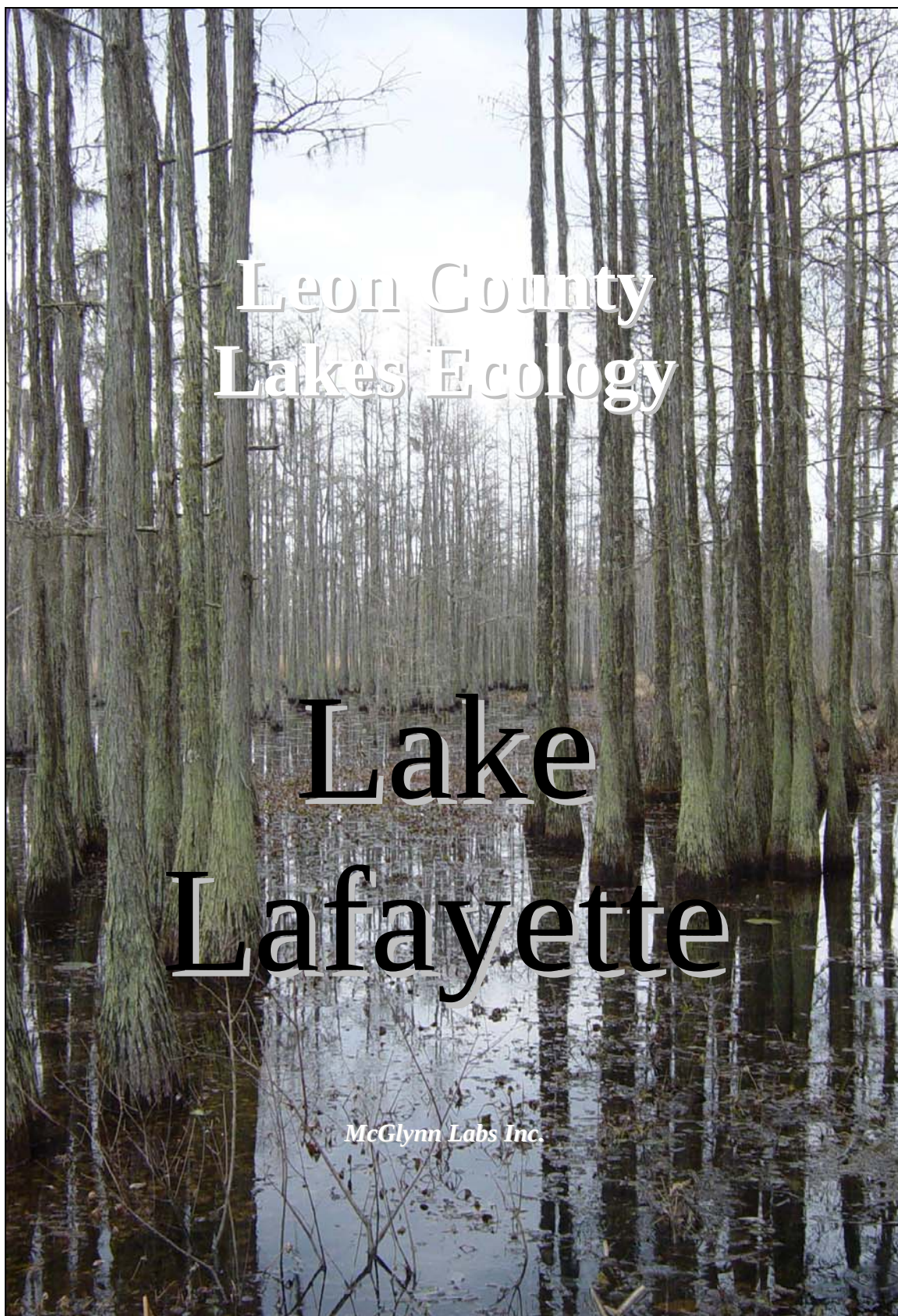




5.1: Lake Lafayette

Surface Area: 1825 acres

Drainage basin: 51,000 acres

Classification: Hypereutrophic

Location: Coastal Lowlands

Leon County Lake Monitoring Stations: 6

Duration of monitoring: 09/91-06/06

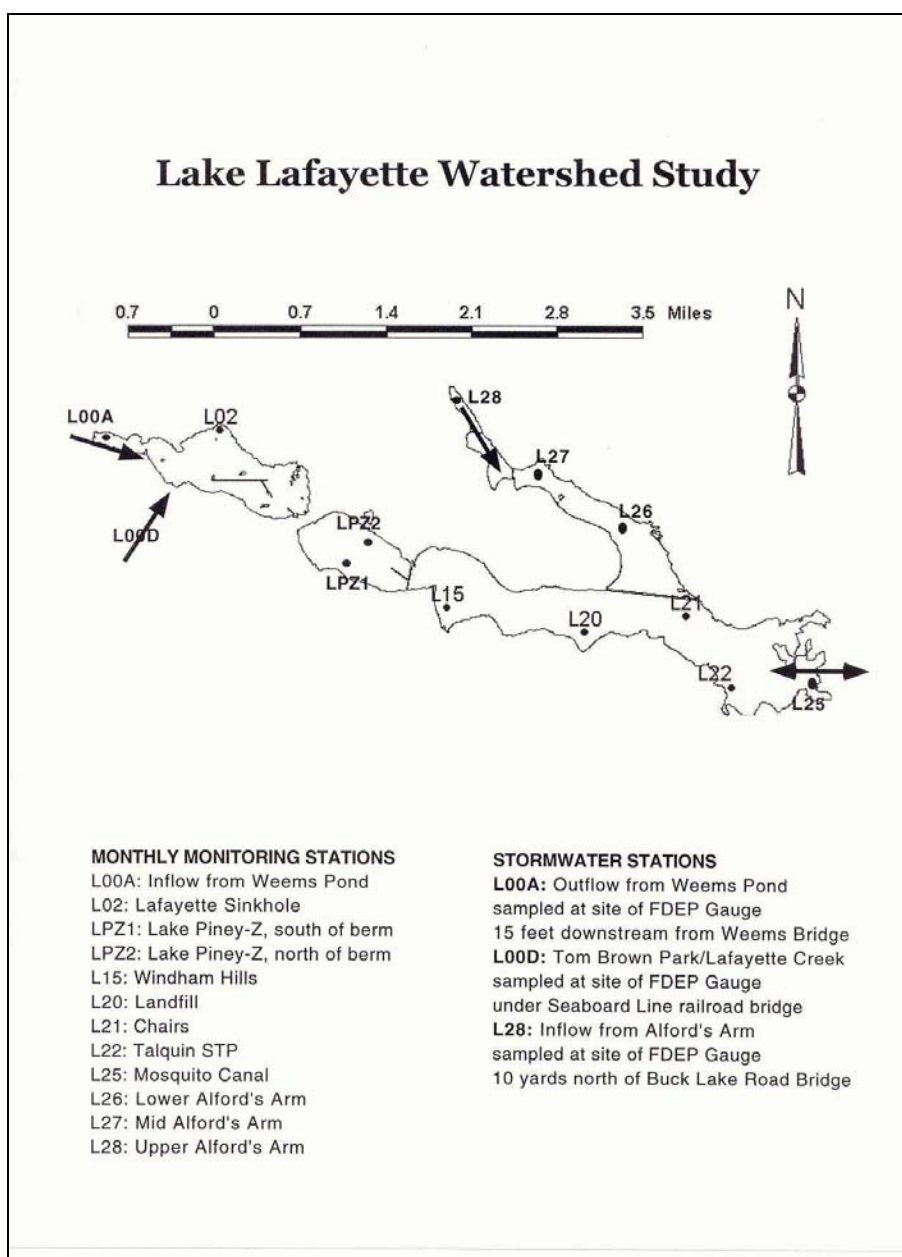


Figure 5.1.1: Lake Lafayette monitoring stations

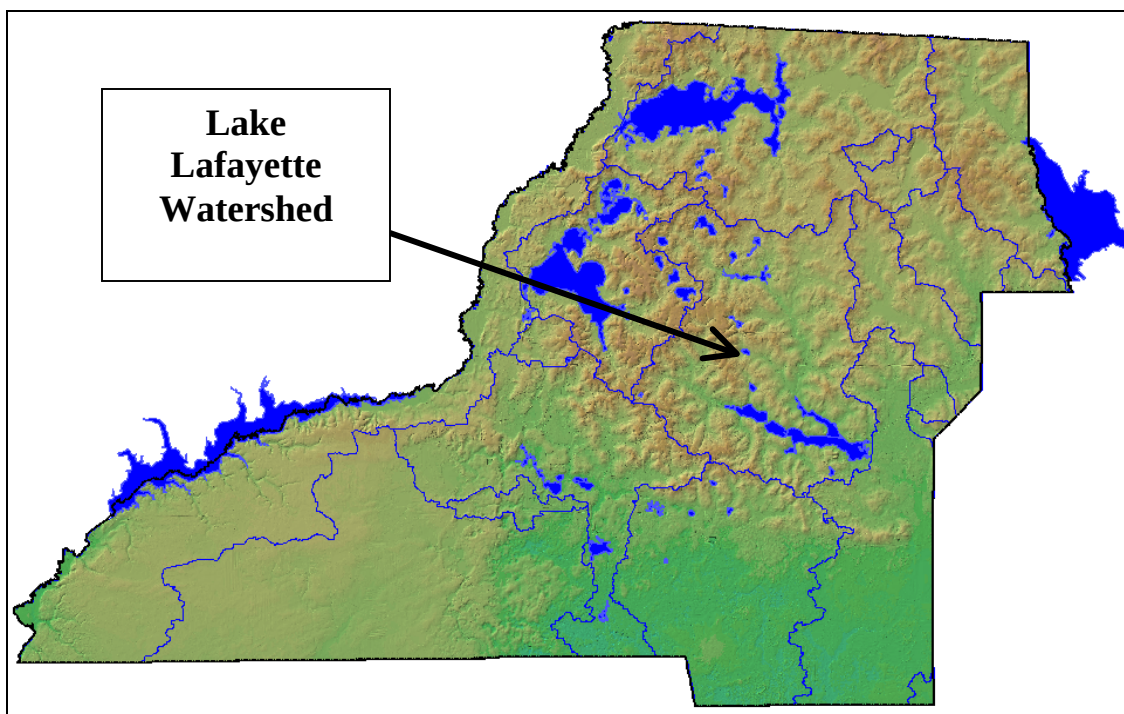


Figure 5.1.2: Map by Greg Mauldin, Tallahassee-Leon County GIS

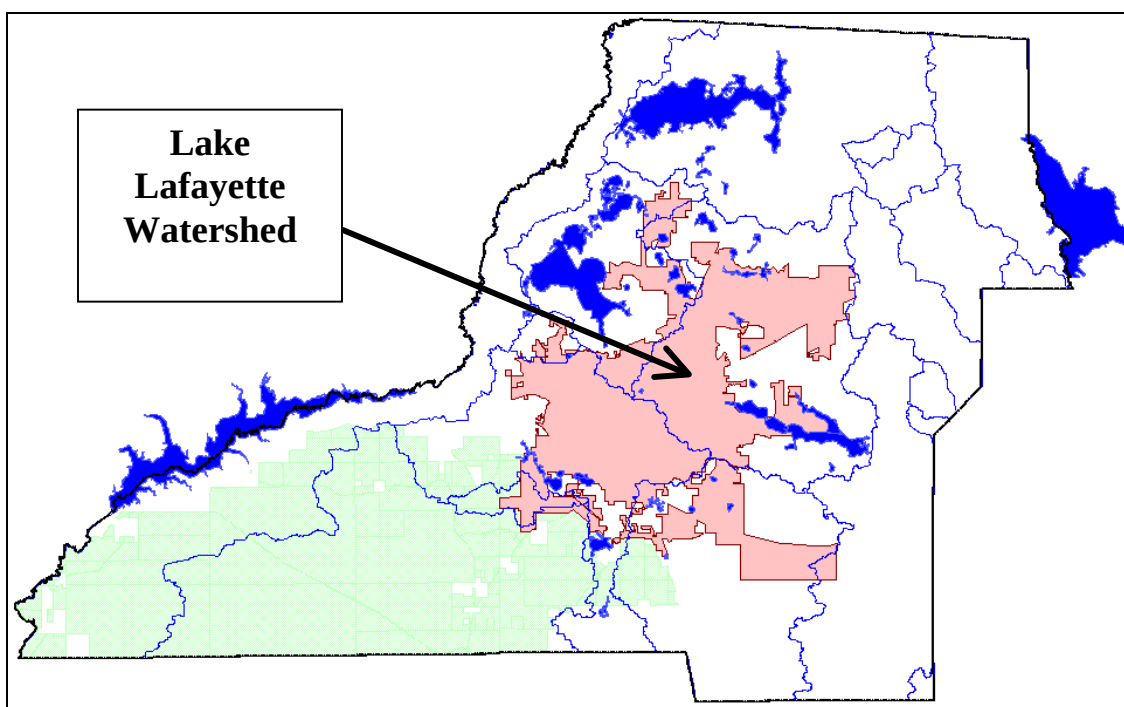


Figure 5.1.3: Map by Greg Mauldin, Tallahassee-Leon County GIS

This lake is the remnant of a Pleistocene river delta. Water levels receded in the last Ice Age and the coast moved farther south of the site which became a river valley and eventual a tributary of the St. Marks River. Dissolution processes culminated in the formation of a large basin, 8,925 acres, including a major sinkhole seven miles west of the St. Marks River (located in Upper Lake Lafayette just South of the Cody Scarp at Fallschase).

The early settlers of Leon County called Lake Lafayette 'Prairie Lake'. This descriptive name tells a lot about how Lake Lafayette originally looked. It was not until nearby lakes were given to French settlers for helping in the American Revolution as part of the Lafayette Land Grant, that it became known as Lake Lafayette. In the late 1940's Lake Lafayette was broken up into a series of smaller lakes by constructing earthen dikes across the basin to keep the lake full of water year around. This began the process we see today in which the Lake is transform into a vegetated marsh.

The Lake Lafayette basin is the most intensively developed of the larger Lake basins in Leon County. This basin contains most of central and northern Tallahassee. A railroad runs through its entire length. The Lakeshore is home to a Federal Prison, the Leon County Landfill, Talquin Electric's "Meadows at Woodrun" Wastewater Treatment Plant and ever increasing urban development. Lake Lafayette is impounded into four hydrologically distinct units. It is the most modified major lake basin in North Florida and no longer functions naturally. Today 78% of Lake Lafayette is publicly owned and yet there is no public access, except on a dirt road which dead ends into the lake near Chaires Crossroads.



Figure 5.1.4: Lake Lafayette Sink, Elias Howard Sellards, ~1875

Upper Lake Lafayette, the only part of Lake Lafayette that still functions naturally, is filled with urban stormwater that continuously drains into the aquifer through a large permanent sinkhole. There are numerous berms throughout the lakebed that restrict flow.

The most significant feature impairing the hydrological flow of Lake Lafayette is the Seaboard Lines railroad bed that separates Alford Arm from Lower Lake Lafayette. There is a distinct vegetative wetland boundary at 45.5 feet elevation throughout the lake basin, indicating that Lake Lafayette was once whole.

Lake Lafayette is currently embroiled in a conflict involving the EPA, FDEP, Leon County and the City of Tallahassee over TMDLs. Federal law requires that pollution limits be set for all impaired water bodies. Lake Lafayette was supposed to be the first lake in our area to receive a TMDL. There is much debate over what pollution levels are allowable in this lake. Leon County commissioned a study that has cast doubt on the status of Upper Lake Lafayette claiming it is merely a retention area for a sinkhole. Undoubtedly the results of this TMDL will define the future of Lake Lafayette and the success of the TMDL program in our area.



Figure 5.1.5: Photographs of Lafayette Sinkhole by Herman Gunter, Dec. 18, 1931. There have always been a lot of fish here!

According to the late Calvin Jones, state archaeologist, the Lake Lafayette Basin is one of the premier paleo sites in the state. The lake is surrounded by close to 40 Native American Mounds, several of which have been excavated; One of which is displayed at the Florida Museum of Natural History. Of special interest are the large Midden Mounds on Lake Piney Z and the Temple Mounds at Fallschase. Native American settlements were common in the Lafayette Basin with some significant archeological sites on Lake Lafayette including the Swift Creek village and the DeSoto Camp (where the first Christmas was celebrated in the New World).

Prior to human intervention the Lafayette Basin functioned as a temporary lake, similar to Lakes Miccosukee and Iamonia, where water was frequently exchanged between the Lake Basin and the St. Marks River through a series of connecting sloughs (located near Chaires Crossroads on Lower Lake Lafayette). Depending on rainfall patterns water would flow into or out of the lake. During times of drought it drained the lake leaving behind a large prairie. In periods of normal rainfall, while the lake is full of water, the sinkhole becomes less active. Diminished hydrostatic pressure gradients to the Floridan Aquifer may cause diminished flows that often cause blockage of the Sink. During periods of excessive rainfall, the water in the Lafayette basin used to flow out of the

Lafayette Sinkhole and the St. Marks River. The large continuous basin was better able to absorb floodwaters than the smaller subdivided basins of today, and excess water had more avenues of escape, helping to diminish flooding.

In 1948 the owners of Piney Z Plantation modified the central portion of Lake Lafayette into a Farm Pond (probably to improve hunting). They separated this central portion of the lake from the rest of Lake Lafayette by building two earthen dikes through the middle of the lake. Prior to this Lake Lafayette functioned as one hydrological unit. The lake was often dry, the 'Road to the Lake' as it is now called in Chairs, was called the 'Road to Town'. In fact, Mrs. Jewell Cooksey, who owned the Dairy Farm where Windham Hills Subdivision is today, recalls 'horse drawn carriage rides' to town on summer afternoons through the dry lake bottom as the 'most common and pleasant route to Tallahassee'. Lightning could start brush fires in the dry Lake. Fire would clear out the accumulated vegetation, transforming the tangle of aquatic vegetation into an open field of Maidencane (*Panicum hemitomon*). The creation of Lake Piney Z, which carved out of the center of Lake Lafayette, altered the natural flow of water within the Lafayette Basin Flow to the sink, causing flooding to occur. Because of this, Chaires Crossroad is often underwater, making it difficult for residents to go to town or get to the Apalachee Parkway (formerly called the Tamiami Trail).

The portion of Lake Lafayette where the water goes down the Sinkhole is now hydrologically isolated from the rest of Lake Lafayette, and is known as Upper Lake Lafayette. It will be the site of a new Fallschase development that will include even a Wal-Mart Superstore.



Figure 5.1.6: Flood damage on the track of the Seaboard Line that divides Alford Arm from Lower Lake Lafayette (April 2, 1948)

Lake Lafayette no longer functions naturally, it is cut up into four smaller Lakes, which currently exist as discrete and separate entities, though in close proximity. The partition furthest from the St. Marks, Upper Lake Lafayette, is fed by several urban streams, which

drain into a large active sinkhole. This is the only part of Lake Lafayette, which contains an active Sinkhole. The next partition, proceeding west to the St Marks, Lake Piney Z, represents the center of Lake Lafayette. The City of Tallahassee currently maintains this portion of the Lake as a fishery in conjunction with the Florida Fish and Wildlife Conservation Commission. Lake Piney Z is currently undergoing high-density residential development. The third subdivision of Lake Lafayette, Lower Lake Lafayette, is the only part of Lake Lafayette still connected to the St. Marks River. A 'mosquito canal' flowing under, and frequently over, Chaires Crossroads connects the two waterbodies. The forth and final amputated section of Lake Lafayette is Alford Arm, which receives stormwater runoff from all the way from Lake McBride in Bradfordville and adjacent residential communities (Florida Department of Environmental Protection, 1998). The four lakes that make up the Lake Lafayette basin have no management plan since state regulators have come to the conclusion that the Lafayette system cannot be managed as a whole in its present subdivided condition.

Lake Lafayette has been impounded for so long that few people even realize the extent to which this lake has been changed. Lake Piney Z and Lower Lake Lafayette are hopelessly clogged with aquatic vegetation. Boating is impossible, but recent attempts by the Florida Game and Freshwater Fish commission to restore this portion of Lake Lafayette have had some success. The cycle of dry vs. wet is necessary to maintain this lake as a navigable waterway.

There are several restoration options for Lake Lafayette:

- All the berms in Lake Lafayette could be removed. This is the free flow option touted as 'letting nature take its course'. Such an option may be difficult to implement, property owners have come to expect the un-natural, predictable, manipulated water levels of the current impoundments;
- A control structure could be built around the Sinkhole, like in Lake Miccosukee and the berms removed, in this manner the lake could be kept full most of the time and then drawn down periodically;
- The existing berms could be modified for drawdown capability. In this manner the various sections of Lake Lafayette could be kept flooded, as they are now, and vested interests would be satisfied. The benefit would be that a drawdown of the entire lake basin would be possible.

Lake Lafayette has been infested with invasive exotic Channeled Apple Snails. These snails are in both Upper Lake Lafayette and Alford Arm. From Alford Arm they can spread into Lake McBride and Lower Lake Lafayette and eventually the St. Marks River and Wakulla. These snails are voracious herbivores devouring almost all the vegetation. An average female lays 3000 eggs a week. They carry parasites that cause Rat Lung Disease, which can kill humans. USF&G did not find the parasitic nematodes in Lake Lafayette.

5.1.1: Upper Lake Lafayette

Surface Area: 300 acres

Drainage basin: 15,000 acres

Classification: Hypereutrophic

Location: Coastal Lowlands

Number of Stations: 1

Duration of monitoring: 09/91-06/06

Approximately 108 million gallons of urban storm water flows into Upper Lake Lafayette during a normal rainy day in Tallahassee. Upper Lake Lafayette contains an active sinkhole, Lafayette Sink, through which stormwater flows directly into the Aquifer. At Lafayette Sink limestone plates are strewn about the ground like toys discarded by a child. Lake Lafayette has drained and filled many times since 1999. Unfortunately Upper Lake Lafayette fills with urban stormwater. Over 30% of the urban stormwater from the City of Tallahassee flows into Upper Lake Lafayette. Stormwater enters Upper Lake Lafayette basin from at least four sources; a highly urbanized 15,000 acre watershed comprising central Tallahassee, Central Drainage Ditch; a 255-acre City of Tallahassee Park and sports complex, Tom Brown Park, Lafayette Creek; a 194-acre maximum-security prison, the Federal Correctional Institute (FCI); and a 369-acre high-density residential development, Piney Z Plantation (Castellanos and Detscher, 1998; White et al, 1998).



Figure 5.1.1: Weems Pond inflow (upper picture). Weems Pond Outfall (lower picture).



Figure 5.1.2: The dry lakebed of Upper Lake Lafayette with the sinkhole in the upper portion of the picture.



Figure 5.1.3: Station L02A, the inflow to Lafayette Sinkhole. Stormwater surges into the Sinkhole after a 2" rain (left). A view of the dry channel in the lakebed between storms.

Upper Lake Lafayette is plagued by nutrient enrichment from the stormwater. Dissolved Oxygen is near zero at the bottom of the Sinkhole and supersaturated at the surface. This is symptomatic of Hypereutrophic systems. There are exceptions; during the drought of 1999 the stormwater stopped flowing into Upper Lake Lafayette and the water in the sink became as clear as Wakulla Springs revealing an underwater rock garden of amazing proportions.

During periods of normal rainfall, the area around the Lafayette Sink becomes a 300-acre lake, while in dry periods, the waters in Upper Lake Lafayette drains through fissures, cracks and caverns into the aquifer leaving a one acre pond, 50 feet deep over the sink. This is a permanent waterbody is at the piezometric surface of the aquifer. There are two caverns in the north wall of the sink. They are at 35 ft depth and are large enough to park

a car in. The eastern cavern is blocked with muck about 25 feet beyond the cavern entrance. The western cavern is open.

Lake Lafayette is a significant aquifer recharge area in Leon County. Using standard runoff coefficients, a 4-inch rainstorm contributes 498 million gallons of stormwater that drains into the Upper Lake Lafayette basin. The rate of flow into the sink is estimated as 96-cfs. The sink basin always contains water, and at drawdown it represents the potentiometric surface of the aquifer. The basin is at about 10 feet above sea level. Tidal fluctuations can be measured in the basin at low water levels, further evidence that the water in this sink is part of a much larger water body, the Floridan Aquifer. Further human exploration of the caverns in Lafayette Sink may expose the complex cavern system permeating the area. Municipal wells in the vicinity of Lake Lafayette have increasing nitrate concentrations, indicating the impact of stormwater (Chellette, 2002).



Figure 5.1.4: Weems Pond flooding into Upper Lake Lafayette, summer 2002. This flooding is from Tropical Storm Helene. The storm water is not getting much treatment here.



Figure 5.1.5: A view of the sink the day after Tropical Storm Helene. This water is going into the Aquifer.



Figure 5.1.6: Foam and swirling stormwater in Lafayette Sink (left). Urban stormwater flowing out of Trescott Pond to Lake Lafayette (right).



Figure 5.1.7: An invasive exotic species of snail, *Pomacea canaliculata* has turned up in Upper Lake Lafayette. This species is thriving. This species can host a nematode that can be parasitic to humans.



Figure 5.1.8: Lafayette Sink with the lake full of water 2001 (photo by Michael Hill, GFC)



Figure 5.1.9: Lafayette Sink, a similar view to the one above, with the lake empty, 2004 (photo by Michael Hill, GFC)



Figure 5.1.10: Stormwater laden with pollutants washes out Weems Road as Weems Pond, a stormwater treatment facility is overwhelmed, June 2001

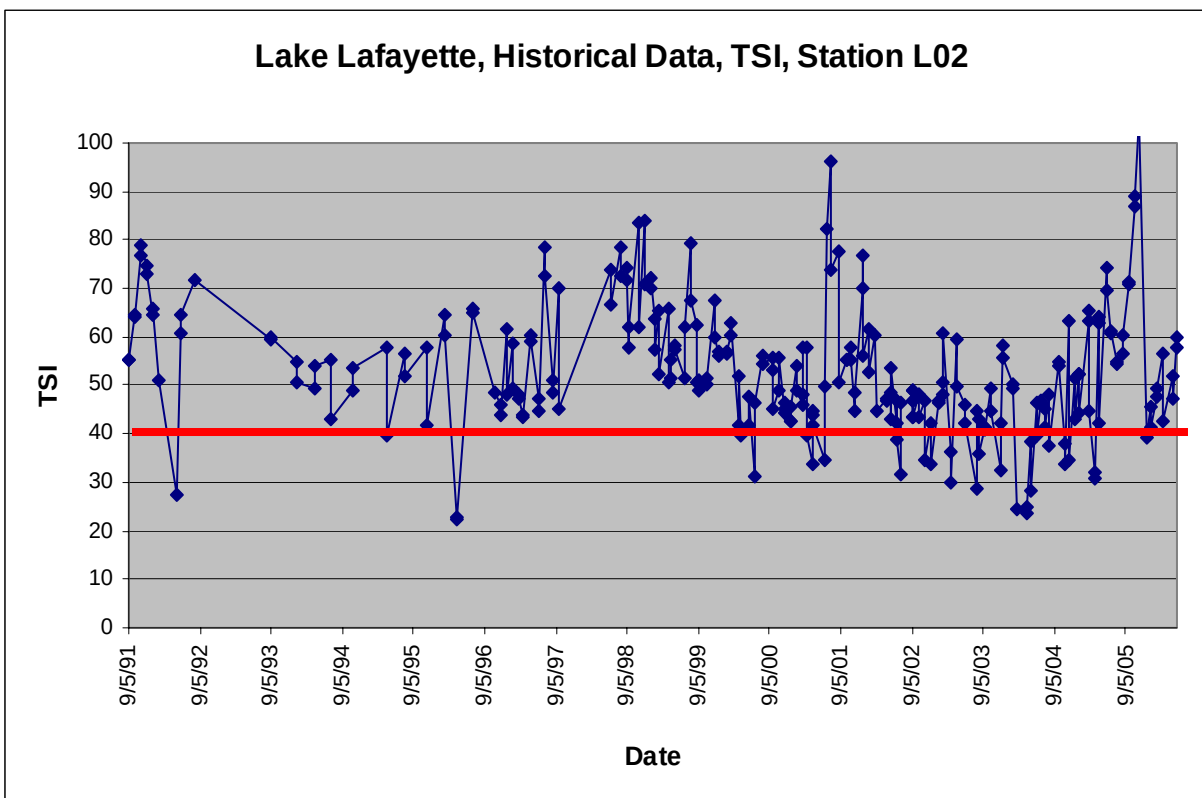


Figure 5.1.11: Upper Lake Lafayette, Station L02, at Lafayette Sink

**Upper Lake Lafayette,
Station L02,
At Lafayette Sink,
Clear lake,**

According to FDEP criteria this lake would be impaired at TSIs greater than 40 units,
Data duration:09/91-06/06.

source LCL Data (McGlynn Laboratories Inc) data from before 1997 LCL Data
(CARRMa).

*** Result: potentially impaired.**

5.1.2: Lake Piney Z

Surface Area: 195 Acres

Drainage basin: 1000

Classification: Hypereutrophic

Location: Coastal Lowlands

Number of Stations: 1

Duration of monitoring: 09/91-06/06

In the 1940's Lake Piney Z was created with earthen dikes built across the center of Lake Lafayette by the owners of Piney Z Plantation. The center of Lake Lafayette became a private pond for duck hunting and fishing. They made a permanent lake that would never go dry. The westernmost dike utilized a large Native American midden mound. The center of Lake Lafayette became a 'plantation pond.'

Impoundment causes other problems. In impounded systems the water levels are stabilized and plants can grow. Problems with native species such as *Cabomba pulcharima* and *Nymphoides aquatica* and the invasive exotic *Eichenoidia crassipes* began to cause more disruption to recreational activities than natural water level fluctuations. During drawdowns aquatic plants to die and during wet periods the aquatic plant communities grow back. The cycle of wet and dry allows neither terrestrial or aquatic plant communities to become established. Fluctuating water levels create open water and increases wildlife potential. In the past fires in the lake bottoms during the dry season cleared out the brush and grazing animals ate the new growth. These forces no longer operate in urban environments.



Figure 5.1.2.1: Lake Piney Z looking south. Note the development (Piney Z Plantation). Swift Creek Middle School is below the Lake. The Lake is overgrown with vegetation. Clear areas are the result of mechanical harvesting, grass carp and herbicide application.



Figure 5.1.2.2: 1957 aerial photograph; note the absence of vegetation in the open water of Lake Piney Z (center). At this time the lake basin was rural and Upper Lake Lafayette was dry. Compare with the photo above taken in 2000.

In the 1990's several residential communities and a public school were built on the northern shore of Lake Piney Z. Swift Creek Middle School was constructed on the site of an ancient Native American village which was excavated before construction began. The aquatic plant population became so thick in Lake Piney Z that a boat could not cross the lake. The City of Tallahassee and the Florida Wildlife Conservation Commission began an ambitious restoration project. The bottom of the Lake was scraped, and the muck was mounded into dikes (called fishing fingers) and islands. The restoration was completed in 2002. There was a slow re-flood of the lake during the drought and this allowed the vegetation to refill the lake. Aquatic plant removal, grass carp and herbicide treatments restored open water habitats by 2005 but increased stormwater runoff enters Lake Piney Z from the south and the berm of the large holding pond to the north of the lake collapsed releasing tons of soil and stormwater into Lake Piney Z. The frequency of harmful algal blooms has increased in Lake Piney Z (Figure 5.3.3) and the water quality is potentially impaired.



Figure 5.1.2.3: 2002 aerial photograph; The berm on the holding pond north of Lake Piney Z failed after Tropical Storm Berl.



Figure 5.1.2.4: 2002 aerial photograph; Plume in Lake Piney Z from the failed berm.

Algal toxin analysis (Lake Piney Z)– The drinking water threshold the cyanobacterial toxin microcystin, as defined by the World Health Organization (WHO), is 1.0 µg/L MCLR. No other Algal toxin standard exists. The blooms sampled in the Lake Piney Z on 5/1/06 exceed that standard. The algal bloom contained harmful algae and exceeded the WHO standard. *Anabaena* algae was found which produces an algal toxin called microcystin that was assayed at 10.0 ug/L on 9/23/05. There have been problems associated with incidental contact with water containing algal toxins and these blooms are properly termed Harmful Algal Blooms (HAB). The algal toxin analytical results from Green Water Labs and a poster from the Florida Department of Health are included (see the Lake Munson discussion, suggested for use in affected waters).



Figure 5.1.2.5: In February 2005 there was a severe algal bloom on Lake Piney Z. It was *Anabaena* sp., a potentially harmful cyanobacteria.

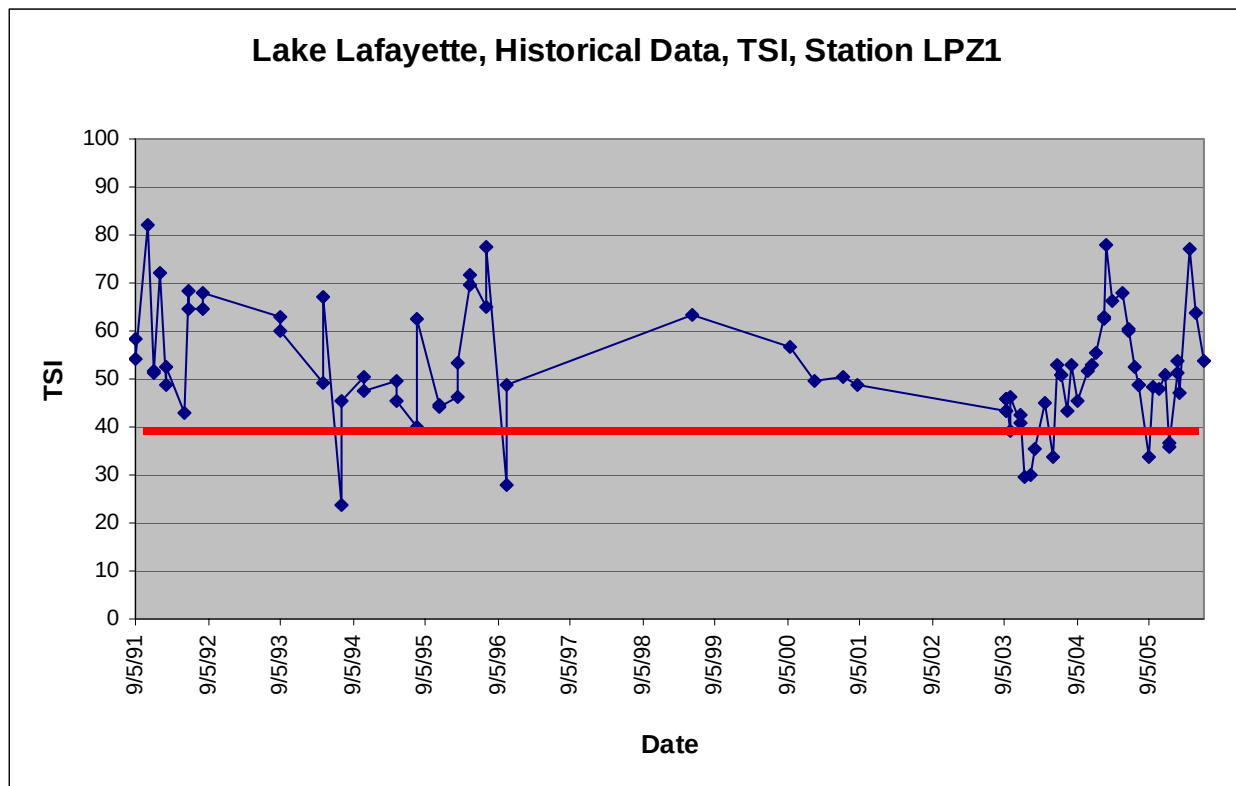


Figure 5.1.2.6: Lake Lafayette, Piney Z Lake, Station LPZ1

Lake Lafayette,

Station LPZ1,

Clear lake,

According to FDEP criteria this lake would be impaired at TSIs greater than 40 units,

Data duration:09/91-06/06,

Data source LCL Data (McGlynn Laboratories Inc) data from before 1997 LCL Data (CARRMa).

*** Result: potentially impaired and getting worse.**

5.1.3: Lower Lake Lafayette (Including Alford Arm)

Surface Area: 1230 Acres (calc), Alford Arm, 100 Acres

Drainage basin: 35,000 (calc)

Classification: mesotrophic

Location: Coastal Lowlands

Number of Stations: 5

Duration of Monitoring: 09/91-06/06

This shallow swampy portion of Lake Lafayette was primarily open water in wet periods and grassland during dry periods before impoundment in 1948 stabilized the water levels allowing cypress trees and other aquatic plants to overgrow 94% of the lake surface. Prior to 1948 this portion of Lake Lafayette was predominantly dry. The lakebed, when flooded was predominantly open water. During the dry seasons, usually in the fall and winter, the water receded into Lafayette Sink. As the dry vegetation browned after the first hard frost, occasional lightning strikes could ignite fires that would burn the dry, accumulated aquatic vegetation. Because of impoundment, Lower Lake Lafayette has had stabilized water levels for over 50 years, a dramatic change in the natural hydrocycle. The oxidation of organic matter is facilitated by exposure of the lake bottom to sunlight and air. Impoundment causes an increase in organic matter. There always was a connection between Lower Lake Lafayette and the St. Marks River, but it was only at extreme flood stages until in 1965 a Mosquito Ditch was dug to connect Lower Lake Lafayette with the St. Marks River.

On Lower Lake Lafayette it seems that there is no water. The surface of the lake is almost completely covered with vegetation, floating islands called Tussocks. Decaying roots floating up from the lake bottom, usually fragrant water lilies, forms them. Aquatic grasses, sedges and even small trees eventually colonize them. This causes problems within a lake. Shifting winds can trap boats and crush them. Tussocks can drift to shore and children playing on them have been blown to the center of the Lake. The neighborhood association at Windham Hills recently spent \$30,000 dollars in 2003 to remove their Tussocks. Soon after removal was accomplished a storm blew in new ones from across the Lake.



Figure 5.1.3.1: Tussocks in their early stage (left) and mature tussock in 6 ft of water (right), these pictures are from station L15 that has good water quality. It is obvious that there is another problem here, water level stabilization. This is what happens when the natural hydrocycle is disrupted.



Figure 5.1.3.2: Tussocks, or floating islands of vegetation covering the water surface in Lower Lake Lafayette.

Another invasive exotic aquatic plant has been found in Lower Lake Lafayette. This plant, *Scirpus cubensis* forms floating grassy mats. In south Florida this plant is responsible for most tussock formation. We are not sure how it was introduced though it was first found near the Seaboard Line railroad tracks (2005).

The Florida Wildlife Conservation Commission and Bureau of Aquatic Plant Control (FDEP) could launch a massive Tussock removal program in Lower Lake Lafayette if a few obstacles were removed. 'A waterbody must have access to the boating public by way of an established, improved boat ramp or a direct navigable connection to an eligible water body' to be eligible for government funding (Rule 62C-54.0035(b)). This does not seem like much of a problem but there are no established or improved boat ramps on many of the impounded subsections of Lower Lake Lafayette. There are at least 5 berms across Alford Arm. These agencies eventually pulled their funding and moved their efforts to Washington County (2006).



Figure 5.1.3.3: Station L28 is located at the inflow to Alford Arm off Buck Lake Road. Water from northern Tallahassee, from Bradfordville and the Killearn Chain of Lakes drains into Lake Lafayette here.

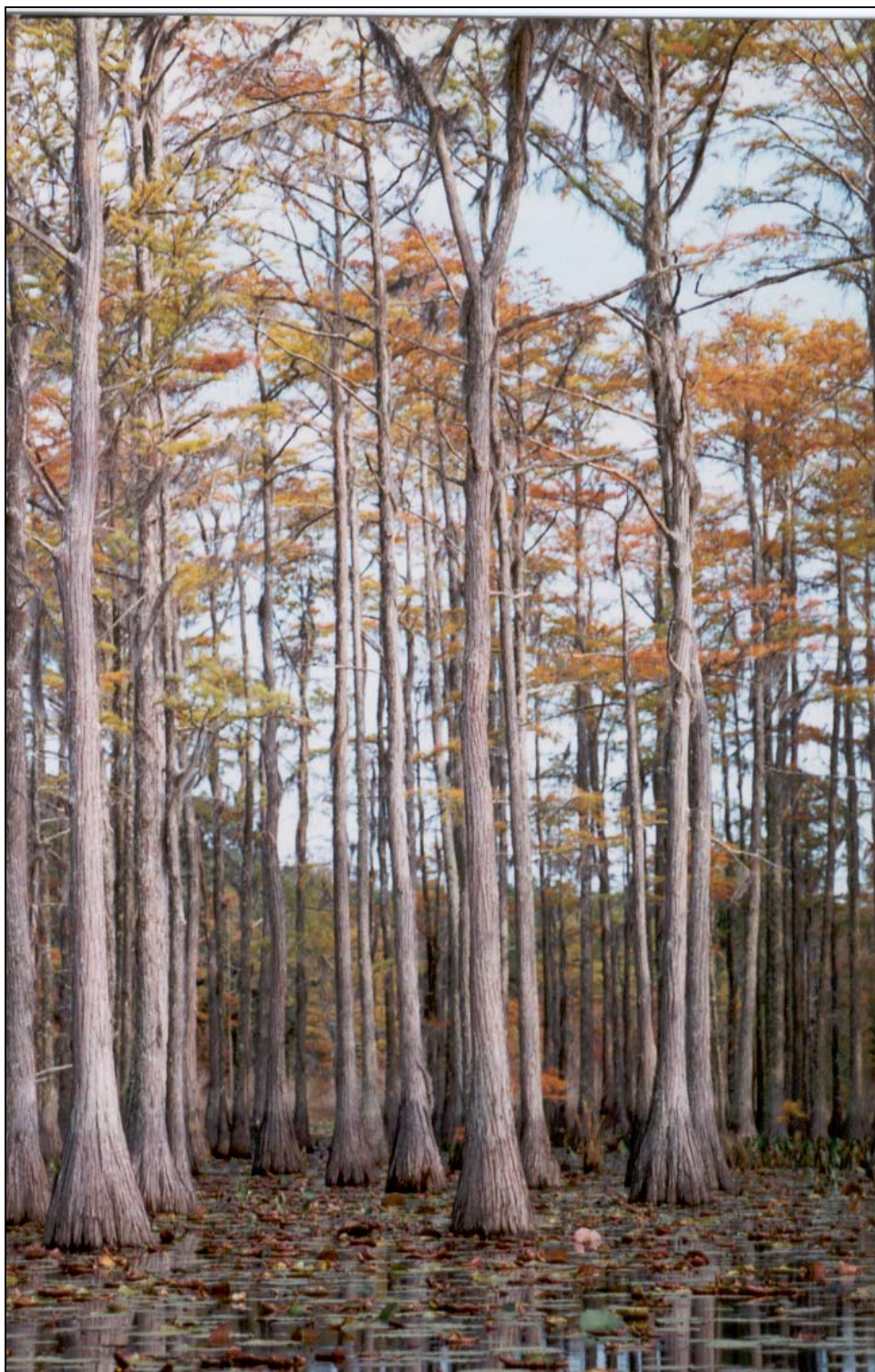


Figure 5.1.3.4: A cypress stand in Lake Lafayette near Chairs Crossroads at station L21. This area is near the Woodstork refuge and is highly favored by Duck Hunters.

Listed species, wood storks (*Mycteria americana*) live on Lower Lake Lafayette, near Chaires Cross (Rodgers, 1987). They inhabit a 413 ha gum-cypress-forested portion of the lake. Wood storks need to have water beneath their nests for nesting, the majority of the nesting birds inhabit a circular pool surrounded by large cypress trees. This pool is a karst depression that merits further investigation since it probably always provides the birds permanent water. That the mean age of the cypress trees on Lake Lafayette is 77 years, the oldest dating to 97 years (FWC). Lower Lake Lafayette used not to be covered with cypress trees. This is not the natural state of the lake. FWC owns 607 acres of the lake bottom, including the wood stork rookery. They feel that the colony is relatively protected except for unnatural water level fluctuations that are caused by the impoundment at Piney Z Lake and the Mosquito Canal at Chairs Crossroad. In a resolution dated 1983, the FWC swore to do "all in its power to protect the Wood Stork Rookery and habitat".



Figure 5.1.3.5: These pictures are from recent controlled burns on Lake Miccosukee. No burning occurred on Lake Lafayette during the drought because the numerous impoundments prevented a drawdown. Lakes Iamonia and Jackson were burned. Lake Lafayette is missing out on these beneficial management strategies that would really help with the aquatic plant problem.

Water quality assessments of Lower Lake Lafayette did not find significant water quality problems associated with the Leon County Landfill (FDEP, 1998). Several studies have found problems associated with the Meadows at Woodrun STP. Excessive nitrogen enrichment has been reported. Ammonia concentrations approaching 5 ppm were reported by FDEP. These exceed 95% of the values found on other Florida lakes. FDEP reported that these water quality problems are caused by seepage from these sewage treatment ponds into the Lake (Bureau of Laboratories, 1998). This problem is still there. The ponds at the STP leak. They are unlined clay ponds.

Conductivity is near background levels in Lower Lake Lafayette. Dissolved oxygen levels are low. This is a result of shading by the vegetation. The lake is overgrown by emergent aquatic vegetation algal growth. Chlorophyll values are low because of the shading. Nitrogen and phosphorus values seem to have stabilized.

Alford Arm is a long narrow finger of Lower Lake Lafayette extending to the north, receiving Stormwater runoff from as far away as Lake McBride in Bradfordville. The railroad causeway that separates Alford Arm from Lower Lake Lafayette, contains inadequate culverts and impedes the transfer of waters into Lower Lake Lafayette. Farm Pond dams divide Alford Arm into 4 separate ponds. The net result of water level stabilization is again, luxuriant aquatic plant growth. This plant growth does effectively clean the stormwater as it filters down the Arm, finally exiting into Lower Lake Lafayette. Throughout the course of the 1999 drought there has been minimal flow here.



Figure 5.1.3.6: Southern Alford Arm near the Seaboard Railroad line and the Woodstork Rookery.



Figure 5.1.3.7: Central Alford Arm, there is four feet of water here, this is what Lake Piney Z looked like before the recent restoration by the Florida Wildlife Commission.



Figure 5.1.3.8: The Lafayette boat trail is approximately 10 miles long winding through Lower Lake Lafayette (completed, winter 2005).



Figure 5.1.3.9: Another view of the boat trail

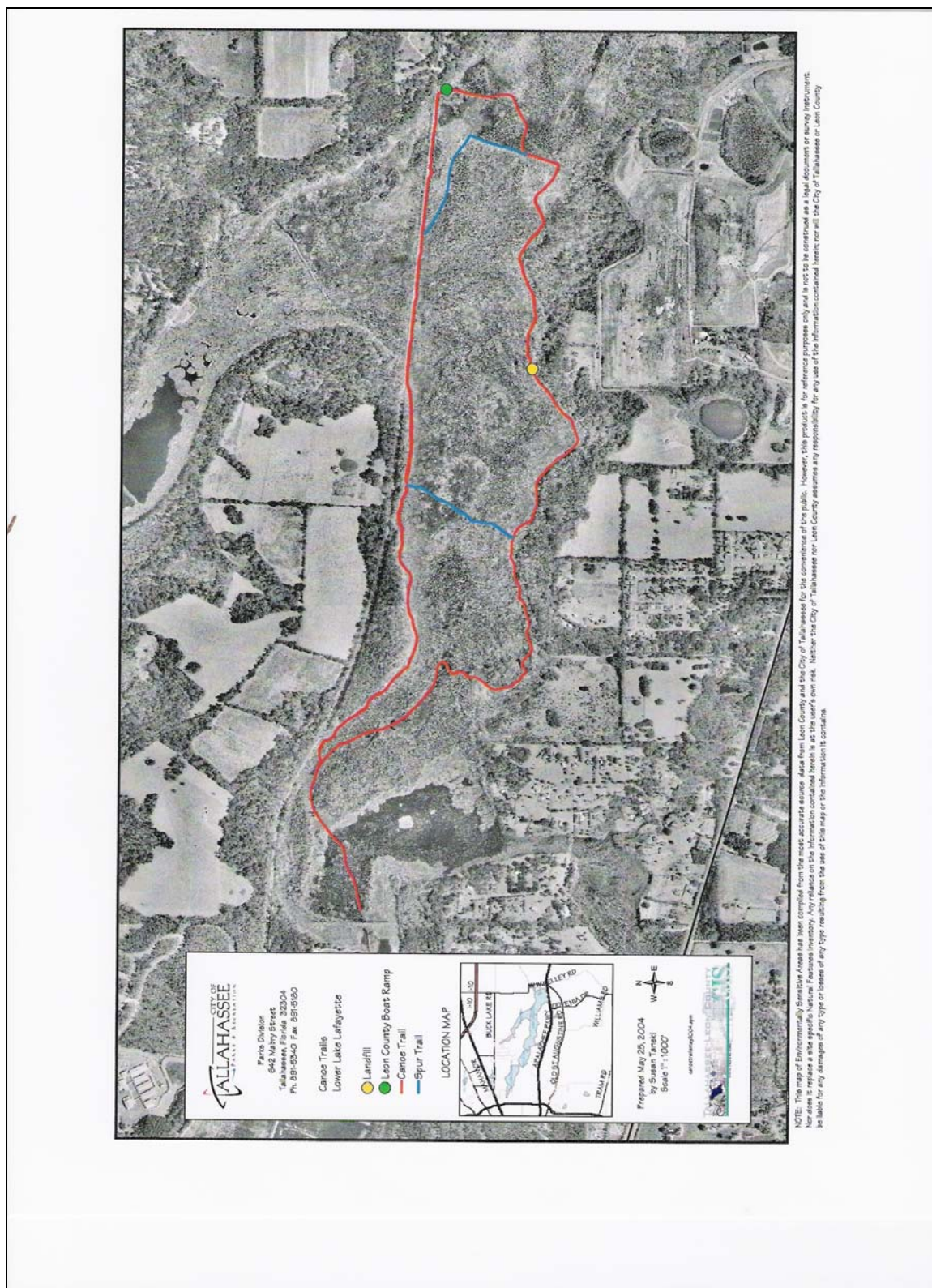
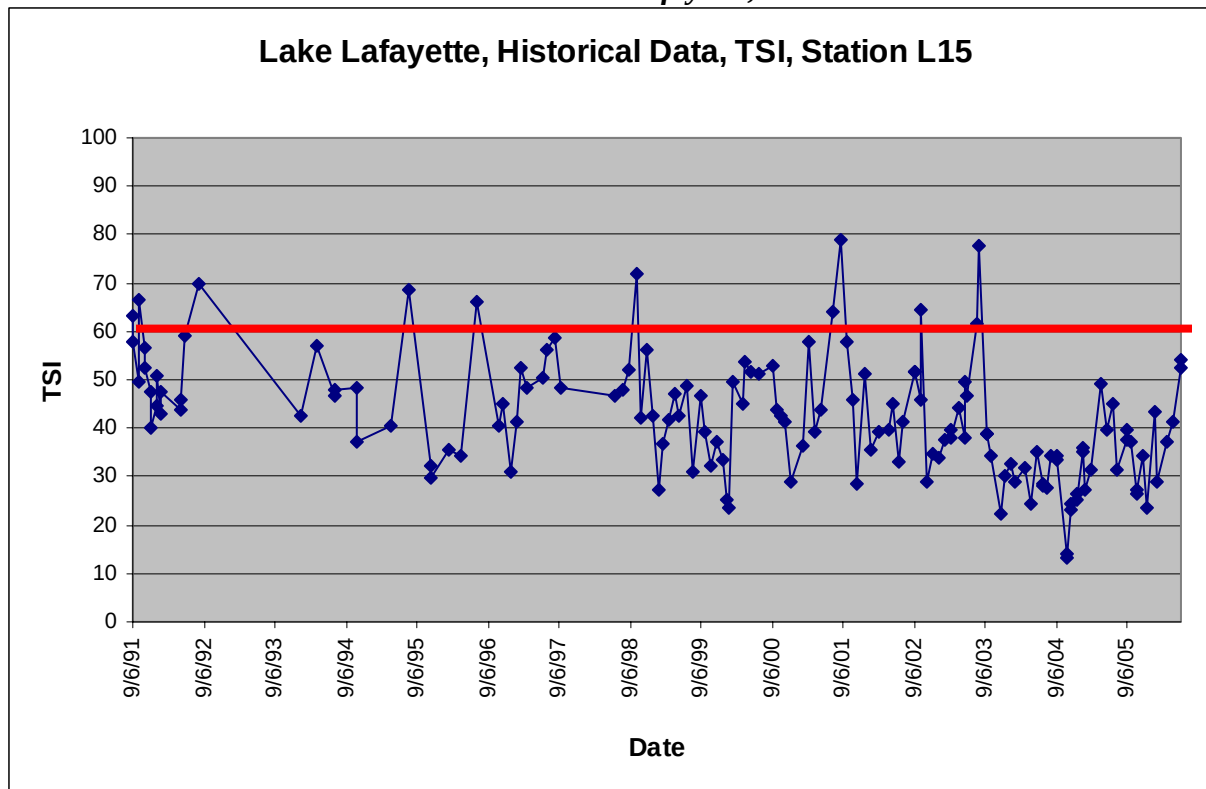


Figure 5.1.3.10: A map of the Lower Lake Lafayette boat trail. Michael Hill, GFC and Jess VanDyke, FDEP were primarily responsible for the clearing and construction of the trail.

10.27: Lower Lake Lafayette, Station L15



**Figure 5.1.3.11: Lower Lake Lafayette,
Station L15,**

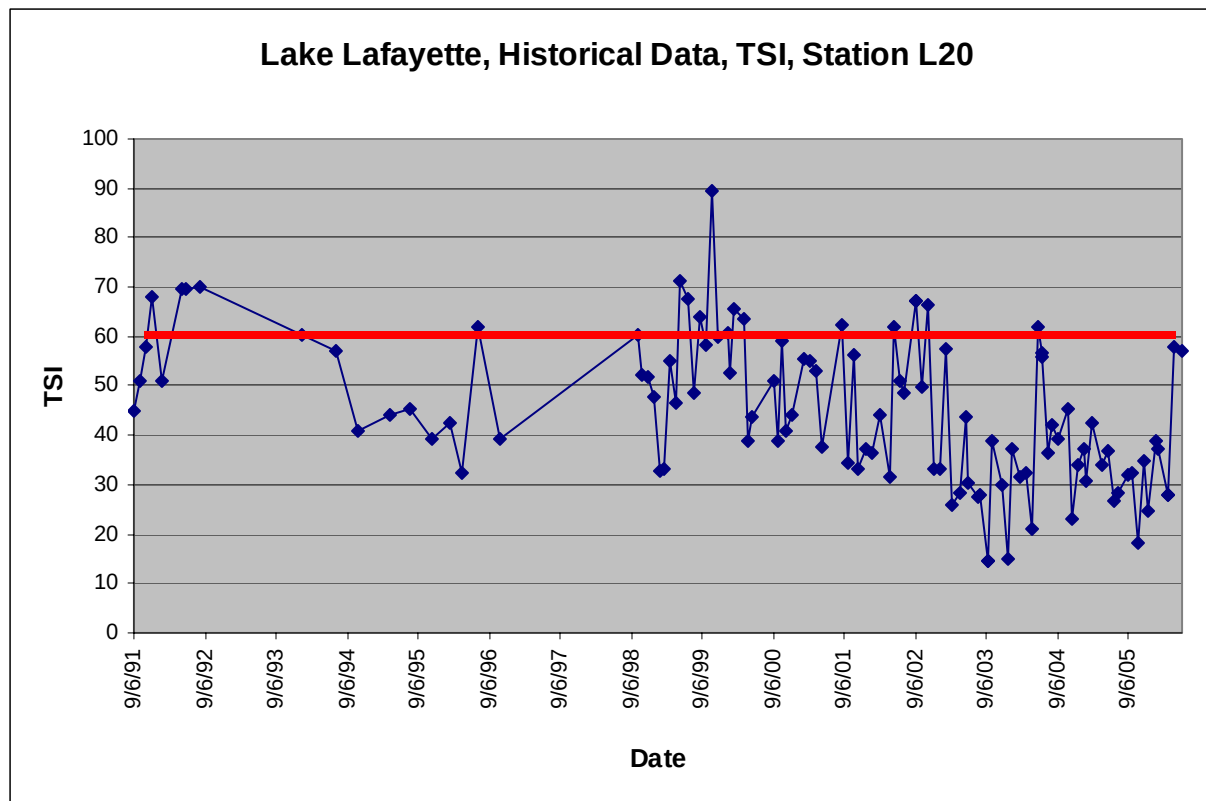
Tannic lake,

According to FDEP criteria this lake would be impaired at TSIs greater than 60 units,
Data duration:09/91-06/06.

Data source LCL Data (McGlynn Laboratories Inc) data from before 1997 LCL Data
(CARRMa).

*** Result: not impaired.**

10.28: Lower Lake Lafayette, Station L20



**Figure 5.1.3.12: Lower Lake Lafayette,
Station L20,**

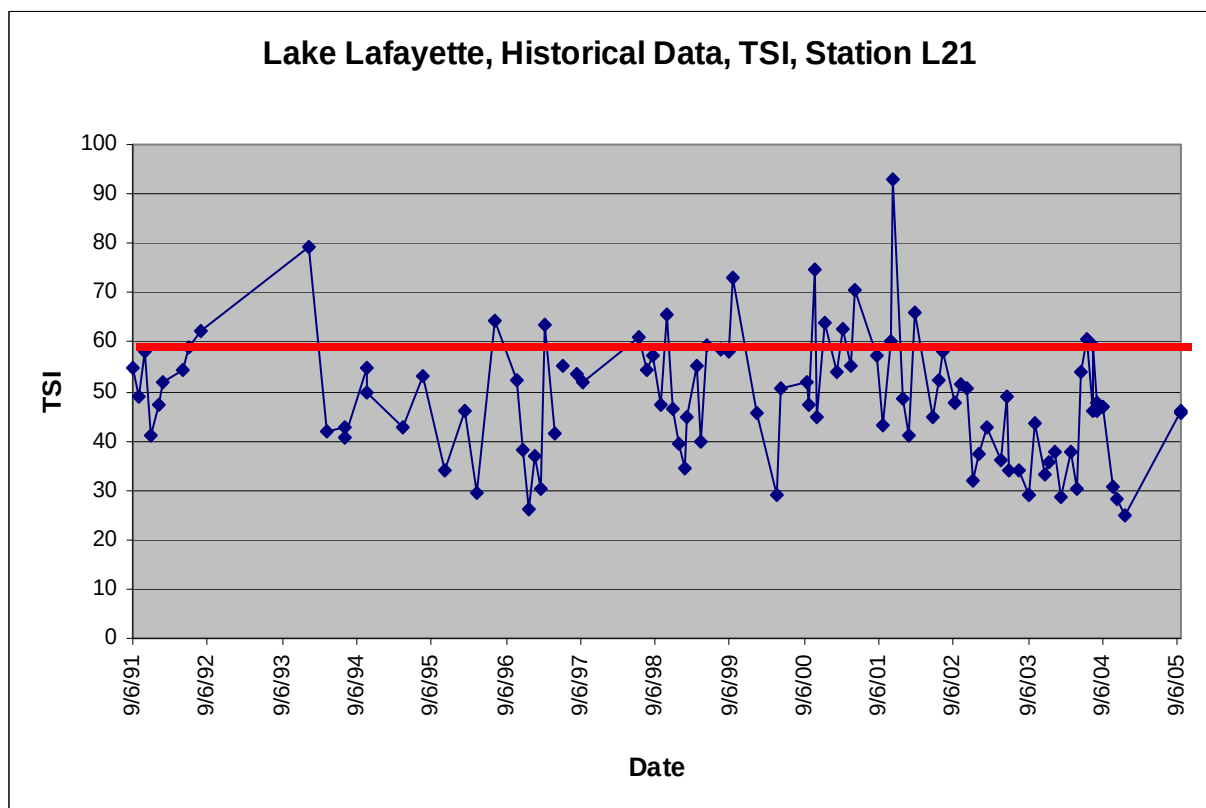
Tannic lake,

According to FDEP criteria this lake would be impaired at TSIs greater than 60 units,
Data duration:09/91-06/06.

Data source LCL Data (McGlynn Laboratories Inc) data from before 1997 LCL Data
(CARRMa).

*** Result: not impaired.**

10.29: Lower Lake Lafayette, Station L21



**Figure 5.1.3.13: Lower Lake Lafayette,
Station L21,**

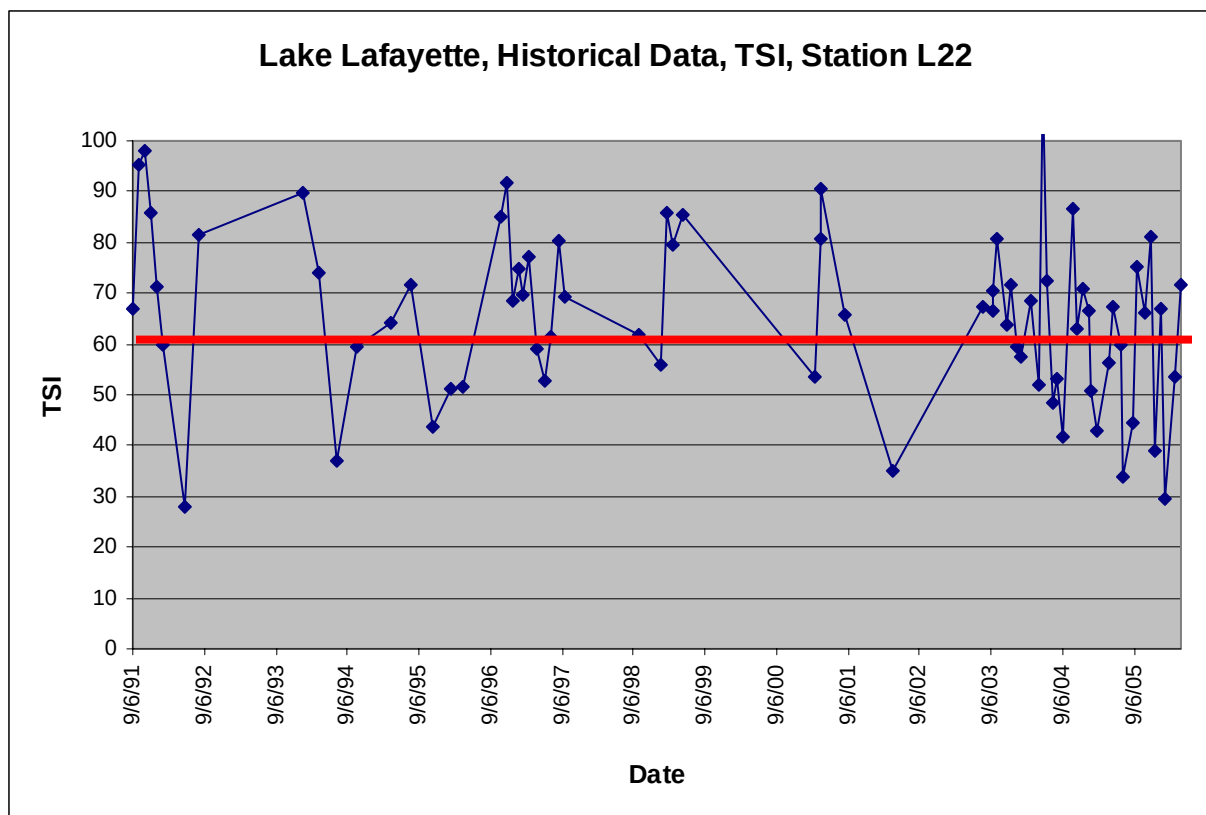
Tannic lake,

According to FDEP criteria this lake would be impaired at TSIs greater than 60 units,
Data duration:09/91-06/06.

Data source LCL Data (McGlynn Laboratories Inc) data from before 1997 LCL Data
(CARRMa).

*** Result: not impaired.**

10.30: Lower Lake Lafayette Station L22, Near the Talquin STP



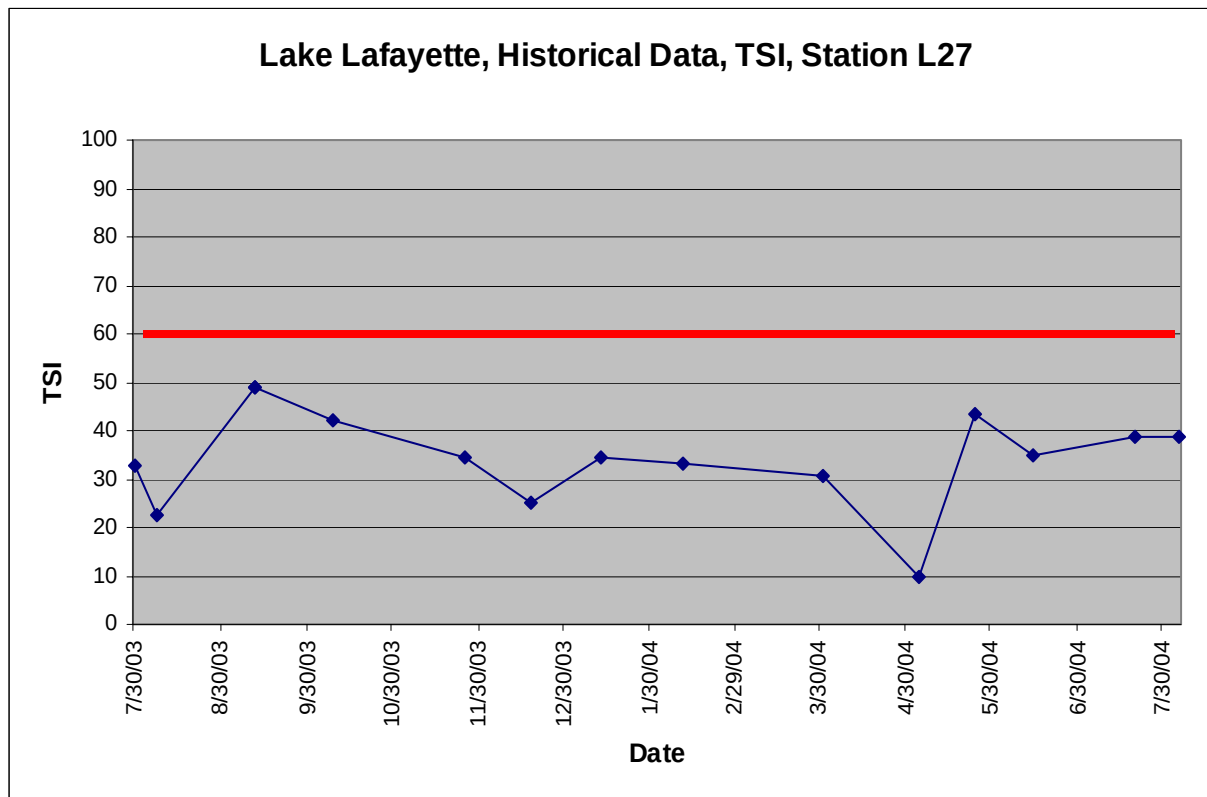
**Figure 5.1.3.14: Lower Lake Lafayette
Station L22,
Near the Talquin STP,
Tannic lake,**

According to FDEP criteria this lake would be impaired at TSIs greater than 60 units,
Data duration:09/91-06/06,

Data source LCL Data (McGlynn Laboratories Inc) data from before 1997 LCL Data
(CARRMa).

*** Result: potentially impaired.**

10.32: Lake Lafayette, Alford Arm, Station L27



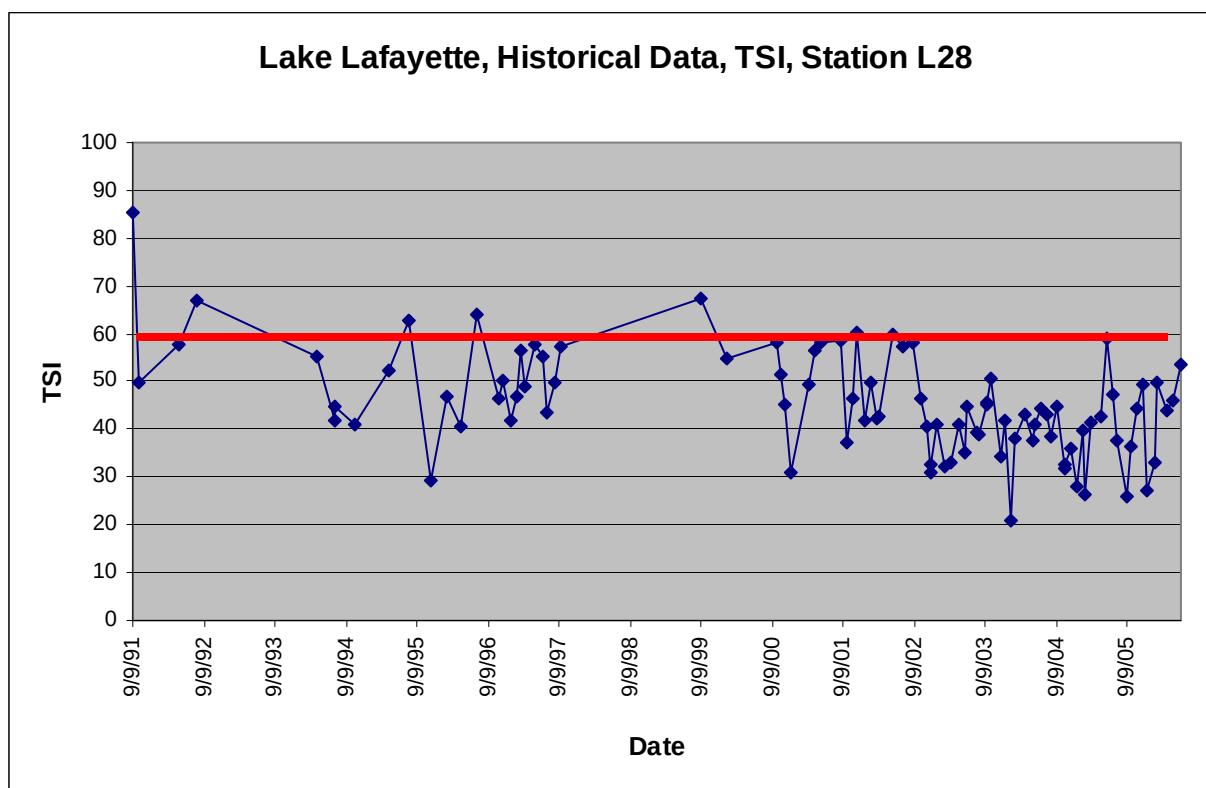
**Figure 5.1.3.16: Lake Lafayette,
Alford Arm,
Station L27,
Tannic lake,**

According to FDEP criteria this lake would be impaired at TSIs greater than 60 units,
Data duration:07/03-06/06,

Data source LCL Data (McGlynn Laboratories Inc).

*** Result: not impaired.**

10.33: Lake Lafayette, Alford Arm, Station L28



**Figure 5.1.3.17: Lake Lafayette,
Alford Arm,
Station L28,
Tannic lake,**

According to FDEP criteria this lake would be impaired at TSIs greater than 60 units,
Data duration:10/91-06/06,

Data source LCL Data (McGlynn Laboratories Inc) data from before 1997 LCL Data
(CARRMa).

*** Result: not impaired.**