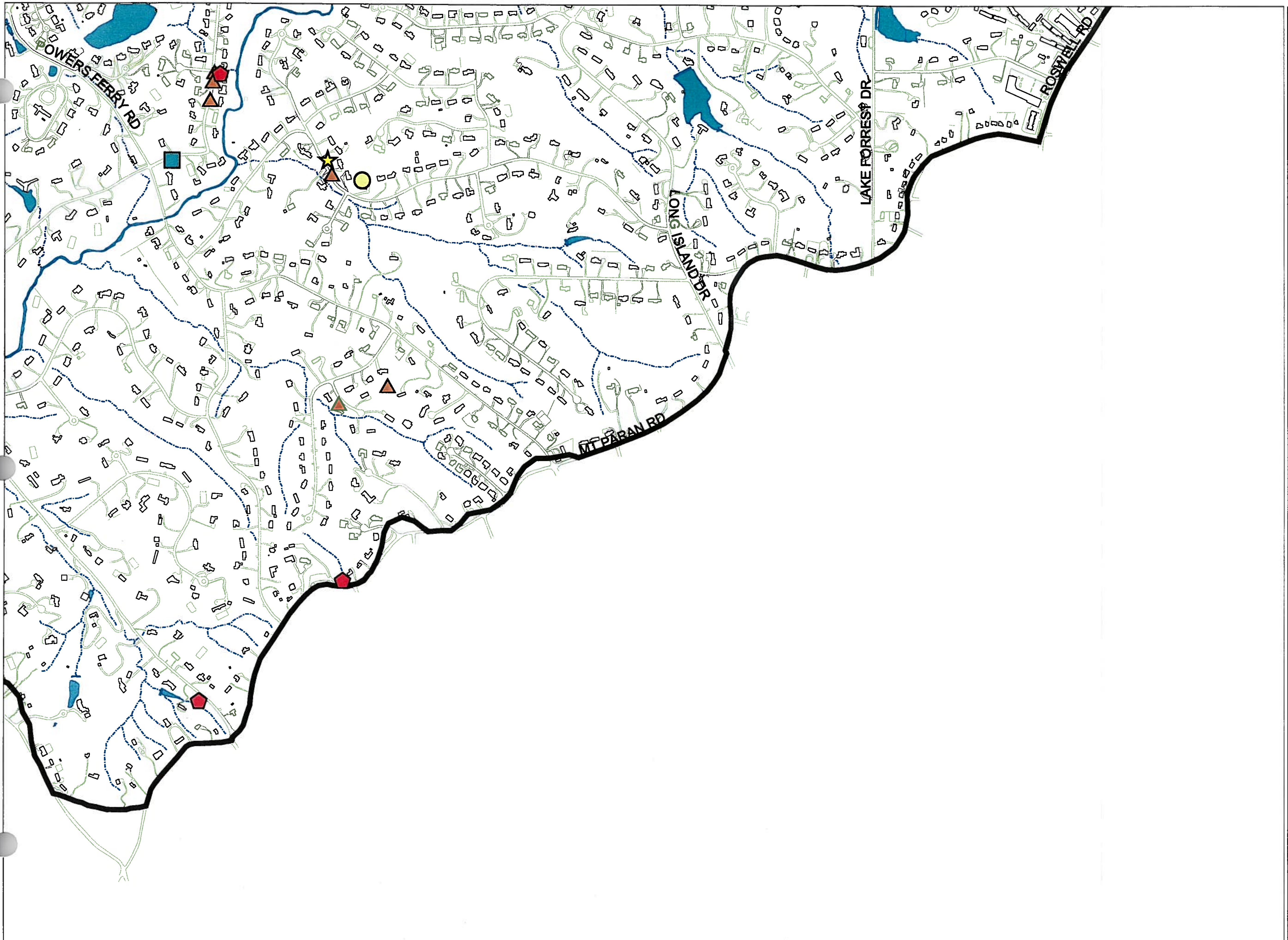
Street_no	Ma_street	Action_req	Basin
	NEAR WEATHERLY LANE & WEATHERLY DRIVE	WATER HAS COME UP ALL THE WAY TO HER HOUSE. SHE IS UPSET ABOUT HER NEIGHBOR ACROSS THE STREAM CLEARCUTTING THEIR LOT. SHE SAID THAT THE FREEMANS' HOUSE (BROWN) IS MORE SUSCEPTIBLE TO FLOODING. MENTIONED THAT PEOPLE ARE CONCERNED ABOUT TAX INCREASES.	UPSTREAM OF OLD CREEK TRAIL HOUSE IS 150 FT. FROM CHANNEL
	Riverchase Circle & Ferry Landing	Sewer overflows at least twice a year and notes lots of problems with water quality	Heards Creek
	JUST US OF BIG TREES FOREST PRESERVE	250 3141 645 STANDARD OVERNIGHT FED EX MAP OF OPEN MANHOLES AND SUSPECTED SEWER LEAKS, LETTER, CD OF DIGITAL PHOTOS.	Sullivans Creek and Powers Branch Watershed
9845	Trace Valley Drive	Reports sewer that overflows at least once a year. Recommends talking with neighbor Beverly Sewer (2 houses down) who is more aware of the problem	Sullivans Creek near Cross section SC-15
5760	MOUNTAIN CREEK ROAD	Sewer overflows every time it rains, with a foul odor. Debris and trash from I-285 pollute his yard and garden after major rains.	Long Island, I northside of I-285
	New Northside Drive	suspected sewer leak at the Crowne Plaza Hotel Parking Lot	Game Creek
135	Grogan's Landing	Concerned about debris that collects in lake and about a leak in the dam	Powers Branch
8450	Valemont Drive (Ridgemont subdivision)	Culvert in yard backs up, adversely impacting stream in yard	
5605	Claire Rose Lane	New development near his home is piling up dirt around the base of trees (about 8-10 feet high) and the trees are dying. He thinks the study should include a provision that if someone destroys a tree in the buffer near a stream, they must replace it. He	
	Brentwood Village & Brandon Mills Farm	Field crew noted uncovered manholes in wetland area between two apartment complexes (Brentwood Village & Brandon Mills Farm). Danger to residents, especially small children.	Powers Branch
680	Weatherley Drive	Mentioned stream cloudiness was unusual, creek was very cloudy with a greenish grey hue to water color. Construction site upstream.	Heards Creek
6400	Riverchase Circle	After a rain, stream runs a milky color and has a sewer smell. Last month, water ran black and had a sewer smell. Toilet paper hangs from the lower branches of overhanging trees.	
	Grantley Court	Field crew noted suspected sanitary sewer leak in the area between Grantley Court, behind Northridge Shopping Center. Appears to be coming from a residence. Field crew noticed milky white discharge coming from pipe and pooling in the creek.	Sullivans Creek
195	Seville Chase	Tremendous amount of erosion has occurred along the stream crossing through her backyard. Over the past 7-8 years that she has lived there, she estimates 10 feet has washed away on one side of the stream. This has caused many large trees to fall into creek causing blockages that add to erosion problem. She would like to see Fulton Co. assist in removing these trees to open up flow in the creek.	Marsh Creek

Appendix D
Problem Sites Database

Street_no	Ma_street	Ma_city	Ma_zip	Phone_numb	First_name	Last_name	CMPL_TYPE	Problem Site	Date_recd	Riprap_pro
160	Hidden Falls Lane	Atlanta		770-390-9019	Carol	Ganz	E		19991008	FALSE

Appendix D
Problem Sites Database

Street_no	Ma_street	Action_req	Basin
160	Hidden Falls Lane	A development of cluster homes is going in on the other side of creek from her house (Brandon Mill Rd) is moving soil that has weakened tree roots and caused trees to fall on her property. These downed trees are causing a blockage on her property. She has spoken to the developers about this and they told her it is not their problem.	Marsh Creek



FULTON COUNTY

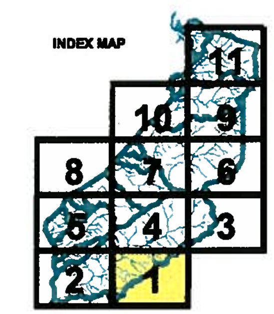
SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX D: Figure 1, Tile 1
Location of Problem Complaints

Complaint Type

- Erosion
- Flooding
- Maintenance
- Other
- Run-off
- Water Quality
- Watershed Boundary
- Building Footprint
- Planimetrics
- Stream

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

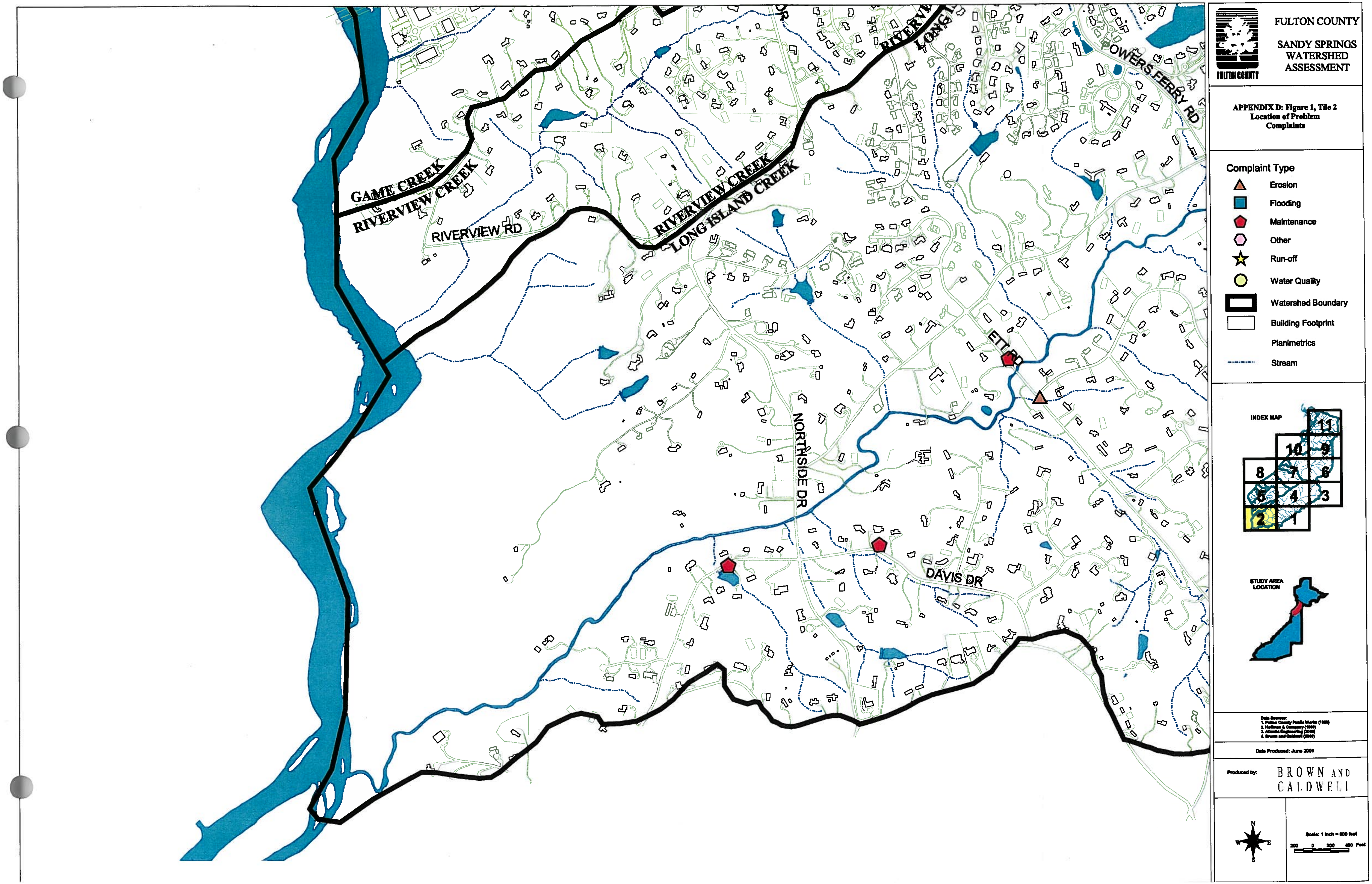
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N
W E
S

Scale: 1 inch = [illegible] feet

200 0 200 400 Feet



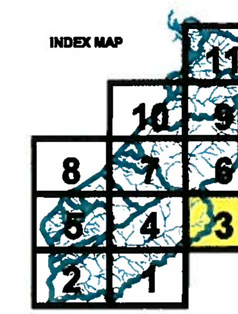
FULTON COUNTY
SANDY SPRINGS WATERSHED ASSESSMENT
APPENDIX D: Figure 1, Tile 2
Location of Problem Complaints
Complaint Type
Erosion
Flooding
Maintenance
Other
Run-off
Water Quality
Watershed Boundary
Building Footprint
Planimetrics
Stream
INDEX MAP
11
10
9
8
7
6
5
4
3
2
1
STUDY AREA LOCATION
Data Sources:
3. Atlantic Engineering
4. Brown and Caldwell
Date Produced: June 2001
Produced by:
BROWN AND CALDWELL
N
W
E
S
200
0
200
400
Feet
GAME CREEK
RIVERVIEW CREEK
RIVERVIEW RD
LONG ISLAND CREEK
POWERS FERRY RD
NORTHSIDE DR
DAVIS DR

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX D: Figure 1, Tile 3
Location of Problem Complaints

Complaint Type
- Erosion
- Flooding
- Maintenance
- Other
- Run-off
- Water Quality
- Watershed Boundary
- Building Footprint
- Planimetrics
- Stream



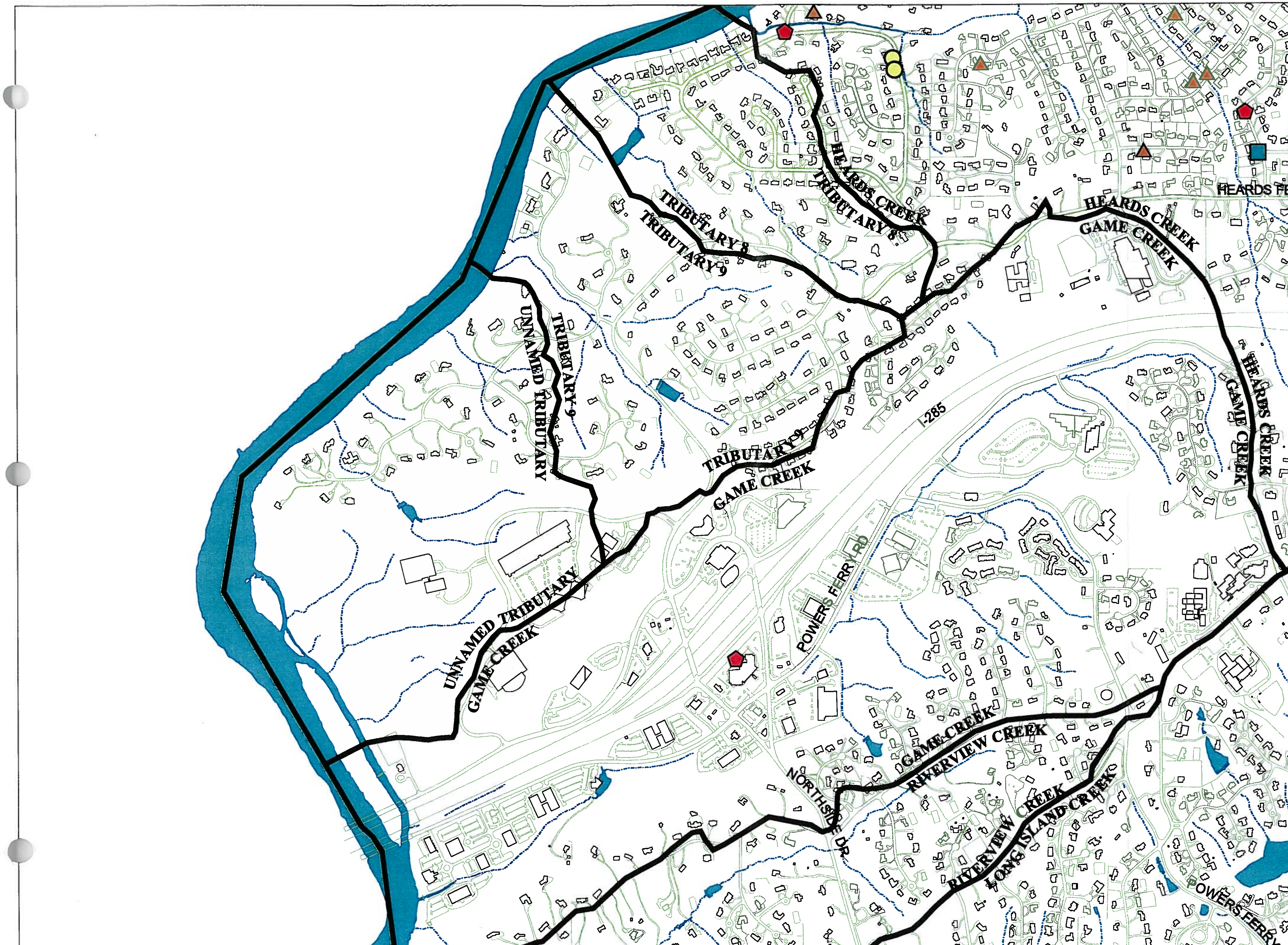
Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = [illegible] feet

FULTON COUNTY
SANDY SPRINGS WATERSHED ASSESSMENT
APPENDIX D: Figure 1, Tile 4
Location of Problem Complaints
Complaint Type
Erosion
Flooding
Maintenance
Other
Run-off
Water Quality
Watershed Boundary
Building Footprint
Planimetrics
Stream
INDEX MAP
11
10
9
8
7
6
5
4
3
2
1
STUDY AREA LOCATION
Data Sources:
Date Produced: June 2001
Produced by:
BROWN AND CALDWELL
N
W
E
S
200
0
200
400
Feet
HEARDS FERRY RD
COLEWOOD CREEK
HEARDS CREEK
LONG ISLAND CREEK
MT. VERNON HWY
GAME CREEK
RIVERSIDE DR
MT VERNON PKWY
I-285
LAKE FORREST DR
LONG ISLAND DR
ROSWELL RD
HAMMOND DR
MARSH CREEK
POWERS FERRY



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

FULTON COUNTY

APPENDIX D: Figure 1, Tile 5
Location of Problem Complaints

Complaint Type

- Erosion
- Flooding
- Maintenance
- Other
- Run-off
- Water Quality
- Watershed Boundary
- Building Footprint
- Planimetrics
- Stream

INDEX MAP

11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1

STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

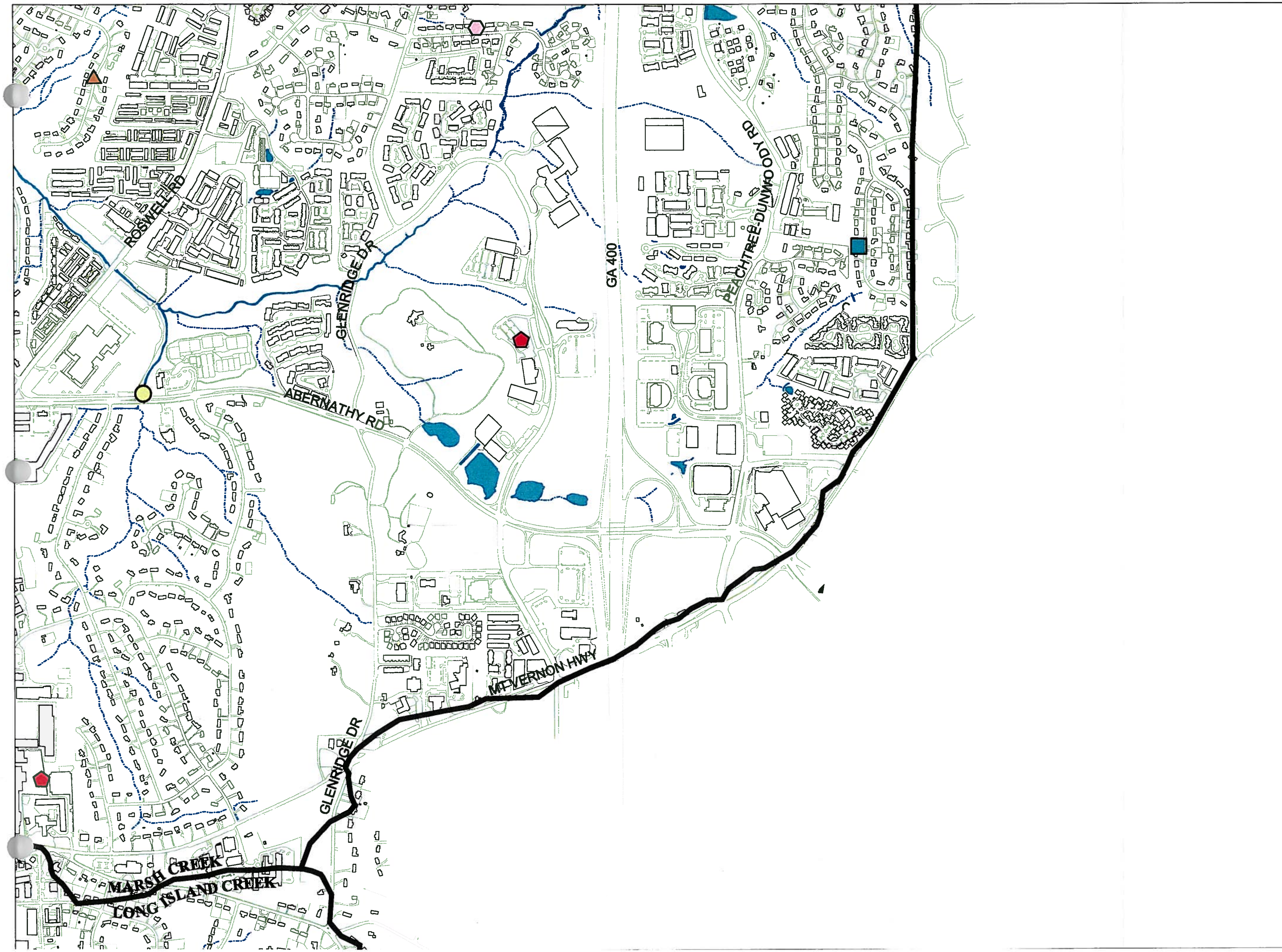
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N E S W

Scale: 1 inch = 900 feet

200 0 200 400 Feet



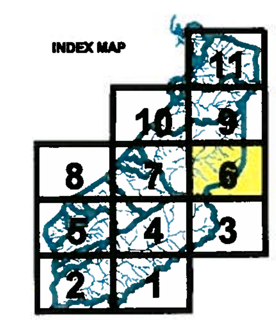
FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX D: Figure 1, Tile 6
Location of Problem Complaints

Complaint Type

- Erosion
- Flooding
- Maintenance
- Other
- Run-off
- Water Quality
- Watershed Boundary
- Building Footprint
- Planimetrics
- Stream



Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

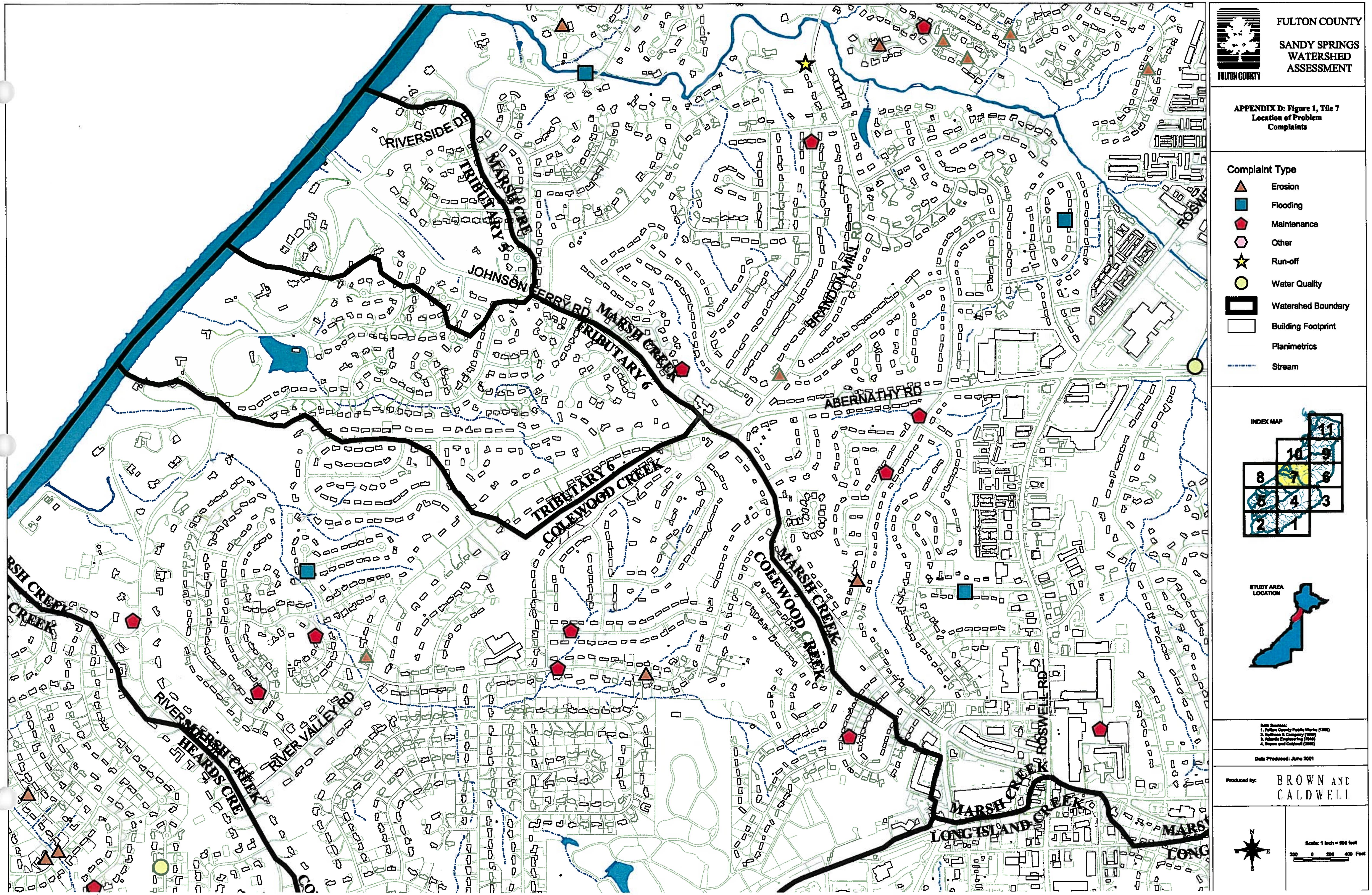
Date Produced: June 2001

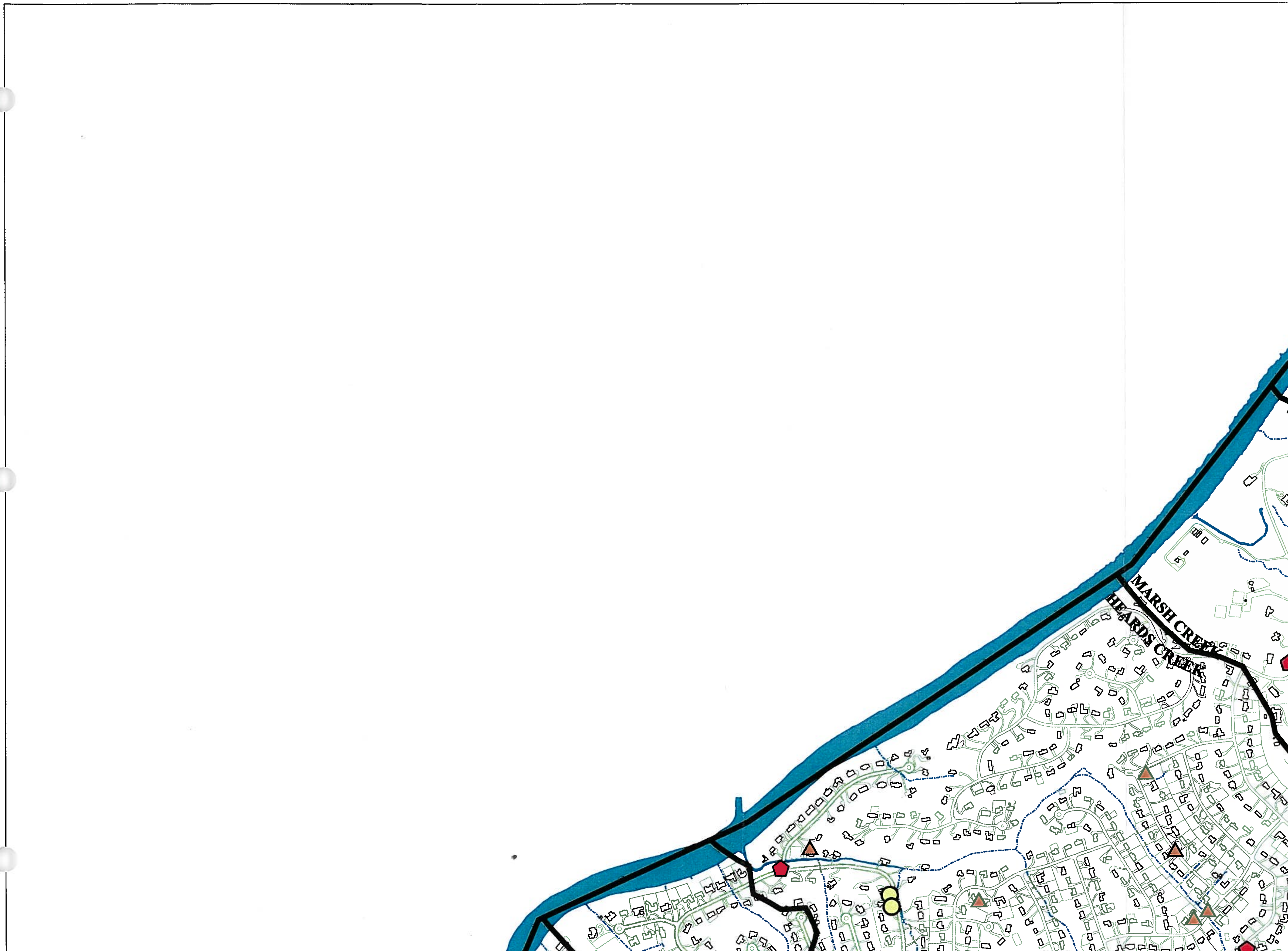
Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = [illegible] feet

200 0 200 400 Feet


FULTON COUNTY
SANDY SPRINGS WATERSHED ASSESSMENT
FULTON COUNTY
APPENDIX D: Figure 1, Tile 7
Location of Problem Complaints
Complaint Type
Erosion
Flooding
Maintenance
Other
Run-off
Water Quality
Watershed Boundary
Building Footprint
Planimetrics
Stream
INDEX MAP
11
10
9
8
7
6
5
4
3
2
1
STUDY AREA LOCATION
Data Sources:
1. Fulton County Public Works
2. Hoffman & Company
3. Atlantic Engineering
4. Brown and Caldwell
Date Produced: June 2001
Produced by:
BROWN AND CALDWELL
Scale: 1 inch = 600 feet
N
S
E
W
RIVERSIDE DR
TRIBUTARY 5
MARSH CREE
JOHNSON FERRY RD
MARSH CREEK
TRIBUTARY 6
BRANDON MILL RD
ABERNATHY RD
TRIBUTARY 6
COLEWOOD CREEK
COLEWOOD CREEK
MARSH CREEK
ROSWELL RD
MARSH CREEK
LONG ISLAND CREEK
RIVER VALLEY RD
MARSH CREEK
HEARDS CRE
RIVER
MARSH CREEK



FULTON COUNTY

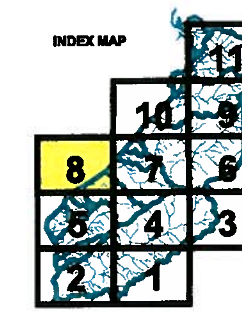
SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX D: Figure 1, Tile 8
Location of Problem Complaints

Complaint Type

- Erosion
- Flooding
- Maintenance
- Other
- Run-off
- Water Quality
- Watershed Boundary
- Building Footprint
- Planimetrics
- Stream

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

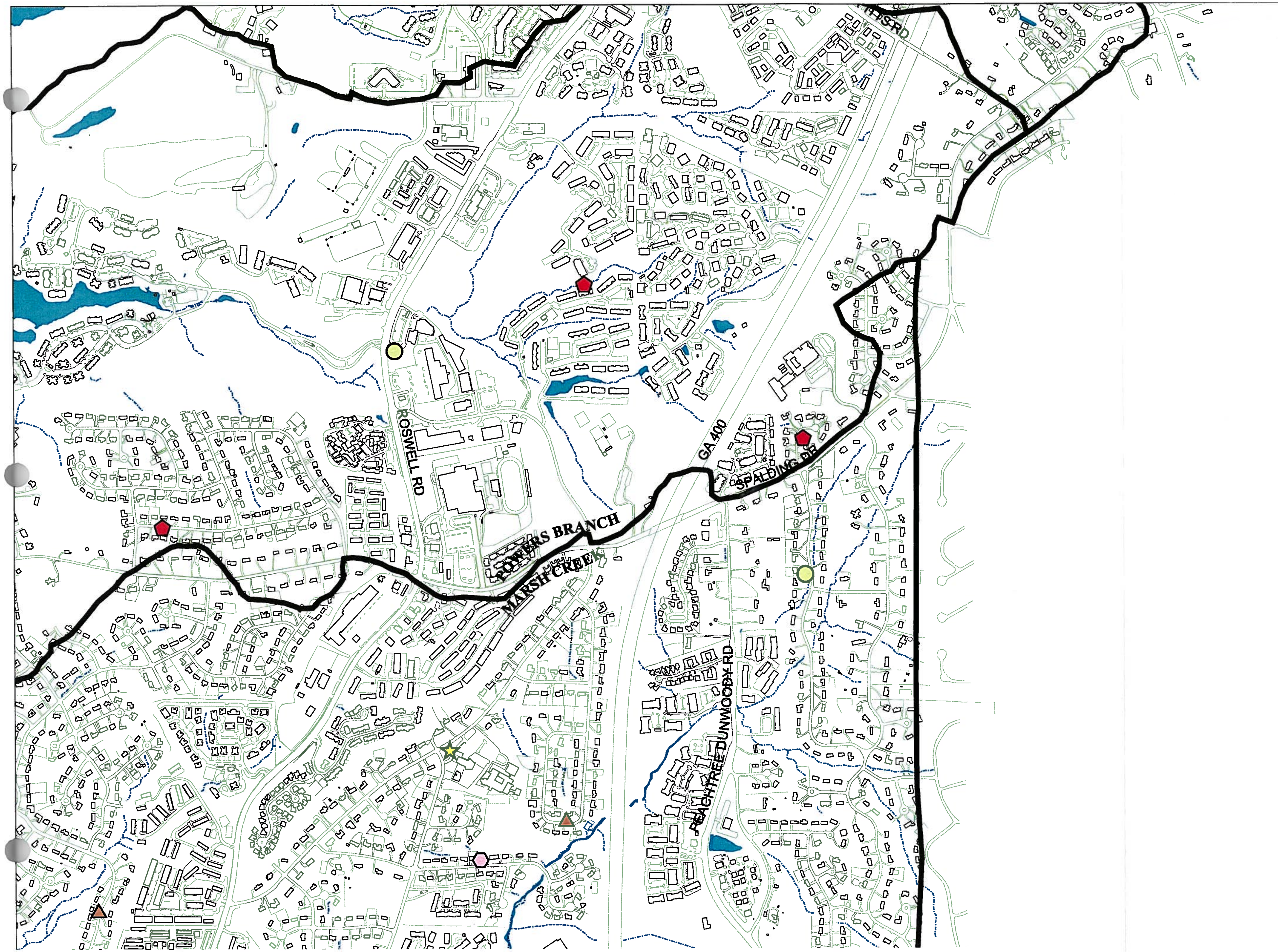
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N
W E
S

Scale: 1 inch = [illegible] feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

FULTON COUNTY

APPENDIX D: Figure 1, Tile 9
Location of Problem Complaints

Complaint Type

- Erosion
- Flooding
- Maintenance
- Other
- Run-off
- Water Quality
- Watershed Boundary
- Building Footprint
- Planimetrics
- Stream

INDEX MAP

11 10 9 8 7 6 5 4 3 2 1

STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works
2. Hoffman & Company
3. Atlantic Engineering
4. Brown and Caldwell

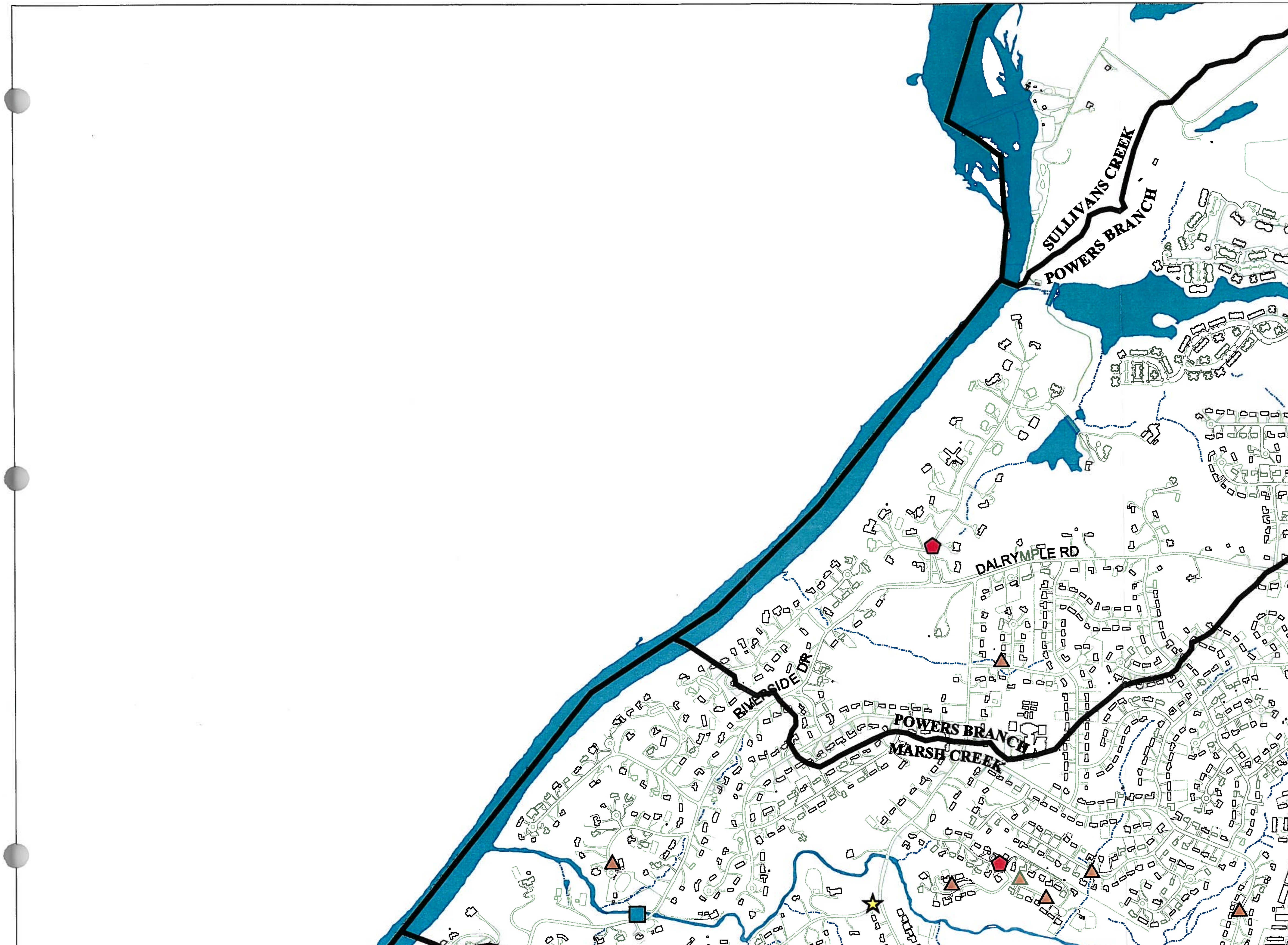
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = 800 feet

200 0 200 400 Feet



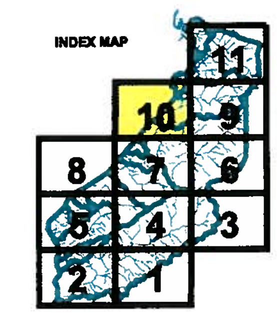
FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX D: Figure 1, Tile 10
Location of Problem Complaints

Complaint Type

- Erosion
- Flooding
- Maintenance
- Other
- Run-off
- Water Quality
- Watershed Boundary
- Building Footprint
- Planimetrics
- Stream



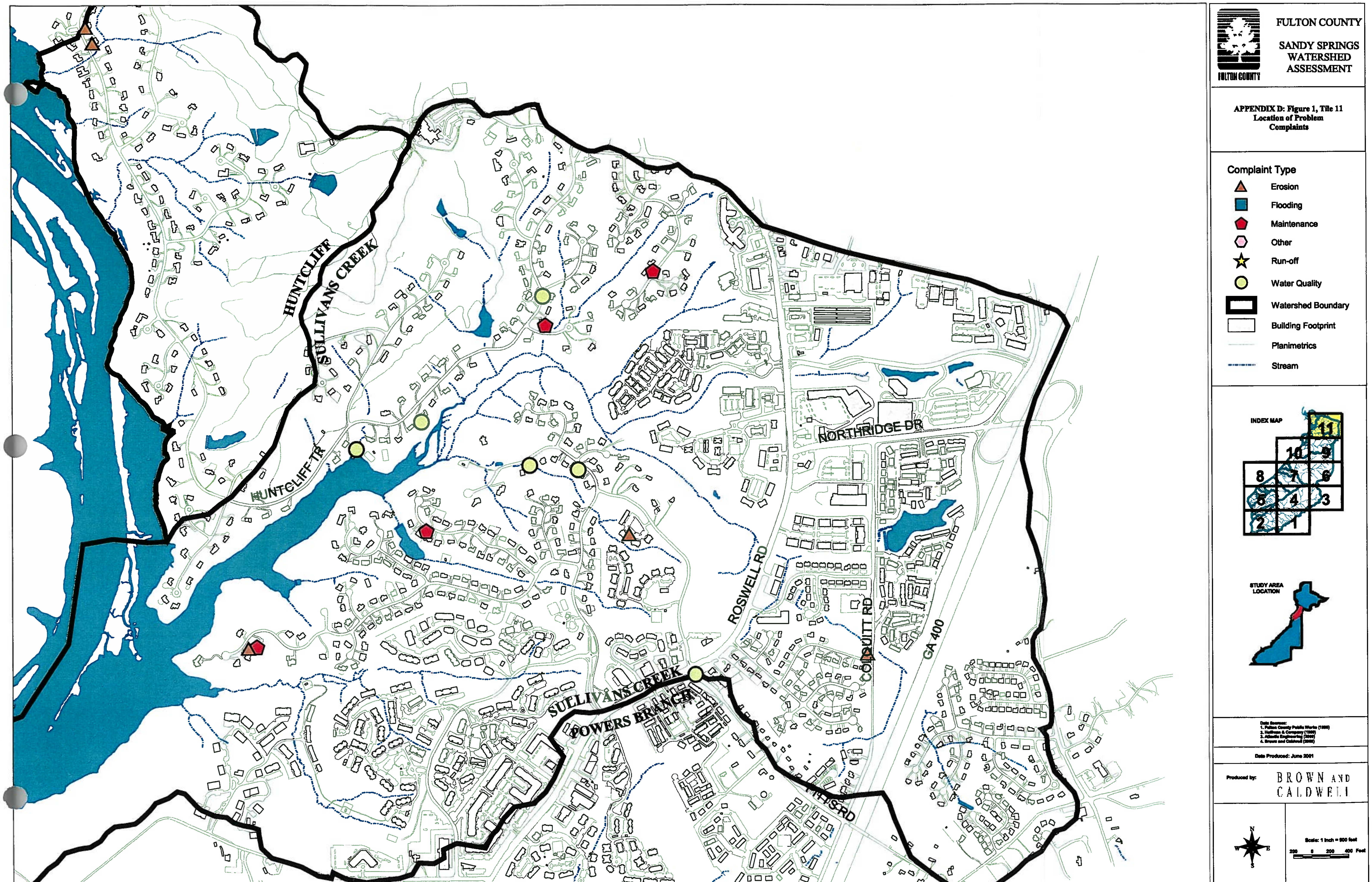
Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = [illegible] feet

200 0 200 400 Feet



FULTON COUNTY
SANDY SPRINGS WATERSHED ASSESSMENT
APPENDIX D: Figure 1, Tile 11
Location of Problem Complaints
Complaint Type
Erosion
Flooding
Maintenance
Other
Run-off
Water Quality
Watershed Boundary
Building Footprint
Planimetrics
Stream
INDEX MAP
STUDY AREA LOCATION
Date Produced: June 2001
Produced by:
BROWN AND CALDWELL
N
W
E
S
HUNTCLIFF
SULLIVANS CREEK
HUNTCLIFF TR
NORTHRIDGE DR
ROSWELL RD
COLQUITT RD
GA 400
POWERS BRANCH

Appendix E

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
C1	A MOVING & MAILING PLACE		7878 ROSWELL RD.	ATLANTA	GA	30350		
C2	A-A AFFORDABLE MOVERS, INC.		6075 ROSWELL RD.	ATLANTA	GA	30328		
836153783	About Signs	J W J Enterprises	5975 Roswell Rd Ne	Atlanta	GA	30328-4048	404-256-9570	Mr Joe Williams
BC0001	Abra Auto Body & Glass		8471 Roswell Rd.	ATLANTA	GA	30350	770-552-1953	Bill Wotocek
153167	Accurate Sign Placement		195 Hildebrand Dr. N.W.	Atlanta	GA	30328	404-255-9960	
BC0002	Ace Hardware		6010 A Sandy Springs Cir	ATLANTA	GA	30328	404-256-9795	Scott Wilson
61455663	Adamark Jewelers Inc	Silversmiths Inc	6136 Roswell Rd Ne	Atlanta	GA	30328-3904	404-252-1185	Mr Mark Geller
C3	ADVANCE LEASING/OFFICE		7517 ROSWELL RD.	ATLANTA	GA	30350		
947772653	Advanced Automotive Specialist		6569b Roswell Rd Ne	Atlanta	GA	30328-3100	404-257-1051	Mr Ron Robertson
73449787	Advanced Industries Inc	S&S Products	590 River Valley Rd NW	Atlanta	GA	30328-2951	404-255-6231	Mr Steve Krakowiak
BC0003	Aldo's Casual Dining/Morgan's	Sandy Springs Crossing	6690 Roswell Road NE	Atlanta	GA	30328	404-869-2700	Terry Ellen (CNM)
G4	Alphagraphics Printshop of the Future		227 Sandy Springs Pl., #F	Atlanta	GA	30328	404-255-2679	H.C. & Rachael Alexand
BC0004	Alpine Cleaners		5430 Northside Dr	ATLANTA	GA	30339		
C7	AMERICAN VOLVO SPECIALIST		6152 ROSWELL RD.	ATLANTA	GA	30328		
1181694	Ameripress Printing		6075 Roswell Rd. N.E., St	Atlanta	GA	30328	404-256-4381	
BC0058	Amoco		6360 Roswell Rd	ATLANTA	GA	30328	404-252-3139	
C11	ANHEUSER BUSCH INC.		1000 ABERNATHY RD.	ATLANTA	GA	30328		
C12	APPLETON PAPERS, INC.		1301 HIGHTOWER TRAIL	ATLANTA	GA	30350		
BC0006	Arby's		8490 Roswell Rd	ATLANTA	GA	30350	770-594-1165	Chad Crawley
C13	ARZ MOTORS		8135 ROSWELL RD.	DUNWOOD	GA	30350		
BC0007	AST Auto Services		5861 Roswell Rd	ATLANTA	GA	30328	404-252-1603	Doug Boss
153667	Atlanta Bread Co.		220 Sandy Springs Cir. N.	Atlanta	GA	30328	404-843-0040	
26173	Atlanta Jewish Times	Waterspout Communications	6065 Roswell Rd., Ste. 70	Atlanta	GA	30328	404-252-1600	
G9	Atlanta Metropolitan Publishing		180 Allen Rd., 302 North	Atlanta	GA	30328-4862	404-843-9800	Mr Thomas G Casey
G10	Atlanta Singles Magazine		180 Allen Rd., Ste. 304-N	Atlanta	GA	30342	404-256-9411	Graham Anthony
836505479	Aurora Concepts Inc	Aurora Rising Magazine	5835 Allen CT NW	Atlanta	GA	30328-4834	404-303-0072	Ms Karen Willis
939673331	Auto Detailing & Hand Washing		280 Mount Vernon Hwy	Atlanta	GA	30328-3902	404-250-0717	Mickael Harrison
BC0008	Automotive Foreign Services		8155 Roswell Rd	ATLANTA	GA	30350	770-804-8200	Virgil Bettingfield
824903389	Avalex Technologies Corp		5825 Glenridge Dr Ne	Atlanta	GA	30328-5387	404-256-3010	Mr Jurgen R Ihns
845056712	B Braun/Mc Gaw Inc		5600 Roswell Rd Ne	Atlanta	GA	30342-1119	404-256-1319	Mr James Hickey
8980526	Beads By Beth		6315 Rivershore Pkwy NW	Atlanta	GA	30328-3708	404-843-0681	Ms Elizabeth Carr
C14	BERNIE'S AUTOMOTIVE, INC.		8135 ROSWELL RD.	ATLANTA	GA	30350	770-901-9600	

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
C1	A MOVING & MAILING PLACE			75				
C2	A-A AFFORDABLE MOVERS, INC.			42				
836153783	About Signs	Owner	Signs Advt Spcltie	39930000	59990301			
BC0001	Abra Auto Body & Glass			7532				
153167	Accurate Sign Placement			3993				
BC0002	Ace Hardware			5251				
61455663	Adamark Jewelers Inc	President	Jewelry Prec Metal	39110000	59449901	39140407		
C3	ADVANCE LEASING/OFFICE			41				
947772653	Advanced Automotive Specialist	Owner	Gnrl Atmtve RPR Shp	75380000				
73449787	Advanced Industries Inc	President	Phtgrph Eqpt Suppl	38619903	3651	3641		
BC0003	Aldo's Casual Dining/Morgan's			5812				
G4	Alphagraphics Printshop of the Future	Owners	Commrcl Prtng Lith	2752	2791			
BC0004	Alpine Cleaners			7212				
C7	AMERICAN VOLVO SPECIALIST			75				
1181694	Ameripress Printing			2759				
BC0058	Amoco			5541				
C11	ANHEUSER BUSCH INC.			20				
C12	APPLETON PAPERS, INC.			26				
BC0006	Arby's			5812				
C13	ARZ MOTORS			75				
BC0007	AST Auto Services			7534				
153667	Atlanta Bread Co.			2051				
26173	Atlanta Jewish Times			2711				
G9	Atlanta Metropolitan Publishing	President	Periodicals	2791	27210202			
G10	Atlanta Singles Magazine	Publ.		2721				
836505479	Aurora Concepts Inc	President	Periodicals	27210000				
939673331	Auto Detailing & Hand Washing	President	Carwashes	75429904				
BC0008	Automotive Foreign Services			7538				
824903389	Avalex Technologies Corp	President	Search Nvgtn Eqpmn	38120201				
845056712	B Braun/Mc Gaw Inc	Manager	Phrmctcl Preprtns	28340000	38410000			
8980526	Beads By Beth	Owner	Mfg Industries Nec	39990816				
C14	BERNIE'S AUTOMOTIVE, INC.			7538				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
C1	A MOVING & MAILING PLACE	7878 ROSWELL RD.	M	100	L	Powers Branch			
C2	A-A AFFORDABLE MOVERS, INC.	6075 ROSWELL RD.	M	100	R	Long Island Cree			
836153783	About Signs	5975 ROSWELL RD NE	M	75	R	Long Island Cree			
BC0001	Abra Auto Body & Glass					Sullivan's Creek	Y	collision center	II
153167	Accurate Sign Placement	195 HILDEBRAND DR. N.W.	M	62	R	Long Island Cree	Y	printing company	
BC0002	Ace Hardware						Y	hardware store	IV
61455663	Adamark Jewelers Inc	6136 ROSWELL RD NE	M	75	L	Long Island Cree	Y	jewelers	IV
C3	ADVANCE LEASING/OFFICE	7517 ROSWELL RD.	M	100	R	Powers Branch			
947772653	Advanced Automotive Specialist	6569B ROSWELL RD NE	M	75	R	Marsh Creek			
73449787	Advanced Industries Inc	590 RIVER VALLEY RD NW	M	75	L	Trib 7	N		
BC0003	Aldo's Casual Dining/Morgan's					Marsh Creek	Y	restaurants (in strip mall)	IV
G4	Alphagraphics Printshop of the Future	227 SANDY SPRINGS PL., #F	M	100	R	Long Island Cree			
BC0004	Alpine Cleaners					Game Creek	Y	dry cleaners	
C7	AMERICAN VOLVO SPECIALIST	6152 ROSWELL RD.	M	100	L	Long Island Cree			
1181694	Ameripress Printing	6075 ROSWELL RD. N.E., ST	M	45	R	Long Island Cree			
BC0058	Amoco					Marsh Creek	Y	gas station	II
C11	ANHEUSER BUSCH INC.	1000 ABERNATHY RD.	M	100	L	Marsh Creek	N		
C12	APPLETON PAPERS, INC.	1301 HIGHTOWER TRAIL	M	100	R	Sullivan's Creek	N		
BC0006	Arby's					Marsh Creek	Y	restaurant	III
C13	ARZ MOTORS	8135 ROSWELL RD.	M	100	R	Sullivan's Creek			
BC0007	AST Auto Services					Long Island Cree	Y	auto repair	II
153667	Atlanta Bread Co.	220 SANDY SPRINGS CIR. N.	M	75	L	Long Island Cree	Y	Restaurant in strip mall	IV
26173	Atlanta Jewish Times	6065 ROSWELL RD., STE. 70	M	100	R	Long Island Cree			
G9	Atlanta Metropolitan Publishing	180 ALLEN RD., 302 NORTH	M	13	L	Long Island Cree	N		
G10	Atlanta Singles Magazine	180 ALLEN RD., STE. 304-N	M	75	L	Long Island Cree	N		
836505479	Aurora Concepts Inc	5835 ALLEN CT NW	M	75	R	Long Island Cree	N		
939673331	Auto Detailing & Hand Washing	280 MOUNT VERNON HWY	M	57	L	Long Island Cree	Y	car wash	II
BC0008	Automotive Foreign Services					Sullivan's Creek	Y	auto repair	II
824903389	Avalex Technologies Corp	5825 GLENRIDGE DR NE	M	75	R	Long Island Cree	N		
845056712	B Braun/Mc Gaw Inc	5600 ROSWELL RD NE	M	75	L	Long Island Cree			
8980526	Beads By Beth	6315 RIVER SHORE PKWY NW	M	50	R	Trib 7	N		
C14	BERNIE'S AUTOMOTIVE, INC.	8135 ROSWELL RD.	M	100	R	Sullivan's Creek	Y	auto repair	II

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
C1	A MOVING & MAILING PLACE		SANDY SPRINGS			
C2	A-A AFFORDABLE MOVERS, INC.		SANDY SPRINGS			
836153783	About Signs		SANDY SPRINGS			
BC0001	Abra Auto Body & Glass		SANDY SPRINGS	unlabeled paint solvents, 55 GALLON DRUMS	08/17/99	Miller, King
153167	Accurate Sign Placement		SANDY SPRINGS		08/20/99	Thurman, Barnum
BC0002	Ace Hardware	3.32886	SANDY SPRINGS	broken bag of Garden Gold plant food	07/28/99	Brearley
61455663	Adamark Jewelers Inc		SANDY SPRINGS		08/16/99	Barnum, Thurman
C3	ADVANCE LEASING/OFFICE		SANDY SPRINGS			
947772653	Advanced Automotive Specialist		SANDY SPRINGS			
73449787	Advanced Industries Inc		SANDY SPRINGS			
BC0003	Aldo's Casual Dining/Morgan's		SANDY SPRINGS		08/16/99	Barnum, Thurman
G4	Alphagraphics Printshop of the Future	0.34557	SANDY SPRINGS			
BC0004	Alpine Cleaners		SANDY SPRINGS		08/31/99	Thurman, King
C7	AMERICAN VOLVO SPECIALIST	0.37305	SANDY SPRINGS			
1181694	Ameripress Printing	1.06975	SANDY SPRINGS			
BC0058	Amoco		SANDY SPRINGS		09/16/99	Thurman, King
C11	ANHEUSER BUSCH INC.		SANDY SPRINGS			
C12	APPLETON PAPERS, INC.	0.3007	SANDY SPRINGS			
BC0006	Arby's		SANDY SPRINGS		08/19/99	King, Barnum
C13	ARZ MOTORS		SANDY SPRINGS			
BC0007	AST Auto Services	7.29517	SANDY SPRINGS	used oil	08/04/99	Miller, Barnum
153667	Atlanta Bread Co.		SANDY SPRINGS		08/20/99	Barnum, Thurman
26173	Atlanta Jewish Times		SANDY SPRINGS			
G9	Atlanta Metropolitan Publishing		SANDY SPRINGS			
G10	Atlanta Singles Magazine		SANDY SPRINGS			
836505479	Aurora Concepts Inc	4.12492	SANDY SPRINGS			
939673331	Auto Detailing & Hand Washing	2.01178	SANDY SPRINGS		08/10/99	King, Barnum,Thurman
BC0008	Automotive Foreign Services	3.81848	SANDY SPRINGS		08/18/99	Thurman, Miller
824903389	Avalex Technologies Corp	3.81848	SANDY SPRINGS			
845056712	B Braun/Mc Gaw Inc	0.57649	SANDY SPRINGS			
8980526	Beads By Beth		SANDY SPRINGS			
C14	BERNIE'S AUTOMOTIVE, INC.		SANDY SPRINGS		08/18/99	Thurman, Miller

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
C1	A MOVING & MAILING PLACE		2238659.30436	1445154.41332	
C2	A-A AFFORDABLE MOVERS, INC.		2232123.68635	1426225.21820	
836153783	About Signs		2232103.76465	1425307.29941	
BC0001	Abra Auto Body & Glass	waste solvents (do have secondary containment) are not labeled; covered by awning	22470945.32000	1450022.60000	
153167	Accurate Sign Placement		2231614.85028	1427040.00898	
BC0002	Ace Hardware	broken bags of phosphorus get swept up & placed in dumpster, landlord mandates how much merchandise can be away from building, most of uncovered "stuff" is pinestraw & mulch; one broken fertilizer bag outside @ time of visit			
61455663	Adamark Jewelers Inc		2232077.55240	1426931.36461	
C3	ADVANCE LEASING/OFFICE		2236101.59249	1440807.83725	
947772653	Advanced Automotive Specialist		2232004.70220	1431182.64206	
73449787	Advanced Industries Inc		2224281.42395	1428577.90190	
BC0003	Aldo's Casual Dining/Morgan's	grease bin was open; drain behind Cici's Pizza drains directly	2232301.49000	1432473.01000	
G4	Alphagraphics Printshop of the Future		2231669.39766	1426112.17355	
BC0004	Alpine Cleaners	nothing noted; nothing stored outside			
C7	AMERICAN VOLVO SPECIALIST		2232075.41052	1427116.34148	
1181694	Ameripress Printing		2232123.68635	1426225.21820	
BC0058	Amoco	two 55 gallon open head drums full, not labeled next to dumpster	2232266.62000	1425589.44000	
C11	ANHEUSER BUSCH INC.		2239521.41218	1430786.90693	
C12	APPLETON PAPERS, INC.		2242784.71379	1450142.16323	
BC0006	Arby's	grease bin was open; dumpsters shared with Pizza Hut carry out & Schlotzsky's	2240738.24000	1448166.87000	
C13	ARZ MOTORS		2239988.37464	1446005.02556	
BC0007	AST Auto Services		2232038.57121	1424136.54947	
153667	Atlanta Bread Co.	empty "Wind Fresh" containers behind building	2230913.04662	1427825.43626	
26173	Atlanta Jewish Times		2232130.34611	1426123.28105	
G9	Atlanta Metropolitan Publishing		2231527.37870	1423618.39735	
G10	Atlanta Singles Magazine		2231527.37870	1423618.39735	
836505479	Aurora Concepts Inc		2230857.61046	1423881.16200	
939673331	Auto Detailing & Hand Washing	MSDS sheet on soap/biodegradable/pH balance; buys all soap from Blue Coral	2232437.78432	1427548.26650	
BC0008	Automotive Foreign Services	oil separation system on premises to separate oil from water; tire pile located behind shop; spill area around oil dispenser container,rain can wash oil out to drain	2240803.01000	1447049.47000	
824903389	Avalex Technologies Corp		2237188.97397	1423971.39128	
845056712	B Braun/Mc Gaw Inc		2232213.76413	1421437.51546	
8980526	Beads By Beth		2225860.13593	1428840.94014	
C14	BERNIE'S AUTOMOTIVE, INC.		2239988.37464	1446005.02556	

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
C1	A MOVING & MAILING PLACE		
C2	A-A AFFORDABLE MOVERS, INC.		
836153783	About Signs		
BC0001	Abra Auto Body & Glass	N	Y
153167	Accurate Sign Placement		
BC0002	Ace Hardware		
61455663	Adamark Jewelers Inc		
C3	ADVANCE LEASING/OFFICE		
947772653	Advanced Automotive Specialist		
73449787	Advanced Industries Inc		
BC0003	Aldo's Casual Dining/Morgan's	N	N
G4	Alphagraphics Printshop of the Future		
BC0004	Alpine Cleaners	Y	N
C7	AMERICAN VOLVO SPECIALIST		
1181694	Ameripress Printing		
BC0058	Amoco	N	N
C11	ANHEUSER BUSCH INC.		
C12	APPLETON PAPERS, INC.		
BC0006	Arby's	N	N
C13	ARZ MOTORS		
BC0007	AST Auto Services	N	N
153667	Atlanta Bread Co.	N	N
26173	Atlanta Jewish Times		
G9	Atlanta Metropolitan Publishing		
G10	Atlanta Singles Magazine		
836505479	Aurora Concepts Inc		
939673331	Auto Detailing & Hand Washing	N	N
BC0008	Automotive Foreign Services	N	N
824903389	Avalex Technologies Corp		
845056712	B Braun/Mc Gaw Inc		
8980526	Beads By Beth		
C14	BERNIE'S AUTOMOTIVE, INC.	N	N

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
BC0009	Big 10 Tires & Automotive Center		224 Hammond Dr.	ATLANTA	GA	30328	404-256-4195	Steve Napier
BC0010	Big K Mart		5925 Roswell Rd	ATLANTA	GA	30328	404-255-7330	Mr. Mullins
82827775	Bilbet Inc	Franklins of Sandy Springs	6600 Roswell Rd Ne	Atlanta	GA	30328-3173	404-255-9163	Mr Bill Bakun
G12	Biochem Systems, Inc.		275 Carpenter Dr., Suite	Atlanta	GA.	30328	800-878-7880	Dan Katz
BC0048	Blockbuster Video/Pet		7878 Roswell Rd	ATLANTA	GA	30350		
63112622	Body Investments Inc		6480 Wright Cir Ne	Atlanta	GA	30328-3121	404-851-0092	Mr Kevin Lowe
C15	BRAKE SERVICES		8290 ROSWELL RD.	ATLANTA	GA	30350		
33361002	Brown & Bigelow Inc		5825 Glenridge Dr Ne	Atlanta	GA	30328-5387	404-255-3737	Mr William D Smith Sr
12203	Browne Mfg. Co., Stewart R.		1165 Hightower Tr.	Atlanta	GA	30350	770-993-9600	
1181075	Bryant House Collection		8295 Ison Rd.	Atlanta	GA	30350	770-396-0042	
C16	BUICK MOTOR DIVISION GMC		5730 GLENRIDGE DR.	ATLANTA	GA	30328		
843529660	Burdett/Chaney Corporation	Buckhead Motor Works	145 Hilderbrand Dr Ne	Atlanta	GA	30328-3805	404-255-1516	Mr Tom Burdett
147603658	Business Wise Inc		6190 Powers Ferry Rd NW	Atlanta	GA	30339-2917	770-956-1955	Mr Lyle Leslie
120949854	C W White	B P Service Station	5565 Northside Dr NW	Atlanta	GA	30327-4227	770-984-9470	Mr Clifton W White
C18	CADILLAC MOTOR CAR DIVISION		5730 GLENRIDGE RD.	ATLANTA	GA	30328		
G14	Cahners Publishing Co.		6540 Powers Ferry Rd., #3	Atlanta	GA	30339	770-955-6500	
BC0011	Carnett's Car Wash & Rapid Lube Center		8505 Roswell Rd.	ATLANTA	GA	30350	770-650-6545	James & Regina McDaniel
39746545	Cerlic Environmental Controls		200 Burdette Rd NW	Atlanta	GA	30327-4806	404-256-3097	Mr Jim Radney
969536994	Checks & Valances	Fabrications	5693 Windy Ridge Dr Ne	Atlanta	GA	30342-1324	404-255-3675	Ms Cheryl Woolley
BC0012	Chevron		7320 Roswell Rd.	ATLANTA	GA	30328		
858738594	Chevron Stations Inc	Chevron Service Station	5545 New Northside Dr	Atlanta	GA	30339-2906	770-933-8059	Ms Carolyn Dennis
BC0054	Chick-Fil-A		8433 Roswell Rd	Atlanta	GA	30350	(770) 523-757	Ronnie
BC0069	Citgo	Easy Serve	7355 Roswell Rd	Atlanta	GA	30328	770-523-2521	Islam
BC0062	Classic Cadillac-Subaru		7700 Roswell Rd	ATLANTA	GA	30350	770-394-9100	Pat Dominicone
217053	Cloth Bag Co., The		1249 Pitts Rd.	Atlanta	GA	30350	770-393-0058	
791424567	Colad Group Inc		1000 Abernathy Rd Ne	Atlanta	GA	30328-5606	770-668-2175	Mr Steve Yates
BC0014	Complete Automotive Services	All Tune & Lube	8135 ROSWELL RD.	ATLANTA	GA	30350	770-399-1977	Timothy Harris

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
BC0009	Big 10 Tires & Automotive Center			7534				
BC0010	Big K Mart			5331				
82827775	Bilbet Inc	President	Commrcl Prtng Lith	27520101	59439902			
G12	Biochem Systems, Inc.	President		2851	2899	2842		
BC0048	Blockbuster Video/Pet			7841	O752	7519	7212	
63112622	Body Investments Inc	President	Tp Bdy Rpr Pnt Sh	75320401				
C15	BRAKE SERVICES			75				
33361002	Brown & Bigelow Inc	President	Commrcl Prtng Lith	27520400				
12203	Browne Mfg. Co., Stewart R.			3629	3648			
1181075	Bryant House Collection			2511				
C16	BUICK MOTOR DIVISION GMC			37				
843529660	Burdett/Chaney Corporation	President	Gnrl Atmtve RPR Shp	75380000	55310103	75390400		
147603658	Business Wise Inc	President	Commrcl Prtng Grvr	27540503				
120949854	C W White	Owner	Gaslne Svc Stations	55419901				
C18	CADILLAC MOTOR CAR DIVISION			37				
G14	Cahners Publishing Co.			2721				
BC0011	Carnett's Car Wash & Rapid Lube Center			7542				
39746545	Cerlic Environmental Controls	President	Analytcl Instrmnts	38269907				
969536994	Checks & Valances	Partner	Curtains Draperies	23910000				
BC0012	Chevron			5541				
858738594	Chevron Stations Inc	Branch Manager	Gaslne Svc Stations	55410000	54110200			
BC0054	Chick-Fil-A			5812				
BC0069	Citgo			5541				
BC0062	Classic Cadillac-Subaru	owner		5511				
217053	Cloth Bag Co., The			2393				
791424567	Colad Group Inc	Branch Manager	Blnkbks Lslf Bndrs	27820401				
BC0014	Complete Automotive Services			7538				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
BC0009	Big 10 Tires & Automotive Center					Long Island Cree	Y	auto repair	II
BC0010	Big K Mart					Long Island Cree	Y	retail store	IV
82827775	Bilbet Inc	6600 ROSWELL RD NE	M	75	L	Marsh Creek			
G12	Biochem Systems, Inc.	275 CARPENTER DR., SUITE	M	100	R	Long Island Cree			
BC0048	Blockbuster Video/Pet					Powers Branch	Y	strip mall	IV
63112622	Body Investments Inc	6480 WRIGHT CIR NE	M	75	L	Marsh Creek			
C15	BRAKE SERVICES	8290 ROSWELL RD.	M	100	L	Sullivan's Creek			
33361002	Brown & Bigelow Inc	5825 GLENRIDGE DR NE	M	75	R	Long Island Cree	N		
12203	Browne Mfg. Co., Stewart R.	1165 HIGHTOWER TR.	M	100	R	Sullivan's Creek			
1181075	Bryant House Collection	8295 ISON RD.	M	100	R	Sullivan's Creek	N		
C16	BUICK MOTOR DIVISION GMC	5730 GLENRIDGE DR.	M	100	L	Long Island Cree	N		
843529660	Burdett/Chaney Corporation	145 HILDERBRAND DR NE	M	75	R	Long Island Cree	Y	auto repair	II
147603658	Business Wise Inc	6190 POWERS FERRY RD NW	M	75	L	Game Creek	Y	office complex	IV
120949854	C W White	5565 NORTHSIDE DR NW	M	75	R	Game Creek	Y	gas station	II
C18	CADILLAC MOTOR CAR DIVISION	5730 GLENRIDGE RD.	M	75	L	Long Island Cree	N		
G14	Cahners Publishing Co.	6540 POWERS FERRY RD., #3	M	100	L	Game Creek			
BC0011	Carnett's Car Wash & Rapid Lube Center					Sullivan's Creek	Y	car wash/oil change	II
39746545	Cerlic Environmental Controls	200 BURDETTE RD NW	M	75	L	Long Island Cree	Y	residential business	
969536994	Checks & Valances	5693 WINDY RIDGE DR NE	M	75	R	Long Island Cree	N		
BC0012	Chevron					Marsh Creek	Y	gas station	II
858738594	Chevron Stations Inc	5545 NEW NORTHSIDE DR	M	100	R	Game Creek	Y	gas station	II
BC0054	Chick-Fil-A					Sullivan's Creek	Y	restaurant	II
BC0069	Citgo						Y	gas station	II
BC0062	Classic Cadillac-Subaru					Powers Branch	Y	car dealership	II
217053	Cloth Bag Co., The	1249 PITTS RD.	M	100	R	Sullivan's Creek	N		
791424567	Colad Group Inc	1000 ABERNATHY RD NE	M	75	L	Marsh Creek	N		
BC0014	Complete Automotive Services					Sullivan's Creek	Y	auto repair	II

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
BC0009	Big 10 Tires & Automotive Center	10.81258	SANDY SPRINGS		08/16/99	Barnum, Thurman
BC0010	Big K Mart	17.41406	SANDY SPRINGS	bags of limestone, 10-10-10 fertilizer, potting mix/miracle grow,all purpose plant food, lawn fertilizer		Miller, Barnum
82827775	Bilbet Inc	0.57939	SANDY SPRINGS			
G12	Biochem Systems, Inc.		SANDY SPRINGS			
BC0048	Blockbuster Video/Pet		SANDY SPRINGS		08/13/99	Thurman, Barnum
63112622	Body Investments Inc		SANDY SPRINGS			
C15	BRAKE SERVICES		SANDY SPRINGS			
33361002	Brown & Bigelow Inc	2.16095	SANDY SPRINGS			
12203	Browne Mfg. Co., Stewart R.		SANDY SPRINGS			
1181075	Bryant House Collection	0.67411	SANDY SPRINGS			
C16	BUICK MOTOR DIVISION GMC	2.37291	SANDY SPRINGS			
843529660	Burdett/Chaney Corporation	10.81258	SANDY SPRINGS		08/20/99	Thurman, Barnum
147603658	Business Wise Inc	1.04	SANDY SPRINGS			
120949854	C W White	1.34539	SANDY SPRINGS		08/31/99	Thurman, King
C18	CADILLAC MOTOR CAR DIVISION	7.24975	SANDY SPRINGS			
G14	Cahners Publishing Co.		SANDY SPRINGS			
BC0011	Carnett's Car Wash & Rapid Lube Center		SANDY SPRINGS		08/17/99	Miller, King
39746545	Cerlic Environmental Controls	1.82431	SANDY SPRINGS		08/03/99	King,Miller, Barnum
969536994	Checks & Valances	7.24975	SANDY SPRINGS			
BC0012	Chevron		SANDY SPRINGS		08/13/99	Thurman, Barnum
858738594	Chevron Stations Inc		SANDY SPRINGS		08/26/99	King, Bangasser
BC0054	Chick-Fil-A	0.5537	SANDY SPRINGS		09/10/99	Barnum, Bangasser
BC0069	Citgo				11/05/99	Thurman, Barnum
BC0062	Classic Cadillac-Subaru			used oil, used antifreeze, Tara Chemical brake wash, MSL-42 grease remover,	10/01/99	Barnum, Miller
217053	Cloth Bag Co., The		SANDY SPRINGS			
791424567	Colad Group Inc		SANDY SPRINGS			
BC0014	Complete Automotive Services	0.6504	SANDY SPRINGS		08/18/99	Miller, Thurman

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
BC0009	Big 10 Tires & Automotive Center		2231704.01000	1425809.92000	
BC0010	Big K Mart	no pollutants noted from pipes draining from building; fertilizer bags (approx. 200) stored outside through summer; employee said when bags break, contents are swept up and thrown away. Then area is washed down thoroughly	2232825.65000	1424956.27000	
82827775	Bilbet Inc		2232121.28318	1431517.11032	
G12	Biochem Systems, Inc.		2232159.81520	1424308.56628	
BC0048	Blockbuster Video/Pet	open sanitary sewer grate behind Dunwoody's Draft House	2238220.15000	1445242.36000	
63112622	Body Investments Inc		2230591.64244	1430372.23403	
C15	BRAKE SERVICES		2240863.92852	1447909.22983	
33361002	Brown & Bigelow Inc		2237188.97397	1423971.39128	
12203	Browne Mfg. Co., Stewart R.		2241355.44568	1450504.46383	
1181075	Bryant House Collection		2239150.67777	1447708.94059	
C16	BUICK MOTOR DIVISION GMC		2237350.64837	1422650.22368	
843529660	Burdett/Chaney Corporation	oil containers cleaned out once a month; anti-freeze is recycled	2231170.92785	1427025.95909	
147603658	Business Wise Inc	3 barrels stored next to car wash- marked non-hazardous, were not empty; 1 probably car wash, 1 misc., 1 marked non hazardous	2217755.92713	1421954.76113	
120949854	C W White	barrels stored next to carwash-markednon-hazardous; were not empty, 1 probably car wash, - misc., 1markednon hazardous	2216083.33219	1421090.34273	
C18	CADILLAC MOTOR CAR DIVISION		2237350.64837	1422650.22368	
G14	Cahners Publishing Co.		2214673.77985	1420026.81614	
BC0011	Carnett's Car Wash & Rapid Lube Center	dumpster has drain under it; drain in car wash, but not on edge	2240956.06000	1450281.55000	
39746545	Cerlic Environmental Controls	located in the basement of a house; inventory wastewater treatment instruments for Sweden-based company	2227574.61033	1418911.94037	
969536994	Checks & Valances		2233876.91280	1421580.03941	
BC0012	Chevron	drain under dumpster but unsure if it is a sanitary sewer	2236352.58000	1438774.29000	
858738594	Chevron Stations Inc	no catch basin at end of carwash; drain inside carwash to sanitary sewer; lots of trash by detention pond-dry,next to dumpster; dumpster has trail of grime leading to detention pond	2216862.16540	1421444.37162	
BC0054	Chick-Fil-A	no potential pollutants noted; site very clean, dumpster compliant	2241037.21000	1449435.47000	
BC0069	Citgo				
BC0062	Classic Cadillac-Subaru	water collects in underground vault & then goes under street & directly into creek; uncovered gaspump, very clean around it; storage area for used oil, anti-freeze, etc. is uncovered and some smaller containers look leaky and open: no secondary containment around used oil containers			
217053	Cloth Bag Co., The		2242212.21937	1443843.01544	
791424567	Colad Group Inc		2239521.41218	1430786.90693	
BC0014	Complete Automotive Services	runoff into storm drain; no drains at end of bays	2240776.81000	1446933.00000	

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
BC0009	Big 10 Tires & Automotive Center	N	N
BC0010	Big K Mart	N	N
82827775	Bilbet Inc		
G12	Biochem Systems, Inc.		
BC0048	Blockbuster Video/Pet	N	N
63112622	Body Investments Inc		
C15	BRAKE SERVICES		
33361002	Brown & Bigelow Inc		
12203	Browne Mfg. Co., Stewart R.		
1181075	Bryant House Collection		
C16	BUICK MOTOR DIVISION GMC		
843529660	Burdett/Chaney Corporation	N	N
147603658	Business Wise Inc	N	Y
120949854	C W White		
C18	CADILLAC MOTOR CAR DIVISION		
G14	Cahners Publishing Co.		
BC0011	Carnett's Car Wash & Rapid Lube Center	Y	N
39746545	Cerlic Environmental Controls		
969536994	Checks & Valances		
BC0012	Chevron	Y	N
858738594	Chevron Stations Inc	?	Y
BC0054	Chick-Fil-A	Y	N
BC0069	Citgo		
BC0062	Classic Cadillac-Subaru	N	N
217053	Cloth Bag Co., The		
791424567	Colad Group Inc		
BC0014	Complete Automotive Services	N	N

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
C22	CONTAINERIZED METAL TRANSPORT		700 OLD POST ROAD	ATLANTA	GA	30328		
BC0015	Costco		6350 Peachtree-Dunwoody	ATLANTA	GA	30328	770-352-8661	James Stafford
938743630	Creative Influence Corporation		6840 Roswell Rd Ne Ste 2b	Atlanta	GA	30328-2449	770-730-9982	Mr Steve Davis
BC0016	Crown		8475 Roswell Rd	Atlanta	GA	30350	770-992-9567	Jallow
BC0017	Crowne Plaza Hotel		6345 Powers Ferry Rd. NW	ATLANTA	GA	30339	770-955-1700	
1181785	Custom Enterprises Co.		630 Mabry Rd.	Atlanta	GA	30328	770-394-1802	
G20	Custom Signs Today, Inc.		5980 Roswell Rd.	Atlanta	GA	30328	404-255-1347	Judy Kavulia
BC0050	D.W. Campbell of Dunwoody, Inc.	Certified Auto Service	8445 Roswell Rd	ATLANTA	GA	30350	770-518-1611	Chuck Lehman
BC0018	Days Inn/Old Hickory House		5750 Roswell Rd	ATLANTA	GA	30342	404-252-5782	Phil Cherry
BC0019	Dekalb Discount Tire		6179 Roswell Rd	Atlanta	GA	30328	404-252-9895	Mark Horgan
29745325	Detroit Jewish News Ltd Partnr	Atlanta Jewish Times	6065 Roswell Rd., #700	Atlanta	GA	30328-4011	404-252-1600	Ms Theresa Wooldridge
BC0049	Diamond Detail		8655-B Roswell Rd	ATLANTA	GA	30350	770-993-8566	Alonzo Newbill, Jr.
BC0020	Diggers Sports Grill		8540 Roswell Rd	ATLANTA	GA	30350	770-587-2005	Scott Stuart
845526078	Do It Right Auto Service Inc		550 Dalrymple Rd Ne	Atlanta	GA	30328-1324	404-755-3777	Pronois Mathew
G23	Dorey Publishing & Information Svcs		6000 Lake Forrest Dr., #5	Atlanta	GA	30328	404-257-1962	Andrea Dorey
BC0021	Dover Square		120 Northwood Drive	ATLANTA	GA	30342	770-579-6777	Equitable management Corporati
G24	Duko Uniforms		7215 Wyncourtney Ln.	Atlanta	GA	30328	770-395-7001	Stanford Dubois
845008143	East Cobb Exxon Car Care	SANDY SPRINGS EXXON	6180 Roswell Rd Ne	Atlanta	GA	30328-3909	404-252-4527	Mr Richard Ehler
152837407	Economy Shoppers Desk Ltd Inc		315 Crosstree Ln Ne	Atlanta	GA	30328-1846	404-892-7777	Mr Charles G Economy
89362446	Eddies Automotive Inc		275 Mount Vernon Hwy	Atlanta	GA	30328-3901	404-252-0057	Mr Edward Mobley
BC0022	El Taco Veloz		5670 Roswell Rd	Atlanta	GA	30342	404-252-5100	Octavio Cabellero
13432195	Elegant Cleaners		6279 Roswell Rd Ne	Atlanta	GA	30328-3207	404-256-0708	Salimah Shariff
BC0023	Enterprise Rent-A-Car		6189 Roswell Rd	ATLANTA	GA	30328	404-255-3873	KC Colberg
118550870	Entertainment Publications		5885 Glenridge Dr Ne	Atlanta	GA	30328-5512	404-303-8608	Mr Roy Woolwine
BC0024	Europe Car Service		6518 Roswell Rd	ATLANTA	GA	30328	404-257-0102	
872709209	Express Oil Chng/Tne-Up Clinic		5811 Roswell Rd Ne	Atlanta	GA	30328-4905	404-851-0040	Mr Bill Sugg
BC0025	E-Z Serve		5645 Roswell Rd	ATLANTA	GA	30342	1-800-826-190	Jim Card
306652	Fastsigns		6138 Roswell Rd.	Sandy S	GA	30328	404-255-3278	

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
C22	CONTAINERIZED METAL TRANSPORT			75				
BC0015	Costco	Assistant Warehouse		5331	5921			
938743630	Creative Influence Corporation	President	Nondurable Gds Nec	51999901	56990400	23950204	50990702	
BC0016	Crown			5541				
BC0017	Crowne Plaza Hotel			7011				
1181785	Custom Enterprises Co.			3089				
G20	Custom Signs Today, Inc.	Owner		3993				
BC0050	D.W. Campbell of Dunwoody, Inc.	Owner		7538				
BC0018	Days Inn/Old Hickory House			7011	5812			
BC0019	Dekalb Discount Tire			7534				
29745325	Detroit Jewish News Ltd Partnr	Manager	Newspapers	27110100				
BC0049	Diamond Detail							
BC0020	Diggers Sports Grill			5812	5813			
845526078	Do It Right Auto Service Inc	President	Gnrl Atmtve RPR Shp	75380000				
G23	Dorey Publishing & Information Svcs	President		2741	27210105	73740000		
BC0021	Dover Square							
G24	Duko Uniforms	Partner		2326	2339			
845008143	East Cobb Exxon Car Care	Owner	Gnrl Atmtve RPR Shp	75380000	55410000	75390400		
152837407	Economy Shoppers Desk Ltd Inc	President	Plstcs Products Ne	30890104				
89362446	Eddies Automotive Inc	President	Gaslne Svc Stations	55410000				
BC0022	El Taco Veloz			5812				
13432195	Elegant Cleaners	Owner	Dryclng Plt Exc Rg	72160000				
BC0023	Enterprise Rent-A-Car			7514				
118550870	Entertainment Publications	Manager	Misc Publishing	27410000				
BC0024	Europe Car Service			7538				
872709209	Express Oil Chng/Tne-Up Clinic	Branch Manager	Atmtve RPR Shps Ne	75399907				
BC0025	E-Z Serve			5541				
306652	Fastsigns			3993				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
C22	CONTAINERIZED METAL TRANSPORT	700 OLD POST ROAD	M	100	L	Heards Creek			
BC0015	Costco					Marsh Creek	Y	retail store	IV
938743630	Creative Influence Corporation	6840 ROSWELL RD NE STE 2B	M	75	L	Marsh Creek			
BC0016	Crown					Sullivan's Creek	Y	gas station	II
BC0017	Crowne Plaza Hotel					Game Creek	Y	hotel	IV
1181785	Custom Enterprises Co.	630 MABRY RD.	M	100	L	Marsh Creek	N		
G20	Custom Signs Today, Inc.	5980 ROSWELL RD.	M	100	L	Long Island Cree			
BC0050	D.W. Campbell of Dunwoody, Inc.					Sullivan's Creek	Y	auto repair	II
BC0018	Days Inn/Old Hickory House					Long Island Cree	Y	hotel/ restaurant	III
BC0019	Dekalb Discount Tire					Long Island Cree	Y	tire shop	II
29745325	Detroit Jewish News Ltd Partnr	6065 ROSWELL RD., #700	M	100	R	Long Island Cree			
BC0049	Diamond Detail						Y	auto detail	II
BC0020	Diggers Sports Grill					Sullivan's Creek	Y	restaurant	IV
845526078	Do It Right Auto Service Inc	550 DALRYMPLE RD NE	M	75	L	Powers Branch	N		
G23	Dorey Publishing & Information Svcs	6000 LAKE FORREST DR., #5	M	100	L	Long Island Cree	N		
BC0021	Dover Square					Long Island Cree	Y	strip mall	IV
G24	Duko Uniforms	7215 WYNCOURTNEY LN.	M	100	R	Marsh Creek	N		
845008143	East Cobb Exxon Car Care	6180 ROSWELL RD NE	M	75	L	Long Island Cree			
152837407	Economy Shoppers Desk Ltd Inc	315 CROSSTREE LN NE	M	75	R	Marsh Creek	N		
89362446	Eddies Automotive Inc	275 MOUNT VERNON HWY	M	57	R	Long Island Cree	Y	auto repair	II
BC0022	El Taco Veloz					Long Island Cree	Y	restaurant	III
13432195	Elegant Cleaners	6279 ROSWELL RD NE	M	75	R	Marsh Creek			
BC0023	Enterprise Rent-A-Car					Long Island Cree	Y	car rental	II
118550870	Entertainment Publications	5885 GLENRIDGE DR NE	M	75	R	Long Island Cree	N		
BC0024	Europe Car Service					Marsh Creek	Y	auto repair	II
872709209	Express Oil Chng/Tne-Up Clinic	5811 ROSWELL RD NE	M	75	R	Long Island Cree	Y	oil change & maintenance	II
BC0025	E-Z Serve					Long Island Cree	Y	gas station	II
306652	Fastsigns	6138 ROSWELL RD.	M	100	L	Long Island Cree	Y		

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
C22	CONTAINERIZED METAL TRANSPORT		SANDY SPRINGS			
BC0015	Costco	0.99636	SANDY SPRINGS		08/26/99	King, Miller, Bangasser
938743630	Creative Influence Corporation	7.29517	SANDY SPRINGS			
BC0016	Crown		SANDY SPRINGS		08/17/99	Miller, King
BC0017	Crowne Plaza Hotel	0.25893	SANDY SPRINGS	discharing raw sewage into storm drain	08/31/99	Thurman, King
1181785	Custom Enterprises Co.		SANDY SPRINGS			
G20	Custom Signs Today, Inc.		SANDY SPRINGS			
BC0050	D.W. Campbell of Dunwoody, Inc.				11/05/99	Thurman, Barnum
BC0018	Days Inn/Old Hickory House		SANDY SPRINGS		08/17/99	Miller, King
BC0019	Dekalb Discount Tire		SANDY SPRINGS		08/10/99	King, Thurman, Barnum
29745325	Detroit Jewish News Ltd Partnr	0.56006	SANDY SPRINGS			
BC0049	Diamond Detail			ZEP cleaning slovent	10/01/99	Barnum,Miller
BC0020	Diggers Sports Grill		SANDY SPRINGS		08/19/99	Barnum, King
845526078	Do It Right Auto Service Inc		SANDY SPRINGS			
G23	Dorey Publishing & Information Svcs		SANDY SPRINGS			
BC0021	Dover Square		SANDY SPRINGS		08/17/99	King, Miller
G24	Duko Uniforms		SANDY SPRINGS			
845008143	East Cobb Exxon Car Care		SANDY SPRINGS			
152837407	Economy Shoppers Desk Ltd Inc		SANDY SPRINGS			
89362446	Eddies Automotive Inc		SANDY SPRINGS		08/10/99	King, Barnum,Thurman
BC0022	El Taco Veloz	0.13059	SANDY SPRINGS		08/17/99	Miller, King
13432195	Elegant Cleaners	0.79803	SANDY SPRINGS			
BC0023	Enterprise Rent-A-Car	0.69963	SANDY SPRINGS		08/10/99	King, Thurman, Barnum
118550870	Entertainment Publications		SANDY SPRINGS			
BC0024	Europe Car Service		SANDY SPRINGS		08/16/99	Thurman, Barnum
872709209	Express Oil Chng/Tne-Up Clinic		SANDY SPRINGS		08/03/99	King, Miller, Barnum
BC0025	E-Z Serve		SANDY SPRINGS	drums,paint bucket	08/04/99	Miller, Barnum
306652	Fastsigns		SANDY SPRINGS		08/16/99	Thurman, Barnum

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
C22	CONTAINERIZED METAL TRANSPORT		2222637.58301	1425109.83590	
BC0015	Costco	pumping station very clean	2239470.33000	1429042.44000	
938743630	Creative Influence Corporation		2233696.87441	1433964.62168	
BC0016	Crown	no potential pollutants noted	2240923.84000	1450127.61000	
BC0017	Crowne Plaza Hotel	recyclable dumpster next to storm grate;open grease pit- trail of 10 square feet leading to storm drain	2216645.18000	1421040.33000	Yes
1181785	Custom Enterprises Co.		2235944.47986	1435933.04712	
G20	Custom Signs Today, Inc.		2232102.71669	1425291.29141	
BC0050	D.W. Campbell of Dunwoody, Inc.				
BC0018	Days Inn/Old Hickory House				
BC0019	Dekalb Discount Tire	open empty oil containers, broken pallets, old engine block around dumpster; one drain in bay, washout will run to storm sewer	2232279.72000	1427313.58000	
29745325	Detroit Jewish News Ltd Partnr		2232130.34611	1426123.28105	
BC0049	Diamond Detail				
BC0020	Diggers Sports Grill	foul odor from grease pit; old, open 55 gallon drum-posibly old grease pit; runoff drains to detention pond	2240553.91000	1450131.19000	
845526078	Do It Right Auto Service Inc		2235244.83089	1438967.93167	
G23	Dorey Publishing & Information Svcs		2229685.95966	1425609.73161	
BC0021	Dover Square	oil stains in parking area			
G24	Duko Uniforms		2235030.45230	1437758.93729	
845008143	East Cobb Exxon Car Care		2232096.50425	1427393.22172	
152837407	Economy Shoppers Desk Ltd Inc		2226186.69934	1434867.75892	
89362446	Eddies Automotive Inc	above ground storage tank for waste oil-picked up every 2-3 weeks; car wash located next door; oil slick between service staion & car wash	2232384.31453	1427537.87273	
BC0022	El Taco Veloz	no potential pollutants noted other than litter & trash on site	2232123.58000	1422103.87000	
13432195	Elegant Cleaners		2232120.94298	1428149.50682	
BC0023	Enterprise Rent-A-Car	asked about soap used to wash cars--"auto detailing" soap			
118550870	Entertainment Publications		2237042.07712	1424739.24693	
BC0024	Europe Car Service	garbage & paint cans lying on the ground; drains by dumpster clogged with dirt			
872709209	Express Oil Chng/Tne-Up Clinic	no notable spills or pollutants noted	2232037.72880	1423729.95713	
BC0025	E-Z Serve				
306652	Fastsigns		2232076.09936	1426953.60545	

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
C22	CONTAINERIZED METAL TRANSPORT		
BC0015	Costco	Y	N
938743630	Creative Influence Corporation		
BC0016	Crown	N	Y
BC0017	Crowne Plaza Hotel		
1181785	Custom Enterprises Co.		
G20	Custom Signs Today, Inc.		
BC0050	D.W. Campbell of Dunwoody, Inc.	N	N
BC0018	Days Inn/Old Hickory House		
BC0019	Dekalb Discount Tire	N	N
29745325	Detroit Jewish News Ltd Partnr		
BC0049	Diamond Detail	N	N
BC0020	Diggers Sports Grill	N	N
845526078	Do It Right Auto Service Inc		
G23	Dorey Publishing & Information Svcs		
BC0021	Dover Square	N	Y
G24	Duko Uniforms		
845008143	East Cobb Exxon Car Care		
152837407	Economy Shoppers Desk Ltd Inc		
89362446	Eddies Automotive Inc	N	N
BC0022	El Taco Veloz	N	Y
13432195	Elegant Cleaners		
BC0023	Enterprise Rent-A-Car	N	Y
118550870	Entertainment Publications		
BC0024	Europe Car Service	N	Y
872709209	Express Oil Chng/Tne-Up Clinic	N	N
BC0025	E-Z Serve	N	N
306652	Fastsigns	N	N

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
N2926	Federal Express PDK		710 Morgan Falls Rd.	Atlanta	GA			
179589239	Fiberdyne Labs Inc		333 Sandy Springs Cir Ne	Atlanta	GA	30328-3897	404-252-0106	Ms Jane Patterson
BC0026	FLO-KEN, INC.	PROFESSIONAL CLEANERS	6018 SANDY SPRINGS CIR NE	ATLANTA	GA	30328-3832	404-255-2146	MR. WILLIAM D. GALUSHA
844961797	Fowler Enterprise Inc		5640 Northside Dr NW	Atlanta	GA	30328	770-952-2577	Terry Fowler
BC0063	Frank Jackson Lincoln Mercury		7555 Roswell Rd	ATLANTA	GA	30350	770-668-9600	Barry Jackson
1182560	Franklin's Of Sandy Springs		6600 Roswell Rd. N.E., St	Atlanta	GA	30328	404-255-9163	
116862	French, Inc., Earl D.		6075 Roswell Rd.	Atlanta	GA	30328	404-255-0881	
N1570	Fulton County-Morgan Falls		460 Morgan Falls Rd.	Atlanta				
BC0027	General Cinema/Salar Restaurant	Parkside Strip Mall	5920 Roswell Rd	ATLANTA	GA	30328	404-252-8181	Mark (Salar rest)
C29	GENERAL MOTORS CORPORATION		5730 GLENRIDGE DR.	ATLANTA	GA	30328		
827809351	German Car Service Inc		7350 Roswell Rd Ne	Atlanta	GA	30328-1043	770-396-9110	Ms Elizabeth Berganske
116969	Gerson & Assocs., Inc.		680 Amster Green Dr.	Atlanta	GA	30350	770-394-6372	
13460790	GF Enterprises Inc		615 Amber Ridge Trl	Atlanta	GA	30328	770-804-2621	Mr David Tenenbaum
C32	GFF LTD		5982 ROSWELL RD.	ATLANTA	GA	30328		
C33	GILMAN PAPER COMPANY		35 GLENLAKE PARKWAY	ATLANTA	GA	30328		
C34	GM IND AND GOVERNMENT RELATION		5730 GLENRIDGE DR.	ATLANTA	GA	30328		
84352053	Graphic Craft Corporation	Graphic Craft Printing	220 Sandy Springs Cir Ne	Atlanta	GA	30328-3853	404-843-2200	Mr Thomas Loveland
805198157	Graphitees		500 Dalrymple Rd Ne	Atlanta	GA	30328-1324	404-394-0506	Mr Dwight Horton
956657068	Grubb & Sayre Inc	Sandy Springs Car Wash	6585 Roswell Rd Ne	Atlanta	GA	30328-3100	404-256-5056	Mr Emanuel Grubb
BC0028	Guardian Savings		5430 Northside Dr	ATLANTA	GA	30339	770-984-9091	
49916609	H R H Flooring		6059 Boylston Dr Ne	Atlanta	GA	30328-4168	404-943-0611	Mr Pelham H Robertson
624874087	Haas Group Inc		5605 Glenridge Dr Ne	Atlanta	GA	30342-1365	404-303-1080	Mr Marshall Haas
859816076	Hanger Prosthetics Orthopedics		755 Mount Vernon Hwy Ne	Atlanta	GA	30328-4274	404-257-0088	Mr Todd Clay
C35	HAVIT PRODUCTS		6000 LAKE FOREST DR.	ATLANTA	GA	30328		
C36	HEAVENLY FRUITS		290 HILDERBRAND DR.	ATLANTA	GA	30328		
BC0064	Hightower Center		8302 Hightower Trail	ATLANTA	GA	30350	770-444-9511	Parkway Property Management
185480	Hofer's Bakery		334 Sandy Springs Cir. N.	Atlanta	GA	30328	404-255-8200	

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
N2926	Federal Express PDK			4513				
179589239	Fiberdyne Labs Inc	Branch Manager	Tlphne Tlgph Apptu	36610000				
BC0026	FLO-KEN, INC.	PRESIDENT	DRYCLING PLT EXC RG	72160000				
844961797	Fowler Enterprise Inc	Owner	Gnrl Atmtve RPR Shp	75380000				
BC0063	Frank Jackson Lincoln Mercury			5511				
1182560	Franklin's Of Sandy Springs			2759				
116862	French, Inc., Earl D.			3911				
N1570	Fulton County-Morgan Falls			9511				
BC0027	General Cinema/Salar Restaurant			7832	5812			
C29	GENERAL MOTORS CORPORATION			37				
827809351	German Car Service Inc	Chief Executive Offi	Gnrl Atmtve RPR Shp	75380000	55			
116969	Gerson & Assocs., Inc.			2399				
13460790	GF Enterprises Inc	President	Jewelry Prec Metal	39110200				
C32	GFF LTD			75				
C33	GILMAN PAPER COMPANY			26				
C34	GM IND AND GOVERNMENT RELATION			37				
84352053	Graphic Craft Corporation	President	Commrcl Prtng Lith	27520101				
805198157	Graphitees	Owner	Auto Apparel Trmng	23960402				
956657068	Grubb & Sayre Inc	President	Carwashes	75420000				
BC0028	Guardian Savings			6035				
49916609	H R H Flooring	President	Carpets and Rugs	22730000	50230000			
624874087	Haas Group Inc	Chairman of the Boar	Periodicals	27210102				
859816076	Hanger Prosthetics Orthopedics	Branch Manager	Srgcl Appl Suppls	38420000				
C35	HAVIT PRODUCTS			28				
C36	HEAVENLY FRUITS			20				
BC0064	Hightower Center			9999				
185480	Hofer's Bakery			2051	2052			

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
N2926	Federal Express PDK	710 MORGAN FALLS RD.	M	100	L	Powers Branch			III
179589239	Fiberdyne Labs Inc	333 SANDY SPRINGS CIR NE	M	75	R	Marsh Creek	N		
BC0026	FLO-KEN, INC.		M	0		Long Island Cree			
844961797	Fowler Enterprise Inc	5640 NORTHSIDE DR NW	M	75	L	Game Creek			
BC0063	Frank Jackson Lincoln Mercury					Powers Branch	Y	car dealership	II
1182560	Franklin's Of Sandy Springs	6600 ROSWELL RD. N.E., ST	M	45	L	Marsh Creek			
116862	French, Inc., Earl D.	6075 ROSWELL RD.	M	100	R	Long Island Cree			
N1570	Fulton County-Morgan Falls	460 MORGAN FALLS RD.	M	100	L	Powers Branch			
BC0027	General Cinema/Salar Restaurant					Long Island Cree	Y	cinema & restaurant in strip r	IV
C29	GENERAL MOTORS CORPORATION	5730 GLENRIDGE DR.	M	100	L	Long Island Cree	N		
827809351	German Car Service Inc	7350 ROSWELL RD NE	M	75	L	Powers Branch	Y	auto repair	II
116969	Gerson & Assocs., Inc.	680 AMSTER GREEN DR.	M	100	L	Sullivan's Creek	N		
13460790	GF Enterprises Inc	615 AMBER RIDGE TRL	M	88	R	Trib 7	N		
C32	GFF LTD	5982 ROSWELL RD.	M	100	L	Long Island Cree			
C33	GILMAN PAPER COMPANY	35 GLENLAKE PARKWAY	M	75	R	Marsh Creek	N		
C34	GM IND AND GOVERNMENT RELATION	5730 GLENRIDGE DR.	M	100	L	Long Island Cree	N		
84352053	Graphic Craft Corporation	220 SANDY SPRINGS CIR NE	M	75	L	Long Island Cree	Y	printing company in strip mall	IV
805198157	Graphitees	500 DALRYMPLE RD NE	M	75	L	Powers Branch	N		
956657068	Grubb & Sayre Inc	6585 ROSWELL RD NE	M	75	R	Marsh Creek			
BC0028	Guardian Savings					Game Creek	Y	savings & loan company	IV
49916609	H R H Flooring	6059 BOYLSTON DR NE	M	75	R	Long Island Cree			
624874087	Haas Group Inc	5605 GLENRIDGE DR NE	M	75	R	Long Island Cree	N		
859816076	Hanger Prosthetics Orthopedics	755 MOUNT VERNON HWY NE	M	32	R	Marsh Creek			
C35	HAVIT PRODUCTS	6000 LAKE FOREST DR.	M	94	L	Long Island Cree	N		
C36	HEAVENLY FRUITS	290 HILDERBRAND DR.	M	100	L	Long Island Cree			
BC0064	Hightower Center						Y	office complex	IV
185480	Hofer's Bakery	334 SANDY SPRINGS CIR. N.	M	75	L	Marsh Creek	N		

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
N2926	Federal Express PDK		SANDY SPRINGS			
179589239	Fiberdyne Labs Inc		SANDY SPRINGS			
BC0026	FLO-KEN, INC.		SANDY SPRINGS			
844961797	Fowler Enterprise Inc		SANDY SPRINGS			
BC0063	Frank Jackson Lincoln Mercury		SANDY SPRINGS	oil drum	09/10/99	Barnum, Bangasser
1182560	Franklin's Of Sandy Springs	2.2271	SANDY SPRINGS			
116862	French, Inc., Earl D.		SANDY SPRINGS			
N1570	Fulton County-Morgan Falls		SANDY SPRINGS			
BC0027	General Cinema/Salar Restaurant	2.09689	SANDY SPRINGS		08/16/99	Barnum, Miller
C29	GENERAL MOTORS CORPORATION		SANDY SPRINGS			
827809351	German Car Service Inc		SANDY SPRINGS		08/13/99	Thurman,Barnum
116969	Gerson & Assocs., Inc.		SANDY SPRINGS			
13460790	GF Enterprises Inc		SANDY SPRINGS			
C32	GFF LTD	7.24975	SANDY SPRINGS			
C33	GILMAN PAPER COMPANY	0.6564	SANDY SPRINGS			
C34	GM IND AND GOVERNMENT RELATION	0.44094	SANDY SPRINGS			
84352053	Graphic Craft Corporation		SANDY SPRINGS		08/20/99	Thurman, Barnum
805198157	Graphitees		SANDY SPRINGS			
956657068	Grubb & Sayre Inc	7.02234	SANDY SPRINGS			
BC0028	Guardian Savings	7.24975	SANDY SPRINGS		08/31/99	Thurman, King
49916609	H R H Flooring	4.12492	SANDY SPRINGS			
624874087	Haas Group Inc	0.16813	SANDY SPRINGS			
859816076	Hanger Prosthetics Orthopedics		SANDY SPRINGS			
C35	HAVIT PRODUCTS		SANDY SPRINGS			
C36	HEAVENLY FRUITS	0.33997	SANDY SPRINGS			
BC0064	Hightower Center		SANDY SPRINGS		08/17/99	Miller, King
185480	Hofer's Bakery		SANDY SPRINGS			

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
N2926	Federal Express PDK		2237142.61123	1443697.45840	
179589239	Fiberdyne Labs Inc		2231416.56600	1428504.68105	
BC0026	FLO-KEN, INC.		2230395.03471	1426060.85051	
844961797	Fowler Enterprise Inc		2215794.07907	1422163.07479	
BC0063	Frank Jackson Lincoln Mercury	very clean; only dumpsters outside under rear covered parking; car wash area drains to storm sewers- uncovered; hazmat area uncovered,surrounded by brick berm; old corroded oil drum stored outside; bays do not have catch basins along doorways			
1182560	Franklin's Of Sandy Springs		2232121.28318	1431517.11032	
116862	French, Inc., Earl D.		2232123.68635	1426225.21820	
N1570	Fulton County-Morgan Falls		2234016.47652	1444250.83900	
BC0027	General Cinema/Salar Restaurant	no potential pollutants noted; other restaurants in strip mall include: Hong Kong Gourmet, Pastabilities, Samrat Indian Cuisine,Subway Sandwiches			
C29	GENERAL MOTORS CORPORATION		2237350.64837	1422650.22368	
827809351	German Car Service Inc	open pipe coming out of ground to the left of dumpster; a few car parts in an "open scrap pile" behind shop	2236466.66358	1439037.78069	
116969	Gerson & Assocs., Inc.		2243638.16467	1445095.70621	
13460790	GF Enterprises Inc		2224328.16760	1430844.87757	
C32	GFF LTD		2232103.97425	1425310.50109	
C33	GILMAN PAPER COMPANY		2237604.88325	1432287.98595	
C34	GM IND AND GOVERNMENT RELATION		2237350.64837	1422650.22368	
84352053	Graphic Craft Corporation		2230913.04662	1427825.43626	
805198157	Graphitees		2234740.77424	1438910.72107	
956657068	Grubb & Sayre Inc		2232064.41184	1431353.94771	
BC0028	Guardian Savings				
49916609	H R H Flooring		2232772.24394	1426164.29075	
624874087	Haas Group Inc		2236544.21720	1421416.53335	
859816076	Hanger Prosthetics Orthopedics		2237101.52528	1429133.58481	
C35	HAVIT PRODUCTS		2229685.95966	1425609.73161	
C36	HEAVENLY FRUITS		2232517.34436	1427050.45989	
BC0064	Hightower Center	dumpster has 4 bags of ready mix concrete by it			
185480	Hofer's Bakery		2231436.58909	1428503.46394	

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
N2926	Federal Express PDK		
179589239	Fiberdyne Labs Inc		
BC0026	FLO-KEN, INC.		
844961797	Fowler Enterprise Inc		
BC0063	Frank Jackson Lincoln Mercury	N	N
1182560	Franklin's Of Sandy Springs		
116862	French, Inc., Earl D.		
N1570	Fulton County-Morgan Falls		
BC0027	General Cinema/Salar Restaurant	N	N
C29	GENERAL MOTORS CORPORATION		
827809351	German Car Service Inc	N	N
116969	Gerson & Assocs., Inc.		
13460790	GF Enterprises Inc		
C32	GFF LTD		
C33	GILMAN PAPER COMPANY		
C34	GM IND AND GOVERNMENT RELATION		
84352053	Graphic Craft Corporation		
805198157	Graphitees		
956657068	Grubb & Sayre Inc		
BC0028	Guardian Savings		
49916609	H R H Flooring		
624874087	Haas Group Inc		
859816076	Hanger Prosthetics Orthopedics		
C35	HAVIT PRODUCTS		
C36	HEAVENLY FRUITS		
BC0064	Hightower Center	N	Y
185480	Hofer's Bakery		

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
BC0029	Home Depot, The		6400 Peachtree-Dunwoody	ATLANTA	GA	30328	770-804-8065	John Heske
949019319	Hood & Caro Enterprises Inc	Eurocar	6518 Roswell Rd Ne Ste 1	Atlanta	GA	30328-3114	404-257-0102	Mr Lalo Caro
160182069	Hot Lanta MBL Auto Detailing		2704 The Vly Ne	Atlanta	GA	30328-5430	770-399-0907	Ms Suzanne Lelenta
BC0030	Hunan House/Cinema Grill	North Springs Shopping Center	7294 Roswell Road NE	Atlanta	GA	30328	770-394-3071	Mr Yap (Hunan House)
BC0031	Il Forno Pizza & Pasta		5680 Roswell Rd	Atlanta	GA	30342	404-255-8466	Abraham
939887287	Illustrum Inc		290 Hilderbrand Dr Ne	Atlanta	GA	30328-3906	404-843-4467	Ms Susan Zimmerman
C37	IMAGE CAR WASH & DETAIL SALON		6087 ROSWELL RD.	ATLANTA	GA	30328		
C39	INSIDE OUT AUTOMOTIVE CORP.		7258 ROSWELL RD.	ATLANTA	GA	30328		
617379201	J W Cox Company Inc	European Import Specialist	5834 Roswell Rd Ne	Atlanta	GA	30328-4906	404-843-8061	Mr Jeffrey Cox
	Jade Palace Chinese Restaurant		6317 Roswell Rd	Atlanta	GA			
45844008	James H Gray Inc	North Springs BP	7325 Roswell Rd Ne	Atlanta	GA	30328-1421	770-394-1604	Mr James H Gray
G31	Jewelry Artisans, Inc.		6690 Roswell Rd., #510	Atlanta	GA	30328	404-255-6268	David Geller
C41	JIFFY LUBE #670		7505 ROSWELL RD.	ATLANTA	GA	30350	770-668-9147	
948207345	Jiffy Lube International Inc		6569 Roswell Rd Ne	Atlanta	GA	30328-3100	770-256-0208	Mr David Lewis
64522568	Jim Hall Inc	Sandy Springs BP	6024 Roswell Rd Ne	Atlanta	GA	30328-4021	404-256-3766	Mr Jim Hall
26943311	K M K Factoring Llc		5784 Lke Forst Dr NW 23	Atlanta	GA	30328	404-250-1960	Mr William McKnew
BC0032	Kaiser Permanente Glenlake Med. Offices		20 Glenlake Pkwy	Atlanta	GA	30328	404-365-0966	
177099850	KAY CLEANERS		6055 SANDY SPRINGS CIR NE	ATLANTA	GA	30328-3863	404-843-1297	MS. KAY KIM
G34	Kinko's Copies		5975 Roswell Rd., N.E., #	Atlanta	GA	30328	404-257-1881	Dwight Lyman
BC0033	Kroger		8331 Roswell Road	ATLANTA	GA	30350	770-998-3040	Steven Cooke

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
BC0029	Home Depot, The	Store Manager		5251				
949019319	Hood & Caro Enterprises Inc	President	Gnrl Atmtve RPR Shp	75380000				
160182069	Hot Lanta MBL Auto Detailing	Principal	Carwashes	75420000				
BC0030	Hunan House/Cinema Grill			5812				
BC0031	Il Forno Pizza & Pasta			5812				
939887287	Illustrum Inc	Principal	Jewelry Prec Metal	39110000	76310200	59440000		
C37	IMAGE CAR WASH & DETAIL SALON			75				
C39	INSIDE OUT AUTOMOTIVE CORP.			55				
617379201	J W Cox Company Inc	President	Gnrl Atmtve RPR Shp	75380000				
	Jade Palace Chinese Restaurant							
45844008	James H Gray Inc	President	Gaslne Svc Stations	55410000				
G31	Jewelry Artisans, Inc.	President		3911				
C41	JIFFY LUBE #670			75				
948207345	Jiffy Lube International Inc	Branch Manager	Automotive Svcs Ne	75490103				
64522568	Jim Hall Inc	President	Gaslne Svc Stations	55419901	75380000	55319901	75490301	75429901
26943311	K M K Factoring Llc	Principal	Mfg Industries Nec	39990000				
BC0032	Kaiser Permanente Glenlake Med. Offices			8011				
177099850	KAY CLEANERS	OWNER	DRCLNG PLT EXC RG	72160000				
G34	Kinko's Copies	General Manager		2752	2741	2789		
BC0033	Kroger			5411				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
BC0029	Home Depot, The					Marsh Creek	Y	hardware store	III
949019319	Hood & Caro Enterprises Inc	6518 ROSWELL RD NE STE 1	M	75	L	Marsh Creek			
160182069	Hot Lanta MBL Auto Detailing	2704 THE VLY NE	M	75	L	Marsh Creek			
BC0030	Hunan House/Cinema Grill					Marsh Creek	Y	restaurants in strip mall	IV
BC0031	Il Forno Pizza & Pasta					Long Island Cree	Y	restaurant	III
939887287	Illustrum Inc	290 HILDERBRAND DR NE	M	75	L	Long Island Cree			
C37	IMAGE CAR WASH & DETAIL SALON	6087 ROSWELL RD.	M	100	R	Long Island Cree			
C39	INSIDE OUT AUTOMOTIVE CORP.	7258 ROSWELL RD.	M	100	L	Marsh Creek			
617379201	J W Cox Company Inc	5834 ROSWELL RD NE	M	75	L	Long Island Cree	Y	auto repair	II
	Jade Palace Chinese Restaurant					Marsh Creek	Y	restaurant	III
45844008	James H Gray Inc	7325 ROSWELL RD NE	M	75	R	Marsh Creek	Y	gas station &auto repair	II
G31	Jewelry Artisans, Inc.	6690 ROSWELL RD., #510	M	100	L	Marsh Creek			
C41	JIFFY LUBE #670	7505 ROSWELL RD.	M	100	R	Powers Branch	Y	oil change & maintenance	II
948207345	Jiffy Lube International Inc	6569 ROSWELL RD NE	M	75	R	Marsh Creek	Y	oil change & maintenance	II
64522568	Jim Hall Inc	6024 ROSWELL RD NE	M	75	L	Long Island Cree	Y	gas station	II
26943311	K M K Factoring Llc	5784 LAKE FORREST DR NW 2	M	13		Long Island Cree	N		
BC0032	Kaiser Permanente Glenlake Med. Offices						Y	office complex	
177099850	KAY CLEANERS		M	0		Long Island Cree			
G34	Kinko's Copies	5975 ROSWELL RD., N.E., #	M	75	R	Long Island Cree			
BC0033	Kroger					Sullivan's Creek	Y	Grocery Store	IV

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
BC0029	Home Depot, The		SANDY SPRINGS	treated wood, quickrete	08/26/99	King, Bangasser
949019319	Hood & Caro Enterprises Inc		SANDY SPRINGS			
160182069	Hot Lanta MBL Auto Detailing		SANDY SPRINGS			
BC0030	Hunan House/Cinema Grill		SANDY SPRINGS		08/16/99	Thurman, Barnum
BC0031	Il Forno Pizza & Pasta		SANDY SPRINGS	grease bin, dumpster	08/17/99	Miller,King
939887287	Illustrum Inc	0.70528	SANDY SPRINGS			
C37	IMAGE CAR WASH & DETAIL SALON		SANDY SPRINGS			
C39	INSIDE OUT AUTOMOTIVE CORP.		SANDY SPRINGS			
617379201	J W Cox Company Inc		SANDY SPRINGS	used antifreeze, used oil filters	08/16/99	Barnum, Miller
	Jade Palace Chinese Restaurant		SANDY SPRINGS	Khafra infrastructure inventory field crew noted discharge of cooking grease oil, kitchen wastewater and solids in stormwater drainage system		
45844008	James H Gray Inc		SANDY SPRINGS		08/12/99	King, Barnum
G31	Jewelry Artisans, Inc.		SANDY SPRINGS			
C41	JIFFY LUBE #670		SANDY SPRINGS		08/03/99	King, Barnum, Miller
948207345	Jiffy Lube International Inc	0.59181	SANDY SPRINGS	oil leaking from dumpster	08/10/99	King,Barnum, Thurman
64522568	Jim Hall Inc	0.79501	SANDY SPRINGS		08/16/99	Thurman, Barnum
26943311	K M K Factoring Llc	0.33513	SANDY SPRINGS			
BC0032	Kaiser Permanente Glenlake Med. Offices	0.47843	SANDY SPRINGS		08/26/99	Bangasser, King
177099850	KAY CLEANERS	0.37305	SANDY SPRINGS			
G34	Kinko's Copies		SANDY SPRINGS			
BC0033	Kroger	4.52855	SANDY SPRINGS		08/17/99	King, Miller

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
BC0029	Home Depot, The	water puddle w/white bubbles in plant area; blocks w/ open cover; broken bags of fertilizer outside; dumpster is covered,compactor system closed, no water, no drain,docking area	2239416.51000	1429473.06000	
949019319	Hood & Caro Enterprises Inc		2231810.96122	1430626.80347	
160182069	Hot Lanta MBL Auto Detailing		2234885.38530	1436968.64461	
BC0030	Hunan House/Cinema Grill	no potential pollutants were identified	2235764.46000	1438344.77000	
BC0031	Il Forno Pizza & Pasta	no potential polllutants noted other than 2 dumpsters and grease pit; runoff draining directly into Long Island Creek			
939887287	Illustrum Inc		2232517.34436	1427050.45989	
C37	IMAGE CAR WASH & DETAIL SALON		2232115.69464	1426347.54278	
C39	INSIDE OUT AUTOMOTIVE CORP.		2236001.42339	1438096.92178	
617379201	J W Cox Company Inc	used antifreeze & oil filters-leaking evident; no yard drains in parking lot-cracking asphalt; flatsloped parking lot- seems like shop will have runoff inside store during moderate storm event	2232038.13316	1423925.12145	
	Jade Palace Chinese Restaurant				Yes
45844008	James H Gray Inc	no abnormal gas/oil residue on pavement	2236439.04091	1438712.38828	
G31	Jewelry Artisans, Inc.		2232575.60986	1432491.65121	
C41	JIFFY LUBE #670	no notable pipes or contaminants	2236123.64222	1440742.69895	
948207345	Jiffy Lube International Inc	oil coming out of dumpster onto pavement, not an obvious amount in dumpster but is leaking out of drain in dumpster; open barrels of transmission oil-6 gallon, half full	2232004.70220	1431182.64206	
64522568	Jim Hall Inc	old car batteries & tires out in open; unmarked barrels-look like car wash fluid barrels; container for secondary containment for oil	2232128.23518	1425732.42843	
26943311	K M K Factoring Llc		2229671.42810	1423655.49309	
BC0032	Kaiser Permanente Glenlake Med. Offices	no evidence of debris or pollutants stored outside or exposed to stormwater;one dumpster & several recycling bins stored outside; very neat and well kept			
177099850	KAY CLEANERS		2230344.88192	1426450.49911	
G34	Kinko's Copies		2232103.76465	1425307.29941	
BC0033	Kroger	almost totally paved; 3 acres, lots of dumpsters; 2 restaurants; grease bins look ok	2241620.32000	1448872.34000	

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
BC0029	Home Depot, The	N	N
949019319	Hood & Caro Enterprises Inc		
160182069	Hot Lanta MBL Auto Detailing		
BC0030	Hunan House/Cinema Grill	N	N
BC0031	Il Forno Pizza & Pasta	N	Y
939887287	Illustrum Inc		
C37	IMAGE CAR WASH & DETAIL SALON		
C39	INSIDE OUT AUTOMOTIVE CORP.		
617379201	J W Cox Company Inc		
	Jade Palace Chinese Restaurant		
45844008	James H Gray Inc	N	N
G31	Jewelry Artisans, Inc.		
C41	JIFFY LUBE #670	N	N
948207345	Jiffy Lube International Inc	N	Y
64522568	Jim Hall Inc	N	N
26943311	K M K Factoring Llc		
BC0032	Kaiser Permanente Glenlake Med. Offices	N	N
177099850	KAY CLEANERS		
G34	Kinko's Copies		
BC0033	Kroger	N	N

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
BC0034	Kroger		227 Sandy Springs Place N	Atlanta	GA	30328	404-256-3434	Mr. Reynolds
805258761	Kwik-Fit Tire & Service Inc		6258 Roswell Rd Ne	Atlanta	GA	30328-3208	404-255-4112	Mr Robert M Morrison
BC0052	La Strada		8550 Roswell Rd	Atlanta	GA	30350	(770) 552-130	Tino Venturi
26943329	Labelogic Inc		185 Mark Trl NW	Atlanta	GA	30328-2163	404-257-5920	Mr Mike Dusek
116940	Laminating Technologies, Inc.		1160 Hightower Tr.	Atlanta	GA	30350	770-518-6010	Tom Carroll
965775380	Laser Photographics		290 Hilderbrand Dr Ne	Atlanta	GA	30328-3906	404-531-0555	Pat Thompson III
BC0035	Leslie's Swimming Pool Supplies		263 Hilderbrand Dr Ne	Atlanta	GA	30328	404-257-1966	Dave Ficquette
621144237	Logo Promotions		6445 Roswell Rd Ne Ste 10	Atlanta	GA	30328	404-252-4993	Mr Ralph M Sher
	Long Horn Steak House		6400 Roswell Rd	Atlanta	GA	30328		
933252629	Lucent Technologies Inc		6701 Roswell Rd Ne	Atlanta	GA	30328-2501	404-573-4000	Mr Sherwood Robbins
783913650	M & K Printing Corp	M & K Printing	6558 Vernon Woods Dr Ne	Atlanta	GA	30328-3203	404-255-8641	Mr Dave Hjelmeland
968128975	Marketing Development Corp		6075 Roswell Rd Ne Ste 22	Atlanta	GA	30328	404-843-1840	Mr John Bielefeldt
968129007	Marketing Promotion Group		7320 Hunters Branch Dr Ne	Atlanta	GA	30328-1721	770-551-8989	Tochie Blad
73455172	Master Kleen Services Entps	Master Kleen	6196 Roswell Rd Ne	Atlanta	GA	30328-3910	404-252-7274	Ms Irene Smith
8523904	MCCULLOUGH'S CHEVRON		5810 Roswell Rd Ne	Atlanta	GA	30328-4906	404-252-3014	Mr Rod McUllough
BC0036	McDonalds		6360 Powers Ferry Rd	ATLANTA	GA	30337	770-955-1732	Angela Watson
841230600	McIntosh Performance Auto Ctr		263 Hilderbrand Dr Ne	Atlanta	GA	30328-3907	404-843-1353	Mr David McIntosh
150319465	Metro Emissions Inc		5600 Roswell Rd Ne	Atlanta	GA	30342-1119	404-252-5538	Mr Robert Lyerly
C46	METRO EMISSIONS, INC.		7355 ROSWELL RD.	ATLANTA	GA	30328		
G37	Metro Trophy Co.		6354 Roswell Rd.	Atlanta	GA	30328	404-705-9005	Ray Sonshein
BC0055	Midas		6112 Roswell Rd	Atlanta	GA	30328	(404) 255-727	Bill Henderson
C48	MIGHTY TIDY CAR WASH		6535 ROSWELL RD.	ATLANTA	GA	30328		

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
BC0034	Kroger			5411				
805258761	Kwik-Fit Tire & Service Inc	Chief Executive Offi	Atmtve RPR Shps Ne	75390000	55319901			
BC0052	La Strada			5812				
26943329	Labelogic Inc	Principal	Commrcl Printng Ne	27590000				
116940	Laminating Technologies, Inc.			2653				
965775380	Laser Photographics	President	Commrcl Printng Ne	27590000				
BC0035	Leslie's Swimming Pool Supplies			5999				
621144237	Logo Promotions	Owner	Nondurable Gds Nec	51999901	23960402	73890304		
	Long Horn Steak House							
933252629	Lucent Technologies Inc	Manager	Tlphne Tlgph Apptu	36610000				
783913650	M & K Printing Corp	President	Commrcl Prtng Lith	27520000	2791	2731		
968128975	Marketing Development Corp	President	Mag Optcl Rcdng Me	36950101				
968129007	Marketing Promotion Group	Owner	Signs Advt Spcltie	39930000				
73455172	Master Kleen Services Entps	President	Dryclng Plt Exc Rg	72160000				
8523904	MCCULLOUGH'S CHEVRON	Owner	Gaslne Svc Stations	55410000				
BC0036	McDonalds			5812				
841230600	McIntosh Performance Auto Ctr	Owner	Gnrl Atmtve RPR Shp	75380000				
150319465	Metro Emissions Inc	President	Automotive Svcs Ne	75490101				
C46	METRO EMISSIONS, INC.			75				
G37	Metro Trophy Co.	Owner		3914	3231	3999		
BC0055	Midas			7538				
C48	MIGHTY TIDY CAR WASH			75				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
BC0034	Kroger					Long Island Cree	Y	Grocery Store	II
805258761	Kwik-Fit Tire & Service Inc	6258 ROSWELL RD NE	M	75	L	Marsh Creek			
BC0052	La Strada						Y	restaurant	III
26943329	Labelogic Inc	185 MARK TRL NW	M	75	R	Marsh Creek	N		
116940	Laminating Technologies, Inc.	1160 HIGHTOWER TR.	M	100	L		Y	clothing/laminating sales	IV
965775380	Laser Photographics	290 HILDERBRAND DR NE	M	75	L	Long Island Cree			
BC0035	Leslie's Swimming Pool Supplies						Y	pool supplies	
621144237	Logo Promotions	6445 RSWELL RD NE STE 109	M	66	R	Marsh Creek			
	Long Horn Steak House					Marsh Creek	Y	restaurant	III
933252629	Lucent Technologies Inc	6701 ROSWELL RD NE	M	75	R	Marsh Creek			
783913650	M & K Printing Corp	6558 VERNON WOODS DR NE	M	75	L	Marsh Creek	Y	printing company	
968128975	Marketing Development Corp	6075 RSWELL RD NE STE 220	M	66	R	Long Island Cree			
968129007	Marketing Promotion Group	7320 HUNTERS BRANCH DR NE	M	75	L	Marsh Creek	N		
73455172	Master Kleen Services Entps	6196 ROSWELL RD NE	M	75	L	Long Island Cree			
8523904	MCCULLOUGH'S CHEVRON	5810 ROSWELL RD NE	M	75	L	Long Island Cree	Y	gas station	II
BC0036	McDonalds					Game Creek	Y	restaurant	III
841230600	McIntosh Performance Auto Ctr	263 HILDERBRAND DR NE	M	75	R	Long Island Cree	Y	auto repair	II
150319465	Metro Emissions Inc	5600 ROSWELL RD NE	M	75	L	Long Island Cree			
C46	METRO EMISSIONS, INC.	7355 ROSWELL RD.	M	100	R	Powers Branch			
G37	Metro Trophy Co.	6354 ROSWELL RD.	M	100	L	Marsh Creek	Y	retail	IV
BC0055	Midas						Y	brake shop	II
C48	MIGHTY TIDY CAR WASH	6535 ROSWELL RD.	M	100	R	Marsh Creek	Y	car wash	II

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
BC0034	Kroger		SANDY SPRINGS		07/28/99	Brearley
805258761	Kwik-Fit Tire & Service Inc		SANDY SPRINGS			
BC0052	La Strada		SANDY SPRINGS		09/10/99	Barnum, Bangasser
26943329	Labelogic Inc		SANDY SPRINGS			
116940	Laminating Technologies, Inc.		SANDY SPRINGS		08/17/99	Miller, King
965775380	Laser Photographics		SANDY SPRINGS			
BC0035	Leslie's Swimming Pool Supplies		SANDY SPRINGS	swimming pool filter material	08/04/99	Miller, Barnum
621144237	Logo Promotions	0.53367	SANDY SPRINGS			
	Long Horn Steak House		SANDY SPRINGS	Discharging cooking grese and oil into stormwater drainage system	10/10/99	
933252629	Lucent Technologies Inc	0.62916	SANDY SPRINGS			
783913650	M & K Printing Corp		SANDY SPRINGS		12/16/99	Thurman, King
968128975	Marketing Development Corp		SANDY SPRINGS			
968129007	Marketing Promotion Group	0.36754	SANDY SPRINGS			
73455172	Master Kleen Services Entps	28.39874	SANDY SPRINGS			
8523904	MCCULLOUGH'S CHEVRON		SANDY SPRINGS	paint drums	08/16/99	Miller, Barnum
BC0036	McDonalds		SANDY SPRINGS		08/31/99	Thurman, King
841230600	McIntosh Performance Auto Ctr		SANDY SPRINGS	oil and anitfreeze, engines, engine parts, grease in yard.	12/16/99	Thurman,King
150319465	Metro Emissions Inc		SANDY SPRINGS			
C46	METRO EMISSIONS, INC.		SANDY SPRINGS			
G37	Metro Trophy Co.		SANDY SPRINGS		08/16/99	Thurman, Barnum
BC0055	Midas	0.31335	SANDY SPRINGS		09/10/99	Barnum, Bangasser
C48	MIGHTY TIDY CAR WASH	17.41406	SANDY SPRINGS		08/10/99	King, Barnum, Thurman

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
BC0034	Kroger	no problems noted	2231398.94000	1426110.99000	
805258761	Kwik-Fit Tire & Service Inc		2232120.78943	1428075.33105	
BC0052	La Strada	dumpsters surrounded by curb & detention pond; dirty but no trail grime to storm sewer; may be a drain under dumpster; in stormconditions, rainwater buildup in the dumpster area would drain to retention pond through gap in surrounding wall	2240576.58000	1450461.75000	
26943329	Labelogic Inc		2231072.97479	1434776.14757	
116940	Laminating Technologies, Inc.	sales center; no potential pollutants noted	2241304.87084	1450514.42547	
965775380	Laser Photographics		2232517.34436	1427050.45989	
BC0035	Leslie's Swimming Pool Supplies		2232239.76000	1426998.16000	
621144237	Logo Promotions		2231937.56200	1429958.42276	
	Long Horn Steak House	discharging cooking oil and grease into stormwater drainage system			Yes
933252629	Lucent Technologies Inc		2232704.83670	1432651.38623	
783913650	M & K Printing Corp	old rusty 55 gal. Barrel found outside in front of building	2232352.51375	1429636.71510	
968128975	Marketing Development Corp		2232123.68635	1426225.21820	
968129007	Marketing Promotion Group		2240521.12603	1438889.73891	
73455172	Master Kleen Services Entps		2232106.08501	1427540.14114	
8523904	MCCULLOUGH'S CHEVRON		2232037.72880	1423729.95713	
BC0036	McDonalds	very clean detention pond,unsure of where it is draining from; foul odor coming from dumpster	2216738.40000	1420618.82000	
841230600	McIntosh Performance Auto Ctr	located below Leslie's Pool Supplies, nothing drains to street, below street level	2232228.91229	1427047.63585	
150319465	Metro Emissions Inc		2232213.76413	1421437.51546	
C46	METRO EMISSIONS, INC.		2236452.70965	1439119.28896	
G37	Metro Trophy Co.		2232085.82029	1429120.05378	
BC0055	Midas	no storm drains; all stormwater flows out to Roswell Rd; runoff fromrear lot flows onto property, toward road; site clean,no significant pollutant sources; construction of condominiums to begin in lot behind property; owner requested a faxed copy of completed report	2231992.39000	1426756.88000	
C48	MIGHTY TIDY CAR WASH		2231877.81920	1430818.61753	

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
BC0034	Kroger	N	N
805258761	Kwik-Fit Tire & Service Inc		
BC0052	La Strada	N	N
26943329	Labelogic Inc		
116940	Laminating Technologies, Inc.	N	N
965775380	Laser Photographics		
BC0035	Leslie's Swimming Pool Supplies	N	N
621144237	Logo Promotions		
	Long Horn Steak House		
933252629	Lucent Technologies Inc		
783913650	M & K Printing Corp	N	N
968128975	Marketing Development Corp		
968129007	Marketing Promotion Group		
73455172	Master Kleen Services Entps		
8523904	MCCULLOUGH'S CHEVRON	N	N
BC0036	McDonalds	N	Y
841230600	McIntosh Performance Auto Ctr	N	N
150319465	Metro Emissions Inc		
C46	METRO EMISSIONS, INC.		
G37	Metro Trophy Co.	N	N
BC0055	Midas	N	N
C48	MIGHTY TIDY CAR WASH	N	N

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
66464124	Milgo Solutions		400 Embassy Row Ne	Atlanta	GA	30328-1667	770-804-5000	L A Trout
C49	MOBILE MAN AUTO DETAILING		5501 GLENRIDGE DRIVE	ATLANTA	GA	30342		
626151690	Motiva Enterprises Llc	Texaco Food Mart 1008	5640 New Northside Dr NW	Atlanta	GA	30328-4612	770-952-7270	Ms Edith Horton
163078272	Motiva Enterprises Llc	Texaco Star Mart	5700 Roswell Rd Ne	Atlanta	GA	30342-1105	404-252-5579	Latonia Jones
790099303	Mr Transmission Inc	Mr Transmission	6569c Roswell Rd Ne	Atlanta	GA	30328-3100	404-843-3379	Mr Tom Nichols
C51	NALCO CHEMICAL COMPANY		5775 GLENRIDGE DR.	ATLANTA	GA	30328		
C52	NATIONAL CAR CARE CENTER	NAPA Advanced Automotive Specialists	6569 ROSWELL RD.	ATLANTA	GA	30328	404-257-1051	Ron Robertson
10778	National Computer Systems, Inc.		400 N. Ridge Rd.	Atlanta	GA	30350	770-641-4100	
38713017	National Pet Supply Inc		5755 Dupree Dr NW Ste 110	Atlanta	GA	30327-4352	770-541-9111	Gene Reilly
C53	NATIONAL PRIDE		6535 ROSWELL RD.	ATLANTA	GA	30328		
19188213	National Scholarship Services		5825 Glenridge Dr Ne	Atlanta	GA	30328-5387	404-459-8899	Mr Calvin S Morse
C54	NATIONWIDE BRAKE MASTERS		6152 ROSWELL RD.	ATLANTA	GA	30328		
257194	New South Publishing, Inc.		7840 Roswell Rd.	Atlanta	GA	30350	770-512-0016	
48183045	Nicoles Inc		600 Dalrymple Rd Ne	Atlanta	GA	30328-1350	770-804-0613	Ms Nicole Phillips
102031655	Noor Enterprises Inc	Southern Classic Cleaners	5355 Roswell Rd Ne	Atlanta	GA	30342-1914	404-252-9900	Shiraz Noormohamad
C56	NORTH SPRINGS AUTOMOTIVE		7295 ROSWELL RD., N.E.	ATLANTA	GA	30328		
	Northridge Auto Care		8290B Roswell Rd	Atlanta	GA	30350	770-643-1300	
C57	NORTHRIDGE EXXON		8325 ROSWELL RD.	DUNWOOD	GA	30350	770-992-4397	Harry
28241813	Old Salem Cleaners	Powers Ferry Village shopping center	6300 Powers Ferry Rd NW	Atlanta	GA	30339-2946	770-952-1991	Mr John Earnest
C58	ORTIZ AUTO REPAIR		55 COPELAND RD.	ATLANTA	GA	30342		
967910308	Park Cleaners Inc		1100 Abernathy Rd Ne	Atlanta	GA	30328-5646	770-804-9010	Nazim Jiwani
C60	PEACH AUTO PAINTING & COLLISION		8435 ROSWELL RD.	ATLANTA	GA	30350	770-641-8312	Will Roberts
24179905	Pencraft Corporation	Ameripress Printing	6075 Roswell Rd Ne Ste 5	Atlanta	GA	30328-4062	404-256-4381	Betty Soprano
932244841	Penske Auto Centers Inc		5925 Roswell Rd Ne	Atlanta	GA	30328-4914	404-255-3335	Mr Randy Wilson

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
66464124	Milgo Solutions	Branch Manager	Tlphne Tlgph Apptu	36610000				
C49	MOBILE MAN AUTO DETAILING			75				
626151690	Motiva Enterprises Llc	Branch Manager	Gaslne Svc Stations	55419901	54110201			
163078272	Motiva Enterprises Llc	Manager	Gaslne Svc Stations	55419901	54110201			
790099303	Mr Transmission Inc	President	Atmtv Trans RPR Shp	75370000				
C51	NALCO CHEMICAL COMPANY			28				
C52	NATIONAL CAR CARE CENTER			75				
10778	National Computer Systems, Inc.			3572				
38713017	National Pet Supply Inc	President	Mfg Industries Nec	39999927				
C53	NATIONAL PRIDE			75				
19188213	National Scholarship Services	Agent	Commrcl Prtng Grvr	27540500				
C54	NATIONWIDE BRAKE MASTERS			75				
257194	New South Publishing, Inc.			2791				
48183045	Nicoles Inc	President	Dolls Stuffed Toys	39420100				
102031655	Noor Enterprises Inc	President	Dryclng Plt Exc Rg	72160000				
C56	NORTH SPRINGS AUTOMOTIVE			75				
	Northridge Auto Care							
C57	NORTHRIDGE EXXON			55				
28241813	Old Salem Cleaners	Owner	Dryclng Plt Exc Rg	72160000				
C58	ORTIZ AUTO REPAIR			75				
967910308	Park Cleaners Inc	President	Dryclng Plt Exc Rg	72169901				
C60	PEACH AUTO PAINTING & COLLISION	Manager		75				
24179905	Pencraft Corporation	Manager	Commrcl Printng Ne	27590000	2752			
932244841	Penske Auto Centers Inc	Branch Manager	Gnrl Atmtve RPR Shp	75380000				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
66464124	Milgo Solutions	400 EMBASSY ROW NE	M	27	L	Marsh Creek	N		
C49	MOBILE MAN AUTO DETAILING	5501 GLENRIDGE DRIVE	M	100	R	Long Island Cree	N		
626151690	Motiva Enterprises Llc	5640 NEW NORTHSIDE DR NW	M	75	R	Game Creek	Y	gas station	II
163078272	Motiva Enterprises Llc	5700 ROSWELL RD NE	M	75	L	Long Island Cree	Y	gas station	II
790099303	Mr Transmission Inc	6569C ROSWELL RD NE	M	75	R	Marsh Creek	Y	transmission repair	II
C51	NALCO CHEMICAL COMPANY	5775 GLENRIDGE DR.	M	100	R	Long Island Cree	N		
C52	NATIONAL CAR CARE CENTER	6569 ROSWELL RD.	M	100	R	Marsh Creek	Y	auto repair	II
10778	National Computer Systems, Inc.	400 NORTHRIDGE RD.	M	100	L	Sullivan's Creek	N		
38713017	National Pet Supply Inc	5755 DUPREE DR NW STE 110	M	75	R	Game Creek	N		
C53	NATIONAL PRIDE	6535 ROSWELL RD.	M	100	R	Marsh Creek			
19188213	National Scholarship Services	5825 GLENRIDGE DR NE	M	75	R	Long Island Cree	N		
C54	NATIONWIDE BRAKE MASTERS	6152 ROSWELL RD.	M	100	L	Long Island Cree			
257194	New South Publishing, Inc.	7840 ROSWELL RD.	M	100	L	Powers Branch			
48183045	Nicoles Inc	600 DALRYMPLE RD NE	M	75	L		N		
102031655	Noor Enterprises Inc	5355 ROSWELL RD NE	M	75	R	Long Island Cree	Y	dry cleaners	IV
C56	NORTH SPRINGS AUTOMOTIVE	7295 ROSWELL RD., N.E.	M	75	R	Marsh Creek			
	Northridge Auto Care						Y	auto repair	II
C57	NORTHRIDGE EXXON	8325 ROSWELL RD.	M	100	R	Sullivan's Creek	Y	gas station	II
28241813	Old Salem Cleaners	6300 POWERS FERRY RD NW	M	75	L	Game Creek	Y	cleaners in Powers Ferry Villa	IV
C58	ORTIZ AUTO REPAIR	55 COPELAND RD.	M	100	R	Long Island Cree	N		
967910308	Park Cleaners Inc	1100 ABERNATHY RD NE	M	75	L	Marsh Creek	N		
C60	PEACH AUTO PAINTING & COLLISION	8435 ROSWELL RD.	M	100	R	Sullivan's Creek	Y	auto painting/ repair	II
24179905	Pencraft Corporation	6075 ROSWELL RD NE STE 5	M	75	R	Long Island Cree			
932244841	Penske Auto Centers Inc	5925 ROSWELL RD NE	M	75	R	Long Island Cree	Y	auto repair	II

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
66464124	Milgo Solutions	17.41406	SANDY SPRINGS			
C49	MOBILE MAN AUTO DETAILING		SANDY SPRINGS			
626151690	Motiva Enterprises Llc		SANDY SPRINGS		08/31/99	Thurman, King
163078272	Motiva Enterprises Llc		SANDY SPRINGS		08/17/99	King, Miller
790099303	Mr Transmission Inc	7.68967	SANDY SPRINGS		12/20/99	Thurman,King
C51	NALCO CHEMICAL COMPANY		SANDY SPRINGS			
C52	NATIONAL CAR CARE CENTER	0.50293	SANDY SPRINGS	empty oil tank	09/10/99	Barnum, Bangasser
10778	National Computer Systems, Inc.	0.37305	SANDY SPRINGS			
38713017	National Pet Supply Inc	21.4662	SANDY SPRINGS			
C53	NATIONAL PRIDE		SANDY SPRINGS			
19188213	National Scholarship Services	0.37305	SANDY SPRINGS			
C54	NATIONWIDE BRAKE MASTERS	9.01012	SANDY SPRINGS			
257194	New South Publishing, Inc.	2.50796	SANDY SPRINGS			
48183045	Nicoles Inc		SANDY SPRINGS			
102031655	Noor Enterprises Inc	10.81258	SANDY SPRINGS		08/04/99	Miller, Barnum
C56	NORTH SPRINGS AUTOMOTIVE	0.3007	SANDY SPRINGS			
	Northridge Auto Care		SANDY SPRINGS	old engines in back of shop, oil cans	08/18/99	
C57	NORTHRIDGE EXXON	0.81581	SANDY SPRINGS	oil container, tire pile	08/17/99	Miller, King
28241813	Old Salem Cleaners	8.8182	SANDY SPRINGS		08/26/99	Bangasser, King
C58	ORTIZ AUTO REPAIR		SANDY SPRINGS			
967910308	Park Cleaners Inc	0.73252	SANDY SPRINGS			
C60	PEACH AUTO PAINTING & COLLISION	0.97615	SANDY SPRINGS		08/17/99	Miller, King
24179905	Pencraft Corporation	1.61563	SANDY SPRINGS			
932244841	Penske Auto Centers Inc	3.41988	SANDY SPRINGS	windshield washer fluid, de-icer material, oil, tires	08/04/99	Miller, Barnum

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
66464124	Milgo Solutions		2239347.92405	1432204.81268	
C49	MOBILE MAN AUTO DETAILING		2234772.32635	1420318.04260	
626151690	Motiva Enterprises Llc	spoke to manager of oil change facility	2216671.18324	1422290.93575	
163078272	Motiva Enterprises Llc	oil spills, stains; car wash has no drains or barriers outside edges	2232167.81942	1422531.81476	
790099303	Mr Transmission Inc	10+ barrels stored outside, uncovered next to building, some full,several old tires stored outside next to dumpster, dumpster open & drain in bottom-any residue will wash into sewer	2232004.70220	1431182.64206	
C51	NALCO CHEMICAL COMPANY		2237262.02492	1423309.46902	
C52	NATIONAL CAR CARE CENTER	dumpster clean,some debris stored beside it; entire lot drains to stormdrain at center, but the stormdrain is slightly raised so a lot of water pools around it	2232004.70220	1431182.64206	
10778	National Computer Systems, Inc.		2241871.90883	1448397.29963	
38713017	National Pet Supply Inc		2218629.54876	1422732.39886	
C53	NATIONAL PRIDE		2231877.81920	1430818.61753	
19188213	National Scholarship Services		2237188.97397	1423971.39128	
C54	NATIONWIDE BRAKE MASTERS		2232075.41052	1427116.34148	
257194	New South Publishing, Inc.		2238126.98250	1444453.86621	
48183045	Nicoles Inc		2235797.11348	1439001.59885	
102031655	Noor Enterprises Inc	no potential polllutants noted	2231911.77288	1419042.54533	
C56	NORTH SPRINGS AUTOMOTIVE		2236240.69627	1438433.43582	
	Northridge Auto Care	Resisted BC inspection, but did note old engines in back of facility			
C57	NORTHRIDGE EXXON	significant oil/radiator fluid, etc. runoff entering storm drain by garage area; exposed try of oil, removed while performing inspection	2240925.96377	1448266.85330	
28241813	Old Salem Cleaners	no notable pollutants,nothing stored outside; strip mall w/ Publix, CVS, & several small shops	2217214.59930	1421124.67602	
C58	ORTIZ AUTO REPAIR		2230146.47749	1422731.74490	
967910308	Park Cleaners Inc		2239796.53072	1430795.73859	
C60	PEACH AUTO PAINTING & COLLISION	empty paint cans around site; detention pond at south end of site (litter/oily water/trees) weir like device in berm to allow runoff to enter pond	2240805.50726	1449622.62250	
24179905	Pencraft Corporation		2232123.68635	1426225.21820	
932244841	Penske Auto Centers Inc	no potential polllutants noted, very clean; drums containing windshield washer concentrated de-icer & oil stored behind fence· no leaks noted; tire pile stored behind fence	2232069.70587	1424787.03921	

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
66464124	Milgo Solutions		
C49	MOBILE MAN AUTO DETAILING		
626151690	Motiva Enterprises Llc	N	Y
163078272	Motiva Enterprises Llc	N	Y
790099303	Mr Transmission Inc	N	N
C51	NALCO CHEMICAL COMPANY		
C52	NATIONAL CAR CARE CENTER	N	N
10778	National Computer Systems, Inc.		
38713017	National Pet Supply Inc		
C53	NATIONAL PRIDE		
19188213	National Scholarship Services		
C54	NATIONWIDE BRAKE MASTERS		
257194	New South Publishing, Inc.		
48183045	Nicoles Inc		
102031655	Noor Enterprises Inc	Y	N
C56	NORTH SPRINGS AUTOMOTIVE		
	Northridge Auto Care	N	N
C57	NORTHRIDGE EXXON	Y	Y
28241813	Old Salem Cleaners		
C58	ORTIZ AUTO REPAIR		
967910308	Park Cleaners Inc		
C60	PEACH AUTO PAINTING & COLLISION	N	N
24179905	Pencraft Corporation		
932244841	Penske Auto Centers Inc	N	N

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
BC0005	Pep Boy's Auto		6521 Roswell Rd	Atlanta	GA	30328	404-843-0662	Mr. Hoffman
3316457	Perfect Arrangers Inc		110 River Springs Dr NW	Atlanta	GA	30328-2020	404-847-0410	Ms Deborah Reece
C61	PERIMETER FORD USED CAR		7799 ROSWELL RD.	ATLANTA	GA	30350		
956025795	Pharmaceutical Research Assoc		5825 Glenridge Dr Ne	Atlanta	GA	30328-5387	404-847-9120	Mr Windell Fisher
C62	PINSTRIPES UNLIMITED		7799 ROSWELL RD.	ATLANTA	GA	30350		
878792712	Powers Ferry Amoco		5500 Northside Dr NW	Atlanta	GA	30327-4228	770-952-4109	Ms Ava Cullins
847317849	Precision Maintenance Inc	Meineke Muffler	6560b Roswell Rd Ne	Atlanta	GA	30328-3102	404-250-1192	Mr George Hall
966414708	PRECISION TUNE		333 SANDY SPRINGS CIR NE	ATLANTA	GA	30328	404-256-2598	MR. FRED CUMMINGS
824606222	Primedia Intertec	Argus Business Division	6151 Powers Ferry Rd NW	Atlanta	GA	30339-2959	770-955-2500	Mr John Skeels
2997356	Primemedia Information Inc	New Homes Databook Div	800 Mount Vernon Hwy	Atlanta	GA	30327-4322	770-668-9466	R A Heil
72463037	Printing Express Inc		215 Hilderbrand Dr Ne	Atlanta	GA	30328-3807	404-252-0550	Mr Harry Yingst
364399030	Printing Post		215 Copeland Rd Ne	Atlanta	GA	30342-4623	404-256-4888	Mr Karim Roeshandel
48624121	Pro Mach Inc		1000 Abernathy Rd Ne	Atlanta	GA	30328-5606	770-668-8900	Mr Jeff Reed
BC0059	Public Storage		5711 ROSWELL RD.	Atlanta	GA	30328	404-845-0439	Doris Koester
BC0037	QT		7884 Roswell Rd	Atlanta	GA	30350		
1681139	Raynat Press Inc	Raynat Graphing Systems	450 Hunters Crossing Dr N	Atlanta	GA	30328-1757	770-393-4300	Mr Gerald Carlin
BC0068	Ray's on the River		6700 Powers Ferry Rd	Atlanta	GA	30339	770-955-1187	Bryan Housley
BC0061	RBM Mercedes-Benz		7640 Roswell Rd	Atlanta	GA	30350	770-390-0700	John Ellis
809489214	RD Brandon Enterprises Inc	Sign-A-Rama	6303 Roswell Rd Ne	Atlanta	GA	30328-3209	404-303-6490	Mr Bob Brandon
C65	RED BARON'S VICTORY LANE		6425 ROSWELL RD.	ATLANTA	GA	30328		
37883402	Reed Elsevier Inc	Cahners Publishing Co	6520 Pwr Ferry Rd Ste 395	Atlanta	GA	30339	770-955-6500	J J Felton Jr
118273507	Reed Elsevier Inc	Gordon Publications	6540 Powers Ferry Rd NW	Atlanta	GA	30339-2933	770-956-9106	Mr Darrell White
BC0053	Rio Bravo		5565 New Northside Dr	ATLANTA	GA	30339	770-952-3241	Susan Fratianne
BC0038	Roadhouse Grill		205 Sandy Springs Place N	Atlanta	GA	30328	404-843-3850	Doug Grey
842078628	ROC Solid Inc	Midtown Baking Company	825 Spalding Dr Ne	Atlanta	GA	30328-1405	770-394-9704	Mr Randy Coryell
937978559	Ron White Engraving Co		290 Hilderbrand Dr Ne	Atlanta	GA	30328-3906	404-250-9333	Mr Ronald White
306602	Ross Equipment Co.		509 Hilderbrand Dr.	Sandy S	GA	30328	404-256-4112	
BC0060	Ruth's Chris Steakhouse		5788 Roswell Rd	ATLANTA	GA	30328	404-255-0035	John Harof

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
BC0005	Pep Boy's Auto			7537				
3316457	Perfect Arrangers Inc	Principal	Mfg Industries Nec	39990000				
C61	PERIMETER FORD USED CAR			55				
956025795	Pharmaceutical Research Assoc	Principal	Phrmctcl Preprtns	28340000				
C62	PINSTRIPES UNLIMITED			75				
878792712	Powers Ferry Amoco	Owner	Gaslne Svc Stations	55410000				
847317849	Precision Maintenance Inc	President	Auto Exhaust RPR Sh	75339902				
966414708	PRECISION TUNE	PRESIDENT	GNRL ATMTVE RPR SHP	75380000				
824606222	Primedia Intertec	Division President	Periodicals	27210102				
2997356	Primemedia Information Inc	Principal	Periodicals	27210105				
72463037	Printing Express Inc	President	Commrcl Prtng Lith	27520000				
364399030	Printing Post	Owner	Commrcl Printng Ne	27590000	27520000			
48624121	Pro Mach Inc	Chief Financial Offi	Packaging Machinery	35650000				
BC0059	Public Storage							
BC0037	QT			5541				
1681139	Raynat Press Inc	Chairman of the Boar	Commrcl Prtng Lith	27520101	2759			
BC0068	Ray's on the River			5812				
BC0061	RBM Mercedes-Benz			5511				
809489214	RD Brandon Enterprises Inc	President	Signs Advt Spcltie	39939907				
C65	RED BARON'S VICTORY LANE			55				
37883402	Reed Elsevier Inc	Branch Manager	Misc Publishing	27410000				
118273507	Reed Elsevier Inc	Branch Manager	Periodicals	27210000				
BC0053	Rio Bravo	General Manager		5812				
BC0038	Roadhouse Grill			5812				
842078628	ROC Solid Inc	Chief Executive Offi	Brd Cke Rltd Prdc	20510000	20520000	20530000		
937978559	Ron White Engraving Co	Owner	Mtl Ctng Alld Svcs	34790102				
306602	Ross Equipment Co.			3471				
BC0060	Ruth's Chris Steakhouse			5812				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
BC0005	Pep Boy's Auto					Marsh Creek	Y	oil change/maintenance	II
3316457	Perfect Arrangers Inc	110 RIVER SPRINGS DR NW	M	75	L	Marsh Creek	N		
C61	PERIMETER FORD USED CAR	7799 ROSWELL RD.	M	100	R	Powers Branch			
956025795	Pharmaceutical Research Assoc	5825 GLENRIDGE DR NE	M	75	R	Long Island Cree	N		
C62	PINSTRIPES UNLIMITED	7799 ROSWELL RD.	M	100	R	Powers Branch			
878792712	Powers Ferry Amoco	5500 NORTHSIDE DR NW	M	75	L	Game Creek	Y	gas station	II
847317849	Precision Maintenance Inc	6560B ROSWELL RD NE	M	75	L	Marsh Creek	Y	brake shop	II
966414708	PRECISION TUNE		M	0					
824606222	Primedia Intertec	6151 POWERS FERRY RD NW	M	75	R	Game Creek	N		
2997356	Primemedia Information Inc	800 MOUNT VERNON HWY	M	57	L		N		
72463037	Printing Express Inc	215 HILDERBRAND DR NE	M	75	R	Long Island Cree	Y	screen printing company	IV
364399030	Printing Post	215 COPELAND RD NE	M	75	R	Long Island Cree	N		
48624121	Pro Mach Inc	1000 ABERNATHY RD NE	M	75	L	Marsh Creek	N		
BC0059	Public Storage						Y	public storage facility	
BC0037	QT					Powers Branch	Y	gas station	II
1681139	Raynat Press Inc	450 HUNTERS CROSSING DR N	M	62	L	Marsh Creek	N		
BC0068	Ray's on the River					Game Creek	Y	restaurant	III
BC0061	RBM Mercedes-Benz					Powers Branch	Y	car dealership	II
809489214	RD Brandon Enterprises Inc	6303 ROSWELL RD NE	M	75	R	Marsh Creek			
C65	RED BARON'S VICTORY LANE	6425 ROSWELL RD.	M	100	R	Marsh Creek			
37883402	Reed Elsevier Inc	6520 POWERS FERRY RD	M	100	L	Game Creek			
118273507	Reed Elsevier Inc	6540 POWERS FERRY RD NW	M	75	L	Game Creek			
BC0053	Rio Bravo					Game Creek	Y	restaurant	III
BC0038	Roadhouse Grill						Y	restaurant	III
842078628	ROC Solid Inc	825 SPALDING DR NE	M	75	R	Marsh Creek	N		
937978559	Ron White Engraving Co	290 HILDERBRAND DR NE	M	75	L	Long Island Cree			
306602	Ross Equipment Co.	509 HILDERBRAND DR.	M	100	R	Long Island Cree	N		
BC0060	Ruth's Chris Steakhouse					Long Island Cree	Y	restaurant	III

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
BC0005	Pep Boy's Auto	4.18289	SANDY SPRINGS		08/10/99	King, Barnum, Thurman
3316457	Perfect Arrangers Inc	0.52143	SANDY SPRINGS			
C61	PERIMETER FORD USED CAR		SANDY SPRINGS			
956025795	Pharmaceutical Research Assoc	4.40914	SANDY SPRINGS			
C62	PINSTRIPES UNLIMITED		SANDY SPRINGS			
878792712	Powers Ferry Amoco	0.48095	SANDY SPRINGS		08/31/99	Thurman, King
847317849	Precision Maintenance Inc	56.85609	SANDY SPRINGS		08/16/99	Thurman,Barnum
966414708	PRECISION TUNE	10.81258	SANDY SPRINGS			
824606222	Primedia Intertec	56.85609	SANDY SPRINGS			
2997356	Primemedia Information Inc	1.17135	SANDY SPRINGS			
72463037	Printing Express Inc	1.52048	SANDY SPRINGS		08/20/99	Thurman,Barnum
364399030	Printing Post		SANDY SPRINGS			
48624121	Pro Mach Inc		SANDY SPRINGS			
BC0059	Public Storage				11/05/99	Thurman,Barnum
BC0037	QT		SANDY SPRINGS		08/12/99	King, Barnum
1681139	Raynat Press Inc	1.10644	SANDY SPRINGS			
BC0068	Ray's on the River				11/05/99	Thurman,Barnum
BC0061	RBM Mercedes-Benz				09/24/99	Thurman,Barnum
809489214	RD Brandon Enterprises Inc	1.36321	SANDY SPRINGS			
C65	RED BARON'S VICTORY LANE	7.29517	SANDY SPRINGS			
37883402	Reed Elsevier Inc		SANDY SPRINGS			
118273507	Reed Elsevier Inc	0.44769	SANDY SPRINGS			
BC0053	Rio Bravo				11/05/99	Thurman,Barnum
BC0038	Roadhouse Grill		SANDY SPRINGS			Brearley
842078628	ROC Solid Inc		SANDY SPRINGS			
937978559	Ron White Engraving Co	0.238	SANDY SPRINGS			
306602	Ross Equipment Co.		SANDY SPRINGS			
BC0060	Ruth's Chris Steakhouse		SANDY SPRINGS		09/16/99	Thurman, King

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
BC0005	Pep Boy's Auto	used oil filters dropped off by customers by disposal container & containers melted and leaked by disposal container; dumpster does have drain grate but not sure if it goes to sanitary sewer,otherwise in compliance; has shop floor cleaner & they dump water in a container to properly dispose of it	2232075.21000	1430704.30000	
3316457	Perfect Arrangers Inc		2228597.04186	1432258.79079	
C61	PERIMETER FORD USED CAR		2237654.73573	1443705.08270	
956025795	Pharmaceutical Research Assoc		2237188.97397	1423971.39128	
C62	PINSTRIPES UNLIMITED		2237654.73573	1443705.08270	
878792712	Powers Ferry Amoco	no drain by car wash	2216336.10704	1420795.28102	
847317849	Precision Maintenance Inc		2231969.90662	1431082.81431	
966414708	PRECISION TUNE		2231415.45109	1428514.47930	
824606222	Primedia Intertec		2217804.07317	1422048.28302	
2997356	Primemedia Information Inc		2237625.50644	1429252.98046	
72463037	Printing Express Inc	no visible drains on property; overgrown with kudzu in back around dumpster	2231782.14125	1427042.24030	
364399030	Printing Post		2231740.92823	1422698.81643	
48624121	Pro Mach Inc		2239521.41218	1430786.90693	
BC0059	Public Storage				
BC0037	QT		2238518.17000	1445338.79000	
1681139	Raynat Press Inc		2240323.76025	1436231.24258	
BC0068	Ray's on the River				
BC0061	RBM Mercedes-Benz	no containment for car was runoff; large black tubing coming down from hill behind pre-owned car building & trench dug prevents most runoff; catch basins located inside parts & service building; lock on used antifreeze containers, but not enclosed			
809489214	RD Brandon Enterprises Inc		2232121.23780	1428291.92429	
C65	RED BARON'S VICTORY LANE		2231986.93452	1429788.46068	
37883402	Reed Elsevier Inc		2214823.49328	1420091.66630	
118273507	Reed Elsevier Inc		2214673.77985	1420026.81614	
BC0053	Rio Bravo				
BC0038	Roadhouse Grill	no problems noted			
842078628	ROC Solid Inc		2238013.95041	1438510.11167	
937978559	Ron White Engraving Co		2232517.34436	1427050.45989	
306602	Ross Equipment Co.		2233745.20964	1425829.41442	
BC0060	Ruth's Chris Steakhouse	grease bin has stains underneath it; dumpster drains behind it to unknown location			

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
BC0005	Pep Boy's Auto	Y	N
3316457	Perfect Arrangers Inc		
C61	PERIMETER FORD USED CAR		
956025795	Pharmaceutical Research Assoc		
C62	PINSTRIPES UNLIMITED		
878792712	Powers Ferry Amoco		
847317849	Precision Maintenance Inc	N	N
966414708	PRECISION TUNE		
824606222	Primedia Intertec		
2997356	Primemedia Information Inc	N	N
72463037	Printing Express Inc		
364399030	Printing Post		
48624121	Pro Mach Inc		
BC0059	Public Storage	N	N
BC0037	QT	N	N
1681139	Raynat Press Inc		
BC0068	Ray's on the River	N	N
BC0061	RBM Mercedes-Benz	N	N
809489214	RD Brandon Enterprises Inc		
C65	RED BARON'S VICTORY LANE		
37883402	Reed Elsevier Inc		
118273507	Reed Elsevier Inc		
BC0053	Rio Bravo	N	N
BC0038	Roadhouse Grill		
842078628	ROC Solid Inc	N	N
937978559	Ron White Engraving Co		
306602	Ross Equipment Co.		
BC0060	Ruth's Chris Steakhouse	N	Y

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
42135892	Sams Car Wash Inc		6380 Roswell Rd Ne	Atlanta	GA	30328-3143	404-252-0376	Mr Sam McElhannon
C67	SANDY SPRINGS AMOCO OIL		5995 ROSWELL RD.	ATLANTA	GA	30328	404-252-9870	Sam Sheriff
120266374	Sandy Springs Chevron Inc		5701 Roswell Rd Ne	Atlanta	GA	30342-1104	404-252-1667	Mr Leon A Hendricks
C70	SANDY SPRINGS CLASSICS		585 GLEN FOREST RD.	ATLANTA	GA	30328		
61407722	Sandy Springs Garage		7475 Trowbridge Rd Ne	Atlanta	GA	30328-1053	770-393-8737	Mr Ronald W Lindsey
C72	SANDY SPRINGS RENTALS		5711 ROSWELL RD.	ATLANTA	GA	30342		
57290975	Sandy Springs Tire Center Inc	Auto Svcs & Tire Supermarts	5861 Roswell Rd Ne	Atlanta	GA	30328-4905	404-252-1603	Mr Leroy Lashley
BC0039	Sandy Springs Toyota		6475 Roswell Rd	Atlanta	GA	30328	404-256-3392	
BC0040	Sandy Springs True Value Hardware		6125 Roswell Rd	Atlanta	GA	30328	404-255-2151	Judy Coffey
C73	SEALBEST PRODUCTS, INC.		1215 HIGHTOWER TRAIL	ATLANTA	GA	30350		
14830660	Seybert Nicholas Prtg Group LP		6865 Glenlake Pkwy Ne	Atlanta	GA	30328-7222	770-351-0766	Mr Nicholas Seybert
BC0041	Shamshiri Buffet		215 Northwood Dr.	Atlanta	GA	30342	404-851-9566	Mostafa Mizakhanlou
BC0042	Shell		5866 Roswell Rd	Atlanta	GA	30328	404-851-9338	Raj Phele
153307	Sign-A-Rama		6303 Roswell Rd.	Atlanta	GA	30328	404-303-6490	
C74	SOLAR SHIELD AUTO TINTING		7277 ROSWELL RD.	ATLANTA	GA	30328		
G49	Soundview Communications, Inc.		7100 Peachtree Dunwoody R	Atlanta	GA	30328	770-668-0432	Wallis W. Wood
809564776	South Hampton Shutter Co		6595 Roswell Rd Ne G	Atlanta	GA	30328-3152	770-393-0063	Mr Ron Shaw
849772603	SOUTHEASTERN GRAPHICS		6025 SANDY SPRINGS CIR NE	ATLANTA	GA	30328-3863	770-594-8874	MR. ELLIOTT DAHLE
845585736	Southern Building Systems		6216 Ferry Dr Ne	Atlanta	GA	30328-3069	404-250-0910	Mr Scott Kirk
53358375	Southern Wood Products Inc	Atlanta Timber	200 Sandy Springs Pl Ne	Atlanta	GA	30328-3854	404-531-0008	Mr Jeff Wofford
C75	SPARKS COMPUTERIZED CAR		8135 ROSWELL RD.	ATLANTA	GA	30350		
938612959	Specular Press		5555 Roswell Rd Ne	Atlanta	GA	30342-1803	404-705-8988	Danial Jencka
BC0043	Speedway		295 Mt. Vernon	Atlanta	GA	30328		Mary
BC0046	SPMC Sears Pool Management		1190 Hightower Tr	Atlanta	GA	30350	770-993-7492	
17514360	Sports Media Group Inc		7094 Peachtree Dunwoody R	Atlanta	GA	30328-1615	770-409-1333	Kristian Krempel

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
42135892	Sams Car Wash Inc	President	Carwashes	75420000				
C67	SANDY SPRINGS AMOCO OIL			55				
120266374	Sandy Springs Chevron Inc	President	Gaslne Svc Stations	55419901				
C70	SANDY SPRINGS CLASSICS			55				
61407722	Sandy Springs Garage	Partner	Gnrl Atmtve RPR Shp	75380000				
C72	SANDY SPRINGS RENTALS			75				
57290975	Sandy Springs Tire Center Inc	President	Gnrl Atmtve RPR Shp	75380000	55319901			
BC0039	Sandy Springs Toyota			5511	7538			
BC0040	Sandy Springs True Value Hardware			5251				
C73	SEALBEST PRODUCTS, INC.			75				
14830660	Seybert Nicholas Prtg Group LP	President	Commrcl Printng Ne	27590000				
BC0041	Shamshiri Buffet			5812				
BC0042	Shell			5541				
153307	Sign-A-Rama			3993				
C74	SOLAR SHIELD AUTO TINTING			75				
G49	Soundview Communications, Inc.	President		2791				
809564776	South Hampton Shutter Co	President	Millwork	24310402	50390100	57190400	17990600	
849772603	SOUTHEASTERN GRAPHICS	OWNER	COMMRCL PRINTNG NE	27590000				
845585736	Southern Building Systems	Owner	Prefbrctd Mtl Bldgs	34480100				
53358375	Southern Wood Products Inc	President	Wood Products Nec	24991101	50990200			
C75	SPARKS COMPUTERIZED CAR			55				
938612959	Specular Press	Owner	Book Publishing	27310000				
BC0043	Speedway			5541				
BC0046	SPMC Sears Pool Management			5999				
17514360	Sports Media Group Inc	Vice-President	Misc Publishing	27410000				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
42135892	Sams Car Wash Inc	6380 ROSWELL RD NE	M	75	L	Marsh Creek	Y	car wash	II
C67	SANDY SPRINGS AMOCO OIL	5995 ROSWELL RD.	M	100	R	Long Island Cree	Y	gas station	II
120266374	Sandy Springs Chevron Inc	5701 ROSWELL RD NE	M	75	R	Long Island Cree	Y	gas station	II
C70	SANDY SPRINGS CLASSICS	585 GLEN FOREST RD.	M	94	R	Long Island Cree	N		
61407722	Sandy Springs Garage	7475 TROWBRIDGE RD NE	M	75	R	Powers Branch	Y	auto repair	II
C72	SANDY SPRINGS RENTALS	5711 ROSWELL RD.	M	100	R	Long Island Cree			
57290975	Sandy Springs Tire Center Inc	5861 ROSWELL RD NE	M	75	R	Long Island Cree			
BC0039	Sandy Springs Toyota					Marsh Creek	Y	car dealership	II
BC0040	Sandy Springs True Value Hardware					Long Island Cree	Y	hardware store	IV
C73	SEALBEST PRODUCTS, INC.	1215 HIGHTOWER TRAIL	M	100	R	Sullivan's Creek	N		
14830660	Seybert Nicholas Prtg Group LP	6865 GLENLAKE PKWY NE	M	50	R	Marsh Creek			
BC0041	Shamshiri Buffet					Long Island Cree	Y	restaurant	III
BC0042	Shell					Long Island Cree	Y	gas station	II
153307	Sign-A-Rama	6303 ROSWELL RD.	M	100	R	Marsh Creek			
C74	SOLAR SHIELD AUTO TINTING	7277 ROSWELL RD.	M	100	R	Marsh Creek			
G49	Soundview Communications, Inc.	7100 PEACHTREE DUNWOODY R	M	68	L	Marsh Creek	Y	office complex	IV
809564776	South Hampton Shutter Co	6595 ROSWELL RD NE G	M	23	R	Marsh Creek			
849772603	SOUTHEASTERN GRAPHICS		M	0		Long Island Cree			
845585736	Southern Building Systems	6216 FERRY DR NE	M	75	L	Trib 7	N		
53358375	Southern Wood Products Inc	200 SANDY SPRINGS PL NE	M	75	L	Long Island Cree	Y	lumber products	I
C75	SPARKS COMPUTERIZED CAR	8135 ROSWELL RD.	M	100	R	Sullivan's Creek			
938612959	Specular Press	5555 ROSWELL RD NE	M	75	R	Long Island Cree	N		
BC0043	Speedway					Long Island Cree	Y	gas station	II
BC0046	SPMC Sears Pool Management					Sullivan's Creek	Y	pool supplies	
17514360	Sports Media Group Inc	7094 PEACHTREE DUNWOODY R	M	68	L	Marsh Creek	N		

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_ DAT	INSPEC_BY
42135892	Sams Car Wash Inc		SANDY SPRINGS		08/16/99	Thurman,Barnum
C67	SANDY SPRINGS AMOCO OIL		SANDY SPRINGS		08/10/99	King,Thurman, Barnum
120266374	Sandy Springs Chevron Inc	0.70053	SANDY SPRINGS	2 small drums of oil	08/03/99	King, Barnum,Miller
C70	SANDY SPRINGS CLASSICS	0.46417	SANDY SPRINGS			
61407722	Sandy Springs Garage	0.50293	SANDY SPRINGS	empty gas tanks	08/27/99	Barnum, Bangasser
C72	SANDY SPRINGS RENTALS	0.49024	SANDY SPRINGS			
57290975	Sandy Springs Tire Center Inc		SANDY SPRINGS			
BC0039	Sandy Springs Toyota	1.33947	SANDY SPRINGS		08/10/99	King, Barnum,Thurman
BC0040	Sandy Springs True Value Hardware	0.85102	SANDY SPRINGS	fertilizer	08/03/99	King,Barnum, Miller
C73	SEALBEST PRODUCTS, INC.		SANDY SPRINGS			
14830660	Seybert Nicholas Prtg Group LP		SANDY SPRINGS			
BC0041	Shamshiri Buffet	0.99106	SANDY SPRINGS	grease pit, dumpsters	08/17/99	Miller, King
BC0042	Shell		SANDY SPRINGS	dumpster	08/16/99	Barnum, Miller
153307	Sign-A-Rama		SANDY SPRINGS			
C74	SOLAR SHIELD AUTO TINTING		SANDY SPRINGS			
G49	Soundview Communications, Inc.		SANDY SPRINGS	wood pallets	09/24/99	Thurman, Barnum
809564776	South Hampton Shutter Co		SANDY SPRINGS			
849772603	SOUTHEASTERN GRAPHICS	2.57349	SANDY SPRINGS			
845585736	Southern Building Systems		SANDY SPRINGS			
53358375	Southern Wood Products Inc	0.71512	SANDY SPRINGS	treated lumber	07/28/99	Brearley
C75	SPARKS COMPUTERIZED CAR		SANDY SPRINGS			
938612959	Specular Press	0.64071	SANDY SPRINGS			
BC0043	Speedway		SANDY SPRINGS		08/10/99	King, Thurman, Barnum
BC0046	SPMC Sears Pool Management		SANDY SPRINGS	triclor-s-triazinetrione, 55 gallon sodium hypochlorite drum, gas can	08/17/99	Miller, King
17514360	Sports Media Group Inc		SANDY SPRINGS			

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
42135892	Sams Car Wash Inc	drains across lot to next door to road, has catch basins; no polllutants necessary	2232077.14038	1429347.79754	
C67	SANDY SPRINGS AMOCO OIL	car wash has a catch basin; garbage can runoff goes to street-probably to a storm sewer	2232117.38817	1425515.40357	
120266374	Sandy Springs Chevron Inc	waterflows to a culvert/driveway next door; sealed underground tank for oil, all tanks updated & in gravel; drum outside w/class 3 flammalble vented & grounded has a non hazardous lable;engines & some tire piles; engine w/stained oil on pavement, 2 open drums w/oil	2232167.81942	1422531.81476	
C70	SANDY SPRINGS CLASSICS		2235533.57730	1423062.57140	
61407722	Sandy Springs Garage	tires & parts beside doors do not appear to be stored there permanently; parkinglot in area very clean; old gas tanks, rusted on grass along wall next to parking lot; dumpster has drain but no water source; oil sheen in puddles by dumpster	2236953.59010	1440435.60681	
C72	SANDY SPRINGS RENTALS		2232164.02701	1422656.75042	
57290975	Sandy Springs Tire Center Inc		2232038.57121	1424136.54947	
BC0039	Sandy Springs Toyota	small shop	2232158.72000	1430363.94000	
BC0040	Sandy Springs True Value Hardware	strip mall-concentrated on hardware store; no contaminants were notable	2232391.06000	1426677.86000	
C73	SEALBEST PRODUCTS, INC.		2241989.31625	1450362.18727	
14830660	Seybert Nicholas Prtg Group LP		2236488.22743	1434430.34839	
BC0041	Shamshiri Buffet	clogged sanitary sewer, dumpster not on pad; grease pit leaking; foul odor from dumpster w/ trail of litter to creek; bad oil spots in parking area			
BC0042	Shell	dumpster smells of urine; grime (rust) trail to drain			
153307	Sign-A-Rama		2232121.23780	1428291.92429	
C74	SOLAR SHIELD AUTO TINTING		2236121.68950	1438266.06437	
G49	Soundview Communications, Inc.	wood pallets next to dumpster appear to have been there a while	2239775.43523	1436321.00668	
809564776	South Hampton Shutter Co		2232101.73036	1431461.01371	
849772603	SOUTHEASTERN GRAPHICS		2230385.38995	1426168.87191	
845585736	Southern Building Systems		2230118.47285	1428102.70457	
53358375	Southern Wood Products Inc		2231578.79126	1426523.79221	
C75	SPARKS COMPUTERIZED CAR		2239988.37464	1446005.02556	
938612959	Specular Press		2232222.56150	1420978.93491	
BC0043	Speedway	dumpster runoff does run to stormwater drain			
BC0046	SPMC Sears Pool Management	mostly yard; gravel entrance; empty pool chemical buckets			
17514360	Sports Media Group Inc		2239782.18111	1436289.21268	

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
42135892	Sams Car Wash Inc	N	N
C67	SANDY SPRINGS AMOCO OIL	N	Y
120266374	Sandy Springs Chevron Inc	N	Y
C70	SANDY SPRINGS CLASSICS		
61407722	Sandy Springs Garage	N	N
C72	SANDY SPRINGS RENTALS		
57290975	Sandy Springs Tire Center Inc		
BC0039	Sandy Springs Toyota		
BC0040	Sandy Springs True Value Hardware	N	N
C73	SEALBEST PRODUCTS, INC.		
14830660	Seybert Nicholas Prtg Group LP		
BC0041	Shamshiri Buffet	N	Y
BC0042	Shell	N	Y
153307	Sign-A-Rama		
C74	SOLAR SHIELD AUTO TINTING		
G49	Soundview Communications, Inc.	N	N
809564776	South Hampton Shutter Co		
849772603	SOUTHEASTERN GRAPHICS		
845585736	Southern Building Systems		
53358375	Southern Wood Products Inc	N	N
C75	SPARKS COMPUTERIZED CAR		
938612959	Specular Press		
BC0043	Speedway	N	N
BC0046	SPMC Sears Pool Management		
17514360	Sports Media Group Inc		

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
937862456	Statsignal Systems Inc		6065 Roswell Rd Ne	Atlanta	GA	30328-4011	404-252-5512	Mr Oliver Lee
BC0051	Stewart R. Browne		1165 Hightower Trail	Atlanta	GA	30350	770-993-9600	
966734071	Sues One Hour		5940 Roswell Rd Ne	Atlanta	GA	30328-4908	404-252-4444	Shom Wilson
C76	SUNSHINE BISCUIT		1303 HIGHTOWER TRAIL	ATLANTA	GA	30350		
BC0044	SunTrust Bank		5550 Northside	ATLANTA	GA	30327	770-980-3250	
C77	SUPER SHOPS, INC.		5834 ROSWELL RD.	ATLANTA	GA	30328		
964353270	Systems & Computer Tech Corp	Sct Manufacturing	1100 Abernathy Rd Ne	Atlanta	GA	30328-5646	770-352-2100	Mr Dan Dacthropdt
BC0045	Taco Mac		5830 Roswell Rd	ATLANTA	GA	30328	404-257-0735	
3494932	Tekgraf Inc		6000 Lk Frrest Dr Ste 110	Atlanta	GA	30328	404-252-0201	Mr William Rychel
783172588	Tensar Earth Technologies Inc		5775 B Glenridge Dr 450	Atlanta	GA	30328	404-250-1290	Mr Philip Egan
BC0047	Texaco		8340 Roswell Rd	Atlanta	GA	30350		Martha Baldanii
BC0067	The Chart House		6450 Powers Ferry Rd	Atlanta	GA	30339	770-988-0094	David Coyle
949291207	The Phoenix Brewing Co		5600 Roswell Rd Ne	Atlanta	GA	30342-1119	404-843-2739	Mr Warren A Bruno
BC0056	The Prado		5600 Roswell Rd Ne	ATLANTA	GA	30342	404-252-0204	Stephanie White
C79	THE STROH BREWERY COMPANY		400 NORTHRIDGE RD.	ATLANTA	GA	30350		
C80	THE TIRE MAN		7349 PEACHTREE DUNWOODY	ATLANTA	GA	30328		
BC0070	Three Dollar Café		5825 Roswell Rd	ATLANTA	GA	30328	770-641-7073	Michelle Nelson
G54	Titon Industries, Inc.		8215 Roswell Rd., Bldg. 3	Atlanta	GA	30350	770-399-5252	Wayne Orr
42251236	TJ WHITE DESIGN	SIGNAL GRAPHICS PRINTING	6030 SANDY SPRINGS CIR NE	ATLANTA	GA	30328-3863	404-250-1800	MS. THERESA WHITE
212656	Tom Cats		6487 Cherry Tree Ln.	Atlanta	GA	30328	404-255-4724	
176060374	TOTAL BODY CARE, INC.		6021 SANDY SPRINGS CIR NE	ATLANTA	GA	30328-3841	404-256-0506	DR. KURT BIVENS
150637296	Total Graphics Inc		5600 Roswell Rd., #180 E.	Atlanta	GA	30342-1119	404-843-3187	Mr Todd Schmitthenner
186344453	Trailer Conditioners Inc		Ups 55 Glenlake Pkwy Ne	Atlanta	GA	30328	770-828-6000	Mr Kent C Nelson
153117	T-Shirts Unlimited Inc.		107 Angus Terr. N.W.	Atlanta	GA	30328	404-843-9924	
BC0057	Wendy's		6350 Powers Ferry	ATLANTA	GA	30339	770-952-6954	Bruce Patton

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
937862456	Statsignal Systems Inc	Chief Executive Offi	Elec Eqpt Sppls N	36990502				
BC0051	Stewart R. Browne							
966734071	Sues One Hour	Owner	Dryclng Plt Exc Rg	72169901				
C76	SUNSHINE BISCUIT			20				
BC0044	SunTrust Bank			6021				
C77	SUPER SHOPS, INC.			55				
964353270	Systems & Computer Tech Corp	Manager	Mag Optcl Rcdng Me	36950101				
BC0045	Taco Mac			5812				
3494932	Tekgraf Inc	President	Computer Terminals	35750000	35770000	73780000		
783172588	Tensar Earth Technologies Inc	President	Plstcs Products Ne	30890300				
BC0047	Texaco			5541				
BC0067	The Chart House			5812				
949291207	The Phoenix Brewing Co	Principal	Malt Beverages	20829902	58120101			
BC0056	The Prado	Office Manager						
C79	THE STROH BREWERY COMPANY			20				
C80	THE TIRE MAN			75				
BC0070	Three Dollar Café			5812				
G54	Titon Industries, Inc.	President		3281	3281	3281	3281	
42251236	TJ WHITE DESIGN	PRESIDENT	COMMRCL PRINTNG LITH	27520101				
212656	Tom Cats			2396				
176060374	TOTAL BODY CARE, INC.	PRESIDENT	TP BDY RPR PNT SHP	75320401				
150637296	Total Graphics Inc	President	Typesetting	27910104	73360103	73890103	2752	
186344453	Trailer Conditioners Inc	Chairman of the Boar	Tp Bdy Rpr Pnt Sh	75320402				
153117	T-Shirts Unlimited Inc.			2396				
BC0057	Wendy's			5812				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
937862456	Statsignal Systems Inc	6065 ROSWELL RD NE	M	75	R	Long Island Cree			
BC0051	Stewart R. Browne					Sullivan's Creek	Y	office complex	IV
966734071	Sues One Hour	5940 ROSWELL RD NE	M	75	L	Long Island Cree	Y	dry cleaners	
C76	SUNSHINE BISCUIT	1303 HIGHTOWER TRAIL	M	100	R	Sullivan's Creek	N		
BC0044	SunTrust Bank					Game Creek	Y	bank	IV
C77	SUPER SHOPS, INC.	5834 ROSWELL RD.	M	100	L	Long Island Cree			
964353270	Systems & Computer Tech Corp	1100 ABERNATHY RD NE	M	75	L				
BC0045	Taco Mac					Long Island Cree	Y	restaurant	III
3494932	Tekgraf Inc	6000 LK FRREST DR STE 110	M	94	L	Long Island Cree	N		
783172588	Tensar Earth Technologies Inc	5775 GLENRIDGE DR	M	100	R	Long Island Cree	N		
BC0047	Texaco					Sullivan's Creek	Y	gas station	II
BC0067	The Chart House					Game Creek	Y	restaurant	III
949291207	The Phoenix Brewing Co	5600 ROSWELL RD NE	M	75	L	Long Island Cree	Y	restaurant	III
BC0056	The Prado					Long Island Cree	Y	strip mall	IV
C79	THE STROH BREWERY COMPANY	400 NORTHRIDGE RD.	M	100	L	Sullivan's Creek			
C80	THE TIRE MAN	7349 PEACHTREE DUNWOODY	M	75	R	Marsh Creek	N		
BC0070	Three Dollar Café					Long Island Cree	Y	restaurant	III
G54	Titon Industries, Inc.	8215 ROSWELL RD., BLDG. 3	M	100	R	Sullivan's Creek			
42251236	TJ WHITE DESIGN		M	0		Long Island Cree			
212656	Tom Cats	6487 CHERRY TREE LN.	M	100	R	Marsh Creek	N		
176060374	TOTAL BODY CARE, INC.		M	0		Long Island Cree			
150637296	Total Graphics Inc	5600 ROSWELL RD., #180 E.	M	100	L	Long Island Cree			
186344453	Trailer Conditioners Inc	UPS 55 GLENLAKE PKWY NE	M	50	R	Marsh Creek			
153117	T-Shirts Unlimited Inc.	107 ANGUS TERR. N.W.	M	50	R	Trib 7	N		
BC0057	Wendy's					Game Creek	Y	restaurant	III

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
937862456	Statsignal Systems Inc		SANDY SPRINGS			
BC0051	Stewart R. Browne		SANDY SPRINGS		08/17/99	Miller, King
966734071	Sues One Hour	2.01178	SANDY SPRINGS		08/16/99	Thurman, Barnum
C76	SUNSHINE BISCUIT		SANDY SPRINGS			
BC0044	SunTrust Bank		SANDY SPRINGS		08/31/99	Thurman, King
C77	SUPER SHOPS, INC.	2.50492	SANDY SPRINGS			
964353270	Systems & Computer Tech Corp		SANDY SPRINGS			
BC0045	Taco Mac	0.59181	SANDY SPRINGS	grease pit	07/28/99	Brearley
3494932	Tekgraf Inc	4.18289	SANDY SPRINGS			
783172588	Tensar Earth Technologies Inc		SANDY SPRINGS			
BC0047	Texaco	21.4662	SANDY SPRINGS		08/19/99	Barnum,King
BC0067	The Chart House				11/05/99	Thurman, Barnum
949291207	The Phoenix Brewing Co		SANDY SPRINGS		08/04/99	Miller, Barnum
BC0056	The Prado		SANDY SPRINGS	2 grease bins	09/16/99	Thurman, King
C79	THE STROH BREWERY COMPANY	17.41406	SANDY SPRINGS			
C80	THE TIRE MAN	9.01012	SANDY SPRINGS			
BC0070	Three Dollar Café		SANDY SPRINGS	cleaning detergents, mops, restaurant trash noted when inquiring management about inspection. Refused to let BC inspect at first.	11/05/99	Thurman, Barnum
G54	Titon Industries, Inc.		SANDY SPRINGS			
42251236	TJ WHITE DESIGN		SANDY SPRINGS			
212656	Tom Cats		SANDY SPRINGS			
176060374	TOTAL BODY CARE, INC.	0.9406	SANDY SPRINGS			
150637296	Total Graphics Inc		SANDY SPRINGS			
186344453	Trailer Conditioners Inc	17.41406	SANDY SPRINGS			
153117	T-Shirts Unlimited Inc.	5.94604	SANDY SPRINGS			
BC0057	Wendy's	0.49002	SANDY SPRINGS		09/16/99	King, Thurman

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
937862456	Statsignal Systems Inc		2232130.34611	1426123.28105	
BC0051	Stewart R. Browne	no potential pollutants noted-office building	2241355.44568	1450504.46383	
966734071	Sues One Hour	dumpster behind cleaners & Uhaul has a consideralbe oil trail coming from it; also in shopping center: Russian Restaurant, Kosher Emporium, Mike's Chicago Dog Haus	2232077.56559	1424907.09924	
C76	SUNSHINE BISCUIT		2242797.76811	1450138.99041	
BC0044	SunTrust Bank	very clean area, no drains visible			
C77	SUPER SHOPS, INC.		2232038.13316	1423925.12145	
964353270	Systems & Computer Tech Corp		2239796.53072	1430795.73859	
BC0045	Taco Mac	kitchen has drains in floor, probably drain to sanitary sewer system	2231963.28000	1423880.86000	
3494932	Tekgraf Inc		2229685.95966	1425609.73161	
783172588	Tensar Earth Technologies Inc		2237262.02492	1423309.46902	
BC0047	Texaco	runoff drains to grassy area	2240712.65000	1448932.53000	
BC0067	The Chart House				
949291207	The Phoenix Brewing Co	under same property management as The Prado	2232213.76413	1421437.51546	
BC0056	The Prado	grease bin on stained oncrete; dumpster near creek on corner of property; Stephanie requested we call her & let her know if we find anything that needs to be amended; foul odor in area near shopping center, but not likely from The Prado	2231833.78000	#############	
C79	THE STROH BREWERY COMPANY		2241871.90883	1448397.29963	
C80	THE TIRE MAN		2239739.52427	1438952.53467	
BC0070	Three Dollar Café	grease trail leading from dumpster to storm drain. Smell of trash.			
G54	Titon Industries, Inc.		2240700.05897	1447184.90094	
42251236	TJ WHITE DESIGN		2230379.60309	1426240.24318	
212656	Tom Cats		2233012.44077	1430291.16444	
176060374	TOTAL BODY CARE, INC.		2230557.06680	1426274.96435	
150637296	Total Graphics Inc		2232213.76413	1421437.51546	
186344453	Trailer Conditioners Inc		2237627.88972	1432828.60408	
153117	T-Shirts Unlimited Inc.		2228955.68532	1427349.37878	
BC0057	Wendy's		2216989.68000	1420819.44000	

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
937862456	Statsignal Systems Inc		
BC0051	Stewart R. Browne	N	N
966734071	Sues One Hour	N	Y
C76	SUNSHINE BISCUIT		
BC0044	SunTrust Bank		
C77	SUPER SHOPS, INC.		
964353270	Systems & Computer Tech Corp		
BC0045	Taco Mac	N	Y
3494932	Tekgraf Inc		
783172588	Tensar Earth Technologies Inc		
BC0047	Texaco	N	N
BC0067	The Chart House	N	Y
949291207	The Phoenix Brewing Co		
BC0056	The Prado	N	Y
C79	THE STROH BREWERY COMPANY		
C80	THE TIRE MAN	N	Y
BC0070	Three Dollar Café		
G54	Titon Industries, Inc.		
42251236	TJ WHITE DESIGN		
212656	Tom Cats		
176060374	TOTAL BODY CARE, INC.		
150637296	Total Graphics Inc		
186344453	Trailer Conditioners Inc		
153117	T-Shirts Unlimited Inc.		
BC0057	Wendy's	N	Y

Appendix E
SS_Regsites Database

ID	COMPANY	TRADENAME	PHY_ADDRES	PHY_C	PHY_ST	PHY_Z	CONTACT_PH	CONTACT_NA
BC0065	Wendy's		8455 Roswell Rd	Atlanta	GA	30350	770-587-5229	Sania
BC0066	Wing Factory		7390 Roswell Rd	ATLANTA	GA	30328	770-394-6800	
216783	Vacuum World		6219 Roswell Rd	Atlanta	GA	30328	404-255-0555	
BC0013	Vernon Woods Chevron		6385 Roswell Rd.	ATLANTA	GA	30328	404-252-5294	

Appendix E
SS_Regsites Database

ID	COMPANY	TITL1	LOB	SIC_1	SIC_2	SIC3	SIC4	SIC5
BC0065	Wendy's			5812				
BC0066	Wing Factory			5812				
216783	Vacuum World			3635				
BC0013	Vernon Woods Chevron			5541				

Appendix E
SS_Regsites Database

ID	COMPANY	AV_ADD	AV_ STATUS	AV_ SCORE	AV_ SIDE	STUDY_AREA	EXISTS	OPERATION	CATEGORY
BC0065	Wendy's					Sullivan's Creek	Y	restaurant	III
BC0066	Wing Factory					Powers Branch	Y	restaurant	III
216783	Vacuum World						Y	vacuum supplies distributor	IV
BC0013	Vernon Woods Chevron					Marsh Creek	Y	gas station	II

Appendix E
SS_Regsites Database

ID	COMPANY	SITE_AREA	SERVICE_AR	POLLUTANTS	INSPEC_DAT	INSPEC_BY
BC0065	Wendy's				08/17/99	King,Miller
BC0066	Wing Factory				08/13/99	Thurman, Barnum
216783	Vacuum World				08/03/99	King, Miller, Barnum
BC0013	Vernon Woods Chevron		SANDY SPRINGS		08/10/99	King, Thurman, Barnum

Appendix E
SS_Regsites Database

ID	COMPANY	COMMENTS	EASTING	NORTHING	PROBLEM POLLUTER
BC0065	Wendy's	no potential pollutants noted other than dumpsters & grease bin			
BC0066	Wing Factory	chemicals kept in storage behind building; drain below dumpster, but manager is unsure if it is a sanitary sewer; considerable amount of grease on ground near dumpster; businees is currently undergoing rennovation			
216783	Vacuum World	nothing notable at this site, everything is clean & no contaminants are present			
BC0013	Vernon Woods Chevron	water runs off to Vernon Rd			

Appendix E
SS_Regsites Database

ID	COMPANY	DUMPSTER COMPLIANCE WITH SOLID WASTE ORDNIANCE 30-2-8	TRAIL OF GRIME TO STORM DRAIN
BC0065	Wendy's	N	Y
BC0066	Wing Factory	N	N
216783	Vacuum World	N	N
BC0013	Vernon Woods Chevron	N	N

Appendix F

INDUSTRY SURVEY PROCEDURE

1. List of industries was developed.
2. Field check indicated numerous industries on list were not there or were not contributing pollutants, and many commercial activities that generate pollutants were not on the list.
3. Most contributors were in densely developed areas or in concentrated corridors.
4. Two person crews will travel site-to-site and conduct the following activities:
    a. Inspection will use visual inspection and review of the digital ortho photo for the area to identify sites.
    b. Introduce themselves to site manager.
    c. Show them letter from County.
    d. Request permission to inspect site.
    e. If permission not granted and site representative is not belligerent, request address and name of owner/manager so letter can be sent, then leave.
5. Inspection
    a. Site sketch will be prepared showing how runoff leaves site. Any inlets will be identified.
    b. Any non-stormwater discharges will be noted, and if possible, the source will be identified.
    c. Ground (pavement areas that have accumulations of pollutants) (e.g. fertilizer bags, oil-stained ground) will be identified.
    d. Outside storage of materials with potential to contribute pollutants will be noted (e.g. drums, batteries, abandoned cars).
    e. Dumpster containment will be described.
    f. Storm drain outfalls and/or existing detention basins near site (if present) will be checked for evidence of staining and/or dry weather flow.

FACILITY INSPECTION DATASHEET

BROWN AND CALDWELL

Facility Name: ______________________________ Crew: __________________________

Facility Address: ______________________________ __________________________

______________________________ Date: __________________________

Facility Contact: ______________________________ Arrival Time: __________________________

Facility Phone Number: ______________________ Depart Time: __________________________

Type of Business:______________________________ SIC Code: ________ Category: ________

Site Map (Include north arrow and cross-street)

Site Narrative

DESCRIPTION OF EXPOSED MATERIAL	Completed By: ____________________ Date Completed: ____________________

Instructions: Please provide an inventory of all potential pollutants located at the facility. For stored materials, please reference how the potential pollutant is stored, how it is protected from the weather, and how stormwater is contained. For process operations (i.e. cleaning, spills, etc.), please note containment practices to keep potentially contaminated water out of the storm drainage system. If none, please note no containment practices.

Description of Potential Pollutant	Time Material Stored	Quantity Stored	Location (as indicated on site map)	Method of Storage	Description of Protection from rainfall and stormflow runoff.

DUMPSTER ASSESSMENT:

Are dumpsters on site in accordance with Fulton County Solid Waste Ordinance (No. 30-2-8)? YES ☐ NO ☐

Is there a trail of grime or debris leading from dumpster to the stormwater sewer? YES ☐ NO ☐

Appendix G

Table 2: HABITAT ASSESSMENT WORKSHEET: RIFFLE/RUN PREVALENT STREAM

Stream Long Island Date 4/29/99
Point of Assessment throughout 100m reach – SS-1
County Fulton co River Basin Chatt. River
Lat./ Long. coordinates
Assessor: Crow Assessor: Patel Assessor:

Habitat Parameter	Score	Habitat Parameter	Score	Habitat Parameter	Score	AVG.
1. Instream Cover (fish)	18	1. Instream Cover (fish)	16	1. Instream Cover (fish)		
2. Epifaunal Substrate (benthic)	6	2. Epifaunal Substrate (benthic)	6	2. Epifaunal Substrate (benthic)		
3. Embeddedness	2	3. Embeddedness	2	3. Embeddedness		
4. Channel Alteration	11	4. Channel Alteration	11	4. Channel Alteration		
5. Sediment Deposition	6	5. Sediment Deposition	6	5. Sediment Deposition		
6. Frequency of Riffles	14	6. Frequency of Riffles	14	6. Frequency of Riffles		
7. Channel Flow Status	9	7. Channel Flow Status	10	7. Channel Flow Status		
8. Bank Vegetative Protection LB RB	6 7	8. Bank Vegetative Protection LB RB	7 8	8. Bank Vegetative Protection LB RB		
9. Bank Stability LB RB	5 5	9. Bank Stability LB RB	8 8	9. Bank Stability LB RB		
10. Riparian Vegetative Zone LB RB	3 9	10. Riparian Vegetative Zone LB RB	3 9	10. Riparian Vegetative Zone LB RB		
Total Score:	101	Total Score:	108	Total Score:		avg:

Table 2: HABITAT ASSESSMENT WORKSHEET: RIFFLE/RUN PREVALENT STREAM

Stream Game Creek Date 4/29/99
Point of Assessment throughout reach - SS-4
County Fulton River Basin Chatt. River
Lat./ Long. coordinates
Assessor: Crow Assessor: Patel Assessor:

Habitat Parameter	Score	Habitat Parameter	Score	Habitat Parameter	Score	AVG.
1. Instream Cover (fish)	17	1. Instream Cover (fish)	17	1. Instream Cover (fish)		
2. Epifaunal Substrate (benthic)	12	2. Epifaunal Substrate (benthic)	12	2. Epifaunal Substrate (benthic)		
3. Embeddedness	10	3. Embeddedness	13	3. Embeddedness		
4. Channel Alteration	3	4. Channel Alteration	3	4. Channel Alteration		
5. Sediment Deposition	6	5. Sediment Deposition	7	5. Sediment Deposition		
6. Frequency of Riffles	16	6. Frequency of Riffles	18	6. Frequency of Riffles		
7. Channel Flow Status	10	7. Channel Flow Status	9	7. Channel Flow Status		
8. Bank Vegetative Protection LB 5 RB 6		8. Bank Vegetative Protection LB 7 RB 8		8. Bank Vegetative Protection LB RB		
9. Bank Stability LB 3 RB 5		9. Bank Stability LB 3 RB 5		9. Bank Stability LB RB		
10. Riparian Vegetative Zone LB 9 RB 0		10. Riparian Vegetative Zone LB 9 RB 1		10. Riparian Vegetative Zone LB RB		
Total Score: 102		Total Score: 112		Total Score:		avg:

Table 2: HABITAT ASSESSMENT WORKSHEET: RIFFLE/RUN PREVALENT STREAM

Stream: Heards Ferry Cr Date: 4/29/99
Point of Assessment: throughout reach - SS-5
County: Fulton River Basin: Chatt. R.
Lat./ Long. coordinates:
Assessor: Crow Assessor: Postel Assessor:

Habitat Parameter	Score	Habitat Parameter	Score	Habitat Parameter	Score	AVG.
1. Instream Cover (fish)	17	1. Instream Cover (fish)	17	1. Instream Cover (fish)		
2. Epifaunal Substrate (benthic)	14	2. Epifaunal Substrate (benthic)	12	2. Epifaunal Substrate (benthic)		
3. Embeddedness	10	3. Embeddedness	10	3. Embeddedness		
4. Channel Alteration	3	4. Channel Alteration	3	4. Channel Alteration		
5. Sediment Deposition	15	5. Sediment Deposition	12	5. Sediment Deposition		
6. Frequency of Riffles	20	6. Frequency of Riffles	20	6. Frequency of Riffles		
7. Channel Flow Status	9	7. Channel Flow Status	9	7. Channel Flow Status		
8. Bank Vegetative Protection LB	8	8. Bank Vegetative Protection LB	7	8. Bank Vegetative Protection LB		
RB	8	RB	8	RB		
9. Bank Stability LB	6	9. Bank Stability LB	7	9. Bank Stability LB		
RB	7	RB	8	RB		
10. Riparian Vegetative Zone LB	0	10. Riparian Vegetative Zone LB	0	10. Riparian Vegetative Zone LB		
RB	0	RB	0	RB		
Total Score:	117	Total Score:	113	Total Score:		avg:

Table 2: HABITAT ASSESSMENT WORKSHEET: RIFFLE/RUN PREVALENT STREAM

Stream Marsh Creek Date 4/30/99
Point of Assessment throughout reach SS-6
County Fulton River Basin Chatt Riv
Lat./ Long. coordinates
Assessor: Crow Assessor: Patel Assessor:

Habitat Parameter	Score	Habitat Parameter	Score	Habitat Parameter	Score	AVG.
1. Instream Cover (fish)	16	1. Instream Cover (fish)	16	1. Instream Cover (fish)		
2. Epifaunal Substrate (benthic)	7	2. Epifaunal Substrate (benthic)	8	2. Epifaunal Substrate (benthic)		
3. Embeddedness	2	3. Embeddedness	4	3. Embeddedness		
4. Channel Alteration	18	4. Channel Alteration	18	4. Channel Alteration		
5. Sediment Deposition	10	5. Sediment Deposition	10	5. Sediment Deposition		
6. Frequency of Riffles	19	6. Frequency of Riffles	17	6. Frequency of Riffles		
7. Channel Flow Status	9	7. Channel Flow Status	7	7. Channel Flow Status		
8. Bank Vegetative Protection LB	9	8. Bank Vegetative Protection LB	9	8. Bank Vegetative Protection LB		
RB	10	RB	9	RB		
9. Bank Stability LB	9	9. Bank Stability LB	8	9. Bank Stability LB		
RB	10	RB	8	RB		
10. Riparian Vegetative Zone LB	8	10. Riparian Vegetative Zone LB	8	10. Riparian Vegetative Zone LB		
RB	10	RB	10	RB		
Total Score:	128	Total Score:	127	Total Score:		avg:

Table 2: HABITAT ASSESSMENT WORKSHEET: RIFFLE/RUN PREVALENT STREAM

Stream Powers Branch Date 4/30/99

Point of Assessment thwalweg SS-7

County Fulton River Basin Chatt, Riv

Lat./ Long. coordinates

Assessor: Crow Assessor: Patel Assessor:

Habitat Parameter	Score	Habitat Parameter	Score	Habitat Parameter	Score	AVG.
1. Instream Cover (fish)	16	1. Instream Cover (fish)	16	1. Instream Cover (fish)		
2. Epifaunal Substrate (benthic)	9	2. Epifaunal Substrate (benthic)	9	2. Epifaunal Substrate (benthic)		
3. Embeddedness	6	3. Embeddedness	6	3. Embeddedness		
4. Channel Alteration	10	4. Channel Alteration	10	4. Channel Alteration		
5. Sediment Deposition	6	5. Sediment Deposition	7	5. Sediment Deposition		
* 6. Frequency of Riffles	19	6. Frequency of Riffles	20	6. Frequency of Riffles		
7. Channel Flow Status	7	7. Channel Flow Status	6	7. Channel Flow Status		
8. Bank Vegetative Protection LB / RB	LB 8 / RB 4	8. Bank Vegetative Protection LB / RB	LB 9 / RB 7	8. Bank Vegetative Protection LB / RB		
9. Bank Stability LB / RB	LB 6 / RB 7	9. Bank Stability LB / RB	LB 4 / RB 7	9. Bank Stability LB / RB		
10. Riparian Vegetative Zone LB / RB	LB 10 / RB 0	10. Riparian Vegetative Zone LB / RB	LB 9 / RB 0	10. Riparian Vegetative Zone LB / RB		
Total Score:	108	Total Score:	110	Total Score:		avg:

* caused overevaluation of site

Table 2: HABITAT ASSESSMENT WORKSHEET: RIFFLE/RUN PREVALENT STREAM

Stream: Snake Creek   Date: 5/11/99
Point of Assessment: upstream of road RS-1
County: Carroll   River Basin: Chatt. Riv.
Lat./ Long. coordinates:
Assessor: Crow   Assessor: Patel   Assessor: Wattleton

Habitat Parameter	Score	Habitat Parameter	Score	Habitat Parameter	Score	AVG.
1. Instream Cover (fish)	18	1. Instream Cover (fish)	17	1. Instream Cover (fish)	17	17.3
2. Epifaunal Substrate (benthic)	17	2. Epifaunal Substrate (benthic)	17	2. Epifaunal Substrate (benthic)	19	17.7
3. Embeddedness	7	3. Embeddedness	5	3. Embeddedness	6	6
4. Channel Alteration	16	4. Channel Alteration	18	4. Channel Alteration	18	17.3
5. Sediment Deposition	6	5. Sediment Deposition	6	5. Sediment Deposition	9	7
6. Frequency of Riffles	12	6. Frequency of Riffles	14	6. Frequency of Riffles	14	13.3
7. Channel Flow Status	13	7. Channel Flow Status	16	7. Channel Flow Status	16	15
8. Bank Vegetative Protection LB 6 RB 8		8. Bank Vegetative Protection LB 6 RB 10		8. Bank Vegetative Protection LB 6 RB 8		14.7
9. Bank Stability LB 6 RB 8		9. Bank Stability LB 6 RB 9		9. Bank Stability LB 5 RB 9	5 9	14.3
10. Riparian Vegetative Zone LB 4 RB 9		10. Riparian Vegetative Zone LB 3 RB 10		10. Riparian Vegetative Zone LB 3 RB 10		13
Total Score:	130	Total Score:	137	Total Score:	140	avg:

Table 2: HABITAT ASSESSMENT WORKSHEET: RIFFLE/RUN PREVALENT STREAM

Stream Bluff Creek Date 5/11/99
Point of Assessment throughout reach RS-2
County Douglas River Basin Chatt. River
Lat./ Long. coordinates
Assessor: Crow Assessor: Patel Assessor: Wattleton

Habitat Parameter	Score	Habitat Parameter	Score	Habitat Parameter	Score	AVG.
1. Instream Cover (fish)	18	1. Instream Cover (fish)	19	1. Instream Cover (fish)	17	18
2. Epifaunal Substrate (benthic)	17	2. Epifaunal Substrate (benthic)	16	2. Epifaunal Substrate (benthic)	14	15.7
3. Embeddedness	14	3. Embeddedness	18	3. Embeddedness	12	14.7
4. Channel Alteration	20	4. Channel Alteration	18	4. Channel Alteration	16	18
5. Sediment Deposition	15	5. Sediment Deposition	16	5. Sediment Deposition	14	15
6. Frequency of Riffles	18	6. Frequency of Riffles	18	6. Frequency of Riffles	18	18
7. Channel Flow Status	8	7. Channel Flow Status	7	7. Channel Flow Status	10	8.3
8. Bank Vegetative Protection LB RB	 10 10	8. Bank Vegetative Protection LB RB	 10 9	8. Bank Vegetative Protection LB RB	 8 9	18.7
9. Bank Stability LB RB	 10 10	9. Bank Stability LB RB	 9 9	9. Bank Stability LB RB	 9 9	18.7
10. Riparian Vegetative Zone LB RB	 10 9	10. Riparian Vegetative Zone LB RB	 10 10	10. Riparian Vegetative Zone LB RB	 8 8	18.3
Total Score:	170	Total Score:	169	Total Score:	152	avg:

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

STREAM NAME: LONG ISLAND CREEK | DATE: 4/29/99

POINT OF ASSESSMENT: just downstream of bridge SS-1

COUNTY: Fulton | DRAINAGE BASIN: Long | TIME: 9:00 AM

WEATHER: overcast; rained some overnight | LAT/LONG:

ASSESSOR(S): Crow, Patel (R+D) | PHOTO/VIDEO TAKEN? YES NO

RIPARIAN ZONE/INSTREAM FEATURES

RECENT RAIN: FLASH FLOOD HEAVY DOWNPOUR MODERATE LIGHT NONE | CHANNELIZED: ~~YES~~ NO long ago

MEAN STREAM WIDTH (FT): 10-15' | MEAN STREAM DEPTH (FT): 1"-4' (≈1')

flow 4-5 cfs

MEAN VELOCITY (FT/S): 0-2 | DAM PRESENT: YES NO TYPE?

LAND USE IN SURROUNDING AREA (SPECIFY PERCENTAGE):

FORESTED	AGRIC-GRAZING	AGRIC-CROPLAND	RESIDENTIAL low density	INDUSTRIAL
COMMERICAL	SIVICULTURAL	WETLAND	OTHER	OTHER

IS THERE AN IMPACT? YES NO sediment IF YES, WHAT IS THE SOURCE OF IMPACT? (CIRCLE THOSE THAT APPLY)

ILLEGAL DISCHARGE PETROLEUM ~~SOIL EROSION~~ AGR. RUNOFF (MANURE, CHEMICAL) STREAM ALTERATION

DAM PERMITTED DISCHARGE WATER INTAKE STORMWATER? LOGGING LANDFILL BYPASS

OTHER

LIVESTOCK DAMAGE BASED ON OBSERVATIONS:
1. STABLE (0-25% DAMAGE, LITTLE/NO EROSION)
2. MODERATE (26-50% DAMAGE, <50% PLANT BIOMASS REMAINS)
3. HIGH (51-75% DAMAGE, <25% PLANT BIOMASS REMAINS)
4. SEVERE (76-100% DAMAGE, LITTLE/NO PLANT BIOMASS)
5. ~~NO LIVESTOCK IN AREA~~

BEAVER ACTIVITY BASED ON OBSERVATIONS:
1. ACTIVE BEAVER DAM AFFECTING STREAM
2. OLD BEAVER DAM/ACTIVITY, LITTLE EFFECT ON STREAM
3. ACTIVE BEAVER DAM/CUTTING EVIDENT BUT LITTLE EFFECT ON STREAM
4. INACTIVE BEAVER DAM, LITTLE EFFECT ON STREAM
4. INACTIVE BEAVER DAM AFFECTING STREAM
5. ~~NO BEAVER ACTIVITY EVIDENT~~

CANOPY COVER: OPEN (0-10%) LIGHTLY SHADED (11-45%) MOSTLY SHADED (46-80%) SHADED (81-100%)

WATER QUALITY

ODORS: NORMAL SEWAGE PETROLEUM CHEMICAL ANAEROBIC OTHER

WATER CLARITY: CLEAR SLIGHTLY TURBID TURBID ~~OPAQUE~~ brown tint cc

SURFACE OILS: SLICK SHEEN GLOBS FLECKS NONE

WATER COLOR: TANNIC → appears somewhat brownish GREEN (ALGAE) CLEAR OTHER

WATER TEMP(°C): ~~15.4~~ 15.3 | WATER pH: 7.06 | WATER D.O.: 7.94 | CONDUCTIVITY: 61.6 ~~75.7~~ | OTHER:

CHEMICAL SAMPLES COLLECTED: NUTRIENTS ROUTINE BACTERIA METALS AGPT SEDIMENT NONE

Turb. - 2.6 Sal - 0.0

Chlorine - 0.0

Collected redbreast + yellow bullhead during macro. sampling

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

SEDIMENT/ SUBSTRATE (A)bsent, (S)parse, (C)ommon
[A = NOT PRESENT, S = 10-30% COVERAGE, C = > 30% COVERAGE]

SUBSTRATE / HABITAT TYPE	COVERAGE	SUBSTRATE / HABITAT TYPE	COVERAGE
WOODY DEBRIS (SNAGS)	S	SAND: COARSE MEDIUM FINE C	in riffle – low runs pools – [illegible]
LEAF PACKS OR LEAF MATS (CPOM)	5%	MUD / MUCK / SILT S	10-25% in runs + pools
UNDERCUT BANKS / ROOTS (linear)	S (25%)	ROCK OR SHELL RUBBLE C	80-100% in riffle [illegible] in run/pool
AQUATIC VEGETATION / MACROPHYTES	O	OTHER:	

SEDIMENT BAR / ISLAND DEPOSITS: SLUDGE PAPER FIBER MUD SAND SILT NONE OTHER gravel, cobble

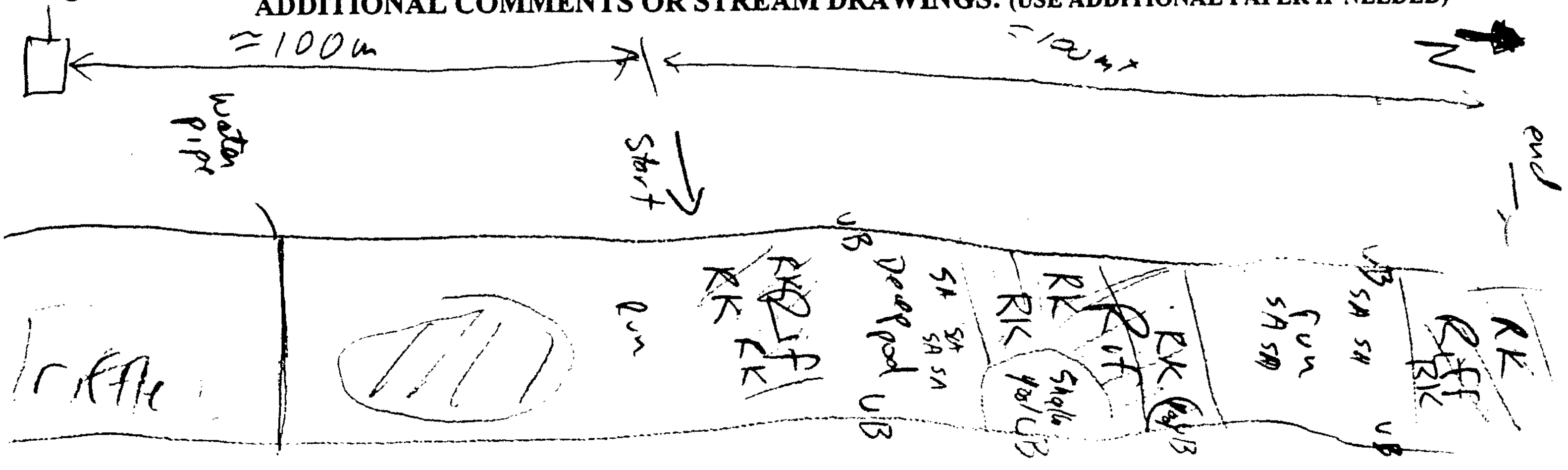
STREAM SUBSTRATE TYPE (PREDOMINANT): BEDROCK COBBLE/GRAVEL GRAVEL/SAND SAND/SILT .OTHER ______ – in runs

HABITAT ASSESSMENT SCORES: riffle pools AVERAGE SCORE:

MACROINVERTEBRATE COLLECTION METHOD USED (CHECK ONE):		
RAPID SURVEY	WITH RIFFLES:	WITHOUT RIFFLES:
MODIFIED EPA RAPID BIOASSESSMENT II	RIFFLE/RUN:	GLIDE/POOL:
GEORGIA BIOASSESSMENT PROTOCOL	RIFFLE/RUN: X	GLIDE/POOL:
	NON-WADEABLE:	OTHER:

HABITATS SAMPLED:		COLLECTED BY:
RIFFLE KICK- 100 ORGANISM SUBSAMPLE RK	8	
RIFFLE-EXTRA Crow		
UNDERCUT BANK-100 ORGANISM SUBSAMPLE	≈10 m	Done in run + pool areas, most o.
UNDERCUT BANK EXTRA		
UNDERCUT BANK/EXPOSED TREE ROOTS Crow		
WOODY DEBRIS Crow	≈10 m	spread throughout
LEAF PACK-CPOM Patel	1 bag	throughout
SAND/BOTTOM SUBSTRATE Patel	8 m	4 in run + 4 in deep pool gr.
MACROPHYTE	none	
VISUAL Crow + Patel	30 man-minutes	

ADDITIONAL COMMENTS OR STREAM DRAWINGS: (USE ADDITIONAL PAPER IF NEEDED)



PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

STREAM NAME: Game Creek	DATE: 4/29/99
POINT OF ASSESSMENT: bottom of reach SS-4	
COUNTY: Fulton | DRAINAGE BASIN: Chatt. River	TIME: 1 PM
WEATHER: very overcast	LAT/LONG:
ASSESSOR(S): Crow, Patel	PHOTO/VIDEO TAKEN? YES NO

RIPARIAN ZONE/INSTREAM FEATURES

RECENT RAIN: FLASH FLOOD HEAVY DOWNPOUR MODERATE LIGHT NONE (previous nite)	CHANNELIZED: YES No
MEAN STREAM WIDTH (FT): 5-8' (~7')	MEAN STREAM DEPTH (FT): <1'
MEAN VELOCITY (FT/S): <1 fps	DAM PRESENT: YES NO TYPE?

flow = 1-2cfs

LAND USE IN SURROUNDING AREA (SPECIFY PERCENTAGE):

FORESTED RBup	AGRIC-GRAZING	AGRIC-CROPLAND	RESIDENTIAL	INDUSTRIAL
COMMERICAL LBup	SIVICULTURAL	WETLAND	OTHER	OTHER

IS THERE AN IMPACT? YES NO IF YES, WHAT IS THE SOURCE OF IMPACT? (CIRCLE THOSE THAT APPLY) sewer

ILLEGAL DISCHARGE PETROLEUM SOIL EROSION (somewhat) AGR. RUNOFF (MANURE, CHEMICAL) STREAM ALTERATION

DAM PERMITTED DISCHARGE WATER INTAKE STORMWATER LOGGING LANDFILL ~~BYPASS~~

OTHER

LIVESTOCK DAMAGE BASED ON OBSERVATIONS:
1. STABLE (0-25% DAMAGE, LITTLE/NO EROSION) 2. MODERATE (26-50% DAMAGE, <50% PLANT BIOMASS REMAINS)
3. HIGH (51-75% DAMAGE, <25% PLANT BIOMASS REMAINS) 4. SEVERE (76-100% DAMAGE, LITTLE/NO PLANT BIOMASS)
~~5. NO LIVESTOCK IN AREA~~

BEAVER ACTIVITY BASED ON OBSERVATIONS:
1. ACTIVE BEAVER DAM AFFECTING STREAM 2. OLD BEAVER DAM/ACTIVITY, LITTLE EFFECT ON STREAM
3. ACTIVE BEAVER DAM/CUTTING EVIDENT BUT LITTLE EFFECT ON STREAM
4. INACTIVE BEAVER DAM, LITTLE EFFECT ON STREAM 4. INACTIVE BEAVER DAM AFFECTING STREAM
~~5. NO BEAVER ACTIVITY EVIDENT~~

CANOPY COVER: OPEN (0-10%) LIGHTLY SHADED (11-45%) MOSTLY SHADED (46-80%) SHADED (81-100%)

WATER QUALITY

ODORS: ~~NORMAL~~ CC SEWAGE	PETROLEUM	CHEMICAL	ANAEROBIC	OTHER	
WATER CLARITY:	CLEAR	SLIGHTLY TURBID	TURBID	OPAQUE – sewer looking	
SURFACE OILS:	SLICK	SHEEN	GLOBS	FLECKS	NONE
WATER COLOR:	TANNIC	GREEN (ALGAE)	CLEAR	OTHER brownish, clear	
WATER TEMP(°C): 16.1/16.2	WATER pH: 6.99	WATER D.O.: 5.82	CONDUCTIVITY: ~~115.6~~ 96.0	OTHER:	
CHEMICAL SAMPLES COLLECTED: NUTRIENTS	ROUTINE	BACTERIA	METALS	AGPT	SEDIMENT NONE

Sal. - 0.1
Turb - 6.5 NTU
Chlorine - 0.0

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

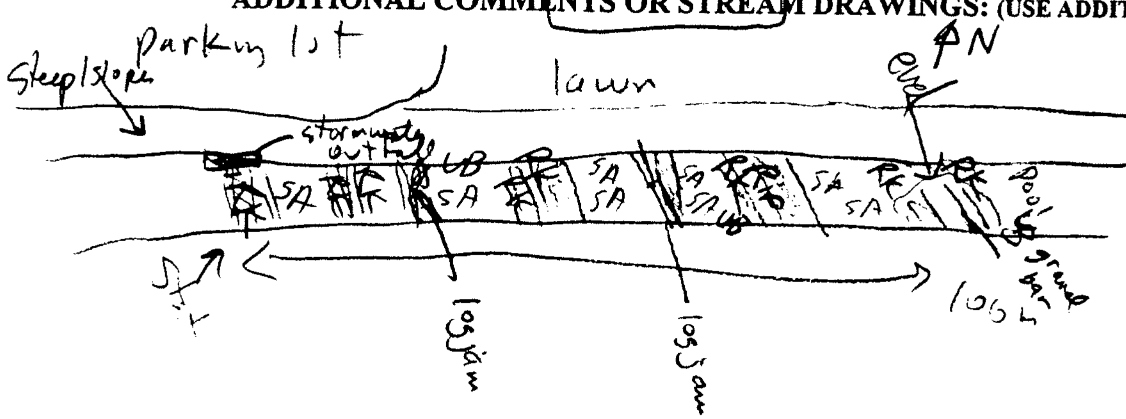
SEDIMENT/ SUBSTRATE (A)bsent, (S)parse, (C)ommon
[A = NOT PRESENT, S = 10-30% COVERAGE, C = > 30% COVERAGE]

SUBSTRATE / HABITAT TYPE	COVERAGE	SUBSTRATE / HABITAT TYPE	COVERAGE
WOODY DEBRIS (SNAGS)	C	SAND: COARSE MEDIUM FINE	C
LEAF PACKS OR LEAF MATS (CPOM)	C	MUD / MUCK / SILT	C
UNDERCUT BANKS / ROOTS <5%	A	ROCK OR SHELL RUBBLE	C
AQUATIC VEGETATION / MACROPHYTES	A	OTHER:	
SEDIMENT BAR / ISLAND DEPOSITS: SLUDGE PAPER FIBER MUD SAND SILT NONE OTHER Gravel			
STREAM SUBSTRATE TYPE (PREDOMINANT): BEDROCK COBBLE/GRAVEL GRAVEL/SAND SAND/SILT OTHER run/pool			
HABITAT ASSESSMENT SCORES: riffles		AVERAGE SCORE:	

MACROINVERTEBRATE COLLECTION METHOD USED (CHECK ONE):		
RAPID SURVEY	WITH RIFFLES:	WITHOUT RIFFLES:
MODIFIED EPA RAPID BIOASSESSMENT II ✓	RIFFLE/RUN:	GLIDE/POOL:
GEORGIA BIOASSESSMENT PROTOCOL ✓	RIFFLE/RUN: ✓	GLIDE/POOL:
	NON-WADEABLE:	OTHER:

HABITATS SAMPLED:		COLLECTED BY:
RIFFLE KICK- 100 ORGANISM SUBSAMPLE RK	8 m	
RIFFLE-EXTRA Crow		
UNDERCUT BANK-100 ORGANISM SUBSAMPLE UB	3 m	
UNDERCUT BANK EXTRA		
UNDERCUT BANK/EXPOSED TREE ROOTS Crow		
WOODY DEBRIS Crow	20m	throughout but mostly in log jams
LEAF PACK-CPOM Patel	1 bag	throughout
SAND/BOTTOM SUBSTRATE Patel	8 m	
MACROPHYTE	0	
VISUAL Crow, Patel	30 man-minute	– throughout

ADDITIONAL COMMENTS OR STREAM DRAWINGS: (USE ADDITIONAL PAPER IF NEEDED)



Ketchp

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

STREAM NAME: Game Cr	DATE: 8/15/95
POINT OF ASSESSMENT: SF 4 off Powers Pig Rd	
COUNTY:	DRAINAGE BASIN:
TIME:	
WEATHER:	LAT/LONG:
ASSESSOR(S):	PHOTO/VIDEO TAKEN? Yes No

RIPARIAN ZONE/INSTREAM FEATURES

RECENT RAIN: FLASH FLOOD HEAVY DOWNPOUR MODERATE LIGHT NONE	CHANNELIZED: Yes No
MEAN STREAM WIDTH (FT):	MEAN STREAM DEPTH (FT):
MEAN VELOCITY (FT/S):	DAM PRESENT: YES NO TYPE?____

LAND USE IN SURROUNDING AREA (SPECIFY PERCENTAGE):

FORESTED	AGRIC-GRAZING	AGRIC-CROPLAND	RESIDENTIAL	INDUSTRIAL
COMMERICAL	SIVICULTURAL	WETLAND	OTHER	OTHER

IS THERE AN IMPACT? YES NO IF YES, WHAT IS THE SOURCE OF IMPACT? (CIRCLE THOSE THAT APPLY)

ILLEGAL DISCHARGE PETROLEUM SOIL EROSION AGR. RUNOFF (MANURE, CHEMICAL) STREAM ALTERATION

DAM PERMITTED DISCHARGE WATER INTAKE STORMWATER LOGGING LANDFILL BYPASS

OTHER____

LIVESTOCK DAMAGE BASED ON OBSERVATIONS:
1. STABLE (0-25% DAMAGE, LITTLE/NO EROSION)
2. MODERATE (26-50% DAMAGE, <50% PLANT BIOMASS REMAINS)
3. HIGH (51-75% DAMAGE, <25% PLANT BIOMASS REMAINS)
4. SEVERE (76-100% DAMAGE, LITTLE/NO PLANT BIOMASS)
5. NO LIVESTOCK IN AREA

BEAVER ACTIVITY BASED ON OBSERVATIONS:
1. ACTIVE BEAVER DAM AFFECTING STREAM
2. OLD BEAVER DAM/ACTIVITY, LITTLE EFFECT ON STREAM
3. ACTIVE BEAVER DAM/CUTTING EVIDENT BUT LITTLE EFFECT ON STREAM
4. INACTIVE BEAVER DAM, LITTLE EFFECT ON STREAM
4. INACTIVE BEAVER DAM AFFECTING STREAM
5. NO BEAVER ACTIVITY EVIDENT

CANOPY COVER: OPEN (0-10%) LIGHTLY SHADED (11-45%) MOSTLY SHADED (46-80%) SHADED (81-100%)

WATER QUALITY

ODORS:	NORMAL	SEWAGE	PETROLEUM	CHEMICAL	ANAEROBIC OTHER____
WATER CLARITY:	CLEAR	SLIGHTLY TURBID	TURBID	OPAQUE	
SURFACE OILS:	SLICK	SHEEN	GLOBS	FLECKS	NONE
WATER COLOR:	TANNIC	GREEN (ALGAE)	CLEAR – brownish tint	OTHER	
WATER TEMP(°C): 23.6	WATER pH: 6.80	WATER D.O.: 5.69	CONDUCTIVITY: 115.2	OTHER: Turb – 6.8	

CHEMICAL SAMPLES COLLECTED: NUTRIENTS ROUTINE BACTERIA METALS AGPT SEDIMENT NONE

flow similar – somewhat lower

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

SEDIMENT/ SUBSTRATE (A)bsent, (S)parse, (C)ommon
[A = NOT PRESENT, S = 10-30% COVERAGE, C = > 30% COVERAGE]

SUBSTRATE / HABITAT TYPE	COVERAGE	SUBSTRATE / HABITAT TYPE	COVERAGE
WOODY DEBRIS (SNAGS)		SAND: COARSE MEDIUM FINE	
LEAF PACKS OR LEAF MATS (CPOM)		MUD / MUCK / SILT	
UNDERCUT BANKS / ROOTS		ROCK OR SHELL RUBBLE	
AQUATIC VEGETATION / MACROPHYTES		OTHER:	
SEDIMENT BAR / ISLAND DEPOSITS: SLUDGE PAPER FIBER MUD SAND SILT NONE OTHER			
STREAM SUBSTRATE TYPE (PREDOMINANT): BEDROCK COBBLE/GRAVEL GRAVEL/SAND SAND/SILT OTHER			
HABITAT ASSESSMENT SCORES:		AVERAGE SCORE:	

MACROINVERTEBRATE COLLECTION METHOD USED (CHECK ONE):		
RAPID SURVEY	WITH RIFFLES:	WITHOUT RIFFLES:
MODIFIED EPA RAPID BIOASSESSMENT II	RIFFLE/RUN:	GLIDE/POOL:
GEORGIA BIOASSESSMENT PROTOCOL	RIFFLE/RUN:	GLIDE/POOL:
	NON-WADEABLE:	OTHER:

HABITATS SAMPLED:		COLLECTED BY:
RIFFLE KICK- 100 ORGANISM SUBSAMPLE	8 m	Crow - throughout, riffles
RIFFLE-EXTRA		
UNDERCUT BANK-100 ORGANISM SUBSAMPLE		
UNDERCUT BANK EXTRA		
UNDERCUT BANK/EXPOSED TREE ROOTS	8 m.	" - "
WOODY DEBRIS	13 m	" -
LEAF PACK-CPOM	3-4 lit	Crow - pools ; 1° pine needles
SAND/BOTTOM SUBSTRATE	8 m	-
MACROPHYTE		
VISUAL	30 m	Crow - 1° lower sect.

ADDITIONAL COMMENTS OR STREAM DRAWINGS: (USE ADDITIONAL PAPER IF NEEDED)

Everything basically same as previous but little less flow (1-2 cfs), still looks "brownish" but no noticeable sewage odor. Also some areas of heavy periphyton due to nutrient enrichment

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

STREAM NAME: Heards Ferry Cr	DATE: 4/29/99
POINT OF ASSESSMENT: bottom of sub SS-5	
COUNTY: Fulton	DRAINAGE BASIN: Chatt. Riv	TIME: 3:50pm
WEATHER: light rain/mist	LAT/LONG:
ASSESSOR(S): Crow Pickel	PHOTO/VIDEO TAKEN? YES NO

RIPARIAN ZONE/INSTREAM FEATURES

RECENT RAIN: FLASH FLOOD HEAVY DOWNPOUR MODERATE LIGHT NONE (previous night)	CHANNELIZED: YES No
MEAN STREAM WIDTH (FT): 8'-10	MEAN STREAM DEPTH (FT): 8"
MEAN VELOCITY (FT/S): 0.5 fps (0-1fps)	DAM PRESENT: YES NO TYPE?

LAND USE IN SURROUNDING AREA (SPECIFY PERCENTAGE):

FORESTED	AGRIC-GRAZING	AGRIC-CROPLAND	RESIDENTIAL 10% (dense)	INDUSTRIAL
COMMERICAL	SIVICULTURAL	WETLAND	OTHER	OTHER

IS THERE AN IMPACT? YES NO IF YES, WHAT IS THE SOURCE OF IMPACT? (CIRCLE THOSE THAT APPLY)

ILLEGAL DISCHARGE PETROLEUM SOIL EROSION AGR. RUNOFF (MANURE, CHEMICAL) STREAM ALTERATION

DAM PERMITTED DISCHARGE WATER INTAKE STORMWATER LOGGING LANDFILL BYPASS

OTHER____________

LIVESTOCK DAMAGE BASED ON OBSERVATIONS:
1. STABLE (0-25% DAMAGE, LITTLE/NO EROSION) 2. MODERATE (26-50% DAMAGE, <50% PLANT BIOMASS REMAINS)
3. HIGH (51-75% DAMAGE, <25% PLANT BIOMASS REMAINS) 4. SEVERE (76-100% DAMAGE, LITTLE/NO PLANT BIOMASS)
5. ~~NO LIVESTOCK IN AREA~~

BEAVER ACTIVITY BASED ON OBSERVATIONS:
1. ACTIVE BEAVER DAM AFFECTING STREAM 2. OLD BEAVER DAM/ACTIVITY, LITTLE EFFECT ON STREAM
3. ACTIVE BEAVER DAM/CUTTING EVIDENT BUT LITTLE EFFECT ON STREAM
4. INACTIVE BEAVER DAM, LITTLE EFFECT ON STREAM 4. INACTIVE BEAVER DAM AFFECTING STREAM
5. ~~NO BEAVER ACTIVITY EVIDENT~~

CANOPY COVER: OPEN (0-10%) LIGHTLY SHADED (11-45%) MOSTLY SHADED (46-80%) SHADED (81-100%)

WATER QUALITY

ODORS: NORMAL SEWAGE PETROLEUM CHEMICAL ANAEROBIC OTHER	
WATER CLARITY: CLEAR SLIGHTLY TURBID TURBID OPAQUE	
SURFACE OILS: SLICK SHEEN GLOBS FLECKS NONE	
WATER COLOR: TANNIC GREEN (ALGAE) CLEAR OTHER	
WATER TEMP(°C): 13.6/13.6	WATER pH: 7.48	WATER D.O.: 9.57	CONDUCTIVITY: 69.9/84.2 (sp cond.)	OTHER:
CHEMICAL SAMPLES COLLECTED: NUTRIENTS ROUTINE BACTERIA METALS AGPT SEDIMENT NONE	

Sal - 0.0
Turb - 1.8
Chl - 0.0

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

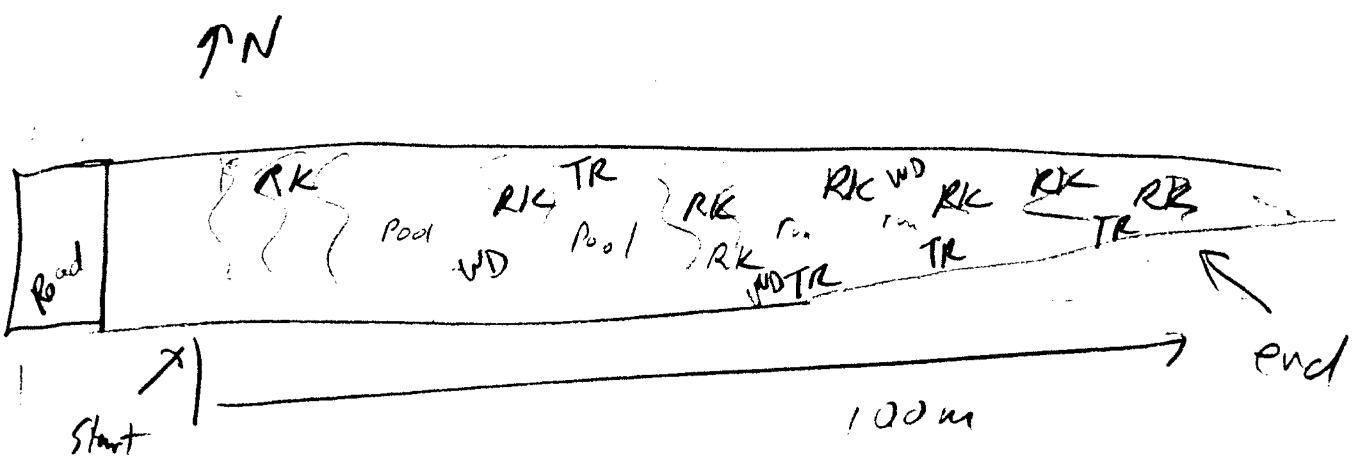
SEDIMENT/ SUBSTRATE (A)bsent, (S)parse, (C)ommon
[A = NOT PRESENT, S = 10-30% COVERAGE, C = > 30% COVERAGE]

SUBSTRATE / HABITAT TYPE	COVERAGE	SUBSTRATE / HABITAT TYPE	COVERAGE
WOODY DEBRIS (SNAGS) 102	S	SAND: COARSE MEDIUM FINE	C
LEAF PACKS OR LEAF MATS (CPOM)	S	MUD / MUCK / SILT	A
UNDERCUT BANKS / ROOTS 104	S	ROCK OR SHELL RUBBLE	C
AQUATIC VEGETATION / MACROPHYTES	A	OTHER:	
SEDIMENT BAR / ISLAND DEPOSITS: SLUDGE PAPER FIBER MUD SAND SILT NONE OTHER			
STREAM SUBSTRATE TYPE (PREDOMINANT): BEDROCK COBBLE/GRAVEL GRAVEL/SAND ~~SAND/SILT~~ some OTHER			
HABITAT ASSESSMENT SCORES:		AVERAGE SCORE:	

MACROINVERTEBRATE COLLECTION METHOD USED (CHECK ONE):		
RAPID SURVEY	WITH RIFFLES:	WITHOUT RIFFLES:
MODIFIED EPA RAPID BIOASSESSMENT II	RIFFLE/RUN:	GLIDE/POOL:
GEORGIA BIOASSESSMENT PROTOCOL ✓	RIFFLE/RUN: ✓	GLIDE/POOL:
	NON-WADEABLE:	OTHER:

HABITATS SAMPLED:		COLLECTED BY:
RIFFLE KICK- 100 ORGANISM SUBSAMPLE	8 m	Crow
RIFFLE-EXTRA		
UNDERCUT BANK-100 ORGANISM SUBSAMPLE		
UNDERCUT BANK EXTRA		
UNDERCUT BANK/EXPOSED TREE ROOTS - TR	4 m	Crow
WOODY DEBRIS	6 m	Crow
LEAF PACK-CPOM	1 bag	Patel
SAND/BOTTOM SUBSTRATE	8 m	Patel
MACROPHYTE	0	
VISUAL	30 ~~man~~-minutes	Crow Patel

ADDITIONAL COMMENTS OR STREAM DRAWINGS: (USE ADDITIONAL PAPER IF NEEDED)



PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

STREAM NAME: Marsh Cr	DATE: 4/30/99
POINT OF ASSESSMENT: ~ 200-300' below bridg SS-6	
COUNTY: Fulton DRAINAGE BASIN: Chatt. Riv	TIME: 8:45
WEATHER: light rain	LAT/LONG:
ASSESSOR(S): Crow Patel	PHOTO/VIDEO TAKEN? YES NO

RIPARIAN ZONE/INSTREAM FEATURES

RECENT RAIN: FLASH FLOOD HEAVY DOWNPOUR MODERATE LIGHT NONE		CHANNELIZED: YES NO	
MEAN STREAM WIDTH (FT): 8-20'	MEAN STREAM DEPTH (FT): 4"-3'		
MEAN VELOCITY (FT/S): 0-2	DAM PRESENT: YES NO TYPE?		

LAND USE IN SURROUNDING AREA (SPECIFY PERCENTAGE):

FORESTED	AGRIC-GRAZING	AGRIC-CROPLAND	RESIDENTIAL – low dens	INDUSTRIAL
COMMERICAL	SIVICULTURAL	WETLAND	OTHER	OTHER

IS THERE AN IMPACT? YES NO IF YES, WHAT IS THE SOURCE OF IMPACT? (CIRCLE THOSE THAT APPLY)

ILLEGAL DISCHARGE PETROLEUM SOIL EROSION AGR. RUNOFF (MANURE, CHEMICAL) STREAM ALTERATION

DAM PERMITTED DISCHARGE WATER INTAKE STORMWATER LOGGING LANDFILL BYPASS

OTHER some construction of new homes near stream upstream of site/bridg

LIVESTOCK DAMAGE BASED ON OBSERVATIONS:
1. STABLE (0-25% DAMAGE, LITTLE/NO EROSION) 2. MODERATE (26-50% DAMAGE, <50% PLANT BIOMASS REMAINS)
3. HIGH (51-75% DAMAGE, <25% PLANT BIOMASS REMAINS) 4. SEVERE (76-100% DAMAGE, LITTLE/NO PLANT BIOMASS)
5. NO LIVESTOCK IN AREA

BEAVER ACTIVITY BASED ON OBSERVATIONS:
1. ACTIVE BEAVER DAM AFFECTING STREAM 2. OLD BEAVER DAM/ACTIVITY, LITTLE EFFECT ON STREAM
3. ACTIVE BEAVER DAM/CUTTING EVIDENT BUT LITTLE EFFECT ON STREAM
4. INACTIVE BEAVER DAM, LITTLE EFFECT ON STREAM 4. INACTIVE BEAVER DAM AFFECTING STREAM
5. NO BEAVER ACTIVITY EVIDENT

CANOPY COVER: OPEN (0-10%) LIGHTLY SHADED (11-45%) MOSTLY SHADED (46-80%) SHADED (81-100%)

WATER QUALITY

ODORS: NORMAL SEWAGE PETROLEUM CHEMICAL ANAEROBIC OTHER				
WATER CLARITY: CLEAR SLIGHTLY TURBID TURBID OPAQUE				
SURFACE OILS: SLICK SHEEN GLOBS FLECKS NONE				
WATER COLOR: TANNIC GREEN (ALGAE) CLEAR OTHER				
WATER TEMP(°C): ~~12.3~~ 12.3	WATER pH: 7.18	WATER D.O. 9.61	CONDUCTIVITY: ~~762~~ 1025	OTHER:
CHEMICAL SAMPLES COLLECTED: NUTRIENTS ROUTINE BACTERIA METALS AGPT SEDIMENT NONE				

Sal - 0.0
Turb - 4.0
Chlor. - 0.0

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

SEDIMENT/ SUBSTRATE (A)bsent, (S)parse, (C)ommon

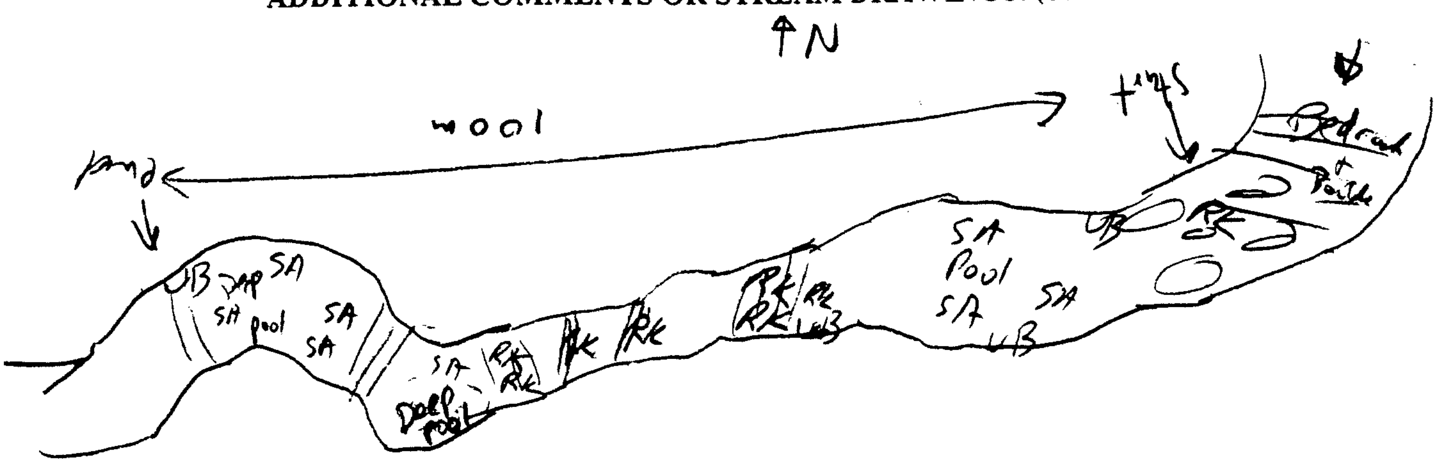
[A = NOT PRESENT, S = 10-30% COVERAGE, C = > 30% COVERAGE]

SUBSTRATE / HABITAT TYPE	COVERAGE	SUBSTRATE / HABITAT TYPE	COVERAGE
WOODY DEBRIS (SNAGS)	A	SAND: COARSE MEDIUM FINE	C
LEAF PACKS OR LEAF MATS (CPOM)	S	MUD / MUCK / SILT	A
UNDERCUT BANKS / ROOTS	C	ROCK OR SHELL RUBBLE	C rock
AQUATIC VEGETATION / MACROPHYTES	A	OTHER:	
SEDIMENT BAR / ISLAND DEPOSITS: C SLUDGE PAPER FIBER MUD SAND SILT NONE OTHER			
STREAM SUBSTRATE TYPE (PREDOMINANT): BEDROCK COBBLE/GRAVEL GRAVEL/SAND SAND/SILT OTHER			
HABITAT ASSESSMENT SCORES:		AVERAGE SCORE:	

MACROINVERTEBRATE COLLECTION METHOD USED (CHECK ONE):		
RAPID SURVEY	WITH RIFFLES:	WITHOUT RIFFLES:
MODIFIED EPA RAPID BIOASSESSMENT II	RIFFLE/RUN:	GLIDE/POOL:
GEORGIA BIOASSESSMENT PROTOCOL	RIFFLE/RUN:	GLIDE/POOL:
	NON-WADEABLE:	OTHER:

HABITATS SAMPLED:		COLLECTED BY:
RIFFLE KICK- 100 ORGANISM SUBSAMPLE KR	8 m	Crow
RIFFLE-EXTRA		
UNDERCUT BANK-100 ORGANISM SUBSAMPLE		
UNDERCUT BANK EXTRA		
UNDERCUT BANK/EXPOSED TREE ROOTS	4 m	Crow
WOODY DEBRIS	7 m	Crow throughout
LEAF PACK-CPOM	1 bag	Patel - throughout
SAND/BOTTOM SUBSTRATE	8 m	Patel
MACROPHYTE	none	
VISUAL	30 min	Crow, Patel

ADDITIONAL COMMENTS OR STREAM DRAWINGS: (USE ADDITIONAL PAPER IF NEEDED)



PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

STREAM NAME: Powers Branch	DATE: 4/30/99
POINT OF ASSESSMENT: near outfall pipe + retention wall SS-7	
COUNTY: Fulton / DRAINAGE BASIN: Chatt. River	TIME: 11:30 AM
WEATHER: overcast	LAT/LONG:
ASSESSOR(S): Crow, Patel	PHOTO/VIDEO TAKEN? YES NO

RIPARIAN ZONE/INSTREAM FEATURES

RECENT RAIN: FLASH FLOOD HEAVY DOWNPOUR MODERATE LIGHT NONE	CHANNELIZED: short section YES No
MEAN STREAM WIDTH (FT): 3-10' (av. 8')	MEAN STREAM DEPTH (FT): 1'-2.5'
MEAN VELOCITY (FT/S): 0-2 (@<1 ft/s)	DAM PRESENT: YES NO TYPE?

LAND USE IN SURROUNDING AREA (SPECIFY PERCENTAGE): nearby apts.

FORESTED	AGRIC-GRAZING	AGRIC-CROPLAND	RESIDENTIAL	INDUSTRIAL
COMMERICAL	SIVICULTURAL	WETLAND	OTHER	OTHER

IS THERE AN IMPACT? YES NO IF YES, WHAT IS THE SOURCE OF IMPACT? (CIRCLE THOSE THAT APPLY)

ILLEGAL DISCHARGE PETROLEUM SOIL EROSION AGR. RUNOFF (MANURE, CHEMICAL) STREAM ALTERATION

DAM PERMITTED DISCHARGE WATER INTAKE STORMWATER LOGGING LANDFILL BYPASS

OTHER sewage?

LIVESTOCK DAMAGE BASED ON OBSERVATIONS:
1. STABLE (0-25% DAMAGE, LITTLE/NO EROSION) 2. MODERATE (26-50% DAMAGE, <50% PLANT BIOMASS REMAINS)
3. ~~HIGH (51-75% DAMAGE,~~ <25% PLANT BIOMASS REMAINS) 4. SEVERE (76-100% DAMAGE, LITTLE/NO PLANT BIOMASS)
5. NO LIVESTOCK IN AREA

BEAVER ACTIVITY BASED ON OBSERVATIONS:
1. ACTIVE BEAVER DAM AFFECTING STREAM 2. OLD BEAVER DAM/ACTIVITY, LITTLE EFFECT ON STREAM
3. ACTIVE BEAVER DAM/CUTTING EVIDENT BUT LITTLE EFFECT ON STREAM
4. INACTIVE BEAVER DAM, LITTLE EFFECT ON STREAM 4. INACTIVE BEAVER DAM AFFECTING STREAM
5. NO BEAVER ACTIVITY EVIDENT

CANOPY COVER: OPEN (0-10%) LIGHTLY SHADED (11-45%) MOSTLY SHADED (46-80%) SHADED (81-100%)

WATER QUALITY @outfall

ODORS: NORMAL SEWAGE PETROLEUM CHEMICAL ANAEROBIC OTHER					
WATER CLARITY:	CLEAR	SLIGHTLY TURBID	TURBID	OPAQUE	
SURFACE OILS:	SLICK	SHEEN	GLOBS	FLECKS	foam NONE
WATER COLOR:	TANNIC	GREEN (ALGAE)	CLEAR	OTHER	
WATER TEMP(°C): 12.3/12.3	WATER pH: 7.22	WATER D.O.: 10.0	CONDUCTIVITY: 83.2 / 83.3	OTHER:	
CHEMICAL SAMPLES COLLECTED: NUTRIENTS ROUTINE BACTERIA METALS AGPT SEDIMENT NONE					

Sul - 0.0 Chlor - 0.6

Turb - 7.4

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD SHEET

SEDIMENT/ SUBSTRATE (A)bsent, (S)parse, (C)ommon

[A = NOT PRESENT, S = 10-30% COVERAGE, C = > 30% COVERAGE]

SUBSTRATE / HABITAT TYPE	COVERAGE	SUBSTRATE / HABITAT TYPE	COVERAGE
WOODY DEBRIS (SNAGS)	S	SAND: COARSE ~~MEDIUM~~ FINE	S
LEAF PACKS OR LEAF MATS (CPOM)	S	MUD / MUCK / SILT	S
UNDERCUT BANKS / ROOTS	S	ROCK OR SHELL RUBBLE	C
AQUATIC VEGETATION / MACROPHYTES	A	OTHER: boulder	C

SEDIMENT BAR / ISLAND DEPOSITS: SLUDGE PAPER FIBER MUD SAND SILT NONE OTHER ______

STREAM SUBSTRATE TYPE (PREDOMINANT): BEDROCK COBBLE/GRAVEL GRAVEL/SAND SAND/SILT OTHER boulder

HABITAT ASSESSMENT SCORES: AVERAGE SCORE:

MACROINVERTEBRATE COLLECTION METHOD USED (CHECK ONE):		
RAPID SURVEY	WITH RIFFLES:	WITHOUT RIFFLES:
MODIFIED EPA RAPID BIOASSESSMENT II	RIFFLE/RUN:	GLIDE/POOL:
GEORGIA BIOASSESSMENT PROTOCOL ✓	RIFFLE/RUN: ✓	GLIDE/POOL:
	NON-WADEABLE:	OTHER:

HABITATS SAMPLED:		COLLECTED BY:
RIFFLE KICK- 100 ORGANISM SUBSAMPLE	8 m	spread throughout riffles
RIFFLE-EXTRA		
UNDERCUT BANK-100 ORGANISM SUBSAMPLE	1 m	Crow
UNDERCUT BANK EXTRA		
UNDERCUT BANK/EXPOSED TREE ROOTS		
WOODY DEBRIS	10 m	throughout - 1° smaller limbs; Crow
LEAF PACK-CPOM	1 bag.	Patel
SAND/BOTTOM SUBSTRATE	8 m	Patel
MACROPHYTE	None	
VISUAL	30 man-minutes	Crow, Patel

ADDITIONAL COMMENTS OR STREAM DRAWINGS: (USE ADDITIONAL PAPER IF NEEDED)

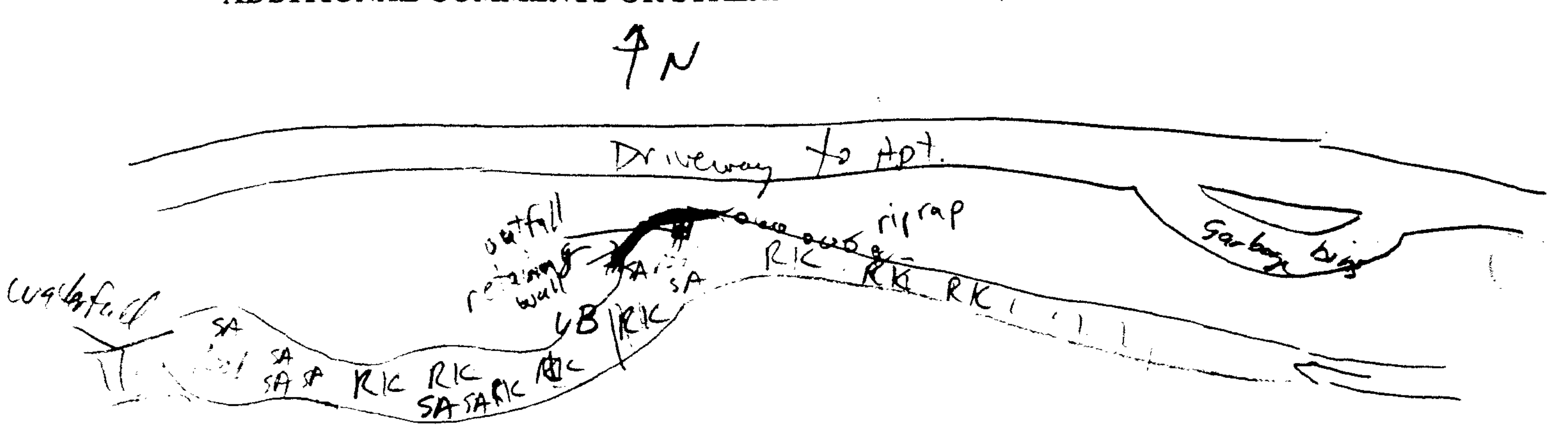


Table 6: Impairment Assessment Sheet

Stream: Long Island Cr Date: 4/29/99
Point of Assessment: stream road SS-1

County: Fulton Drainage Basin: Chatt. Riv
Assessor(s): Crow, Patel

1. Detection of impairment: Impairment detected (Complete items 2-6) No Impairment Detected (Stop here)

2. Biological Impairment Indicator:

Benthic macroinvertebrates
_____ absence of EPT taxa
_____ dominance of tolerant taxa groups
_____ low benthic abundance (under 100)
_____ low taxa richness
_____ other

Other aquatic communities
_____ periphyton (overabundance)
_____ macrophytes (overabundance)
_____ slimes (overabundance)
_____ fish (dead, open sores, deformaties, few present)

3. Brief description of problem:______________________________

Any previous surveys (list month and year)?______________________

4. Type of impact:
__X__ organic enrichment ? _____ toxicants _____ flow _____ undetermined
_____ poor habitat __X__ sediment _____ other

5. Estimated area of impact (multiply stream length affected by approximate stream width), where applicable:__________________meters²

6. Suspected source(s) of problem:
_____ point source discharge (list name, type of facility, location)
__X__ construction site runoff
_____ mine
_____ dam
_____ channelization
_____ ground water
_____ other
_____ combined sewer outfall
_____ silviculture runoff
_____ animal feedlot
_____ agricultural runoff
__X__ urban runoff
_____ unknown

Observations/Comments:

Table 6: Impairment Assessment Sheet

Stream: Game Creek Date: 4/29/99

Point of Assessment: @ bottom of road (near storm... outfall)

55-4

County: Fulton Drainage Basin: Chatt. Riv.

Assessor(s): Cron, Patel

1. Detection of impairment: **Impairment detected (Complete items 2-6)** No Impairment Detected (Stop here)

2. Biological Impairment Indicator:

Benthic macroinvertebrates

- ✓ absence of EPT taxa
- ✓ dominance of tolerant taxa groups
- ___ low benthic abundance (under 100)
- ✓ low taxa richness
- ___ other

Other aquatic communities

- ✓ periphyton (overabundance)
- ___ macrophytes (overabundance)
- ___ slimes (overabundance)
- ___ fish (dead, open sores, deformaties, few present)

3. Brief description of problem: ___

Any previous surveys (list month and year)? no

4. Type of impact:

- X organic enrichment
- ___ poor habitat
- ___ toxicants ?
- ___ sediment
- ___ flow
- ___ other
- ___ undetermined

5. Estimated area of impact (multiply stream length affected by approximate stream width), where applicable: ___ meters²

6. Suspected source(s) of problem:

- ___ point source discharge (list name, type of facility, location)
- ___ construction site runoff
- ___ mine
- ___ dam
- ___ channelization
- ___ ground water
- ___ other
- X combined sewer outfall
- ___ silviculture runoff
- ___ animal feedlot
- ___ agricultural runoff
- X urban runoff
- ___ unknown

Observations/Comments:

brownish, milky appearance

Redo

Table 6: Impairment Assessment Sheet

Stream: Game Cr. Date: 8/15/99!

Point of Assessment: SS-4

County: ______ Drainage Basin: ______

Assessor(s): ______

1. Detection of impairment: Impairment detected (Complete items 2-6) No Impairment Detected (Stop here)

2. Biological Impairment Indicator: Same as before

Benthic macroinvertebrates
- ____ absence of EPT taxa
- ____ dominance of tolerant taxa groups
- ____ low benthic abundance (under 100)
- ____ low taxa richness
- ____ other

Other aquatic communities
- ____ periphyton (overabundance)
- ____ macrophytes (overabundance)
- ____ slimes (overabundance)
- ____ fish (dead, open sores, deformaties, few present)

3. Brief description of problem: ______

Any previous surveys (list month and year)? ______

4. Type of impact:
- ____ organic enrichment
- ____ poor habitat
- ____ toxicants
- ____ sediment
- ____ flow
- ____ other
- ____ undetermined

5. Estimated area of impact (multiply stream length affected by approximate stream width), where applicable: ______ meters²

6. Suspected source(s) of problem:
- ____ point source discharge (list name, type of facility, location)
- ____ construction site runoff
- ____ mine
- ____ dam
- ____ channelization
- ____ ground water
- ____ other
- ____ combined sewer outfall
- ____ silviculture runoff
- ____ animal feedlot
- ____ agricultural runoff
- ____ urban runoff
- ____ unknown

Observations/Comments:

Table 6: Impairment Assessment Sheet

Stream: Heards Fork Cr Date: 4/29/99
Point of Assessment: throughout SS-5

County: Fulton Drainage Basin: Chatt. River
Assessor(s): Crow, Potel

1. Detection of impairment: Impairment detected (Complete items 2-6) No Impairment Detected (Stop here)

2. Biological Impairment Indicator:

Benthic macroinvertebrates
_____ absence of EPT taxa
_____ dominance of tolerant taxa groups
_____ low benthic abundance (under 100)
_____ low taxa richness
_____ other

Other aquatic communities
_____ periphyton (overabundance)
_____ macrophytes (overabundance)
_____ slimes (overabundance)
_____ fish (dead, open sores, deformaties, few present)

3. Brief description of problem:_____

Any previous surveys (list month and year)?_____

4. Type of impact:
_____ organic enrichment _____ toxicants _____ flow _____ undetermined
_____ poor habitat _____ sediment _____ other

5. Estimated area of impact (multiply stream length affected by approximate stream width), where applicable:_____ $meters^2$

6. Suspected source(s) of problem:
_____ point source discharge (list name, type of facility, location)
_____ construction site runoff
_____ mine
_____ dam
_____ channelization
_____ ground water
_____ other
_____ combined sewer outfall
_____ silviculture runoff
_____ animal feedlot
_____ agricultural runoff
_____ urban runoff
_____ unknown

Observations/Comments:

Table 6: Impairment Assessment Sheet

Stream: Marsh Cr Date: 4/30/99
Point of Assessment: throughout reach SS-6

County: Fulton Drainage Basin: Chatt. Riv
Assessor(s): Crow, Patel

1. Detection of impairment: Impairment detected (Complete items 2-6) No Impairment Detected (Stop here)

2. Biological Impairment Indicator:

Benthic macroinvertebrates
_____ absence of EPT taxa
_____ dominance of tolerant taxa groups
_____ low benthic abundance (under 100)
_____ low taxa richness
_____ other

Other aquatic communities
_____ periphyton (overabundance)
_____ macrophytes (overabundance)
_____ slimes (overabundance)
_____ fish (dead, open sores, deformaties, few present)

3. Brief description of problem:______________________________

Any previous surveys (list month and year)?______________________________

4. Type of impact:
_____ organic enrichment _____ toxicants _____ flow _____ undetermined
_____ poor habitat _____ sediment _____ other

5. Estimated area of impact (multiply stream length affected by approximate stream width), where applicable:__________________meters²

6. Suspected source(s) of problem:
_____ point source discharge (list name, type of facility, location)
_____ construction site runoff
_____ mine
_____ dam
_____ channelization
_____ ground water
_____ other
_____ combined sewer outfall
_____ silviculture runoff
_____ animal feedlot
_____ agricultural runoff
_____ urban runoff
_____ unknown

Observations/Comments:

Table 6: Impairment Assessment Sheet

Stream: Powers Branch Date: 4/30/99
Point of Assessment: retention wall & outfall pipe ; SS-7

County: Fulton Drainage Basin: Chatt. Riv.
Assessor(s): Crou, Patel

1. Detection of impairment: Impairment detected (Complete items 2-6) No Impairment Detected (Stop here)

2. Biological Impairment Indicator:

Benthic macroinvertebrates
_____ absence of EPT taxa
_____ dominance of tolerant taxa groups
_____ low benthic abundance (under 100)
_____ low taxa richness
_____ other

Other aquatic communities
✓ periphyton (overabundance)
_____ macrophytes (overabundance)
✓ slimes (overabundance)
_____ fish (dead, open sores, deformaties, few present)

3. Brief description of problem: ____________________

Any previous surveys (list month and year)? none known

4. Type of impact:
✓ organic enrichment _____ toxicants _____ flow _____ undetermined
✓ poor habitat _____ sediment _____ other

5. Estimated area of impact (multiply stream length affected by approximate stream width), where applicable: entire area meters²

6. Suspected source(s) of problem:
_____ point source discharge (list name, type of facility, location)
_____ construction site runoff
_____ mine
_____ dam
_____ channelization
_____ ground water
_____ other

✓ combined sewer outfall ? – sewage
_____ silviculture runoff
_____ animal feedlot
_____ agricultural runoff
✓ urban runoff
_____ unknown

Observations/Comments:

PHOTO 1 - REPRESENTATIVE VIEW OF SS-1, LONG ISLAND CREEK

PHOTO 2 - REPRESENTATIVE VIEW OF SS-1, LONG ISLAND CREEK

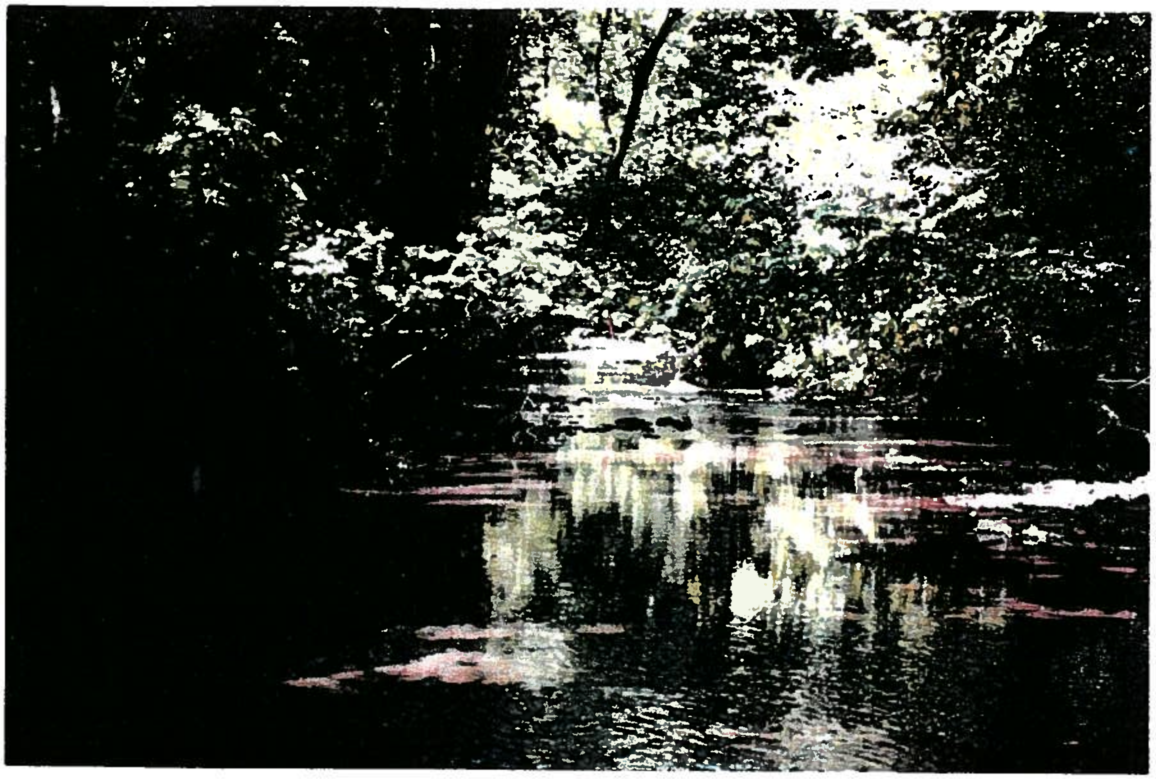


PHOTO 3 - REPRESENTATIVE VIEW OF SS-1, LONG ISLAND CREEK

PHOTO 4 - REPRESENTATIVE VIEW OF SS-1, LONG ISLAND CREEK

PHOTO 5 - REPRESENTATIVE VIEW OF SS-4, GAME CREEK
(Note large pipe draining into stream.)

PHOTO 6 - REPRESENTATIVE VIEW OF SS-4, GAME CREEK

PHOTO 7 - REPRESENTATIVE VIEW OF SS-4, GAME CREEK

PHOTO 8 - REPRESENTATIVE VIEW OF SS-4, GAME CREEK

PHOTO 9 - REPRESENTATIVE VIEW OF SS-5, HEARDS CREEK

PHOTO 10 - REPRESENTATIVE VIEW OF SS-5, HEARDS CREEK

PHOTO 11 - REPRESENTATIVE VIEW OF SS-5, HEARDS CREEK

PHOTO 12 - REPRESENTATIVE VIEW OF SS-5, HEARDS CREEK

PHOTO 13 - REPRESENTATIVE VIEW OF SS-6, MARSH CREEK

PHOTO 14 - REPRESENTATIVE VIEW OF SS-6, MARSH CREEK

PHOTO 15 - REPRESENTATIVE VIEW OF SS-6, MARSH CREEK

PHOTO 16 - REPRESENTATIVE VIEW OF SS-6, MARSH CREEK

PHOTO 17 - REPRESENTATIVE VIEW OF SS-7, POWERS BRANCH

PHOTO 18 - REPRESENTATIVE VIEW OF SS-7, POWERS BRANCH
(Note retaining wall in foreground.)

PHOTO 19 - REPRESENTATIVE VIEW OF SS-7, POWERS BRANCH
(Note pipe and retaining wall in creek and adjacent roadway.)

PHOTO 20 - REPRESENTATIVE VIEW OF RS-1, SNAKE CREEK

PHOTO 21 - REPRESENTATIVE VIEW OF RS-1, SNAKE CREEK

PHOTO 22 - REPRESENTATIVE VIEW OF RS-1, SNAKE CREEK

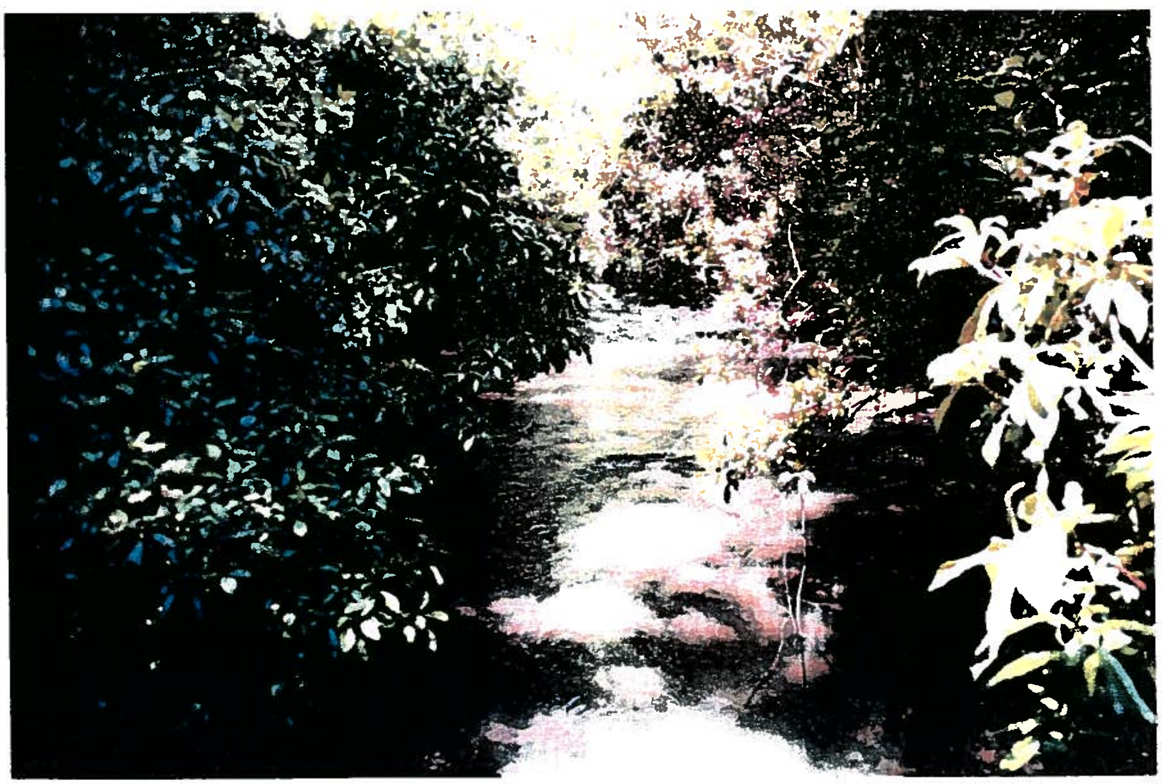


PHOTO 23 - REPRESENTATIVE VIEW OF RS-1, SNAKE CREEK

PHOTO 24 - REPRESENTATIVE VIEW OF RS-2, BLUFF CREEK

PHOTO 25 - REPRESENTATIVE VIEW OF RS-2, BLUFF CREEK

PHOTO 26 - REPRESENTATIVE VIEW OF RS-2, BLUFF CREEK

PHOTO 27 - REPRESENTATIVE VIEW OF RS-2, BLUFF CREEK

SPECIES	T.V.**	F.F.G.***	LONG ISLAND Station SS-1			GAME CREEK (8/99) Station SS-4			HEARDS FERRY Station SS-5			MARSH CREEK Station SS-6		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
PLATYHELMINTHES														
Turbellaria														
Tricladida														
Planariidae														
Cura foremanii	**4.97**													
Dugesia tigrina	**7.23**					2		2						
NEMATODA	**6.02**	**P**		10	10					20	20			
MOLLUSCA														
Bivalvia														
Veneroida														
Corbiculidae														
Corbicula fluminea	**6.12**	**FC**												
Sphaeriidae														
Musculium sp.	**7.58**	**FC**										4		4
Pisidium sp.	**6.48**	**FC**				4		4		22	22			
Gastropoda														
Basommatophora														
Ancylidae														
Ferrissia rivularis	**6.55**	**SC**				1	10	11				2	10	12
Lymnaeidae														
Pseudosuccinea columella	**7.65**	**CG**					12	12						
Physidae														
Physella sp.	**8.84**	**CG**		10	10				93	760	853	17	140	157
Planorbidae														
Menetus dilatatus	**8.23**	**SC**				6	60	66				1		1
ANNELIDA														
Oligochaeta	***10**	**CG**												
Haplotaxida														
Enchytraeidae	**9.84**	**CG**										7		7
Lumbricidae		**CG**	10		10		60	60				4	3	7
Naididae	***8**	**CG**	42	2	44							11	10	21
Dero sp.	**9**	**CG**				49	10	59				36		36
Nais sp.	**8.88**	**CG**	10		10								20	20
Nais behningi	**8.89**	**CG**												
Nais communis	**8.81**	**CG**	2		2	7		7						
Slavina appendiculata	**7.06**	**CG**	10		10									
Tubificidae w.h.c.	**7.11**	**CG**	10	2	12					405	405			
Tubificidae w.o.h.c.	**7.11**	**CG**	80	46	126	10	10	20		22	22	4	15	19
Limnodrilus hoffmeisteri	**9.47**	**CG**								22	22		20	20
Lumbriculida														
Lumbriculidae	**7.03**	**CG**										11	30	41
Lumbriuclus sp.	***8**	**CG**					20	20						
Hirudinea	***8**	**P**		20	20					11	11			
Branchiobdellida				20	20									
Branchiobdellidae	***6**	**CG**		20	20									
Helobdella sp.	***6**	**P**				18		18						

Appendix G - Section 3
Raw Macroinvertebrate Data

SPECIES	T.V.**	F.F.G.***	POWERS BRANCH Station SS-7			SNAKE CREEK Station RS-1			BLUFF CREEK Station RS-2		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
PLATYHELMINTHES											
Turbellaria											
Tricladida											
Planariidae											
Cura foremanii	**4.97**			20	20						
Dugesia tigrina	**7.23**										
NEMATODA	**6.02**	**P**		10	10						
MOLLUSCA											
Bivalvia											
Veneroida											
Corbiculidae											
Corbicula fluminea	**6.12**	**FC**				6	100	106		10	10
Sphaeriidae				10	10						
Musculium sp.	**7.58**	**FC**									
Pisidium sp.	**6.48**	**FC**									
Gastropoda											
Basommatophora											
Ancylidae											
Ferrissia rivularis	**6.55**	**SC**	10		10						
Lymnaeidae											
Pseudosuccinea columella	**7.65**	**CG**									
Physidae											
Physella sp.	**8.84**	**CG**	10		10	5		5			
Planorbidae											
Menetus dilatatus	**8.23**	**SC**									
ANNELIDA											
Oligochaeta	***10**	**CG**									
Haplotaxida											
Enchytraeidae	**9.84**	**CG**									
Lumbricidae		**CG**	1		1					10	10
Naididae	***8**	**CG**	1350	172	1522	5	10	15			
Dero sp.	**9**	**CG**	159		159	25		25	40		40
Nais sp.	**8.88**	**CG**		172	172					10	10
Nais behningi	**8.89**	**CG**		172	172						
Nais communis	**8.81**	**CG**		104	104						
Slavina appendiculata	**7.06**	**CG**				15	10	25	20	10	30
Tubificidae w.h.c.	**7.11**	**CG**									
Tubificidae w.o.h.c.	**7.11**	**CG**	80	69	149						
Limnodrilus hoffmeisteri	**9.47**	**CG**									
Lumbriculida											
Lumbriculidae	**7.03**	**CG**					1	1		90	90
Lumbriuclus sp.	***8**	**CG**									
Hirudinea	***8**	**P**					10	10			
Branchiobdellida											
Branchiobdellidae	***6**	**CG**									
Helobdella sp.	***6**	**P**									

Appendix G - Section 3
Raw Macroinvertebrate Data

SPECIES	T.V.**	F.F.G.***	LONG ISLAND Station SS-1			GAME CREEK (8/99) Station SS-4			HEARDS FERRY Station SS-5			MARSH CREEK Station SS-6		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
ARTHROPODA														
Crustacea														
Ostracoda														
Copepoda														
Cladocera														
Decapoda														
Cambaridae			1		1		20	20					1	1
Cambarus sp.	**7.62**	**CG**		1	1					2	2			
Procambarus sp.	**9.49**	**SH**		8	8					1	1			
Collembola														
Isotomidae				100	100								10	10
Insecta														
Ephemeroptera														
Baetidae										280	280			
Acentrella ampla	**3.61**	**CG**												
Baetis sp.	***4**	**CG**		980	980		90	90						
Baetis intercalaris	**4.99**	**CG**								128	128		1281	1281
Labiobaetis sp.	***4**	**CG**		50	50		30	30				1		1
Caenidae	***7**	**CG**												
Caenis sp.	**7.41**	**CG**												
Ephemeridae	***4**	**CG**												
Hexagenia sp.	**4.9**	**CG**												
Ephemerellidae	***1**	**SC**												
Ephemerella invaria gp.	**2.37**	**CG**												
Eurylophella sp.	**4.34**	**SC**												
Serratella sp.	***1**	**SC**												
Heptagenidae	***4**	**SC**												
Epeorus rubidus/subpallidus	**1.22**	**CG**												
Stenonema sp.	***4**	**SC**					10	10		10	10			
Stenonema modestum	**5.5**	**SC**												
Isonychiidae	***2**													
Isonychia sp.	**3.45**	**FC**												
Tricorythidae	***4**													
Tricorythodes sp.	**5.06**	**CG**												
Odonata														
Aeshnidae	***3**	**P**								10	10			
Boyeria vinosa	**5.89**	**P**		2	2					10	10			
Calopterygidae	***5**	**P**												
Calopteryx sp.	**7.78**	**P**					10	10		30	30		13	13
Coenagrionidae	***9**	**P**												
Argia sp.	**8.17**	**P**				3	262	265					10	10
Enallagma sp.	**8.91**	**P**					20	20						
Cordulegastridae	***3**	**P**												
Cordulegaster sp.	**5.73**	**P**												
Gomphidae	***7**	**P**		10	10									
Progomphus obscurus	**8.22**	**P**		23	23								4	4
Lestidae														
Archilestes grandis	**8**	**P**					10	10						
Libellulidae	***9**	**P**				2	51	53						

SPECIES	T.V.**	F.F.G.***	POWERS BRANCH Station SS-7			SNAKE CREEK Station RS-1			BLUFF CREEK Station RS-2		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
ARTHROPODA											
Crustacea											
Ostracoda						5		5			
Copepoda											
Cladocera									10		10
Decapoda											
Cambaridae				2	2		3	3		7	7
Cambarus sp.	**7.62**	**CG**		1	1				1	3	4
Procambarus sp.	**9.49**	**SH**								3	3
Collembola											
Isotomidae											
Insecta											
Ephemeroptera											
Baetidae							20	20			
Acentrella ampla	**3.61**	**CG**					70	70		70	70
Baetis sp.	***4**	**CG**					30	30			
Baetis intercalaris	**4.99**	**CG**		1661	1661					300	300
Labiobaetis sp.	***4**	**CG**					10	10			
Caenidae	***7**	**CG**									
Caenis sp.	**7.41**	**CG**					20	20			
Ephemeridae	***4**	**CG**									
Hexagenia sp.	**4.9**	**CG**				7		7		1	1
Ephemerellidae	***1**	**SC**									
Ephemerella invaria gp.	**2.37**	**CG**								181	181
Eurylophella sp.	**4.34**	**SC**					40	40		30	30
Serratella sp.	***1**	**SC**					10	10	5	100	105
Heptagenidae	***4**	**SC**									
Epeorus rubidus/subpallidus	**1.22**	**CG**								31	31
Stenonema sp.	***4**	**SC**									
Stenonema modestum	**5.5**	**SC**				5	496	501		220	220
Isonychiidae	***2**										
Isonychia sp.	**3.45**	**FC**					141	141		93	93
Tricorythidae	***4**										
Tricorythodes sp.	**5.06**	**CG**							5		5
Odonata											
Aeshnidae	***3**	**P**					10	10	5		5
Boyeria vinosa	**5.89**	**P**									
Calopterygidae	***5**	**P**									
Calopteryx sp.	**7.78**	**P**									
Coenagrionidae	***9**	**P**									
Argia sp.	**8.17**	**P**					20	20			
Enallagma sp.	**8.91**	**P**									
Cordulegastridae	***3**	**P**									
Cordulegaster sp.	**5.73**	**P**								10	10
Gomphidae	***7**	**P**					10	10		30	30
Progomphus obscurus	**8.22**	**P**								2	2
Lestidae											
Archilestes grandis	**8**	**P**									
Libellulidae	***9**	**P**									

Appendix G - Section 3
Raw Macroinvertebrate Data

SPECIES	T.V.**	F.F.G.***	LONG ISLAND Station SS-1			GAME CREEK (8/99) Station SS-4			HEARDS FERRY Station SS-5			MARSH CREEK Station SS-6		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
Plecoptera														
Chloroperlidae	***1**	**P**												
Alloperla sp.	**1.22**	**CG**												
Leuctridae	***0**	**SH**												
Leuctra sp.	**0.67**	**SH**												
Perlidae	***1**	**P**												
Acroneuria abnormis	**2.06**	**P**												
Eccoptura xanthenes	**3.74**	**P**												
Perlesta sp.	**4.7**	**P**												
Perlesta placida	**4.72**	**P**												
Perlodidae	***2**	**P**												
Hemiptera														
Corixidae	**9**	**PI**					10	10						
Belostomatidae														
Belostoma sp.		**P**												
Gerridae		**P**								50	50			
Aquarius sp.		**P**		11	11									
Veliidae														
Microvelia sp.						1	10	11						
Rhagovelia obesa		**P**		20	20		10	10						
Megaloptera														
Corydalidae	***0**	**P**												
Corydalus cornutus	**5.16**	**P**		1	1									
Nigronia serricornis	**4.95**	**P**					10	10						
Sialidae	***4**	**P**												
Sialis sp.	**7.17**	**P**												
Trichoptera														
Brachycentridae	***1**	**FC**												
Micrasema sp.	***2**	**SH**												
Hydropsychidae	***4**	**FC**	40	371	411					150	150	6	70	76
Ceratopsyche sp.	***4**	**FC**												
Ceratopsyche morosa	**2.63**	**FC**											1	1
Ceratopsyche sparna	**2.72**	**FC**												
Cheumatopsyche sp.	**6.22**	**FC**		10	10	11	236	247		30	30		201	201
Hydropsyche sp.	***5**	**FC**					163	163		40	40			
Hydropsyche betteni	**7.78**	**FC**		44	44		33	33		184	184	1	32	33
Hydropsyche venularis	**4.96**	**FC**		14	14									
Hydroptilidae	***4**	**PI**											40	40
Hydroptila sp.	**6.22**	**PI**												
Philopotamidae	***3**	**FC**												
Chimarra aterrima	**2.76**	**FC**		30	30		153	153	50	70	120			
Dolophilodes sp.	**0.81**	**FC**												
Psychomyiidae	***2**	**CG**												
Lype diversa	**4.05**	**SC**								10	10			

SPECIES	T.V.**	F.F.G.***	POWERS BRANCH Station SS-7			SNAKE CREEK Station RS-1			BLUFF CREEK Station RS-2		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
Plecoptera											
Chloroperlidae	***1**	**P**									
Alloperla sp.	**1.22**	**CG**					10	10			
Leuctridae	***0**	**SH**									
Leuctra sp.	**0.67**	**SH**							15	358	373
Perlidae	***1**	**P**								192	192
Acroneuria abnormis	**2.06**	**P**					1	1		21	21
Eccoptura xanthenes	**3.74**	**P**								1	1
Perlesta sp.	**4.7**	**P**								120	120
Perlesta placida	**4.72**	**P**					42	42		20	20
Perlodidae	***2**	**P**					30	30			
Hemiptera											
Corixidae	**9**	**PI**									
Belostomatidae											
Belostoma sp.		**P**		1	1						
Gerridae		**P**									
Aquarius sp.		**P**									
Veliidae										10	10
Microvelia sp.											
Rhagovelia obesa		**P**								10	10
Megaloptera											
Corydalidae	***0**	**P**									
Corydalus cornutus	**5.16**	**P**					1	1		1	1
Nigronia serricornis	**4.95**	**P**					10	10			
Sialidae	***4**	**P**									
Sialis sp.	**7.17**	**P**				5		5	5		5
Trichoptera											
Brachycentridae	***1**	**FC**									
Micrasema sp.	***2**	**SH**					10	10			
Hydropsychidae	***4**	**FC**		31	31		70	70		41	41
Ceratopsyche sp.	***4**	**FC**					60	60		110	110
Ceratopsyche morosa	**2.63**	**FC**									
Ceratopsyche sparna	**2.72**	**FC**					643	643			
Cheumatopsyche sp.	**6.22**	**FC**					120	120		90	90
Hydropsyche sp.	***5**	**FC**		10	10						
Hydropsyche betteni	**7.78**	**FC**		93	93						
Hydropsyche venularis	**4.96**	**FC**									
Hydroptilidae	***4**	**PI**									
Hydroptila sp.	**6.22**	**PI**								20	20
Philopotamidae	***3**	**FC**		10	10						
Chimarra aterrima	**2.76**	**FC**					20	20			
Dolophilodes sp.	**0.81**	**FC**								210	210
Psychomyiidae	***2**	**CG**									
Lype diversa	**4.05**	**SC**					10	10		10	10

SPECIES	T.V.**	F.F.G.***	LONG ISLAND Station SS-1			GAME CREEK (8/99) Station SS-4			HEARDS FERRY Station SS-5			MARSH CREEK Station SS-6		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
Coleoptera														
Dytiscidae	*5	P												
Hydroporus sp.	8.62	PI								10	10			
Curculionidae										10	10			
Elmidae	*5	CG												
Ancyronyx variegata	6.49	SC					30	30					30	30
Macronychus glabratus	4.58	SH												
Microcylloepus pusillus	2.11	CG										1	10	11
Optioservus sp.	2.36	SC												
Oulimnius latiusculus	1.78	CG												
Promoresia sp.	2.35	SC												
Stenelmis sp.	5.1	SC		20	20					10	10			
Gyrinidae		P												
Dineutus sp.	5.54	P												
Hydrophilidae		P												
Staphylinidae		P		10	10							1		1
Psephenidae	*4	SC												
Psephenus herricki	2.35	SC												
Diptera														
Ceratopogonidae	*5	P												
Atrichopogon sp.	6.49			10	10									
Chironomidae		CG	30	24	54	12	90	102	80	411	491	8	381	389
Ablabesmyia mallochi	7.19	P	210	1410	1620	77	280	357	199	1190	1389	97	97	194
Ablabesmyia rhamphe sp. gp.	8.37	P				5		5						
Brillia flavifrons	5.18	SH	40	50	90		20	20	80	90	170			
Cardiocladius obscurus	5.87	P								50	50	9	145	154
Chironomus sp.	9.63	CG	40	790	830					270	270	513	1404	1917
Cladotanytarsus sp.	4.09	FC												
Corynoneura sp.	6.01	CG	30		30									
Cricotopus bicinctus	8.54	CG	210	100	310	9		9	80	270	350	18	97	115
Cricotopus tremulus	*7	CG		50	50		20	20						
Cryptochironomus sp.	6.4	P				2	30	32					145	145
Cryptochironomus fulvus	6.38	P												
Dicrotendipes sp.	8.1	CG		50	50	68	930	998						
Endochironomus nigricans	7.79	SH				2		2						
Limnophyes sp.	7.43	CG	10		10					50	50	9		9
Lopescladius sp.	1.67													
Microtendipes sp.	5.53	CG				4		4						
Microtendipes pedellus gp.	*6	FC												
Nanocladius sp.	7.07	CG	30	160	190					90	90		145	145
Odontomesa fulva	5.89	CG												
Parachironomus sp.	9.42	CG				2		2						
Paracladopelma sp.	5.51	CG											97	97
Parakiefferiella sp.	5.4	CG	10		10									
Parametriocnemus lundbecki	3.65	CG	70	630	700				1357	1690	3047	3	484	487
Paratanytarsus sp.	8.45	CG												
Paratendipes sp.	5.11	CG				4		4		780	780	9		9
Phaenopsectra sp.	6.5	SC				27		27	319		319	363	97	460
Polypedilum convictum	4.93	SH					100	100	638	1050	1688			
Polypedilum fallax	6.39	SH					20	20						

SPECIES	T.V.**	F.F.G.***	POWERS BRANCH Station SS-7			SNAKE CREEK Station RS-1			BLUFF CREEK Station RS-2		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
Coleoptera											
Dytiscidae	*5	P									
Hydroporus sp.	8.62	PI									
Curculionidae											
Elmidae	*5	CG									
Ancyronyx variegata	6.49	SC					60	60		10	10
Macronychus glabratus	4.58	SH					10	10			
Microcylloepus pusillus	2.11	CG									
Optioservus sp.	2.36	SC					100	100	5	20	25
Oulimnius latiusculus	1.78	CG					101	101		210	210
Promoresia sp.	2.35	SC				5		5		20	20
Stenelmis sp.	5.1	SC		100	100				5		5
Gyrinidae		P									
Dineutus sp.	5.54	P					1	1		10	10
Hydrophilidae		P									
Staphylinidae		P									
Psephenidae	*4	SC									
Psephenus herricki	2.35	SC								101	101
Diptera											
Ceratopogonidae	*5	P									
Atrichopogon sp.	6.49			20	20		10	10		10	10
Chironomidae		CG	20	130	150		210	210	10	72	82
Ablabesmyia mallochi	7.19	P	80	70	150	230	140	370	260	40	300
Ablabesmyia rhamphe sp. gp.	8.37	P	20		20						
Brillia flavifrons	5.18	SH		70	70		30	30		10	10
Cardiocladius obscurus	5.87	P									
Chironomus sp.	9.63	CG	390	70	460						
Cladotanytarsus sp.	4.09	FC					100	100		70	70
Corynoneura sp.	6.01	CG	20		20						
Cricotopus bicinctus	8.54	CG		120	120	30	20	50	20	60	80
Cricotopus tremulus	*7	CG	10	20	30						
Cryptochironomus sp.	6.4	P									
Cryptochironomus fulvus	6.38	P		20	20	10	20	30			
Dicrotendipes sp.	8.1	CG		70	70						
Endochironomus nigricans	7.79	SH									
Limnophyes sp.	7.43	CG	30		30						
Lopescladius sp.	1.67									10	10
Microtendipes sp.	5.53	CG				10		10		10	10
Microtendipes pedellus gp.	*6	FC					20	20	410	10	420
Nanocladius sp.	7.07	CG	10		10					10	10
Odontomesa fulva	5.89	CG		50	50						
Parachironomus sp.	9.42	CG									
Paracladopelma sp.	5.51	CG									
Parakiefferiella sp.	5.4	CG		20	20						
Parametriocnemus lundbecki	3.65	CG		220	220		630	630	30	360	390
Paratanytarsus sp.	8.45	CG							10	10	20
Paratendipes sp.	5.11	CG				10		10	130		130
Phaenopsectra sp.	6.5	SC	100	90	190	1210	50	1260		10	10
Polypedilum convictum	4.93	SH	20		20	50	760	810		120	120
Polypedilum fallax	6.39	SH		20	20						

Appendix G - Section 3
Raw Macroinvertebrate Data

SPECIES	T.V.**	F.F.G.***	LONG ISLAND Station SS-1			GAME CREEK (8/99) Station SS-4			HEARDS FERRY Station SS-5			MARSH CREEK Station SS-6		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
Polypedilum halterale	**7.31**	**SH**												
Polypedilum illinoense	**9**	**SH**	250	840	1090	36	30	66	678	50	728	80	290	370
Potthastia longimanus	**6.46**	**CG**											48	48
Procladius sp.	**9.1**	**P**		100	100					50	50	9		9
Prodiamesa olivacea	**9.5**												48	48
Psectrocladius sp.	**3.59**	**SH**											48	48
Pseudosmittia sp.	***6**	**CG**	10		10					50	50			
Rheocricotopus robacki	**7.28**	**CG**	720	2040	2760				359	730	1089		726	726
Rheotanytarsus sp.	**5.89**	**FC**	180	310	490	2		2	40	460	500			
Robackia demeijerei	**3.74**	**CG**												
Stelechomyia perpulchra	**5.02**	**CG**												
Stenochironomus sp.	**6.45**	**SH**					20	20					194	194
Stictochironomus devinctus	**6.52**	**CG**		50	50	4	30	34		50	50			
Synorthocladius semivirens	**4.36**	**CG**	40		40					50	50			
Tanypus sp.	**9.19**	**P**										9		9
Tanytarsus sp.	**6.76**	**FC**	100	630	730	32	110	142	239	2150	2389	9	387	396
Thienemanniella xena	**5.86**	**CG**	10		10		20	20		50	50			
Thienemannimyia sp. gp.	**8.42**	**P**		260	260	12	380	392		260	260	53	339	392
Tvetenia bavarica gp.	**3.65**	**CG**	70	260	330					50	50			
Tvetenia discoloripes	**3.61**	**CG**											48	48
Xenochironomus xenolabis	**7.1**	**P**					20	20						
Zavrelia sp.	**5.3**	**CG**												
Zavrelimyia sp.	**9.11**	**P**		100	100									
Culicidae	***8**	**FC**												
Anopheles sp.	**8.58**	**FC**		10	10									
Dixidae		**CG**												
Dixa sp.	**2.55**	**CG**												
Dolichopodidae	***5**	**P**		1	1									
Empididae	***6**	**P**								20	20			
Clinocera sp.	***6**	**P**												
Hemerodromia sp.	***6**	**P**					60	60						
Ephydridae	***8**	**PI**												
Muscidae	***8**	**P**		10	10							1		1
Psychodidae	***10**	**CG**											10	10
Pericoma sp.	***4**	**CG**										1		1
Psychoda sp.	**9.64**	**CG**	20	10	30									
Simuliidae	***6**	**FC**												
Simulium sp.	**4**	**FC**	70	881	951				500	1831	2331	1	1492	1493
Tipulidae	***3**	**SH**		10	10				10	41	51			
Antocha sp.	**4.25**	**CG**		30	30					110	110		20	20
Hexatoma sp.	**4.31**	**P**												
Limnonia sp.	**9.64**	**SH**					10	10						
Tipula sp.	**7.33**	**SH**		10	10		12	12	2	66	68	9	10	19
CHORDATA****														
Osteichthyes				113	113								10	10
Caudata			1	10	11					45	45	1	1	2
TOTAL NO. OF ORGANISMS			**2355**	**10661**	**13016**	**412**	**3522**	**3934**	**4724**	**14256**	**18980**	**1308**	**8703**	**10011**
TOTAL NO. OF TAXA			**29**	**53**	**64**	**28**	**43**	**55**	**16**	**52**	**53**	**33**	**44**	**56**

Appendix G - Section 3
Raw Macroinvertebrate Data

SPECIES	T.V.**	F.F.G.***	POWERS BRANCH Station SS-7			SNAKE CREEK Station RS-1			BLUFF CREEK Station RS-2		
			CPOM	COMP	TOTAL	CPOM	COMP	TOTAL	CPOM	COMP	TOTAL
Polypedilum halterale	7.31	SH				30		30			
Polypedilum illinoense	9	SH		380	380		130	130			
Potthastia longimanus	6.46	CG		20	20						
Procladius sp.	9.1	P	10	70	80						
Prodiamesa olivacea	9.5			20	20						
Psectrocladius sp.	3.59	SH									
Pseudosmittia sp.	*6	CG		20	20	10		10			
Rheocricotopus robacki	7.28	CG	90	610	700	10	60	70	10	20	30
Rheotanytarsus sp.	5.89	FC		120	120		30	30		40	40
Robackia demeijerei	3.74	CG								40	40
Stelechomyia perpulchra	5.02	CG								10	10
Stenochironomus sp.	6.45	SH				10	20	30			
Stictochironomus devinctus	6.52	CG									
Synorthocladius semivirens	4.36	CG									
Tanypus sp.	9.19	P									
Tanytarsus sp.	6.76	FC	30	120	150	70	20	90	30	20	50
Thienemanniella xena	5.86	CG									
Thienemannimyia sp. gp.	8.42	P	30	140	170	10	80	90	30	140	170
Tvetenia bavarica gp.	3.65	CG		20	20		20	20	10		10
Tvetenia discoloripes	3.61	CG					20	20			
Xenochironomus xenolabis	7.1	P									
Zavrelia sp.	5.3	CG							40	10	50
Zavrelimyia sp.	9.11	P								10	10
Culicidae	*8	FC									
Anopheles sp.	8.58	FC									
Dixidae		CG									
Dixa sp.	2.55	CG					30	30		21	21
Dolichopodidae	*5	P									
Empididae	*6	P		20	20					10	10
Clinocera sp.	*6	P					10	10			
Hemerodromia sp.	*6	P								1	1
Ephydridae	*8	PI		20	20						
Muscidae	*8	P									
Psychodidae	*10	CG									
Pericoma sp.	*4	CG									
Psychoda sp.	9.64	CG		20	20						
Simuliidae	*6	FC		10	10						
Simulium sp.	4	FC	20	990	1010		390	390	5	220	225
Tipulidae	*3	SH		20	20						
Antocha sp.	4.25	CG		160	160		50	50		30	30
Hexatoma sp.	4.31	P								20	20
Limnonia sp.	9.64	SH									
Tipula sp.	7.33	SH		2	2		1	1		10	10
CHORDATA****											
Osteichthyes										10	10
Caudata							11	11	1	1	2
TOTAL NO. OF ORGANISMS			**2490**	**6390**	**8880**	**1773**	**5161**	**6934**	**1111**	**4200**	**5311**
TOTAL NO. OF TAXA			**21**	**49**	**58**	**23**	**60**	**70**	**24**	**70**	**78**

Cell: A3
Comment: This spreadsheet was revised using new data from Game Creek.
The spreadsheet containing the original Game Creek as well as the new Game Creek data is located on Sheet 1. The revised metric calculations are located on Sheet 2 and the revised ecoanalysis data is located on sheet 5.

Other changes:
All Ablabesmyia janta and parajanta are now Ablabesmyia rhamphe sp. gp. And all Conchapelopia are now Thienemannimyia sp. gp.

The above changes caused slight differences in the metric and ecoanalysis data from the previous report.

SUMMARY OF FISHERY DATA

SPECIES	SS-1	SS-4	SS-5	SS-6	SS-7	RS-1	RS-2
Catastomidae							
Blacktail redhorse, *Moxostoma poecilurum*						2	
Alabama hogsucker, *Hypentelium etowanum*	6					19	15
Creek chubsucker, *Erimyzon oblongus*							1
Centrarchidae							
Bluegill, *Lepomis macrochirus*	5	25	11	2	7	8	
Redbreast sunfish, *Lepomis auritus*	51			66		9	6
Green sunfish, *Lepomis cyanellus*	26	1	9		1		
Warmouth, *Lepomis gulosus*	2						
Hybrid sunfish, *Lepomis sp.*	1						
Largemouth bass, *Micropterus salmoides*			2				
Redeye bass, *Micropterus coosae*						1	6
Cottidae							
Banded sculpin, *Cottus carolinae*						3	18
Cyprinidae							
Bluehead chub, *Nocomis leptocephalus*			3	2		11	21
Clear chub, *Hybopsis winchelli*							3
Creek chub, *Semotilus atromaculatus*	8			22			1
Dixie chub, *Semotilus thoreauianus*						1	
Silverjaw minnow, *Ericymba buccata*	14						
Bandfin shiner, *Luxilis zonistius*						49	104
Yellowfin shiner, *Notropis lutipinnis*	29		14				
Bluefin stoneroller, *Campostoma pauciradii*	12			31		11	20
Ictaluridae							
Yellow bullhead, *Ameiurus natalis*	4			22		2	1
Flat bullhead, *Ameiurus platycephalus*						1	
Percidae							
Blackbanded darter, *Percina nigrofasciata*	19					32	18
Total Individuals	177	26	39	149	8	149	214
Total Species	11*	2	5	6	2	13	12

ɔes not include hybrid as separate species.

Biological Data Analysis Guidelines

PREPARED FOR: Fulton County

PREPARED BY: Dale Jones

COPIES: Sean Roche/CH2M HILL
Glenn Dukes/CH2M HILL

DATE: December 6, 1999

Fulton County is currently conducting watershed assessments for all the major watersheds in the county (Little River, Camp Creek, Johns Creek, Big Creek, and several small watersheds in Sandy Springs). Four different consultant teams (CH2M HILL, CDM, Parsons, and Brown and Caldwell) have been contracted to conduct these watershed assessments and have established a coordination effort to ensure a consistent approach to performing the work countywide. As a part of the coordination effort, the project team decided to pool biological data from the reference stations for the biological data analysis (benthic macroinvertebrate and fish). CH2M HILL gathered all reference station data collected as a part of the various watershed assessments and developed scoring criteria. The criteria and methodology are presented below.

Benthic Macroinvertebrates

Benthic macroinvertebrate samples were identified to the lowest taxonomic level practical, and the results were used to compute six community, population, and functional metrics following the GBP (GADNR, 1997). The coarse particulate organic matter (CPOM) and mulithabitat samples were combined for calculation of all metrics except ratio of shedders (see Table 1). Each metric or index represents a slightly different component of community structure and/or function and provides a measure of biotic integrity. A composite of seven reference stations was used for scoring the study stations following guidelines established by Barbour et al. (1997). Several stations were sampled on multiple occasions. The revised RBP allows for using a composite of reference stations when a large reference database exists. Data from the two reference stations sampled as part of the study for the Camp Creek study area, and one each from the Sandy Springs, Big Creek, and Johns Creek study area were supplemented with reference station data collected from other watershed studies by CH2M HILL. Following the RBP guidelines and using the data from 7 reference stations the 95th percentile for each metric was used as the reference condition. The percentile value provided a more robust measure of reference station condition and minimized the natural variability observed among the reference stations. As with the habitat scores, watershed size was taken into account when comparing study and reference stations; however, there was little difference in metric values among reference stations of different size watersheds.

Assessment scores of 0, 1, 3, and 5 were assigned to each metric based on the degree of deviation from "expected" metric values for relatively undisturbed reference streams.

Metrics 1, 2, and 5 were rated based on a percent similarity to the reference condition (see Table 2). Metrics 3, 4, and 6 were rated against fixed rating criteria from the GBP. The six metric ratings were then summed, yielding an overall site score for each station. The summed score for each station was then compared to the corresponding reference station score and the percentage of reference station was determined. Percentages could range from a low of 0 to 21 percent reference, indicating "very poor" biotic integrity, to a high of 84 to 100 percent reference, indicating "very good" conditions.

TABLE 1
Metrics Used for Georgia Bioassessment Protocols for Fulton County Watershed Assessment

Metric	Sample [a]		
	CPOM	MH	Total
1. Taxa Richness			X
2. EPT Index			X
3. Indicator Assemblage Index (IAI)			X
4. Percent Contribution of Dominant Taxon			X
5. North Carolina Biotic Index (NCBI)			X
6. Ratio of Shredders/Total	X		

[a] The sample column indicates the type of sample that was used to calculate the metric. CPOM = coarse particulate organic matter. MH = multi-habitat

TABLE 2
Proposed Reference Conditions for the Chattahoochee River Basin

Metric					Percentile						
	Mean	Median	Max	Min	5th	10th	20th	50th	80th	90th	95th
Taxa Richness (Total)	76	77	101	57	59	61	70	77	83	86	93
Percent Contribution Dominant Taxon (Total)	17.1	15.231	31.9	7.61	7.77	7.97	8.79	15.2	24.1	31	31.8
EPT Index (Total)	20	20	29	12	14	15	16	20	23	24	26
Biotic Index (Total)	5.46	5.485	6.29	4.29	4.7	5.04	5.1	5.49	5.83	5.93	6.1
Proportion of EPT Individuals (Total)	0.3	0.3	0.48	0.07	0.14	0.19	0.21	0.31	0.32	0.33	0.34
Proportion of Chironomid and Annelid Individuals (Total)	0.52	0.56	0.87	0.22	0.27	0.31	0.36	0.55	0.66	0.68	0.77
Ratio of Shredders/Total (CPOM)	14.8	12.314	34.3	1.4	1.66	2.18	4.97	12.3	25.2	29	31.6
Ratio of scrapers to filter collectors (Total)	0.39	0.3752	0.89	0.09	0.1	0.11	0.14	0.38	0.47	0.8	0.86
EPT/Chironomidae (Total)	0.76	0.54	2.75	0.08	0.11	0.14	0.31	0.54	1.16	1.27	1.94

Shading indicates the score that should be used for the reference condition

Fish

IBI scores were derived for each station by rating 12 metrics of fish community structure in three broad categories: (1) species richness and composition, (2) trophic composition, and (3) fish abundance and condition. The IBI assumes that each metric correlates either positively or negatively with increased stream degradation. The 12 metrics are differentially sensitive to various levels of stream perturbation. For example, some metrics distinguish throughout the low to intermediate range of biotic integrity (e.g., proportion of fish with disease/anomalies), while others are more sensitive in the intermediate to high range of biotic integrity (e.g., number of sensitive species) (Karr et al., 1986). The 12 metrics rated in this assessment are listed in Table 3.

Ratings of 1, 3, or 5 were assigned to each IBI metric based on the degree of deviation from "expected" metric values for relatively undisturbed reference streams of similar size. Species commonly found in the Chattahoochee River Basins are listed in Table 4. Species are classified for calculating metrics 1, 4 through 9, and 11. Metrics 1 to 5, 10, and 11 were rated against the expectation criteria developed using the reference stations (see Figures 1 through 7). Metrics 6 to 9 and 12 were rated using the fixed rating criteria prescribed in RBP V (see Karr et al., 1986; Barbour et al., 1997; and Plafkin et al., 1989). The 12 metric ratings were then summed, yielding an overall site score for each station. Scores could range from a low of 12, indicating "very poor" biotic integrity, to a high of 60, indicating "excellent" conditions.

TABLE 3
IBI Metrics Used to Evaluate Fish Community Sampling Data for Fulton County Study Stations (Sources: Karr et al., 1986; Plafkin et al., 1989)

Metric	Scoring Criteria		
	5	3	1
Species Richness and Composition:			
1. Number of native fish species		See Figure 1	
2a-Camp Creek study area. Number of native benthic species using silt-free substrates (darters, sculpins, madtoms, Alabama hogsucker, and jumprock species)		See Figure 2	
3. Number of sunfish species (excludes bass)		See Figure 3	
4. Number of native minnow (cyprinid) species		See Figure 4	
5. Number of sensitive species		See Figure 5	
6. Proportion of tolerant species	<1%	1-5%	>5%
Trophic Composition:			
7. Proportion as omnivores	<20%	20-45%	>45%
8. Proportion as insectivorous minnows	>45%	45-20%	>20%
9. Proportion as top carnivores	>5%	5-1%	<1%
Fish Abundance and Condition:			
10. Catch per unit sampling effort (no./hr.), excluding the tolerant species		See Figure 6	
11. Proportion as gravel/crevice spawning species		See Figure 7	
	>47%	>23-47%	0-23%
12. Proportion with disease/anomalies	0-2%	>2-5%	>5%

TABLE 4
Species list for Camp Creek Study Area

Scientific Name	Common Name	Trophic Level	Native vs Non Native	Spawning Guild	Tolerant vs Intolerant
PETROMYZONTIDAE (LAMPREYS)					
Ichthyomyzon gagei (amocoetes)	southern brook lamprey	herbivore [b]	Native	Lithophilous [c]	
CYPRINIDAE (MINNOWS)					
Campostoma pauciradii	bluefin stoneroller	herbivore [a]	Native	Lithophilous [c]	
Cyprinella venusta	blacktail shiner	insectivore [b]	Native	Lithophilous [a,c]	
Ericymba buccata	silverjaw minnow	insectivore [a, b]	Native	Non-lithophilous [c]	
Hybopsis sp. *cf. winchelli*	clear chub	insectivore [a]	Native	Non-lithophilous [c]	Sensitive
Luxilus zonistius	bandfin shiner	insectivore [a]	Native	Lithophilous [c]	
Nocomis leptocephalus	bluehead chub	omnivore [c]	Native	Lithophilous [c]	
Notropis longirostris	longnose shiner	insectivore [a]	Native	Non-lithophilous [c]	Sensitive
Notropis lutipinnis	yellowfin shiner	insectivore [d]	Native	Lithophilous [e]	
Notropis texanus	weed shiner	omnivore [b]	Native	Non-lithophilous [c]	
Semotilus atromaculatus	creek chub	omnivore [c, e]	Native	Lithophilous [c]	Tolerant
CATOSTOMIDAE (SUCKERS)					
Catostomus commersoni	white sucker	omnivore [b, f]	Non Native	Lithophilous [b,e]	
Erimyzon oblongus	creek chubsucker	insectivore [a,b,e]	Native	Lithophilous [b,e]	
Hypentelium etowanum	Alabama hog sucker	insectivore [a]	Native	Lithophilous [c, d]	Sensitive
Minytrema melanops	spotted sucker	insectivore [a]	Native	Lithophilous [c]	Sensitive [f]
Moxostoma lachneri	greater jumprock	insectivore	Endemic	Lithophilous [c]	Sensitive
ICTALURIDAE (BULLHEAD CATFISHES)					
Ameiurus brunneus	snail bullhead	omnivore [a]	Native	Lithophilous [b,d]	
A. natalis	yellow bullhead	omnivore [c]	Native	Non-lithophilous [b]	
A. nebulosus	brown bullhead	omnivore [c]	Native	Non-lithophilous [b]	Tolerant [f]
A. platycephalus	flat bullhead	omnivore [c]	Non Native	Non-lithophilous [a,b,c,d]	
Ictalurus punctatus	channel cat	omnivore [c]	Native	Non-lithophilous [b]	
Noturus leptacanthus	speckled madtom	insectivore [b]	Native	Non-lithophilous [a]	
Noturus sp. *(yoy)*	madtom	insectivore [b]	Native	Non-lithophilous [a]	
ESOCIDAE (PIKES)					
Esox americanus	redfin pickerel	piscivore [c]	Native	Non-lithophilous [b]	

TABLE 4
Species list for Camp Creek Study Area

Scientific Name	Common Name	Trophic Level	Native vs Non Native	Spawning Guild	Tolerant vs Intolerant
FUNDULIDAE (TOPMINNOWS)					
Fundulus stellifer	southern studfish	invertivore [e]	Native	Lithophilous [b,d]	
POECILIIDAE (LIVEBEARERS)					
Gambusia holbrooki (affinis)	eastern mosquitofish	omnivore [b,e]	Native	Non-lithophilous [b,e]	
ATHERINIDAE (SILVERSIDES)					
Labidesthes sicculus	brook silverside	planktivore [c]	Native	Non-lithophilous [c]	
COTTIDAE (SCULPINS)					
Cottus sp. *cf. bairdi*	mottled sculpin	insectivore [c]	Native	Lithophilous [a]	
CENTRARCHIDAE (SUNFISHES)					
Lepomis auritus	redbreast sunfish	insectivore [c]	Native	Non-lithophilous [a]	
L. cyanellus	green sunfish	insectivore [c]	Non Native	Non-lithophilous [a]	Tolerant
L. gulosus	warmouth	invertivore [c]	Native	Non-lithophilous [a]	
L. macrochirus	bluegill	insectivore [c]	Native	Non-lithophilous [a]	
L. microlophus	redear sunfish	invertivore [c]	Native	Non-lithophilous [b]	
L. minatus x L. punctatus (contact zone	spotted sunfish	insectivore [b]	Native	Non-lithophilous [a,d]	
Lepomis hybrid					
Micropterus sp. *cf. coosae*	shoal bass	piscivore [a]	endemic	Lithophilous [a,c,d]	Sensitive
Micropterus salmoides	largemouth bass	piscivore [a]	Native	Non-lithophilous [a]	
Pomoxis nigromaculatus	black crappie	piscivore [c]	Native	Non-lithophilous [b]	
PERCIDAE (PERCHES AND DARTERS)					
Percina nigrofasciata	blackbanded darter	insectivore [e]	Native	Non-lithophilous [a]	
Perca flavescens	yellow perch	piscivore [c]	Non Native	Non-lithophilous [c]	

[a] Karr et al., 1986
[b] Etnier and Starnes, 1993
[c] Jenkins and Burkhead, 1993
[d] no life history information available
[e] Mettee et al., 1996
[f] Becker, 1983

References

Barbour, M. T., Gerritsen, J., Snyder, B. D., Stribling, J. B. 1997. *Revisions to Rapid Bioassessment Protocols for Use in Streams and Rivers: Periphyton, Benthic Macroinvertebrates, and Fish (Draft Form).* U.S. Environmental Protection Agency. Assessment and Watershed Protection Division. USEPA/841-D-97-002.

Georgia Department of Natural Resources. 1997. *Draft: Standard Operating Procedures–Freshwater Macroinvertebrate Biological Assessment*. Georgia Department of Natural Resources, Water Protection Branch, Atlanta, Georgia.

Karr, J. R., K. D. Fausch, P. L. Angermeier, P.R. Yant, I. J. Schlosser. 1986. Assessing biological integrity in running waters, a method and its rationale. Illinois Natural History Survey Special Publication 5. September 1986.

Plafkin, J. L., M. T. Barbour, K.D. Porter, S. K. Gross, R. M. Hughes. 1989. *Rapid Bioassessment Protocols for Use in Streams and Rivers: Benthic Macroinvertebrates and Fish.* U.S. Environmental Protection Agency. Assessment and Watershed Protection Division. USEPA/440/4-89/001.

Figure 1
Number of Native Species vs. Watershed Area for Reference Sites

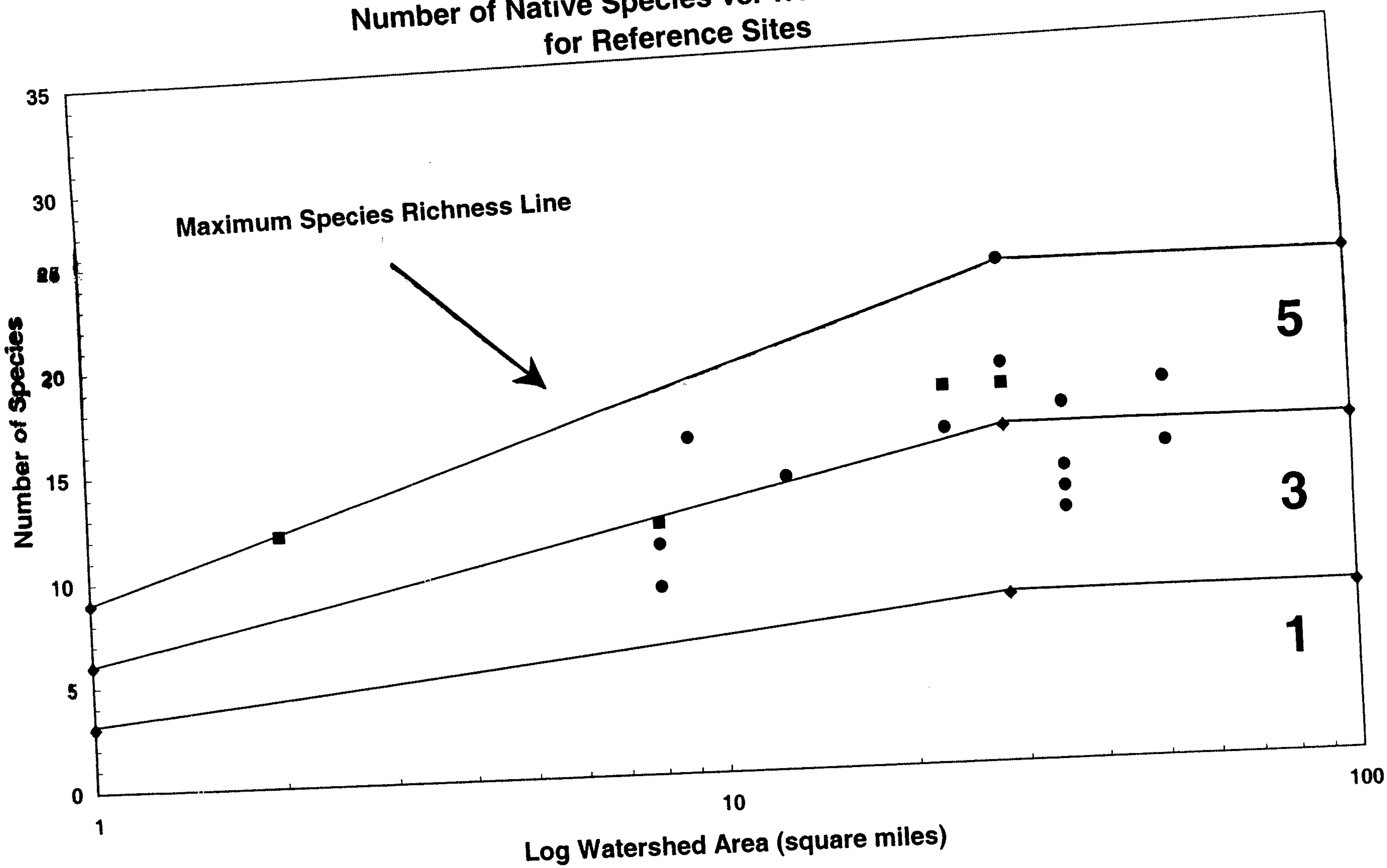


Figure 2
Number of Darter, Sculpin, Madtom, Hogsucker, and Jumprock Species vs. Watershed Area for Reference Sites

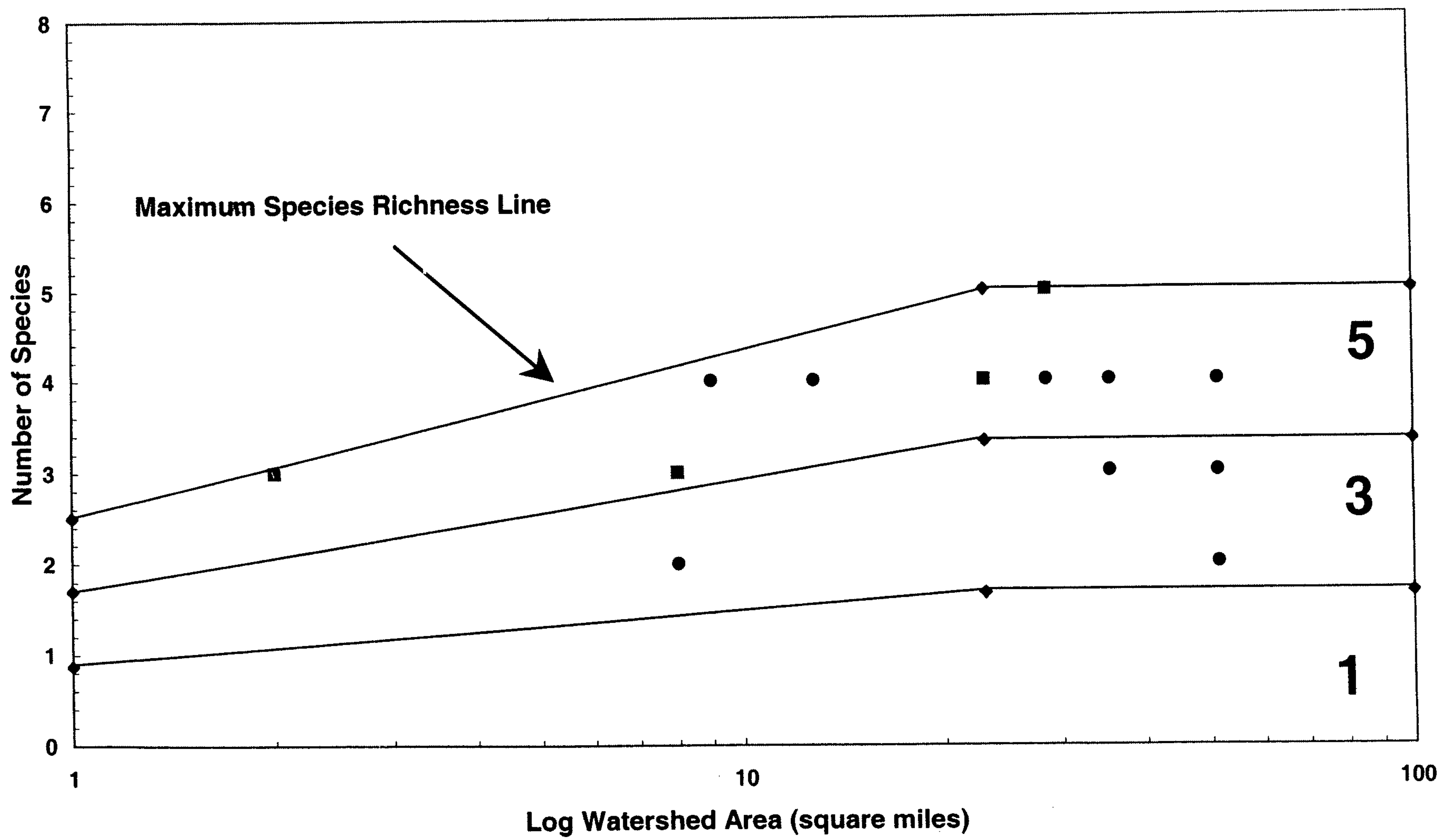


Figure 3
Number of Sunfish Species vs. Watershed Area for Reference Sites

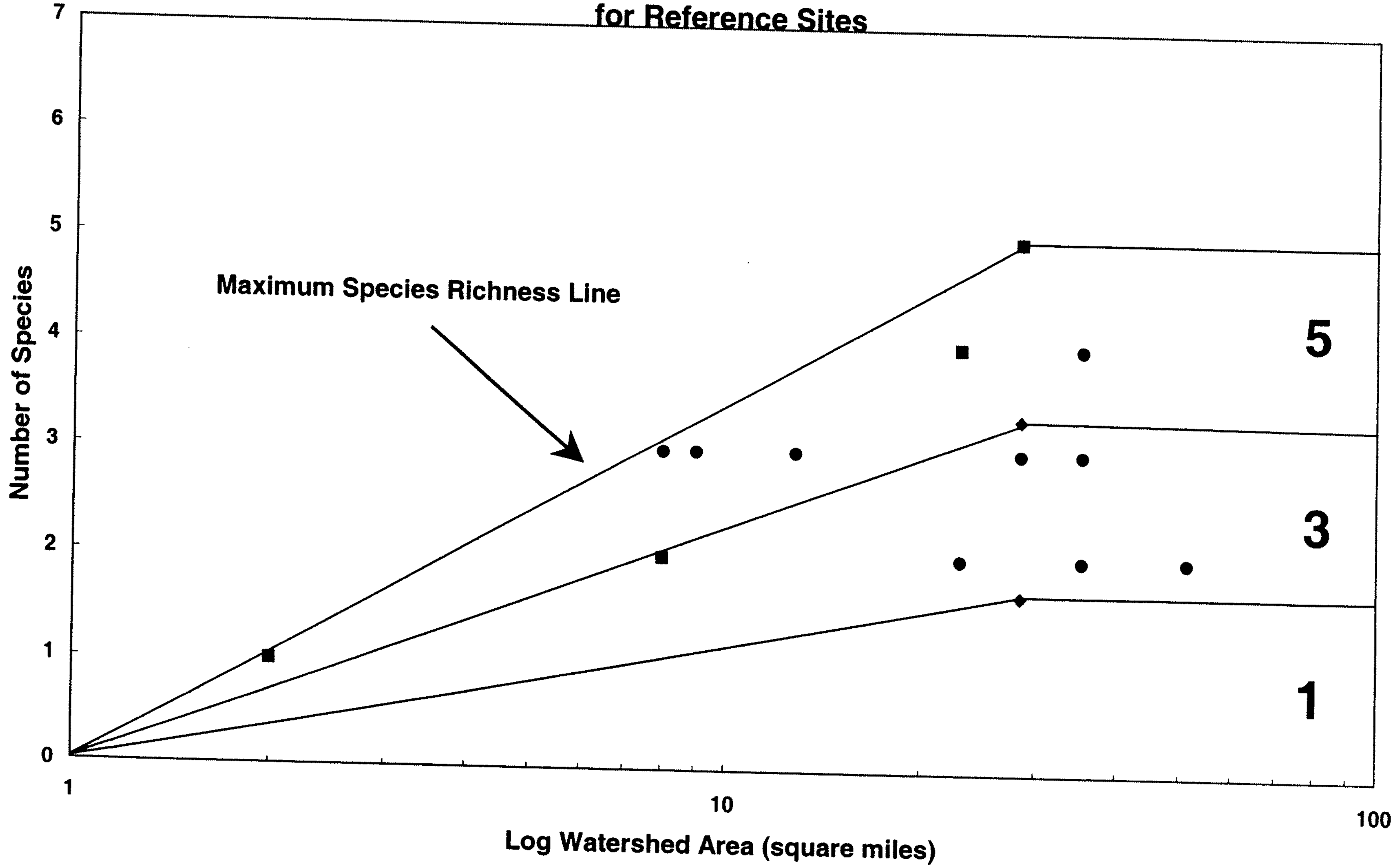


Figure 4
Number of Cyprinid Species vs. Watershed Area for Reference Sites

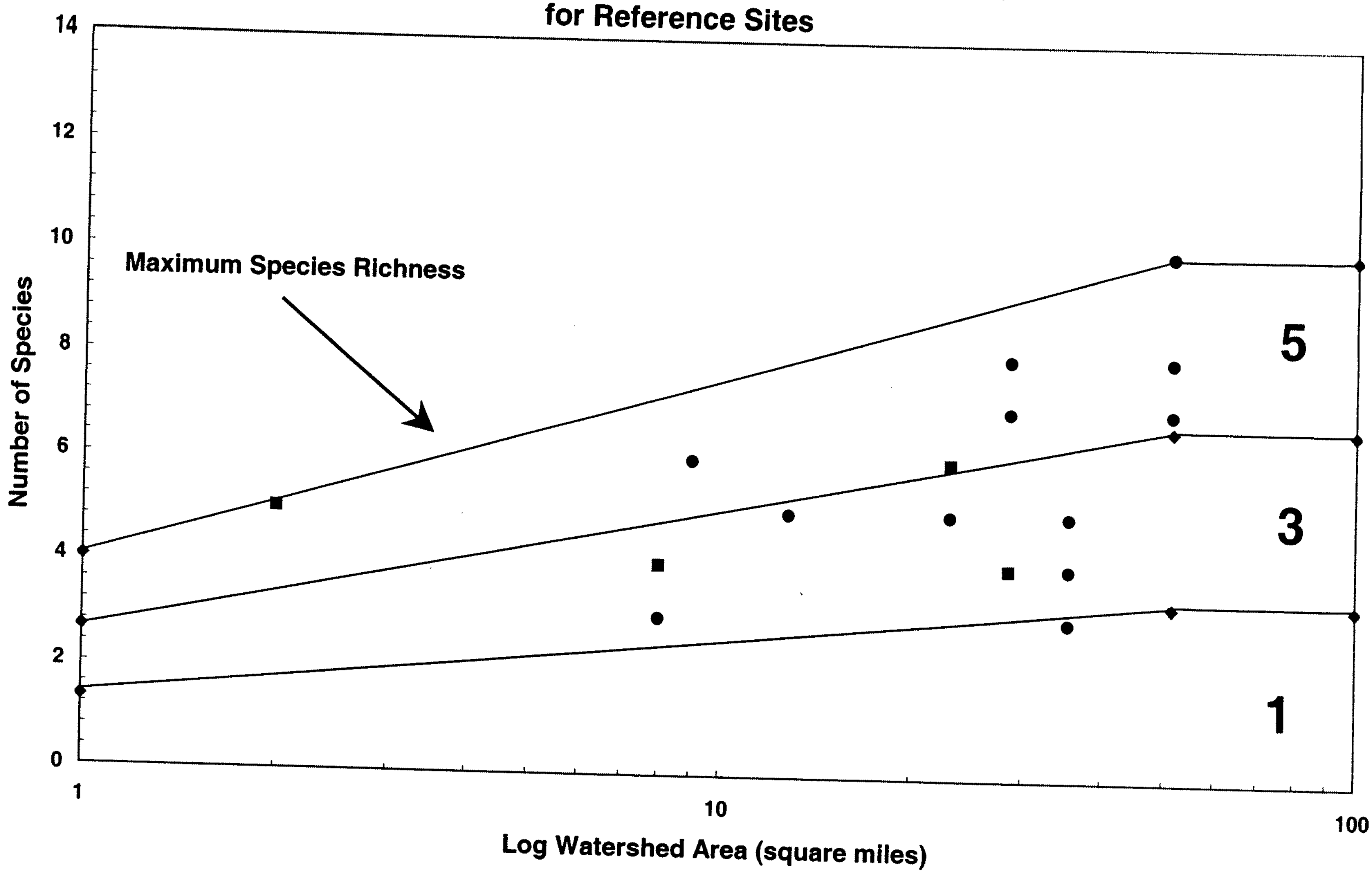


Figure 5
Number of Sensitive Species vs. Watershed Area for Reference Sites

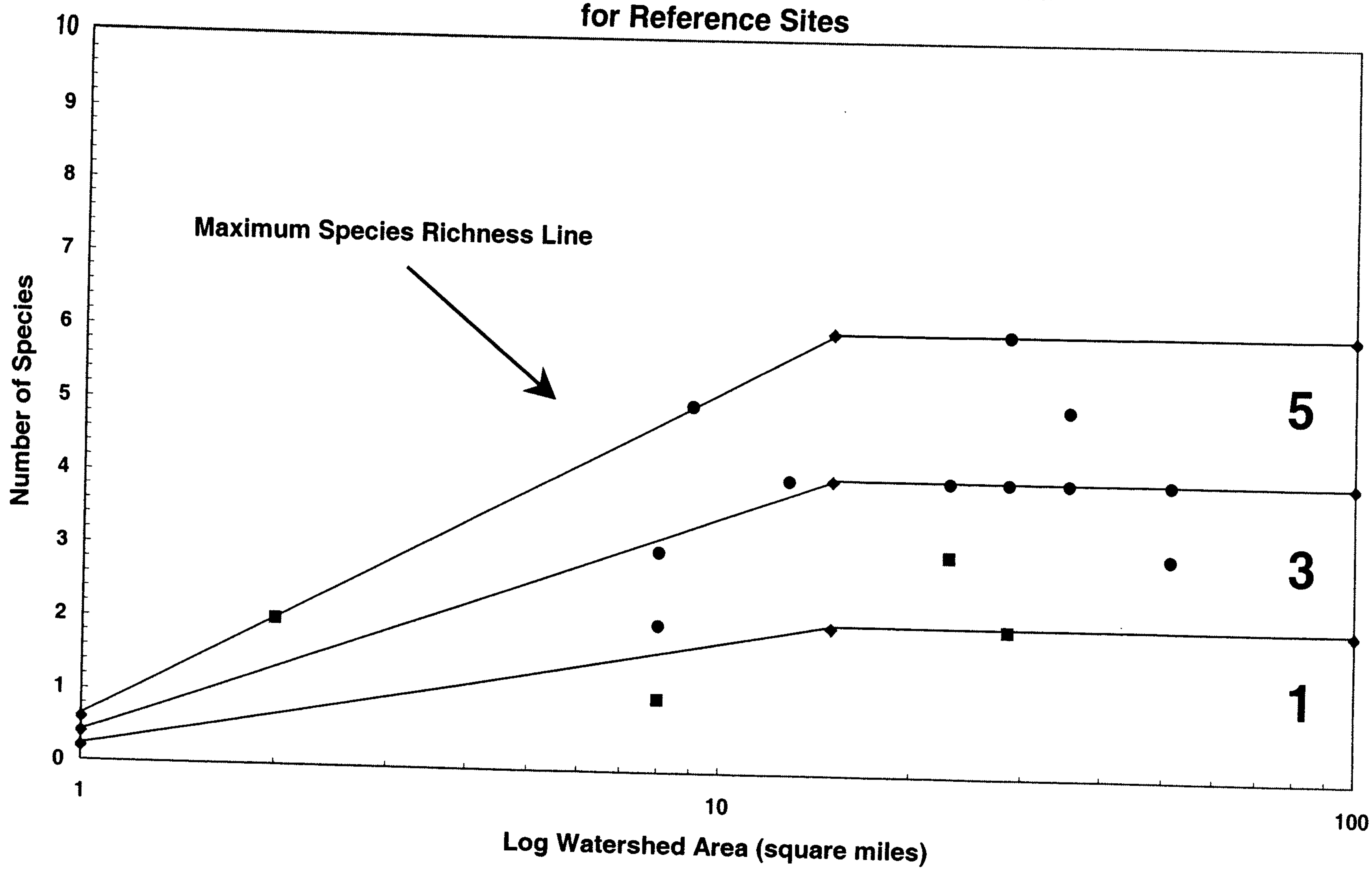


Figure 6
Catch Per Unit Effort (# individuals/hours, excluding tolerant species) vs. Watershed Area for Reference Sites

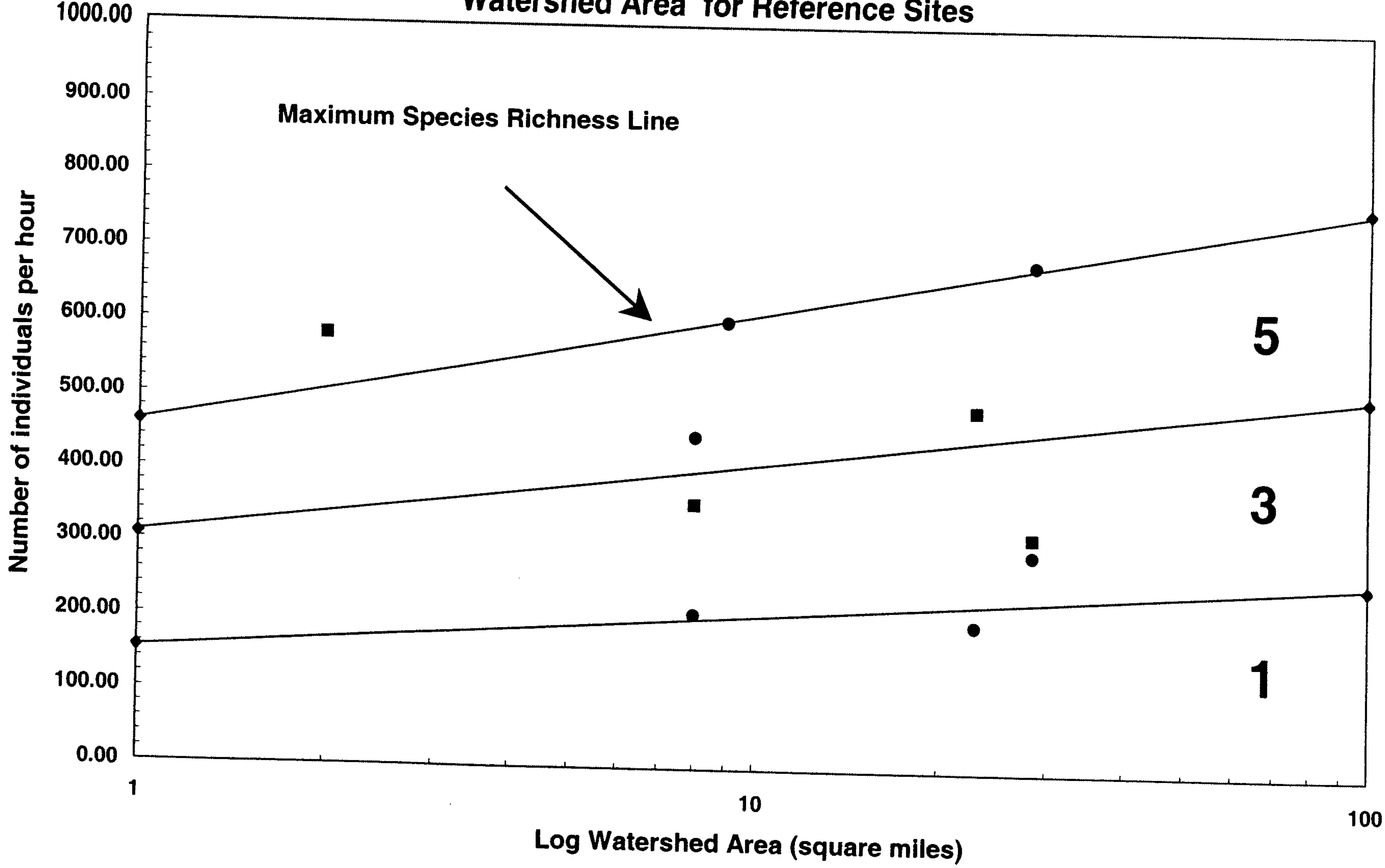
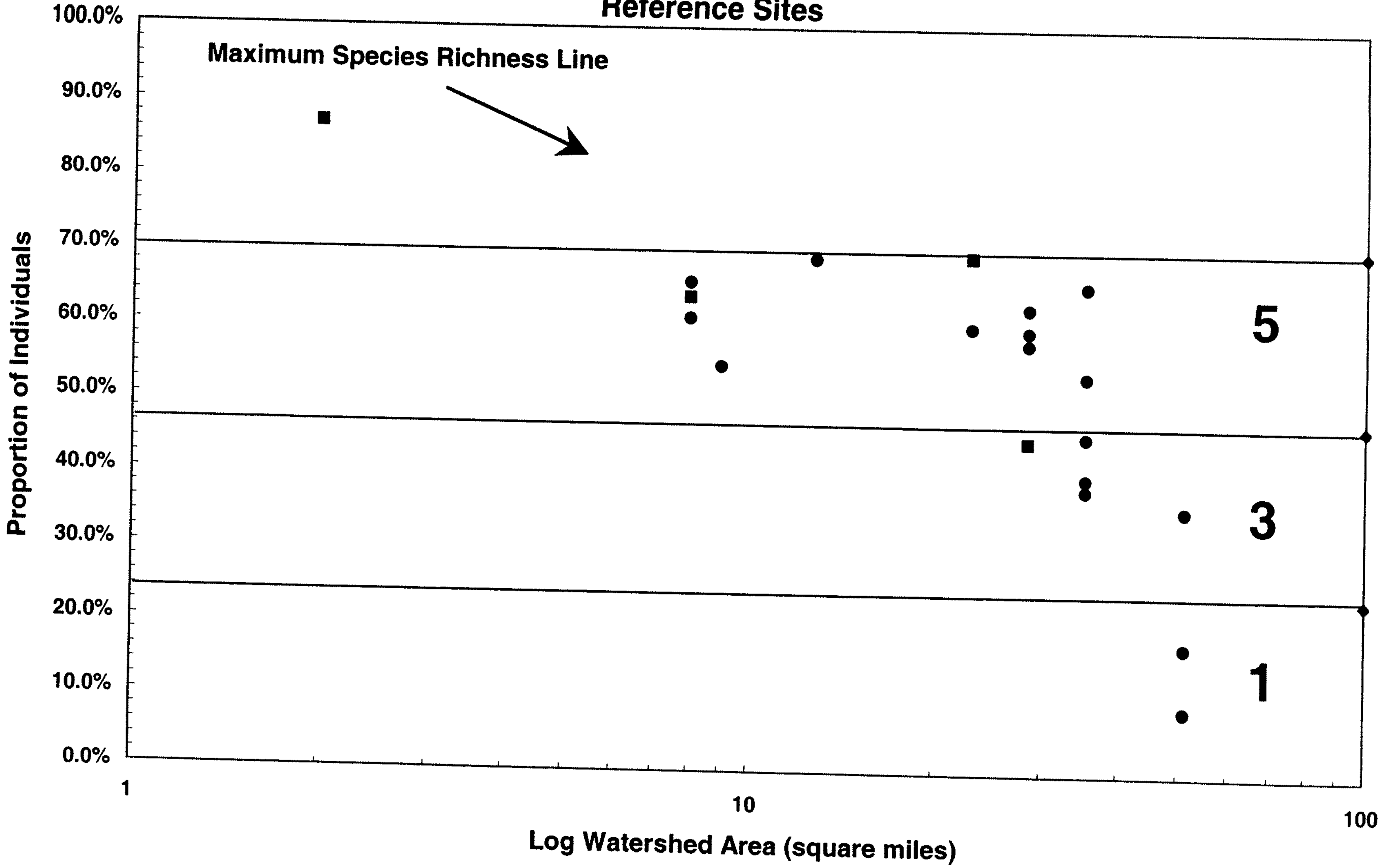


Figure 7
Proportion of Simple Lithophilic Spawning Individuals vs. Watershed Area for Reference Sites



SS-1

Analytical Environmental Services, Inc.

Date: *07-Jul-99*

CLIENT:	C2 Environmental Services	**Client Sample ID:**	Long Island Cr.
Lab Order:	9906233	**Tag Number:**	Long island Creek @
Project:	Sandy Creek	**Collection Date:**	4/30/99
Lab ID:	9906233-002A	**Matrix:**	BIOLOGICAL TISSUE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
CHLORINATED PESTICIDES		**SW8081A**				Analyst: **RG**
4,4´-DDD	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
4,4´-DDE	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
4,4´-DDT	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Aldrin	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
alpha-BHC	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
beta-BHC	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Chlordane	BRL	29		µg/Kg	1	6/23/99 4:01:00 AM
Chlorpyrifos	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
delta-BHC	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Dieldrin	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Endosulfan I	BRL	19		µg/Kg	1	6/23/99 4:01:00 AM
Endosulfan II	BRL	29		µg/Kg	1	6/23/99 4:01:00 AM
Endosulfan sulfate	BRL	48		µg/Kg	1	6/23/99 4:01:00 AM
Endrin	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Endrin aldehyde	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
gamma-BHC	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Heptachlor	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Heptachlor epoxide	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Hexachlorobenzene	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Methoxychlor	BRL	48		µg/Kg	1	6/23/99 4:01:00 AM
Mirex	BRL	95		µg/Kg	1	6/23/99 4:01:00 AM
Pentachloroanisole	BRL	9.5		µg/Kg	1	6/23/99 4:01:00 AM
Surr: Decachlorobiphenyl	55.6	30-150		%REC	1	6/23/99 4:01:00 AM
Surr: Tetrachloro-m-xylene	46.6	30-150		%REC	1	6/23/99 4:01:00 AM
MERCURY		**SW7471A**				Analyst: **VG**
Mercury	0.137	0.00244		mg/Kg	1	6/23/99 2:00:00 PM
POLYCHLORINATED BIPHENYLS		**SW8082**				Analyst: **RG**
Aroclor 1016	BRL	29		µg/Kg	1	6/25/99 9:29:00 AM
Aroclor 1221	BRL	29		µg/Kg	1	6/25/99 9:29:00 AM
Aroclor 1232	BRL	29		µg/Kg	1	6/25/99 9:29:00 AM
Aroclor 1242	BRL	29		µg/Kg	1	6/25/99 9:29:00 AM
Aroclor 1248	BRL	29		µg/Kg	1	6/25/99 9:29:00 AM
Aroclor 1254	BRL	29		µg/Kg	1	6/25/99 9:29:00 AM
Aroclor 1260	BRL	48		µg/Kg	1	6/25/99 9:29:00 AM
Surr: Decachlorobiphenyl	60.7	30-150		%REC	1	6/25/99 9:29:00 AM
Surr: Tetrachloro-m-xylene	44.2	30-150		%REC	1	6/25/99 9:29:00 AM
PRECENT LIPIDS		**EPA DRAFT**				Analyst: **VS**
Total Lipids	20	0.		wt%	1	6/22/99

Qualifiers:

BRL - Below Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

SS-1

Analytical Environmental Services, Inc.

Date: *07-Jul-99*

CLIENT:	C2 Environmental Services	**Client Sample ID:**	Long Island Cr.
Lab Order:	9906233	**Tag Number:**	Long island Creek @
Project:	Sandy Creek	**Collection Date:**	4/30/99
Lab ID:	9906233-002A	**Matrix:**	BIOLOGICAL TISSUE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP		**SW6010B**				Analyst: **MJ**
Antimony	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Arsenic	BRL	0.0199		mg/Kg	1	6/23/99 8:21:00 PM
Beryllium	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Cadmium	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Chromium	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Copper	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Lead	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Nickel	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Selenium	BRL	0.0199		mg/Kg	1	6/23/99 8:21:00 PM
Silver	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Thallium	BRL	0.995		mg/Kg	1	6/23/99 8:21:00 PM
Zinc	13	0.995		mg/Kg	1	6/23/99 8:21:00 PM

Qualifiers:

- BRL - Below Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range

RS-1

Analytical Environmental Services, Inc.

Date: *07-Jul-99*

CLIENT:	C2 Environmental Services	**Client Sample ID:**	Snake Creek
Lab Order:	9906232	**Tag Number:**	Snake Creek @ Wayside Drive
Project:	Johns Creek Watershed	**Collection Date:**	5/11/99
Lab ID:	9906232-002A	**Matrix:**	BIOLOGICAL TISSUE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
CHLORINATED PESTICIDES		**SW8081A**				Analyst: **RG**
4,4´-DDD	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
4,4´-DDE	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
4,4´-DDT	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Aldrin	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
alpha-BHC	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
beta-BHC	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Chlordane	BRL	29		µg/Kg	1	6/23/99 1:44:00 AM
Chlorpyrifos	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
delta-BHC	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Dieldrin	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Endosulfan I	BRL	19		µg/Kg	1	6/23/99 1:44:00 AM
Endosulfan II	BRL	29		µg/Kg	1	6/23/99 1:44:00 AM
Endosulfan sulfate	BRL	48		µg/Kg	1	6/23/99 1:44:00 AM
Endrin	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Endrin aldehyde	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
gamma-BHC	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Heptachlor	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Heptachlor epoxide	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Hexachlorobenzene	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Methoxychlor	BRL	48		µg/Kg	1	6/23/99 1:44:00 AM
Mirex	BRL	96		µg/Kg	1	6/23/99 1:44:00 AM
Pentachloroanisole	BRL	9.6		µg/Kg	1	6/23/99 1:44:00 AM
Surr: Decachlorobiphenyl	74.9	30-150		%REC	1	6/23/99 1:44:00 AM
Surr: Tetrachloro-m-xylene	73.1	30-150		%REC	1	6/23/99 1:44:00 AM
MERCURY		**SW7471A**				Analyst: **VG**
Mercury	0.151	0.00236		mg/Kg	1	6/23/99 2:00:00 PM
POLYCHLORINATED BIPHENYLS		**SW8082**				Analyst: **RG**
Aroclor 1016	BRL	29		µg/Kg	1	6/24/99 7:17:00 PM
Aroclor 1221	BRL	29		µg/Kg	1	6/24/99 7:17:00 PM
Aroclor 1232	BRL	29		µg/Kg	1	6/24/99 7:17:00 PM
Aroclor 1242	BRL	29		µg/Kg	1	6/24/99 7:17:00 PM
Aroclor 1248	BRL	29		µg/Kg	1	6/24/99 7:17:00 PM
Aroclor 1254	BRL	29		µg/Kg	1	6/24/99 7:17:00 PM
Aroclor 1260	BRL	48		µg/Kg	1	6/24/99 7:17:00 PM
Surr: Decachlorobiphenyl	94.9	30-150		%REC	1	6/24/99 7:17:00 PM
Surr: Tetrachloro-m-xylene	93.3	30-150		%REC	1	6/24/99 7:17:00 PM
PRECENT LIPIDS		**EPA DRAFT**				Analyst: **VS**
Total Lipids	21	0.		wt%	1	6/22/99

Qualifiers:

BRL - Below Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

RS-1

Analytical Environmental Services, Inc.

Date: *07-Jul-99*

CLIENT:	C2 Environmental Services	**Client Sample ID:**	Snake Creek
Lab Order:	9906232	**Tag Number:**	Snake Creek @ Wayside Drive
Project:	Johns Creek Watershed	**Collection Date:**	5/11/99
Lab ID:	9906232-002A	**Matrix:**	BIOLOGICAL TISSUE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP		**SW6010B**				Analyst: **MJ**
Antimony	BRL	1		mg/Kg	1	6/23/99 7:59:00 PM
Arsenic	0.0203	0.02		mg/Kg	1	6/23/99 7:59:00 PM
Beryllium	BRL	1		mg/Kg	1	6/23/99 7:59:00 PM
Cadmium	BRL	1		mg/Kg	1	6/23/99 7:59:00 PM
Chromium	BRL	1		mg/Kg	1	6/23/99 7:59:00 PM
Copper	BRL	1		mg/Kg	1	6/23/99 7:59:00 PM
Lead	BRL	1		mg/Kg	1	6/23/99 7:59:00 PM
Nickel	4.12	1		mg/Kg	1	6/23/99 7:59:00 PM
Selenium	BRL	0.02		mg/Kg	1	6/23/99 7:59:00 PM
Silver	BRL	1		mg/Kg	1	6/23/99 7:59:00 PM
Thallium	BRL	1		mg/Kg	1	6/23/99 7:59:00 PM
Zinc	16.2	1		mg/Kg	1	6/23/99 7:59:00 PM

Qualifiers:

BRL - Below Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

RS-2

Analytical Environmental Services, Inc.

Date: *07-Jul-99*

CLIENT:	C2 Environmental Services	**Client Sample ID:**	Bluff Creek
Lab Order:	9906233	**Tag Number:**	Bluff Creek @
Project:	Sandy Creek	**Collection Date:**	5/11/99
Lab ID:	9906233-001A	**Matrix:**	BIOLOGICAL TISSUE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
CHLORINATED PESTICIDES		**SW8081A**				Analyst: **RG**
4,4´-DDD	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
4,4´-DDE	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
4,4´-DDT	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Aldrin	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
alpha-BHC	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
beta-BHC	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Chlordane	BRL	29		µg/Kg	1	6/23/99 3:15:00 AM
Chlorpyrifos	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
delta-BHC	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Dieldrin	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Endosulfan I	BRL	19		µg/Kg	1	6/23/99 3:15:00 AM
Endosulfan II	BRL	29		µg/Kg	1	6/23/99 3:15:00 AM
Endosulfan sulfate	BRL	48		µg/Kg	1	6/23/99 3:15:00 AM
Endrin	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Endrin aldehyde	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
gamma-BHC	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Heptachlor	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Heptachlor epoxide	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Hexachlorobenzene	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Methoxychlor	BRL	48		µg/Kg	1	6/23/99 3:15:00 AM
Mirex	BRL	97		µg/Kg	1	6/23/99 3:15:00 AM
Pentachloroanisole	BRL	9.7		µg/Kg	1	6/23/99 3:15:00 AM
Surr: Decachlorobiphenyl	107.3	30-150		%REC	1	6/23/99 3:15:00 AM
Surr: Tetrachloro-m-xylene	91.1	30-150		%REC	1	6/23/99 3:15:00 AM
MERCURY		**SW7471A**				Analyst: **VG**
Mercury	0.127	0.00245		mg/Kg	1	6/23/99 2:00:00 PM
POLYCHLORINATED BIPHENYLS		**SW8082**				Analyst: **RG**
Aroclor 1016	BRL	29		µg/Kg	1	6/24/99 7:52:00 PM
Aroclor 1221	BRL	29		µg/Kg	1	6/24/99 7:52:00 PM
Aroclor 1232	BRL	29		µg/Kg	1	6/24/99 7:52:00 PM
Aroclor 1242	BRL	29		µg/Kg	1	6/24/99 7:52:00 PM
Aroclor 1248	BRL	29		µg/Kg	1	6/24/99 7:52:00 PM
Aroclor 1254	BRL	29		µg/Kg	1	6/24/99 7:52:00 PM
Aroclor 1260	BRL	48		µg/Kg	1	6/24/99 7:52:00 PM
Surr: Decachlorobiphenyl	112.0	30-150		%REC	1	6/24/99 7:52:00 PM
Surr: Tetrachloro-m-xylene	99.9	30-150		%REC	1	6/24/99 7:52:00 PM
PRECENT LIPIDS		**EPA DRAFT**				Analyst: **VS**
Total Lipids	22	0.		wt%	1	6/22/99

Qualifiers:

- BRL - Below Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range

RS-2

Analytical Environmental Services, Inc.

Date: *07-Jul-99*

CLIENT:	C2 Environmental Services	**Client Sample ID:**	Bluff Creek
Lab Order:	9906233	**Tag Number:**	Bluff Creek @
Project:	Sandy Creek	**Collection Date:**	5/11/99
Lab ID:	9906233-001A	**Matrix:**	BIOLOGICAL TISSUE

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP		**SW6010B**				Analyst: **MJ**
Antimony	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Arsenic	BRL	0.0199		mg/Kg	1	6/23/99 8:03:00 PM
Beryllium	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Cadmium	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Chromium	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Copper	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Lead	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Nickel	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Selenium	BRL	0.0199		mg/Kg	1	6/23/99 8:03:00 PM
Silver	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Thallium	BRL	0.996		mg/Kg	1	6/23/99 8:03:00 PM
Zinc	12.1	0.996		mg/Kg	1	6/23/99 8:03:00 PM

Qualifiers:

BRL - Below Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

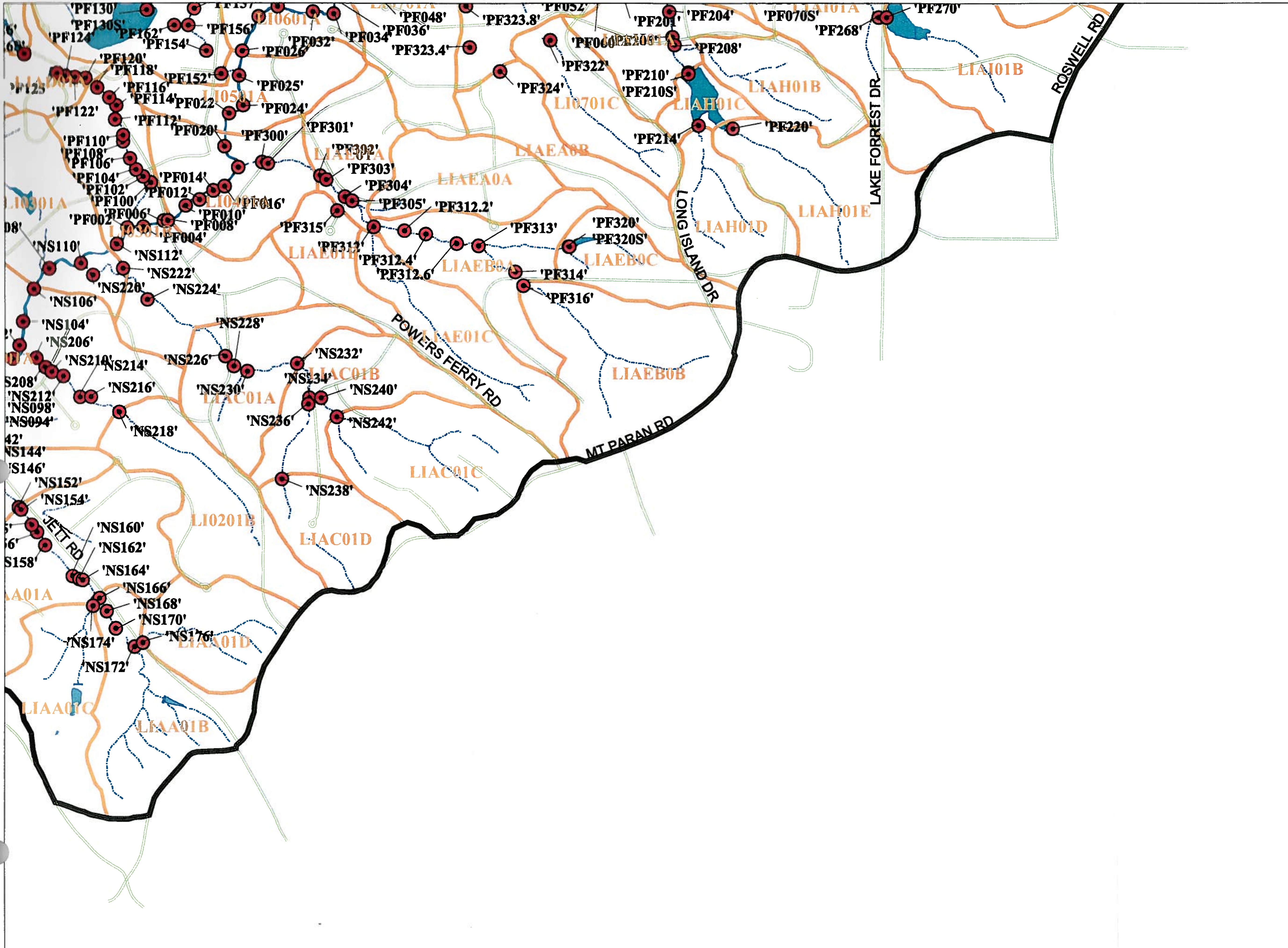
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Appendix H



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 1
Location of Hydraulic Modeling Nodes

- Hydraulic Modeling Node
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Street
- Stream

INDEX MAP

STUDY AREA LOCATION

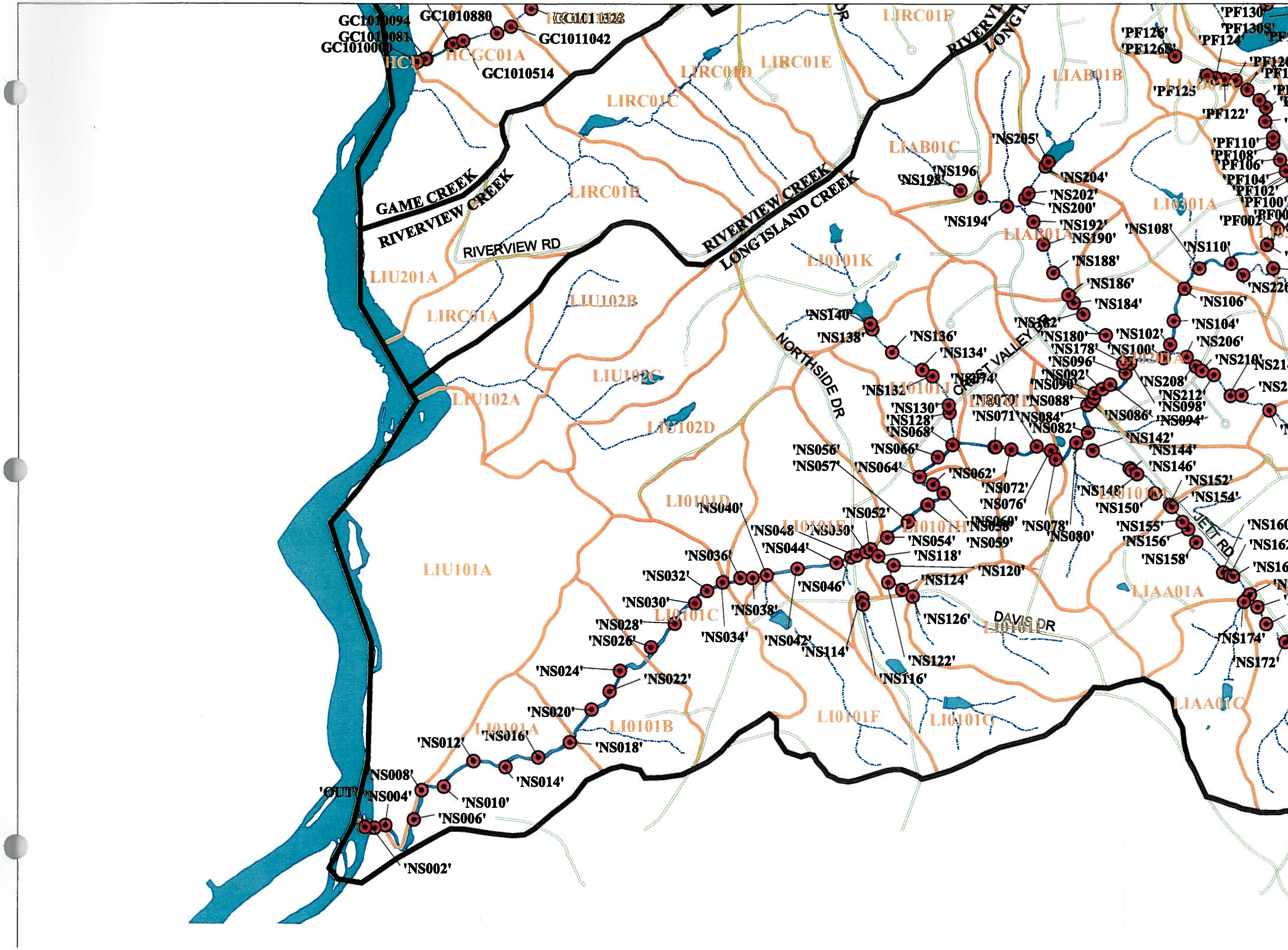
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

FULTON COUNTY

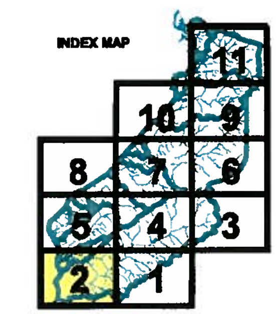
SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 2
Location of Hydraulic Modeling Nodes



- Hydraulic Modeling Node
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Street
- Stream

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works
2. Hoffman & Company
3. Atlantic Engineering
4. Brown and Caldwell

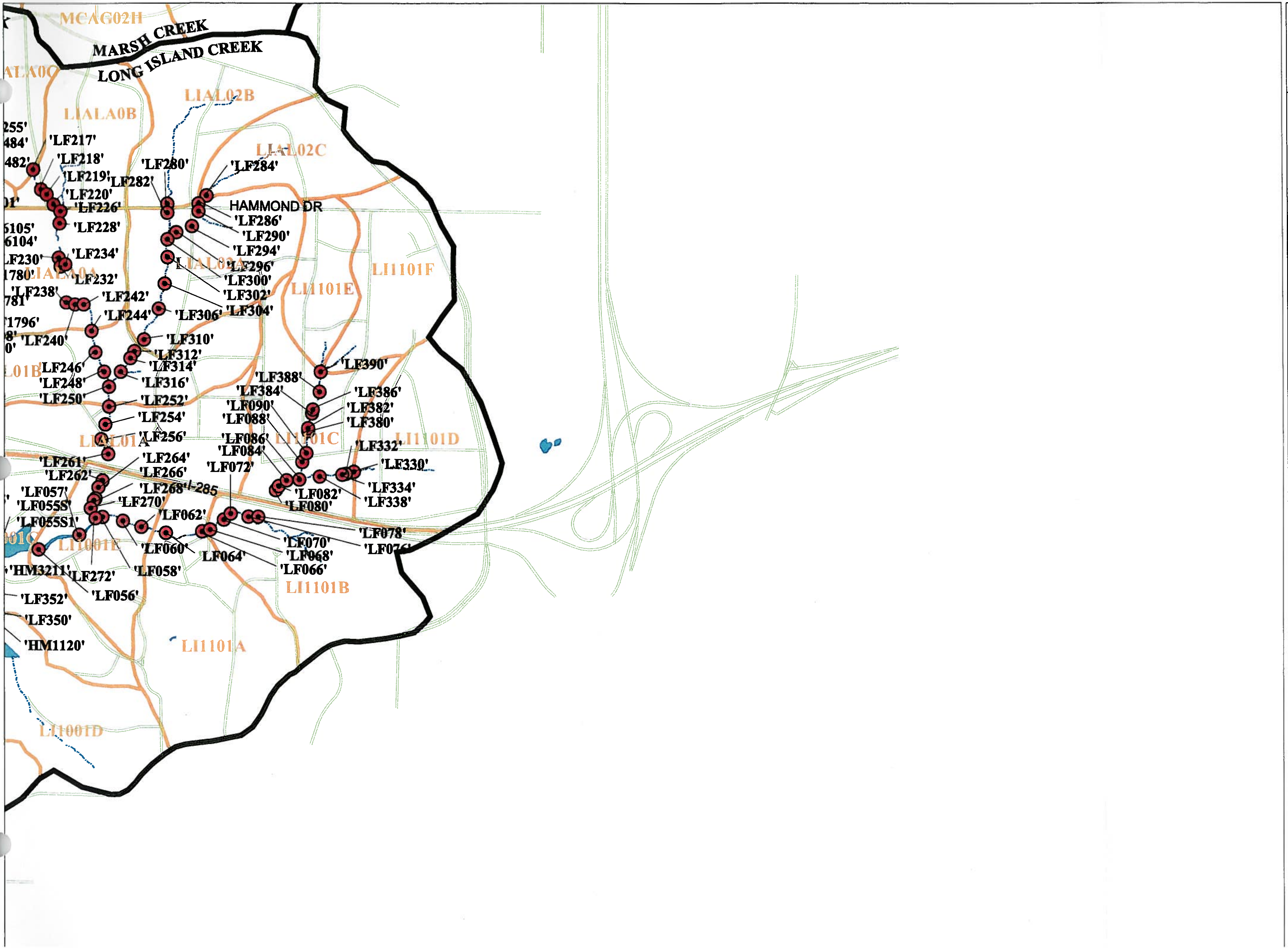
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = 900 feet

200 0 200 400 Feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 3
Location of Hydraulic Modeling Nodes

- Hydraulic Modeling Node
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Street
- Stream

INDEX MAP

11 10 9 8 7 6 5 4 3 2 1

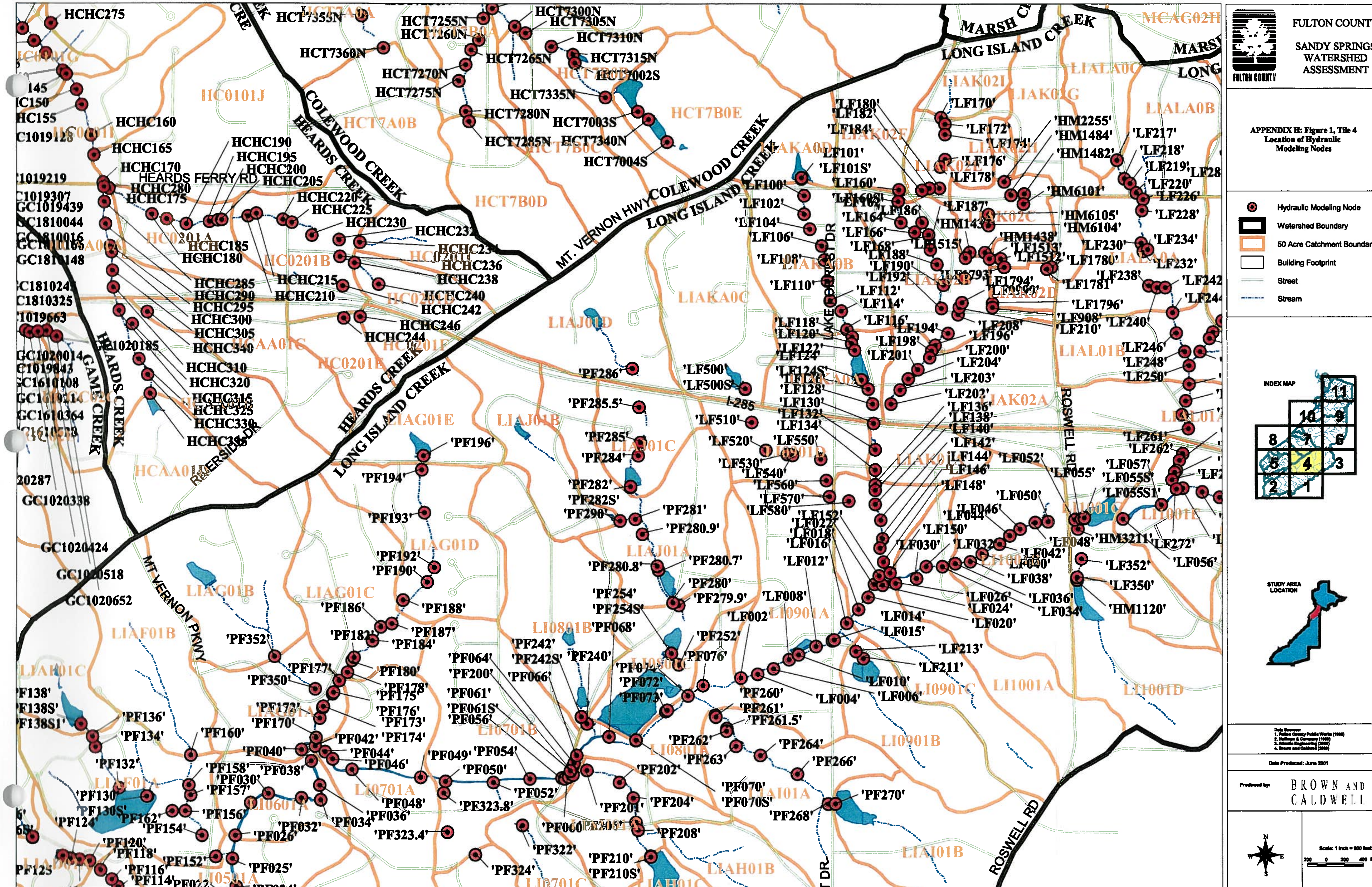
STUDY AREA LOCATION

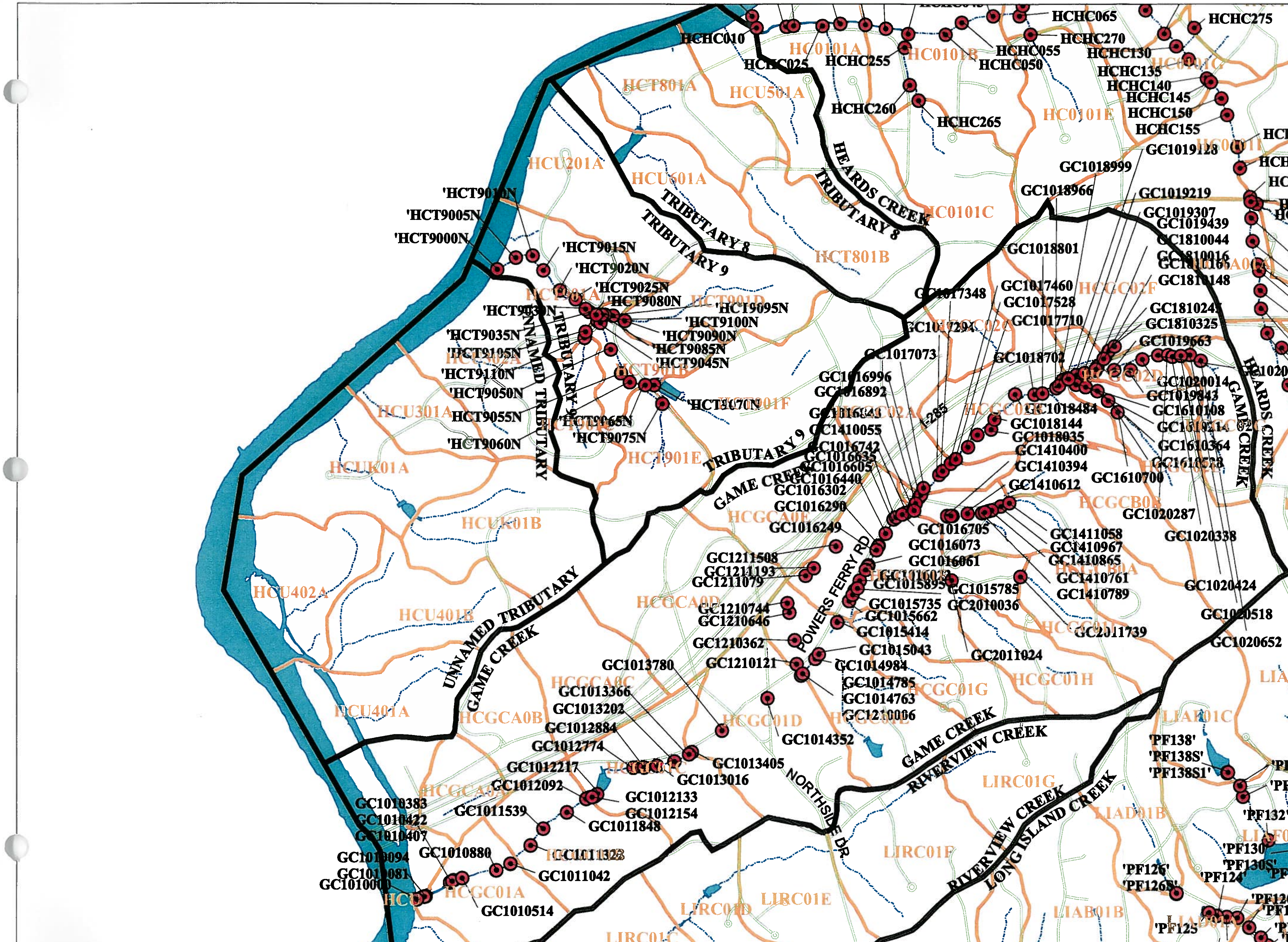
Data Produced: June 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = 800 feet


FULTON COUNTY
SANDY SPRINGS WATERSHED ASSESSMENT
FULTON COUNTY
APPENDIX H: Figure 1, Tile 4
Location of Hydraulic Modeling Nodes
Hydraulic Modeling Node
Watershed Boundary
50 Acre Catchment Boundary
Building Footprint
Street
Stream
INDEX MAP
11
10
9
8
7
6
5
4
3
2
1
STUDY AREA LOCATION
Data Sources:
1. Fulton County Public Works
2. Hoffman & Company
3. Atlantic Engineering
4. Brown and Caldwell
Date Produced: June 2001
Produced by:
BROWN AND CALDWELL
N
W
E
S
200 0 200 400 Feet
MARSH CREEK
LONG ISLAND CREEK
COLEWOOD CREEK
HEARDS CREEK
GAME CREEK
MT. VERNON HWY
MT VERNON PKWY
HEARDS FERRY RD
RIVERSIDE DR
LAKE FORREST DR
ROSWELL RD
I-285
HCHC275
HCHC160
HCHC165
HCHC170
HCHC175
HCHC180
HCHC185
HCHC190
HCHC195
HCHC200
HCHC205
HCHC210
HCHC215
HCHC220
HCHC225
HCHC230
HCT7255N
HCT7260N
HCT7270N
HCT7275N
HCT7280N
HCT7285N
HCT7300N
HCT7305N
HCT7310N
HCT7315N
HCT7335N
HCT7340N
HCT7360N
HCT7002S
HCT7003S
HCT7004S
HCT7B0E
HCT7B0D
HCT7A0B
HC0101J
HC0201A
HC0201B
HCAA01C
LIAJ01D
LIAJ01B
LIAJ01A
LIAG01E
LIAG01D
LIAG01C
LIAG01B
LIAF01B
LIAKA0C
LIAKA0D
LIAL01B
LIALA0B
LIALA0C
MCAG02H
LI1001A
LI1001D
LI0901B
LI0901A
LI0701B
LI0701A
LI0701C
LIAH01B
LIAH01C
LIAI01B
'PF196'
'PF194'
'PF193'
'PF192'
'PF190'
'PF188'
'PF186'
'PF286'
'PF285.5'
'PF285'
'PF284'
'PF282'
'PF282S'
'PF281'
'PF280.9'
'PF280.8'
'PF280.7'
'PF280'
'PF279.9'
'PF270'
'PF268'
'PF266'
'PF264'
'LF500'
'LF500S'
'LF510'
'LF520'
'LF530'
'LF540'
'LF550'
'LF560'
'LF570'
'LF580'
'HM1120'
'HM3211'
'HM6101'
'HM6104'
'HM6105'
'HM2255'
'HM1484'
'HM1482'



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 5
Location of Hydraulic Modeling Nodes

- Hydraulic Modeling Node
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Street
- Stream

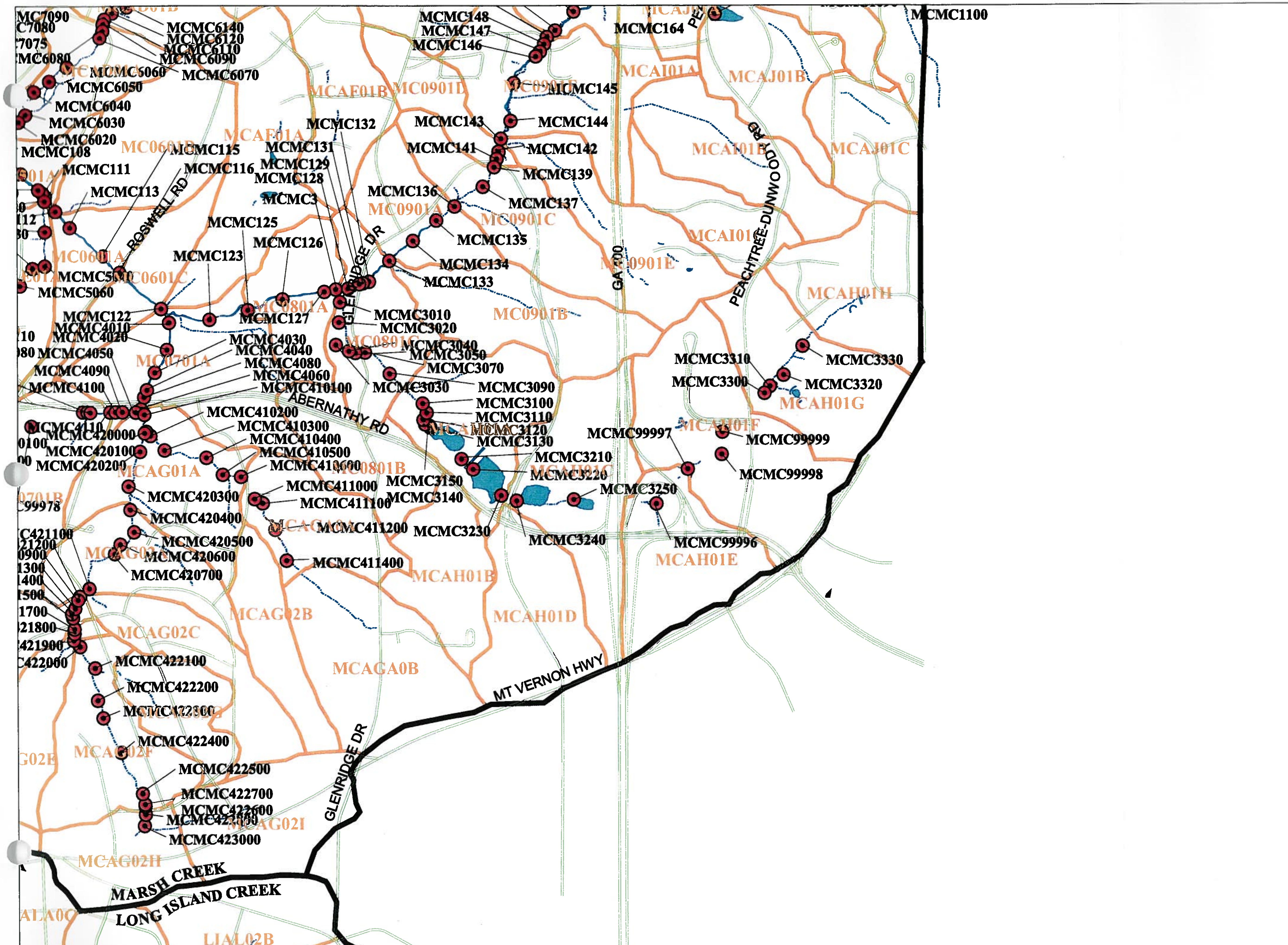
INDEX MAP

STUDY AREA LOCATION

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 900 feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 6
Location of Hydraulic Modeling Nodes

- Hydraulic Modeling Node
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Street
- Stream

INDEX MAP

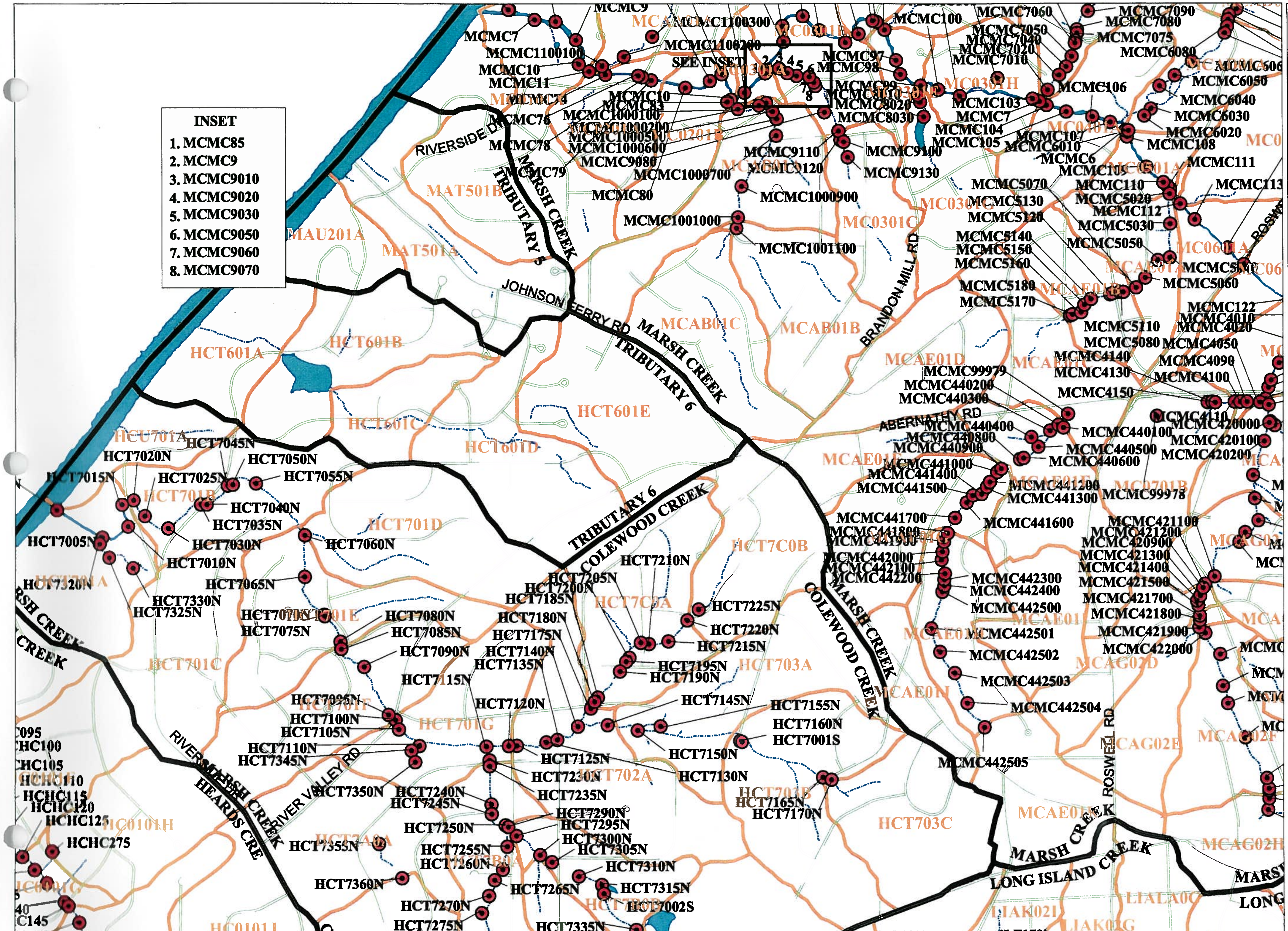
STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1998)
2. Hathaway & Company (1999)
3. Atlantic Engineering (2000)
4. Brown and Caldwell (2000)

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 800 feet



FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 7
Location of Hydraulic Modeling Nodes

Hydraulic Modeling Node
Watershed Boundary
50 Acre Catchment Boundary
Building Footprint
Street
Stream

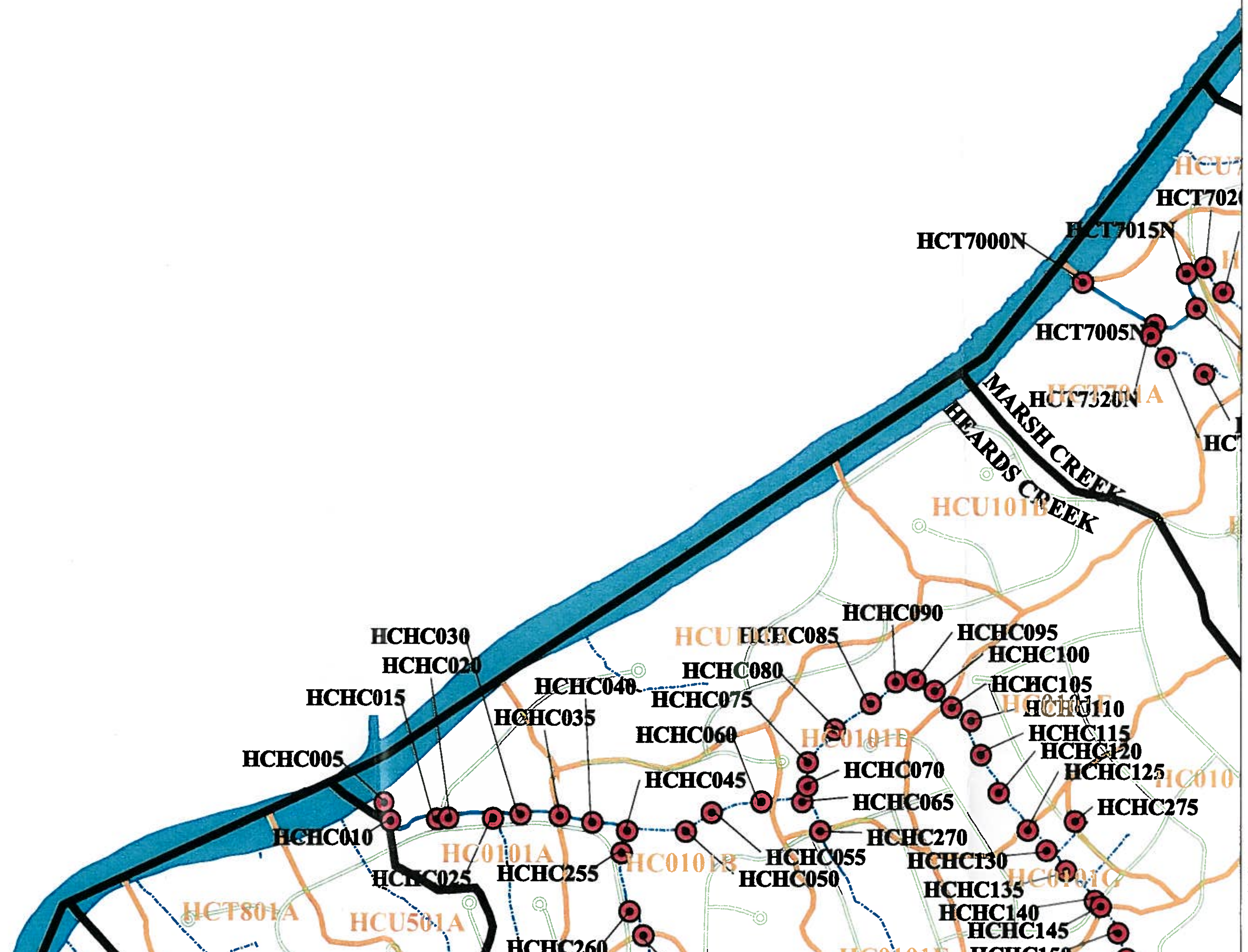
INDEX MAP

STUDY AREA LOCATION

Date Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 400 feet



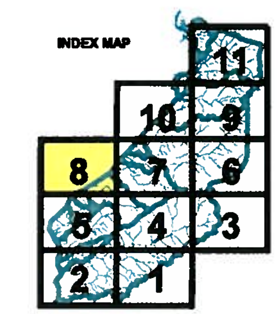
FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 8
Location of Hydraulic Modeling Nodes

- Hydraulic Modeling Node
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Street
- Stream

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works ([illegible])
2. Hoffman & Company ([illegible])
3. Atlantic Engineering ([illegible])
4. Brown and Caldwell ([illegible])

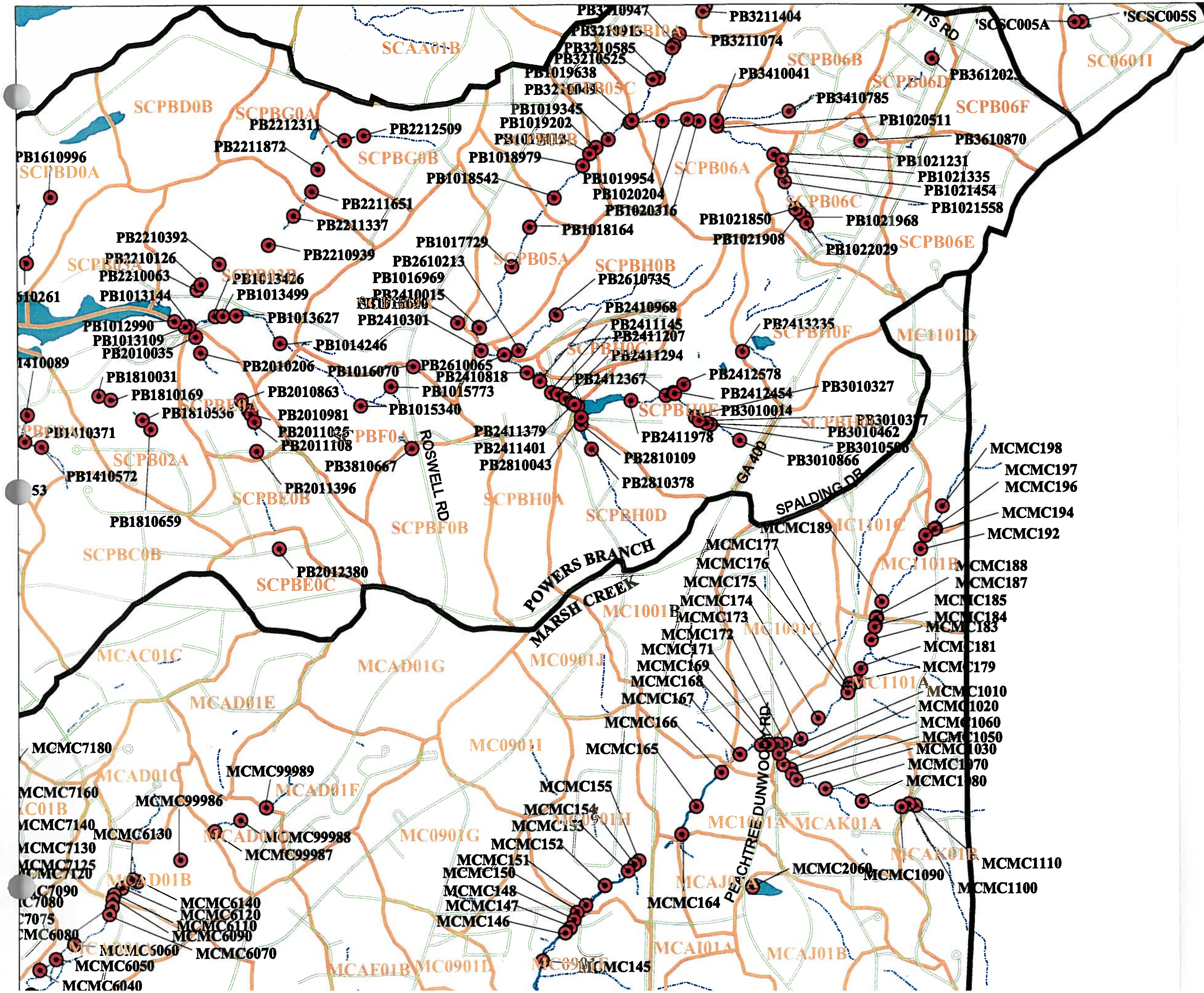
Date Produced: June 2001

Produced by: BROWN AND CALDWELL

N W E S

Scale: 1 inch = [illegible] feet

200 0 200 400 Feet



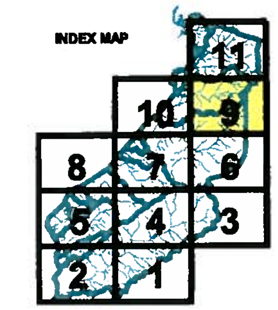
FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 9
Location of Hydraulic Modeling Nodes

- Hydraulic Modeling Node
- Watershed Boundary
- 50 Acre Catchment Boundary
- Building Footprint
- Street
- Stream

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1996)
2. Hoffman & Company (1999)
3. Atlantic Engineering (2000)
4. Brown and Caldwell (2000)

Data Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 600 feet

FULTON COUNTY

SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 10
Location of Hydraulic Modeling Nodes

Hydraulic Modeling Node

Watershed Boundary

50 Acre Catchment Boundary

Building Footprint

Street

Stream

INDEX MAP

STUDY AREA LOCATION

Date Produced: June 2001

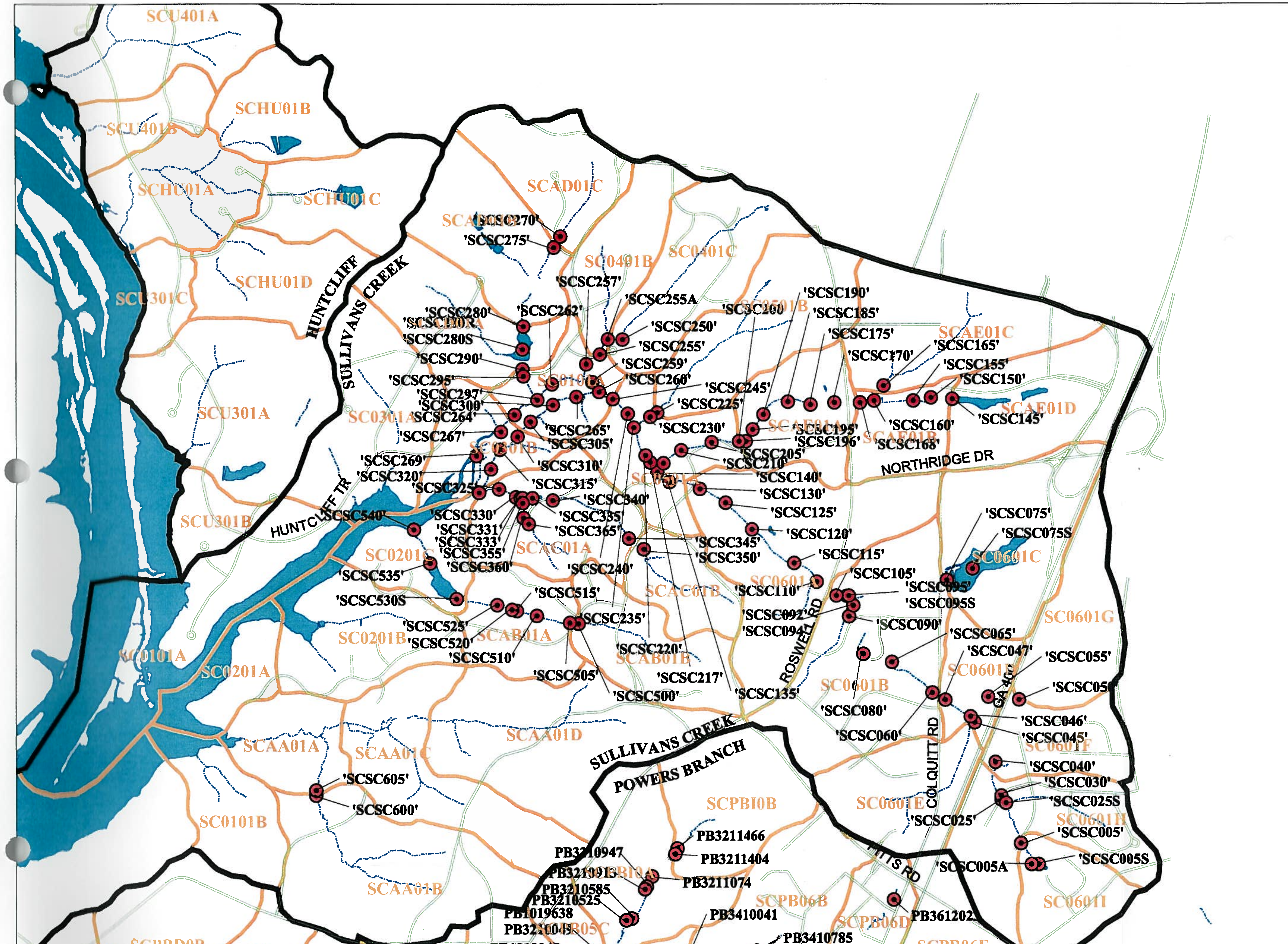
Produced by: BROWN AND CALDWELL

Scale: 1 inch = 800 feet

FULTON COUNTY

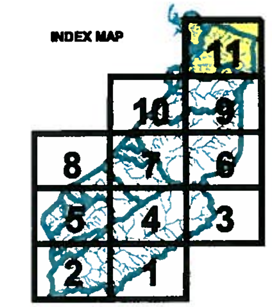
SANDY SPRINGS WATERSHED ASSESSMENT

APPENDIX H: Figure 1, Tile 11
Location of Hydraulic Modeling Nodes



Hydraulic Modeling Node
Watershed Boundary
50 Acre Catchment Boundary
Building Footprint
Street
Stream

INDEX MAP



STUDY AREA LOCATION

Data Sources:
1. Fulton County Public Works (1998)
2. Hartman & Company (1999)
3. Atlantic Engineering (2000)
4. Brown and Caldwell (2000)

Data Produced: June 2001

Produced by: BROWN AND CALDWELL

Scale: 1 inch = 600 feet
200 0 200 400 Feet

Appendix I

Appendix I – Hydrology & Hydraulic Modeling Calibration Parameters

Overview

This appendix presents the values determined in calibration for key parameters in the water quality model. As discussed in Chapter 4, the calibration process was performed according to the guidelines provided in the User's Guide to SWMM4 RUNOFF and supporting modules (RAIN, TEMPERATURE, COMBINE, AND STATISTICS)[CHI 1998&1999].

Hydrology

For hydrology, parameters were adjusted to match the total water balance and baseflow volumes in the calibration period. The User's Guide to SWMM4 RUNOFF and supporting modules (RAIN, TEMPERATURE, COMBINE, AND STATISTICS) provides guidance on the ranges of different parameters and their influences on the model results. This document was used as a reference throughout the calibration process.

- The key parameters adjusted during the calibration process included
- Width of subcatchment (feet) (WIDTH on the H1 line in the RUNOFF file)

This term actually refers to the physical width of overland flow in the subcatchment and may be estimated by ratio of subcatchment area to average length of overland flow.

- Percent impervious of subcatchment (percent) (%IMP on the H1 line in the RUNOFF file)

(Percent of subcatchment area hydraulically effective or directly connected.)

- Impervious area Manning's roughness (IMPN on the H1 line in the RUNOFF file)
- Pervious area Manning's roughness (PERVN on the H1 line in the RUNOFF file)
- Impervious area depression storage (IDS on the H1 line in the RUNOFF file)
- Pervious area depression storage (PDS on the H1 line in the RUNOFF file)

Table I-1 summarizes the values used for each significant parameter in each subcatchment. For certain parameters, a range of values is indicated. This is due to the various land use types in each watershed. The existence of unmodeled offline detention ponds (in shopping centers, etc,) was taken into account by increasing the amount of impervious depression storage for individual watersheds.

TABLE I-1
Hydrology Parameters

Parameter	Colewood Creek	Game Creek	Heards Creek	Long Island Creek	Marsh Creek	Powers Branch	Sullivan's Creek	Trib 9
WIDTH	732-1895	319-5670	416-1476	220-2868	283-3920	645-3024	656-2595	2325-3795
%IMP	8-21	8-62	10-26	4-57	10-80	3-37	5.5-40.0	10-21
IMPN	.05	.03	.015	.015	.015	.03	.015	.015
PERVN	.35	.22-.3	.35	.35	.35	.25-.38	.35	.04
IDS	.015	.15	.15	.15	.15-.35	.062-.117	.15	.1
PDS	.02	.15-.3	.2	.2	.2	.1-.2	.2	.2

Hydraulic

For the hydraulic, or EXTRAN model, parameters were adjusted to match the volumes and characteristic shapes of storm hydrographs. The User's guide to SWMM4 TRANSPORT, EXTRAN, and STORAGE modules provides guidance on the ranges of different parameters and their influences on the model results. This document was also used as a reference throughout the calibration process. After an alternative analysis during the calibration process, it was determined that the best way to match the peaks of the hydrographs, as well as the volumes, was to decrease the amount of water coming through the system. This was done by applying a correction factor to the percent impervious, or %IMP, in each catchment. This correction factor was 0.6.

References

James, William; Huber, Wayne; Dickinson, Robert; and James, Robert., 1998 & 1999. *Water systems models HYDROLOGY. Users guide to SWMM4 RUNOFF and supporting modules (RAIN, TEMPERATURE, COMBINE, AND STATISTICS)* by COMPUTATIONAL HYDRAULICS INSTITUTE ISBN 0-9683681-0-7

James, William; Huber, Wayne; Dickinson, Robert; and James, Robert., 1998 & 1999. *Water systems models HYDRAULICS. Users guide to SWMM4 TRANSPORT, EXTRAN, and STORAGE modules* ISBN 0-9683681-1-5

Appendix J

Appendix J – Water Quality Modeling Calibration Parameters

Overview

This appendix presents the values determined in calibration for key parameters in the water quality model. As discussed in Chapter 5, the calibration process was performed according to the guidelines provided in the HSPF User's Manual [USEPA 1993].

Hydrology

For hydrology, parameters were first adjusted to match the total water balance, baseflow volumes in the calibration period, and finally, the volumes and characteristic shapes of storm hydrographs. The EPA BASINS Technical Note 6, Estimating Hydrology Parameters for NPSM/HSPF [USEPA 1999], provides guidance on the ranges of different parameters and their influences on the model results. This document was used as a reference throughout the calibration process.

- The key parameters adjusted during the calibration process included
- Lower zone nominal storage (inches) (LZSN)
- Fraction of groundwater inflow lost to deep groundwater (DEEPFR)
- Lower zone evapotranspiration parameter (LZETP)
- Index to the infiltration capacity of the soil (inches/hour) (INFILT)
- Basic groundwater recession rate if no inflow to groundwater (per day) (AGWRC)
- Fraction of potential evapotranspiration satisfied from baseflow (BASETP)
- Interflow inflow parameter (INTFW)
- Interflow recession parameter (per day) (IRC)
- Upper zone nominal storage (in) (UZSN)
- Retention (interception) storage capacity of the surface (in) (RETSC)

Table J-1 summarizes the values used for each significant parameter in each subwatershed. For certain parameters, a range of values is indicated. This is due to the various land use types in each watershed. All parameter values are within ranges according to EPA BASINS Technical Note 6.

TABLE J-1
Hydrology Parameters

Parameter	Heards Creek	Upper Long Island	Marsh Creek	Powers Branch	Game Creek
LZSN	8	5-8	8-9	4-9	8
INFILT	0.0375	0.065-0.85	0.045-0.6	0.045-0.6	0.0375
AGWRC	0.9825-0.99	0.999	0.999	0.99	0.9825-0.99
DEEPFR	0.035	0	0.004-0.04	0.01-0.04	0.035
BASETP	0.015-0.025	0	0.002	0.002	0.015
UZSN	0.9-2	0.7-2	0.7-0.8	0.7-2	0.9-2
INTFW	1.5	2.8	0.7-0.8	0.7-2	1.5
IRC	0.585	0.75	0.65-0.75	0.65-0.75	0.585
LZETP	0.65	0.5	0.5	0.5	0.65
RETSC	0.05-0.19	0.08-0.15	0.1-0.2	0.1-0.2	0.05-0.19

Sediment

Model parameters were adjusted to bring calculated model unit area loads in line literature values. Significant parameters for pervious land surfaces included:

- Coefficient in the soil detachment equation (KRER)
- Rate at which sediment enters detached storage from the air (lbs/ acre day) (NVSI)
- Coefficient for transport in the detached sediment washoff equation (KSER)
- Significant parameters for impervious land surfaces included:
- Rate at which solids accumulate on the land surface (tons/acre day) (ACCSDP)
- Fraction of solids storage removed each day with no runoff (per day) (REMSDP)
- Coefficient in the solids washoff equation (KEIM)

Finally, parameters affecting in-stream concentrations were adjusted. The important parameters included:

- Coefficient in the sand load power function formula (KSAND)
- Exponent in the sand load power function formula (EXPSND)
- Critical bed shear stress for deposition of silt (lb/ft2) (TAUCD)
- Critical bed shear stress for scour of silt (lb/ft2) (TAUCS)
- Critical bed shear stress for deposition of clay (lb/ft2) (TAUCD)

- Critical bed shear stress for scour of clay (lb/ft2) (TAUCS)

Table J-2 summarizes the values used for each significant parameter in each subwatershed. For certain parameters, a range of values is indicated. This is due to the various land use types in each watershed

TABLE J-2
Sediment Parameters

Parameter	Heards Creek	Upper Long Island	Marsh Creek	Powers Branch	Game Creek
KRER	0.28	0.28	0.28	0.28	0.28
NVSI	0.15	0.1-0.15	0.1-0.15	0.15	0.15
KSER	0.35-1.05	0.35-1.65	0.35-1.65	0.35-2.2	0.35-1.45
KEIM	0.1	0.1-2	0.1-2	0.1-2	0.1
ACCSDP	0.00065	0.00065-0.002	0.00065-0.002	0.00065	0.00065
REMSDP	0.0125	0.01-0.125	0.01-0.0125	0.0125	0.0125
KSAND	0.2	0.055	0.2	0.2	0.2
EXPSND	2.75	3	2.75	2.75	2.75
TAUCD-SILT	0.04	0.005	0.04	0.04	0.04
TAUCS-SILT	0.15	0.15	0.15	0.15	0.15
TAUCD-CLAY	0.07	0.06	0.07	0.07	0.07
TAUCS-CLAY	0.2	0.15	0.2	0.2	0.2

Phosphorus

As with sediment, model parameters were adjusted to bring calculated model unit area loads in line with literature values.

Significant parameters for pervious land surfaces included:

- Washoff potency factor (lbs/ton) (POTFW)
- Concentration of phosphorus in interflow outflow (lbs/ft3) (IOQC)
- Concentration of phosphorus in active groundwater outflow (lbs/ft3) (AOQC)

Significant parameters for impervious land surfaces included:

- Rate of accumulation of phosphorus (lbs/acre day) (ACQOP)

Finally, parameters affecting in-stream concentrations were adjusted. The important parameters included:

- Initial dissolved concentration of phosphorus (DQAL)

Table J-3 summarizes the values used for each significant parameter in each subwatershed. For certain parameters, a range of values is indicated. This is due to the various land use types in each watershed.

TABLE J-3
Phosphorus Parameters

Parameter	Heards Creek	Upper Long Island	Marsh Creek	Powers Branch	Game Creek
POTFW	0.6-1.3	0.6-1.2	0.6-1.3	0.6-1.3	0.6-1.2
IOQC	1.9×10^{-6} - 6.2×10^{-7}	1.9×10^{-6} - 6.2×10^{-7}	1.9×10^{-6} - 6.2×10^{-7}	1.9×10^{-6} - 6.2×10^{-7}	1.8×10^{-6} - 6.2×10^{-7}
AOQC	1.9×10^{-6} - 6.2×10^{-7}	1.9×10^{-6} - 6.2×10^{-7}	1.9×10^{-6} - 6.2×10^{-7}	1.9×10^{-6} - 6.2×10^{-7}	1.8×10^{-6} - 6.2×10^{-7}
ACQOP	0.0055	0.006	0.0055	0.0055	0.0055
DQAL	0.05	0.05	0.05	0.05	0.05

References

United States Environmental Protection Agency. 1999. BASINS Technical Note 6 Estimating Hydrology and Hydraulic Parameters for HSPF. Office of Water. EPA-823-R-00-012.

United States Environmental Protection Agency. 1993. Hydrological Simulation Program – FORTRAN User's Manual for Release 10. Office of Research and Development. EPA/600/R-93/174.

Appendix K

Appendix K – Introduction to Lorelei

Overview

The Sandy Springs project team has developed an ArcView GIS application named LORELEI to rapidly develop and compare management alternatives with dozens or hundreds of individual, ground-truthed BMPs located throughout multiple catchments. LORELEI provides decision support through four main activities:

- **Data management**. LORELEI is used to store data about potential BMP locations and associated drainage area, costs, types, and effectiveness along with "standard" geographic information such as natural features, watershed delineations, parcel maps, etc. The data structure supports the "BMP train" concept by including parent-child relationships, allowing the development and evaluation of complex series of BMPs to prevent or mitigate stormwater impacts.

- **Scenario development**. LORELEI provides a convenient environment for developing scenarios with different combinations of BMPs. The program allows the rapid selection of both individual projects and entire categories of BMPs. "BMP trains" can be used to build scenarios starting with low cost, high yield BMPs and testing program performance at each step along the train-building process. Citizen preferences can be built in to the train-building process and the cost-impact of these preferences quickly determined.

- **Scenario evaluation**. LORELEI estimates and compares scenario costs and benefits. Sensitivities to both can be quickly determined by adjusting expected performance or cost.

- **Enhanced involvement and understanding**. LORELEI uses the geographical context provided by GIS to give stakeholders and decision makers the opportunity to participate directly in development of scenarios, and to provide a clear picture of issues, components, and cost and benefit implications of different management scenarios. Its straightforward data handling and GIS linkages allow real-time fine-tuning of proposed scenarios during public meetings to determine the cost or performance impact of participants' suggestions.

Background

Extensive spatial data, such as land use, stream delineations, hypsography, building footprints, roads and other impervious areas, and parcel boundaries were readily available from Fulton County and the Atlanta Regional Commission. Additional spatial data collected included a complete stormwater infrastructure inventory to support hydraulic and hydrological modeling of the stormwater and stream systems. The project team also collected 15-minute flow and rainfall data in five of the modeled basins along with wet-weather and dry-weather water quality information for calibration.

The complex nature of the problem required extra effort to manage and to communicate to the ultimate client – the taxpaying citizen. Because of the highly urbanized status of the Sandy Spring study area, we needed to keep track of several hundred candidate BMP sites, develop management scenarios using different combinations of BMPs, evaluate their impact on water quality, compare scenario results … and present all of this information to a wide range of people including technical experts, managers and decision-makers, and the public.

From previous project experience, we knew that placing information in a geographic context greatly enhances understanding. So, we evaluated the feasibility of developing a GIS-based interface to the necessary information --- the BMPs and model results. As discussed below, we found that many of the necessary tasks could be implemented directly with ESRI's ArcView GIS, a program already in use at Fulton County. We therefore set out to develop the ArcView-based tool called LORELEI to support data management, scenario evaluation, and communication activities.

Data Management

In addition to the basic geographic layers used to provide spatial context, LORELEI presents information about BMP locations and BMP service areas. BMPs are indicated by polygons on the base map corresponding to extent of the BMP itself, while BMP service areas are polygons delineating the service area for the BMP. Information about the BMP type, cost, and removal efficiency are attributes of the BMP layer, while parent-child relationships are attributes of the BMP service area. The parent-child relationship indicates the order of passage for runoff through a BMP treatment train (Figure K-1).

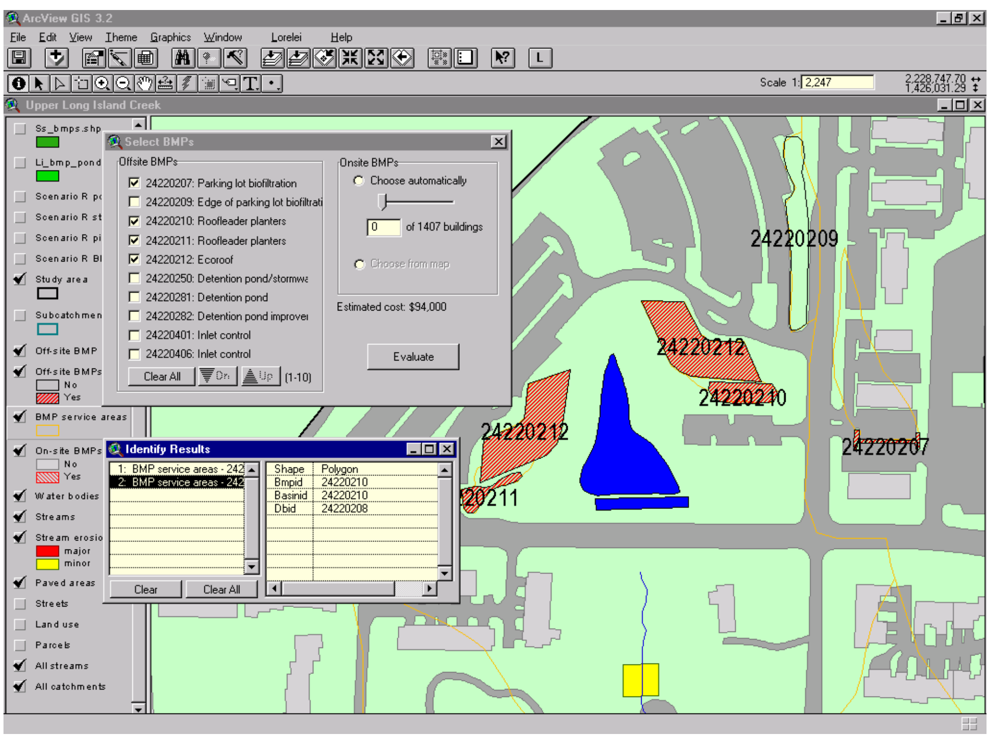


FIGURE K - 1
LORELEI Display of a BMP Treatment Train with Ecoroof 24220212 Draining to Roofleader Planters 24220210/0211

Scenario Development

LORELEI allows the user to select off-site BMPs to include in a management scenario by clicking directly on its ID on the map, or by scrolling through a list of available BMPs. The locations for potential BMPs in the Sandy Springs application were first identified identified on aerial photographs, then ground-truthed during field surveys and stream walks. LORELEI also includes the capability to select individual buildings for implementation of an on-site BMP such as a rainwater cistern; this can be done building-by-building or by random selection based on expected level of household participation.

Model results can also be used to identify subareas in the basin where pollutant generation is high. This information may suggest where to focus attention on BMPs (Figure *K*-2).

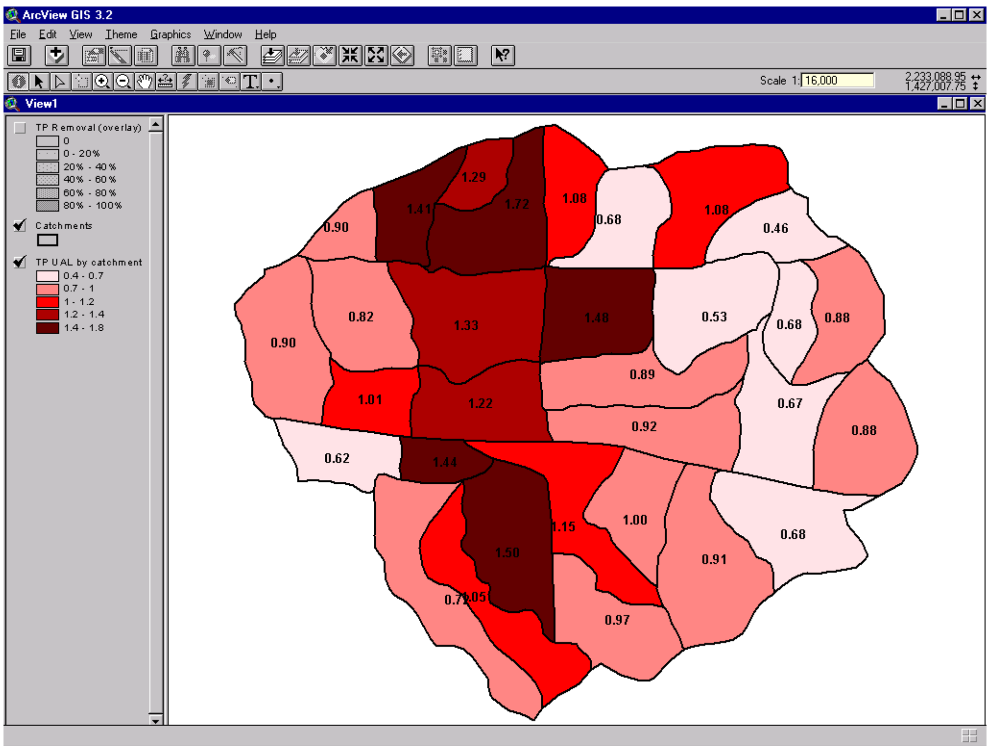


FIGURE K-2
Evaluation of Total Phosphorus Unit Area Loads by Catchment

Once developed, LORELEI's Save Scenario and Load Scenario functions allow the user to store the combinations of BMPs to be evaluate as management scenarios, then retrieve saved scenarios for comparison or further modification.

Scenario Evaluation

To evaluate the benefits of a management scenario, LORELEI uses the BMP data discussed above plus land use and impervious surface data in coordination with BASINS model results. There are two components: washoff and instream scour.

Washoff. The project work plan stipulated the use of U.S. EPA's BASINS/NPSM modeling framework to evaluate water quality, while SWMM was used for water quantity modeling. Because of the small watershed areas and short stream lengths, instream processes were found not to be important except for sediment scour. This allows LORELEI to use a unit area load (UAL) approach based on long-term (10-year) average pollutant washoff as modeled in BASINS/NPSM. Each area in LORELEI is classified by land use and imperviousness, and a lookup table is used to find the appropriate UAL. The generated load is then routed through BMPs, and reduced according to BMP data.

Instream Scour. For sediment evaluation, it was noted that 1) overland runoff did not account for all observed instream sediment and 2) sediment scour is an important potential habitat stressor. BASINS/NPSM allowed us to calibrate instream sediment scour to our observed data, but did not provide a convenient mechanism for evaluating the localized impacts of small BMPs on the scour. LORELEI provides a method for estimating these impacts that masks or reduces erosion from areas identified in surveys.

- Masking is the elimination of erosion from an identified erosional area because an BMP such as a pond or check dam will cover up the threatened areas (Figure K-3).

- Reduction considers the impact of upstream BMPs on flow. LORELEI calculates impervious area upstream of each erosional zone and a potential stormflow volume with and without added storage. The ratio is then used to potential instream erosion according to a user-specified power relationship.

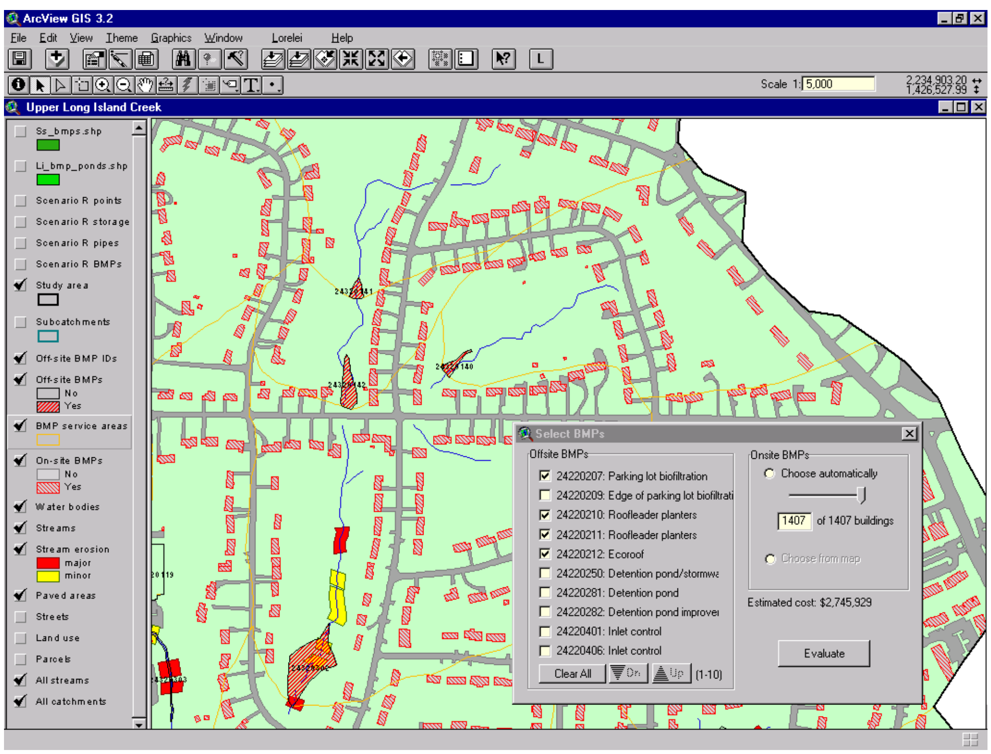


FIGURE K-3
Masked Erosional Areas Underneath Pond 24320302 with Reduced Erosion Upstream due to Increased Storage

Sediment and nutrient loads are reported at the mouth of the system along with total costs for the selected BMPs, allowing a quick global comparison of costs and benefits to other scenarios. Removal amounts calculated at each BMP can be accessed from LORELEI.

Appendix L

Appendix L - Citizen Database

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
		Hammond Park Community Building	705 Hammond Drive		Atlanta	GA	30328	NF	Sandy Springs
		Chattahoochee River National Recreation Area	1978 Island Ford Parkway		Atlanta	GA	30350-34	NF	
		Autrey Mill Nature Center - Alpharetta	9770 Autrey Mills Road		Alpharetta	GA	30022	NF	Johns Creek
		Welcome All Parks - College Park	4255 Will Lee Road		College Park	GA	30349	SF	Camp Creek
		Eagle Golf Club at Morgan Falls Park	460 Morgan Falls Road		Atlanta	GA	30350	NF	Camp Creek
		City of Roswell	38 Hill Street, Suite G-60		Roswell	GA	30075	NF	Big Creek
		Wolf Creek Olympic Shooting Complex	3070 Merk Road, SW		Atlanta	GA	30349	SF	Camp Creek
		Greater Atlanta Home Builders Assoc., Inc.	1399 Montreal Road		Tucker	GA	30084		
Acree	Annie		13370 Providence Park Drive		Alparetta	GA	30031		
Adams	Diane		460 Liberty Trace		Roswell	GA	30076		
Adams	J.	Kingswood Business Center	1095 Old Roswell Road, Suite D-2		Roswell	GA	30076	NF	Sandy Springs
Aiken	D.C.		425 Park Creek Way		Alpharetta	GA	30022	NF	Johns Creek
Aiken	Fred	Office of Congressman Bob Barr	999 Whitlock Avenue, Suite 13		Marietta	GA	30064	SF	
Alcon	Alison	SEW Americorps	1526 W. Nancy Creek Drive		Atlanta	GA	30319		
Alexander	Doug	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Alexander	Gary	Grogan's Bluff Homeowners Association	8235 Grogans Ferry Road		Atlanta	GA	30350-31	NF	Sandy Springs
Alexander	H.J.A.	High Point Trail	2160 Hgh Point Trail		Atlanta	GA	30331	SF	Camp Creek
Alexander	Lois		4570 Danforth Road		Atlanta	GA	30331	SF	Camp Creek
Alexander	Mark	Sierra Club	511 Tuxworth Circle		Decatur	GA	30033	ALL	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Alexander	William	Ridgecrest Forest Community Association	468 Dollar Mill Road		Atlanta	GA	30331	SF	Camp Creek
Allen	Terry		1599 Boulevard Lorraine, SW		Atlanta	GA	30311	SF	Camp Creek
Allen	Richard	Old Fairburn Association of Neighborhoods	3925 Wolf Creek Circle		Atlanta	GA	30331	SF	Camp Creek
Allen	Patricia	Roswell Commons Town Homes	114 Roswell Commons Way		Roswell	GA	30076	NF	Sandy Springs
Allen	Georgia		1494 Ezra Church Drive, NW		Atlanta	GA	30311-21	SF	Camp Creek
Allen	Debbie	Medlock Bridge	5225 Cottage Farm Road		Alpharetta	GA	30022	NF	Johns Creek
Allison	Antone	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Alston	Cynthia		1060 Reunion Place		Atlanta	GA	30331	SF	Camp Creek
Amanns	A.W.	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Ammons	Nick	RMJ	141 Pryor St., SW, Ste. 3701		Atlanta	GA	30303	CON	
Anchors	Jerry			30327-4644	College Park	GA	30337	SF	Camp Creek
Anderson	Ken		120 Ketton Crossing		Duluth	GA	30097	NF	Johns Creek
Areheart	Gayle	Camden Pond -- Subdivision	320 Camden Way		Alpharetta	GA	30004	NF	Big Creek
Armour	Edna	Mays High School	3166 Boyce Court, SW		Atlanta	GA	30316-48	ATL	
Arnold	Frankie	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Arnold	Corlice	Association of West Cascade Community	1070 New Hope Road		Atlanta	GA	30331	SF	Camp Creek
Arras	Cindy	Bridgepointe -- Subdivision	5547 Bridge Point Drive		Alpharetta	GA	30005	NF	Big Creek
Asberry	Daniel, III	Westminster Mortgage Corp.	2900 Chamblee-Tucker Rd., BLDG 4 ,Ste300		Atlanta	GA	30341	NF	Little River
Ashley	Ken	Waterford Country Lake Homeowners Association	470 Mikasa Drive		Alpharetta	GA	30022	NF	Johns Creek
Askin	James	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek

Last Na	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	W..ershed
Assad	Arthur	Heathridge Homeowners Association	715 Bittersweet Trail		Dunwoody	GA	30350	NF	Sandy Springs
Assad	Arthur	Heathridge Homeowners Association	715 Bittersweet Trail		Dunwoody	GA	30350	NF	Sandy Springs
Astor	Scott	Highlands at Parkbridge -- Subdivision	United General Industries, Inc.	6000 Live Oak Parkway, N.W., Ste. 115	Alpharetta	GA	30093	NF	Big Creek
Atkerson	Sandra		2752 Evansdale Circle		Atlanta	GA	30340		
Aycock	Elvin	Atlanta Engineering Services, Inc.	3050 Royal Blvd., S #175		Atlanta	GA	30022	NF	Sandy Springs
Aycock	Grover	The Woods	7124 Woodridge Lane		Union City	GA	30291	SF	Camp Creek
Bachman	Jeff	Mayfield Place -- Subdivision	8300 Dunwoood Place, Suite 150		Atlanta	GA	30350	NF	Big Creek
Baer	Jay		1784 Century Boulevard		Atlanta	GA	30345	NF	
Baer	Susan	Autumn Chase Homeowners Association	308 The Chase N.E.		Atlanta	GA	30328	NF	Sandy Springs
Baer	Susan	Autumn Chace Homeowners Association	308 The Chase N.E.		Atlanta	GA	30328	NF	Sandy Springs
Bailey	Janet	Riverview/Palisades Homeowners Association	5200 Riverview Road		Atlanta	GA	30327	NF	
Bailey	Janet	Riverview/Palisades Homeowners Association	5200 Riverview Road		Atlanta	GA	30327	NF	Sandy Springs
Bailey	Joseph		5135 Kerry Drive, SE		Atlanta	GA	30331	SF	Camp Creek
Bailey	Rojene	Lake Jan Estate Community	4400 Lakeridge Circle, SW		Atlanta	GA	30331	SF	Camp Creek
Baird	Justus	Caledonian Consulting	5305 Skidaway Drive		Alpharetta	GA	30022	NF	Johns Creek
Baker	Joyce	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Balentine	Betty	Peachtree Garden Club	3015 Andrews Drive, NW		Atlanta	GA	30319	ATL	
Banks	Joel	Business Brokers of Georgia, Inc.	770 Old Roswell Place, Suite E-200		Roswell	GA	30075	NF	Big Creek
Banks	Rebecca		104 Pates Lake Drive		Hampton	GA	30228		
Barkley	Jim		1550 Stethem Ferry		Alpharetta	GA	30022	NF	Johns Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Barksdale	Richard		1542 Boat Rock Road		Atlanta	GA	30331	SF	Camp Creek
Barnes	Karen	Alpharetta Estates - Subdivision	185 Wendy Hill Drive		Alpharetta	GA	30004	NF	Big Creek
Barnes	Wesley	Delon Hampton & Associates	600 W. Peachtree		Atlanta	GA	30308	CON	
Barnes	Betty	Roswell Green Homeowners Association	117 Roswell Green Lane		Roswell	GA	30075	NF	Big Creek
Barnet	Joseph	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Barnette	Harold	NPU	P.O. Box 5502		Atlanta	GA	30307	ATL	
Barran	Susan		10870 Pinehigh		Alpharetta	GA	30022	NF	Johns Creek
Barrett	Ed	Watts & Browning	1954 Airport Road, Suite 120		Atlanta	GA	30341-49		All
Barron	George	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Bartholomew	Phil		205 Cliff Overlook		Atlanta	GA	30350		
Bartlett	Peggy		1346 Avalon Place		Atlanta	GA	30306		
Bates	Bill	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Battle	Samuel		1470 Austin Road		Atlanta	GA	30331	SF	Camp Creek
Bauchspies	Robert	Windridge (Windward) -- Subdivision	1925 Windridge Landing		Alpharetta	GA	30005	NF	Big Creek
Bauer	Mr. & Mrs.	North Farm Homeowners Association	520 Carybell Lanes		Alpharetta	GA	30004	NF	Big Creek
Baugh	Thomas	U.S. Fish and Wildlife Service, Southeast Region	1875 Century Blvd.		Atlanta	GA	30345	NF	
Bausano	John	CDM	2100 Riveredge Parkway, Ste. 500		Atlanta	GA	30328		
Bausano	John	Camp Dresser & McKee	2100 RiverEdge Parkway, Suite 500		Atlanta	GA	30328		
Baust	Katherine	GEO AmeriCorps	3185 Center Street		Smyrna	GA	30080	NF	
Beasley	David	Chastain Park Civic Association	265 Forrest Lake Drive, NW		Atlanta	GA	30327	NF	

Last Nan.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Wa..rshed
Beasley	David	Chastain Park Civic Association	265 Forrest Lake Drive, N.W.		Atlanta	GA	30327	NF	Sandy Springs
Beck	Bob	Trout Unlimited Georgia Council	3836 Foxwood Road		Duluth	GA	30096	NF	
Beecher	Constance	Camelot Club Condo Association, Inc.	920 Camelot Drive		College Park	GA	30349	SF	Camp Creek
Bell	Marcus		1281 Nskey Lake Road		Atlanta	GA	30331	SF	Camp Creek
Bell	John	Rockdale County	2570 Old Covington Highway		Conyers	GA	30207	GOV	
Bell	Bruce & Ginger		13255 Bethany Road		Alpharetta	GA	30004		
Bell	Buck		13251 Bethany Road		Alpharetta	GA	30004	NF	Big Creek
Bellinger	Bernard	Fulton County	141 Pryor St, Ste. 6000		Atlanta	GA	30303	FC	
Bemont	Donna	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Bencali	G.J.	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Bennett	Neil	North Farm Homeowners Association	255 Steppingstone Drive		Alpharetta	GA	30004	NF	Big Creek
Benson	Sam	Broadwell Road -- Subdivision	12340 Broadwell Road		Alpharetta	GA	30004	NF	Big Creek
Benton	Patti	Hunters Oak -- Subdivision	5350 Hunters Oak Drive		Alpharetta	GA	30004	NF	Big Creek
Berger	Shirley		522 Londonberry Road		Atlanta	GA	30327	NF	Sandy Springs
Berkovitz	Barry & Patty		800 Crest Vally Drive		Atlanta	GA	30327	NF	Sandy Springs
Berkow	George	Jim Cowart Company	3295 River Exchange Drive, Suite 400		Norcross	GA	30092	NF	
Bernes-Stark	Betsy	Fulton County	141 Pryor Street, SW, Suite 5001		Atlanta	GA	30303	FC	
Bernhart	Michelle	Camp Dresser & McKee	2100 Riveredge Parkway, Suite 500		Atlanta	GA	30328	NF	
Berry	Bo	Webb Bridge Crossing/Big Creek Homeowners Assoc.	4135 Big Creek Overlook		Alpharetta	GA	30022	NF	Johns Creek
Berry	Ed	Summerfield -- Subdivision	295 Summerfield Drive		Alpharetta	GA	30022	NF	Big Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Berry	Enrico	GEO AmeriCorps	3185 Center St.		Smyrna	GA	30080	NF	
Berry	Jim		10215 Hutcheson Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Bestidoe	Charles	Riverside West Garden Club	9480 Huntcliff Trace		Atlanta	GA	30350	NF	Sandy Springs
Bethea	Sally	Upper Chattahoochee Riverkeeper	1900 Emery Street, Suite 450		Atlanta	GA	30319	ALL	
Betts	Veronica	Southwest Concerned Citizens of Fulton County	6035 Canaan Woods Drive		Atlanta	GA	30331	SF	Camp Creek
Betts	Jay		6410 River Chase		Atlanta	GA	30328	NF	Sandy Springs
Bevel	Shirley		1090 Mitchell Crossing Drive		Atlanta	GA	30331	SF	Camp Creek
Bick	Alfie		1715 Piper Circle		Atlanta	GA	30316		
Biele	Charles	Mobil Land Development Corp.	6120 Windward Parkway, Ste. 290		Alpharetta	GA	30005	NF	Sandy Springs
Bilbo	June	Publix Super Market Stream Adopters	9925 Haynes Bridge Road		Alpharetta	GA	30022	NF	Johns Creek
Bissell	Henry		6225 Old Hickory Point		Atlanta	GA	30328	NF	Sandy Springs
Bitner	Debbie	North Point High School	770 Sable Point Road		Alpharetta	GA	30004		
Bitter	David	American Institute of Archiitects	57 Forsyth, Suite 1300		Atlanta	GA	30303	ALL	
Bivins	Nancy		3805 Hedgecliff Court		Alpharetta	GA	30022	NF	Johns Creek
Black	Donna	Fulton County	141 Pryor St., SW, Ste. 2085		Atlanta	GA	30303	FC	
Black	Tom	DeKalb County	1300 Commerce Drive		Decatur	GA	30032		
Blackwell	Judith	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Blad	Tochie		7320 Hunters Branch Drive, NE		Atlanta	GA	30328	NF	Sandy Springs
Blad	Tochie	Fulton Co. Citizens Commission on the Environment	7320 Hunters Branch Drive		Atlanta	GA	30328	NF	Sandy Springs
Blalock	Richard	Lynne Circle/Milton Manor -- Subdivision	370 Lynne Circle		Alpharetta	GA	30004	NF	Big Creek

Last Nan.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	W...rshed
Blankenship	Wilborn	Princton Square Homeowners Association	705 Old Campus Trail		Atlanta	GA	30328		
Blichfeldt	Roger	Glenridge Forest/Hammond Hills	5680 Kayron Drive		S.Springs	GA	30328	NF	Sandy Springs
Blonder	Michael	Atlanta Apartment Association	3 Piedmont Center, Suite 710/3565 Piedmont Rd		Atlanta	GA	30305	NF	
Blue	John	Reynolds Road	1860 Reynolds Road		Atlanta	GA	30331	SF	Camp Creek
Boazman	Derrick	Atlanta City Council	1854 Bond Dr., SW		Atlanta	GA	30315	ATL	Camp Creek
Bock	Greg		240 Davenham Court		Alpharetta	GA	30005	NF	Johns Creek
Boddie	Clark	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Bode	Mary Anne	Northfield -- Subdivision	263 Dennis Drive		Alpharetta	GA	30004	NF	Big Creek
Bohanon	Barbara	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Bomar	Ken	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Bond	Michael	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Boner	Mark	WWETCO	753 Grimes Bridge Road		Roswell	GA	30075	NF	Big Creek
Boring	Jeffrey	The Nature Conservancy of Georgia	1330 West Peachtree St., Ste. 410		Atlanta	GA	30309-29	NF	Sandy Springs
Born	Doris	Meadowbrook Hills -- Subdivision	239 Meadow Drive		Alpharetta	GA	30004	NF	Big Creek
Bourne	Bob	Cobb Co. Water System	662 South Cobb Drive		Marietta	GA	30060		
Bowden	Harry		5010 Butner Road		College Park	GA	30349	SF	Camp Creek
Boxill	Nancy	Fulton County Board of Commissioners	141 Pryor St., SW, Ste. 10032		Atlanta	GA	30303	FC	
Boyd	DeAnn	Park Pride Atlanta	675 Ponce de Leon Avenue, 8th Floor		Atlanta	GA	30308	ATL	
Boyd	W.E.		6400 Cochran Mill Road		Palmetto	GA	30268	SF	Camp Creek
Bradford	Jack		5555 Sherrell Drive NE		Atlanta	GA	30342-13		

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Bradley	Ray	Lakeview	105 Leeward Lane		Roswell	GA	30076	NF	Sandy Springs
Bradley	Wendy	River Walk Subdivision	10900 Regal Forest Drive		Suwanee	GA	30024		Johns Creek
Bradley	Jessalyn	Woodard Academy	1662 Rugby Avenue		Atlanta	GA	30337		Bear Creek
Bradley-Slaughter	Ruth		533 Campbellton Road, SW		Atlanta	GA	30331	SF	Camp Creek
Bragg	Kathy	Tribble Richardson	P.O. Box 13147		Macon	GA	31208	SF	Camp Creek
Brantley	Carol		356 Fourth Street		Atlanta	GA	30308	ATL	
Breaden	Dave	Ogden Environmental and Energy Services	1395 S. Marietta Pkwy		Marietta	GA	30067	SF	
Breckstein	Brenda	Sutton Middle School	4360 Powers Ferry Road		Atlanta	GA	30334	NF	
Brittian	Willie		2225 Wallace Road		Atlanta	GA	30331	SF	Camp Creek
Brodek	Theodore	NPU	555 Hardendorf Ave., NE		Atlanta	GA	30307	ATL	
Bronstein	David		10870 Charburn Way		Duluth	GA	30097	NF	
Brooks	Bill and Lorraine	North Farm Civic Association	12300 Orchard Farm Lane		Alpharetta	GA	30004	NF	Big Creek
Brooks	Richard		795 Hammond Drive, Apt. 1002		Atlanta	GA	30328		
Brooks	David		1910 Dinsmore Road		Alpharetta	GA	30004	NF	Big Creek
Brooks	Linda		1515 Loch Lomond Trace, SE		Atlanta	GA	30331		
Brooks Cooper	Linda	W. Atlanta Watershed Alliance	1515 Loch Lomond Tr. SW		Atlanta	GA	30331	SF	Camp Creek
Brosnan	Thomas	ILSI Risk Science Institute	1126 Sixteenth Street, NW		Washington	DC	20036-48	SF	
Brown	Junie		P.O. Box 720213		Atlanta	GA	30358	SF	
Brown	Travis	Lovett School	1323 Crestwood Lane		Atlanta	GA	30339		
Brown	Threet	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Brown	Taralee	South Fulton Revitalization, Inc.	66 Luckie Street, Suite 800		Atlanta	GA	30303	ATL	Camp Creek
Brown	Susan	Cub Scout Pack 1055	1055 Willeo Road		Roswell	GA	30075	NF	Big Creek
Brown	Ronald	Canaan Glen Homeowners Association	1675 Water Way Crossing		Atlanta	GA	30331	SF	Camp Creek
Brown	Carylon		2225 Enon Road		Atlanta	GA	30331	SF	Camp Creek
Brown	Frank	Glenridge Forest/Hammond Hills	630 Patrick Place		Atlanta	GA	30321	NF	Sandy Springs
Brown	Cecil	Palmetto Municipality	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Brown	Barbara	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Brown	Barbara	Standard View Homeowners Association	6075 Standards View Drive		Duluth	GA	30136	NF	
Brown	Ann		1050 Mt. Creek		Atlanta	GA	30328	NF	Sandy Springs
Brown	A. Thomas	Ogden Environmental and Energy Services	1395 South Marietta Parkway Building 300 Suite 200		Marietta	GA	30067	CON	
Brown	Jennifer	SEW Americorps	1526 W. Nancy Creek Road		Atlanta	GA	30319		
Brown	Frank	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Bruce	Adrienne	SEW Americorps	1526 W. Nancy Creek Road		Atlanta	GA	30319		
Brumley	Larry		11100 Surrey Park Trail		Duluth	GA	30155	NF	
Bryant	Reuban		2415 Enon Road, SW		Atlanta	GA	30331	SF	Camp Creek
Bryant	Nesha		13170 Hutchson Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Bryant	Kyle	R & D Testing & Drilling	2366 Sylvan Road		Atlanta	GA	30344	SF	
Bryant	Bill	Georgia Power, Economic Development	285 Peachtree Street, Ste. 1750		Atlanta	GA	30303-00	ALL	
Bryant	Eliane		7645 Rico Road		Palmetto	GA	30268	SF	Camp Creek
Buchanan	Ron	Roswell Lions Club	120 Derby Forest Court		Roswell	GA	30076		

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Buchli	Edward	North Fulton Developers Association	1954 Airport Road, Suite 120		Atlanta	GA	30341	NF	Little River
Bucks	Harold		5075 Erin Road, SW		Atlanta	GA	30331	SF	Camp Creek
Bucy	Barney		124 Hingland Glen Court		Alpharetta	GA	30022	NF	Johns Creek
Budinger	Chuck	Fulton County	141 Pryor St., SW, Ste. 5001		Atlanta	GA	30303	FC	
Budinger	Chuck		1112 Center Street		Atlanta	GA	30318		
Buice	Yanisa	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Bullock	Sallie		845 Windsor Parkway NE		Atlanta	GA	30342	NF	Sandy Springs
Bundy	Jerry	Northcliff Homeowner's Association	2870 Stone Glen Close		Roswell	GA	30076	NF	Sandy Springs
Bunge	Karen		9 Piedmont Center/3495 Piedmont Road		Atlanta	GA	30305	ATL	
Buntley	M.		1895 Enon Pines Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Burden	Rose	Fulton County	141 Pryor St., SW, Ste. 5001		Atlanta	GA	30303-00	FC	
Burdette	Janice		9690 Cedar Grove Road		Fairburn	GA	30213	SF	Camp Creek
Burgamy	Pat	Tiffany Square Townhomes -- Subdivision	4001 Toiffany Square Drive		Alpharetta	GA	30004	NF	Big Creek
Burgess	Bob		131 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Burgess	Carin		4040 Cascade Road		Atlanta	GA	30331	SF	Camp Creek
Burke	Nancy		103 Creekside Park Drive		Alpharetta	GA	30022	NF	Johns Creek
Burke	Roy	Georgia Department of Natural Resources	7 Martin Luther King Jr. Drive, Suite 643		Atlanta	GA	30334	DNR	
Burrell	Earl G.	Fulton County	141 Pryor St., SW, Ste. 6049		Atlanta	GA	30303	FC	
Burtin	Wayland	Versailles Homeowners Association	520 Marceau Way, SW		Atlanta	GA	30331-83	SF	Camp Creek
Burton	Bruce		865 Onagh Court		Alpharetta	GA	30004		

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Burum	Susan		9695 Foxworth Drive		Alpharetta	GA	30022	NF	Johns Creek
Busck Sullivan	Ellen	Roswell Adopt-A-Stream	3615 Lake Shore Drive		Smyrna	GA	30082	NF	
Bush	Robert		1121 Kensington Court		Alpharetta	GA	30022	NF	Johns Creek
Butler	Dave	S. Peachtree Creek Nature Preserve	P.O. Box 33247		Atlanta	GA	30033	NF	
Butler	Levi		1870 New Hope Road		Atlanta	GA	30331	SF	Camp Creek
Butler	Margurite		5125 Erin Road, SW		Atlanta	GA	30331	SF	Camp Creek
Butterworth	Neal	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Byers	John		125 Fox Cove Court		Alpharetta	GA	30022	NF	Johns Creek
Byrd	Stacy	Eagles Landing High School	301 Tunis Road		McDonough	GA	30253		
Cadogan	Shari	City of Atlanta	68 Mitchell St., SW, Suite 3350		Atlanta	GA	30335	ATL	
Cagle	Foster	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Cain	Tekeba	GACC	1940 Fisher Road	#86A	Atlanta	GA	30315		
Caines	Gary		9905 Twingate Drive		Alpharetta	GA	30022	NF	Johns Creek
Caird	Pam		180 Water Mill Court		Alpharetta	GA	30004		
Calabro	Peter		1030 Churchill Lane		Roswell	GA	30075	NF	Big Creek
Calhoun	Clyde	Magnolia Garden Club	4920 Riverview Road, N.W.		Atlanta	GA	30327	NF	Sandy Springs
Callahan	Peter		4895 Candacraig		Alpharetta	GA	30022	NF	Johns Creek
Cameron, Jr.	James	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Camocho	Ron		4645 Mystic Dr.		Atlanta	GA	30342	NF	Sandy Springs
Campbell	Bill	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Cannon	Wallace	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Cantrel	Maryland		5029 Cascade Road, SW		Atlanta	GA	30331	SF	Camp Creek
Cantrell	E.		4995 Dublin Drive		Atlanta	GA	30331	SF	Camp Creek
Carbonara	Jeff	North Bridges Homeowners Association	5170 North Bridges Drive		Alpharetta	GA	30022	NF	Johns Creek
Carlson	Harold		5005 Jett Road		Atlanta	GA	30327		
Carpenter	James		4115 Glen Devon Drive		Atlanta	GA	30327	NF	Sandy Springs
Carr	Angelyb		450 Piney Way		Atlanta	GA	30331	SF	Camp Creek
Carr	Lamont	Southwest Fulton Revitalization, Inc.	55 Trinity Avenue SW, Suite G300		Atlanta	GA	30335	SF	Camp Creek
Carr	Steve	Intrenchment Creek Coalition	850 Mercer Street, SE		Atlanta	GA	30312	ATL	Camp Creek
Carroll	Benny	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Carson	Mackie	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Carson	Jennifer		935 Forest Overlooks Trail		Atlanta	GA	30331	SF	Camp Creek
Carter	Judi	North Spring High School	7447 Rowell Road		Atlanta	GA	30328	NF	
Carter	Regina	Fulton County	141 Pryor Street	Suite 5001	Atlanta	GA	30303		
Carter	Sonya	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Carubba	Frank	Georgia Department of Natural Resources	205 Butler Street, SE Floyd Towers East, Suite 107		Atlanta	GA	30334	DNR	
Caruthers	Chatman		5035 Cascade Overlook		Atlanta	GA	30331	SF	Camp Creek
Casey	Brian		6350 Riverchase Circle		Atlanta	GA	30328	NF	Sandy Springs
Cash	Frank		5455 Morton Road		Alpharetta	GA	30022	NF	Johns Creek
Cashin	Jack & Helen		1005 Little River Way		Alpharetta	GA	30005		

Last Na	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Casses	Kathleen		6006 McClure Road		Fairburn	GA	30213		
Castlin	Sam	Kings Ridge Subdivision	705 King Crest Court		Fairburn	GA	30213	SF	Camp Creek
Caverly	Gene & Ann	Spinnakers (Windward) -- Subdivision	6370 Spinnaker Lane		Alpharetta	GA	30005	NF	Big Creek
Caylor	Diane		120 Vicarage Court		Alpharetta	GA	30005		
Cero	Cynthia		560 Old Path Crossing		Roswell	GA	30075		
Chambers	Lloyd		6484 Joanna Street		Lithia Springs	GA	30122	NF	
Chamblee	Carter		4262 Cascade Road, SW		Atlanta	GA	30331	SF	Camp Creek
Champagne	Alice	Upper Chattahoochee Riverkeeper	1900 Emery Street, Suite 450		Atlanta	GA	30319	ALL	
Champagne	Alice	Riverkeeper	1900 Emory Street, Suite 450		Atlanta	GA	30318		
Chanay	Robin		1241 Ormewood Avenue, SE		Atlanta	GA	30316		
Chapman	Donnie	Capital Design	418 North Main Street		Alpharetta	GA	30004		
Chariker	Sean	Camden Pond -- Subdivision	3020 Camden Way		Alpharetta	GA	30004	NF	Big Creek
Chatman	Jerome		115 Sansy Pines Drive		Atlanta	GA	30331	SF	Camp Creek
Cheatham	Dwayne	Woodside Hills Subdivision	2490 Zane Drive		Atlanta	GA	30331	SF	Camp Creek
Cheek	John	Sandy Springs Revitalization, Inc.	100 Allen Road		Atlanta	GA	30328	NF	Sandy Springs
Cheney	Ken		645 Gunby Road		Marietta	GA	30067	SF	
Cherry	Lisa	Alpharetta Parks and Recreation	1825 Old Milton Pkwy		Alpharetta	GA	30004	NF	Big Creek
Cherry	Rose		4530 Cascade Road		Atlanta	GA	30331	SF	Camp Creek
Chesnutt	Charlie	Park Glenn -- Subdivision	1625 Silverleaf Way		Alpharetta	GA	30005	NF	Big Creek
Chime	Richard	City of Atlanta	68 Mitchell Street, Suite 4500		Atlanta	GA	30335	ATL	

Last Name	First Name	Organization	Address 1	Address 2	City, State	Zip	Area	Watershed
Cholick	Hugh		P.O. Box 1555		Duluth GA	30097	NF	
Christler	Gloria		5090 Erin Road, SW		Atlanta GA	30331	SF	Camp Creek
Claiff	Dave	Puck's Farm	5170 Bethelem Road		Fairburn GA	30213		
Clark	Ed	JJG / Fulton County	141 Pryor St., SW, Ste. 6001		Atlanta GA	30303		
Clark	Stewart		9015 Etching Overlook		Duluth GA	30097	NF	
Clark	Richard		5890 Canaan Glen Court		Atlanta GA	30331	SF	Camp Creek
Clark	James		2330 Hopewell Plantation Drive		Alpharetta GA	30004	NF	Big Creek
Clark	Lance	City of Atlanta	55 Trinity Ave, SW		Atlanta GA	30335	ATL	
Clarke	Ed	JJ&G	141 Pryor St., Ste. 6000		Atlanta GA	30303	CON	
Clemendorf	Marcia	South Fulton Community Coalition	P.O. Box 412		Union City GA	30291	SF	Camp Creek
Clement	Christine		11845 upper Wooten Road		Palmetto GA	30268	SF	Camp Creek
Clemmons	Pam		4870 Northway Drive, NE		Atlanta GA	30342	NF	Sandy Springs
Clerk	Rebecca		325 Knotty Pine Drive		Atlanta GA	30331	SF	Camp Creek
Cleveland	Bill	Whispering Pines Homeowners Association	6441 Wright Road		Atlanta GA	30328		
Cochran	Chris	Greater Atlanta Homebuilders Assoc., Inc.	1399 Montreal Road		Tucker GA	30086	NF	
Cochrane	Charlie	Big Trees Forest Preserve	130 Azalea Drive		Roswell GA	30075		
Coffey	Roxie		10190 Cedar Grove Road		Fairburn GA	30213	SF	Camp Creek
Cohen	Bryan	UGI	6000 Liveoak Parkway, Ste. 115		Norcorss GA	30093	NF	All
Cohen	Dan	City of Atlanta	55 Trinity Ave, SW		Atlanta GA	30335	ATL	
Cohen	Solomon		55 Mountain Creek Trace		Atlanta GA	30328		

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Coker	Karen	Martin's Landing Town Homes	P.O. Box 1609		Woodstock	GA	30188	SF	
Colclasure	Joy	Taylor Oaks Homeowners Assoc.	1305 Taylor Oaks Dr.		Roswell	GA	30076	NF	Sandy Springs
Cole	Terry	Brown & Caldwell	53 Perimeter Center E., Ste. 500		Atlanta	GA	30346	CON	
Colvin	Mary Lou	Hampton Hills Civic Association	6411 N. Hampton Drive		Atlanta	GA	30328	NF	Sandy Springs
Comer	Alex	Fulton County	141 Pryor Street, Suite 5001		Atlanta	GA	30303		
Compton	Etitta		7355 Ild Rico Road		Palmetto	GA	30268	SF	Johns Creek
Compton	Joan		5355 Laithbank Lane		Alpharetta	GA	30022	NF	Johns Creek
Cone	Karl	Hidden Branches Homeowners Association	7215 Hunters Branches Drive		Atlanta	GA	30328	NF	Sandy Springs
Connah	Jim		6368 Vernon Woods Drive NE		Atlanta	GA	30328		
Conrad	Loren	Willow Springs Homeowners Association	220 Pen hurst Way		Roswell	GA	30076	NF	Sandy Springs
Conway	Yvonne		695 Fernbrooks Drive		Atlanta	GA	30331	SF	Camp Creek
Cook	Belinda		10130 Link Court		Alpharetta	GA	30022		
Cook	Daryl	North Fulton Developers Association	Watts & Browning 1954 Airport Road, Ste. 120		Atlanta	GA	30341	NF	Little River
Cook	Hugh		5050 Erin Road, SW		Atlanta	GA	30331	SF	Camp Creek
Cook	Winston	Melanie Maor Community Action Association	5710 Melanie Trail		College Park	GA	30349	SF	Camp Creek
Coon	Bud	Haynes Landing/Timberstone Association	10625 Timberstone Road		Alpharetta	GA	30022	NF	Johns Creek
Cooper	James		4350 Cochran Mill Road		Palmetto	GA	30213	SF	Camp Creek
Cooper	Drew		10375 Worthington Hills Manor		Roswell	GA	30076		
Cooper	Roshell	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Cooper	Tim	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Copp	Roger	Brown & Caldwell	53 Perimeter Center E., Ste. 500		Atlanta	GA	30346	CON	
Corbin	Brian	City of College Park	21 Standish Avenue		Atlanta	GA	30309	SF	Camp Creek
Corbin	Tom		2130 Silver Circle		Gainesville	GA	30501		
Cordell	Cliff	Haydens Walk Homeowners Association	255 Hayden Walk Court		Alpharetta	GA	30022	NF	Johns Creek
Cordle	Ralph		10190 Capps Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Cornett	Gene	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Cornett	June		120 Donamcre Court		Alpharetta	GA	30022	NF	Johns Creek
Costen	Ralph		5040 Erin Road, SW		Atlanta	GA	30331	SF	Camp Creek
Couch	Carol	USGS	3039 Amwiler Road, Suite 130		Atlanta	GA	30360	NF	
Couch	David	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Counter, III	Benjamin	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Cowart	Jim	Jim Cowart Company	3295 River Exchange Drive, Suite 400		Norcross	GA	30092	NF	
Cowden	Sharon	Fulton County	141 Pryor Street SW, Ste. 5001		Atlanta	GA	30303	FC	
Cox	David		10705 Hawkhurst Way		Duluth	GA	30097	NF	
Cox	Tony	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Coyne	Elizabeth		11270 Brookhollow		Alpharetta	GA	30022	NF	Johns Creek
Crabb	Cheryl	Atlanta Journal/Consitution	75 Main Street		Atlanta	GA	30303		
Crass	Carl	Pounds-Harris MHR	141 Pryor Street	6th Floor	Atlanta	GA	30303	CON	
Crawford	Doug	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Cress	Jean	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek

Last Na.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Crews	Edward	City of East Point	2777 E. Point Street		East Point	GA	30344	SF	Camp Creek
Crews	Sheila	Tucker Federal Bank	P.O. Box 870606		Morrow	GA	30287	SF	Camp Creek
Cribb	Wesley	SE Waters AmeriCorps	1100 Colquitt Avenue, NE		Atlanta	GA	30307	ALL	
Crisp	Teresa	Camp Dresser & McKee	2100 RiverEdge Parkway, Suite 500		Atlanta	GA	30328		
Crittenden	Chris	City of Atlanta	1510 Key Road		Atlanta	GA	30316	ATL	
Crosby	Catherine		8450 Valemont Drive (Ridgemont Subdivision)		Atlanta	GA	30350	NF	Sandy Springs
Cross	Deloris		1400 Martinique Court		Atlanta	GA	30331	SF	Camp Creek
Crowley	Carl		645 E. Paces Ferry Rd., Suite 1410		Atlanta	GA	30326		
Cruce	Laura	Regional Business Coalition of Metro Atlanta, Inc.	P.O. Box 1740		Atlanta	GA	30301	ALL	
Crutchfield	Bob	Christian City	7290 Lester Road		Union City	GA	30291	SF	Camp Creek
Cummings	Antoinette	Cobb County Water System	1897 County Farm Road		Marietta	GA	30060-31	SF	
Cunliffe	Harold	Georgia Homebuilders	5755 Dupree Drive, Suite 130		Atlanta	GA	30327	NF	
Dale	Linda	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Danchetz	Frank	Georgia Department of Transportation	#2 Capitol Square, SW		Atlanta	GA	30334	DOT	
Danco	Linda	Brown & Caldwell	53 Perimeter Center E., Ste. 500		Atlanta	GA	30346	CON	
Dancy	Lucretia		1710 Wateray Crossing		Atlanta	GA	30331	SF	Camp Creek
Daniel	Cindy	ARC	3715 Northside Pkwy, Suite 300		Atlanta	GA	30327	ALL	
Daniel	Richard	Dekalb County Public Works	1580 Roadhaven Drive		Stone Mounta	GA	30083	NF	
Daniel	Rusty	Hines/Deerfield Park, L.L.C.	5 Ravinia Drive		Atlanta	GA	30346	NF	
Daniels	Rick	DeKalb County	1580 Roadhaven Dr.		Stone Mounta	GA'	30083		All

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Danley	Howard	U. S. Army Corps of Engineers	109 St. Joseph Street, ATTN: PDFA P.O. Box 2288		Mobile	AL	36628	COE	
Darby	Margaret		4366 Skyland Drive		Atlanta	GA	30342		
Darnell	Emma	Fulton County Board of Commissioners	141 Pryor Street SW, Ste. 10032		Atlanta	GA	30303	FC	
Davenport	Bill	Georgia Power, Community Development	6711 Londonderry Way		Union City	GA	30291	SF	Camp Creek
Davenport	Dennis	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Davies	Shea	GEO AmeriCorps	3185 Center Street		Smyrna	GA	30080	NF	
Davis	Harvey		1780 Varsailles Drive		Atlanta	GA	30331	SF	Camp Creek
Davis	John	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Davis	Margaret	Meadows of Pinetree	6850 Cainwood Drive		College Park	GA	30349	SF	Camp Creek
Davis	Marsha		145 Seville Chase		Atlanta	GA	30328		
Davis	Michael	Reunion Place Homeowners Association	1175 Reunion Place		Atlanta	GA	30331	SF	Camp Creek
Davis	Russ	Northside Hospital	1000 Johnson Ferry Road, NE		Atlanta	GA	30342-16	NF	
Davis	Willie		2471 Ozark Trail, SW		Atlanta	GA	30331	SF	Camp Creek
Daws	Herb		280 Dartmoor Circle NE		Atlanta	GA	30328	NF	Sandy Springs
De Little			3225 Cumberland Blvd. S.E. #400		Atlanta	GA	30339		
Dean	Elizabeth	Wilkerson Mill Gardens	9595 Wilkerson Mill		Palmetto	GA	30268	SF	Camp Creek
Dean	Douglas	Neighborhood Planning Unit	211 Georgia Avenue, SE		Atlanta	GA	30315	ATL	Camp Creek
Deavor	Frank		117 Vilamoura Way		Duluth	GA	30155	NF	
Debolt	Bruce	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Decraene	Dan	Four Seasons Civic Association	7965 Innsbruck Drive		Atlanta	GA	30350	NF	Sandy Springs

Last N	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Decroce	Michael	Dunwoody Springs Community Association	1102 Garden Court		Atlanta	GA	30328	NF	Sandy Springs
DeGolian	Peter	Brown & Caldwell	53 Perimeter Center East		Atlanta	GA	30346		
DeGolian	Peter	Brown & Caldwell	53 Perimeter Center E., Ste. 500		Atlanta	GA	30346		
Delgado	Odalys	Fulton County	141 Pryor St., SW, Ste. 6023		Atlanta	GA	30303	FC	
Dellasala	John		550 Birch Forest Lane		Alpharetta	GA	30022	NF	Johns Creek
Delucia	Marylou		35 Laurel Mill Court		Roswell	GA	30076		
Demons	Samuel	Monterey Homeowners	2595 Lantern Lane		College Oark	GA	30349	SF	Camp Creek
Dempsey	Tully	Leigh Creek Forest Products	PO Box 589		Palmetto	GA	30268	SF	Camp Creek
Dennard	Johnny		5090 Dublin Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Denton	Doug	Dekalb Citizens for Better Tree Protection	P. O. Box 1341		Decatur	GA	30031	NF	
Deshpande	Anupa	Metro Atlanta Chamber of Commerce	235 International Blvd		Atlanta	GA	30303	CC	
Devine	Jack & Kathy		360 Petersford Way		Alpharetta	GA	30004		
Didicher	John	Civil Design Inc.	750 Hammond Drive, Bld 10 Suite 100		Atlanta	GA	30328	NF	
Dietrick	Holly		420 Lazy Wind Lane		Duluth	GA	30097	NF	
Digby	Tom		4330 Cochran Mill Road		Fairburn	GA	30213	SF	Camp Creek
Dillon	Gordon	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Dingle	Jeffrey	B & E Jackson & Associates	34 Peachtree St., NW, Ste. 2100		Atlanta	GA	30303	CON	
DiPlacide	Janet		10505 Cedar Grove Road		Fairburn	GA	30213	SF	Camp Creek
Disney	Linda	City of Atlanta	City Hall South Building, Suite 4800		Atlanta	GA	30335	ATL	
Dixon	Dabney	Georgia State University/STOP	808 Yorkshire Road, NE		Atlanta	GA	30306	ATL	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Dixon	Mary		5345 Bentley Hall		Alpharetta	GA	30022	NF	Johns Creek
Dixon	Mike	Roswell Rotary Club	853 Mimosa Boulevard		Roswell	GA	30075	NF	Big Creek
Dobbs	Sue	Sweet Apple Crossing	1095 Applecross Drive		Roswell	GA	30075	NF	Big Creek
Dodson	Barry		210 Ellen Place		Atlanta	GA	30331	SF	Camp Creek
Dodson	Bill	Atlanta Bar Association	6000 Lake Forest Drive, Suite 300		Atlanta	GA	30328	NF	
Dodson	Geri		3127 Flamingo Drive		East Point	GA	30344	SF	Camp Creek
Dodson	Tucker		25 Dover Cliff Way		Alpharetta	GA	30022	NF	Johns Creek
Domino	Frank	Riverclub Homeowners Association	325 Parlan Run		Duluth	GA	30136	NF	
Dorris	John	Greater North Fulton County Chamber of Commerce	1025 Old Roswell Road, Ste. 101		Roswell	GA	30076	NF	Big Creek
Dorsey	Sherry	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Dorvee	Stephen	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Douglas	Ann	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Douglas	Roxanne	SWF Exec. Comm	370 Bardeaux Court		Atlanta	GA	30331	SF	Camp Creek
Douty	Bill	Delon Hampton & Associates, Inc.	600 W. Peachtree St., Ste. 1470		Atlanta	GA	30308		
Drake	Dianne	City of East Point			East Point	GA	30044	NF	
Drake	Pauline	Spelman College	350 Spelman Ln.		Atlanta	GA	30314	ATL	Camp Creek
Droszcz	Michelle	Georgia Adopt- A-Stream Program	7 Martin Luther King Jr. Dr., Ste. 643		Atlanta	GA	30334	ALL	
Duff	Melissa	West Fulton Middle School	1890 Bankhead Highway, NW		Atlanta	GA	30318	ATL	
Duffy	Norma		990 Edgewater Drive		Atlanta	GA	30328	NF	Sandy Springs
Duffy	Barbara	N.FultonCommunity Charities (NFCC)	89 Grove Way		Roswell	GA	30075	NF	Big Creek

Last Na	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Dukes	Glenn	CH2M HILL	115 Perimeter Center Place, NE, Ste. 700		Atlanta	GA	30346	CON	
Dulko	Duane	Henderson Village -- Subdivision	1330 Millsone Drive		Alpharetta	GA	30004	NF	Big Creek
Dumbleton	Butch	Windward Homeowners, Inc. -- Subdivision	1135 Landings Overlook		Alpharetta	GA	30005	NF	Big Creek
Dunagan	J. David	Fulton Co. Water Quality Program	141 Pryor St., SW, Ste. 5001		Atlanta	GA	30305	FC	
Dunlap	Don		3196 Bruckner Boulevard		Snellville	GA	30122	NF	
Dupuis	Tom	CH2M HILL	411 East Wisconsin Ave. Ste 1600		Milwaukee	WI	53202-42	x	
Durant	Bill	Fulton County	141 Pryor St., SW, Ste. 3090		Atlanta	GA	30303	FC	
Durbrow	Rick	U.S. Environmental Protection Agency	61 Forsyth Street, 14th Floor		Atlanta	GA	30303	EPA	
Durham	Randy	Environmental Protection Division	205 Butler Street SE, Suite 1058		Atlanta	GA	30334	EPD	
Durman	Charles		6400 Roswell Road NE		Atlanta	GA	30328-31		
Durrett	Jim	Metro Atlanta Chamber of Commerce	235 International Boulevard		Atlanta	GA	30301	CC	Camp Creek
Dutson	Don	Powers Lake Homeowners Association	875 South Power Court		Atlanta	GA	30327	NF	Sandy Springs
Dutson	Don	Powers Lake Homeowners Association	875 South Power Court		Atlanta	GA	30327	NF	Sandy Springs
Dutton			6284 Campbellton Road		Atlanta	GA	30331	SF	Camp Creek
Dvorscak	Mike	The William B. Hare Company	3520 Piedmont Road, Suite 130		Atlanta	GA	30305-15	NF	
Earle	Holland		9030 Bluffview Trace		Roswell	GA	30076	NF	Sandy Springs
Eason	Michael	Wynbridge -- Subdivision	10555 Wynbridge Drive		Alpharetta	GA	30005	NF	Big Creek
Ebright	Ron		15745 Hamby Road		Alpharetta	GA	30004		
Edelman	Kathy	North Towne Homeowners Association	150 Andover		Alpharetta	GA	30004	NF	Big Creek
Eichelberger	Vivian	Dekalb Clean & Beautiful	1300 Commerce Drive, Suite 400		Decatur	GA	30030	NF	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Eichhorn	Ike	Citizen	9350 Bluffwind Ch		Roswell	GA	30076	NF	Sandy Springs
Eichorn	Sandy	Northcliff Homeowners Association	9350 Bluffwind Chase		Roswell	GA	30076	NF	Sandy Springs
Eisenhauer	Bill	STOP	354 9th Street, NE		Atlanta	GA	30309	ATL	
Ekblaw	Carollyn	Jamestown -- Subdivision	2135 Newport Landing		Alpharetta	GA	30004	NF	Big Creek
Elliott	James	Emory University Law School	Gambrell Hall		Atlanta	GA	30322	ATL	
Elmendorf	Holly	City of Atlanta	2440 Bolton Road, NW		Atlanta	GA	30318	ATL	
Emmons	Julia	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Empel	Jay	Heards Forest Homeowners Association	2 Heards Overlook Court		Atlanta	GA	30328	NF	Sandy Springs
Emroe	Barbara	Plymouth Colony -- Subdivision	514 Plymouth Lane		Alpharetta	GA	30004	NF	Big Creek
Engbritson	David	High Meadows School Stream Adopters	1055 Willeo Road		Roswell	GA	30075	NF	Big Creek
Engheben	Ray		10985 Spottied Pony Trace		Alpharetta	GA	30022	NF	Johns Creek
English	Charles	S.W.F Exec. Comm.	1050 New Britain Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Enholm	Bob	Neighborhood Planning Unit	101 Avery Drive, NE		Atlanta	GA	30309	ATL	
Epps	William	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Erhardt	Joe		125 Gingergate Court		Alpharetta	GA	30022	NF	Johns Creek
Estes	Bud		1604 Princeton West Trail		Marietta	GA	30062-59		
Etchison	Carolyn		200 Green Road		Alpharetta	GA	30004		
Ethridge	Gray	The Ethridge Family Riverside Creek Adopters	907 Turner Drive		Smryna	GA	30080	NF	
Fann	Rosel		2636 Browns Mill Rd., SE		Atlanta	GA	30359	SF	
Fanucchi	Sara	Woodard Academy	1662 Rugby Avenue		Atlanta	GA	30337		Bear Creek

Last N	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Farnham	Merribeth	CDM	132 Colonial Blvd., Ste. F-44		Fort Myers	FL	33907		
Farnsworth	Richard G.		3888 Whittington Dr., NE		Atlanta	GA	30342	NF	Sandy Springs
Farr	John	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Farr	Roy	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Farrell	Kevin	Georgia Department of Natural Resources	205 Butler St., SE Floyd Towers East		Atlanta	GA	30334	DNR	
Farrell	Susan		5265 Mt. Vernon Parkway		Atlanta	GA	30327		
Fash	Elena	Neighborhood Planning Unit	2854 Ridgemore Rd		Atlanta	GA	30318	ATL	
Fason	James	Fulton County	141 Pryor St., SW, Ste. 5001		Atlanta	GA	30303	FC	
Fatzinger	Heather	Delon Hampton & Associates	1606 Woodlands Dr.		Smyrna	GA	30080	NF	
Feiler	Jennifer	Trinity School River Kids Network	3254 Northside Parkway		Atlanta	GA	30327	NF	
Fellers	Andrew	UTECH	490 Brownlee Road, SW		Atlanta	GA	30311	SF	Camp Creek
Felton	Dorothy		465 Tanacrest		Atlanta	GA	30328	NF	Sandy Springs
Feltus	Mickey	EPA Wetlands	3188 Parkridge Crescent		Chamblee	GA	30303		
Fenstermacher	Joselyn	Chattahoochee River NRA-NPS	1978 Island Ford Parkway		Atlanta	GA	30350		
Ferguson	Frank & Ruth		8229 Atlanta Newnan Road		Palmetto	GA	30268	SF	Camp Creek
Fernandez	Daniel	Parkmont -- Subdivision	71 Parkmont Drive		Roswell	GA	30076	NF	Big Creek
Festa	Roger	Landbank Development Corp.	10800 Alpharetta Highway, Ste. 208 J7		Roswell	GA	30076	NF	Sandy Springs
Figiel	Ken	Pines Homeowners Association	4315 Pine Vista Blvd		Alpharetta	GA	30022	NF	Johns Creek
Finke	Christopher	Associated Engineering Consultants	50 Warm Springs Circle, Ste. 100		Roswell	GA	30075	NF	Big Creek
Finley	Al		590 Cold Stream Court		Atlanta	GA	30328	NF	Sandy Springs

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Fiordelisi	Lisa	Windward Homeowners, Inc. -- Subdivision	1135 Landings Overlook		Alpharetta	GA	30005	NF	Big Creek
Fitzgerald	Susan	Springridge	375 Spring Ridge Trace		Roswell	GA	30076	NF	Sandy Springs
Fitzpatrick	Peter		8225 Landing South		Atlanta	GA	30350		
Fleeman	Myma	Metro Brokers	103 West Park Drive		Peachtree Cit	GA	30269	SF	Camp Creek
Fleeman	Phylicia	Homeowner	4815 Scarborough Road		College Park	GA	30349	SF	Camp Creek
Fleisher	Jack		5755 Sunset Maple Drive		Alpharetta	GA	30022	NF	Johns Creek
Fleming	James	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Flennery	Jack		1820 Reynolds Road		Atlanta	GA	30331	SF	Camp Creek
Flood	Brigette	CH2M HILL	115 Perimeter Center Place, Suite 700		Atlanta	GA	30346	NF	
Flountroy	Joyce		1345 High Falls Court, SW		Atlanta	GA	30331	SF	Camp Creek
Flowers	Cheryl		5170 Eric Road		Atlanta	GA	30331	SF	Camp Creek
Flowers	Chip	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Floyd	Alberta	Pine Meadows Neighborhood Association	3227Dale Lane, SW		Atlanta	GA	30311	SF	Camp Creek
Floyd	Ed	Mount Paran/Northside Citizen Association	1560 Mt. Paran Road		Atlanta	GA	30327	NF	Sandy Springs
Flugel	Craig	Nottingham Gate -- Subdivision	6370 Maid Marion Close		Alpharetta	GA	30004	NF	Big Creek
Fogel	Julia	Shadowbrook Homeowners Association	771 Grimes Bridge Road		Roswell	GA	30075	NF	Big Creek
Foley	Debbie		459 Glencastle Drive		Atlanta	GA	30327		
Ford	Emily		10805 Hutcheson Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Ford	Willie		1400 Bolton Rd., NW		Atlanta	GA	30331	SF	Camp Creek
Foreman	Brad	Regency Park Community Assoc.	1215 Regency Center Dr.		Atlanta	GA	30331	SF	Camp Creek

Last Na.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Forry	Shirley	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Forward	Denise		424 Tanglewood Farm Drive		Canton	GA	30115		
Fountain	David	Streams Alive!	760 Crest Valley Drive		Atlanta	GA	30327	NF	Sandy Springs
Fowler	Johnny	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Frahey	Michael	Park Glenn -- Subdivision	1460 Bittercress Court		Alpharetta	GA	30004	NF	Big Creek
Franglamore	Caroline		1113 Crest Valley Drive		Atlanta	GA	30327-45		
Franklin	Clarence		1795 Reynolds Road		Atlanta	GA	30331	SF	Camp Creek
Franklin	Loretta	DeVry - Alpharetta	2555 Northwinds Rd		Alpharetta	GA	30004	NF	Big Creek
Fredo	Brian		440 Calhoun Street		Atlanta	GA	30318		
French	Steve	City Planning Program	College of Architecture - Georgia Tech		Atlanta	GA	30332-01	ATL	
Frenzel	Chuck & Susan		8985 Huntcliff Trace		Atlanta	GA	30350-17		
Fronebarger	B.L.	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Fulton	Bob	Fulton County Board of Commissioners	141 Pryor St., SW, Ste. 10032		Atlanta	GA	30303	FC	
Funk	Adrienne		1978 Island Ford Parkway		Atlanta	GA	30350		
Gaddy, III	William	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Galloway	Woody	Dillard and Galloway	230 Peachtree Street, Suite 2200		Atlanta	GA	30303	ATL	
Gamble	William		1090 Mitchell Crossing Drive		Atlanta	GA	30331	SF	Camp Creek
Gana	Gene		4725 Weathervane Drive		Alpharetta	GA	30022	NF	Johns Creek
Ganz	Carol		160 Hiddebs Falls Lane		Atlanta	GA	30328		
Garner	Ralph		1110 Carlo Terrace		Atlanta	GA	30331	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Gasaway	Marilyn		3638 Barrow Place, SW		Atlanta	GA	30331	SF	Camp Creek
Gause	Ron	Gause Aviation Services	7775 Roosevelt Highway		Palmetto	GA	30268	SF	Camp Creek
Geer	Walt	Andover North -- Subdivision	730 Windsor Court		Alpharetta	Ga	30004	NF	Big Creek
Gehle	David		249 Regal Dr.		Lawrenceville	GA	30245	NF	
George	Barbara		7085 N. Green Drive		Atlanta	GA	30328		
George	Decker	Northside Homeowners Association	260 Summerfield Drive		Alpharetta	GA	30004	NF	Big Creek
George	Jim	Cousins Properties	2500 Windy Ridge Parkway, Ste. 1600		Atlanta	GA	30339-56	NF	All
Getachew-Smith	David		590 Regency Parkd Dr.		Atlanta	GA	30331	SF	Camp Creek
Geter	Art	Association of West Cascade Community	710 Fern Brooks Drive		Atlanta	GA	30331	SF	Camp Creek
Getty	Alyse & Drew		756 Amberglen Lane		Lawrenceville	GA	30293		
Gibbs	Trey	Georgia Environmental Organization	3185 Center St.		Smyrna	GA	30080	NF	
Gibbs, Jr.	Howard		445 Piney Way, SW		Atlanta	GA	30331	SF	Camp Creek
Gibson	Alan	Windward Homeowners Association	305 Woodlake Court		Alpharetta	GA	30022	NF	Johns Creek
Gibson	Hope	Aviary	10535 Aviary Dr.		Alpharetta	GA	30022	NF	Johns Creek
Gibson	Allan	Winward Community Services Assoc. -- Subdivision	322 Cutty Sark Way		Alpharetta	GA	30005	NF	Big Creek
Gibson	Chery	Woodward Academy	1662 Rugby Avenue		College Park	GA	30337	SF	Bear Creek
Gilder	Jeff		11170 Brookhollow Trail		Alpharetta	GA	30022	NF	Johns Creek
Gillis	Charlotte	US Dept of the Interior	100 Alabama Street SW, Building 1924		Atlanta	GA	30303	GOV	
Gillyard	Connie		4724 Cascade Road		Atlanta	GA	30331	SF	Camp Creek
Gilpen	Lyndon	Scottdale	4630 Morton Road		Alpharetta	GA	30022	NF	Johns Creek

Last Na	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Giroux	Petey	Georgia Department of Natural Resources	7 Martin Luther King Jr. Drive, Suite 643		Atlanta	GA	30334	DNR	
Glaze	George	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Glover	Joe	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Godbee	Tim	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Godbut	J.D.		265 Marchand Court		Atlanta	GA	30328-20		
Gohlke	Karen		1951 Sturbridge Lane		Buford	GA	30519		
Gold	Linda		6250 Mt. Brook Lane		Atlanta	GA	30328	NF	Sandy Springs
Gold	Nelson		6250 Mt. Brook Lane		Atlanta	GA	30328	NF	Sandy Springs
Goldman	Barbara		780 Old Creek Trail		Atlanta	GA	30328	NF	Sandy Springs
Gorelick	Annette	Nesbit Lake Homeowner's Association	8910 Nesbit Lake Drive		Alpharetta	GA	30022	NF	Johns Creek
Gould	Tom	Dekalb Civic Coalition	128 Champlain Street		Decatur	GA	30030	NF	
Grant	Harriet		1085 Mountain Creek Trail NW		Atlanta	GA	30328-35	NF	Sandy Springs
Gray	Douglas	Cascade Glen Homeowners Association	470 Hickory Glen Lane		Atlanta	GA	30331	SF	Camp Creek
Grayson	William	Woodruff Estate	180 Turquoise Trail		College Park	GA	30349	SF	Camp Creek
Green	Kimberly	Fulton County Dept. of Information/ Public Affairs	141 Pryor St., SW, Ste. 3090		Atlanta	GA	30303	FC	
Green	Loretta	Meadowbrook Forest	2242 Meadowlane Drive		Atlanta	GA	30311	SF	Camp Creek
Green	Willie		5980 Canaan Woods Drive		Atlanta	GA	30331	SF	Camp Creek
Griffin	Melvin	National Association of Minority Contractors	90 Rogers Street		Atlanta	GA	30317	ATL	
Griffith	Ira	Abbott's Landing H.O. Association	115 Thatching Lane		Alpharetta	GA	30022	NF	Johns Creek
Grimes	Will	Thornton Woods Homeowners Association	2525 Thornton Drive		College Park	GA	30349	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Griswold	Sharon		240 Glen Meadow Ct.		Atlanta	GA	30328	NF	Sandy Springs
Groszmann	Glenn	Sierra Club	160 Thompson Place		Roswell	GA	30075-35	ALL	Big Creek
Grote	Cathy	Crabapple Chase -- Subdivision	505 Sherman Oaks Way		Alpharetta	GA	30004	NF	Big Creek
Groth	Marjorie		12020 Hutcheson Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Gude	Lynn	Regency Park Community Assoc.	345 Regency Crest Court		Atlanta	GA	30331	SF	Camp Creek
Guerrero	Stacy		830 Starrsville Road		Covington	GA	30014		
Guill	Dan	Fulton County	141 Pryor St., SW, Ste. 6001		Atlanta	GA	30303	FC	
Gurbal	John	Roads and Drainage Division	Executive Square, 4305-4307 Memorial Drive		Decatur	GA	30032		
Guzzardi	Swain	L&D Development	8601 Dunwoody Place< Suite 446		Atlanta	GA	30350	NF	
Gwynn	Jack		10215 Crescent Ridge Drive		Roswell	GA	30076	NF	Big Creek
Haddad	Nayef	Fulton County	141 Pryor ST., SW Ste 6001		Atlanta	GA	30303	FC	
Haddock	Darryl	U. T. A. C.	2140 Montilly Place		College Park	GA	30349	SF	Camp Creek
Hadjkhan	Hossein	Fulton County	141 Pryor St, 2085		Atlanta	GA	30303	FC	
Hahhford	Joe		3760 Old Alabama Road		Alpharetta	GA	30022	NF	Johns Creek
Hall	Roy	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Hall	Tracy	Jean Young Middle School	2652 Tupelo St., SW		Atlanta	GA	30317	ATL	
Hall	Ken	CH2M HILL	115 Perimeter Center Place, Suite 700		Atlanta	GA	30346-12	CON	
Hall	Elissa		10435 Willow Meadow Circle		Alpharetta	GA	30022	NF	Johns Creek
Hall	B.W.		5984 Norcross Tucker Road		Norcross	GA	30093	NF	
Halley	Mike		4115 Welcome All Terrace		College Park	GA	30349-19	SF	Camp Creek

Last Na.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Hallford	Joe		3760 Old Alabama Road		Alpharetta	GA	30022	NF	Johns Creek
Hambry	Alan	Planning Commission	5275 Northwater Way		Duluth	GA	30126	NF	
Hamer	Rosemary		1000 Reunion Place		Atlanta	GA	30331	SF	Camp Creek
Hamerster	Rick	Willow Run Homeowners Association	10795 Willow Meadow Circle		Alpharetta	GA	30022	NF	Johns Creek
Hamlin	Bob & Marsha		4365 Dunmore Road		Marietta	GA	30068		
Hamm	Rodney	Fulton County	141 Pryor St., SW, Ste. 5030		Atlanta	GA	30303	FC	
Hammen	Jeff	Roswell Lions Club	1155 Taylor Oaks Drive		Roswell	GA	30076		
Hammer Blum	Kristina	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Hammonds	Wiliams		2005 Enon Pines Drive		Atlanta	GA	30331	SF	Camp Creek
Hampton	Donald	CMTC	4728 Corn Creek Dr.		Fairburn	GA	30213	Sf	All
Handley	Roger	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Hannah	Bette	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Hanson	Tommie		1330 New Hope Road, SW		Atlanta	GA	30331	SF	Camp Creek
Harbert	Harold	Georgia Adopt A Stream Program	7 Martin Luther King, Jr. Dr., Ste. 643		Atlanta	GA	30334	ALL	All
Harden	Jordan	Woodland Estates	6735 Smoke Ridge Drive		College Park	GA	30349	SF	Camp Creek
Hardy	Sandra	South Fulton Parkway Alliance	7870 Creekwood Road		Fairburn	GA	30213	SF	Camp Creek
Harkey	Steve	Mount Vernon Woods Subdivision	6582 Cherry Tree Lane		Sandy Spring	GA	30328		
Harkins	Butch	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Harrelson	Bobby		10080 Creel Road		Fairburn	GA	30213	SF	Camp Creek
Harrington, Jr.	B.W.		2300 Wallace Road		Atlanta	GA	30331	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Harris	Bill		4290 Colewood Way		Atlanta	GA	30328		
Harris	Terrance		970 Carlo Woods Drive		Atlanta	GA	30331	SF	Camp Creek
Harris	Michael	Greater Atlanta Homebuilders Association	1630 West Peachtree, #4		Atlanta	GA	30309	ATL	All
Harris	Mary	Greater Loch-Lomond Community Association	4620 Orkney Lane		Atlanta	GA	30331	SF	Camp Creek
Harris	Darryl		4605 Guilford Forest		Atlanta	GA	30331	SF	Camp Creek
Harris	Dorothy		225 Banks Road		Fayetteville	GA	30214	SF	Camp Creek
Harrison	Jim	U.S. Environmental Protection Agency	61 Forsyth Street		Atlanta	GA	30303	EPA	
Harrison	Sherry	Saddle Creek Civic Association	385 Saddle Lake Drive		Roswell	GA	30076	NF	Sandy Springs
Hart	George	Line Creek Community Association	16 West Andrews Drive, N.W.		Altanta	GA	30305	SF	Camp Creek
Hart	Jesse		3605 Benchmark Drive		College Park	GA	30349	SF	Camp Creek
Hartmann	Michelle	Fulton County Planning	141 Pryor Street		Atlanta	GA	30303	FC	
Hartrampf	Carl	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Hartsen	Jane		11985 Leeward Walk Circle		Alpharetta	GA	30022	NF	Johns Creek
Hasson	Naim		1355 Montinique Court		Atlanta	GA	30331	SF	Camp Creek
Hatcher	Kathryn		Carl Institute of Gov't, University of Georgia		Athens	GA	30602	NF	
Haubner	Steven	Atlanta Rezone Commission	3715 Northside Parkway, Building 200 Suite 300		Atlanta	GA	30327	NF	
Hawkins	David	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Hayes	James		10965 Hutcheson Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Hayes	P.	Lost Forest Civic Association	900 Lost Forest Drive N.W.		Atlanta	GA	30328	NF	Sandy Springs
Haynes	Billy		5070 Erin Road, SW		Atlanta	GA	30331	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Haynes	Marian	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Hays	Fred	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Haythorn	Thom		200m Clipper Court		Alpharetta	GA	30022	NF	Johns Creek
Head	Harold		5485 Skyview Drive		Atlanta	GA	30331	SF	Camp Creek
Head	Phenus	Mitchell Crossing Homeowners Association	1135 Mitchell Crossing Drive		Atlanta	GA	30331	SF	Camp Creek
Headley	Tom		405 Mikasa Drive		Alpharetta	GA	30022	NF	Johns Creek
Heath	Clyde		11675 Wills Road, Bldg. 1		Alpharetta	GA	30004	NF	Big Creek
Heath	Harvey	North Point	1440 Woodcrest Drive		Roswell	GA	30075	NF	Big Creek
Heath	John	City of Atlanta	55 Trinity Avenue S.W.		Atlanta	GA	30335	ATL	
Heerdegen	Kevin	Cameron Glen Civic Association	P.O. Box 28404		Sandy Spring	GA	30358	NF	Sandy Springs
Heinman	Richard		100 Riverview Run		Atlanta	GA	30328		
Heit	Larry		190 Colewood Way		Atlanta	GA	30328		
Heller	Andy		4020 Falls Ridge Drive		Alpharetta	GA	30022	NF	Johns Creek
Helling	Amy	Georgia State University	Dept. of Public Administration & Urban Studies	University Plaza	Atlanta	GA	30303-30	ALL	All
Helterbran	Dave		395 Spalding Drive NE		Atlanta	GA	30328		
Henderson	Zac	Zachary Henderson, A.I.A.	1060 Canton Street		Roswell	GA	30075	NF	Big Creek
Henderson	Patricia		1470 Moury Avenue	#288	Atlanta	GA	30315		
Hendricks	Peter		6085 Lake Forrest Drive, Suite 200		Atlanta	GA	30342	NF	Sandy Springs
Henning	Ruth	GEO AmeriCorps	3185 Center Street		Smyrna	GA	30080	NF	
Hepburn	Clifford		1050 Forest Overlook Drive		Atlanta	GA	30331	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Herndon	Erik	SEW Americorps	1008 N. Virginia, NE	#3	Atlanta	GA	30306		
Hewson	Michael & Cathi		8525 Sentinea Chase Drive		Roswell	GA	30076		
Heyliger	Wilton	Morris Brown College	643 Martin Luther King Dr.		Atlanta	GA	30314	ATL	Camp Creek
Hickman	Alice		622 Hill Pine Drive		Atlanta	GA	30306	ATL	
Hicks	Stan		255 Glenmoor Path		Alpharetta	GA	30022	NF	Johns Creek
Hicks	Jennifer	Georgia Department of Natural Resources	7 Martin Luther King Jr. Drice, Suite 139		Atlanta	GA	30334	DNR	
Higgins	Glenn	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Hightower	Michael	Fulton County Board of Commissioners	141 Pryor St., SW, Ste. 10032		Atlanta	GA	30303	FC	
Hildebrand	Mark	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Hildebrant	Sally	Westminster at Crabapple -- Subdivision	5115 Jonquilla Drive		Alpharetta	GA	30004	NF	Big Creek
Hill	Ethel		2115 Datona Drive		Atlanta	GA	30331	SF	Camp Creek
Hill	Gaynell	Georgia Department of Natural Resources	205 Butler Street, SE Suite 1058E		Atlanta	GA	30334	DNR	
Hill	Joanne	Cascade Glen Subdivision	1030 Beechcrest Road		Atlanta	GA	30311	SF	Camp Creek
Hill	Julius		2641 Silver Lace Court		Atlanta	GA	30345		
Hill	Rev. Larry		1225 Bankhead Highway		Atlanta	GA	30318		
Hill	William	Martin's Lake Condos	620 Oakstone Drive		Roswell	GA	30075-33	NF	Big Creek
Hillard	Patsy	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Hillcock	Stacey	ECO-Atlanta	1776 Peachtree Street, Suite 340 South Tower		Atlanta	GA	30309	ATL	
Hillman	Janet		4905 Walnut Grove		Alpharetta	GA	30022	NF	Johns Creek
Hines	Curtis		435 Piney Way		Atlanta	GA	30331	SF	Camp Creek

Last Nar.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Hippe	Dan	U. S. Geological Survey	3039 Amwiler Road, Suite 130		Atlanta	GA	30360	NF	
Hipps			6215 Campbellton Road		Atlanta	GA	30331	SF	Camp Creek
Hirsch	Anna		4690 Huntly Drive, NE		Atlanta	GA	30342		
Hix	John	Planning Commissioners	2440 Sommerser Trail		Atlanta	GA	30331	SF	Camp Creek
Hodges	Patrick	Arrowood -- Subdivision	121 Arrowood Court		Alpharetta	GA	30004	NF	Big Creek
Hogg	Linda		1415 N. Harris Ridge		Atlanta	GA	30327		
Holland	Mike	Huntcliff Subdivision	9745 Huntcliff Trace		Atlanta	GA	30350		
Holloman	Scherye		5130 Kerry Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Holloway	Judy	Surrey Park Homeowners Association	11220 Surrey Park Trail		Duluth	GA	30136	NF	
Holmes	Douglass		5340 Cascade Hills Court		Atlanta	GA	30331	SF	Camp Creek
Holsey	Eugene		210 Canaan Glen Way		Atlanta	GA	30331	SF	Camp Creek
Holt	Tom		4890 Haydens Walk Court		Alpharetta	GA	30022	NF	Johns Creek
Hood	Walter & Icie		8365 Bohannan Road		Fairburn	GA	30213	SF	Camp Creek
Hood, Jr.	Charles		5155 Dublin Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Hooker	Douglas	SLKing Associates, Inc.	One Park Tower, 34 Peachtree Street, NW	Suite 1000	Atlanta	GA	30303		
Hopper	Lee	Sterling Trust	Two Ravinia Drive		Atlanta	GA	30346		
Horrigan	Diane		935 Freeman Wood Lane		Alpharetta	GA	30004	NF	Big Creek
Hovis	Marilyn	Londonberry Garden Club	405 Londonberry Road		Atlanta	GA	30327	NF	Sandy Springs
Howerton	Rhonda	Taylor Oaks Homeowners Assoc.	1025 Taylor Oaks Dr.		Roswell	GA	30076	NF	Sandy Springs
Howse	Margo	Dekalb County	1580 Roadhaven Drive		Stone Mounta	GA	30088	NF	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Huff	Bill	Hufbilt Properties, Inc.	PO Box 420752		Atlanta	GA	30342	NF	Sandy Springs
Hughes	Sammy		2410 Enon Road		Atlanta	GA	30331	SF	Camp Creek
Huneycut	Jody	Jim Cowart Developers	3295 River Exchange Dr., Ste.400		Norcross	GA	30092	NF	
Hunter	Brooke		14680 Wood Road		Alpharetta	GA	30004	NF	Big Creek
Hunter	Charles	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Hunter	Gordon		14680 Wood Rd.		Alpharetta	GA	30004	NF	Big Creek
Hunter	Patti		11122 Parsons Road		Duluth	GA	30097	NF	
Huntington	Roger	Dekalb County	1300 Commerce Drive, Room 402		Decatur	GA	30030	NF	
Hurt-Simmons	Barbara	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Inglett	Ray		4925 Jett Road		Atlanta	GA	30327		
Isone	Mike	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Ivey	George	MARTA	14505 Batesville Road		Alpharetta	GA	30004	NF	Big Creek
Ivy	Olin	Georgia Environmental Organization	3185 Center St		Smyrna	GA	30080	NF	
Ivy	Kim		514 Webster Drive, Apt. 4		Decatur	GA	30033	NF	
Jackson	Birdel	B & E Jackson & Associates	34 Peachtree St., NW, Ste. 2100		Atlanta	GA	30303	CON	
Jackson	Catherine		4445 Park Brook Trace		Alpharetta	GA	30022		
Jackson	Consaundra		2895 Butner Road		Atlanta	GA	30331	SF	Camp Creek
Jackson	Julian	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Jackson	Melanie		425 Louvre Court		Atlanta	GA	30331	SF	Camp Creek
Jackson	Russell		2410 Enon Road		Atlanta	GA	30331	SF	Camp Creek

Last Na.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Jackson	Shirley	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Jacobs	Michael		4980 Byers Road		Alpharetta	GA	30022	NF	Johns Creek
James	Debra	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Jameson	Fred		495 Franklin Road		Atlanta	GA	30342	NF	Sandy Springs
Jarrad	C.I.		13175 Hutcheson Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Jarrett-Gude	Lynn	Southwest Fulton/Tri-Cities Revitalization, Inc.	345 Regency Crest Court		Atlanta	GA	30331	SF	Camp Creek
Jefferos	Steve	CIBA Vision	11460 Johns Creek Parkway		Duluth	GA	30097	NF	
Jenrette	Vernyce	Association of West Cascade Community	4260 Cascade Road, S.W.		Atlanta	GA	30331	SF	Camp Creek
Jizzi	Mary		9545 Knollcrest Boulevard		Alpharetta	GA	30022	NF	Johns Creek
Johnson	Wendy	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Johnson	Karl	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Johnson	Keshia	City of Atlanta	55 Trinity Avenue, Suite 5800		Atlanta	GA	30335	ATL	
Johnson	Leroy		4190 Manor Hills Lane		Atlanta	GA	30331	SF	Camp Creek
Johnson	Marilyn		145 Morning Springs Walk		Fairburn	GA	30213	SF	Camp Creek
Johnson	Jewel	Loch Lomond Homeowners Association	4660 Orkney Lane		Atlanta	GA	30327	NF	Sandy Springs
Johnson	Terry		995 Forest Overlook Trail		Atlanta	GA	30331	SF	Camp Creek
Johnson	Lynn	Nesbit Lake Homeowner's Association	4990 Water Shadow Lane		Alpharetta	GA	30022	NF	Johns Creek
Johnson	Sandra	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Johnson	Connie		510 Oak Landing Drive		Alpharetta	GA	30022	NF	Johns Creek
Johnson	Rhonda	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Johnson	Hugh	Koweta Farms	PO Box 610		Palmetto	GA	30268	SF	Camp Creek
Johnson	Clyde	Federal Highway Administration	515 Wellspring Court		Alpharetta	GA	30004	NF	All
Johnson	Daniel		490 Water Shadow Lane		Alpharetta	GA	30022	NF	Johns Creek
Johnson	David	Mount Vernon Woods Homeowners Association	545 Tanacrest Circle, NW		Atlanta	GA	30328	NF	Sandy Springs
Johnson	Derrick		5115 Erin Road		Atlanta	GA	30331	SF	Camp Creek
Johnson	Edwin		2165 Enon Road		Atlanta	GA	30331	SF	Camp Creek
Johnson	George	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Johnson	Harvey		1040 Carlo Woods Drive		Atlanta	GA	30331	SF	Camp Creek
Johnson	Allen		5695 Ashwind Trace		Alpharetta	GA	30022	NF	Johns Creek
Jones	David		7440 Wildercliff Drive		Atlanta	GA	30328		
Jones	Stuart	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Jones	Wilburt	Sandtown Community Center	5320 Campbellton Road		Atlanta	GA	30331	SF	Camp Creek
Jones	Verna	Keep Atlanta Beautiful	55 Trinity Avenue		Atlanta	GA	30335	ATL	
Jones	Tom		515 Angler Court		Atlanta	GA	30331	SF	Camp Creek
Jones	Steve		14705 Birmingham Highway		Alpharetta	GA	30004		
Jones	Robert	City of Atlanta - Public Works	55 Trinity Ave., Ste. 4400		Atlanta	GA	30335	GOV	
Jones	Donald		6020 Canaan Woods Drive		Atlanta	GA	30331	SF	Camp Creek
Jones	Dale	CH2M HILL	115 Perimeter Center Place, NE, Ste. 700		Atlanta	GA	30346-12	NF	
Jones	Carole		2200 Enon Road		Atlanta	GA	30331	SF	Camp Creek
Jones	Jerry	U. S. Army Corps of Engineers	P.O. Box 2288 Attn: CESAM-PD-EI		Mobile	AL	36628	COE	

Last Nar	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Jordan	Abby	Green South Fulton	4355 Highway 92		Fairburn	GA	30213	SF	Deep Creek
Jordan	Linda	Fulton County Citizens Commission on the Envir.	675 Timbergrove Drive		Atlanta	GA	30331	SF	Camp Creek
Jorden	Bill	W.L. Jorden & Associates	1908 Cliff Valley Way		Atlanta	GA	30329	NF	
Joyner	Terry	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Jurcyzk	Shirley	Hampton Hall -- Subdivision	4835 Bagley Terrace Drive		Alpharetta	GA	30004	NF	Big Creek
Kalahar	Bill	Colony 29 Homeowners Association	7480 Talbot Colony		Atlanta	GA	30328	NF	Sandy Springs
Kales	Matt	Upper Chattahoochee Riverkeeper	1900 Emory Street, Ste. 450		Atlanta	GA	30318	ALL	All
Kaplan	Ronnie		7460 Halfpenny Place		Atlanta	GA	30350		
Kareem	Benjanae		120 North Avenue	#2435	Atlanta	GA	30313		
Kawula	Margaret	The Timberland Company	536 Ridgecrest Road, NE		Atlanta	GA	30307	NF	Sandy Springs
Kay	Juan	Milton Estates -- Subdivision	245 Meadow Dirve		Alpharetta	GA	30004	NF	Big Creek
Kayne	Carolyn		724 Highland Ave.		Atlanta	GA	30312	ATL	Camp Creek
Keapler	Mark	Southwest Atlanta Neighborhood Association, Inc.	1895 Plaza Lane, Suite 243		Atlanta	GA	30311	SF	Camp Creek
Keesee	Corrie & Chris		350 Hickory Flat Road		Alpharetta	GA	30004		
Keifer	Julie		913 Nottingham Point		Alpharetta	GA	30022	NF	Johns Creek
Keisler	Floyd		13230 Freemanville Road		Alpharetta	GA	30004		
Kellen	Robert	Huntcliff Homeowners Association	9415 Huntcliff Trace		Atlanta	GA	30350	NF	Sandy Springs
Kelley	Laura		4497 Windsor Oaks Drive		Marietta	GA	30066		
Kelsey	John	Zachary Henderson, A.I.A.	1060 Canton Street		Roswell	GA	30075	NF	Big Creek
Kenn	Mike	Fulton County Board of Commissioners	141 Pryor St., SW, Ste. 10032		Atlanta	GA	30303	FC	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Kenna	Gordon	Clean Air Campaign	P. O. Box 550451		Atlanta	GA	30355	SF	
Kennedy Tucker	Inga	Old National Merchant Association	P.O. Box 490068		College Park	GA	30349	SF	Camp Creek
Kerdekk	Ron		6665 Maid Mark		Alpharetta	GA	30022	NF	Johns Creek
Kiel	Paul	Brandon Hall/Rivergate	1735 Brandon Hall		Atlanta	GA	30350	NF	Sandy Springs
Kilpatrick	Monica	Cochran Mill Nature Center - Palmetto	P.O. Box 911		Fairburn	GA	30213	SF	Camp Creek
Kimbrough	Ann	Fulton County	141 Pryor St., SW, Ste. 3090		Atlanta	GA	30303	FC	
King	Bob	Fulton Co. Dept. of Public Works	141 Pryor St		Atlanta	GA	30303	FC	
King	Mark		225 Wessex Court NE		Atlanta	GA	30328-26		
King	Stephen	CH2M HILL	115 Perimeter Center Place, NE, Suite 700		Atlanta	GA	30346	NF	
Kitzky	Harold		5635 Lake Forest Drive		Atlanta	GA	30342		
Kornblum	David		10955 Morton's Crossing		Alpharetta	GA	30022-56	NF	Johns Creek
Koskinas	Chris	Fulton County	141 Pryor Street		Atlanta	GA	30309	FC	
Kostaras	Carol		12155 Winding Oak Trail		Alpharetta	GA	30022	q	Johns Creek
Kotler	Mike		9470 kingston Crossing Circle		Alpharetta	GA	30022	NF	Johns Creek
Kratz	Betsy		4815 Morton Chase Drive		Alpharetta	GA	30022	NF	Johns Creek
Krousel	Elizabeth	Ogden Environmental and Energy Services	1395 South Marietta Parkway Building 300 Ste. 200		Marietta	GA	30067	CON	
Krueger	Margaret	Johns Creek Community Association	5005 Saddle Bridge Lane		Alpharetta	GA	30022	NF	Johns Creek
Kruger	Kathy		595 Willowbrook Run		Alpharetta	GA	30022	NF	Johns Creek
Kurey	R.J.	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Kurtz	Robert	Broadwell Road -- Subdivision	1630 Broadwell Oaks Drive		Alpharetta	GA	30004	NF	Big Creek

Last Na.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Kurtz	Glenn	Perimeter Transporatation Coalition	115 Perimeter Center Place, Suite 200		Atlanta	GA	30346	NF	
Kyle	Bovis	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Lackey	Mike	Parson's Run Homwowners Association	11110 Linbrook Lane		Duluth	GA	30097	NF	
Lackey	David	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Ladipo	Edith	Southside Stream & Creek Keepers	2232 Belvedere Ave., SW		Atlanta	GA	30311	SF	Camp Creek
Ladsen	Dane		1007 Little River Way		Alpharetta	GA	30004		
Lafortune	Robert	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Lafrague	Ashton	Park Lane -- Subdivision	425 Trammel Drive		Alpharetta	GA	30004	NF	Big Creek
Lambert	Lamar	Fulton County	141 Pryor St, SW Ste 6001		Atlanta	GA	30303	FC	
Land	Clyde		5100 Kerry Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Landrum	Fred	GA. D.O.T.	940 Virginia Avenue		Hapeville	GA	30354	SF	
Landrum	William	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Langford	Susan Pease	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Langford	Pat	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Langhorne	Webster	South Atlanta High School	800 Hutchins Rd., SE		Atlanta	GA	30334	SF	
Langley	Kenyon		6240 Highway 70		Palmetto	GA	30268	SF	Camp Creek
Last	Mike		210 Autum Sage Drive		Alpharetta	GA	30005		
Latta	Gail		5495 Buckhollow Drive		Alpharetta	GA	30005	NF	Johns Creek
Lattimer	Keith		125 Founders Cover		Alpharetta	GA	30022	NF	Johns Creek
Laws	F.		770 Branchview Drive		Atlanta	GA	30331	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Learnard	Kim	Cameron Forest & Wood H.O. Association	10400 Forest Bridge Drive		Alpharetta	GA	30022	NF	Johns Creek
Leathers	Nancy	Fulton County	141 Pryor St., SW, Ste. 5001		Atlanta	GA	30303	FC	
Ledford	Steve		512 Harbor Landing		Roswell	GA	30076		
Lee	Marilyn		1365 Reynolds Road		Atlanta	GA	30331	SF	Camp Creek
Lee	Jeff		4935 Walnut Grove		Alpharetta	GA	30022	NF	Johns Creek
Lee	Christina	City of Fairburn	56 Malone Street		Fairburn	GA	30213	SF	Camp Creek
Lee	David		125 Pond Trace		Fayetteville	GA	30215	SF	Camp Creek
Lemond	Frank	Oxford Mills	620 Turbridge Court		Alpharetta	GA	30022	NF	Johns Creek
Lenny	Debbi		7889 Sugarland Drive		Jonesboro	GA	30236		
Leonard	Joseph	Reynolds Road Community	1705 Reynolds Road		Atlanta	GA	30331	SF	Camp Creek
Leonard	Michael		905 Park Lane Court		Alpharetta	GA	30022	NF	Johns Creek
Leonard	Scott		146 Steward Drive NE		Atlanta	GA	30342-19		
Lesser	Gayle		5070 Derrick Road		College Park	GA	30349	SF	Camp Creek
Letchas	Arthur	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Levinge	Patrice		3950 Ryans Lake Terrace		Cumming	GA	30040	NF	Big Creek
Levitt	Harvey	City of Dalton	255 Amberidge Trail		Atlanta	GA	30328	NF	
Lewis	Edgar		2586 Black Forest Trail		Atlanta	GA	30331	SF	Camp Creek
Lewis	Mercer	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Lewis	Tim	Northshore Homeowners Association	1190 Martin Ridge Road		Roswell	GA	30076	NF	Sandy Springs
Lewis	Tom	Rivermont Community Association	375 North Peak		Alpharetta	GA	30022	NF	Johns Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State	Zip	Area	Watershed
Liberman	Harold		2067 Somervale Court		Atlanta GA	30329		
Liebmann	S.W.		3260 Rilman Drive		Atlanta GA	30327	NF	Sandy Springs
Linder	Harvey		365 Waters Bend Way		Alpharetta GA	30022	NF	Johns Creek
Lippmann	Ann	Union City Municipality	5047 Union Street		Union City GA	30219	SF	Camp Creek
Little	John	Native Plant Society	5198 Rock Springs Road		Lithonia GA	30038		
Littleton	Byron	Windsor Forest Community Club	1893 Windsor Drive, SW		Atlanta GA	30311	SF	Camp Creek
Long	David	Shannon Southpark Mall	1000 Shannon Southpark		Union City GA	30291	SF	Camp Creek
Long	Marion	Camp Fire Boys & Girls	100 Edgewood Avenue		Atlanta GA	30303	ATL	
Longino	Jack	City of College Park	P.O. Box 87137		College Park GA	30337	SF	Camp Creek
Lord	Karin		115 Gingergate		Alpharetta GA	30022	NF	Johns Creek
Lord	Wayne	Northside Woods Neighborhood Association	815 Highcourt Road		Altanta GA	30327	NF	Sandy Springs
Lord	Wayne	Northside Woods Neighborhood Association	815 Highcourt Road		Atlanta GA	30327	NF	Sandy Springs
Loughrey	Bill	SPARC	Scientific Atlanta	1 Technology Parkway South	Norcross GA	30092	NF	
Lowe	Bill	Pounds-Harris	141 Pryor St., Ste. 6066		Atlanta GA	30303	CON	
Lowe	Tom	Fulton County Board of Commissioners	141 Pryor St., SW, Ste. 10032		Atlanta GA	30303	FC	
Lucas	Carter	City of Roswell	38 Hill St., Suite G-30		Roswell GA	30075	NF	Big Creek
Luckie	Mary Lou	Metro Atlanta Chamber of Commerce	P.O. Box 1740		Atlanta GA	30301	CC	
Luckovich	Mike		65 Chevaux Court		Atlanta GA	30304		
Lummus	Angela	City of Mountain Park	100 Mountain Park Road		Mountain Par GA	30075	NF	Big Creek
Lunday	John	North Harbor Club	6755 Chesapeake Point		Atlanta GA	30328	NF	Sandy Springs

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Lurye	Lillian	School Boards/PTA within Fulton County	114 Baker St. NE		Atlanta	GA	30308	ALL	
Lynch	Lee		5580 Cherqin de Vie		Atlanta	GA	30342		
Lyons	George	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Maase	Tim		310 Anchorage Place		Roswell	GA	30076		
Macke	Gail		10565 Morton Ridge Drive		Alpharetta	GA	30022	NF	Johns Creek
Macrina	JoAnn	Parsons Engineering	5395 Triangle Parkway, Ste. 100		Norcross	GA	30092	NF	
Maddox	Jim	Atlanta City Council	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Maffeo	Mitchell	Village Green -- Subdivision	5018 Village Green Way		Alpharetta	GA	30004	NF	Big Creek
Magnarella	Christine		513 Drexel Avenue		Decatur	GA	30030		
Mahovsky	Lynn		95 Forestwood Lane		Atlanta	GA			
Malcolm	Lonnie	NPU	626 Elizabeth PL., NW		Atlanta	GA	30318	ATL	
Malone	Maureen	Neighborhood Planning Unit	1095 Avon Ave., SW		Atlanta	GA	30310	ATL	
Manning	Stephen		4540 Cascade Road		Atlanta	GA	30331	SF	Camp Creek
Maple	Stephanie		400 Piney Way		Atlanta	GA	30331	SF	Camp Creek
Marcus	Joey		P.O. Box 10518		Atlanta	GA	30310	ATL	
Marcus	Sherrill	Southern Organizing Committee	P.O. Box 10518		Atlanta	GA	30310		
Marcus	Sherrill	S.W. Atlanta Roundtable	2072 Snow Road, SW		Atlanta	GA	30311	SF	Camp Creek
Marcus	Ted	Telfair Homeowners Association	125 Barnard Place		Atlanta	GA	30328	NF	Sandy Springs
Marianne	Broadbennett		865 North Island Drive NW		Atlanta	GA	30327-46		
Mark	Jonathan	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek

Last Na.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Marks	Bill		1120 Winding Creek Trail		Atlanta	GA	30328		
Marmer	Natalie		840 Overhill Court N.W.		Atlanta	GA	30328	NF	Sandy Springs
Marriner	John	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Marsh	Whitney		220 Gatsby Place		Alpharetta	GA	30022		
Marsh	Clinton		1401 Adams Drive		Atlanta	GA	30331	SF	Camp Creek
Martello	Bill	JJ&G	2000 Clearview Avenue		Atlanta	GA	30340	NF	
Martin	Alberta		4990 Cascade Overlook, SW		Atlanta	GA	30331	SF	Camp Creek
Martin	C.T.	Atlanta City Council	561 Peyton Road		Atlanta	GA	30311	ATL	Camp Creek
Martin	Chuck	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Martin	Don	RMJ	141 Pryor St., Ste. 3701		Atlanta	GA	30303	CON	
Martin	Gloria		3555 Pine Forrest Drive		Atlanta	GA	30345		
Martin	Jerry		560 Oak Landing Drive		Alpharetta	GA	30022	NF	Johns Creek
Martin	Samual	Hollyberry Civic Association	220 Hollyridge Way		Roswell	GA	30076	NF	Sandy Springs
Mason	Preston	SAFE	2631 Forrest Avenue		Atlanta	GA	30318	ATL	
Mason	Rick	Pounds-Harris MHR	141 Pryor St., SW, Ste. 6066		Atlanta	GA	30303	CON	
Matheison	Ben & Doris		5795 Millwick Drive		Alpharetta	GA	30022	NF	Johns Creek
Mathison	Rick		305 South River Farm		Alpharetta	GA	30022	NF	Johns Creek
Matoney	Jim	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
May	Anita	Timberlane -- Subdivision	5061 Anclote Drive		Alpharetta	GA	30005	NF	Big Creek
May	Edward	Rivershore Estates Garden Club II	280 Riverhill Drive		Atlanta	GA	30328	NF	Sandy Springs

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Mayer	Bob	North Pond	570 Sailwind Drive		Roswell	GA	30076	NF	Sandy Springs
Mays	Edward	Rivershore Estates Garden Club II	280 Riverhill Drive		Atlanta	GA	30328	NF	Sandy Springs
Maziar	Susan		5350 Timber Trail		Atlanta	GA	30342	NF	Sandy Springs
McBride	Dan	BellSouth	125 Perimeter Center West, Room 310		Atlanta	GA	30346	NF	
McCain	Rose	St. Ives Homeowners Association	120 Kennermer Court		Duluth	GA	30136	NF	
McCarty	Vern	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	STL	
McCauley	Kevin	North Buckhead Civic Association	551 Chateaugray Lane		Atlanta	GA	30342	NF	Sandy Springs
McClure	Pamela		270 Enon Court, SW		Atlanta	GA	30331	SF	Camp Creek
McCrary	Tom	Bethsaida West	2905 Sandy Circle		Riverdale	GA	30296	SF	Camp Creek
McCullough	Sam	Kimball Falls -- Subdivision	Land Sellutions	11111 House Road, Suite 300	Roswell	GA	30076	NF	Big Creek
McDonald	Leslie		10965 Pinehugh Drive		Alpharetta	GA	30022	NF	Johns Creek
McGarity	Stephanie		4410 Brookhaven Drive		Atlanta	GA	30319		
McGea	Ray	McGee Bros. Logging	7850 Cedar Grove Rd.		Fairburn	GA	30213	SF	Camp Creek
McGinnis	Rick	Riverwood Homeowners Association	9380 Riverclub Parkway		Duluth	GA	30155	NF	
McGrevin	Carol		10697 Bell Road		Duluth	GA	30097	NF	
McGuinn	Mike		6420 Tanacrest Court		Atlanta	GA	30328		
McHugh	Bennett	Liberty Square Association	10445 Worthington Hills Manor		Roswell	GA	30076	NF	Sandy Springs
McIver	Pamela		270 Enon Court		Atlanta	GA	30331	SF	Camp Creek
McKenna	Maura	Park Forest Homeowners Association	10210 Brier Mill Court		Alpharetta	GA	30022	NF	Johns Creek
McKenzie Mathis	Wilford & Hazel	Coldwood/Coldridge Forest -- Subdivision	140 Jay Ellen Court		Alpharetta	GA	30004	NF	Big Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
McLean	Tom	Jackson Lake Homeowners Association	1281 Wendy Hill Road		Monticello	GA	31064	SF	
McMickens	Bettye	Sandy Springs/North Fulton Clean & Beautiful	470 Morgan Falls Road		Atlanta	GA	30350	NF	Camp Creek
McMillan	John	Northward Real Estate	16050 Wills Road		Alpharetta	GA	30004	NF	Big Creek
McMillen	Amy	Collier Hills Civic Association	463 Overbrook Drive		Atlanta	GA	30318	ATL	
McNally	William	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
McNeill	Carrol	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
McPhail	Jon		640 Dorris Road		Alpharetta	GA	30004	NF	Little River
Meadows	Melissa		850 Edgewater Drive		Atlanta	GA	30328	NF	Sandy Springs
Melear	Harvey	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Mergens	Sue		4256 Cascade Road, SW		Atlanta	GA	30331	SF	Camp Creek
Merriman	Marta		10770 Pine Walk Forest Circle		Alpharetta	GA	30022	NF	Johns Creek
Merritt	Carol		5120 Erin Road, SW		Atlanta	GA	30331	SF	Camp Creek
Meyer	Mike	SEW Americorps	1166 Shepherds Lane		Atlanta	GA	30324		
Michaels	Scott		353 Leeward Walk Lane		Alpharetta	GA	30022	NF	Johns Creek
Miers	Roger	River Pines Golf Course	4775 Old Alabama Road		Alpharetta	GA	30022		
Mikalsen	Ted	Georgia Department of Natural Resources	205 Butler Street, SE Floyd Towers East Suite 10		Atlanta	GA	30334	DNR	
Miles	Edwin		2320 Wallace Road		Atlanta	GA	30331	SF	Camp Creek
Milholland	Brandon & Ellen		2800 Windrush Lane		Roswell	GA	30076-37		
Mill	John		3780 Old Alabama Road		Alpharetta	GA	30022	NF	Johns Creek
Miller	J.	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Miller	James		120 Louise Terrace		Atlanta	GA	30331	SF	Camp Creek
Miller	Jeff	Hillbrooke Homeowners Association	5350 Hillgate Crossing		Alpharetta	GA	30022	NF	Johns Creek
Miller	John	W.L. Jorden & Associates	1908 Cliff Valley Way, Suite 200		Atlanta	GA	30329	NF	
Miller	Polly	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Miller	Ellen		5020 Promenade Drive		Atlanta	GA	30331	SF	Camp Creek
Millet	Jack	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Mills	Harriet	Ridgeview Civic Association	975 West Kingston Drive		Atlanta	GA	30342	NF	Sandy Springs
Mills	Roger	Woodchase Homeowners Association	999 Peachtree Street, Suite 2700		Atlanta	GA	30309	ATL	
Mills	Harriet	Ridgeview Civic Association	975 West Kingston Drive		Atlanta	GA	30342	NF	Sandy Springs
Minor	Winston	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Minshoe	Elenor	Chattahoochee Nature Center - Roswell	9135 Willeo Road		Roswell	GA	30075	NF	Big Creek
Mitchell	Storm		P.O. Box 984		Red Oak	GA	30272	SF	Camp Creek
Mitchler	Dave	Fairfax - Subdivision	800 Smoke House Court		Alpharretta	GA	30004	NF	Big Creek
Mitnick	Dan	Timberston-Haynes Landing Homeowners Association	3405 Stillridge Drive		Alpharetta	GA	30022	NF	Johns Creek
Mobley	Mel	Whispering Pines Homeowners Association	40 Whispering Way		Atlanta	GA	30328	NF	Sandy Springs
Modica	Steven	Travis Pruitt & Assoc.	5555 Oak Brook Pkwy		Norcross	GA	30093	NF	
Molock	Elwood		5145 Kerry Drive		Atlanta	GA	30331	SF	Camp Creek
Mondor	Geraldine		8925 Laurel Way		Alpharetta	GA	30022		
Montgomery	Nancy	Laurel Woods Subdivision	2935 Old Farm Road		College Park	GA	30349	SF	Camp Creek
Mooney	David	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek

Last N	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Moore	Wendy	Londonberry Garden Club	710 Londonberry Road		Atlanta	GA	30327	NF	Sandy Springs
Moore	Willie		430 Piney Way		Atlanta	GA	30331	SF	Camp Creek
Moore	William	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Moore	Ralph	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Moore	Felicia	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Moore	Don		2233 Harvard Avenue		College Park	GA	30033	NF	
Moore	Don	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Moore	Angie	City of Atlanta	68 Mitchell Street, SW Suite 450		Atlanta	GA	30335	ATL	
Moore	David		2090 Noblin Ridge Trail		Duluth	GA	30097		
Moran	Al		2205 Enon Road		Atlanta	GA	30331	SF	Camp Creek
Morey	Ed	Fulton County Planning Commission	520 Spalding Drive		Atlanta	GA	30328	NF	All
Morgan	Jeff		11235 Abbotts Station Drive		Duluth	GA	30097	NF	
Morgan	Wendy	Atlanta Regional Commission	200 Northcreek, Ste 300	3715 Northside Parkway	Atlanta	GA	30327-28	ALL	
Moring	Stuart	City of Roswell	38 Hill Street, Ste. G 60		Roswell	GA	30075	Public	Big Creek
Morris	Lee	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Morris	Terry		955 Manchester Place NW		Atlanta	GA	30328-48		
Morrow	Thomas	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Morse	Jackie	SEW Americorps	4685 Chamblee Dunwoody Road #B-3		Dunwoody	GA	30338		
Morsley	Tracey		4970 Montcalm Drive		Atlanta	GA	30331	SF	Camp Creek
Mortison	John	Southshore Homeowners Association	620 Clearlake Terrace		Roswell	GA	30076	NF	Sandy Springs

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Moscow	Billy	Rowell Eye Clinic Water Watchers	1190 Grimes Bridge Road		Roswell	GA	30075	NF	Big Creek
Moskaluk	John	City of Alpharetta	1790 Hembree Road		Alpharetta	GA	30004		Big Creek
Mosley	Chris		3796 Benjamin Court		Atlanta	GA	30331	SF	Camp Creek
Moss	Ken	Moss Creek Monitor	1075 Canton Street		Roswell	GA	30022	NF	Johns Creek
Moss	William and Nan		120 Seville Chase, NW		Atlanta	GA	30328		Sandy Springs
Moultrie	Alton	South Fulton Parkway Alliance	P.O. Box 1776		Atlanta	GA	30301	NF	Johns Creek
Muller	Claire	Atlanta City Council	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Mullis	Robert	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Murphree	Heather		2590 Davenport Park Drive		Duluth	GA	30096		
Murphy	Henry & Jane	Charlotte Estates -- Subdivision	135 Pruitt Drive		Alpharetta	GA	30004	NF	Big Creek
Murphy	James		4224 Cascade Road, SW		Atlanta	GA	30331	SF	Camp Creek
Muse	Lori	Amberidge Homeowners Association	645 Amberidge Trail		Atlanta	GA	30328	NF	Sandy Springs
Myrick	Wini		15655 Rowe Road		Alpharetta	GA	30004		
Nall	Janice		5475 Buckhollow Drive		Alpharetta	GA	30022	NF	Johns Creek
Nalley	John	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Nash	Al	North Fulton Revitalization, Inc.	Tower Place, Suite 1090	3340 Peachtree Road, N.E.	Atlanta	GA	30326	NF	
Nave	Charles	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek
Nejad	M.R.		4940 Walnut Grove		Alpharetta	GA	30022	NF	Johns Creek
Nesbit	Dale		9050 Nesbit Ferry Road		Alpharetta	GA	30022	NF	Johns Creek
Nestor	Brad	American Society of Landscape Architects	3060 Peachtree Road, Suite 600		Atlanta	GA	30305	CON	

Last Na	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Netterville	Andre	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Neville	"Gus"	Rivershore Estates Homeowners Association	6210 Rivercliffe Drive		Atlanta	GA	30328	NF	Sandy Springs
Newhart	Christine		9645 Knoll Crest Boulevard		Alpharetta	GA	30022	NF	Johns Creek
Nicholson	R.W.		9450 Clublands Drive		Alpharetta	GA	30022	NF	Johns Creek
Nicholson	Terry		5645 Sandown Way		Duluth	GA	30155	NF	Johns Creek
Nickles	Becky	Breakwater Homeowners Association, Inc.	135 Marsh Glen Point		Atlanta	GA	30328	NF	Sandy Springs
Niebur	Teresa		195 Seville Chase		Atlanta	GA	30328		
Noble	Bob	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Nobles	Jon	Wexford Homeowners Association	11980 Williams Club Place		Roswell	GA	30075	NF	Big Creek
Nodica	Steve		535 Saddle Crest Drive		Roswell	GA	30075	NF	Big Creek
Nolan	Nancy	Chatahoochee Nature Center	9135 Willeo Rd		Roswell	GA	30075	NF	Big Creek
Noles	Judy	South Fulton Clean & Beautiful	PO Box 326		Union City	GA	30291	SF	Camp Creek
Norman	Sharon	Lovett School	4075 Paces Ferry Road, NW		Atlanta	GA	30327	NF	
Norris	Juner		929 Burnt Hickory Drive, SW		Atlanta	GA	30311	SF	Camp Creek
Norris	Lanse		2940 Leah Lane		Douglasville	GA	30135		
Nye	Teri		1715 Piper Circle, SE		Atlanta	GA	30316		
Nygren	Steve		10950 Hutcheson Ferry		Palmetto	GA	30268	SF	Camp Creek
Oates	Coach	Boatrock Recreational Center	5800 Boatrock Road, SW		Atlanta	GA	30331	SF	Camp Creek
O'Connor	Cindy		12285 Broadleaf Lane		Alpharetta	GA	30005		
Oden	Johnny		4684 Campbellton Road		Atlanta	GA	30331	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State	Zip	Area	Watershed
Oittman	Melvin	City of East Point	2777 East Point Street		East Point GA	30344	SF	Camp Creek
O'Keefe	J.		5535 Ashwind Trace		Alpharetta GA	30005	NF	Johns Creek
Oliver	Raynard	Guilford Pointe Homeowners Association	4475 Birdie Lane		Atlanta GA	30331	SF	Camp Creek
O'Neil	Alice		8005 Saddle Ridge Drive		Atlantat GA	30350		
Ordoyne	Ora		180 Keswick Way		Alpharetta GA	30022	NF	Johns Creek
Orlans	Jerry	City of Roswell	38 Hill Street, Suite 115		Roswell GA	30075	NF	Big Creek
Osborne	N'Taki	National Wildlife Federation	1330 W Peachtree Street, Suite 475		Atlanta GA	30309	ALL	
Osman	Dan	North Farm Homeowners Association	345 North Farm Drive		Alpharetta GA	30004	NF	Big Creek
Osmer	Dennis	CIBA Vision	11460 John's Creek Parkway		Duluth GA	30097-15	NF	Johns Creek
Owley	Jessica	GEO AmeriCorps	3185 Center St.		Smyrna GA	30080	NF	
Ozmelek	Aylin		995 Woodstock Road		Roswell GA	30075		
Pace	Carolyn	North Alpharetta/Hopewell Civic Association	2320 Saddle Sporings Drive		Alpharetta GA	30004	NF	Big Creek
Pace	Gregory	Fulton County	141 Pryor Street,SW Suite 5001		Atlanta GA	30303	FC	
Padilla	Joe	Atlanta Home Builders' Association	P.O. Box 450749		Atlanta GA	31145	SF	
Paine	Jim	City of Alpharetta	2 South Main Street		Alpharetta GA	30004	NF	Big Creek
Palmer	Gary		243 The South Chace, NE		Sandy Spring GA	30328	NF	Sandy Springs
Pamplin	Dell	Chattahoochee High School River EPES	5230 Taylor Road		Alpharetta GA	30022	NF	Johns Creek
Pamplin	Sally	Shakerag Elementary School	10885 Rogers Circle		Duluth GA	30097	NF	
Pardue	Bill	The Rockettes	1346 Beech Valley Road, NE		Atlanta GA	30306	NF	
Paris	Mary		9545 KnollCrest Boulevard		Alpharetta GA	30022	NF	Johns Creek

Last N.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Park	Alison	Charlotte Estates -- Subdivision	120 Pruitt Drive		Alpharetta	GA	30004	NF	Big Creek
Parker	Angela	Fulton County E & CD/PI	141 Pryor St., SW, Ste. 5001		Atlanta	GA	30303	FC	
Parker	Wayne	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Parsi	Mary		9545 Knoll Crest Boulevard		Alpharetta	GA	30022	NF	Johns Creek
Parson	Judy	Kimball Farms -- Subdivision	1130 Seale Drive		Alpharetta	GA	30005	NF	Big Creek
Pasaley	Jennifer	South Fulton Revitalization, Inc.	66 Luckie Street, Suite 800		Atlanta	GA	30335	SF	Camp Creek
Passantino	Richard		6090 Weatherly Drive N.W.		Atlanta	GA	30328	NF	Sandy Springs
Patterson	Leonard	Marion Woods Homeowners Association	4995 Cascade Overlook		Atlanta	GA	30331	SF	Camp Creek
Patton	William		205 Pebblecreek Place		Atlanta	GA	30331	SF	Camp Creek
Patton	Stacey	The Nature Conservancy of Georgia	1330 W. Peachtree Street, Ste. 410		Atlanta	GA	30309	ALL	
Patwardhan	Avinash	CH2M Hill	115 Perimeter Center Plac, NE, Suite 700		Atlanta	GA	30346		
Payne	David	SAND	691 Woodland Ave., SE		Atlanta	GA	30316	ATL	
Payne-White	Patricia	Peaview Watershed Alliance	P.O. Box 909		Decatur	GA	30322		
Peach	Alfonza		465 Waterway Drive		Atlanta	GA	30331	SF	Camp Creek
Peek	Billy		10675 Hutcheson Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Peeks	Tarika		3200 Lakeview Place #322		College Park	GA	30337	SF	Camp Creek
Pelfrey, Jr.	Harry	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Pendarvis	Cere		22 Huntington Place		Atlanta	GA	30350		
Peoples	Robert		7035 Riverside Drive		Atlanta	GA	30328	NF	Sandy Springs
Perez	Liz	Parsons Engineering	5395 Triangle Parkway, Ste. 100		Norcross	GA	30092	NF	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Perez	Robert		5395 Roswell Road		Atlanta	GA	30342		
Perkins	Tim	Forsyth County	110 E. Main Street		Cumming	GA	30040		All
Perry	Michael	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Perryman	Audrey		120 Hamden Forest Trail		Atlanta	GA	30331	SF	Camp Creek
Peterson	Ralph	Spring Run -- Subdivision	320 Oak Terrace		Alpharetta	GA	30004	NF	Big Creek
Phalen	Tim and Kim		5110 Forest Run Trace		Alpharetta	GA	30022		
Phelts	Michael	Neighborhood Planning Unit	1053 Washington Rd, Heights Terrace		Atlanta	GA	30314	ATL	All
Phifer	Nicole & Cynthia		1976 Kimberly Road		Atlanta	GA	30331	SF	Camp Creek
Phillips	Alonzo		2300 Enon Road		Atlanta	GA	30331	SF	Camp Creek
Phillips	Bill	River Oaks Homeowners Association	1625 Lazy River Lane		Atlanta	GA	30350	NF	Sandy Springs
Phillips	Charles	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Pierce	Sheila	CH2M HILL	115 Perimeter Center Place, Suite 700		Atlanta	GA	30346		
Pinkston	D'Lee	Crabapple Trace -- Subdivsion	1050 Crabapple Trace		Alpharetta	GA	30004	NF	Big Creek
Pittman	Helen		450 Piney Way		Atlanta	GA	30331	SF	Camp Creek
Pitts	Bradd		9255 South River Farm Road		Alpharetta	GA	30022	NF	Johns Creek
Pitts	Marilyn		9255 South River Farm Drive		Alpharetta	GA	30022	NF	Johns Creek
Pitts	Robb	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Plucinsky	Peggie	Oine Meadows Neighborhood Association	300 Calla Lane		Alpharetta	GA	30022	NF	Johns Creek
Poole	Dana	Upper Chattahoochee Riverkeeper	1900 Emory Street, Ste. 450		Atlanta	GA	30318		All
Porter	C.	Canaan Woods	6040 Canaan Woods Drive		Atlanta	GA	30331	SF	Camp Creek

Last Na..	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Portier	Rodney		3880 Wold Creek Circle		Atlanta	GA	30331	SF	Camp Creek
Pounds	Jim	Pounds-Harris	141 Pryor St., SW, Ste. 6066		Atlanta	GA	30303	CON	
Prather	George	Neighborhood Planning Unit	146 Griffin St., NW		Atlanta	GA	30314	ATL	Camp Creek
Pratt	Elmo		5420 State Bridge Road		Alpharetta	GA	30022	NF	Johns Creek
Pratt	Audrey	North Fulton Estates	5420 State Bridge Road		Alpharetta	GA	30022	NF	Johns Creek
Prebble	Barbara	Amberidge Homeowners Association	685 Amberidge Trail		Atlanta	GA	30328	NF	Sandy Springs
Preising	Rick	Roswell Station Homeowners Association	555 Junction Point		Roswell	GA	30075	NF	Big Creek
Preston	Richard		1290 Parkmont Drive		Roswell	GA	30076		
Prestwood	Suzanne		11730 Ashwick Place		Alpharetta	GA	30022	NF	Johns Creek
Prince	Marisa	SEW Americorps	4685 Chamblee Dunwoody Road	#B-3	Dunwoody	GA	30338		
Prince	Mary White	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Pritchett	Stanley	Tacomac Forest Community Association	3410 Towanda Drive		College Park	GA	30349	SF	Camp Creek
Pryor	Barbara	Amberidge Homeowners Association	685 Amberidge Trail		Atlanta	GA	30328		
Pulling	William	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Putt	Samantha	Environmental Funding of Georgia	1447 Peachtree Street, Suite 502		Atlanta	GA	30309	ALL	
Queen	Arthur	National Association of Minority Contractors	4251 East Side Drive		Decatur	GA	30034	NF	
Ragland	Marlene		1385 Reynolds Road		Atlanta	GA	30331	SF	Camp Creek
Rainwater	Norma		4500 Highway 53 East		Dawsonville	GA	30534		
Rainwater	Sue	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Ramsey	Meg	Atlanta Jaycees Stream Team	P.O. Box 38345		Atlanta	GA	30334	ALL	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Randell	Earl		205 Canaan Glen		Atlanta	GA	30331	SF	Camp Creek
Ransom	Benita	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Ratchyard	J.		1150 Boat Rock Road		Atlanta	GA	30331	SF	Camp Creek
Rawls Hill	Marla	CH2M HILL	115 Perimeter Center Place, NE, Ste. 700		Atlanta	GA	30346-12	CON	
Ray	Wilford		3485 North Desert Drive		East Point	GA	30344	SF	Camp Creek
Ready	Jud	Underwood Brook Adopt-A-Stream	1150 Collier Road, #M7		Atlanta	GA	30318	ATL	
Rector	David	Fulton County Teaching Museum	689 North Avenue		Hapeville	GA	30354	SF	
Reed	David	Leeward Walk & Hunters Glen	11895 Leeward Walk Circle		Alpharetta	GA	30022	NF	Johns Creek
Reed	Robert	Lake Claire Neighbors	230 Madison Avenue		Decatur	GA	30030	NF	
Reed	Roberta		135 Christopher Run		Alpharetta	GA	30004	NF	Big Creek
Reese	Andy	Ogden Environmental and Energy Services	3800 Ezell Rd., Ste. 100		Nashville	TN	37211	CON	
Reese	James		2000 Enon Pines Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Reeves	Lawrence	R&D	2366 Sylvan Road		Atlanta	GA	30344	SF	
Reeves, Jr.	Lenward	Greentree Trail Homeowners Association	4630 Berryhill Court		College Park	GA	30349	SF	Camp Creek
Reid	Harvey		6630 Williamson Drive NE		Atlanta	GA	30328		
Reid	Joe	Shakerag Homeowners Association	7300 Bell Road		Duluth	GA	30097	NF	
Reid	Kim	CERULEA, Inc.	748 Oakland Avenue, SE		Atlanta	GA	30315	ATL	Camp Creek
Releford	Eugene		5080 Kerry Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Renfrow	R.	Corn Creek Farms	4725 Corn Creek Dr.		Fairburn	GA	30213	SF	Camp Creek
Reynaud	Louis	The Chelsey and Jennifer Oaks -- Subdivision	400 Ridge Court		Alpharetta	GA	30004	NF	Big Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Reynolds	Annise		1045 Carlo Woods Drive		Atlanta	GA	30331	SF	Camp Creek
Reynolds	J.C.		5035 Cascade Road, SW		Atlanta	GA	30331	SF	Camp Creek
Reynolds	Terry	Wexwood Glen Homeowners Association	2175 Wallace Road, SW		Atlanta	GA	30331	SF	Camp Creek
Rhea	Beverly		1533 Biddle Court		Dunwoody	GA	30338		
Rhodes	Joyce	Fulton Co. Planning & Economic Development	141 Pryor Street, 5th Floor		Atlanta	GA	30303	FC	
Rhodes	Joyce	Huntington Esates	220 Fox Lane Drive		Atlanta	GA	30349	SF	Camp Creek
Rice	Allen		10150 Creel Road		Fairburn	GA	30213	SF	Camp Creek
Richards	Tyler	City of Atlanta	2440 Bolton Road, NW		Atlanta	GA	30318	ATL	
Richardson	Alice	Mayfield Place -- Subdivision	5000 Harbour Ridge Drive		Alpharetta	GA	30005	NF	Big Creek
Richardson	David		1755 Collines Avenue		Atlanta	GA	30331	SF	Camp Creek
Richey	Jack		520 Chimney Bluff		Alpharetta	GA	30022	NF	Johns Creek
Ricketts	John	CH2M HILL	2567 Fairlane Drive		Montgomery	AL	36123-05	CON	
Ricks	Hubert	Hidden Valley Neighborhood Association	4265 Hidden Valley Drive		College Park	GA	30349	SF	Camp Creek
Rigsby	Edward	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Riley	Lynne		10605 Wren Ridge Road		Alpharetta	GA	30022	NF	Johns Creek
Riley	Kristen	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Rindone	Janic		220 Glenmoor Path		Alpharetta	GA	30022	NF	Johns Creek
Ringel	Edie	Georgia Adopt-A-Stream	1960 Ridgewood Drive		Atlanta	GA	30307		
Robbins	John	Hines/Deerfield Park, L.L.C.	5 Ravinia Drive		Atlanta	GA	30346	NF	
Roberts	Charlie	Roberts Properties, Inc.	8010 Roswell Rd., Ste 120		Atlanta	GA	30350	NF	

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Roberts	Tellsa	Surrey Place -- Subdivision	5535 Surrey Court		Alpharetta	GA	30004	NF	Big Creek
Robertson	Kim		330 Natoma Terrace		Alpharetta	GA	30022	NF	Johns Creek
Robertson	Mark		330 Natoma Terrace		Alpharetta	GA	30022	NF	Johns Creek
Robinson	Olive		400 Dorris Road		Crabapple	GA	30004	NF	Big Creek
Robinson	William		3695-F Cascade Road		Atlanta	GA	30331	SF	Camp Creek
Robinson	Melanie	West Fulton Middle School	1890 Bankhead Avenue		Atlanta	GA	30318	ATL	
Robinson	Margie	Hampton Square Homeowners Association	4860 Hampton Square Drive		Alpharetta	GA	30022	NF	Johns Creek
Robinson	Johnny	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Robinson	Annie	Rico Civic Club	10800 Hutcheson Ferry Road		Palmetto	GA	30268-22	SF	Camp Creek
Robinson	Dan	Milton High School	10660 Centennial Drive		Alpharetta	GA	30022-49	NF	Johns Creek
Robinson	Ronald	Roswell Lions Club	70 Foal Drive		Roswell	GA	30076	NF	Johns Creek
Roche	Sean	CH2M HILL	115 Perimeter Center Place, Ste. 700		Atlanta	GA	30346	NF	
Roland	Vivian	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Roll	Judith	Ponderosa Neighborhood Association	6305 Tahoe Drive		College Park	GA	30349	SF	Camp Creek
Rose	Harvon		450 Standing Rock Drive		Atlanta	GA	30331	SF	Camp Creek
Rose	Neva	Georgia Institute of Technology	500 Tech Parkway, Code 0282		Atlanta	GA	30332-02	ATL	
Rosenberg	Steve		11160 Brookhollow Trail		Alpharetta	GA	30022	NF	Johns Creek
Ross	W.	Glenridge Condominium Association	5273 Glendridge Drive		Atlanta	GA	30342	NF	Sandy Springs
Ross	Bill	Georgia Planning Association	2161Peachtree Road NE, Suite 806		Atlanta	GA	30309	ALL	
Ross	Catherine	CRA Consulting, Inc.	80 West Wieuca Road, Ste. 115		Atlanta	GA	30332	CON	

Last Na.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Roundtree, Jr.	Jack	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Rowell	Steven		1895 Wellbourne Drive		Atlanta	GA	30324		
Royston	Deborah	Little River Valley Assoc. & N. Fulton Comm. Grid	16055 Westbrook Road		Alpharetta	GA	30004	NF	Little River
Ruby	Robert		680 North Island Drive		Atlanta	GA	30327-46		
Rucker	Claudia	Barrows Down	255 Barrow Downs		Alpharetta	GA	30004	NF	Big Creek
Rucker	Najwa		2040 Stanton Road		East Point	GA	30344		
Rudesill	Bob	Taylor Oaks Homeowners Assoc.	1200 Taylor Oaks Drive		Roswell	GA	30076	NF	Sandy Springs
Russell	Barkley		43 Greene Street, NE		Fairburn	GA	30213		
Russell	Pat	Winterthur Homeowners Association	5850 Winterthur Drive		Atlanta	GA	30328	NF	Sandy Springs
Russo	Charles	Cliftondale Park - College Park	4645 Butner Road		College Park	GA	30349	SF	Camp Creek
Ruth, Jr.	William	Fulton Industrial Printing, Inc.	4485 H. Fulton Industrial Boulevard		Atlanta	GA	30336	SF	Camp Creek
Ryan	Shannon		225 Tellico Road		Canton	GA	30115		
Sacco	Phil	CH2M HILL	115 Perimeter Center Place, Suite 700		Atlanta	GA	30346-12	CON	
Salatino	Barbara	Greenlaurel	400 Greenlaurel Drive		Atlanta	GA	30342	NF	Sandy Springs
Samaritan	Jeanette	Upper Chattahoochee Riverkeeper	1900 Emery Street, Suite 450		Atlanta	GA	30319	ALL	
Sanborn	Michael	Bridgepointe -- Subdivision	5625 Bridge Point Drive		Alpharetta	GA	30005	NF	Big Creek
Sanders	Dan		10960 Hutcheson Ferry Road		Palmetto	GA	30268	SF	Camp Creek
Santo	Jim	Atlanta Regional Commission	3715 Northside Parkway, Building 200, Suite 300		Atlanta	GA	30327	ALL	
Sapp	Beth		700 Garr Circle		Atlanta	GA	30331	SF	Camp Creek
Sartor	Zeda Stanley		3769 Crosby Dr., SW		Atlanta	GA	30331	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Sastry	Aruna		11396 Ridgehill Drive		Alpharetta	GA	30022	NF	Johns Creek
Saunders	Jason	Milton High School	10660 Centennial Drive		Alpharetta	GA	30022-49	NF	Johns Creek
Scarbrough	Peter	Cameron Crest Farms Community Association	4900 Galdrew		Alpharetta	GA	30022	NF	Johns Creek
Scates	William		5655 Old National Highway		College Park	GA	30349	SF	Camp Creek
Schaffner	John	Corporate Image Group	66 Skyland Drive, Suite 100		Roswell	GA	30075	NF	Big Creek
Schiavone	John	Jim Cowart Company	3295 River Exchange Drive, Suite 400		Norcross	GA	30092	NF	
Schiffman	James		785 Sudbury Road		Atlanta	GA	30328		
Schmid	Kate		111 Heritage Way		Peachtree Cit	GA	30269		
Schmidt	Mike	CDM	Attn: Annette White	2100 Riveredge Parkway, Suite 500	Atlanta	GA	30328	CON	
Schomaker	Gail	North Fulton Revitalization, Inc.	3655 Jacobean Entry		Alpharetta	GA	30022	NF	Big Creek
Schorr	Dan		100 Red Leaf Court		Alpharettta	GA	30005	NF	Johns Creek
Schweitzer	Richard	Cherokee Park Civic Association, Inc.	4595 Meadow Valley Drive		Atlanta	GA	30342-25	NF	Sandy Springs
Scutt	Timothy	Bridgestone Farms Homeowners Association	4625 Ogeechee Drive		Alpharetta	GA	30022	NF	Johns Creek
Seagraves	Cathy		6590 Wright Circle		Atlanta	GA	30328-31		
Searle	Sam & Laurie		12600 Whiteside Road		Palmetto	GA	30268	SF	Camp Creek
Sears	Bertram	South Fulton Chamber of Commerce	6400 Shannon Parkway		Union City	GA	30291	SF	Camp Creek
Seguin	Wanda		130 Paley Way		Alpharetta	GA	30022	NF	Johns Creek
Sessions	Jim	Macauley Properties	2700 Delk Rd., Ste. 150		Mariettta	GA	30067	SF	
Sessom	Earnest		4700 Cascade Road, SW		Atlanta	GA	30331	SF	Camp Creek
Sestrich	Michale		1680 Gladewood Drive		Alpharetta	GA	30022	NF	Johns Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Settle	Susan		315 Ankonian Drive		Alpharetta	GA	30022	NF	Johns Creek
Sewell	Cindy	Amity & Jeremy	1200 Pine Grove Pointe Drive		Roswell	GA	30075	NF	Big Creek
Shaffert	Diane & Larry		10 Twin Ridges		Ball Ground	GA	30107		
Shafter	Linda		10930 Pinehigh Drive		Alpharetta	GA	30022	NF	Johns Creek
Shannon	Don	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Shapiro	Barbara		10570 Wynbridge Drive		Alpharetta	GA	30022	NF	Johns Creek
Sharp	Alexander & Eliz		6817 Ramundo Drive		Atlanta	GA	30060		
Shaunnessy	Martha		7140 Hunters Branch Drive		Atlanta	GA	30328-17		
Shedd	George		5445 Bethlehem Road		Fairburn	GA	30213	SF	Camp Creek
Shedd	Joel		4430 Cochran Mill Road		Fairburn	GA	30213	SF	Camp Creek
Sheehan	Peggy		5410 Bentley Hall Drive		Alpharetta	GA	30005		
Sheer	Tracy		3785 Village Drive SW		Atlanta	GA	30331	SF	Camp Creek
Sheets	Steve	W.L. Jorden & Associates	1908 Cliff Valley Way		Atlanta	GA	30329	NF	
Shefrin	Elana		1508 Bristol Trace		Alpharetta	GA	30022		
Shell	William	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Shelor	Susan		6280 Murets Road		Alpharetta	GA	30022	NF	Johns Creek
Shepard	Clayton		5245 Laithbank Lane		Alpharetta	GA	30022	NF	Johns Creek
Shepherd	Joyce	NPU	1460 Stewart Ave., SW		Atlanta	GA	30310	ATL	
Sherberger	Fred	Fernbank Science Center	156 Heaton Park Drive, NE		Atlanta	GA	30307	ATL	
Sherrill	Jim		360 Tara Trail		Atlanta	GA	30327		

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Sherrill	John		1409 Peachtree Street, NE		Atlanta	GA	30309	ATL	
Shevlin	Pat	Mannings Ridge -- Subdivision	445 Ridge Court		Alpharetta	GA	30004	NF	Big Creek
Shirey	Mark		5420 Bulce Road		Alpharetta	GA	30022	NF	Johns Creek
Shirley	Mark	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Shoemaker	A.	Aberdeen Forest Association	810 Glenairy Drive		Sandy Spring	GA	30328	NF	Sandy Springs
Silverthorne	Alice	Poplar Ridge -- Subdivision	1010h Poplar Ridge Run		Alpharetta	GA	30004	NF	Big Creek
Simmons	Reid	Horseshoe Bend Community Assocation	8660 River Trace		Roswell	GA	30076	NF	Johns Creek
Simon	Alan		105 Dunhill Court		Atlanta	GA	30328-12		
Sims	Barney		2884 Connally Dr., SW		Atlanta	GA	30311	SF	Camp Creek
Sinclair	Jean		5095 Dublin Drive		Atlanta	GA	30331	SF	Camp Creek
Singleton	Ken	Morning Creek Subdivision	3900 Morning Drive		College Park	GA	30349	SF	Camp Creek
Skopczynski	Debbie	NPU	949 Rupley Drive, NE		Atlanta	GA	30306	ATL	
Slavin	Beth		10700 Branham Fields Road		Duluth	GA	30155	NF	
Slider	Sandra	C.P. Historical Neighborhood Association	10400 Forest Bridge Drive		Alpharetta	GA	30022	NF	Johns Creek
Sloan	Beryl		655 Glen Forest Road		Atlanta	GA	30328		
Sloan	Courtenay		6595 G. Roswell Rd., Ste 255		Atlanta	GA	30328	NF	Sandy Springs
Slosberg	Janet	Taylor Oaks Homeowners Assoc.	220 Taylor Meadow Chase		Roswell	GA	30076	NF	Sandy Springs
Slosinger	Judy			455 Krikstall Trail	Alpharetta	GA	30022	NF	Johns Creek
Small	Zabeau		671 Heards Ferry Road		Atlanta	GA	30328	NF	Sandy Springs
Smith	Leo	Pamona Park Resident Association	3227 Dale Lane, SW		Atlanta	GA	30311	SF	Camp Creek

Last Na	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Smith	Tom	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Smith	Sam	Huntington Community Association	3470 Somerset Trail, SW		Atlanta	GA	30331	SF	Camp Creek
Smith	Sally	Fulton County	141 Pryor Street, 6th Floor		Atlanta	GA	30309	FC	
Smith	Rick	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Smith	Myles	Georgia Power Company	333 Piedmont Avenue, NE, BIN #10230		Atlanta	GA	30308-33	ATL	
Smith	Mollie	The Presnell Group	80 West Wieuca Road, Suite 115		Atlanta	GA	30332	CON	
Smith	Margo	Trust for Public Land	1447 Peachtree Stret, Suite 601		Atlanta	GA	30309	ALL	
Smith	Kathleen		13305 Bethany Road		Alpharetta	GA	30004		
Smith	Judy		4660 Jeff Road		Atlanta	GA	30327		
Smith	Jesse	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Smith	G.W.	Bridgepointe -- Subdivision	5695 Bridgepointe		Alpharetta	GA	30004	NF	Big Creek
Smith	Frank	Burdett Park Community Center	2945 Budett Road		College Park	GA	30349	SF	Camp Creek
Smith	Cheryl	Georgia Department of Natural Resources	250 Butler Street, SE,	#1058	Atlanta	GA	30334	DNR	
Smith	Cardinal W.	NPU	952 Ralph David Abernathy Blvd.		Atlanta	GA	30310	ATL	
Smith	Brenda	Thaxton Pointe Homeowners Association	4075 Hawkins Crossing		College Park	GA	30349	SF	Camp Creek
Smith	Alice	Alpharetta Parks & Recreation	1825 Old Milton Parkway		Alpharetta	GA	30004	NF	Big Creek
Smith	Blanchie		4725 Guilford Forst Drive		Atlanta	GA	30331	SF	Camp Creek
Snell	Woody	South Fulton Developers Association	The Pacific Group	5755 Dupree Dr., Ste. 130	Atlanta	GA	30327	NF	Camp Creek
Snider	Russell	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Snyder	Bruce		303 South River Farm Road		Alpharetta	GA	30022	NF	Johns Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Snyder	Nancy		303 South River Farm Road		Alpharetta	GA	30022	NF	Johns Creek
Solon	Tony	Park Glenn -- Subdivision	1450 Bittercress Court		Alpharetta	GA	30005	NF	Big Creek
Sommerville	Jim	Environmental Protection Division	4244 International Parkway, Suite 119		Atlanta	GA	30354	EPD	
Soucy	K.	Rivergate Homeowners Association	8250 Habersham Waters Road		Atlanta	GA	30350	NF	Sandy Springs
Spangler	Henry	The Pines	7131 Forest Lane		Union City	GA	30291	SF	Camp Creek
Spangler	Laura	Peaview Watershed Alliance	P.O. Box 21960		Atlanta	GA	30322		
Spencer	Anthony	Fulton County	141 Pryor St., SW		Atlanta	GA	30303	FC	
Spikes	Jesse		2158 Niskey Lane Trail		Atlanta	GA	30331	SF	Camp Creek
Spotts	John	Georgia Soil & Water Conservation District	4274 McClatchey Circle NE,		Atlanta	GA	30342	NF	
Stadler	Rob		345 Ridgeview Trail NE		Atlanta	GA	30328-33		
Staley	Bill	Spring Run -- Subdivision	211 Road Oak Lane		Alpharetta	GA	30004	NF	Big Creek
Stallings	Ann		4330 Cascade Road, SW		Atlanta	GA	30331	SF	Camp Creek
Stanko	Tom	Atlanta Regional Commission	3715 Northside Parkway, Building 200, Suite 300		Atlanta	GA	30327	ALL	
Starling	Michael	Atlanta Regional Commission	3715 Northside Parkway	Bldg. 200 Ste .300	Atlanta	GA	30327-28	ALL	
Starnes	Debi	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Statham	Ben & Linda	The Little River Valley Watershed Association	270 Hickory Flat Road		Alpharetta	GA	30004		Little River
Statham	Tom		1455 Rochelle Drive		Dunwoody	GA	30338		
Statum	Glenda		270 Hickory Flat Road		Alpharetta	GA	30004	NF	Big Creek
Steadman	Vivian	S. T. O. P.	924 Bower Street, N.W.		Atlanta	GA	30318	ATL	
Stephens	Ernest	Sierra Club	3303 Whitney Avenue		Hapeville	GA	30214	ALL	Camp Creek

Last Na	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Stephens	Mike	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Stephens	Thomas	Rico Neighborhood Association	7040 Rico Road		Palmetto	GA	30268	SF	Camp Creek
Stevens	Patricia	Atlanta Regional Commission	3715 Northside Parkway, Building 200 Suite 300		Atlanta	GA	30327	ALL	
Steward	Barbara	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Steward	Joan	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Stewart	Denval	Fulton County Legal Dept.	141 Pryor St., Ste. 4038		Atlanta	GA	30303	x	
Stickler	Cy	Tophat Soccer Club	829 West Wesley Road		Atlanta	GA	30327	NF	
Stills	Laura		6370 Riverchase Circle		Atlanta	GA	30328	NF	Sandy Springs
Stinson	Buck & Beth		315 Brookshire Lane		Alpharetta	GA	30022	NF	Johns Creek
Stipe	Eric	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Stoebig	Bill	Sommerset at Henderson Village -- Subdivision	8910 S. Somerset Lane		Alpharetta	GA	30004	NF	Big Creek
Stokes	James	Empire Real Estate Board, Inc.	5353 Fairington Road		Lithonia	GA	30038	NF	
Stokes	Phillip		750 Aberdeen Lane NE		Atlanta	GA	30328	NF	Sandy Springs
Stone	Beverly		80 Forestwood Lane		Atlanta				
Stovall	Marion & Jacque		1685 Reynolds Road		Atlanta	GA	30331	SF	Camp Creek
Straw		Litchfield	320 Buckingham Foret Court		Roswell	GA	30075	NF	Big Creek
Sukenick	Adam	Cobb Co. Water System	662 South Cobb Drive		Marietta	GA	30060		
Sullivan	Michael	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Sullivan	Mike	United Way	P.O. Box 852		Roswell	GA	30077	NF	Sandy Springs
Summers	Dave	Six Branches Homeowners Association	1597 Branch Valley Drive		Roswell	GA	30076	NF	Sandy Springs

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Sumrell	Barbara		1350 Nix Road		Alpharetta	GA	30004		
Suna	Steve	NPU	918 Ponce De Leon Avenue, NE		Atlanta	GA	30306	ATL	
Swarts	Jeanne		125 Gentry Gates		Alpharetta	GA	30022	NF	Johns Creek
Sylvester	Denise		2270 Enon Road		Atlanta	GA	30331	SF	Camp Creek
Syprett	Todd	La Vista Associates, Inc.	3201 Peachtree Corners Circle		Norcross	GA	30092	NF	
Tait	Jennifer	Ogden Environmental and Energy Services	1395 South Marietta Parkway		Marietta	GA	30067	CON	
Tallay	Sandra	Fulton County	141 Pryor Street SW, Suite 8054		Atlanta	GA	30303-34	FC	
Tapp	Helen	Council For Quality Growth	1770 Indian Trail Road, Suite 160		Norcorss	GA	30093	NF	
Tarnowski	Stan	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Tate	Edwin	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Tate	Jeff	Heritage Cove	4249 Scott Circle		East Point	GA	30344	SF	Camp Creek
Tatum	Reginald		4930 Montcalm Drive		Atlanta	GA	30331	SF	Camp Creek
Tauxe	Cindy	Druid Hills Civic Association Watershed	1553 Emory Road		Atlanta	GA	30306	ALL	
Taylor	Andrea	SEW Americorps	1719 Prince George Drive		Riverdale	GA	30296		
Taylor	Robert	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Thomas	Anne	Roswell Neighbor News	345 Roswsell Hills Court		Roswell	GA	30075	NF	Big Creek
Thomas	Peter	RMJ	141 Pryor St., SW, Ste. 3701		Atlanta	GA	30303	CON	
Thomas	John		4005 Cascade Road		Atlanta	GA	30331	SF	Camp Creek
Thomas	Paul	City of Atlanta	44 Trinity Avenue		Atlanta	GA	30335		
Thompson	Brenda	Sandtown Community Association	2015 Wallace Road		Atlanta	GA	30331	SF	Camp Creek

Last Na.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Thompson	Derin		530 Nottingham Court		Alpharetta	GA	30005		
Thompson	Dolores	Fulton County	141 Pryor Street, Suite 6023		Atlanta	GA	30303	FC	
Thompson	Frank		5000 Dublin Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Thompson	Gerald		8105 Johnson Road		Palmetto	GA	30268	SF	Camp Creek
Thompson	Zan	Thompson Design Associates	800 Community Cirlce		Roswell	GA	30075-45	NF	Big Creek
Thomson	Mark	Pinewalk Swim & Tennis Club	2665 Pinewalk Way		Alpharetta	GA	30022	NF	Johns Creek
Thorn	Jim		715 Buttercup Trace		Alpharetta	GA	30022	NF	Johns Creek
Thornton	Toni	Fulton County	141 Pryor Street	Suite 5001	Atlanta	GA	30303		
Thornton	Grant	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Thornton	Grant	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Thruston	Charles		2910 The Meadows Way		College Park	GA	30349	SF	Camp Creek
Thurman	Karen		12290 Broadwell Road		Alpharetta	GA	30004	NF	Big Creek
Tiernan	Ginna	Dekalb County	1300 Commerce Drive, Room 200		Decatur	GA	30030	NF	
Tieslau	Dottie	The Pines at Kimball Bridge	125 Pine Knoll		Alpharetta	GA	30022	NF	Johns Creek
Till	Ashley	Fulton County	141 Pryor St, 6th Fl		Atlanta	GA	30303	FC	
Todd	Violet		4870 Cochran Mill Road		Fairburn	GA	30213	SF	Camp Creek
Todd	Terry	Fulton County	141 Pryor St., SW, Ste. 6036		Atlanta	GA	30303	FC	
Todd	Melissa		5415 Cochran Mill Road		Fairburn	GA	30213	SF	Camp Creek
Todebush	Connie		200 Ketton Downes		Duluth	GA	30022		Johns Creek
Tolliver	Lafaitha	BP / Amoco Oil	5300-B Fulton Industrial Boulevard		Atlanta	GA	30336	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Toole	Joyce		7045 Rico Road		Palmetto	GA	30268	SF	Camp Creek
Toomey	Keith	City of Atlanta	68 Mitchell Street, SE		Atlanta	GA	30335	ATL	
Townes	Dwight	Fulton County Dept. of Information/Public Affairs	141 Pryor St., SW, Ste. 3090		Atlanta	GA	30303	FC	
Trammell	Susan		6335 Mt. Brook Way		Atlanta	GA	30328	NF	Sandy Springs
Troy	Mike	Siemens Energy & Automation	3333 Old milton Parkway		Alpharetta	GA	30022	NF	Johns Creek
Tucker	Inga	PEQ	4405 Mall Blvd., Ste 310		Atlanta	GA	30291	SF	Camp Creek
Tully	Brian	North River Neighborhood Association, Inc.	215 River Court Parkway		Atlanta	GA	30328	NF	Johns Creek
Tura	Beth		445 Poplar Glen Court		Alpharetta	GA	30022	NF	Johns Creek
Turner	Claude		5501 Long Island Drive NW		Atlanta	GA	30327		
Turner	Bruce	Greenmont Walk -- Subdivision	12000 Greenmont Walk		Alpharetta	GA	30004	NF	Big Creek
Umstead	Tom		795 Old Creek Trail		Atlanta	GA	30328	NF	Sandy Springs
Upshaw	Mary Louise	Fulton County	141 Pryor St., SW, Ste. 2085		Atlanta	GA	30303	FC	
Vachon	Nicole	Forty Oaks Nature Preserve	3790 Market Street		Clarkston	GA	30021	NF	Johns Creek
Van Dorn	Janice		555 Treyburn View		Alpharetta	GA	30004		
Van Eldik	Colette		6319 Charleston Place		Dunwoody	GA	30350		
Vander Horst	Paul	Georgia Institute of Technology	225 North Avenue, NW 4th Floor Administration Bui		Atlanta	GA	30332-06	ATL	
Varner	Missye	City of Union City	5047 Union Street		Union City	GA	30291	SF	Camp Creek
Venable	Michael		5720 Mortilly Circle		College Park	GA	30349		
Venice	Christine	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Verma	Pratyush	Georgia Department of Natural Resources	7 Martin Luther King Jr. Drive, Suite 643		Atlanta	GA	30334	DNR	

Last Nai.	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Vesely	Bill	Aquascape	605 Mauldin Road	Suite B	Woodstock	GA	30188		
Vincent	Gayle	Park Glenn -- Subdivision	1465 Bittercress Court		Alpharetta	GA	30005	NF	Big Creek
Vogel	Warren		945 Ivey Falls Drive		Atlanta	GA	30328	NF	Sandy Springs
Vuocolo	Mike		6721 Wessex Downs Drive		Alpharetta	GA	30005	NF	Johns Creek
Wach	Roger	Huntcliff Homeowners Association	70 Cliffcreek Trace		Atlanta	GA	30350	NF	Sandy Springs
Wachsler	Julie	Cliftondale Community Club, Inc.	3925 West Stubbs Road		College Park	'	30349	SF	Camp Creek
Wagness	David	U.S. Geological Survey	3039 Amwiler Road, Suite 130		Atlanta	GA	30360	NF	
Walker	Donald		4045 Cascade Road		Atlanta	GA	30331	SF	Camp Creek
Walker	Barrett	Dekalb Civic Coalition	1729 Coventry Place		Decatur	GA	30030	NF	
Walker	Ted	Northside Hospital	1000 Johnson FerryRoad, NE		Atlanta	GA	30342-16	NF	
Wall	Kent	SE Waters AmeriCorps	1169 Hancock Dr.		Atlanta	GA	30306	ALL	
Waller	Thomas	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Walston			4035 West Stubbs Road		Atlanta	GA	30331	SF	Camp Creek
Walton	Howard	Hallie Hill/Forest Oak Homeowners Association	2690 Fox Hall Lane		College Park	GA	30349	SF	Camp Creek
Wansley	Maribeth	South Fulton Clean & Beautiful	9895 Brazell Road		Palmetto	GA	30268	SF	Camp Creek
Warren	Dale	Atlanta Planning Advisory Board	691 Woodland Avenue, SE		Atlanta	GA	30316	ATL	
Warren	Jim	Johns Creek Community Association	11555 Medlock Bridge Road, Suite 150		Duluth	GA	30097	NF	
Warren	Richie		9400 Prestwick Club Drive		Duluth	GA	30155	NF	
Waters	D'Valincia	R&D Environmental	2366 Sylvan Avenue, SW		Atlanta	GA	30344	SF	Camp Creek
Watkins	Harriette	GA. Power Co.	760 Ralph McGill Blvd.		Atlanta	GA	30312	ALL	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Watkins	Ronald	City of College Park	P.O. Box 87137		College Park	GA	30337	SF	Camp Creek
Watkins	Vangie	Atlanta Planning Advisory Board	211 Pemberton Road, SW		Atlanta	GA	30331	SF	
Watson	Arletta		2760 Evansdale Circle		Atlanta	GA	30340		
Watson	Bill	GA Tech Public Policy	GA Tech 345		Atlanta	GA	30332	ALL	
Watson	Marilyn		115 Sessingham		Alpharetta	GA	30022	NF	Johns Creek
Weathersby	Arnold	Carver Hills Neighborhood Association	1586 Mary George Ave., NW		Atlanta	GA	30318	ATL	
Webb	Chris	Fulton County -- Dept of Env. & Comm. Dev.	141 Pryor St., SW, Ste. 5001		Atlanta	GA	30303		
Webb	Judy	State Bridge Community Association	11155 Buice Road		Alpharetta	GA	30022	NF	Big Creek
Webb	Marvin		780 Branchview Drive		Atlanta	GA	30331	SF	Camp Creek
Weber	Brent		9500 Medlock Bridge Road		Duluth	GA	30097	NF	Big Creek
Weber	Diana		950 Jones Road		Roswell	GA	30075	NF	Big Creek
Weber	Marty		405 Sable Court		Alpharetta	GA	30004	NF	Big Creek
Webster	Karen	Fulton County Board of Commissioners	141 Pryor Street SW, Ste. 10032		Atlanta	GA	30303	FC	
Weeks	Jim	City of Palmetto	P.O. Box 190		Palmetto	GA	30268	SF	Camp Creek
Wella	E.A.		650 Windsor Parkway		Atlanta	GA	30342	NF	Sandy Springs
Weimar	Connie	Peavine Watershed Alliance	354 Brooks Ave, NE		Atlanta	GA	30307	ALL	
Weinberg	Susan	Mountain Park Civic Club	136 Cardinal Drive		Mountain Par	GA	30075	NF	Big Creek
Weinman	Richard	Highpoint Civic Association	190 Inland Ridge Way		Atlanta	GA	30342	NF	Sandy Springs
Weiss	Mark	The Renaissance Communications Group	1425 Market Boulevard, Suite 330-R3		Roswell	GA	30076	NF	Sandy Springs
Welborn	Jim and Mary	Mid Broadwell Traced -- Subdivision	7400 Mid Broadwell Trace		Alpharetta	GA	30004	NF	Big Creek

Last Nan..	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Wentworth	Sheryl	Plymouth Colony -- Subdivision	520 Plymouth Lane		Alpharetta	GA	30004	NF	Big Creek
Wernick	Richard	Land Sellutions	11111 Houze Street, Ste. 300		Roswell	GA	30076	NF	Big Creek
West	Solomon		3765 Garrison Drive		Atlanta	GA	30331	SF	Camp Creek
West	Dee	Alpharetta Clean and Beautiful	131 Roswell Street, Suite A-1		Alpharetta	GA	30004	NF	Big Creek
Wheeler	Diana	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Whigham	Dan	Huntcliff Homeowners Association	970 The 16th Fairway		Atlanta	GA	30350		
Whiman	A.J.		6310 River Shore Parkway NW		Atlanta	GA	30328		
White	Ortude	Atlanta Apartment Association	881 Ponce de Leon Avenue		Atlanta	GA	30306	ALL	
White	Sally	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
White	Mary		6750 Rico Road		Palmetto	GA	30268	SF	Camp Creek
White	James		1395 Loch Lomone		Atlanta	GA	30331		
White	Jack	SE Waters AmeriCorps	996 Drewry St., NE		Atlanta	GA	30306	ALL	
White	Cissie	Trinity School River Kids Network	3254 Northside Parkway		Atlanta	GA	30327	NF	
White	Cindy	White Family Water Watchers	600 Abbeywood Drive		Roswell	GA	30075-66	NF	Big Creek
White	Ray	Dekalb County	1300 Commerce Drive, Room-Maloof Center		Decatur	GA	30030-32	NF	
Whitehurst	Lynnetta		1957 Dand Creek		Atlanta	GA	30331	SF	Camp Creek
Whitlow	Harrison	Inverness	2215 Azalea Drive		Roswell	GA	30075	NF	Big Creek
Whittle	Gwyndolyn	City of Mountain Park	100 Mountain Park Road		Mountain Par	GA	30075	NF	Big Creek
Widener	Russell	City of East Point	2777 East Point Street		East Point	GA	30344	SF	Camp Creek
Wiggins	Gene	City of Fairburn	P.O. Box 145		Fairburn	GA	30213	SF	Camp Creek

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Wilburn	Sheri	North Roswell Homeowners League	2030 Trotters Ridge Ln.		Roswell	GA	30075	NF	Big Creek
Wilby	Walter Scott	Intrenchment Creek Coaltion	393 Ormond Street, SE		Atlanta	GA	30315	ATL	Camp Creek
Wilder	Nancy	Peachtree Dunwoody North Civic Association	7309 Peachtree Dunwoody Road		Atlanta	GA	30328	NF	Sandy Springs
Wiley	Hank		515 Crossgate Trail		Alpharetta	GA	30022	NF	Johns Creek
Wilfer	Ann	Georgia Environmental Organization	3185 Center St.		Smyrna	GA	30080	NF	
Wilkes	J.	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Wilkins	Teresa	Hidden Valley Community Association	4320 Hidden Court		Atlanta	GA	30349	SF	Camp Creek
Willard	Wendell	Rivergate Homeowners Association	755 Rivergate Drive		Atlanta	GA	30350	NF	Sandy Springs
Williams	Tom	Capital Resources & Properties	124 Sweetberry Court		Alpharetta	GA	30005	NF	Camp Creek
Williams	Kevin		1395 S. Marietta Parkway, Bld 300, Ste. 210		Marietta	GA	30067	SF	
Williams	Tom	Underwood Hills Homeowners Association	6495 Scott Valley Road		Atlanta	GA	30328	NF	Sandy Springs
Williams	Edwin	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Williams	Carolyn	Red Oak Community	4443 Campbell Drive , Apt. 57		College Park	GA	30349	SF	Camp Creek
Williams	Bruce		3437 Rockhaven Circle NE		Atlanta	GA	30324		
Williams	Brenda		5140 Cralyn Court		Duluth	GA	30097	NF	
Williams	Ron	Tiller Walk Subdivision	5606 Claire Rose Lane		Atlanta	GA			
Williams	John	Metro Atlanta Homebuilders Association	P.O. Box 450749		Atlanta	GA	31145	SF	
Williamson	Sarah	GEO AmeriCorps	3185 Center St.		Smyrna	GA	30080	NF	
Willingham	Anthony		5010 Dublin Drive, SW		Atlanta	GA	30331	SF	Camp Creek
Wilson	Cassandra		2125 Datona Drive		Atlanta	GA	30331	SF	Camp Creek

Last N	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Wilson	Libba		4570 Cochran Mill Road		Fairburn	GA	30213	SF	Camp Creek
Winbush	Donald		P.O. Box 490322		Atlanta	GA	30349		
Winbush	Don	Devonshire Homeowners Association	2280 Wexford Dr		College Park	GA	30349	SF	Camp Creek
Winiski	Paula	Martin's Landing Foundation	120 Buckhorn Court		Roswell	GA	30076	NF	Sandy Springs
Winn	Mork	Georgia Department of Natural Resources	7 Martin Luther King Jr. Drive Suite 643		Atlanta	GA	30334	DNR	
Winslett	Larry	Sierra Club	109 Azalea Trail		Dahlonega	GA	30533	ALL	All
Winslow	Cleta	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Winter	Thorne	LOR, Inc.	P.O. Box 647		Atlanta	GA	30301		
Winters	Owen	Natural Science for Youth Foundation	130 Azalea Drive		Roswell	GA	30075	NF	Big Creek
Wise	Lloyd	U.S. Environmental Protection Agency, Region 4	61 Forsyth Street		Atlanta	GA	30303	EPA	
Wise	Solomon		3765 Garrison Drive		Atlanta	GA	30331	SF	Camp Creek
Wise, Jr.	Roger		225 Boels Tee		Roswell	GA	30076	NF	Sandy Springs
Witt	Michael	Mayfield -- Subdivision	1402 Salem Drive		Alpharetta	GA	30004	NF	Big Creek
Wood	Jere	Roswell Neighborhood Network	1175 Canton Street		Roswell	GA	30075	NF	Big Creek
Wood	Guy	Ponderosa Neighborhood Association	525 Sam Remo Court		College Park	GA	30349	SF	Camp Creek
Wood	Jere	City of Roswell	38 Hill Street, Suite 115		Roswell	GA	30075	NF	Big Creek
Woodling	Dennis	City of Alpharetta	1790 Hembree Road		Alpharetta	GA	30004	NF	All
Woolard	Cathy	City of Atlanta	55 Trinity Avenue, SW		Atlanta	GA	30335	ATL	
Word	David	Georgia Department of Natural Resources	205 Butler Street, Suite 1152		Atlanta	GA	30334	DNR	
Worley	Joan	Riverside Homeowners Association	6269 Mountain Brook Way		Atlanta	GA	30328	NF	Sandy Springs

Last Name	First Name	Organization	Address 1	Address 2	City, State		Zip	Area	Watershed
Wright	Harriet		5275 Happy Valley Circle		Atlanta	GA	30331	SF	Camp Creek
Wright	Shera		11145 Willow Bend Dr.		Roswell	GA	30075	NF	Big Creek
Wright	Tommie		1735 Reynolds Road, SW		Atlanta	GA	30331	SF	Camp Creek
Wurl	Sonny		6800 Mann Road		Palmetto	GA	30268	SF	Camp Creek
Wynn	Becky		5950H State Bridge Road, Suite 160		Duluth	GA	30097	NF	
Yakubesab	T.		11820 Upper Wooten Road		Palmetto	GA	30268	SF	Camp Creek
Yeazel	Jennifer	Sierra Club	4898 Long Island Drive		Atlanta	GA	30342	ALL	Sandy Springs
Yeh	Allison	Atlanta Regional Commission	200 Northcreek Ste 300	3715 Northcreek Parkway	Atlanta	GA	30327-28	ALL	
Yost	Carolyn	Jamestown Colony Neighborhood Association	4445 Greenspring Road		College Park	GA	30337	SF	Camp Creek
Young	Dan	Wallace Road	2050 Wallace Road, SW		Atlanta	GA	30331	SF	Camp Creek
Youngblood	Rena		4825 Jones Bridge Woods Drive		Alpharetta	GA	30022	NF	Johns Creek
Youngman	Bill	U. S. Army Corps of Enginners	P.O. Box 2288		Mobile	AL	36628	COE	
Ziegler	Steve		4965 Agate Drive		Alpharetta	GA	30022	NF	Johns Creek
Zimmerman	Sharon		6417 Deerings Lane		Norcross	GA	30092		
Zoda	Suzanne	EnviroComm, Inc.	5427 Carriage Lane		Powder Sprin	GA	30127	SF	
Zoller	Jean	City of Alpharetta	2 South Main Street		Alpharetta	GA	30004	NF	Big Creek
Zuniga	Richard	Lakeview Estate Homeowners Association	9610 Red Bird Lane		Alpharetta	GA	30022	NF	Johns Creek

Appendix M

APPENDIX M

Sandy Springs Water Quality Monitoring Plan

		STATIONS				
	One-time Costs	Long Island Creek @ Lake Forrest	Long Island Creek @ Jett Rd.	Heards Creek	Marsh Creek	Powers Branch
EQUIPMENT AND SUPPLIES						
Sigma Auto Samplers (2 additional units)	$50,000					
Marsh McBirney Flow-mate 2000	$3,000					
Staff gauge & installation	$300					
Top-set Wading Rod	$500					
Waders	$400					
Tape Measure	$30					
Miscellaneous Sampling Supplies (year)		$200	$200	$200	$200	$200
General maintenance (per year)		$2,000	$2,000	$2,000	$2,000	$2,000
Total Equipment and Maintenance Cost	$54,230	$2,200	$2,200	$2,200	$2,200	$2,200
SAMPLING EVENTS - LABOR						
Base flow (all stations) (12 events/year) x (2 staff/event) x ($50/hr/staff) x 6 hours/staff/event		$7,200				
Storm flow (8 events/year) x (2 staff/event) x ($50/hr/staff) x 2 hours/staff/event		$3,200	$3,200	$3,200	$3,200	$3,200
Total Labor Cost		$10,400	$3,200	$3,200	$3,200	$3,200
LABORATORY SAMPLE ANALYSIS						
Costs assume 1 sample/station/baseflow event and 3 samples/station/stormflow event						
Baseflow ($200/sample**)		$2,400	$2,400	$2,400	$2,400	$2,400
Wet ($200/sample)		$4,800	$4,800	$4,800	$4,800	$4,800
Heptaclor epoxide ($300/analysis)* 10 events/year, 2 analyses; one for dissolved conc., one for particulate		$9,000	$9,000	$9,000	$9,000	$9,000
Total Laboratory Cost		$16,200	$16,200	$16,200	$16,200	$16,200
FLOW MONITORING (all stations) - LABOR						
5 baseflow events and 5 storm events 7 hours per event/staff (2 staff)		$7,000	$7,000	$7,000	$7,000	$7,000
Plot Stage/Discharge Curve		$500	$500	$500	$500	$500
Total Flow Monitoring Cost		$7,500	$7,500	$7,500	$7,500	$7,500
PROJECT MANAGEMENT						
Labor (4 hours/week)						$15,600
TOTAL COST	$54,230	$36,300	$29,100	$29,100	$29,100	$44,700
						$222,530

*Heptaclor epoxide cost multiplied by 1.5 to monitor in-channel sediment and storm drain outfall samples
**Parameters: TSS, NH4, TKN, NO2+3, TP, TPO4, COD, Fecal coliform, Turbidity