

SECTION 3

Local Technological Hazard, Risk and Vulnerability

Summary of Plan Updates

Section		Change
Sec 3, I	Technological Hazards	Added Updated Table
Sec 3, I	Technological Hazards	Updated Hazard Summary
Sec. 3, II	High Risk Dams in Fayette County	Added a Map of Category I Dams by Jurisdiction
Sec 3, II	List of High Risk Dams in Fayette County	Updated Data
Sec 3, II	Assets Exposed to Hazard	Updated Data
Sec 3, II	Assets Exposed to Hazard	Added Maps of Category I Dams
Sec 3, II	Damage Assessment	Updated Damage Assessment Totals
Sec 3, III	Emerging Threats	Deleted Emerging Threats Section

The economic recession in Fayette County has caused a significant economic downturn. This unprecedented recession continues to reduce some hazards in our community through business failures of hazardous material facilities. These business failures continue to significantly reduced inventories of hazardous materials in our community, therefore reducing the risk of technological hazards of hazardous material releases. Through the efforts of the Disaster Mitigation Plan, there has been significant progress in the areas of reducing and in some cases eliminating our community's vulnerability regarding technological hazards and risks. Plan achievements are,

- * Work toward the elimination of chlorine gas at water treatment facilities by using ultraviolet technology for water treatment
- * There has been no major hazardous material incident in Fayette County since the last plan update through better education, better processes, and inventory reductions.

Technological hazards include hazards that are of a technical nature and manmade. There are more than 2.0 million pounds of hazardous materials that are reported through the Fayette County Local Emergency Planning Committee SARA Title III program. The Fayette County Hazard Mitigation Committee has also identified Category I dams as a technological hazard. Lack of zoning regulations prior to 1980 regarding construction permits in dam inundation areas created hazards from manmade dams.

The following items are listed below are the technological or manmade hazards that could possibly affect Fayette County.

Technological Hazards

I. Hazardous Materials Releases

Hazard Identification - Hazardous materials are substances, which are harmful to the health and safety of people and property. Fayette County, Peachtree City, Fayetteville, Tyrone, have facilities that produce, process or store hazardous materials and are at risk, as are facilities that treat, or dispose of hazardous wastes. The Towns of Brooks and Woolsey do not have facilities that store or process hazardous materials in their jurisdiction. Mitigation of this hazard may be accomplished by adhering to state and federal, and manufacture safety standards. Proper packaging, storage, and handling will assist in elimination of hazardous materials incidents. Historical data was collected from Fayette County Fire and Emergency Services, Fayetteville Fire Department, Peachtree City Fire Department, the Fayette County LEPC, and the Georgia Department of Natural Resources Environmental Protection Division.

Hazard Profile - Fayette County has been fortunate that major hazardous material releases have not occurred. In the last 5 years, there has been two minor releases of hazardous material that caused a major emergency response. These chemicals included freon and propane. There was no injuries or deaths as a result of those releases. This trend suggests that the county experiences a haz-mat spill every 2.5 years. This is a substantial reduction in the last five years. These responses are for what would be considered major hazardous material releases and responses that would threaten the public and the environment.

HAZARDOUS MATERIAL RELEASES FAYETTE COUNTY 2010-2015

Freon	3/12/2011	Fayetteville
Propane	2/13/13	Peachtree City

Vulnerability Assessment - Fayette County is 45.61% residential with a population of approximately 106,000. There are 485 industrial facilities few of which use hazardous materials. The vast majority of these high- risk facilities are within Peachtree City. Of these facilities, 12 are considered to be high at risk for technological hazards. They are considered high at risks due to the potential of the material, the quantity (more than 3 million lbs.) and the location of the facility. If a catastrophic release were to occur much some of the population in the immediate area would be effected.

Fayette County also has 15.7 miles of the CSX railroad that runs through the western part of unincorporated Fayette County, the Town of Tyrone, and Peachtree City. Approximately 2,000 shipments of hazardous materials are transported via this rail line each year. If a major derailment occurs, certain segments of the population would be affected.

The highways in Fayette County are primary transportation routes for the delivery and pass through of hazardous materials. These state highways provide access to the heart of the industrial basin in Peachtree City. These routes and the homes and businesses along these routes are vulnerable to possible technological hazards. There are no interstate highways that runs through Fayette County.

Assets Exposed to Hazard - The most prevalent asset damaged during a hazardous materials release is the environment. Waterways and storm water runoff are impacted most by hazardous material releases. Certain areas of the population could be impacted by release of certain chemicals.

Damage Assessment - The damage to the environment due to hazardous materials releases cannot be estimated. The permanent damage to a critical facility due to a fixed facility release has not been recorded. A release of certain types of chemicals in certain areas would have catastrophic effects on the population. These have been identified through the LEPC 112 R Risk Management Program and are available by request.

Land Use & Development Trends - There are currently land use and development trends directly relating to placement of industries that use hazardous materials. Fayette County, Peachtree City, Fayetteville, Brooks, and Woolsey have adopted a strict land use plan that designates areas where industries that use, store, or transport hazardous materials can be built. The land use plans designates future industrial facilities areas so that response organizations are able to better plan for major industrial and hazardous material transportation incidents. See Section 9, Appendix B Land Use and Development Maps by Jurisdiction.

Multi-Jurisdictional Concerns - Hazardous materials incidents have been recorded in Fayetteville and Peachtree City. All jurisdictions in Fayette County with the exception of Brooks and Woolsey have fixed industrial facilities are susceptible to releases of hazardous material. In Fayette County, nearly 80% of all reportable quantities of hazardous materials are in Peachtree City's industrial basin.

Hazard Summary - Hazardous materials releases are a relatively uncommon occurrence in Fayette County. Major hazardous material releases would impact our environment and could have serious consequences should one occur. Mitigation plans must be executed to reduce the threat to lives and property as a result of hazardous materials releases. Mitigation strategies specific to this threat can be found in Section 5, Part I.

Major Fixed Hazardous Material Facilities in Fayette County

Facility	Jurisdiction	Chemical
Avery Dennison	Peachtree City	By Request
Fayette County South Water Treatment Facility	Fayette County	By Request
Fayette County TDK Water Treatment Facility	Peachtree City	By Request
Fayetteville Water Treatment Facility	Fayetteville	By Request
Fayetteville Wastewater Treatment Facility	Fayetteville	By Request
Petroflame Propane	Brooks	Propane
TDK Components	Peachtree City	By Request
Universal Refining	Peachtree City	By Request
Bell South	Fayetteville	By Request
Bell South	Peachtree City	By Request
Wilden Plastics	Peachtree City	By Request
Atlanta Regional Airport	Peachtree City	By Request

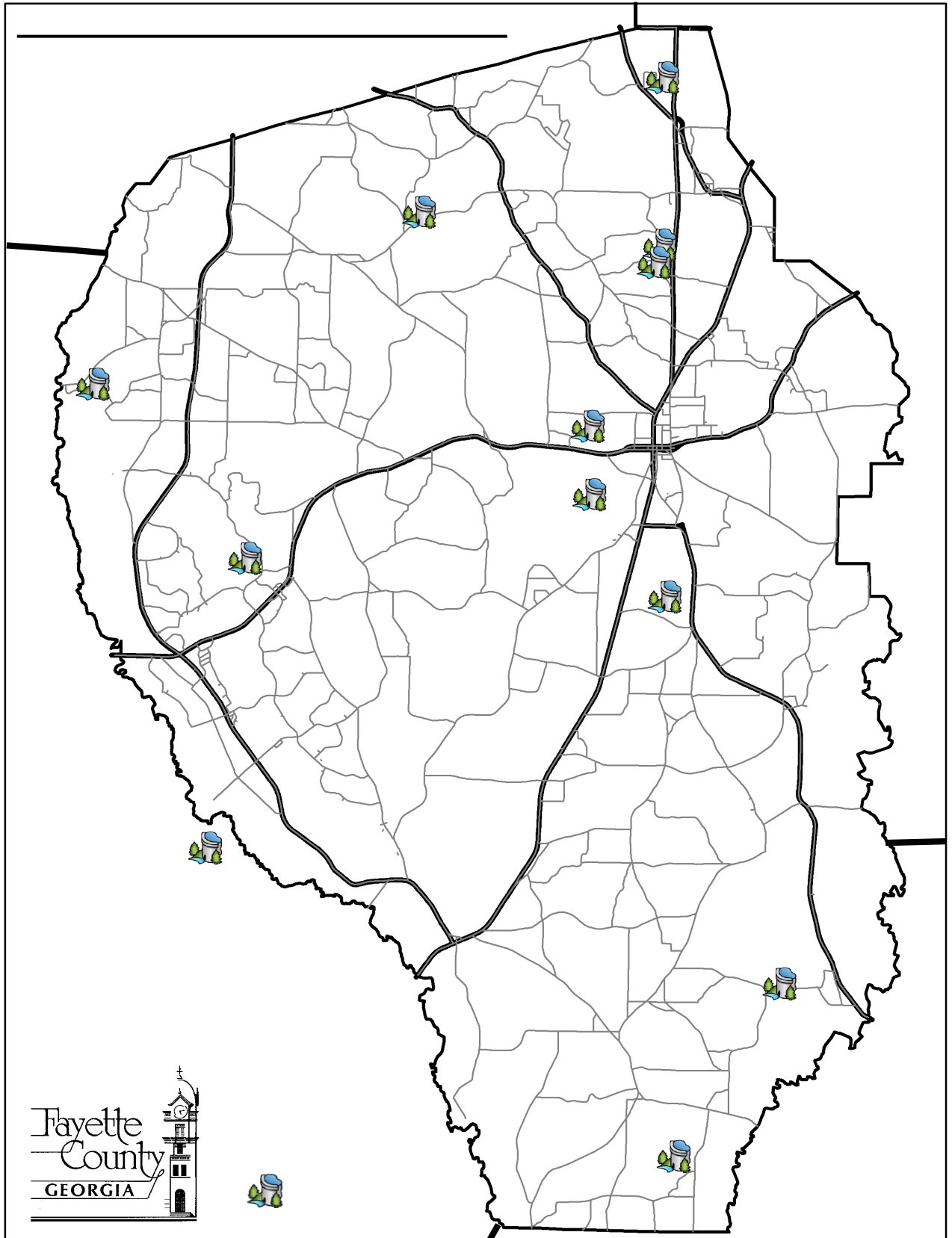
II High Risk Manmade Dams in Fayette County

Hazard Identification: Fayette County has more than 100 manmade lakes, ponds and dams that retain water. Most of the lakes are privately owned and were build post-depression as an agricultural incentive to provide water for livestock and crop irrigation. As Fayette County transitions from a rural farming community to a major suburb of Atlanta, these lakes have become a prime site for single-family dwellings and subdivisions. Most of these dams are not well maintained and are not regulated because there is no risk associated with a breach or failure. Fayette County does have however, nine dams that are considered Category I, or high risk in nature due to their size, height, surface acres and because of downstream impact. In addition, Fayette County has 57 Category II dams. The Georgia Department of Natural Resources Safe Dams Division establishes permits and enforces dam safety and maintenance regulations in Fayette County.

Hazard Profile: There has been one accidental dam breach in Fayette County that caused loss of property. The potential for others exists for an additional catastrophic intentional or accidental breach. Of the eleven Category I dams in Fayette County. Three are concrete dams and are considered to be in compliance and permitted through the Safe Dams Division. These three dams are owned by government and are used to retain county and municipal raw water supplies for drinking water.

The Georgia Safe Dams division has conducted dam break analysis of each Category I dam in Fayette County. These analyses have been provided to the Fayette County Emergency Management Agency and have proved beneficial in planning for potential dam breaks.

Map of Category I Dams by Jurisdiction



High Risk Dams in Fayette County

Name of Dam	GPS Location	Physical Location	Private/Public	Use
Horton	33.18.924 084.25.034	South Hwy 92 in unincorporated Fayette County	Public	Reservoir
Kedron	33.25.433 084.34.274	Kedron Dr. Peachtree City	Public	Reservoir
Dickson	33.32.331 084.26.949	Hwy. 314 in unincorporated Fayette County	Private	Recreation
Graves	33.275 84.449	Brooks	Private	Recreation
Ford	33.24.738 084.27.052	Pond Trace Dr.	Private	Recreation
Pye		Hood Rd.	Public	Retention
Bradbury	33.30.20 84.31.21	Pine Knot Rd.	Private	Recreation
Lake McIntosh	33.350000 84,583333	Peachtree City	Public Owned	Reservoir
Kozisek	33 29 36 54 84 27 10 18	Longview Rd. @ Neely	Private	Recreation
Margaret Phillips	33.29 51.01 84 27 10 18	Neely Rd.	Private	Recreation
Lake McIntosh	33.350000 84,583333	Peachtree City	Public Owned	Reservoir
Castle Lake	33.461667 84.616667	Tyrone	Private	Recreation

Vulnerability Assessment - There are 46 homes, businesses, and roadways that are vulnerable to possible dam breaks. The total value of these assets threatened by Category I dams in 2005 was \$10,254,920. As a result of implementing the Fayette County Disaster Plan there has been a reduction in the vulnerability assessment from Category I dams in our community totaling \$2,186,920. This is a direct result of the Pye Lake mitigation project that mitigated flooding and a potential a dam breach and the possible destruction of homes below the dam. Dam breaks can occur as a result of poor design, excess water capacity, discharge pipe failure, and poor dam maintenance. Generally, the structures and occupants and roadways directly beneath the dam are at risk. Fayette County is home to over 100 ponds and lakes with dams. Of these dams nine are considered to be high hazard dams as classified by the Safe Dams Division of the Georgia Department of Natural Resources. Annual inspections, citations, and permitting of these Dams by Safe Dams of Georgia significantly reduce the vulnerability of the structures, residents, and roadways below.

Assets Exposed to Hazards

The Hazard Mitigation Committee identified and analyzed dam break analysis in order to identify assets that are exposed to Category I dam hazards in Fayette County. Below is a list of assets that the Committee identified as a result of their findings.

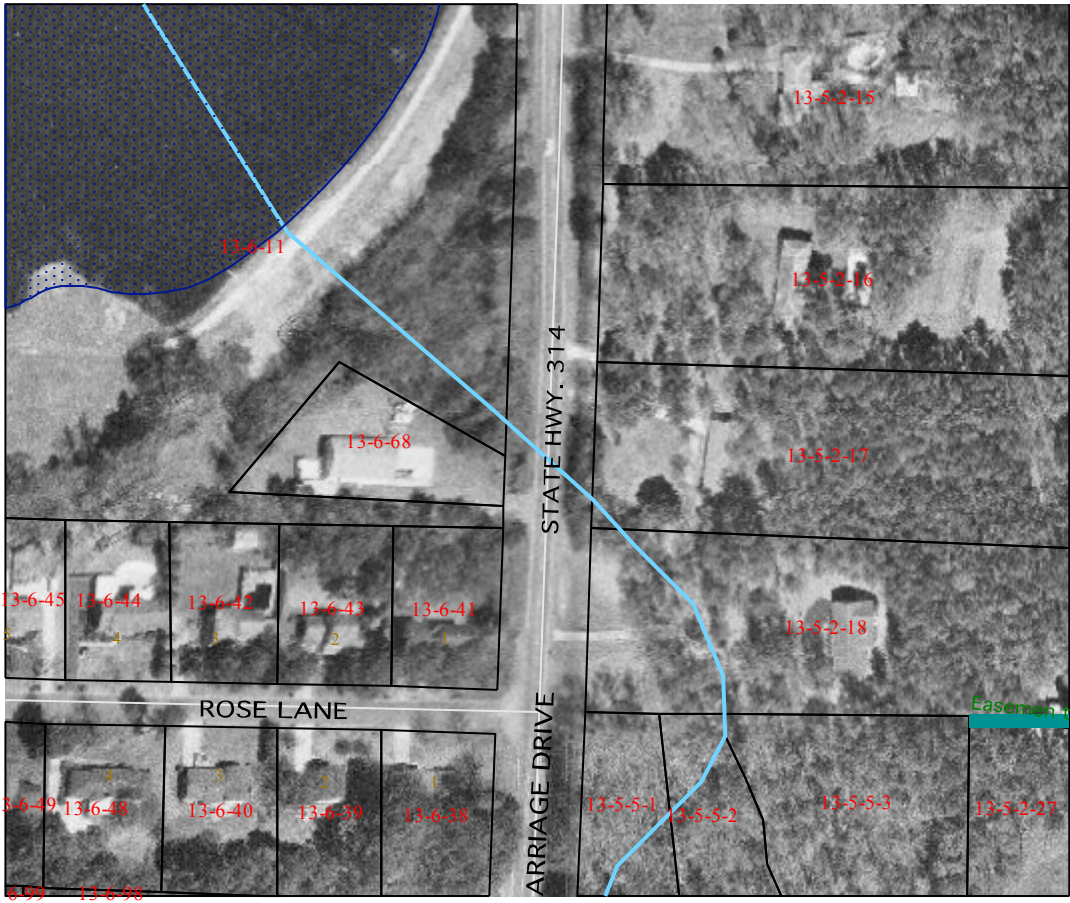
Dam	Assets Exposed to Hazard	Value	ID Number
Horton	315 Lowery Rd	\$235,000	4-18-84
	323 Lowery Rd	\$156,000	4-18-41
	353 Lowery Rd.	\$232,000	4-19-9
	354 Lowery Rd	\$246,000	4-19-44
	367 Lowery Rd	\$140,000	4-19-7
	368 Lowery Rd	\$253,000	4-19-43
	166 Goodman Rd	\$234,000	4-18-69
	167 Goodman Rd	\$142,000	4-18-62
	125 Cheshire Circle	\$180,000	4-18-1-10
	360 Crabapple Rd	\$171,000	4-18-81
Kedron	Flat Creek Golf Course	\$3,325,000	7-31-8
	471 Herndon Hill	\$372,000	7-30-10-11
	410 Tantallon Dr	\$419,000	7-31-25-34
Dickson	State Highway 314 Bridge	\$750,000	
	1193 Hwy 314	\$178,500	13-5-2-17
	1181 Hwy 314	\$300,000	13-5-2-8
Vickery	Still Under Study		
Graves	Still Under Study		
Ford	150 Trace Ct	\$337,000	5-10-7-5
	155 Trace Ct	\$255,000	5-10-7-6
Bradbury	413 Lees Mill Rd	\$143,420	708-018
Kozisek	116 Bethea Rd	\$4,234,290	0544-037
Margaret Phillips	116 Bethea Rd	\$4,234,290	0544-037
Total Assessments Exposed to Category I Dam Failures		\$12,303,210	

Source: Fayette County Tax Assessors Office

Category I Dam Lake Horton

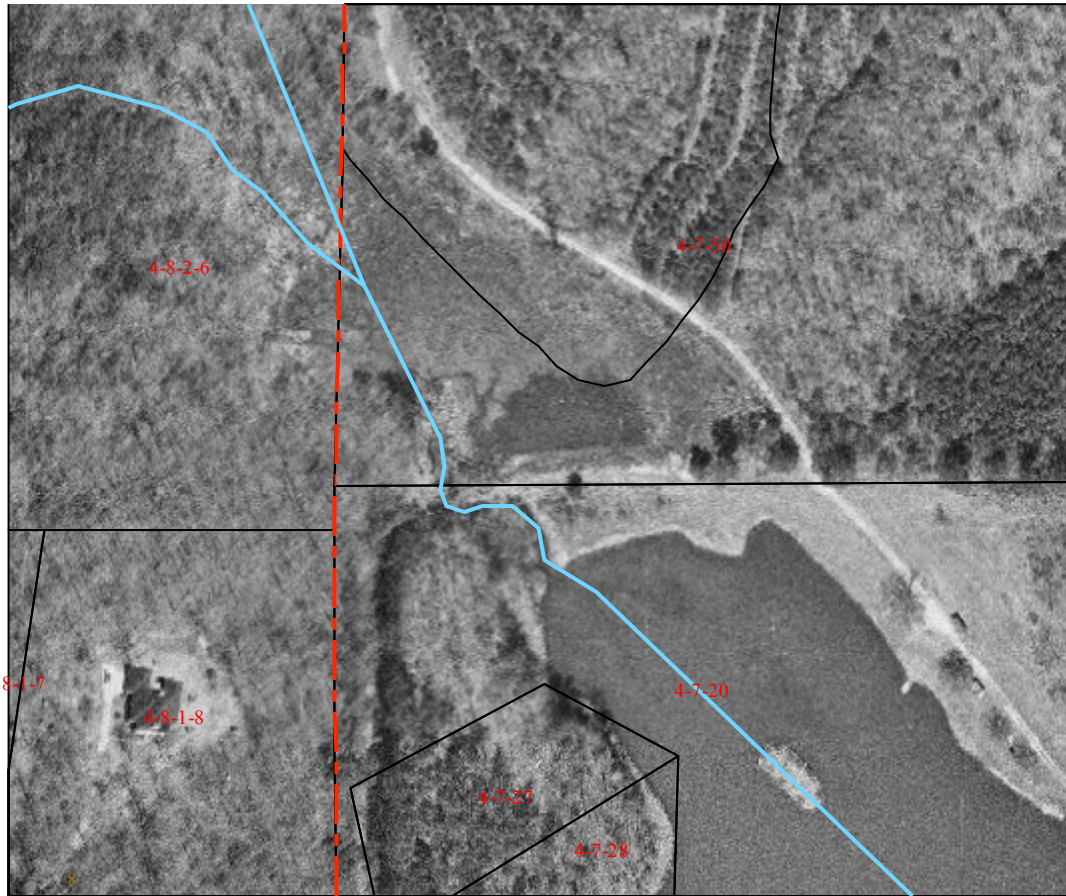


Category I Dam Lake Dickson

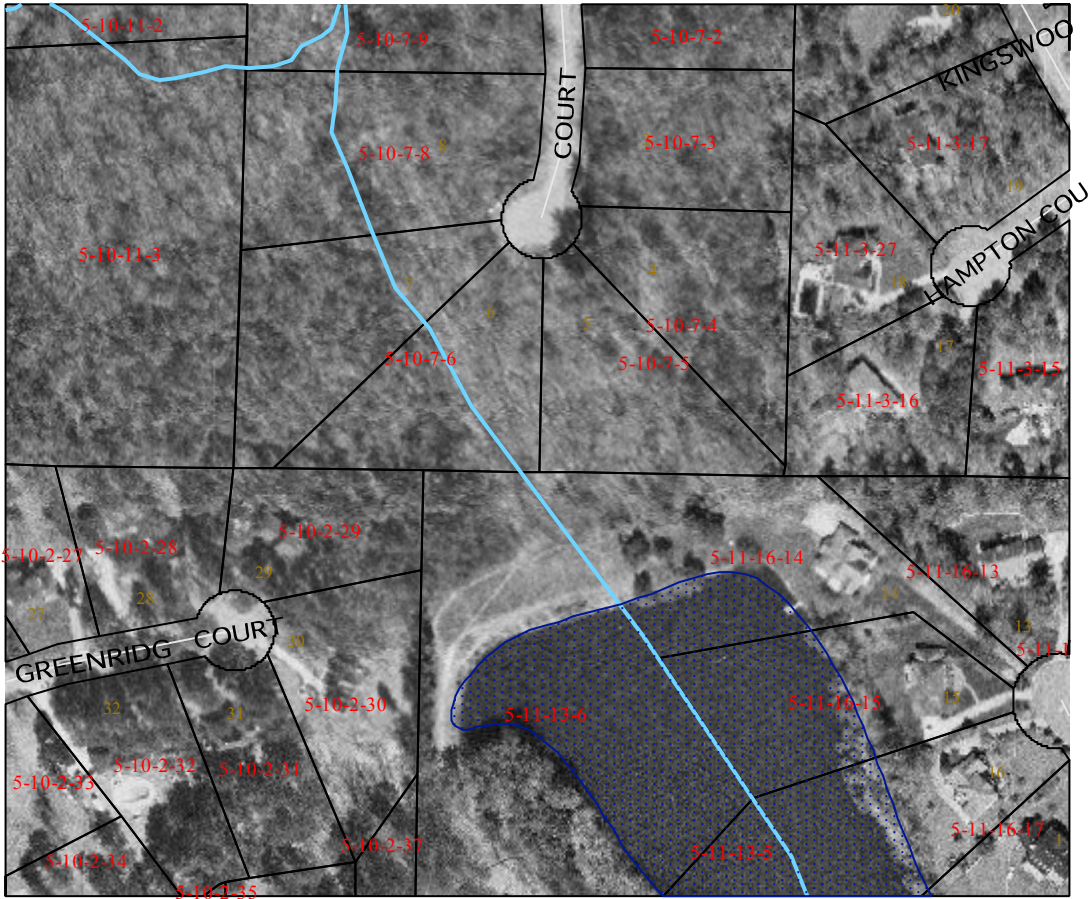


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Category I Dam Lake Graves



Category I Dam Lake Ford



Substantial improvements have been made to this structure to substantially reduce the risk of a dam breach

Pye Lake and Gingercake Creek Fayetteville: Area 2



■ Structures in Floodplain
□ 100 Year Floodplain

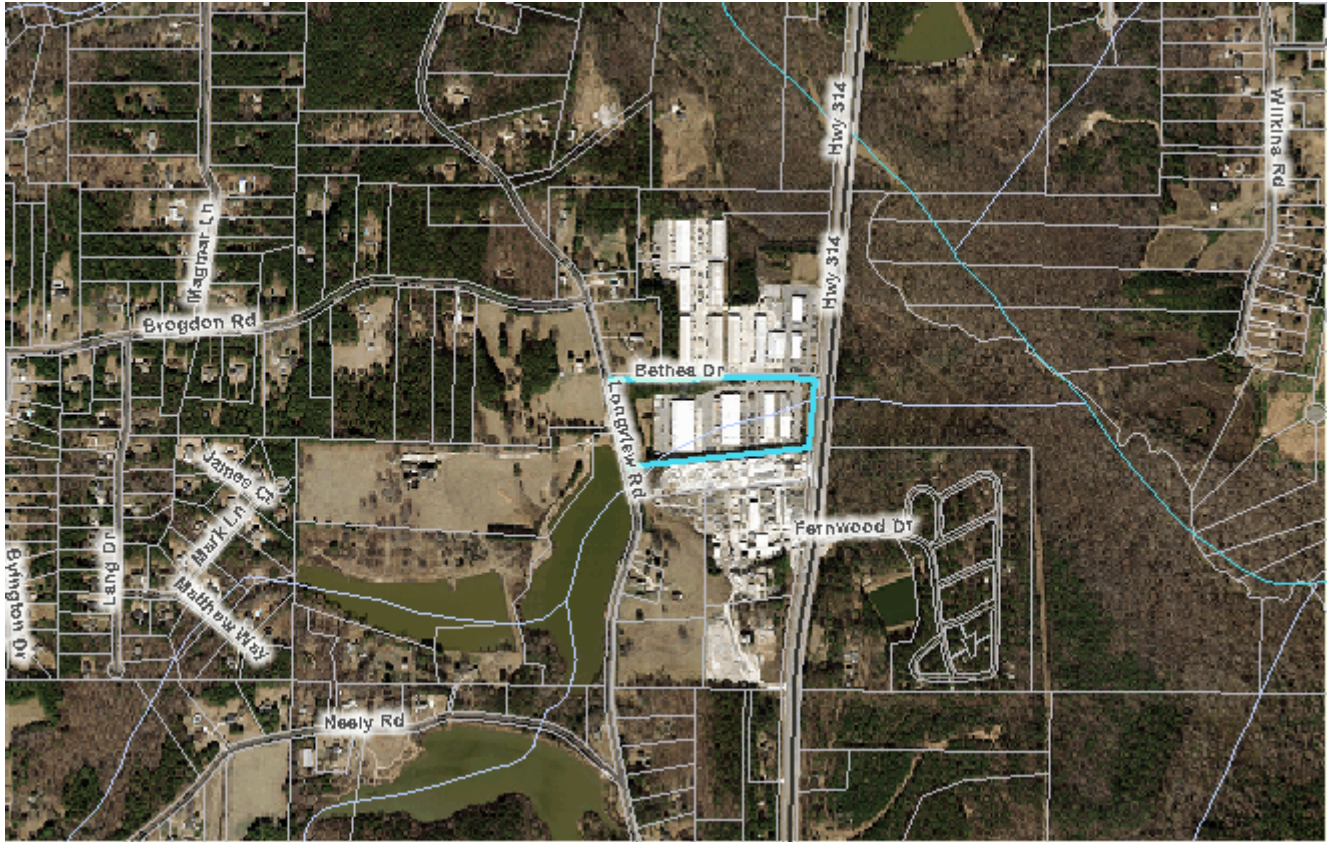


Hazard has been mitigated through a Hazard Mitigation grant project

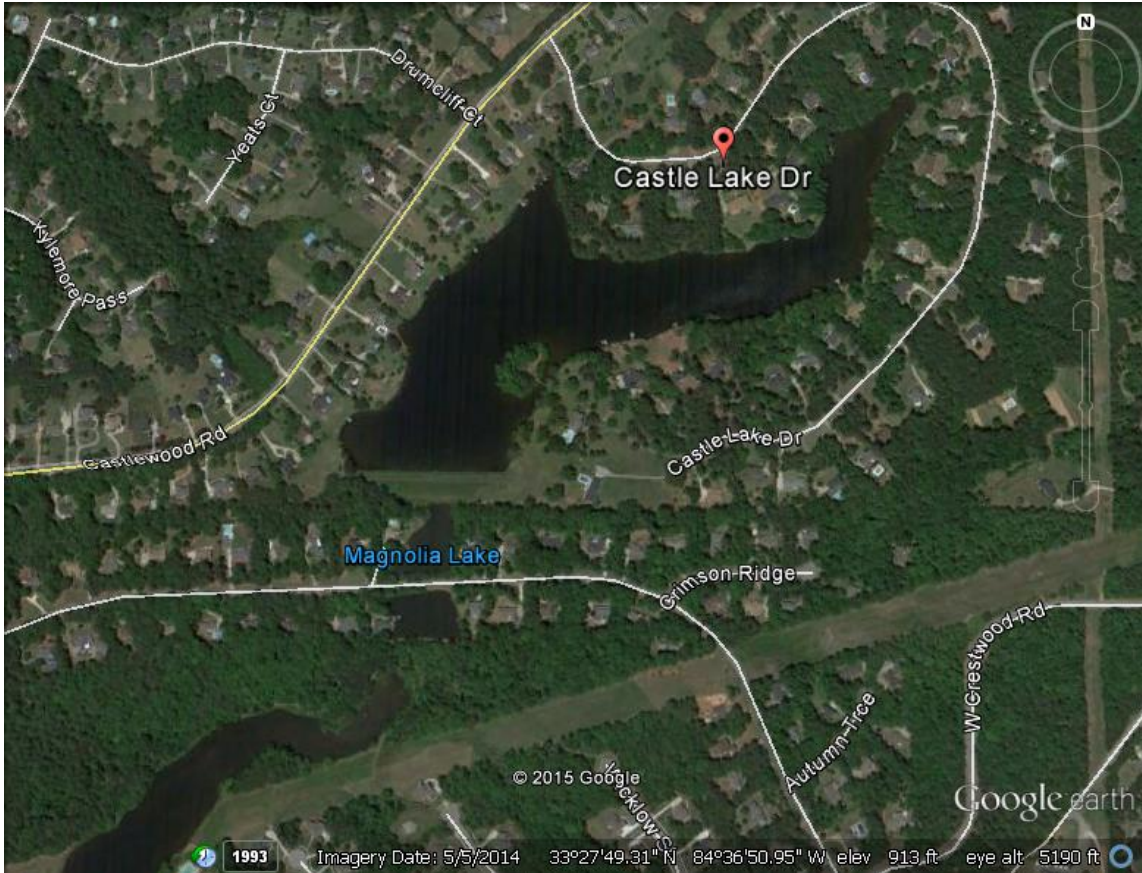
Category I Lake Bradbury



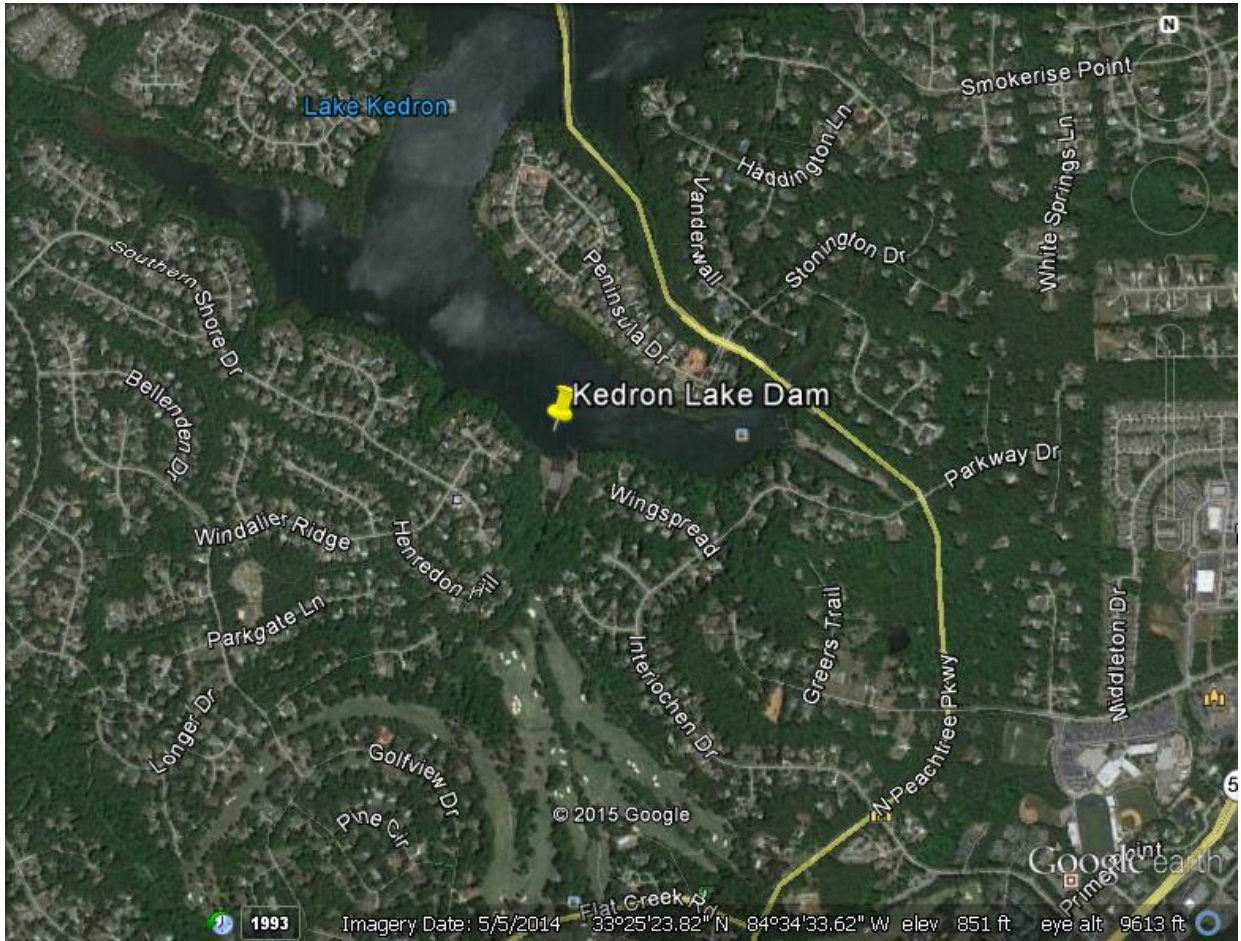
**Kozisek and Margaret Phillips
Lake Dam**



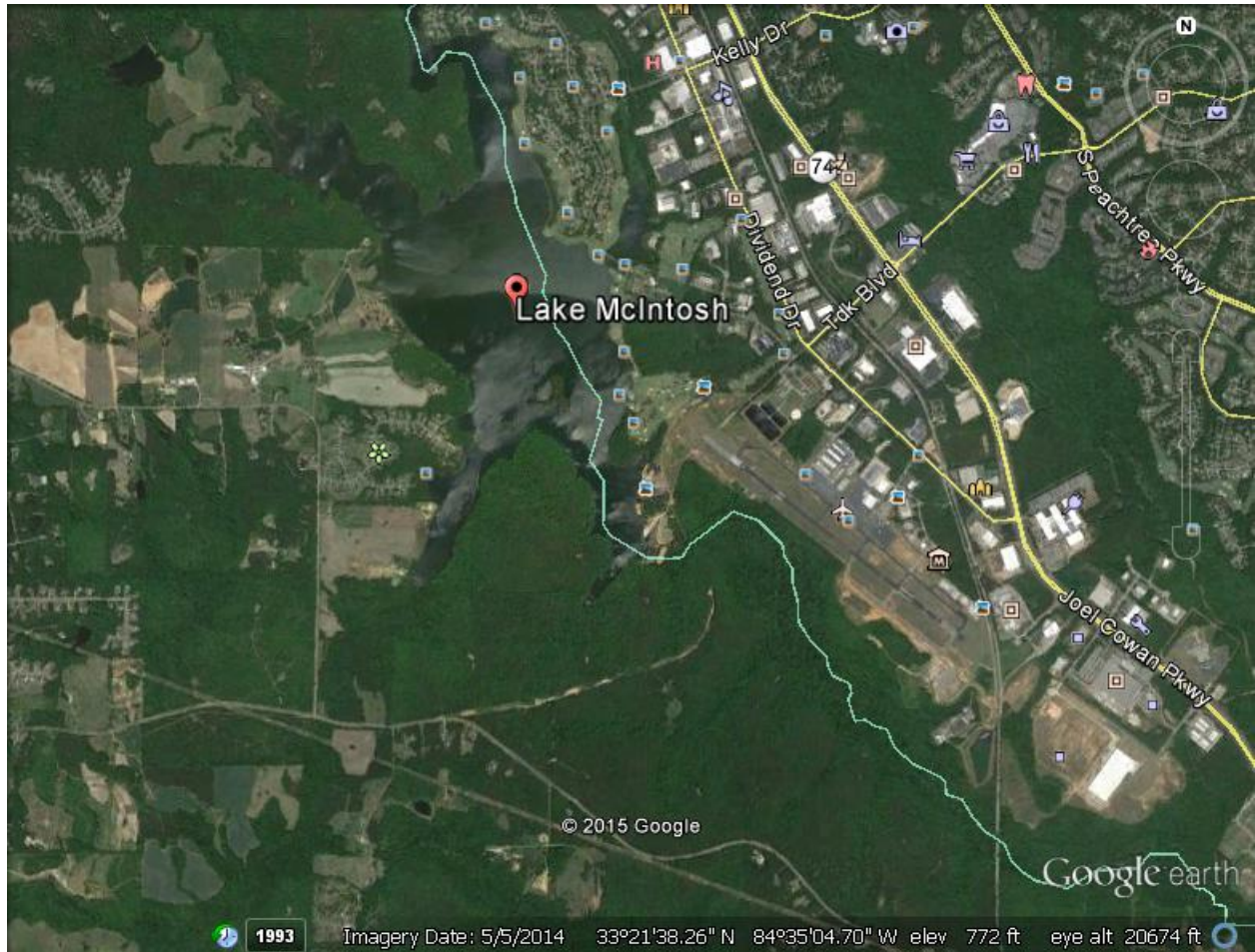
Castle Lake Dam



Kedron Lake Dam



Lake McIntosh Dam



Damage Assessment

The total value of assets in Fayette County that are threatened by Category I dams is \$12,303,210. This figure is an estimate as no true dam break analysis has been conducted. The EPD through its Safe Dams program has performed a dam break analysis on each dam but only to the first structure and not beyond, therefore, it is difficult to accurately determine the total fiscal impact given the potential for downstream impact.

Land Use and Development Trends

Fayette County has experienced rapid growth. That trend has slowed due to deteriorating economic conditions. Fayette County currently reviews plans for single dwelling houses and subdivisions in an effort to prevent the creation of dam break hazards. The Fayette County Technical Review Committee is comprised of representatives of all departments with responsibility for enforcing rules and regulations and making recommendations preventing the future construction of dwellings below a dam. This has been an effective process in preventing the creation of Category I dams.

Fayette County's position is that of the Safe Dams Division that it is the responsibility of the dam owner to maintain and operate a safe dam as to prevent a dam failure, thus preventing the loss of life or property.

In an effort to minimize the potential for dam failure, Fayette County added Dam Impoundment Design and Specifications to the county's Development Regulations (Art. X 8-301 8-309 of the Fayette County Development Regulations) as a way to ensure proper dam design for future impoundments. See Section 9. Appendix B Land Use and Development Maps by Jurisdiction.

Multi-Jurisdictional Concerns

Fayette County, Peachtree City, Fayetteville, and Tyrone have identified Category I dams in their jurisdictions. Safe Dams of Georgia conducts annual inspections, issues permits, and citations for those owners who are not in compliance.

Hazard Summary

The Fayette County Emergency Management Agency has placed a high priority on dam safety. The Agency works closely with the EPD's Safe Dams personnel to ensure high hazard dams are maintained and inspected annually. The Agency has written response plans to all Category I dams in Fayette County. These plans have the cooperation and partnership of the dam owners and operators. These plans include inundation zones, reduction of water levels, the training of owners in emergency response procedure.