SOURCE WATER ASSESSMENT REPORT

AUBURN WATER WORKS BOARD
1501 WEST SAMFORD AVENUE
AUBURN, ALABAMA 36832

SC PROJECT No. 01732-SWA

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SOURCE WATER ASSESSMENT REPORT

PWSID 804 - AUBURN WATER WORKS

Prepared for:

Auburn Water Works Board
&
City of Auburn
Water Resource Management Department
1501 West Samford Avenue
Auburn, Alabama 36832

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1.0 INTRODUCTION

This document represents part of a cooperative agreement between the Auburn Water Works Board (AWWB), the City of Auburn Water Resource Management Department, and the Alabama Department of Environmental Management (ADEM) to conduct an assessment of the water system's raw water source to determine the susceptibility to contamination of the surface water supply. The AWWB for many years has funded a perennial watershed surveillance program to monitor potential contaminant sources that could diminish the quality of the raw water source serving the citizens of Auburn, Alabama. This program has included routine monitoring at selected sites for chemical, physical, and microbiological parameters, periodic storm-event monitoring, and stream bio-assessments of macro-invertebrates to determine the on-going health of the feeder streams. In the Source Water Assessment Program (SWAP), a watershed delineation, a contaminant source inventory, a contingency plan, and a program to assure public awareness is addressed. The objectives of the study are to assist personnel in assessing known and potential sources of contamination in the watershed and the susceptibility of the water source to each contaminant. The study was done according to the guidelines of ADEM Administrative Code 335-7-6 and Scope of Services - Assessment of Surface Water Sources included in the cooperative grant agreement. The objectives included the following scope of work:

- Field confirmation of the ADEM inventory of known or potential (permitted) contaminants of concern within the ADEM-delineated Source Water Protection Area (SWPA)
- Field inventory of known and potential contaminants not provided by ADEM and within the boundaries of the SWPA
- Establishing the location, in Geographic Information Systems (GIS) format, of known and potential contaminant sources; submission of a map to ADEM, showing the GIS-established locations of contaminant sources
- Provide assistance to the AWWB to conduct a susceptibility analysis of all contaminants of concern identified in the SWPA
- Provide assistance in development of a contingency plan for the system's water treatment plant in the event of a contamination event
- Preparation of the SWPA report according to ADEM-mandated format

This report presents the methods used to conduct the study, describes the geologic and physiographic setting of the watershed and SWPA, presents findings from the contaminant

source inventory, presents the results of the susceptibility analysis, and provides a summary of the contingency plan.

1.1 Regulatory Background

The Source Water Assessment Program of Alabama resulted from amendments to the Safe Drinking Water Act of 1974 (ADEM 1990, 1991, 1996). The US Environmental Protection Agency (EPA) was directed to oversee the development by states of plans and programs designed to protect areas providing surface water to public water intakes. ADEM administers the SWAP for the State of Alabama, and in January 1999, regulations were promulgated that require water systems that utilize surface water sources to complete Source Water Assessments to protect public health by preventing contamination of their municipal water supplies. In addition to source water protection, other benefits of the program include preservation of water resources for future generations, avoidance of the expense of cleaning up a contaminated water supply or finding alternative sources of water, and encouraging economic growth by securing an abundant supply of clean water. ADEM submitted to AWWB the guidelines and scope of services to be provided along with a USGS-type map (1:24,000) that included the boundaries of the Source Water Protection Area (watershed) and buffer zones adjacent to the water supply and feeder streams, the location of the intake, and designated sites for known or potential sources of contamination listed in the ADEM inventory. ADEM's requirements for the SWAP include:

1. A brief description of the watershed and the SWPA
2. An inventory of known and potential sources of contamination within the boundaries of the watershed
3. Susceptibility analyses of known and potential sources of surface water contamination within the SWPA
4. Contingency plans for possible contamination events

2.0 CHEWACLA CREEK BASIN

2.1 Description

The raw water source for Auburn, Alabama is primarily served by surface water impounded in Lake Ogletree (approximately 300 acres, with an estimated capacity of 1.7 billion gallons at full pool). Chewacla Creek and its major tributaries of Nash Creek and Robinson Creek originate near the city of Opelika, Alabama in Lee County and meander South through the community of Beauregard, then West to Lake Ogletree. The watershed encompasses approximately 35 square

miles and is located just North and East of the fall line in southern Lee County. All of the drainage basin for Lake Ogletree lies within the Southern Piedmont district of the Piedmont Upland physiographic section. This eco-region comprises a transitional area of the mostly mountainous Appalachians to the Northeast, and the relatively flat plain to the Southeast, with land surface altitudes ranging from 400 feet to 800 feet above sea level. It is a complex mosaic of Pre-Cambrian and older Paleozoic metamorphic and igneous rocks with moderately dissected irregular plains with a few hills. The geology of the area is predominantly clastic sediments that have been altered by regional metamorphism into the gneiss, schist, and marble. Rocky bottoms of boulders, cobble, and gravel characterize streams in this region with many streams containing large quantities of sand and silt as a consequence of sedimentation due to human activities on the watershed. Chewacla Creek (and its tributaries) has a use category designation of Aquatic Fish and Wildlife, but excess siltation and nutrients from construction activities and urban run-off allow only partial support of their use designation. Chewacla Creek does fully support its designation as a domestic water supply. Much of the watershed for Lake Ogletree is pasture and forest, with much development in recent years contributing to many new homes and businesses being constructed, especially in the Northeastern and Eastern sections of the watershed.

2.2 Physiography and Geology

The SWPA of the Auburn intake (at Lake Ogletree) and the Chewacla Creek /Lake Ogletree watershed is situated in the Southern Piedmont district of the Piedmont Upland physiographic section, and Lake Ogletree is located only a few miles upstream where Chewacla Creek flows through the Fall Line district of the East Gulf Coastal Plain physiographic section. The Southern Piedmont district is characterized by rolling hills and valleys with land surface altitudes ranging from 400 feet above sea level to 800 feet above sea level.

Igneous and metamorphic rocks that range in age from Pre-Cambrian to Late Paleozoic underlie the SWPA, and just south of Lake Ogletree, sedimentary deposits of Cretaceous age unconformably overlie the basement complex of igneous and metamorphic rocks. The geology of the area is predominantly clastic sediments that have been altered by regional metamorphism into the gneiss, schist, and marble.

The portion of the Chewacla Creek Basin within the SWPA is the Pine Mountain Group of the Southern Piedmont. To the east of the SWPA is the Hollis Quartzite, which consists of quartzite containing mica, feldspar, and some pyrite. The quartzite formations surround the Chewacla Marble, which is located on the South end of the SWPA. Chewacla marble is a light

gray, fine grained dolomite. A portion of this formation is currently being mined by Martin-Marietta Materials, and the water being pumped from the quarry pit (approximately 6.5 million gallons per day) may become a potential long-term source for the raw water supply for the AWWB following closure of the facility at some point in the future. Three wells have been drilled that can be tapped in the future, with assessments to be conducted prior to the utilization of the aforementioned wells.

2.3 Climate

The climate of the SWPA is characterized as sub-tropical and humid, with a mean annual rainfall of approximately 55 inches. The mean precipitation ranges from 23.64 inches in summer/ fall to 30.94 inches in the winter/spring. In summer, the maximum average temperature is 89.1 °F, with an average minimum daily temperature of 33.6 °F in the winter. Local afternoon thunderstorms bring most of the rainfall from June to August, with Fall months yielding much less rain except for an occasional tropical storm or hurricane, which can lead to significant rainfall. The period of heaviest rainfall is usually between December and April. Storm-event monitoring in 2000 and 2001 in the SWPA revealed only a few rainfall events greater than 3 inches (maximum of 6.1 inches in 48 hours).

3.0 SOURCE WATER PROTECTION AREA

3.1 Description

The SWPA includes Lake Ogletree (approximately 300 acres), Chewacla Creek (2 branches), and its major tributaries of Nash Creek and Robinson Creek, which originate in or near Opelika, Alabama. These streams meander South through the community of Beauregard, then West to Lake Ogletree. The watershed drains approximately 35 square miles and is located just Northeast of the fall line in southern Lee County, Alabama. The SWPA lies primarily outside the Auburn City limits with most of the watershed located in unincorporated Lee County and in the city limits of Opelika, Alabama. The SWPA includes a 500-foot buffer zone from the water's edge on each side of Chewacla Creek and along each tributary, constituting 4,436 acres or 22% of contributing land area in the SWPA.

3.1 Time of Travel

The time of travel of water from major or easily-identifiable land marks to the point of intake was estimated to enable water treatment plant personnel and city engineers to estimate time available to respond to a contamination event upstream from Lake Ogletree. Stream velocity estimates vary based on measurements at various sites at low flow and during two storm events as part of a storm-event monitoring project in 2000-2001. From these data, the maximum flow velocity indicated in **Table 4** was measured at 4.6 feet per second. At maximum flow of the main stem of Chewacla Creek, a potential contaminant at the headwaters would require an estimated three hours to flow into Lake Ogletree, but would require approximately 15 hours at average flow. Maximum flow on Robinson Creek would require approximately 5.5 hours and up to 78 hours during average flow for a contaminant to travel from the headwaters to Lake Ogletree. The maximum flow rate in Nash Creek would deliver a contaminant (at the headwaters) to the lake in approximately one hour, with approximately 22 hours required at the average flow rate. During severe drought conditions, portions of Nash Creek, Robinson Creek, and Chewacla Creek have been observed with virtually no measurable flow velocity. It is obvious that potential contaminants introduced at any point in the watershed would constitute a moderate to high susceptibility at maximum flow velocities of either stream.

4.0 SUSCEPTIBILITY ANALYSIS

SunCrest Laboratories, L.L.C. and personnel of the AWWB conducted a susceptibility analysis of the Lake Ogletree SWPA in which known and potential contaminants were assigned a high, moderate, or low rating for their risk to contaminate the intake on Lake Ogletree. The analysis is intended to determine the contaminant sources that constitute the greatest risk and which will receive the highest priority for monitoring and/or controlling any potential releases from the location of the contaminant. Results are shown in **Table 5**, and these ratings will be finalized in joint participation with ADEM. In addition, each of the eight ADEM-specified categories for rating each potential contaminant is listed along with the rating for each potential contaminant.

Site locations (47 sites) of these potential contaminants have been placed on the map as recommended by ADEM. The site location, potential contaminants, site address, contact or owner name, telephone number and email address (if available) of contact, and longitude-latitude (and elevation) of each site are shown in **Table 3**.

5.0 NOTIFICATION PROCEDURE FOR CONTAMINATION EVENTS

Owners or contact persons for properties or facilities deemed to be contamination risks will be presented with appropriate information on which agencies they should contact should an accidental spill or contamination event occur on their property. This information will be posted at the place of business for all personnel to view. First notification should be to the Lee County Emergency Management Agency [Contact: Katherine C. Russell, Director; 908 Avenue B, Opelika, AL (or P.O. Box 2769, Opelika, AL 36803-2769); telephone (334) 749-8161 or email: krussell@leecoema.com] with follow-up to Matt R. Dunn, P.E., Auburn Water Resource Management Department, 1501 W. Samford Avenue, Auburn, AL 36832 [Telephone (334) 501-3077 daytime or (334) 501-3100 after hours; email: mdunn@auburnalabama.org]. The caller should identify themselves, the location of the property, the nature and extent of the contamination, and the time of the contamination event.

6.0 CONTINGENCY PLANS

In the event of a contamination episode, the information on the nature of the contaminant, the extent of the contamination, and the location and time of the event, should be required of any caller. For hydrocarbon spills (oil, gasoline, etc.), the Auburn Water Works Board is prepared to apply absorbent booms within a short period of time at a site near the mouth of Chewacla Creek at the head of Lake Ogletree (or at any site upstream) to diminish the extent of the contamination of the lake. Personnel of SunCrest Laboratories [Telephone (334) 257-3435 or email: suncrestlab@centurytel.net] will be available for water monitoring and/or to determine flow rates and time-of-travel for contaminants as needed. Pumps at the lake can be shut down to prevent any raw water from being pumped to the treatment plant. The board has contingency plans allowing tapping into the water supply of the City of Opelika (contracted for up to 3.6 million gallons per day and has the option to procure greater amounts). Several wells are available to provide additional water in case of an emergency. In addition, contingency plans are in place (service pipeline already in place) to pump 3.5 million gallons per day (if requested by the City) from water stored in a rock quarry downstream from the Lake Ogletree dam (Martin Marietta Rock Quarry). Eight water storage tanks in the city of Auburn have a storage capacity of 7.7 million gallons serving just over 20,000 customers. Presently storage capacity would handle in excess of 1.5 days of water use for the city. A clear well with a capacity of 1,000,000 gallons was constructed at the water treatment plant several years ago. The AWWB water treatment plant could process 7.2 million gallons per day in 2001, and an expansion in 2002 increased potential capacity to12.0 million gallons per day (presently permitted for 8.0 million gallons per day). A volume of 1,831,538,000 gallons of raw water was pumped from Lake Ogletree in the year 2000, with 1,658,699,000 gallons of finished water pumped to the distribution system. An average volume of 5.569 million gallons per day was measured at the raw water intake during

2009, with a total raw water volume of 2,032,798,000 gallons of water pumped from Lake Ogletree in 2009. A total of 1,910,398,000 gallons of finished water (Estes Plant) was pumped to the distribution system during 2009 (with a total of 2,089,292,705 gallons finished water used in 2009).

7.0 METHODS FOR INFORMING THE PUBLIC

Upon completion of the Source Water Assessment report and approval by ADEM, several copies of the report will be available for review at the City's Bailey-Alexander Water and Sewer Complex (1501 W. Samford Avenue, Auburn, AL 36832). Public service announcements will be issued over local radio stations and a notice will be placed in the local newspapers. In addition, a notice will be issued to all customers in their monthly bill that the report is available. Individual copies will be provided upon written request. Additional copies will be filed at the Auburn Public Library and Auburn City Hall.

Table 1. Land Owners - SWPA Buffer Zone (Land Atlas & Plat Book–2001)*

Auburn Watershed

Lake Ogletree / Chewacla Creek

1. City of Auburn Water Works Board
2. Hickory Hills Subdivision
3. Floyd Armor / Milton & Patricia Stokely
4. Thomas Nixon & Sherrill Nixon
5. Alan Nixon & Arleene Dodson
6. Virginia Whatley and James L. Whatley
7. Auburn Apartments
8. John and Beth Mitchell
9. P.P. Mitchell and Leon Whatley
10. State of Alabama Forestry Commission
11. Kawita
12. Ann Hilyer and Hilyer Family Limited
13. William and Celia Dryer
14. Nelson and Gladys Hilyer
15. James and Juanita Blackwell
16. Collins
17. Bobby and Gina Parker
18. G & D Bowman
19. Mary and John Whatley

Lee's Lake (Emerald Lake)

(West Prong)

1. Plainsman Development
2. Pep Bryant
3. Billy and Charlotte Yarbrough
4. J. Pruitt, Sr.
5. Melton & Sistrunk
6. Emma Melton
7. Kenneth & Charlotte Williford
8. David & Diane Rhyne
9. Dudley & Abrams
10. H & H Colley

(East Prong)

11. Nealy & Linda Pearce
12. Linda Pearce
13. J.R. Dudley et. al.
14. Ina & Lorna Mayfield, Ltd.
15. Villa Heights Subdivision
16. J & W Lyle
17. John & Carolyn Patterson

Nash Creek

1. Floyd Armor
2. W. J. Trussell III
3. William & Karen Trussell
4. B. Ferguson
5. R. Trussell
6. Mamie L. Trussell
7. Peggy L. Jones
8. M. Williams
9. Auburn University
10. Wayne & Penny Wood
11. John & Mary Pratt
12. Helen T. Jones
13. Cowikee Turf Limited
14. James D. Vaughn
15. James & Betty Vaughn

Robinson Creek

1. John & Beth Mitchell
2. David & Cynthia James
3. Peter Mitchell
4. Dena L. Mitchell
5. Opelika Metal Fab.
6. George Mann

***Land Atlas & Plat Book Not Updated Since 2001.**

Table 2. Types of Contaminant Sources

Types of Potential Sources	Potential Contaminators	Map Site Numbers
Agriculture	1. Animal Feeding	26
	2. Crop land	26
	3. Silviculture	26
	4. Plant Nurseries/Lawn Service	12, 17, 31, 32, 33
Residential	1. Septic Systems	10,18, 27, 29, 40, 45
	2. Highways	
Government	1. Municipal Sewer Lines / Pump Stations	22, 23, 29, 41
	2. Schools & Parks	6, 41
	3. Waste Water Treatment Lagoons	6
Commercial	1. Auto Repair Shops / Vehicles	11, 19, 28, 36, 38, 39, 42, 46
	2. Dry Cleaners	
	3. Gasoline Service Stations	1, 4, 7, 20, 25, 35
	4. Above Ground Fuel Storage	1, 4, 7, 8, 9, 13, 15, 20, 23, 32, 38, 42, 46
	5. Metal Shop	16, 36
	6. Fertilizers/Pesticides	3, 21
Industrial	1. Railroad Tracks & Yards	9, 15, 44
	2. Above Ground Tanks	(See above Commercial)
	3. Quarries	2, 37
	4. General Industries	14, 24, 28, 34, 46

Table 3. Contaminant Sources (Source Water Protection Area)

#	Name	Address*	Description	Coordinates			Contact Name	Contact Number
				Latitude	Longitude	Alt.		
1	Alice Faye's Station	Parker Crossroads 2028 Lee Road 166 Opelika, AL 36804	Gasoline Service Station	32°33'44.714" N	85°20'42.993" W	660.28'	Alice McCormick	741-9383
2	APAC Mid-South (Southern Aggregates)	1413 Lee Rd. 166 & Spring Villa Rd. 3085 AL Hwy 169 Opelika, AL 36804	Limestone Quarry (NPDES AL 0070122)	36°34'36.987" N	85°20'23.294" W	-	Gary Watkins	749-0003
3	Auburn Environmental & Pest Services	6485 Lee Rd. 54 Auburn, AL 36830	Environmental laboratory & pest services	32°34.103' N	85°24.799' W	623.0'	Charlie Brewer	745-0055 502-6049
4	Beauregard Liberty	7717 Hwy 51 Opelika, AL 36804	Gasoline Service Station	32°32'43.122" N	85°22'19.930" W	623.7'	Phillip Ray	745-4956
5	Beauregard Country Kitchen	Hwy 51 Opelika, AL 36804	Restaurant	32°32.541' N	85°22.189' W	643.0'	Barbara Coleman	749-8757
6	Beauregard High School	7343 Hwy 51 Opelika, AL 36804	Sewage Lagoon / Stormwater Run-off (AL 0043656)	32°33'10.984" N	85°22'13.001" W	626.0'	Lee County Board of Education brown.richard @leek12al.us	745-5916 745-9770
7	Beauregard Stop & Shop (Coastal)	6076 AL Hwy 51 Opelika, AL 36804	Gasoline Service Station	32°34'06.030" N	85°22'16.421" W	608.39'	Tren Pattel	745-6278
8	Blossman Gas	3003 Marvyn Pkway Opelika, AL 36804	Propane gas & Supplies	32°36'50.691" N	85°22'16.436" W	735.61'	Bert Hallmark opelika@ blossmangas.com	749-1431
9	Castone Corp.	1511 Old Columbus Rd. Opelika, AL 36804	Stone aggregates, fuel tanks, gravel, etc.	32°37'13.289" N	85°21'02.199" W	806.42'	Tammy Batson	745-3571
10	Chewacla Rd. Trailer Park	Hwy 169 Opelika, AL 36804	Residential, Mobile Home	32°37'15.196" N	85°20'27.184" W	798.14'	None	None

#	Name	Address*	Description	Coordinates			Contact Name	Contact Number
				Latitude	Longitude	Alt.		
11	Countryside Motors	Hwy 51 Opelika, AL 36804	Automotive Sales	32°35'16.797" N	85°22'14.145" W	702.26'	Terry Pitts, Owner	741-9700
12	Cutting Edge	6609 Lee Rd. 54 Auburn, AL 36830	Lawn service, landscaping	32°34.016' N	85°24.905' W	577.0'	Jamie Brady email: www.cutting edgelawn.bus	826-8806
13	Dixie Pipeline	5565 AL HWY 51 Opelika, AL 36804	Pipeline Substation for Natural Gas	32°34'34.306" N	85°22'13.671" W	646.62'	Chris Robinson, Environmental Engineer	745-7128
14	Dollar General	7943 Hwy 51 Opelika, AL 36804	General retail merchandise	32°32.531' N	85°22.211' N	669.0'	Charles Hamburger	749-0099
15	East Alabama Paving	Old Columbus Hwy Opelika, AL 36804	Asphalt, gravel, sand, fuel, etc.	32°37.658' N	85°22.233' W	810.0'	Bobby Cash	749-8865
16	East Alabama Welding	AL Hwy 51 South Opelika, AL 36804	Office / shop / metals	32°34'59.627" N	85°22'14.132" W	688.48'	Jack Heptinstall	749-5262
17	Flower Zone Nursery	Windham Acres Ct. 1270 Lee Rd 47 Opelika, Al 36804	Horticulture Nursery (Insecticides and Fertilizers)	32°32'11.765" N	85°23'47.358" W	606.25'		745-0494
18	Hidden Woods Trailer Park	Lee Cty Rd 621 AL Hwy 169 Royal St. Opelika, AL 36804	Residential; mobile homes	32°35'50.299" N	85°20'43.477" W	738.33'	None	None
19	Interport Transportation	2011 Marvyn Pkway Opelika, AL 36804	Storage & distribution	32°37.529' N	85°22.274' W	813.0'	None	None
20	LA-Z-B Chevron	4184 Lee Rd 146 Auburn, AL 36830	Gasoline Station / Food Service	32°34'13.836" N	85°24'41.238" W	604.06'	Mr. Harry Lazenby or Mrs. Jamie Lazenby, Owners lazbee@bellsouth.net	749-5346
21	Lee County Feed & Seed	7747 Hwy 51 Opelika, AL 36830	Animal feed, fertilizers, seeds, plants, etc.	32°32.713' N	85°22.308' W	643.0'	Eric Hilyer	741-5320

#	Name	Address*	Description	Coordinates			Contact Name	Contact Number
				Latitude	Longitude	Alt.		
22	Lift Station 1 (T12 N) LS-5 Hwy 51 Bridge	Robinson Creek, Marvyn Parkway	Lift Station (Opelika Sewage)	32°36'39.95" N	85°22'15.094" W	710.57'	City of Opelika Waste Water Admin.	705-5450
23	Lift Station 2(T22) LS-14, Deer Park	Robinson Creek (Carol Ave., Opelika Mobile Home Park)	Lift Station (Opelika Sewage)	33°36'02.886" N	85°22'44.489" W	674.84'	City of Opelika Waste Water Admin.	705-5450
24	L, S, & S (Lovoy, Summerville, & Shelton, P.C.)	6801 Lee Rd. 54 Auburn, AL 36830	Accounting Services	32°33.910' N	85°25.002' W	541.0	Michelle Granberry	741-1050
25	M&M Grocery	2010 AL Hwy 169 Opelika, AL 36804	Chevron Gasoline Station (UST Permit 14607)	32°35'59.754" N	85°20'14.376" W	740.62'	Mr. Dana Riddle, Owner	742-9605
26	Nixon's Farm	Lee Co. Rd. 027 Auburn, AL 36830	Beef Cattle Farm	32°33'17.942" N	85°24'46.696" W	536.67'	T. Nixon	749-2338
27	Oakhaven Trailer Park	1 Oakhaven Mobile Park Opelika, AL 36804	Mobile home park with storm-water pond	32°36'26.731" N	85°22'16.698" W	731.66'	Charlotte Williford	745-0116
28	Opelika-Auburn News/ WRBL News	Media General Drive Opelika, AL 36804 (280 Extension)	Newspapers, paper fliers, trucking, etc.	32°36.890' N	85°24.799' W	787.0'	James Rainey email: jrainey@ alsmg.com	749-6271
29	Opelika Mobile Home Park	Carol Avenue Opelika, AL 36804	Residential, mobile homes	32°35.947' N	85°22.537' W	541.0'	www.opelikaMHP. com	787-9117
30	Opelika Solid Waste Disposal	Spring Villa Rd. Opelika, AL 36804	Residential and construction solid waste	32°35.145' N	85°20.391'	672.0'	City of Opelika, Solid Waste Mgmt.	705-5450
31	Out in the Garden	4137 Lee Rd 146 Auburn, AL 36802	Horticulture, landscaping materials, lawn ornaments, etc.	32 34.265' N	85 24.711'	606.0'	Katherine Conner	705-6965
32	Parker Grassing	5723 AL HWY 51 Opelika, AL 36804	Fertilizers and pesticides	32°34.451 N	85°22.209 W	658.00'	Teresa Clark parkergrassing@ bellsouth.net	749-3870

#	Name	Address*	Description	Coordinates			Contact Name	Contact Number
				Latitude	Longitude	Alt.		
33	Plant World	7509 Lee Rd. 146 Auburn, AL 36830	Horticultural Nursery; Fertilizers and Insecticides	32°33'55.834" N	85°21'23.588" W	616.91'	John M. Hammond	745-0459
34	Publix Food & Pharmacy (Store #1294)	Hamilton Place 2415 Moore's Mill Rd. Auburn, AL 36830	Food, beverages, groceries, household items, etc.	32°35.116' N	85°26.220' W	656.0'	Ed Hutton	502-8667
35	R & M Food Mart (Solo Gasoline)	823 Crawford Rd. Opelika, AL 36804	Gasoline Service Station-ALD 17003	32°36'45.513" N	85°21'23.382 W	756.27'	Manny Singh	745-0796
36	Road Runner Auto Sales & Salvage	1542 Lee Rd 47 Auburn, AL 36830	Junk vehicle storage, auto parts; oil, gasoline, etc.	32°32'12.225" N	85°24'07.230" W	566.98'	Joe Christopher	749-5549
37	RQ Discharge (Southern Aggregates Quarry)	Spring Villa Rd. 3085 AL Hwy 169 Opelika, AL 36804	Ground water from quarry; alkalinity, conductivity, minerals	32°35'01.274" N	85°20'23.977" W	668.2'	APAC Mid-South, An Oldcastle Co.	749-0003
38	S&H Trucking	1300 Old Columbus Rd. Opelika, AL 36804	Truck repair and service, fuel, tanks	32°37'13.190" N	85°20'57.187" W	794.36'	Mr. Harry Ward, Owner spward@charter.net	705-4999
39	S&S Automotive	2132 AL Hwy 169 Opelika, AL 36804	Tune ups and oil changes. Some junk cars on property	32°35'53.840" N	85°20'13.147" W	737.55'	Mr. Sammy Larow, Owner	745-6402
40	Scottland Forest Trailer Park	500 Crawford Rd, #107 Opelika, AL 36804	Well maintained residential park; mobile homes	32°37'04.452" N	85°21'41.366" W	797.97'	David Tankersley dtankersley@bellsouth.net	749-0073
41	Southview Primary School	2712 Marvyn Pkway Opelika, AL 36804	Educational facility	32°37.041' N	85°22.325' W	757.0'	Opelika Board of Education	745-9711
42	Thompson Carriers	1700 Old Columbus Rd. Opelika, AL 36804	On-site storage of tanker trucks & gravel, etc	32°37'02.999" N	85°20'33.219" W	805.83'	Mr. John Thompson or Mrs. Beverly Thompson	745-0484
43	Turning Point	1001 Old Columbus Rd. Opelika, AL 36804	Metals, cutting fluids, and solvents, etc.	32°37'14.008" N	85°21'15.393" W	784.37'	Mr. Wayne Jones, (First Realty Lease)	741-7007

Table 4. Hydraulic Flow Data

Distances, Velocities, & Time of Travel

Distances

Chewacla Creek	Nash Creek	Robinson Creek
T20	T2	TP
↓	↓	↓
3,330'	3,080'	4,080'
↓	↓	↓
C8	T1	T12
↓	↓	↓
6,470'	4,830'	23,180'
↓	↓	↓
C7	C1	T11
↓		↓
10,050'		18,110'
↓		↓
C5		C1
↓		
12,440'		
↓		
C1		

Velocities				
Site	**Min** (ft/sec)	**Max** (ft/sec)	**Longitude**	**Latitude**
C1	0.10	1.8	32°33'18.033 N	85°25'38.620 W
C5	0.79*	3.3*	32°33'7.089 N	85°23'39.889 W
C7	1.36	4.6	32°33'41.887 N	85°22'20.213 W
C8	0.52	4.6	32°33'59.260 N	85°21'42.365 W
T1 (T1')	0.10	2.1	32°33'52.807 N	85°25'7.794 W
T2	0.10*	2.1*	32°34.413 N	85°25.114 W
T11	0.18	3.9	32°33'48.393 N	85°23'23.379 W
T12	0.28*	3.9*	32°36'38.066 N	85°22'16.687 W
T20	0.10	4.6	32°34.451 N	85°21.858 W
TP	0.18*	3.9*	32°36.703 N	85°21.292 W

*Estimated

Table 4. Hydraulic Flow Data (Continued)

Travel Between Points		
Chewacla Creek		
Time Of Travel (min)		
Site to Site	**During Average Flow**	**During Maximum Flow**
C5 → C1	460	79
C7 → C5	152	64
C7 → C1	612	143
C8 → C7	114	23
C8 → C1	726	166
T20 → C8	177	11
T20 → C1	903	177
Robinson Creek		
T11 → C1	2,156	105
T12 → T11	2,146	99
T12 → C1	4,302	204
TP → T12	377	17
TP → C1	4,679	326
Nash Creek		
T1 → C1	805	38
T2 → T1	513	24
T2 → C1	1,318	62

* C1: Mouth of Chewacla Creek at head of Lake Ogletree
TP: Trailer Park at Hwy 169 (Robinson Creek)

Table 5. Po ial Contaminant Inventory and Susceptibility Anal

#	Site Name	Contaminant Type	Latitude	Longitude	Susceptibility Analysis Categories								Overall Susceptibility Ranking
					Intake Structure	Existing Raw Water Quality	Water Flow Conditions	Distance To Intake	Water Source Contami-nation Potential	Contami-nant Toxicity	Contaminant Site Characteristics	Contaminant Site Clean-Up/ Control	
1	Alice Faye's Station	Hydrocarbons (oil & Gasoline); Storm water runoff	32°33'44.714" N	85°20'42.993" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
2	APAC Mid-South (Southern Aggregates	Turbidity, alkalinity, various minerals including calcium & magnesium, & hydrocarbons	36°34'36.987" N	85°20'23.294" W	N/A	N/A	N/A	High	Mod.	Low	Low	Low	Low
3	Auburn Environmental & Pest Serviees	Nitrate, Nitrite, Sulfate, Phosphate, Insecticides, Turbidity, Herbicides	32°34.103' N	85°24.799' W	N/A	N/A	N/A	Mod.	Mod.	Mod.	Low	Low	Low
4	Beauregard Liberty	Hydrocarbons (oil & Gasoline); Storm water runoff	32°32'43.122" N	85°22'19.930" W	N/A	N/A	N/A	High	High	Mod.	Low	Mod.	Mod.
5	Beauregard Country Kiteben	Storm water runoff, turbidity	32°32.541' N	85°22.189' W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
6	Beauregard High School	Storm water runoff, hydrocarbons, turbidity	32°33'10.984 N	85°22'13.001" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
7	Beauregard Stop & Shop (Coastal)	Storm water runoff, bydrocarbons, turbidity	32°34'06.030" N	85°22'16.421" W	N/A	N/A	N/A	High	Low	Mod.	Low	Mod.	Mod.
8	Blossman Gas	Storm water runoff, hydrocarbons, turbidity	32°36'50.691" N	85°22'16.436" W	N/A	N/A	N/A	High	Mod.	Mod.	Low	Low	Low
9	Castone Corp.	Storm water runoff, turbidity, various minerals	32°37'13.289" N	85°21'02.199" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
10	Chewacla Rd Trailer Park	Storm water runoff, Turbidity, hydrocarbons	32°37'15.196" N	85°20'27.184" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
11	Countryside Motors	Hydrocarbons (Gasoline & Oil)	32°35'16.797" N	85°22'14.145" W	N/A	N/A	N/A	High	Low	Mod.	Low	Low	Low
12	Cutting Edge	Nitrate, Nitrite, Sulfate, Phosphate, Insecticides, Turbidity, Herbicides	32°34.016' N	85°24.905' W	N/A	N/A	N/A	Mod.	Mod.	Mod.	Low	Low	Low

#	Site Name	Contaminant Type	Latitude	Longitude	Susceptibility Analysis Categories								Overall Susceptibility Ranking
					Intake Structure	Existing Raw Water Quality	Water Flow Conditions	Distance To Intake	Water Source Contamination Potential	Contaminant Toxicity	Contaminant Site Characteristics	Contaminant Site Clean-Up/ Control	
13	Dixie Pipeline	Storm water runoff, some hydrocarbons	32°34'34.306" N	85°22'13.671" W	N/A	N/A	N/A	High	Mod.	Mod.	Low	Low	Low
14	Dollar General	Storm water runoff	32°32.531' N	85°22.211' W	N/A	N/A	N/A	Mod.	Low	Low	Low	Low	Low
15	East Alabama Paving	Storm water runoff, turbidity, hydroearbons	32°37.658' N	85°22.233' W	N/A	N/A	N/A	High	Low	Mod.	Low	Low	Low
16	East Alabama Welding	Storm water runoff, cutting fluids, metals	32°34'59.627" N	85°22'14.132" W	N/A	N/A	N/A	High	Mod.	Mod.	Low	Low	Low
17	Flower Zone Nursery	Nitrate, Nitrite, Sulfate, Phosphate, Insecticides, Turbidity, Herbicides	32°32'11.765" N	85°23'47.358" W	N/A	N/A	N/A	Mod.	Mod.	Mod.	Low	Low	Low
18	Hidden Woods Trailer Park	Storm water runoff, turbidity, hydrocarbons	32°35'50.299" N	85°20'43.477" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
19	Interport Transportation	Storm water runoff, turbidity, hydroearbons	32°37.529' N	85°22.274' W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
20	LA-Z-B Chevron	Hydroearbons (oil & Gasoline); Storm water runoff	32°34'13.836" N	85°24'41.238" W	N/A	N/A	N/A	High	High	Mod.	Low	Mod.	Mod.
21	Lee County Feed & Seed	Nitrate, Nitrite, Sulfate, Phosphate, Insecticides, Turbidity, Herbicides	32°32.713' N	85°22.308 ' W	N/A	N/A	N/A	Mod.	Mod.	Mod.	Low	Low	Low
22	Lift Station 1 (T12 N), LS-5, Hwy 51 Bridge	Coliform, Fecal Coliform, Cryptosporidium, Giardia, Nitrate, Nitrite, Sulfate, Turbidity, Viruses, Phosphorus, Hydrocarbons (Oil & Gasoline)	32°36'39.95" N	85°22'15.094" W	N/A	N/A	N/A	High	High	Mod.	Mod.	Mod.	Mod.
23	Lift Station 2 (T22), LS-14, Deer Park	Coliform, Fecal Coliform, Cryptosporidium, Giardia, Nitrate, Nitrite, Sulfate, Turbidity, Viruses, Phosphorus, Hydrocarbons (Oil & Gasoline)	33°36'02.886" N	85°22'44.489" W	N/A	N/A	N/A	High	High	Mod.	Mod.	Mod.	Mod.

#	Site Name	Contaminant Type	Latitude	Longitude	Susceptibility Analysis Categories								Overall Susceptibility Ranking
					Intake Structure	Existing Raw Water Quality	Water Flow Conditions	Distance To Intake	Water Source Contamination Potential	Contaminant Toxicity	Contaminant Site Characteristics	Contaminant Site Clean-Up/ Control	
24	L, S, & S (Lovoy, Summerville, & Shelton, P.C.	Storm water runoff, turbidity	32°33.910' N	85°25.002 ' W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
25	M&M Groeery	Storm water runoff, hydrocarbons, turbidity	32°35'59.754" N	85°20'14.376" W	N/A	N/A	N/A	High	Low	Mod.	Low	Low	Low
26	Nixon's Farm	Beef Cattle Farm; Coliform, Fecal Coliform, Cryptosporidum, Giardia, Nitrate, Nitrite, Sulfate, Phosphorus, turbidity, viruses. Potential spill site.	32°33'17.942" N	85°24'46.696" W	N/A	N/A	N/A	High	Mod.	Mod.	Low	Low	Mod.
27	Oakhaven Trailer Park	Storm water runoff, turbidity, hydrocarbons	32°36'26.731" N	85°22'16.698" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
28	Opelika-Auburn News/WRBL News	Storm water runoff, turbidity, hydrocarbons	32°36.890' N	85°24.799' W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
29	Opelika Mobile Home	Storm water runoff, turbidity, hydrocarbons	32°35.947' N	85°22.537' W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
30	Opelika Solid Waste Disposal	Nitrate, Nitrite, Sulfate, Phosphate, Insecticides, Turbidity, Herbicides, Hydrocarbons	32°35.145' N	85°20.391' W	N/A	N/A	N/A	High	Mod.	Mod.	Low	Low	Mod.
31	Out in the Garden	Nitrate, Nitrite, Sulfate, Phosphate, Insecticides, Turbidity, Herbicides	32°34.265' N	85°24.711' W	N/A	N/A	N/A	High	Mod.	Mod.	Low	Low	Mod.
32	Parker Grassing	Nitrate, Nitrite, Sulfate, Phosphate, Insecticides, Turbidity, Herbicides	32°34.451' N	85°.22.209' W	N/A	N/A	N/A	High	Mod.	Low	Low	Low	Low
33	Plant World	Nitrate, Nitrite, Sulfate, Phosphate, Insecticides, Turbidity, Herbicides	32°33'55.834" N	85°21'23.588" W	N/A	N/A	N/A	High	Mod.	Low	Mod.	Low	Mod.
34	Publix Food & Pharmacy (Store #1294)	Storm water runoff, turbidity	32°35.116' N	85°26.220' W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
35	R & M Food Mart (Solo Gasoline)	Storm water runoff, turbidity, hydrocarbons	32°36'45.513" N	85°21'23.382" W	N/A	N/A	N/A	High	Low	Mod.	Low	Low	Low

#	Site Name	Contaminant Type	Latitude	Longitude	Susceptibility Analysis Categories								Overall Susceptibility Ranking
					Intake Strueture	Existing Raw Water Quality	Water Flow Conditions	Distance To Intake	Water Source Contami-nation Potential	Contami-nant Toxieity	Contaminant Site Charaeteristics	Contaminant Site Clean-Up/ Control	
36	Road Runner Auto Sales & Salvage	Hydrocarbons (Oil & Gasoline)	32°32'12.225" N	85°24'07.230" W	N/A	N/A	N/A	High	Mod.	Low	Low	Low	Low
37	RQ Discharge (Southern Aggregates Quarry)	Turbidity, alkalinity, various minerals including Calcium & Hydrocarbons	32°35'01.274" N	85°20'23.977" W	N/A	N/A	N/A	High	Mod.	Low	Low	Low	Low
38	S&H Trucking	Hydrocarbons (Oil & Gasoline), Storm water runoff	32°37'13.190" N	85°20'57.187" W	N/A	N/A	N/A	High	Mod.	Low	Low	Low	Low
39	S&S Automotive	Hydrocarbons (Oil & Gasoline), Storm water runoff	32°35'53.840" N	85°20'13.147" W	N/A	N/A	N/A	High	Mod.	Low	Low	Low	Low
40	Scottland Forest Trailer Park	Storm water runoff, turbidity, hydrocarbons	32°37'04.452" N	85°21'41.366" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
41	Southview Primary School	Storm water runoff, turbidity	32°37.041' N	85°22.325' W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
42	Thompson Carriers	Hydrocarbons (Oil & Gasoline), Storm water runoff	32°37'02.999" N	85°20'33.219" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
43	Turning Point	Storm water runoff, cutting fluids, metals	32°37'14.008" N	85°21'15.393" W	N/A	N/A	N/A	High	Mod.	Mod.	Low	Low	Mod.
44	Uniroyal / Goodrich (Michelin North America)	Storm water runoff, Hydrocarbons, mineral nutrients, turbidity (No new produets)	32°36'32.665" N	85°20'14.245" W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low
45	Whatley Housing Project	Septic Tanks (Coliform, Fecal Coliform, Cryptosporidium, Giardia, Nitrate, Sulfate, Turbidity, Viruses, Phosphorus, & Beef Cattle	32°32'43.595" N	85°23'12.512" W	N/A	N/A	N/A	High	Mod.	Low	Low	Low	Low
46	Wilhite Enterprises	Storm water runoff, hydrocarbons, mineral nutrients, turbidity	32°36.571' N	85°23.528' W	N/A	N/A	N/A	High	Low	Low	Low	Low	Low

#	Site Name	Contaminant Type	Latitude	Longitude	Susceptibility Analysis Categories								Overall Susceptibility Ranking
					Intake Structure	Existing Raw Water Quality	Water Flow Conditions	Distance To Intake	Water Source Contami-nation Potential	Contami-nant Toxicity	Contaminant Site Characteristics	Contaminant Site Clean-Up/ Control	
47	Intake	Potential For All Contaminants	32°33'04.853 N	85°26'47.606 W	Mod.	Mod.	Mod.	N/A	Mod.	Mod.	Low	Low	Mod.

PLATES

APPENDIX

Appendix. Table 1.

Scheduled Watershed Sampling Sites-I

Site	Location	Latitude	Longitude	Altitude	Comments
C1	Chewacla, Lee County Rd. 054	32°33'18.033 N	85°25'38.620 W	523.75'	Chewacla Creek, Below mouth of Nash Creek
C2	Chewacla Creek, Lee County Rd. 027	32°33'17.942 N	85°24'46.696 W	536.84'	Chewacla Creek, Beef cattle farm
C5	Chewacla Creek, Lee County Rd. 112	32°33'7.089 N	85°23'39.889 W	574.11'	Chewacla Creek, Near former dairy farm (beef cattle + Willow Run Lake inflow)
C7	Chewacla Creek, Hwy 51	32°33'41.887 N	85°22'20.213 W	591.80'	Chewacla Creek, Below source of entry for quarry water (Southern Aggregates)
C8	Chewacla Creek, Lee County Rd.146	32°33'59.26'1 N	85°21'42.365 W	608.95'	Chewacla Creek, Upstream from source of entry for quarry water
T19	Upper Chewacla Creek	32°35.644' N	85°20.564 W	702.0	Downstream from lake near Hwy 169
T32	Nash Creek / Chewacla (Lee Co. Rd. 146)	32°33'52.807 N	85°25'7.794 W	545.45'	Below environmental lab & horticulture nursery
T34	Upper Chewacla Creek (Downstream from Emerald Lake)	32°34.533 N	85°21.826 W	626.0'	Downstream from Emerald Lake and beef cattle farm
T11	Robinson Creek (Lee Co. Rd. 146)	32°33'48.393 N	85°23'23.379 W	557.65'	Upstream from confluence with Chewacla Creek
T12 N	Robinson Creek (Hwy 51)	32°36'39.469 N	85°22'14.199 W	708.47'	Upper Robinson Creek, Upstream from LS-5
T12 N Lift Station (LS-5)	Robinson Creek (Hwy 51)	32°36'39.953 N	85°22'15.094 W	710.57'	Upper Robinson Creek
T22	Robinson Creek (Carol Ave.)	32°36'00.12 N	85°22'49.596 W	669.29'	Mid-Robinson Creek
T22 Lift Station (LS-14)	Robinson Creek (Carol Ave.)	32°36'02.186 N	85°22'44.489 W	674.84'	Mid-Robinson Creek

Appendix. Table 1.

Site	Location	Latitude	Longitude	Altitude	Comments
L1	Lake Ogletree Dam	32°32'51.027 N	85°26'55.806 W	483.26'	
L2	Lake Ogletree Pump Stations	32°33'04.853	85°26'47.606 W	510.47'	Two raw-water intake stations
L5	Upper Lake Ogletree (Legg Inlet)	32°33'38.499 N	85°25'38.620 W	502.42'	Near Green Chapel Rd.
HQ-1	Rock Quarry Discharge, Southern Aggregates	32°35'01.274" N	85°20'57.187" W	668.2'	Spring Villa Rd.

Appendix. Table 2.

Intermittent Watershed Sampling Sites-II

Bioassessment Sampling Sites				
Site Designation	**Location**	**GPS Coordinates**		
		Latitude	**Longitude**	**Altitude**
CB-1 (C7)	Chewacla Creek	32°22'3`.887 N	85°22'20.213 W	591.80'
CB-2 (T11)	Robinson Creek	32°3'48.393 N	85°23'23.379 W	557.65'
CB-3 (C2)	Chewacla Creek	32°33'17.942 N	85°24'46.696 W	536.84'
CB-4 (T1')	Nash Creek	32°33'17.881 N	85°25'32.279 W	500.42'
CB-5 (L1')	Chewacla Creek	32°32'48.434 N	85°27'03.017 W	483.26'
Storm Event Sampling Sites				
SE 001 (T20 or T9)	Chewacla Creek	n/a	n/a	n/a
SE 002 (C7)	Chewacla Creek	32°33'41.887 N	85°22'20.213 W	591.80'
SE 003 (T11)	Robinson Creek	32°33'48.393 N	85°23'23.379 W	557.65'
SE 004 (T1')	Nash Creek	32°33'52.807 N	85°25'7.794 W	545.47'
SE 005 (C1)	Chewacla Creek	32°33'18.033 N	85°25'38.620 W	523.75'
SE 006 (L5)	Lake Ogletree	32°33'38.499 N	85°25'38.620 W	502.42'
SE 007 (L1')	Below Lake Ogletree	32°32'48.434 N	85°27'03.017 W	454.61'
SE 008 (L2)	Pump Station	32°33'04.853 N	85°26'47.606 W	510.47'

THE WATER WORKS BOARD OF THE CITY OF AUBURN 2009 CONSUMER CONFIDENCE REPORT

OUR WATER RESOURCES

The Water Works Board of the City of Auburn (AWWB) is proud to present its 2009 Consumer Confidence Report (CCR). In compliance with Federal and State laws, the AWWB routinely monitors for numerous constituents in the drinking water. We are pleased to report that our drinking water is safe and meets all Federal and State requirements. The tables in this report illustrate the results of water quality monitoring for the calendar year 2009. This is the thirteenth issue of a series of water quality reports made available to you annually, as required by the United States Environmental Protection Agency (EPA). Reports are published mid-year for the previous year.

AWWB's main water supply comes from Lake Ogletree, located in southeast Auburn. Lake Ogletree is approximately 300 acres and is fed primarily by Chewacla Creek (pictured above). The total watershed feeding the lake encompasses approximately 33 square miles. In 2009, water from Lake Ogletree was utilized to produce approximately 92% of AWWB's drinking water. In addition, the AWWB purchases drinking water from Opelika Utilities which receives its raw water from Saugahatchee Lake and the Halawakee Creek Embayment on Lake Harding. Drinking water is purchased from Opelika Utilities primarily to supplement growing season peak demands. Supplies purchased from Opelika Utilities accounted for approximately 8% of Auburn's drinking water in 2009. Monitoring of the Lake Ogletree watershed is conducted year-round for *Cryptosporidium* (*Crypto*), *Giardia lamblia* (*Giardia*), nutrients, and numerous other water quality parameters. Most contaminants originate from surface runoff associated with natural deposits, automobiles, industry, construction, and animals. The source water monitoring program is a critical tool in identifying contaminant sources and protecting AWWB's drinking water supply. In addition, the City of Auburn helps protect and manage the Lake Ogletree watershed by controlling development density within its jurisdiction and working with property owners to encourage good on-site methods to manage pollutant runoff. The AWWB also completed a Source Water Assessment for the Lake Ogletree Watershed in 2002 as mandated by the Alabama Department of Environmental Management (ADEM). The Source Water Assessment determined that Lake Ogletree is at a low to moderate risk from contaminant sources. During 2010, the AWWB will update the Source Water Assessment for the Lake Ogletree Watershed. This and other reports are available for review at the Bailey-Alexander Water and Sewer Complex, located at 1501 W. Samford Avenue. Please call Matt Dunn at (334) 501-3060 for more information.

Above: Lake Ogletree is the AWWB's main water supply. Lake Ogletree is approximately 300 acres and is fed primarily by Chewacla Creek.

Below: The Bailey-Alexander Water and Sewer complex houses field operations, administration and billing services.

Table of Primary Contaminants

At high levels, some primary contaminants are known to pose health risks to humans. This table provides a quick glance of any primary contaminant detections.

*mg/L unless indicated

CONTAMINANT	MCL (mg/L)	AMOUNT DETECTED (mg/L)	CONTAMINANT	MCL (mg/L)	AMOUNT DETECTED (mg/L)
Bacteriological			Chlordane	0.002	ND
Total Coliform Bacteria	< 5%	ND	Chlorine	4	1.40
Turbidity	TT	0.80 NTU	Chlorine dioxide	0.8	ND
Radiological			Chlorite	1	ND
Beta/photon emitters	4 mrem/yr.	ND	Chlorobenzene	0.1	ND
Alpha emitters	15 pCi/L	-0.75 pCi/L	Cis-1,2-Dichloroethylene	0.07	ND
Combined radium	5 pCi/L	ND	Dalapon	0.2	ND
Inorganic			Di-(2-ethylhexyl)adipate	0.4	ND
Antimony	0.006	ND	Di(2-ethylhexyl)phthalates	0.006	ND
Arsenic	0.01	ND	Dibromochloropropane	0.0002	ND
Asbestos	7 MFL	ND	Dichloromethane	0.005	ND
Barium	2	0.0293	Dinoseb	0.007	ND
Beryllium	0.004	0.0002	Dioxin[2,3,7,8-TCDD]	3E-08	ND
Cadmium	0.005	ND	Diquat	0.02	ND
Chromium	0.1	ND	Endothall	0.1	ND
Copper	AL=1.3	0.71	Endrin	0.002	ND
Cyanide	0.2	ND	Epichlorohydrin	TT	ND
Fluoride	4	1.40	Ethylbenzene	0.7	ND
Lead	AL=0.015	0.007	Ethylene dibromide	0.00005	ND
Mercury	0.002	0.0014	Glyphosate	0.7	ND
Nitrate	10	0.136	HAA5	0.06	0.0424
Nitrite	1	ND	Heptachlor	0.0004	ND
Selenium	0.05	ND	Heptachlor epoxide	0.0002	ND
Thallium	0.002	ND	Hexachlorobenzene	0.001	ND
Organic Chemicals			Hexachloropentadiene	0.05	ND
2,4-D	0.07	ND	Lindane	0.0002	ND
0-Dichlorobenzene	0.6	ND	Methoxychlor	0.04	ND
1,1,1-Trichloroethane	0.2	ND	Oxamyl [Vydate]	0.2	ND
1,1,2-Trichloroethane	0.005	ND	PCBs	0.0005	ND
1,1-Diehloroethylene	0.007	ND	p-Dichlorobenzene	0.075	ND
1,2,4-Trichlorobenzene	0.07	ND	Pentachlorophenol	0.001	ND
1,2-Dichloroethane	0.005	ND	Picloram	0.5	ND
1,2-Dichloropropane	0.005	ND	Simazine	0.004	ND
2,4,5-TP (Silvex)	0.05	ND	Styrene	0.1	ND
Acrylamide	TT	ND	Tetrachloroethylene	0.005	ND
Alaehlor	0.002	ND	TOC	TT	1.66
Atrazine	0.003	ND	Toluene	1	ND
Benzene	0.005	ND	Toxaphene	0.003	ND
Benzo(a)pyrene[PHAs]	0.0002	ND	trans-1,2-Dichloroethylene	0.1	ND
Bromate	0.01	ND	Trichloroethylene	0.005	ND
Carbofuran	0.04	ND	TTHM	0.08	0.0515
Carbon Tetrachloride	0.005	ND	Vinyl Chloride	0.002	ND
Chloramines	4	ND	Xylenes	10	ND

Primary Detected Contaminants

CONTAMINANT	MCLG	MCL	Range			Amount Detected		Test Date	Likely Source of Contamination
Bacteriological									
dity	0	TT	0	-	0.80	0.80	NTU	Hourly	Soil runoff
Radiological									
Beta/photon emitters	0	4	N/D			N/D	mrem/yr	8/22/2003	Decay of natural and man-made deposits
Alpha emitters	0	15	0	-	-0.75	-0.75	pCi/L	4/19/2005	Erosion of natural deposits
Inorganic Chemicals									
Barium	2	2	ND	-	0.0293	0.0293	ppm	4/29/2009	Discharge of drilling waste/metal refineries. Natural deposits.
Beryllium	0.004	0.004	ND	-	0.0002	0.0002	ppm	4/29/2009	Discharge of metal refineries and coal-burning factories
Copper	1.3	AL=1.3	No. of Sites above action level		0	0.71	ppm	9/6/2007	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	4	4	0.10	-	1.40	1.40	ppm	Daily	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	0	AL=15	No. of Sites above action level		0	7.00	ppb	6/5/2007	Corrosion of household plumbing systems, erosion of natural deposits
Mercury	0.002	0.002	ND	-	0.0014	0.0014	ppm	4/29/2009	Natural deposits, discbarge from refineries, landfills, etc.
Nitrate	10	10	ND	-	0.136	0.136	ppm	4/29/2009	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Organic Chemicals									
Chlorine	4 MRDLG	4 MRDL	1.14	-	1.80	1.40	ppm	Daily	Microbial disinfectant
TTHM	0	0.08	0.0004	-	0.0958	0.0515	ppm	Quarterly	By-product of drinking water chlorination
HAA5	0	0.06	0.0003	-	0.0625	0.0424	ppm	Quarterly	By-product of drinking water chlorination
TOC	-	TT	1.00	-	2.52	1.66	ppm	Monthly	Naturally present in the environment

Other Detected Constituents/Contaminants

CONTAMINANT	MCLG	MCL	Range			Amount Detected		Test Date	Likely Source of Contamination
Alkalinity	-	-	22	-	62.00	62.00	ppm	Daily	Natural deposits
Aluminum	-	0.2	ND	-	0.02	0.02	ppm	4/29/2009	Natural deposits, and treatment by-product at water plant
Bromodichloromethane	0	-	0.4	-	13.40	6.00	ppb	Quarterly	By-product of drinking water chlorination
Calcium	-	-	ND	-	11.95	11.95	ppm	4/29/2009	Natural deposits, lime fed at water plant
Carbon Dioxide	-	-	ND	-	18.20	18.20	ppm	4/29/2009	Natural deposits
Chloride	250	250	ND	-	9.50	9.50	ppm	4/29/2009	By-product of drinking water chlorination
Chloroform	70	-	BDL	-	85.20	35.50	ppb	Quarterly	By-product of drinking water chlorination
Color	-	15	ND	-	24.00	24.00	cu	Daily	Natural deposits
Dibromochloromethane	60	-	0	-	3.10	1.30	ppb	Quarterly	By-product of drinking water chlorination
Hardness	-	-	ND	-	40.00	40.00	ppm	4/29/2009	Natural deposits
Iron	0.3	-	ND	-	0.0087	0.0087	ppm	Daily	Natural deposits
Magnesium	-	-	ND	-	3.113	3.113	ppm	4/29/2009	Natural deposits
Manganese	0.05	-	0.003	-	0.049	0.049	ppm	Daily	Natural deposits
pH	-	-	6.9	-	8.20	7.30	su	Hourly	Natural deposits
Sodium	-	-	ND	-	5.832	5.832	ppm	4/29/2009	Natural deposits
Sulfate	250	-	ND	-	13.60	13.60	ppm	4/29/2009	Treatment by-product at water plant
Zinc	5	-	ND	-	0.15	0.15	ppm	6/11/2009	Corrosion inhibitor

Definitions/Key:

MCLG- Maximum Contaminant Level Goal (The level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.)

MCL – Maximum Contaminant Level (The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.)

MRDLG – Maximum Residual Disinfectant Level Goal (The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of the disinfectants to control microbial contaminants.)

MRDL – Maximum Residual Disinfectant Level (The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.)

ppm – parts per million (i.e. 1 ppm compares to 1 dollar out of 1 million dollars.)

parts per billion (i.e. 1 ppb compares to 1 dollar out of 1 billion dollars.)

parts per trillion (i.e. 1 ppt compares to 1 dollar out of 1 trillion dollars.)

pCi/l – picocuries per liter (A measure of radioactivity)

NTU – Nephelometric Turbidity Units (Measure of suspended particles such as silt, clay, organic matter, algae and other microorganisms.)

TT – Treatment Technique (A required process intended to reduce the level of a contaminant in drinking water.)

AL – Action Level (The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.)

ND – Not Detected (Indicates that the compound was not detected above the Lab's Method Reporting Limit.)

* - Based on a study conducted by ADEM with the approval of the EPA, a statewide waiver for the monitoring of ashestos and dioxin was issued. Thus, monitoring for these contaminants was not required (Author: Joe Alan Power, Statutory Authority. History: Adopted June 7, 2000.)

RESULT SUMMARY

The Water Works Board of the City of Auburn (AWWB) is pleased to report that none of the samples collected from the James Estes Water Treatment Facility or from the distribution system exceeded a primary or secondary contaminant maximum contaminant level (MCL) in 2009. Additionally, no MCL was exceeded for any contaminant from those portions of the AWWB distribution system receiving water from Opelika Utilities.

In accordance with ADEM Administrative Code 335-7-11 (Lead and Copper Rule), the AWWB was required to monitor for the presence of Lead and Copper in the drinking water during the 2007 monitoring year. Monitoring for Lead and Copper is required every three years and will therefore be performed again during 2010. The results of the 2007 monitoring did not indicate any violations of water quality standards under the Lead and Copper Rule. All results from the 2010 Lead and Copper monitoring will be published in the 2010 reporting year Consumer Confidence Report (CCR). The AWWB is also currently conducting monitoring associated with the Unregulated Contaminant Monitoring Program 2 and these results will also be published in the 2010 reporting year CCR.

CRYPTOSPORIDIUM AND GIARDIA LAMBLIA

Cryptosporidium (*Crypto*) and *Giardia lamblia* (*Giardia*) are protozoan parasites and are two of the most common microbiological contaminants found in surface water. Ingestion of these parasites can cause severe diarrhea, fever and other gastrointestinal problems. All surface water supplies throughout the country, especially in watersheds with large animal populations, are at risk for contamination. *Crypto* and *Giardia* are eliminated at the water treatment plant through effective sedimentation, filtration and disinfection. Since 1990, the AWWB has routinely tested for *Crypto* and *Giardia*. Although both have been detected in raw water samples in the past, neither organism has ever been detected in AWWB's treated water.

IMPORTANT HEALTH INFORMATION

All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 1-800-426-4791. Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or human activity. Some people may be more vulnerable to contaminants in drinking water than the general population. Individuals with compromised immune systems such as cancer patients undergoing chemotherapy, organ transplant recipients, individuals who have AIDS or are HIV-positive, individuals with immune system disorders, elderly persons and infants can be particularly at risk from infections. People at risk should seek advice about drinking water from their health care providers. EPA and the Centers for Disease Control (CDC) guidelines for the appropriate means to lesson the risk of infection by *Crypto* and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

AWWB NEWS AND PUBLIC INFORMATION

Frequent and intense storm events during 2009 were in sharp contrast to the "exceptional" drought that the region experienced during 2007 and 2008 (US Drought Monitoring Index). In fact, rainfall in the Auburn area during 2009 exceeded all previously recorded data. Though these rains were generally welcomed, they reemphasized the importance of the role of stormwater and watershed management practices in protecting and maintaining the quality of the local water resources. The Water Resource Management Department operates and manages a stormwater program through a Phase II National Pollutant Discharge Elimination System General Permit. The stormwater program is jointly funded by the AWWB and the City of Auburn. For more information about stormwater and watershed management please go to **http://www.auburnalabama.org/wrm-watershed/**.

The AWWB has taken proactive steps to ensure that the quality and quantity of water delivered to its customers is reliable and will be for many years to come. For more than 21 years, the AWWB has funded numerous studies on Lake Ogletree and its surrounding watershed. One of the most important of these studies is the biannual Source Water Monitoring Program. The study includes biannual monitoring within Lake Ogletree and its contributing watershed for numerous physical, chemical, bacteriological, and mineral water quality parameters. The program allows for the advanced knowledge of potential changes within the watershed, and allows for progressive management decisions within the watershed. These studies are an integral part of the ongoing effort and responsibility of the AWWB to ensure the delivery of safe and clean water.

The AWWB encourages the public to participate in the monthly Board meetings. Board meetings are typically held monthly at 4:00 P.M. on Thursday following the third Tuesday of each month in the AWWB Conference Room of the Bailey-Alexander Complex located at 1501 W. Samford Avenue. The Water Board members are Tony Overfelt, Ph.D. (Chairman), Emily Leischuck (Vice-Chairman), Errol Howard (Secretary), Jim Baird (Asst. Secretary), and Jeff Clary, Ed.D. If you have any questions concerning public participation or water quality, please call the Water Resource Management Office at (334) 501-3060 or send an e-mail to Matt Dunn, Watershed Division Manager, at **mdunn@auburnalabama.org**. If you have questions about setting up an account, w service changes or billing inquiries, please contact the Water Revenue Office at (334) 501-3050 or send an email to **jholland@auburnalabama.org**. For additional information, please visit us online at **www.auburnalabama.org/wrm**.

REFERENCES

Alabama Department of Environmental Management, 1990. *Administrative code*, Alabama Department of Environmental Management Administrative Code R. 335-7; December 5, 1990.

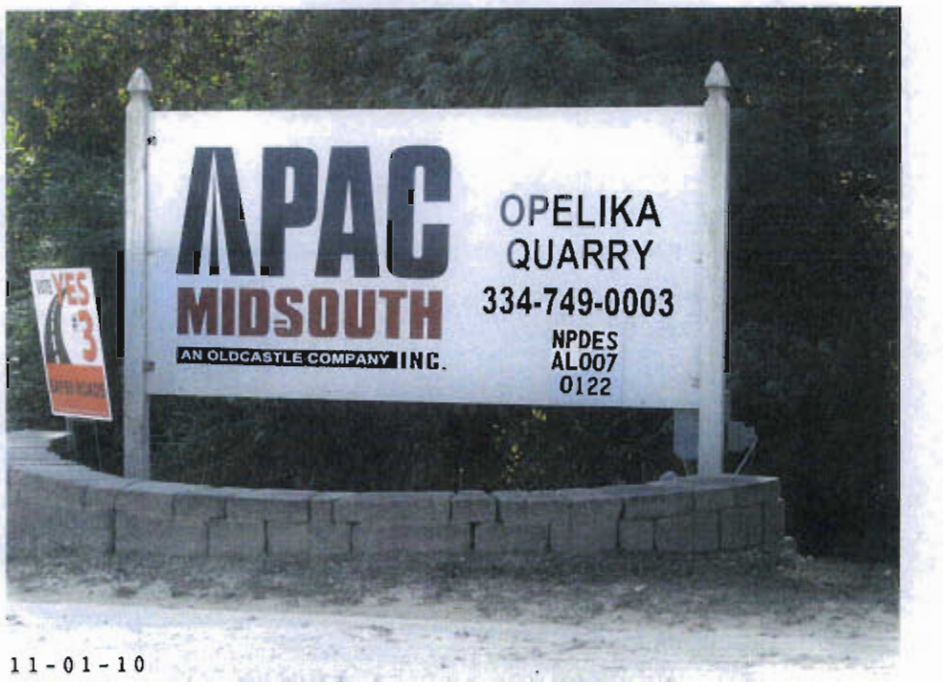
Alabama Department of Environmental Management, 1991, *Alabama wellhead protection program*, Alabama Department of Environmental Management, 71 p.

Alabama Department of Environmental Management, 1996, *Administrative Code*, Alabama Department of Environmental Management, Division 7, Water Supply Program, Code R. 335-7-12; January 2, 1996, variously paginated.

Lee County Soil & Water Conservation District Land Atlas & Plat Book, Lee County, Alabama, 2001, 58 p.

Storm-Event Monitoring on Lake Ogletree Watershed, 2001. SunCrest Laboratories, L.L.C.

Site #1: Alice Faye's



Site #2: APAC Mid-South
(Southern Aggregates)

Site #3: Auburn Environmental & Pesticide Services

11-01-10

Site #4: Beauregard Liberty

Site #5: Beauregard Country Kitchen

Site #6: Beauregard High School

Site #7: Beauregard Stop & Shop

Site #8: Blossman Gas

Site #9: Castone Corporation

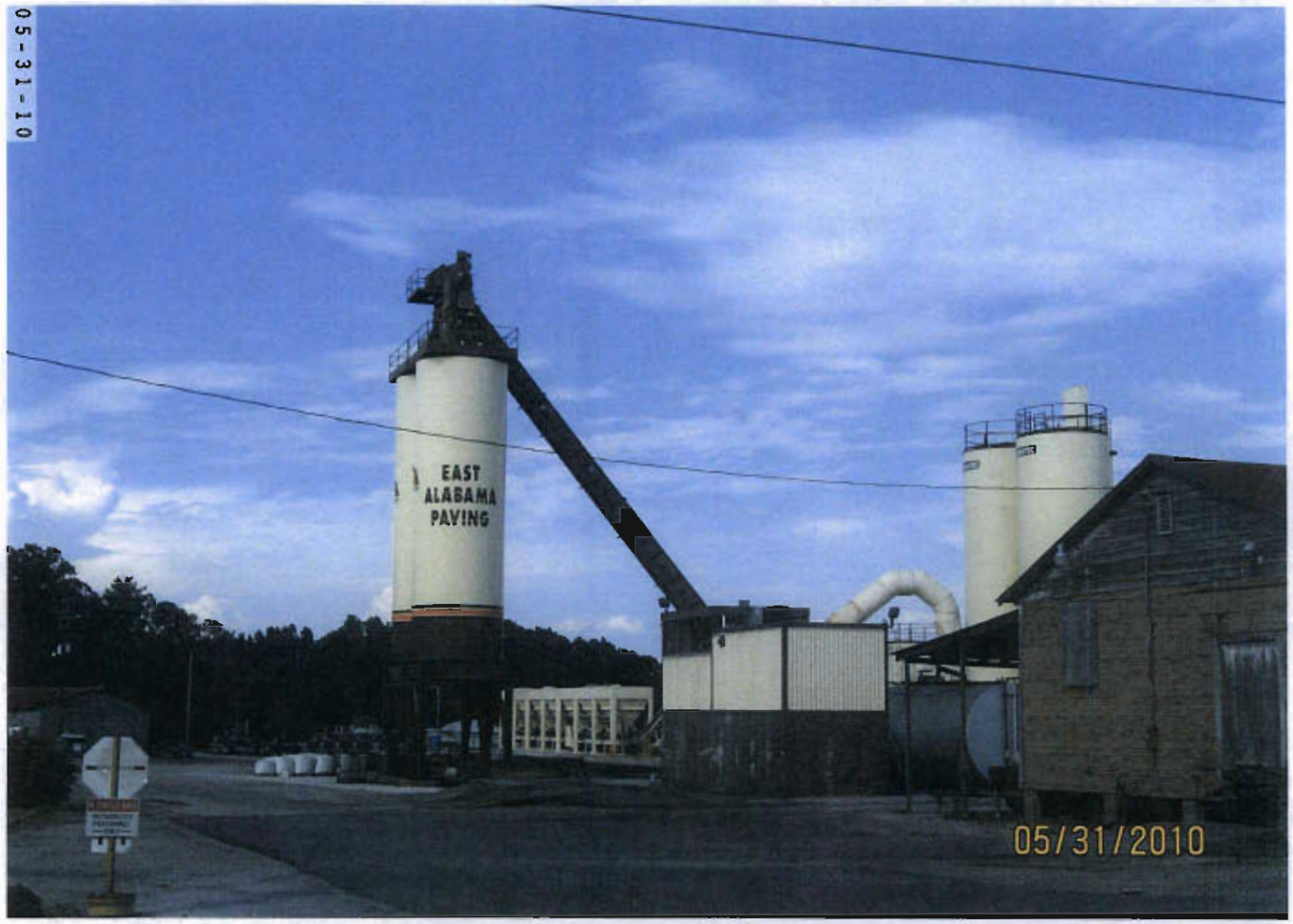
Site #10: Chewacla Road Trailer Park

Site #11: Countryside Motors

Site #12: Cutting Edge

Site #13: Dixie Pipeline

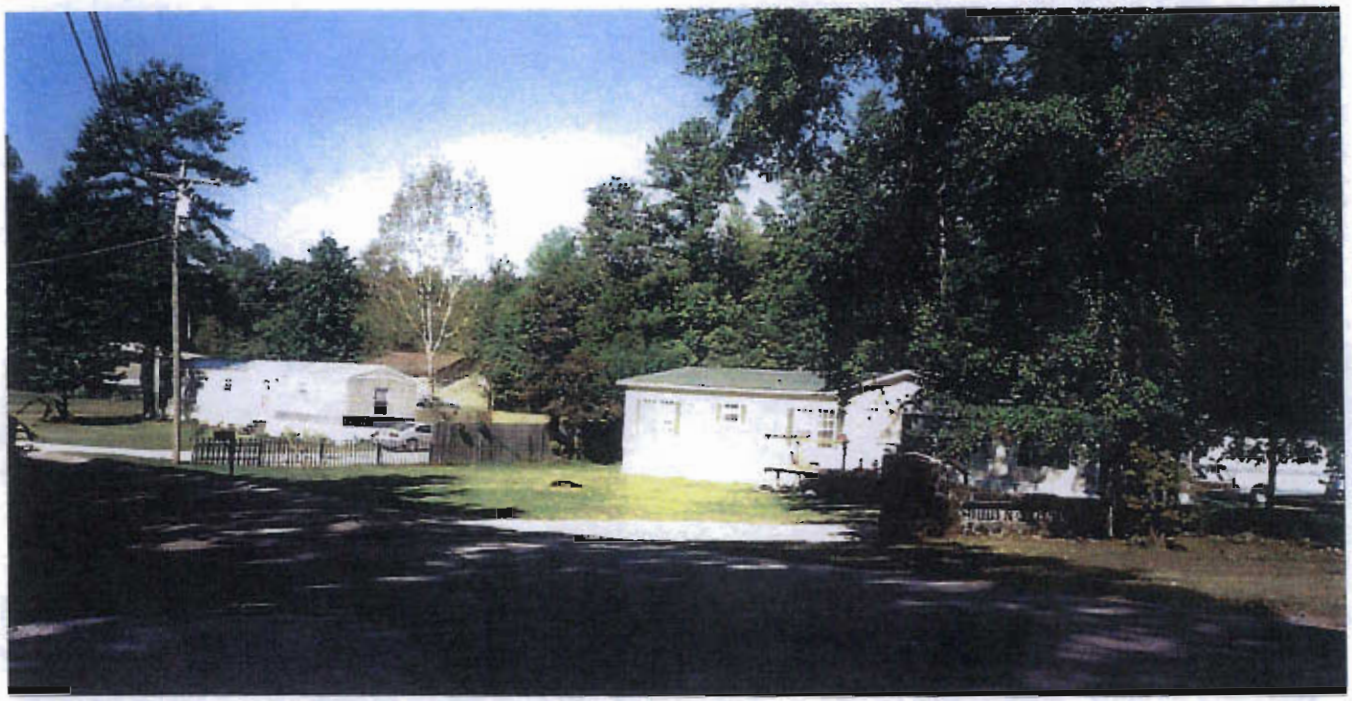
Site #14: Dollar General



Site #15: East Alabama Paving

Site #16: East Alabama Welding

Site #17: Flower Zone Nursery



Site #18: Hidden Woods Trailer Park

Site #19: Interport Transportation

Site 20: LA-Z-B Chevron

Site #21: Lee County Feed & Seed

Sites #22 & 23: Lift Stations

Site #24: Lovoy, Summerville, & Shelton, P.C.

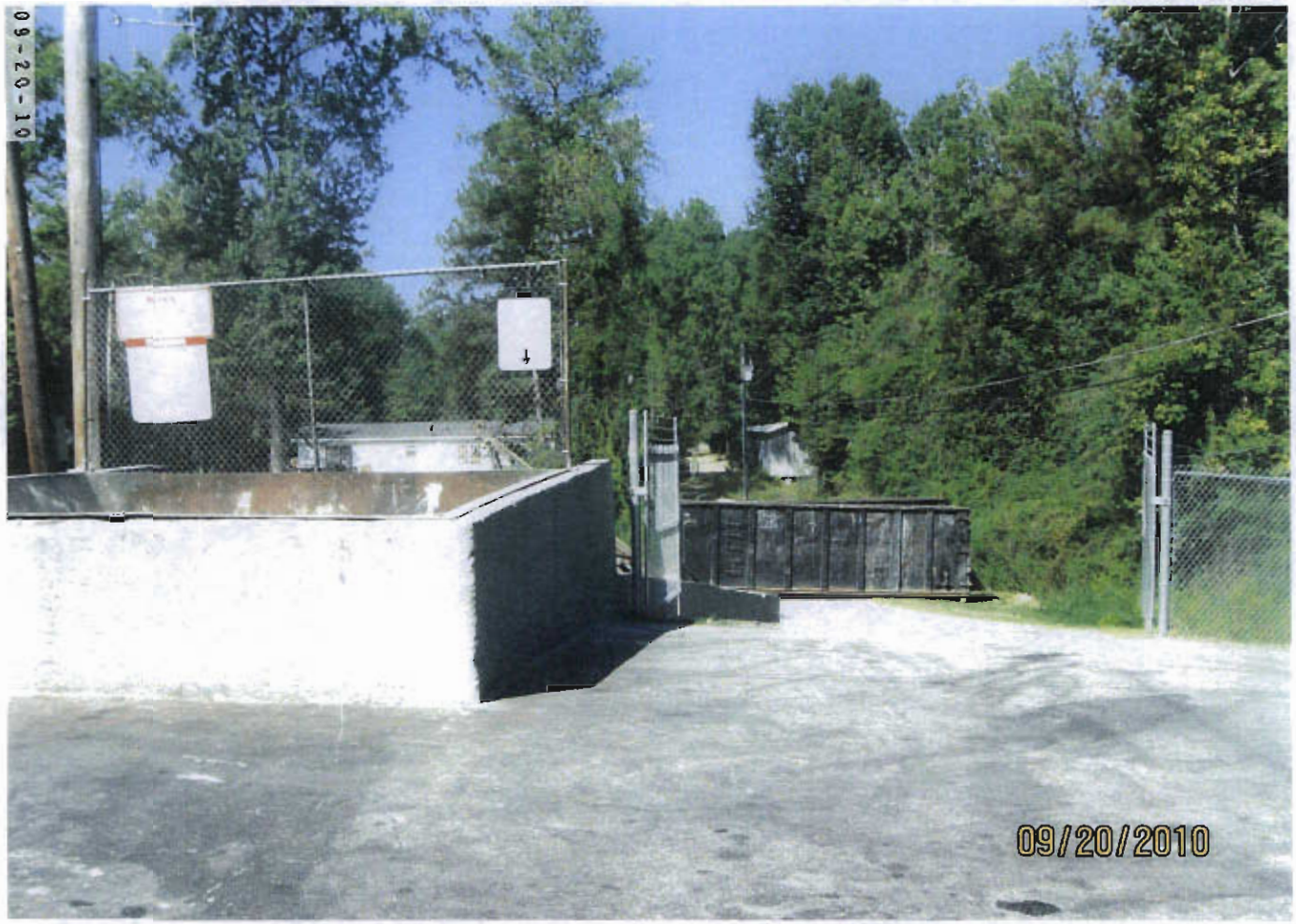
Site #25: M & M Grocery

Sites #26: Nixon Farm

Site #27: Oak Haven Mobile Home Park

Site #28: Opelika-Auburn News/WRBL News

Site #29: Opelika Mobile Home Park



Site #30: Opelika Solid Waste Disposal

Site #31: Out in the Garden

Site #32: Parker Grassing

05-31-10

Site #33: Plant World

Site #34: Publix Food & Pharmacy

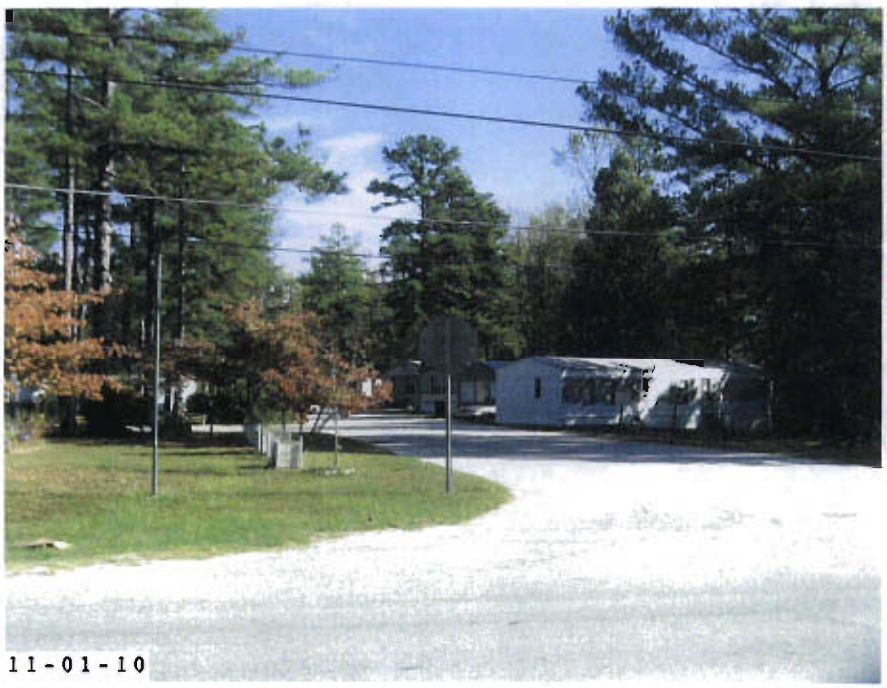
Site #35: R & M Food Mart (Solo)

Site #36: Road Runners Auto Sales & Salvage

Site #37: Rock Quarry Discharge (Mid-South)

Site #38: S & H Trucking

Site #39: S & S Automotive



Site #40: Scottland Forest

Site #41: Southview Primary School

Site #42: Thompson Carriers

Site #43: Turning Point Machining & Tooling

Site #44: Uniroyal/Goodrich

Site #45: Whatley Housing

Site #46: Wilhite Enterprises

Site #47: Raw Water Intake (Lake Ogletree)

Lake Ogletree