

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Water Resource Management

SOUTH AND CENTRAL DISTRICTS • GROUP 4 BASIN • 2006

Water Quality Assessment Report

Kissimmee River and Fisheating Creek



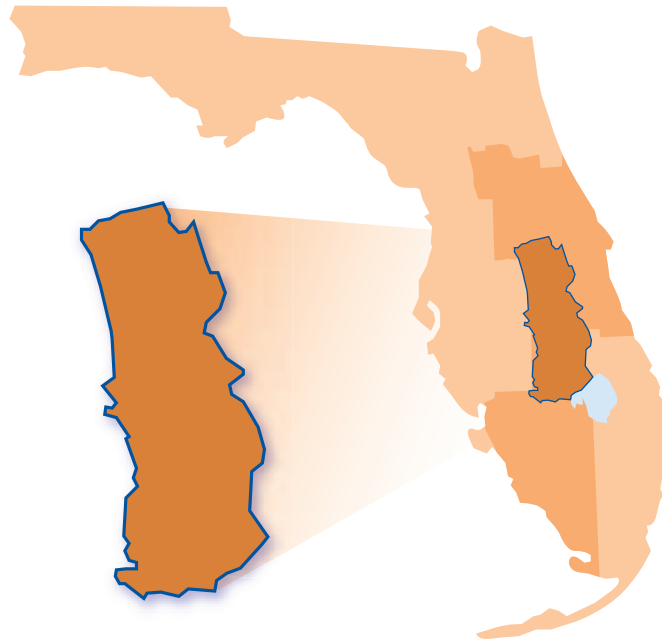


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Acknowledgments

The *Kissimmee River and Fisheating Creek Basins Water Quality Assessment Report* was prepared by the Kissimmee River and Fisheating Creek Basins Team, Florida Department of Environmental Protection, as part of a five-year cycle to restore and protect Florida's water quality. Team members and contributors include the following:

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Web Sites

Florida Department of Environmental Protection, Bureau of Watershed Management

TMDL Program

<http://www.dep.state.fl.us/water/tmdl/index.htm>

Identification of Impaired Surface Waters Rule

<http://www.dep.state.fl.us/water/tmdl/docs/AmendedIWR.pdf>

STORET Program

<http://www.dep.state.fl.us/water/storet/index.htm>

2004 305(b) Report

http://www.dep.state.fl.us/water/docs/2004_Integrated_Report.pdf

Criteria for Surface Water Quality Classifications

<http://www.dep.state.fl.us/legal/rules/shared/62-302.pdf>

Status/Assessment Reports

http://www.dep.state.fl.us/water/tmdl/stat_rep.htm

Allocation Technical Advisory Committee (ATAC) Report

<http://www.dep.state.fl.us/water/tmdl/docs/Allocation.pdf>

U.S. Environmental Protection Agency

Region 4: Total Maximum Daily Loads in Florida

<http://www.epa.gov/region4/water/tmdl/florida/>

National STORET Program

<http://www.epa.gov/storet/>

Preface

Content Features

- **Executive Summary:** Appears at the beginning of every report and provides an overview of the watershed management, its implementation, and how this approach will be used to identify impaired waters.
- **Sidebar:** Appears throughout the report and provides additional information pertinent to the text on that page.
- **Noteworthy:** Appears on pages near text that needs additional information but is too lengthy to fit in a sidebar.
- **Definitions:** Appear where scientific terms occur that may not be familiar to all readers. The word being defined is bold-faced in the text.
- **References:** Appear immediately before the Appendices and provide a complete listing of all sources used in the text.
- **Appendices:** Appear at the end of the report and provide additional information on a range of subjects such as bioassessment methodology, rainfall and stream flow, types of natural communities, STORET stations, water quality statistics, land use, and permitted facilities.



Executive Summary

The Water Quality Assessment Report for the Kissimmee River and Fisheating Creek Basins is part of the implementation of the Florida Department of Environmental Protection's (Department's) watershed management approach for restoring and protecting water resources and addressing Total Maximum Daily Load (TMDL) Program requirements. A TMDL represents the maximum amount of a given pollutant that a waterbody can assimilate and still meet the waterbody's designated uses. A waterbody that does not meet its designated uses is defined as impaired. The watershed approach, which is implemented using a cyclical management process, provides a framework for implementing the requirements of the 1972 federal Clean Water Act and the 1999 Florida Watershed Restoration Act (Chapter 99-223, Laws of Florida).

A Status Report, published during Phase 1 of the watershed management cycle, provided a *Planning List*, or preliminary identification, of potentially impaired waterbodies in the Kissimmee River and Fisheating Creek Basins. This Assessment Report presents the results of additional data gathered during Phase 2 of the cycle. The report contains a *Verified List* of impaired waters (**Table 5.2** in Chapter 5) that has been adopted by Secretarial Order and approved by the U.S. Environmental Protection Agency (EPA). TMDLs must be developed and implemented for these waters, unless the impairment is documented to be a naturally occurring condition that cannot be abated by a TMDL, or unless a management plan already in place is expected to correct the problem. The Verified List also constitutes the Group 4 basin-specific 303(d) list of impaired waters, so called because it is required under Section 303(d) of the Clean Water Act.

The report also provides the results of a preliminary ground water quality assessment and discusses ground water–surface water issues for further evaluation and resource priorities. See **Noteworthy** in Chapter 1 for a description of the contents of this report, by chapter.

In the Kissimmee River and Fisheating Creek Basins, state, federal, regional, and local agencies and organizations are making progress towards identifying problems and improving water quality. Through its watershed management activities, the Department works with these entities to support programs that are improving water quality and restoring and protecting ecological resources. The Department's TMDL Program objectives will be carried out in the basin through close coordination with key stakeholders and initiatives such as the cities of Orlando, Kissimmee, St. Cloud, Lake Wales, Avon Park, Sebring, and Lake Placid; Orange, Polk, Osceola, Highlands, Okeechobee, and Glades Counties; Reedy Creek Improvement District (RCID); Southwest Florida Water Management District (SWFWMD); and South Florida Water Management District (SFWMD). Coordination with the many other initiatives in the basin is essential to the success of the TMDL efforts. These initiatives include the Comprehensive Everglades Restoration Plan and the Kissimmee River Restoration Project.



Not only do stakeholders in the basin share responsibilities in achieving water quality improvement objectives, they also play a crucial role in providing the Department with important monitoring data and information on management activities. Significant data providers in the basin include SFWMD, SWFWMD, the Department, Florida Fish and Wildlife Conservation Commission, the city of Orlando, RCID, Polk and Orange Counties, Avon Park Air Force (Bombing) Range, and the U.S. Geological Survey.

During the next few years, considerable data analysis will be done to establish TMDLs for impaired waters in the Kissimmee River and Fisheating Creek Basins, establish the initial allocations of pollutant load reductions needed to meet those TMDLs, and produce a Basin Management Action Plan to reduce the amount of pollutants that cause impairments. These activities depend heavily on the active participation of the water management district, local governments, businesses, and other stakeholders. The Department will work with these organizations and individuals to undertake or continue reductions in the discharge of pollutants and achieve the established TMDLs for impaired waterbodies.

Summary of Findings

The Department's assessment shows that 49 waterbodies or waterbody segments in the Kissimmee River and Fisheating Creek Basins are impaired per the IWR methodology and require the development of TMDLs. The following summarizes, by planning unit, impairments by waterbody types and the primary pollutants. Planning units are smaller areas in the basin that provide a more detailed geographic basis for identifying and assessing water quality improvement activities.

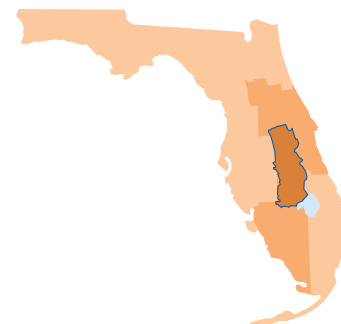
Upper Kissimmee Planning Unit

Of the 144 waterbody segments in the Upper Kissimmee Planning Unit, 90 segments have sufficient data for assessment. Of these, 30 are verified impaired for at least 1 parameter assessed, 3 are impaired for reasons other than a pollutant (do not require TMDLs) and concurrently on the Planning List for other parameters, 32 remain on the Planning List, and 28 meet standards.

The 30 verified impaired segments in the planning unit, and the parameters of impairment, are as follows:

Alligator Lake	Mercury in fish
Brick Lake	Mercury in fish
Cane Lake	Nutrients (Trophic State Index [TSI])
Clear Lake	Nutrients (TSI)
City Ditch Canal	Dissolved oxygen (DO)
Davenport Creek	DO, fecal coliforms
East Lake Tohopekaliga	Mercury in fish
Horseshoe Creek	DO, fecal coliforms

Lake Butler	Nutrients (historic TSI), mercury in fish
Lake Catherine	DO, nutrients (TSI)
Lake Copeland	Nutrients (TSI)
Lake Cypress	Mercury in fish, nutrients (TSI)
Lake Davenport	DO
Lake Hart	Mercury in fish
Lake Hatchineha	Mercury in fish
Lake Holden	Nutrients (TSI)
Lake Jackson Osceola County	DO, nutrients (TSI)
Lake Kissimmee (Mid)	Mercury in fish, lead, nutrients (TSI)
Lake Lorna Doone	Nutrients (TSI)
Lake Mann	Nutrients (TSI)
Lake Marian	Nutrients (TSI)
Lake Mary Jane	Lead, mercury in fish
Lake Olive	Nutrients (TSI)
Lake Pineloch	Nutrients (TSI)
Lake Russell	Mercury in fish
Lake Tohopekaliga	Mercury in fish
Lake Underhill	Nutrients (TSI)
Reedy Creek Above Lake Russell	DO
Red Lake	Copper
Rock Lake	Nutrients (TSI)



Other parameters causing potential impairments in the planning unit include nutrients, DO, turbidity, copper, iron, lead, cadmium, bacteria, mercury, beryllium, beta benzene hexachloride (BHC), chlorine, dichlorodiphenyltrichloroethane (DDT), dieldrin, endrin, guthion, heptachlor, silver, toxaphene, chlordane, and nickel.

Lower Kissimmee Planning Unit

Of the 16 waterbody segments in the Lower Kissimmee Planning Unit, 13 segments have sufficient data for assessment. Of these, 4 are verified impaired for at least 1 parameter assessed, 2 are impaired for reasons other than a pollutant (do not require TMDLs) of which 1 is concurrently on the Planning List for 2 other parameters, 8 remain on the Planning List, and none meets standards.

The four verified impaired segments in the planning unit, and the parameters of impairment, are as follows:

Farm Area	DO
S-154C	DO
Blanket Bay Slough	DO, nutrients (chlorophyll <i>a</i>)
Oak Creek	Nutrients

Other parameters causing potential impairments in the planning unit include beryllium, DO, iron, and nutrients (chlorophyll *a*).



Lake Istokpoga Planning Unit

Of the 86 waterbody segments in the Lake Istokpoga Planning Unit, 52 segments have sufficient data for assessment. Of these, 10 are verified impaired for at least 1 parameter assessed, 1 is impaired for reasons other than a pollutant (does not require a TMDL), 24 remain on the Planning List, and 17 meet standards.

The 10 verified impaired segments in the planning unit, and the parameters of impairment, are as follows:

Huckleberry Lake	Nutrients (TSI)
Josephine Creek	DO, nutrients (chlorophyll <i>a</i>)
Lake Istokpoga	Nutrients (TSI)
Lake Josephine	Nutrients (TSI), mercury in fish
Lake Sebring	Mercury in fish
Livingston Creek	DO
Livingston Lake	Mercury in fish
Morgan Hole Creek	Fecal coliforms, total coliforms
Lake Arbuckle	Mercury in fish
Lake Clinch	Mercury in fish

Other parameters causing potential impairments in the planning unit include nutrients (TSI), iron, turbidity, DO, biology, fecal coliforms, and lead.

Lake Placid Planning Unit

Of the 33 waterbody segments in the Lake Placid Planning Unit, 20 segments have sufficient data for assessment. Of these, 3 are verified impaired for at least 1 parameter assessed, 6 remain on the Planning List, and 11 meet standards.

The three verified impaired segments in the planning unit, and the parameters of impairment, are as follows:

June in Winter	Mercury in fish
Lake Placid	Mercury in fish
Persimmon Lake	Nutrients (TSI)

Other parameters causing potential impairments in the planning unit include iron and nutrients.

Fisheating Creek Planning Unit

Of the three waterbody segments in the Fisheating Creek Planning Unit, two segments have sufficient data for assessment. Of these, one is verified impaired for at least one parameter assessed, one remains on the Planning List, and none meets standards.

The one verified impaired segment in the planning unit, and the parameters of impairment, is as follows:

Fisheating Creek	DO, iron, nutrients (chlorophyll <i>a</i>), nutrients (historical chlorophyll <i>a</i>)

Other parameters causing potential impairments in the planning unit include copper and lead.

Northwest Lake Okeechobee Planning Unit

Of the 10 waterbody segments in the Northwest Lake Okeechobee Planning Unit, 2 segments have sufficient data for assessment. Of these, 2 are verified impaired for at least 1 parameter assessed, none remains on the Planning List, and none meets standards.

The two verified impaired segments in the planning unit, and the parameters of impairment, are as follows:

Harney Pond Canal	DO, nutrients (chlorophyll <i>a</i>)
Indian Prairie Canal	DO, nutrients (chlorophyll <i>a</i>)

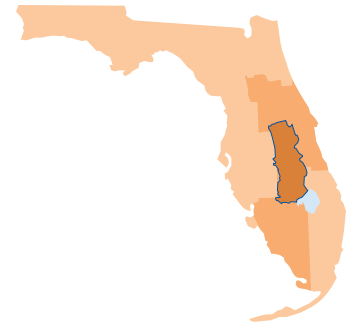
Another parameter causing potential impairments in the planning unit is bacteria.

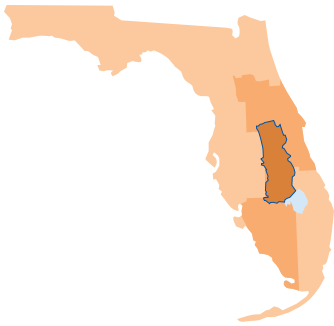
Summary of Ground Water Findings

As is the case elsewhere in the state, ground water seepage provides water to the lakes, rivers, and canals of the basin and can influence surface water quality. Some nutrients and heavy metals are naturally occurring substances that affect surface water quality to varying extents within the basin via ground water inflows.

Natural sources of phosphorus are present in the basin and should be considered in TMDL development. However, there are probably no areas where natural phosphate alone can be isolated as the source of phosphorus enrichment in surface waterbodies. Phosphorus is naturally derived from phosphate that occurs in parts of the basin; however, it is also derived from livestock waste and inorganic fertilizers. Within the western part of the basin, elevated radon areas indicative of phosphate near the land surface are located near several waterbodies that are nutrient impaired; naturally occurring phosphorus may contribute to these in-lake phosphorus concentrations. However, these lakes are also near citrus groves that receive fertilizer applications. In other parts of the basin, phosphorus may accumulate in peat and muck within and adjacent to surface waterbodies. These areas also include potential pollutant sources such as domestic waste, fertilizer, and livestock waste. Elevated concentrations of nitrate and/or ammonia occur in the surficial aquifer throughout the agricultural areas and are not naturally occurring.

Iron is naturally abundant in the surficial aquifer throughout the Kissimmee River and Fisheating Creek Basins, and is the likely source of the verified iron impairment in the Fisheating Creek S-154C Canal (waterbody identification number 3201A). This naturally occurring iron, plus conditions favorable for finding dissolved iron at high levels in surface water (low pH, low DO, and tannic water) coincide in this waterbody segment. This waterbody segment does not appear to be located near waste sites or point sources that would be likely sources of iron.





Total Maximum Daily Load Priority Areas

There are five high priority areas for TMDL development in the Kissimmee River and Fisheating Creek Basins (four in the Kissimmee Basin and two in the Fisheating Creek Basin). Section 62-303.500, Florida Administrative Code, defines high priority waters as waterbody segments where the impairment poses a threat to potable water supplies or human health; waterbody segments where the impairment is due to a pollutant regulated by the Clean Water Act and the pollutant has contributed to the decline or extirpation of a federally listed threatened or endangered species, as indicated in the Federal Register listing the species; or waterbody segments verified as impaired that are included on the EPA's 1998 303(d) list as high priority. The five areas are as follows:

Kissimmee River Basin

Planning Unit	Waterbody Segment	IWR Parameters
Upper Kissimmee	Horseshoe Creek	Fecal coliforms
Upper Kissimmee	Reedy Ck above L. Russell	DO
Lower Kissimmee	Farm Area	DO
Lower Kissimmee	Oak Creek	Nutrients (chlorophyll <i>a</i>)

Fisheating Creek Basin

Planning Unit	Waterbody Segment	IWR Parameters
NW L. Okeechobee	Indian Prairie Canal	Nutrients (chlorophyll <i>a</i>), DO

In the case of the five aforementioned high priority areas, the rationale for their high priority ranking is because they were originally on EPA's 1998 303(d) list as high priority (due in 2005) and were also found to be impaired using the IWR methodology.

The remaining TMDLs in these basins are due in 2010/2011; however, all nutrient and DO TMDLs are being accelerated for completion in 2007 due to the Lake Okeechobee and Estuary Recovery (LOER) Action Plan. For an explanation of LOER, please refer to the **Major Programs and Projects** section in Chapter 2.

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Chapter 1: Introduction

Purposes and Content of the Assessment Report

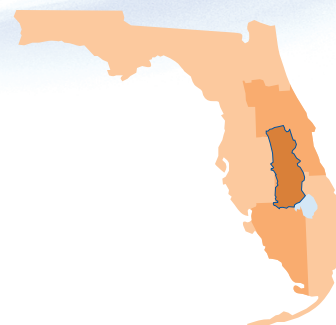
The Florida Department of Environmental Protection (Department) is implementing a statewide watershed management approach for restoring and protecting water quality and addressing **Total Maximum Daily Load** (TMDL) Program requirements. Under Section 303(d) of the 1972 federal Clean Water Act and the 1999 Florida Watershed Restoration Act (FWRA) (Chapter 99-223, Laws of Florida), TMDLs must be developed for all waters that do not meet their designated uses (such as drinking water, recreation, and shellfish harvesting) and are thus defined as impaired.

TMDLs will be developed, and the corresponding reductions in pollutant loads allocated, as part of the watershed management approach, which rotates through the state's 52 river basins over a 5-year cycle. Extensive public participation from diverse stakeholders in each of these basins is crucial in all phases of the cycle.

A Status Report published during Phase 1 of the watershed management cycle provided a *Planning List*, or preliminary identification, of potentially impaired waterbodies in the Kissimmee River and Fisheating Creek Basins. A copy of the report can be found at http://www.dep.state.fl.us/water/tmdl/stat_rep.htm.

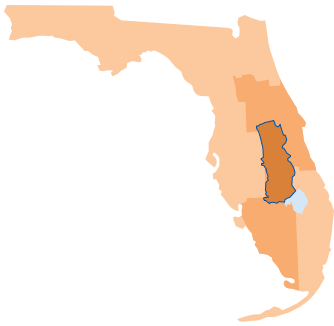
This Assessment Report, which updates the information in the Status Report, incorporates data collected from the Department's strategic monitoring and gathered from other agencies and groups during Phase 2 of the watershed cycle. The report contains a *Verified List* of impaired waters required by the FWRA and Section 303(d) of the federal Clean Water Act, for which TMDLs must be developed and implemented (see **Noteworthy** for a description of the Assessment Report's contents, by chapter). It also describes the results of a preliminary ground water quality assessment and discusses priorities for further evaluation, as well as resource priorities and proposed actions. Based on the assessment results, in the Kissimmee River and Fisheating Creek Basins, 49 waterbodies or waterbody segments are verified impaired for 1 or more parameters. TMDLs must be developed for these waters, unless the impairment is documented to be a naturally occurring condition that a TMDL cannot abate, or unless a management plan is already in place to correct the problem.

This report is intended for distribution to a broad range of potential stakeholders, including decision makers in federal, state, regional, tribal, and local governments; public and private interests; and citizens.



Total Maximum Daily Load

The maximum amount of a given pollutant that a waterbody can assimilate and remain healthy, such that all of its designated uses are met.



The Verified List is required by Subsection 403.067(40), Florida Statutes, and Section 303(d) of the federal Clean Water Act. The Department has adopted the Verified List of impaired waters in accordance with the FWRA and the Identification of Impaired Surface Waters Rule (Rule 62-303, Florida Administrative Code). The U.S. Environmental Protection Agency (EPA) has also approved this list as the current 303(d) list of impaired waters for the basin, so called because it is required under Section 303(d) of the Clean Water Act.

The first 303(d) list, which was required by the EPA in 1998, is to be amended annually to include basin updates. Florida's 1998 303(d) list included a number of waterbodies in the Kissimmee River and Fisheating Creek Basins.

This Water Quality Assessment Report follows the EPA's guidance for meshing Clean Water Act requirements for Section 305(b) water quality reports and Section 303(d) lists of impaired waters. The integrated water quality assessment is used to identify the status of data sufficiency, the potential for impairment, and the need for TMDL development for each waterbody or waterbody segment in the basin. **Tables 3.5b through 3.10b** in Chapter 3 provide a composite assessment for the Kissimmee River and Fisheating Creek Basins, by planning unit.

Appendix A describes the legislative and regulatory background for TMDL development and implementation through the watershed management approach, and briefly explains the TMDL Program. Background information on the Department's TMDL Program, the process of TMDL development and implementation, lists of impaired and potentially impaired waters, and assessments for other parts of the state are available at <http://www.dep.state.fl.us/water/tmdl/index.htm>.

Stakeholder Involvement

The FWRA requires the Department to work closely with stakeholders to develop and implement TMDLs. In addition, the Department's Allocation Technical Advisory Committee (ATAC) report, submitted to the legislature, recommends relying on stakeholder involvement. Stakeholder involvement in the TMDL process will vary with each phase of implementation to achieve different purposes (**Table 1.1**). A copy of the ATAC report is available at <http://www.dep.state.fl.us/water/tmdl/docs/Allocation.pdf>.

The Department will work cooperatively with a number of key stakeholders and initiatives to develop, allocate, and implement TMDLs in the Kissimmee River and Fisheating Creek Basins. These include the cities of Orlando, Kissimmee, St. Cloud, Lake Wales, Avon Park, Sebring, and Lake Placid; Orange, Polk, Osceola, Highlands, Okeechobee, and Glades Counties; the Reedy Creek Improvement District; Southwest Florida Water Management District; and the South Florida Water Management District.

Table 1.1: Stakeholder Involvement in the TMDL Program

Watershed Management Cycle	Nature of Stakeholder Involvement
Phase 1: Preliminary Evaluation	Close coordination with local stakeholders to conduct a preliminary basin water quality assessment; inventory existing and proposed management activities; identify management objectives and issues of concern; develop a Strategic Monitoring Plan; and produce a preliminary Status Report that includes a Planning List of potentially impaired waters
Phase 2: Strategic Monitoring and Assessment	Cooperative efforts between the Department and local stakeholders to collect additional data; get data into STORET (the EPA's national water quality STOR age and RETR ieval database); complete water quality assessment; produce a final Assessment Report that includes a Verified List of impaired waters for Secretarial adoption; and provide an opportunity for stakeholders to document reasonable assurance (for Department review) that existing or proposed management plans and projects are adequate to restore water quality without the establishment of a TMDL
Phase 3: Development and Adoption of TMDLs	Coordination with stakeholders to discuss TMDL model framework, including model requirements, parameters to be modeled, model endpoints, design run scenarios, and preliminary allocations; communication of science used in the process; public workshops for rule adoption of TMDLs
Phase 4: Development of Basin Management Action Plan	Broad stakeholder participation in developing a Basin Management Action Plan (B-MAP) (including detailed allocations and implementation strategies), incorporating it into existing management plans where feasible; public meetings during the planning process
Phase 5: Implementation of Basin Management Action Plan	Emphasis on implementing the B-MAP, other voluntary stakeholder actions, and local watershed management structures; Department will continue to provide technical assistance, fulfill oversight responsibilities, and administer National Pollutant Discharge Elimination System point and nonpoint source permits

The Watershed Management Cycle in the Florida Department of Environmental Protection's Central and South Districts

Figure 1.1 shows the order in which the Department's Central and South Districts' basins will be evaluated under the watershed management cycle. These groups are identified according to a U.S. Geological Survey classification system using hydrologic unit codes.

The Ocklawaha and Everglades West Coast Basins were the first basins in these districts to undergo a preliminary assessment in 2000. Preliminary assessments for the Group 2 basins, Middle St. Johns and Charlotte Harbor, were completed in 2001, and for the Group 3 basins, Upper St. Johns and Caloosahatchee, in 2002. The Group 4 preliminary assessments for the Kissimmee River and Fisheating Creek Basins were conducted in 2003. The preliminary assessments for the Group 5 basins, the Indian River Lagoon and the Florida Keys, were carried out in 2004. In 2005, the cycle resumed with the Group 1 basins, the Ocklawaha and Everglades West Coast Basins.



Figure 1.1: Schedule for Implementing the Watershed Management Cycle in the Department's Central and South Districts, Basin Groups 1 through 5

Contents of This Report

- **Chapter 1: Introduction** briefly characterizes the purpose and content of the Water Quality Assessment Report, discusses stakeholder involvement, and describes how the watershed management cycle will be implemented in the Department's Central and South Districts.
- **Chapter 2: Basin Overview** characterizes the basin's general setting, water resources, major water quality trends, and watershed management issues and activities.
- **Chapter 3: Surface Water Quality Assessment** discusses the scope of the assessment, summarizes data-gathering activities and sources of data, describes EPA terminology for designated use attainment and its integrated report categories, and provides, by basin planning unit, an evaluation of water quality, a discussion of permitted discharges and land uses, a summary of ecological priorities and problems, and an overview of water quality improvement plans and projects.
- **Chapter 4: Ground Water Quality Assessment** describes the Department's principal ground water monitoring networks, the basin assessment methodology, the results of the preliminary assessment of ground water quality and ground water to surface water interactions, and potential influences of ground water on surface water quality.
- **Chapter 5: The Verified List of Impaired Waters** contains the Verified List of impaired waters, discusses public participation, describes documentation of reasonable assurance, lists the pollutants causing impairments, provides listings based on other information indicating a nutrient imbalance, and describes the adoption process for the Verified List.
- **Chapter 6: TMDL Development, Allocation, and Implementation** discusses the prioritization of listed waters, TMDL development, TMDL allocation and implementation, and the development of a Basin Management Action Plan.



Chapter 2: Basin Overview

Basin Setting

The Kissimmee River and Fisheating Creek Basins are adjacent basins that both flow into Lake Okeechobee and are part of the greater Everglades ecosystem. For this reason, and also because of similar land uses, both basins have been combined into a single report.

The 2,940-square-mile Kissimmee River Basin extends from Orlando southward to Lake Okeechobee. This basin, which is the largest source of surface water to Lake Okeechobee, is about 105 miles long and has a maximum width of 35 miles. The northern portion of the basin (often termed the Chain of Lakes) comprises many lakes, some of which are interconnected by canals. The Chain of Lakes is bounded on the southern end by State Road (S.R.) 60, where the largest of the lakes, Lake Kissimmee, empties into the Kissimmee River. The southern portion of the basin includes the Lake Wales Ridge lakes, the Kissimmee River itself, and its tributary watersheds (including flow from the Istokpoga watershed) between Lake Kissimmee and Lake Okeechobee. The Kissimmee River was originally a 103-mile-long shallow, meandering river that was reconfigured in the 1960s into a 56-mile-long canal (renamed C-38) for flood control.

The 849-square-mile Fisheating Creek Basin extends from west-central Highlands County (from just south of S.R. 66) southward into the northern portion of Glades County, and then eastward towards Lake Okeechobee. It includes Fisheating Creek, the C-41 and C-41A Canals, and Indian Prairie between Lakes Istokpoga and Okeechobee.

Population

South-central Florida is growing rapidly. **Table 2.1** lists regional population growth, by county. Although the numbers would indicate a large population, the Kissimmee River and Fisheating Creek Basins are actually quite rural. The bulk of the population in the two most populated counties (Orange and Polk) is actually outside (north and west) of the study area. Some of the larger population centers in the basin are the southern outskirts of Orlando, Kissimmee, St. Cloud, Lake Wales, Avon Park, Sebring, and Lake Placid. **Figure 2.1** shows the principal geopolitical features in the Kissimmee River and Fisheating Creek Basins.

Land Use

The very northern end of the Kissimmee River Basin is primarily urban and includes a small portion of the city of Orlando, three large theme parks (Walt Disney World, Sea World, and Universal Studios), the Orlando International Airport, and the cities of Kissimmee and St. Cloud.

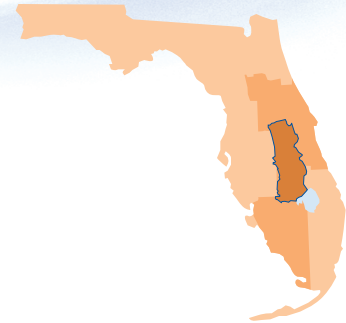


Table 2.1: Population Growth by County in the Kissimmee River and Fisheating Creek Region

County	1970	1980	1990	2000	2010	2020
Glades	3,675	5,992	7,591	10,576	12,169	13,767
Highlands	29,505	47,526	68,432	87,366	100,701	114,959
Okeechobee	11,229	20,264	29,627	35,910	39,728	43,557
Orange	344,312	470,865	677,491	896,344	1,136,886	1,361,728
Osceola	25,268	49,287	107,728	172,493	248,724	318,287
Polk	227,221	321,652	405,382	483,924	562,750	636,650
Total	641,210	915,586	1,296,251	1,686,613	2,100,958	2,488,948

Source: Florida Legislature, 2004.

Sources of Information

Much of the information about the Kissimmee River and Fisheating Creek Basins in this report was obtained from the SFWMD District Water Management Plan (SFWMD, 2000), *The South Florida Environment—A Region Under Stress* (McPherson and Halley, 1997), *Water Resources Atlas of Florida* (Fernald and Purdum, 1998), and *Florida Agricultural Facts Directory* (DACS, 2002). The report cites other references individually. The References section contains a complete listing of all the resources used in creating this report.

Although there are some pockets of residential development along the Lake Wales Ridge (in the cities of Lake Wales, Avon Park, Sebring, and Lake Placid), agricultural lands, wetlands and upland forests dominate the remainder of the Kissimmee River Basin and all of the Fisheating Creek Basin. **Tables 2.2** and **2.3** show the land use percentages in these basins in a broad (Level I) geographic information system analysis, as identified by the South and Southwest Florida Water Management Districts (SFWMD and SWFWMD) in 1999.

Table 2.2: Level I 1999 Land Use in the Kissimmee River Basin

Level I	Type	Percent of Basin
1000	Urban and Built-up	11.4
2000	Agriculture (includes improved pasture)	35.2
3000	Rangeland	9.6
4000	Upland Forest	9.9
5000	Water (includes open bay)	11.0
6000	Wetlands	21.3
7000	Barren Land	0.4
8000	Transportation, Communications, and Utilities	1.2
Total		100

Table 2.3: Level I 1999 Land Use in the Fisheating Creek Basin

Level I	Type	Percent of Basin
1000	Urban and Built-up	1.2
2000	Agriculture (includes improved pasture)	66.1
3000	Rangeland	3.9
4000	Upland Forest	8.6
5000	Water (includes open bay)	0.7
6000	Wetlands	18.7
7000	Barren Land	0.6
8000	Transportation, Communications, and Utilities	0.2
Total		100

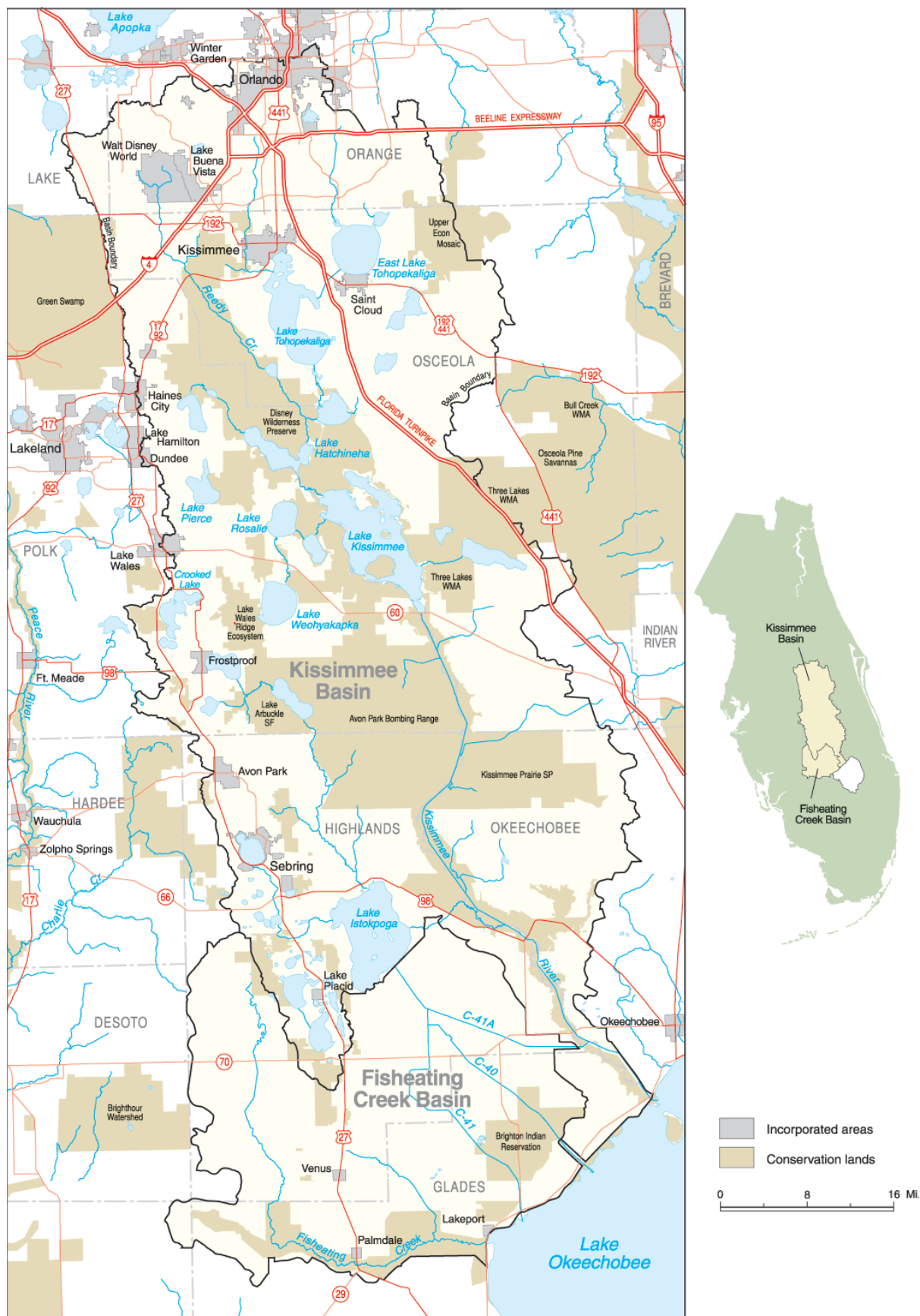


Figure 2.1: Geopolitical Map of the Kissimmee River and Fisheating Creek Basins

Table 2.4: Acreage of Citrus Production, by County

Crop	Orange County	Polk County	Osceola County	Highlands County	Okeechobee County	Glades County
Oranges	6,729	85,788	13,061	71,107	10,285	9,742
Grapefruit	185	6,415	1,407	2,789	1,351	369
Specialty Citrus ¹	1,181	9,281	805	4,236	534	395
Total	8,095	101,484	15,273	78,132	12,170	10,506

Source: DACS, 2002.

¹Temples, tangelos, tangerines, limes, lemons, and others.

Aside from the commercial development near Orlando and along U.S. Highway 27, agriculture is the major industry and land use in both the Kissimmee River and Fisheating Creek Basins, and when combined with rangeland occupies about 45 and 70 percent of each basin, respectively. The dominant agricultural commodities in the region are citrus and cattle.

Florida ranks first in the United States for citrus production, producing by weight 3 times as much citrus as California, Texas, and Arizona combined. Citrus production (oranges, tangerines, and grapefruit) occurs throughout both basins, and the 225,660 acres of citrus planted in the region (**Table 2.4**) makes up more than 27 percent of all the citrus production in Florida (Florida Department of Agriculture and Consumer Services [DACS], 2002). Regrettably the 2004 hurricane season had a devastating impact on the central Florida citrus crop; the combined impacts of Hurricanes Charley, Frances, and Jeanne caused extensive fruit drop, and the hurricane-force winds and rain spread citrus canker inoculum from infected areas into previously uninfected areas (DACS, Summer 2005). Adding insult to injury, 2005 brought the late-season Hurricane Wilma that further damaged the citrus-growing region, the impacts of which are still being assessed.

Cattle ranching and dairy farming are also extremely important. Florida ranks 3rd among the states east of the Mississippi River and 12th nationally in the number of beef and brood cows. Okeechobee County is Florida's leading cattle-producing county, with Highlands, Osceola, and Polk Counties rounding out 4 of the top 5, and Glades County ranking 8th. In total, the region contains approximately 534,000 head of beef and dairy cattle (**Table 2.5**) (DACS, 2002).

Surface Water Resources

Although the subjects of this Assessment Report are the Kissimmee River and Fisheating Creek Basins, no description of these basins would be complete without an understanding of their hydrology in the context of the larger Everglades ecosystem to which they belong.

The Kissimmee River and Fisheating Creek Basins lie at the northern end of an interconnected Everglades ecosystem. Historically, water from

Table 2.5: Number of Head of Cattle, by County, in 2002

Cattle	Orange County	Polk County	Osceola County	Highlands County	Okeechobee County	Glades County
Beef Cows ¹	10,000	55,000	70,000	63,000	65,000	40,000
Beef Statewide Rank	25	4	1	3	2	8
Dairy Cows ¹	—	Not Disclosed	Not Disclosed	7,000	32,000	Not Disclosed
Total Cattle ^{1,2} and Calves	14,000	94,000	96,000	109,000	148,000	73,000
Total Statewide Rank	33	4	3	2	1	8

Source: DACS, 2002.

¹Number of head.

²Includes both beef and dairy.

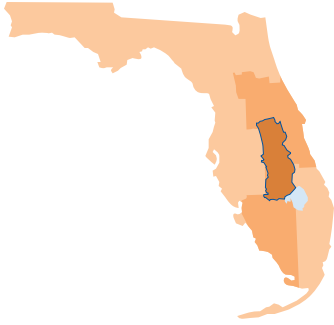
— = Not available.

these rivers slowly meandered into Lake Okeechobee and exited unimpeded from the lake southward into the Everglades through small tributaries and broad sheetflow during the rainy season.

Prior to the twentieth century, long periods of flooding and hurricanes made most of south Florida inhospitable to development. In an effort to make the land developable for human uses, Hamilton Disston led an effort in 1882 to dredge canals between the Kissimmee Chain of Lakes, and between Lake Okeechobee and the Caloosahatchee River. The latter provided Lake Okeechobee's first outlet to salt water (the Gulf of Mexico) via the Caloosahatchee River. Then the Kissimmee River Navigation Project, authorized by Congress in 1902, resulted in a navigation channel being dredged from the town of Kissimmee downstream to Fort Basinger. The project, with a required depth of 3 feet and a width of 30 feet, included a side channel through Istokpoga Creek.

In the early 1900s, the Everglades Drainage District dug the St. Lucie, West Palm Beach, Hillsboro, North New River, and Miami Canals from Lake Okeechobee to the Atlantic Ocean. Together, these projects provided a means to drain the northern Everglades for agricultural and residential uses, forever altering or severing the natural hydrologic connections among the different parts of the Everglades ecosystem.

Small towns eventually arose in the region, some very close to Lake Okeechobee. A small muck levee was constructed along the lake's southern shoreline to protect those towns and farms from flooding in the early 1920s. In 1926 and again in 1928, 2 major hurricanes hit the region. These hurricanes generated storm surges in Lake Okeechobee that flooded the lakeside communities and hundreds of acres to the south, killing more than 400 and 2,000 people, respectively. The 1928 hurricane, in particular, killed a greater number of people than any other hurricane in U.S. history, except for the Galveston hurricane of 1900 (Fernald et al., 1998). To prevent such devastation from recurring, Congress authorized the U.S. Army Corps of Engineers (USACOE) to construct the Herbert Hoover Dike, an earthen levee that still surrounds the lake's perimeter.



In response to extensive flooding over much of south Florida in 1947, Congress authorized the Central and Southern Florida (C&SF) Flood Control Project in 1948. It became a massive flood management system whose activities included raising the height of the Hoover Dike, extending the dike completely around Lake Okeechobee, and leading Congress to further authorize the channelization of the Kissimmee River for additional flood control in 1954. The channelization of the Kissimmee River began in 1961 and was completed 10 years later. The 103-mile-long, meandering river was replaced by a 56-mile-long canal (the C-38), thereby eliminating the seasonal flooding of the river's floodplain, which averaged about 2 miles in width during the wet season.

Flow into Lake Okeechobee was controlled by 6 locks and dams along the river. The construction of the C-38 Canal considerably altered the hydrology, water quality, and wetlands in the Kissimmee River Basin. The dams in the canal created pond areas that were permanently flooded, while farther upstream from each dam, wetlands were drained and replaced by terrestrial vegetation. As a result, about 40,000 to 50,000 acres of floodplain marsh disappeared. This resulted in a significant loss of habitat for wading birds and other aquatic animals, and in a loss of the natural nutrient-filtering effects of these wetlands. Drainage also eliminated the river's natural oxbows and stimulated agricultural development in floodplain and adjacent wetlands, all of which contributed to the increased nutrient loading to Lake Okeechobee (McPherson and Halley, 1997).

The environmental impacts of channelization were quickly recognized, and calls for the restoration of the river began even during canal construction. In 1999, groundbreaking on the restoration project began. The project will repair the river and its floodplain by increasing water storage in the upper Kissimmee Basin and by physical modifications to the lower basin. This will include backfilling 22 miles of the C-38, re-carving 9 miles of river channel, removing 2 water control structures, and removing floodplain levees. Construction will require approximately 15 years.

Figure 2.2 shows the locations of the largest waterbodies in the Kissimmee River and Fisheating Creek Basins. A more detailed discussion in Chapter 3 provides information on each planning unit.

Surface Water Quality Classifications

Florida's water quality standards, the foundation of the state's program of water quality management, designate the "present and future most beneficial uses" of the waters of the state (Subsection 403.061[10], Florida Statutes [F.S.]). Water quality criteria for surface water and ground water, expressed as numeric or narrative limits for specific parameters, describe the water quality necessary to maintain these uses. Florida's surface water is classified using the following five designated use categories:

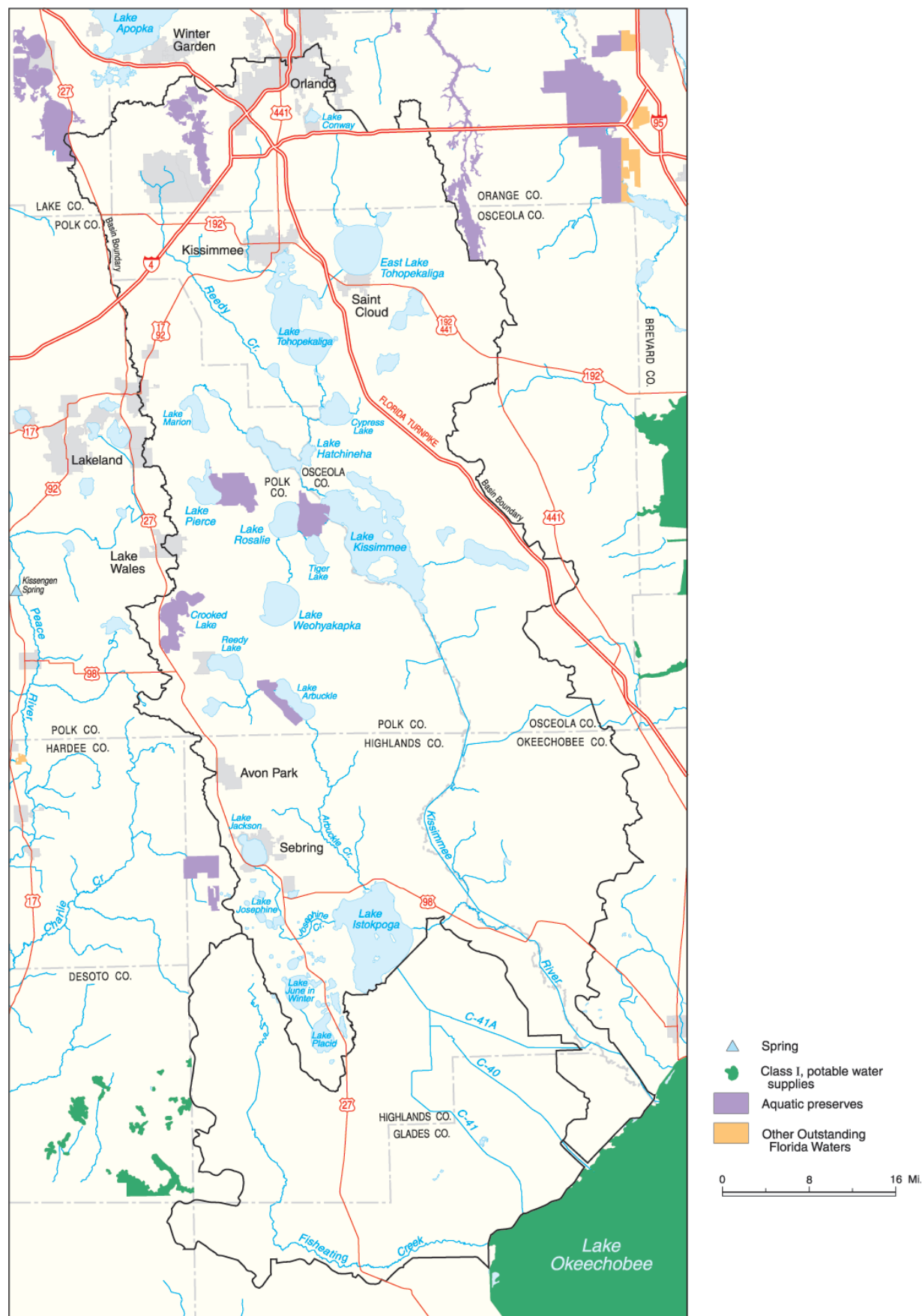


Figure 2.2: Surface Water Resources of the Kissimmee River and Fisheating Creek Basins



Class I	Potable water supplies
Class II	Shellfish propagation or harvesting
Class III	Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife
Class IV	Agricultural water supplies
Class V	Navigation, utility, and industrial use (there are no state waters currently in this class)

Surface water quality classifications in the Kissimmee River and Fisheating Creek Basins are as follows:

Class I:

Lake Okeechobee

Class II:

There are no Class II waters in the two basins.

Class III and Class IV:

All other state waters in the basins are Class III unless specifically designated as Class IV waters. Class IV waters consist of all secondary and tertiary canals or ditches wholly within agricultural areas behind a water control structure permitted by the water management district under Sections 373.103, 373.413, or 373.416, F.S.

Class V:

There are no Class V waters in the basins.

Special Designations

Outstanding Florida Waters

A number of waterbodies in the basin have been given additional protection through designation as Outstanding Florida Waters (OFWs) (Table 2.6).

OFWs are designated for “special protection due to their natural attributes” (Section 403.061, F.S.). These waters are listed in Section 62-302.700, Florida Administrative Code (F.A.C.). The intent of an OFW designation is to maintain ambient water quality, even if these designations are more protective than those required under the waterbody’s surface water classification. Most OFWs are associated with managed areas in the state or federal park system, such as aquatic preserves, national seashores, or wildlife refuges. Other OFWs may also be designated as “Special Waters” based on a finding that the waters are of exceptional recreational or ecological significance, and are identified as such in Rule 62-302, F.A.C.

Surface Water Improvement and Management Priority Waters

In 1987, the Florida legislature created the Surface Water Improvement and Management (SWIM) Program to restore waterbodies. The initial legislation identified 6 priority waterbodies: Lake Apopka, Tampa Bay, Indian River Lagoon, Biscayne Bay, Lower St. Johns River, and Lake Okeechobee. Today, SWIM plans have been developed for 30 waterbodies

Table 2.6: OFWs in the Kissimmee River and Fisheating Creek Basins

County	OFW	Location	WBID
Orange			
	Lake Butler Chain of Lakes Special Water	Lake Down	3170S
		Lake Butler	3170Q
		Lake Louise	3170W
		Lake Isleworth	3170X
		Lake Chase	3170V
		Lake Blanche	3170U
		Lake Tibet Butler	3170Y
		Lake Sheen	3170H
		Pocket Lake	3170Z
		Cypress Creek	3170J
		Leftover Reedy Creek (small part, wetland of Lake Down)	31702
		Lake Tibet Butler Outlet	3170Y1
		Lake Butler drain	3170J1
Polk			
	Lake Arbuckle State Park	Lake Arbuckle and Lake Arbuckle State Park	1685A
		Livingstone Creek	1685B
		Morgan Hole Creek	1761D
		Blue Jordan Swamp (small part)	1710
	Saddle Blanket Scrub	Lake Livingston drain	1730F
	Crooked Lake Special Water	Crooked Lake Special Water	1663
		Crooked Lake Outlet	1663A
	Lake Kissimmee State Park	Lake Kissimmee State Park	1573B
		Tiger Creek	3183D
		Tiger Lake Outlet	1573Z
		Tiger Lake	1573A
		Lake Kissimmee	3183B (small part)
		Lake Kissimmee north drain	3183A1
		Rosalie Canal	3183C
		Lake Rosalie	1573C
		Lake Rosalie Outlet	1573

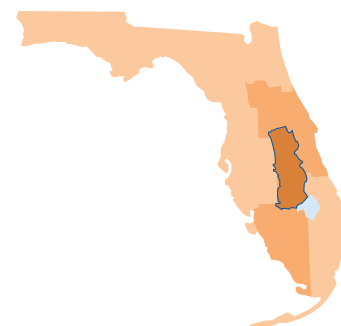




Table 2.6 (continued)

County	OFW	Location	WBID
Polk, continued			
	Catfish Creek	Catfish Creek	1532
		Lake Rosalie Outlet	1573
		Lake Pierce	1532A
Osceola			
	Prairie Lakes State Preserve	Jackson Canal	3183F
		Lake Jackson	3183G
	Prairie Lakes State Preserve and Three Lakes Prairie Lakes	Prairie Lake State Preserve	3183B
		Three Lakes–Prairie Lakes	3183B
		Lake Marian	3184
		Lake Marian Outlet	3184A
		Lake Kissimmee South	3183E2
		Lake Kissimmee (mid drain)	3183B1
Highlands			
	Placid Lakes	Placid Lakes	1938C
		Fisheating Creek	3201A
		Lake Placid Outlet	1938Y
		Placid June Canal	1938B
Okeechobee			
		None	
Glades			
		None	
Lake			
	Clermont Chain of Lakes Special Water	Lake Louisa State Park (small part)	3170I1

statewide. The SWIM Program addresses a waterbody's needs as a system of connected resources, rather than isolated wetlands or waterbodies. The state's 5 water management districts work with federal, state, and local governments and the private sector to develop and implement SWIM plans to restore damaged ecosystems, prevent pollution from runoff and other sources, and educate the public.

The following waterbodies in the basin are SWIM priority waters for restoration: Lake Okeechobee (planning area includes the Kissimmee River; Lake Istokpoga and Canal; C-40, C-41, and C-41A Canals; and Fisheating Creek).

Minimum Flows and Levels

Under the Florida Watershed Restoration Act (FWRA) (Chapter 373, F.S.), a minimum flow and level (MFL) is the limit at which further water withdrawals will cause significant harm to the water resources of the area and related natural systems. Consumptive use and alterations to their watersheds have reduced or have the potential to reduce the amount and timing of surface water being delivered. Projected increases in withdrawals also could reduce future flows and levels.

To help determine the amount of water that is needed to ensure sustainability of the ecology or the water resources of an area, the SWFWMD and SFWMD must determine MFLs. Lakes and aquifers have minimum levels. Minimum flows are set for rivers and streams. **Tables 2.7a** and **2.7b** list the SWFWMD and SFWMD MFLs in the Kissimmee River and Fisheating Creek Basins, respectively.

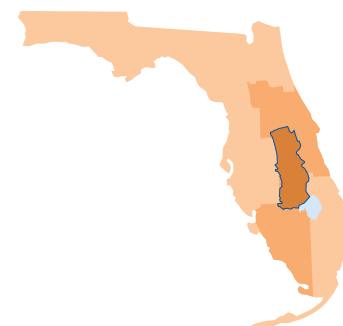


Table 2.7a: SWFWMD MFLs in the Kissimmee River and Fisheating Creek Basins

Waterbody	Year of MFL Development
Crooked Lake	2005
Lake Clinch	2006
Lake Jackson (Highlands County)	2004
Lake June in Winter	2005
Lake Letta	2006
Lake Lotela	2006
Lake Placid	2005
Lake Wales	2006

Table 2.7b: SFWMD MFLs in the Kissimmee River and Fisheating Creek Basins

Waterbody	Year of MFL Development
Lake Istokpoga	2005

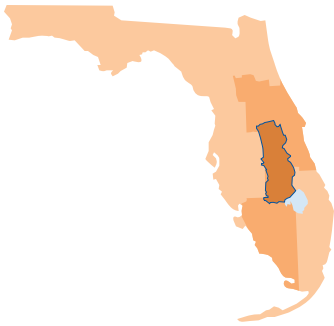
Ground Water Resources

Aquifers

The three principal Florida aquifer systems—surficial, intermediate, and Floridan—are all present beneath the entire area of the Kissimmee River and Fisheating Creek Basins. These aquifer systems are defined and separated based primarily on variations in lithostratigraphy.

Surficial Aquifer System

The surficial aquifer system is variable across the two basins; but in all cases, it is unconfined and is recharged primarily by rainfall. The surficial aquifer system occurs in several lithostratigraphic units. In the Kissimmee River Basin, it occurs in the undifferentiated Pliocene–Pleistocene



sediments, Cypresshead Formation, and shell beds of the Caloosahatchee and Fort Thompson Formations. In the Fisheating Creek Basin, it occurs in the Tamiami, Caloosahatchee/Fort Thompson Formations, and undifferentiated sediments (Scott, 1992).

The surficial aquifer varies in thickness from over 400 feet along the western margin of the Kissimmee River Basin adjacent to and along the Lake Wales Ridge, to as little as 100 feet or less in the southern portion of the Fisheating Creek Basin. The base of the surficial aquifer system occurs at the first impermeable sediments of the Hawthorn Group. Occasionally, upper Hawthorn Group sediments may form the basal portion of the surficial aquifer system. The lithostratigraphic units forming the surficial aquifer system range from quartz sands to limestones with varying admixtures of shell and clay. With the lithologic variation comes some natural variation in the water quality of the surficial aquifer.

Intermediate Aquifer System/Confining Unit

The intermediate aquifer system/confining unit occurs throughout the Kissimmee River and Fisheating Creek Basins. The intermediate aquifer is primarily recharged from the downward movement of surficial aquifer system waters. Interbedded sand, clay, and carbonate sediments of the Hawthorn Group comprise the intermediate confining unit and aquifer system. In portions of the Kissimmee River Basin, Tamiami-equivalent sediments may form the top of the intermediate confining unit (Scott, 1992). The top of the Hawthorn Group (roughly corresponding to the top of the intermediate aquifer system/confining unit) ranges from about 50 feet above mean sea level in the northern reaches of the Kissimmee River Basin, to about 100 feet below mean sea level along the southeastern margin of the basin. The thickness of the intermediate aquifer system/confining unit ranges from approximately 500 feet in the northern Kissimmee River Basin area, to more than 600 feet in the southernmost portion of the Fisheating Creek Basin (Scott, Lloyd, Maddox, and Copeland, 1991), although this zone is perforated beneath and in the vicinity of sinkhole lakes. Permeable zones within the intermediate confining unit increase in thickness and extent in the southwestern portion of the 2-basin area. The base of the intermediate aquifer system/confining unit generally corresponds with the top of the Oligocene Suwannee or Ocala Limestone.

The importance of the intermediate aquifer system as a source of potable water increases westward within the Fisheating Creek Basin areas of southern Highlands and western Glades Counties. Within the Kissimmee River Basin, this aquifer is not very productive and is seldom used for water supply.

Floridan Aquifer System

The Floridan aquifer system resides in a thick, highly productive sequence of carbonate sediments, which mostly lie beneath the Hawthorn Group. It is divided into upper and lower units beneath most of the two-basin area. The lower portion of the Hawthorn Group may be included in the upper Floridan aquifer system in some areas, but in general, the Suwannee Limestone forms the upper unit of the aquifer system, with the Ocala

Limestone and the Avon Park, Oldsmar, and upper Cedar Keys Formations comprising the balance of the system. The base of the Floridan aquifer system, corresponding to the top of the sub-Floridan confining unit, occurs within the upper portion of the Cedar Keys Formation (Miller, 1986).

The altitude of the top of the Floridan aquifer system ranges from sea level in the northernmost part of the Kissimmee River Basin to more than 650 feet below mean sea level in the southeastern portion of the Fisheating Creek Basin adjacent to Lake Okeechobee (Scott, et al., 1991). The thickness of the Floridan ranges from less than 2,300 feet in the northern fringes of the Kissimmee River Basin near Orlando, to more than 3,400 feet under the southwestern portion of the Fisheating Creek Basin (Miller, 1986).

Primary recharge to the Floridan aquifer system occurs along the northern and western boundaries of the Kissimmee River valley. The Floridan aquifer system ground water basin does not correspond to the Kissimmee River Basin, particularly in the far northern reaches, where Floridan waters recharge aquifer areas to the north.

Within all but the southernmost portion of the Kissimmee River Basin, Floridan aquifer system wells are the primary suppliers of potable water. South of a line running southwest to northeast approximately following the Highlands–Glades County border, and extending northeast to just north of the town of Okeechobee, the Floridan is too saline to be used as a potable water supply.

Ground Water–Surface Water Interactions

Karst Features

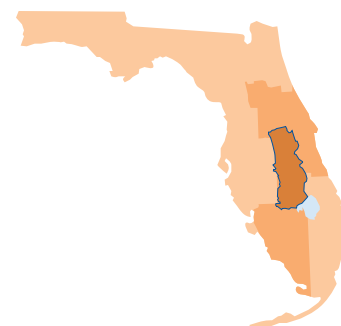
The development of karst features is primarily expressed at the surface as “sinkhole lakes.” These occur within the upper Kissimmee Basin, and along the western boundary of the basin on the eastern flank of the Lake Wales Ridge. Surface water–ground water exchange can occur through the bottom sediments of these lakes, depending on the thickness, composition, and resultant transmissivity of the lake bottom/sinkhole collapse sediments. As a result, water can seep from lakes into the upper Floridan aquifer.

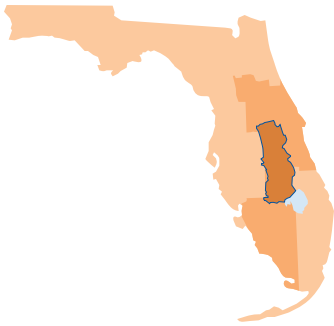
Salt Water Intrusion

Due to their inland locations, the Kissimmee River and Fisheating Creek Basins are not directly threatened by the coastal intrusion of saline waters from oceanic sources. The overpumping of the Floridan aquifer system within these basins could potentially cause the upwelling of sub-Floridan brines, but this has not yet happened in this region.

Ground Water Contamination

Most urban development occurs primarily in the upper Kissimmee River Basin, which comprises the fast-growing southern half of the metropolitan Orlando area. Within this area there are a number of ground water contamination sites of limited extent, mostly associated with small-scale industries and leaking underground fuel storage tanks. However, this area also contains a number of drainage wells and galleries that divert storm-water into the upper Floridan aquifer to compensate for aquifer withdrawals in the urban area, increase recharge, control lake levels, and suppress





the upward migration of sub-Floridan mineralized waters. The city of Orlando's water supply wells tap the same aquifer zone in the same geographic areas, without significant degradation of water quality (Schiner and German, 1983).

Cattle dip vats are ubiquitous to most of Florida, and hundreds of them have been identified in the Kissimmee River and Fisheating Creek Basins. Approximately 3,400 cattle-dipping vats were constructed throughout Florida from 1906 through 1962. These vats were used to eradicate ticks from cattle and other livestock. The vats were constructed of concrete and were typically 30 feet long, 3 feet wide, and 7 feet deep. The vats were generally filled with an arsenic solution that killed the ticks. It is now known that the solutions used are harmful to humans, and areas with the vats may have contaminated ground water in their vicinity. Other possible contaminants are benzene hexachloride (BHC), dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyl dichloroethylene (DDE), and toxaphene (Florida Department of Health, 2003). Most of the potential aquifer contamination resulting from cattle-dipping vats is extremely localized, and these facilities are not considered to be hazardous on a regional scale.

Superfund Sites

According to the U.S. Environmental Protection Agency (EPA, 2003), there are no National Priority List (Superfund) contaminated sites within the Kissimmee River and Fisheating Creek Basins.

Delineated Areas

Concentrations of ethylene dibromide (EDB) in exceedance of the primary drinking water standard of 0.02 micrograms per liter (Baker, 1994) have been detected in numerous wells along the Lake Wales Ridge at the western edge of the Kissimmee River Basin. EDB was used primarily to control nematodes in citrus groves. It is no longer used, but relict high concentrations persist in portions of aquifers along the Lake Wales Ridge area of Polk and Highlands Counties. Most of the areas where these wells occur have been designated as ground water delineated contamination areas for EDB, and activities such as new well construction are forbidden or tightly regulated.

Lake Wales Ridge Agricultural Area

This area along the western boundary of the Kissimmee River Basin includes the main portion of the highly productive ridge citrus area where heavy applications of fertilizers and agrichemicals have caused extensive degradation of ground water and impact to thousands of private drinking water wells. Nitrate, the aforementioned EDB, and bromacil are the most common causes of ground water contamination. This area of contamination is discussed further in Chapter 4.

Ground Water Usage

Aquifer Storage and Recovery

As a part of the Comprehensive Everglades Restoration Plan (CERP), up to 200 aquifer storage and recovery (ASR) wells with a capacity of up to 1 billion gallons per day are proposed in the Lake Okeechobee region to capture and store excess surface water. A number of these wells are also planned in the Kissimmee River and Fisheating Creek Basins. This project will (1) provide additional regional storage, while reducing both evaporation losses and the amount of land needed for the construction and operation of traditional aboveground reservoirs; (2) increase the storage capacity of Lake Okeechobee to better meet regional water supply demands; (3) manage a portion of regulatory releases from the lake to improve Everglades hydrologic flow patterns and to meet supplemental water supply demands of the lower east coast; (4) reduce harmful regulatory discharges of fresh water to the St. Lucie and Caloosahatchee Estuaries; and (5) maintain and enhance the existing level of flood protection (CERP, 2002).

After treatment, water from Lake Okeechobee will be injected into and stored in the upper Floridan aquifer during high-water periods, pumped back out, aerated, and returned to the lake during the dry season. The returned water would purportedly have no adverse water quality effects on Lake Okeechobee surface waters and may even promote some level of nutrient load reduction, depending on the level of pre- and post-treatment of ASR waters.

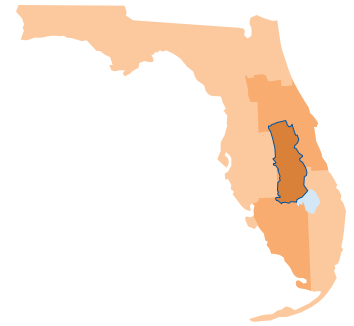
One of the CERP Pilot ASR Projects has been permitted and built in the Kissimmee River Basin, near the Kissimmee River outfall into Lake Okeechobee. It consists of one ASR well, with a five-million-gallon-per-day permitted capacity. How this and other ASR projects affect water quality will likely depend on the volume, underground residence time, and level of pretreatment of injected waters.

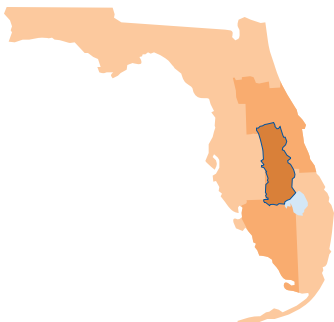
Water Use Caution Areas and Water Resource Caution Areas

The SWFWMD has included those portions of the Kissimmee River and Fisheating Creek Basins within its boundaries in Polk and Highlands Counties as part of the designated southern water use caution area (WUCA). This area was designated in order to address declining lake levels on the Lake Wales Ridge area of Polk and Highlands Counties, which is a major recharge area for the Floridan aquifer system.

The SFWMD has designated the area including Lake Istokpoga, the eastern half of the Fisheating Creek Basin in Highlands and Glades Counties, and the small fraction of the Kissimmee River Basin in Glades County, as a water resource caution area (WRCA).

Under Section 373.036, F.S., and Subsection 62-40.520(1), F.A.C., each water management district in the state must identify WRCA's in which potential water shortages, considerable reductions in water levels, saltwater intrusion, or other degradations may occur within 20 years, and must develop management plans to address their water resource problems. In these areas, existing and anticipated sources of water and conservation efforts may not be adequate to supply water for all existing legal uses and





reasonably anticipate future needs, and still sustain water resources and related natural systems. Five constraints are considered in establishing these WRCAs:

- Impacts to native vegetation, primarily wetlands;
- Impacts to MFLs, primarily spring flows;
- Impacts to ground water quality in terms of increased saltwater intrusion;
- Impacts to existing legal users; and
- Failure to identify a source of supply for future development.

Watershed Management Activities and Processes

Over the years, management plans and activities in the Kissimmee River and Fisheating Creek Basins have been implemented to eliminate wastewater discharges; reduce the discharges of polluted stormwater from urban and agricultural areas; improve ground water quality; and protect, preserve, and restore special areas. The following section describes historical, current, and ongoing activities and processes to address water quality problems. **Table 2.8** provides a summary.

Table 2.8: Summary of Historical Issues and Activities in the Greater Everglades Region

Year	Issues and Activities
1881–1899	Florida sold 4 million acres of land to Hamilton Disston in 1881. In 1882, Disston began channelization in the upper Kissimmee River Basin and the Caloosahatchee River, initiating a series of actions affecting downstream waters. A canal connecting Lake Okeechobee, Lake Hicpochee, and the Caloosahatchee River at LaBelle was completed in 1884. The USACOE, under the Federal Rivers and Harbor Act, recommended navigational improvements (channelization) for the Kissimmee–Okeechobee–Caloosahatchee watershed in 1899.
1904–1916	Napoleon Bonaparte Broward was elected governor of Florida in 1904 on a promise to drain the Everglades. The Florida legislature created the Everglades Drainage District in 1907, publicly funding drainage and flood control projects around Lake Okeechobee. This “District” was the first of several to carry out drainage projects in south Florida. The U.S. government appropriated monies in 1909 to improve navigational access from the Caloosahatchee River through Lake Okeechobee to the east coast. Intensive canal construction took place near Lake Okeechobee and in the Everglades in 1910. The General Drainage Act of 1913 authorized adjacent landlords to establish drainage districts to drain and “reclaim” their lands. The construction of Tamiami Trail began in 1916.
1918–1929	The first locks were completed at Moore Haven in 1918. Several major hurricanes hit south Florida from 1922 to 1928. The 1926 hurricane took more than 400 lives in the Moore Haven area due to Lake Okeechobee flooding. By 1927, Lake Okeechobee was connected to the Atlantic Ocean via the Miami, North New River, Hillsboro, West Palm Beach, and St. Lucie Canals, and to the Gulf of Mexico via the channelization of the Caloosahatchee River. Despite these flood control measures, Lake Okeechobee flooding during a 1928 hurricane killed another 2,000+ people south of the lake. The Tamiami Trail was completed by 1928. The Okeechobee Flood Control District was established in 1929 in response to the Lake Okeechobee flooding. The maximum lake stage elevation was lowered from 19 to 17 feet above mean sea level (MSL). Lake elevations began to be regulated through discharges to the Atlantic Ocean and Gulf of Mexico.

Table 2.8 (continued)

Year	Issues and Activities
1930– 1937	In 1930, the federal Rivers and Harbors Act authorized the enlargement of the Caloosahatchee and St. Lucie Canals and the construction of a navigational channel for Lake Okeechobee's south shoreline. Spoil from the channel became the 30-foot Hoover Dike, which was completed in 1937, flanking three-quarters of the lake. In 1937, the Ortona Lock was completed, and the Caloosahatchee River had a navigable channel 7 feet deep and 80 feet wide.
1947– 1959	In 1947, two hurricanes flooded south Florida. The existing canal network was unsuccessful in alleviating flood conditions. In response, Congress passed the Flood Control Act of 1948, authorizing the USACOE to create a huge, multistage flood control project in south Florida. The 1949 Florida legislature created the Central and Southern Florida Flood Control District (C&SFFCD) to operate and maintain the flood control project. All functions and assets of the Okeechobee Flood Control District were vested in the new C&SFFCD, and the Okeechobee Flood Control District was abolished. The same 1949 legislature provided for the liquidation of the Everglades Drainage District and the transfer of all its facilities to the C&SFFCD by 1955.
1960– 1971	Improvements began on the Hoover Dike in 1960. The Kissimmee River channelization project began in 1962. The Hoover Dike was raised to 40 feet above MSL and extended completely around Lake Okeechobee by 1964. Franklin Lock, the control mechanism between fresh and salt water on the Caloosahatchee River near Olga, was completed in 1969. The maximum stage on Lake Okeechobee was lowered in 1970 and regulated between 14.0 and 15.5 feet above MSL (wet and dry season, respectively). The extreme drought of 1970–71 heightened awareness of water supply and environmental problems. The 1971 Governor's Conference on Water Management in South Florida concluded that water quality was steadily deteriorating in practically all aquatic systems in southern Florida and that water quantity was not being managed to ensure a minimum adequate supply during the dry season. The Kissimmee River channelization project was completed in 1971, turning a 103-mile-long, meandering river into a 56-mile-long canal that speeded the flow of sediments and nutrients into Lake Okeechobee.
1972– 1979	The Florida legislature passed the Florida Water Resources Act in 1972, establishing 5 water management districts statewide and expanding their responsibilities to include the control and regulation of ground water and surface water. Florida citizens approved a constitutional amendment in 1972, authorizing \$240 million in state bonds to buy environmentally sensitive lands. The first public hearing on the restoration of the Kissimmee River was held in 1972. In August 1974, the Lake Okeechobee regulation schedule was raised to 15.5 and 17.5 feet MSL (wet and dry season, respectively), leading to long periods of high water. The Florida legislature passed the Aquatic Preserves Act in 1975, creating a statewide system of specially protected and managed aquatic areas. The Florida Department of Environmental Regulation was created in 1975. In 1976, a summary report to the legislature indicated that water from the Kissimmee River (C-38) was causing the eutrophication of Lake Okeechobee. In 1976, the C&SFFCD was renamed the South Florida Water Management District (SFWMD). The SFWMD initiated a study in 1978 to develop a water quality database for the Caloosahatchee River and its tributaries. The 1979 legislative session created the Conservation and Recreation Lands (CARL) Program for land acquisition.
1981– 1990	The Florida legislature passed the Save Our Rivers (SOR) Act in 1981. The SOR Program authorized the water management districts to purchase lands along rivers. The governor and cabinet approved the Charlotte Harbor Resource Planning and Management Plan in 1981, pursuant to Chapter 380.045, F.S. In 1987, the Florida legislature passed the Surface Water Improvement and Management (SWIM) Act, a statewide program for protecting and restoring priority surface waterbodies of regional significance. Lake Okeechobee was one of six original listed waterbodies. In 1990, the Florida legislature adopted Governor Bob Martinez's Preservation 2000 (P-2000) Program, which provided funds for the CARL and SOR land acquisition programs.

Table 2.8 (continued)

Year	Issues and Activities
1992–1996	In 1993, the Florida Environmental Reorganization Act merged the Departments of Environmental Regulation and Natural Resources into the Florida Department of Environmental Protection (Department). Governor Lawton Chiles nominated Charlotte Harbor as an “estuary of national significance” in 1995, and Charlotte Harbor was accepted into the National Estuary Program, one of only 27 other watersheds in the United States to receive the designation. Congress passed the Everglades and South Florida Ecosystem Restoration Act in 1996 to restore the water quality and basic hydrologic patterns in the entire Everglades/south Florida ecosystem.
1997–1999	Governor Lawton Chiles issued an executive order requiring the water management districts to develop a priority list and schedule for the establishment of minimum flows and levels (MFLs) for surface water and ground water by November 15, 1997. During the El Niño event of 1997–98, the SFWMD released extreme amounts of fresh water from Lake Okeechobee to the St. Lucie and Caloosahatchee Estuaries (from early January to late April 1998). Fish with lesions, ulcers, and bloody spots were collected in Charlotte Harbor from April 14 to June 12, 1998. Phosphorus loading to Lake Okeechobee continued to exceed target levels in 1998 and the Lake Okeechobee Issue Team was formed as a subset of the South Florida Ecosystem Restoration Working Group (SFERWG) to identify ways to enhance the ecological values of Lake Okeechobee. In 1999, the Florida legislature established the Florida Forever Program, which replaced P-2000. This new program provides \$300 million a year for preservation and restoration efforts. Groundbreaking began on the Kissimmee River restoration in 1999.
2000–2005	In 2000, the Florida legislature passed the Lake Okeechobee Protection Act (Chapter 2000-130, Laws of Florida), which required the completion of a lake protection plan and provided \$38 million to implement projects and programs outlined in the act. The SFWMD lowered water levels in Lake Okeechobee by 2 feet in April 2000, again discharging extreme amounts of fresh water into the St. Lucie and Caloosahatchee Estuaries. The Charlotte Harbor National Estuary Program sent a letter to the water management district, stating that the extreme releases of fresh water from Lake Okeechobee into the Caloosahatchee River were not consistent with the harbor’s Comprehensive Conservation Management Plan. A moderate bloom of red tide occurred from Charlotte Harbor to Key West in the spring of 2000. Fish with lesions, ulcers, and red lips/fins were collected in Charlotte Harbor from early May to early August 2000. The Florida Fish and Wildlife Conservation Commission (FWC) mechanically scraped 21 miles (1,308 acres) of tussocks from Lake Istokpoga’s shoreline in the spring of 2001. The SFWMD released fresh water from Lake Okeechobee to meet the MFL to the Caloosahatchee River and Estuary from December 2001 through the end of January 2002. Mullet with lesions were spotted and caught in the Caloosahatchee Estuary downstream of Franklin Lock from December 2001 to late January 2002. Another red tide event occurred along the Gulf Coast in early February 2002, ranging from Tampa Bay to Naples. On February 13, 2003, the SFWMD Governing Board adopted a resolution naming the Lower Charlotte Harbor a SWIM priority waterbody. This designated SWIM area includes the Caloosahatchee Estuary, San Carlos Bay, Estero Bay, Matlacha Pass, and Pine Island Sound. The Lee County Board of County Commissioners petitioned the SFWMD and the Department for a Chapter 373.233(4) reservation of water for the Caloosahatchee River and Estuary for fish and wildlife in 2003. In 2005 large amounts of nutrient-enriched, blue-green algae-laden water was discharged from Lake Okeechobee into the St. Lucie River and Estuary on the Atlantic Coast and the Caloosahatchee River and Estuary on the Gulf Coast creating massive blue-green algae blooms in both those waterways and downstream estuaries. On October 10, 2005, the governor and legislature announced the Lake Okeechobee and Estuary Recovery (LOER) Action Plan, which provided funding to “fast-track” water quality improvement projects for Lake Okeechobee including accelerating to 2007 the completion of some TMDLs in the Kissimmee River/Fisheating Creek Basins, which were previously scheduled for 2010 and 2011.

Table 2.8 (continued)

Year	Issues and Activities
2006	On March 22, 2006, the Nature Conservancy purchased 1,646 acres of land along the old Kissimmee River near Route 78 to advance the important goals of the Comprehensive Everglades Restoration Plan. The land was purchased on behalf of the SFWMD and will be transferred to them at a later date. On April 12, 2006 the SFWMD governing board unanimously approved the purchase of the last parcels of land needed to complete the final phases of the Kissimmee River Restoration Project. The 12,000 acres purchased for \$35.8 million will complete the total acquisition of 102,061 acres needed for construction of the project.

Much of the progress in the basins in developing water quality restoration plans and implementing watershed and water quality improvements is attributable to coordinated local, state, and regional efforts. Many plans share common goals, and their implementation is based on various groups playing critical roles in planning, funding, managing, and executing projects. The Florida Department of Environmental Protection (Department) continues to coordinate its efforts with these entities to obtain data, improve monitoring activities, and exchange information through periodic meetings.

Major Programs and Projects

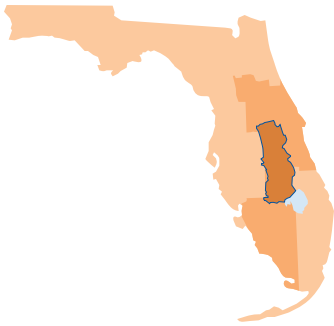
A number of significant events, including the following, have contributed greatly to ecological and hydrologic modifications in the region.

Comprehensive Everglades Restoration Plan

The C&SF Project was first authorized in 1948 to provide flood control, water control, water supply, and other services to an area that stretches from Orlando to Florida Bay. Although the project has performed its original purposes, it also contributed to an unintended decline in the south Florida ecosystem. As such, a comprehensive review study ("The Restudy") was conducted to investigate structural and operational modifications to the C&SF Project that would accomplish the following:

- Improve the quality of the environment;
- Improve aquifer protection;
- Improve the integrity, capability, and conservation of agricultural and urban water supplies; and
- Maintain current levels of flood protection.

The Restudy, conducted by the USACOE and the SFWMD, resulted in the CERP, which provides a framework and guide to restore, protect, and preserve the water resources of central and southern Florida. The plan was transmitted to Congress on July 1, 1999, and its various projects are now under way, several of which listed below directly affect the Kissimmee River Basin.



- **Lake Okeechobee Watershed Water Quality Treatment Facilities—** The purpose of this feature, which includes 2 reservoir-assisted stormwater treatment areas (RASTAs), is to attenuate peak flows and retain phosphorus before it flows into Lake Okeechobee. The initial design of the RASTAs assumes a 1,775-acre facility in the S-154 Basin in Okeechobee County and a 2,600-acre facility in the S-65D Basin of the Kissimmee River Basin in Highlands and Okeechobee Counties.

To meet the water quality goals for Lake Okeechobee, other RASTAs may be needed—for example, for the C-41 and Fisheating Creek Basins, which are not currently included in the CERP conceptual plan for this project. Therefore, the CERP feasibility study proposed that a comprehensive plan for the Lake Okeechobee watershed be developed before the final plan for the project is implemented.

Further, many of the wetlands in the Lake Okeechobee watershed have been ditched and drained for agricultural water supply and flood control. Thus, the other component of the project will restore the hydrology of selected isolated and riverine wetlands in the region by plugging the connection to drainage ditches and diverting flows to adjacent wetlands. This will be accomplished by purchasing conservation easements within the Lake Okeechobee watershed to restore approximately 3,500 acres of isolated wetlands. The sites, which range in size from an individual wetland to an entire subbasin, are located in the lower Kissimmee River Basin (S-65D, S-65E, and S-154) and Taylor Creek/Nubbin Slough (S-191).

- **North of Lake Okeechobee Storage Reservoir—**This facility would store water during wet periods for later use during dry periods and reduce nutrient loads flowing to the lower Kissimmee River and Lake Okeechobee. Water storage in the reservoir could come from runoff from the watershed, or water could be pumped directly from Lake Okeechobee for temporary storage during periods of high lake stages. This increased storage capacity will reduce the duration and frequency of undesirable high and low water levels in Lake Okeechobee. Low lake stages can stress the lake's littoral ecosystems and cause water supply shortages in the Lake Okeechobee service areas. High lake stages can require large discharges from the lake that are damaging to the downstream estuarine ecosystems. Depending upon the proposed locations of this water storage/treatment facility and pollutant loading conditions in the watershed, the facility should be designed to achieve water quality improvements consistent with the appropriate pollution load reduction targets.

The initial conceptual design of this component includes a single aboveground reservoir with a total storage capacity of approximately 200,000 acre-feet, as well as a stormwater treatment area (STA). The reservoir would be located in the Kissimmee River region, north of Lake Okeechobee. The specific location or configuration of the facility (or group of facilities) has not been identified; however, it is anticipated that it will be located in Glades, Highlands,

or Okeechobee County. The initial design assumed a 20,000-acre facility (17,500-acre reservoir and 2,500-acre STA) with water levels in the reservoir fluctuating up to 11.5 feet above grade. The final number, size, depth, configuration, and location of this facility (or group of facilities) will be determined through more detailed planning, land suitability analyses, and design.

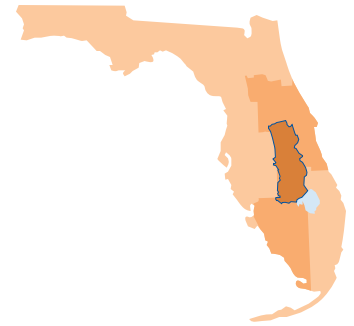
- **Lake Istokpoga Regulation Schedule Modification**—This project includes the development of a plan to address water resource problems in the Lake Istokpoga watershed. Lake Istokpoga is a natural lake located in Highlands County, a tributary of Lake Okeechobee and the Kissimmee River. The major focus of this plan is to create a balance between the environmental needs, water supply, and flood control in the Lake Istokpoga drainage area.

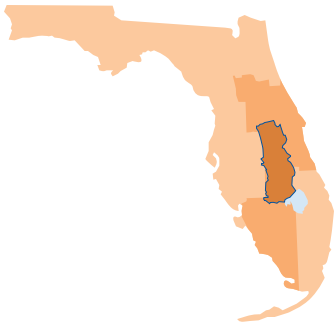
The plan would examine the Lake Istokpoga Basin with a view towards enhancing fish and wildlife benefits and developing a long-term, comprehensive management plan. It has been noted that the operation of S-68, beginning in 1962, reduced the maximum annual fluctuation of the lake (SFWMD, 1978). While the littoral zone expanded, the amount of quality habitat was reduced by the formation of extensive floating tussocks and dense cattail communities. Persistently lowered lake levels have reduced the natural frequency of seasonal drying and inundation. Without natural dewatering events, the germination of diverse aquatic plant seeds is reduced, the consolidation and compaction of organic sediments cannot occur, and the formation and expansion of floating mats of water hyacinths and other species common to tussock communities are promoted. These mats reduce the marsh's overall productivity and diversity. The plan will also address the need for flood protection to the perimeter and upstream tributaries, and downstream areas west and east of C-41A. Water supply needs for agriculture and the Seminole Tribe of Florida will also be addressed.

Kissimmee River Restoration Project

Congress authorized the Kissimmee River Restoration Project (KRRP) in the 1992 Water Resources Development Act. The project will be completed in several phases, with the final phase of construction scheduled for completion in 2012 and the restoration evaluation to be completed in 2017. The project, a joint partnership between the SFWMD and the USACOE, is restoring over 40 square miles of river/floodplain ecosystem and 27,000 acres of wetlands by backfilling the C-38 canal and reconnecting historical meandering remnant river channels. Phase I of the KRRP, completed in February 2001, backfilled approximately 7.5 miles of the C-38 canal, recarved approximately 1.25 miles of river channel, and demolished the S-65B structure to reconnect 15 miles of continuous river channel.

The primary goal of the KRRP is to reestablish the ecological integrity of the river-floodplain system. Restoration of ecological integrity requires reconstruction of the physical form of the river (i.e., canal backfilling, removal of water control structures, and elimination of secondary drainage





ditches, levees, and roads) and reestablishment of historic (prechannelization) hydrologic (i.e., discharge and stage) characteristics.

A key element of the KRRP is a comprehensive restoration assessment program for tracking ecological responses to restoration. To address the goal of ecological integrity, the assessment program has a broad scope encompassing hydrology, geomorphology, water quality, and major biological communities, including plants, invertebrates, reptiles, amphibians, fish, and birds. All assessment components were monitored prior to restoration to establish a baseline for evaluating future changes.

Kissimmee River Headwaters Revitalization Project

The Kissimmee River Headwater Revitalization Project (KRHRP) was jointly authorized with the KRRP in the 1992 federal Water Resources Development Act. The primary purpose of the KRHRP is to modify the water storage and regulation schedule to approximate the historical flow characteristics of the Kissimmee River system. A secondary project purpose is to increase the quantity and quality of lake littoral zone habitat in Lakes Kissimmee, Hatchineha, Tiger, and Cypress for the benefit of fish and wildlife. The KRHRP does not consider requirements for treatment of hydrilla or lake habitat restoration and enhancement projects, nor does it address water-level regulation in the 16 waterbodies north of Lake Cypress.

In June 2001, an interim operation schedule was implemented for water control structure S-65, which regulates discharge from Lake Kissimmee into the Kissimmee River. This interim schedule provides a strategy for meeting KRRP needs for continuous flow by allocating water for discretionary releases. Although beneficial to the river, the interim schedule does not raise the high pool stage and thus does not fully allow for the expected natural river flows, nor does it provide benefits to littoral zone habitat in headwater lakes.

The KRHRP includes revisions to the interim regulation schedule, along with structure and canal modifications to accommodate the increased capacity associated with the increased lake storage volumes needed to fully meet the requirements of the KRRP. Presently, the SFWMD has acquired the majority of lands that will be inundated as a result of increased lake stages. Canal and structure modifications will be completed by 2010, at which point the revised regulation schedule will be implemented.

Kissimmee Basin Hydrologic Assessment, Modeling, and Operations Planning Study

The “Kissimmee Basin Modeling and Operations Study” is a SFWMD initiative, the goal of which is to identify and evaluate alternative short- and long-term water control structure operating criteria to meet the operational objectives of the Kissimmee Basin and its associated water resource projects. The operating criteria will be designed to meet water management objectives for

- Flood control (basinwide)
- Water supply (basinwide)

- Natural resource requirements of the Kissimmee River restoration and Kissimmee Chain of Lakes
- Downstream ecosystem requirements (Lake Okeechobee)

Phase I of the study is complete and included watershed delineation verification, problem identification, preliminary data analysis, model evaluation and selection, monitoring network evaluation, basin model plan/strategy, and an assessment report. Phase II was initiated in late 2005 and includes the development of modeling tools and their application to evaluate and select alternative operating criteria for the future operation of water control structures in the Kissimmee Basin.

The interim plan will be constrained by water management infrastructure and land interests that will exist from 2007 through completion of the KRRP. The long-term plan will be constrained by future water management infrastructure and land uses that will exist when the KRRP is complete in 2012.

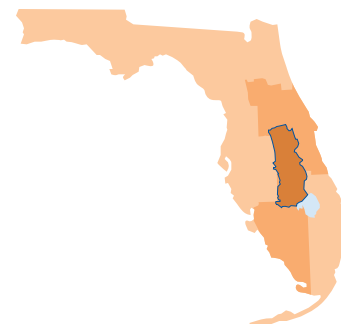
Kissimmee Chain of Lakes Long-Term Management Plan

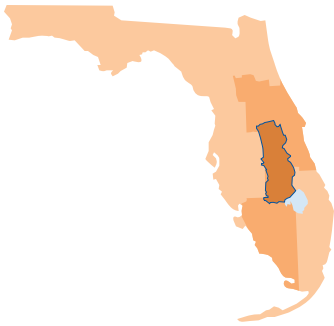
The Kissimmee Chain of Lakes Long-Term Management Plan (KCOL LTMP) was initiated in April 2003 by the SFWMD Governing Board to improve, enhance, and/or sustain the ecosystem health of the Kissimmee chain of regulated lakes while minimizing adverse impacts to the Kissimmee River and Lake Okeechobee. Six partner agencies participating with the SFWMD in the KCOL LTMP to date are the Florida Fish and Wildlife Conservation Commission (FWC), the Department, DACS, USACOE, United States Fish and Wildlife Service (USFWS), and EPA.

After identifying these issues and current initiatives, the partner agencies identified five goals to address concerns that are aligned with the mission defined by the SFWMD resolution. The goals are

- Hydrologic management
- Habitat preservation and enhancement
- Aquatic plant management
- Water quality improvement
- Recreation and public use

Several products produced during 2004–05 include (1) an annotated bibliography containing 650 references to research and monitoring activities within the KCOL; (2) a stakeholder value survey indicating a desire for fish and wildlife habitat preservation and access to areas for picnicking, boating, hiking, and fishing; and (3) a conceptual ecosystem model intended to identify candidate indicator species, desirable ecosystem attributes, and performance measures.





Lake Istokpoga and Upper Chain of Lakes Basin Phosphorus Source Assessment

Sponsored by the SFWMD, the project will document the general characteristics of land use activities as they relate to phosphorus imports and exports and develop a basic mass balance model for the movement of phosphorus within subbasins. This budget development will assist in the planning of appropriate phosphorus source control methods in the Lake Istokpoga and Upper Kissimmee Chain of Lakes watersheds to improve water quality.

Lake Okeechobee and Estuary Recovery Action Plan

In response to identified water resource needs, legislative directives, and demands of Florida citizens, the Lake Okeechobee and Estuary Recovery (LOER) action plan has been developed to help restore the ecological health of Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries. Key state agencies charged with carrying out this plan include the SFWMD, the Department, DACS, and the Department of Community Affairs (DCA).

Through the leadership of the governor and legislature, initial funding has been provided for a series of “fast-track” capital projects to help provide meaningful water quality improvements. In the Kissimmee River and Fisheating Creek Basins, the establishment of some total maximum daily loads (TMDLs), which were to be developed by September 2010 and 2011, will be accelerated for completion by 2007. This acceleration will only apply to nutrient and dissolved oxygen TMDLs. This work will be accompanied by the development of a Basin Management Action Plan with local stakeholders, which will identify the specific actions to be taken by all parties to restore water quality and incorporate the elements of this acceleration plan.

Lake Okeechobee Protection Act

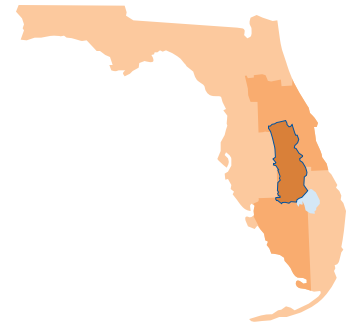
The 2000 legislature passed the Lake Okeechobee Protection Act (Chapter 2000-130, Laws of Florida) to establish a restoration and protection program for the lake. This will be accomplished by achieving and maintaining compliance with state water quality standards in Lake Okeechobee and its tributary waters, through a watershed-based, phased, comprehensive, and innovative protection program designed to reduce phosphorus loads and implement long-term solutions, based on the lake’s phosphorus TMDL and considering the establishment of TMDLs for the tributaries of Lake Okeechobee.

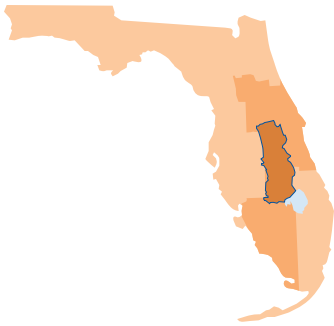
The program sets forth a series of activities and deliverables for the coordinating agencies—the SFWMD, the Department, and DACS. Elements specifically required by the legislation include a formal Lake Okeechobee Protection Plan (LOPP) and annual reports, the implementation of the Lake Okeechobee Construction Project, a watershed phosphorus source control program, a comprehensive water quality and ecological monitoring program, the evaluation of in-lake phosphorus management, the creation of an exotic species control program, and the acquisition of associated permits. The LOPP identifies alternative plans, schedules, and

costs to meet the phosphorus TMDL of 140 metric tons (Mtons) by 2015, as specified in the act.

The integrated management strategy to achieve the restoration of Lake Okeechobee is based on implementing phosphorus source control programs, including best management practices (BMPs) at the parcel level, subbasin and regional phosphorus control and flow attenuation projects, and in-lake remediation activities. Elements include the following:

- **Owner-implemented BMPs**—These practices, which are described in the various BMP manuals adopted by DACS (Rule 5M-3), were selected to represent affordable, cost-effective practices that are not eligible for cost-sharing. Suites of owner-implemented BMPs are land-use specific. For example, cow/calf land uses may reduce phosphorus fertilization, improve grazing management, or result in better management of nitrogen and micronutrients. The owner-implemented BMPs for urban areas also include reducing phosphorus fertilization and lawn maintenance activities.
- **Funded cost-share BMPs**—These are implemented under existing cost-sharing programs (DACS [state appropriations] and the U.S. Department of Agriculture–Natural Resources Conservation Service (USDA-NRCS) [federal appropriations]) with existing funding. They were selected to represent the maximum contribution that could be implemented within the financial capabilities of the average landowner. Bottcher and Harper (2003) describe the typical suites of funded cost-sharing BMPs provided for each land use, along with the associated phosphorus reductions and cost per acre. Due to initial funding limitations, this category only includes agricultural BMPs implemented in portions of the S-191, S-65A through E, and S-154 basins.
- **Typical cost-sharing BMPs that require future funding**—BMPs for each agricultural landowner (nontribal lands) will be identified through an assessment described in the BMP manuals prepared by DACS, nutrient management plans, or conservation plans through the USDA-NRCS. Examples include internal fencing to keep cows out of wetlands and streams, on-site retention facilities, and/or a stormwater management system. Because the implementation of these BMPs will be beyond the financial capabilities of the average landowner, additional funding through cost-sharing will be required for implementation. Bottcher and Harper (2003) include the typical suite of agricultural BMPs for each land use. The document also provides load reductions and costs per acre. The urban BMPs (retrofits) include creating retention/detention areas that will address phosphorus loading from subdivisions.
- **Phosphorus reductions from lands within the Seminole Brighton Reservation**—Although the integrated management strategy includes lands within the reservation, at this time, the Seminole Tribe, as a sovereign nation, is not participating in the state cost-sharing BMP program, but may do so in the future. The Seminole Tribe is





currently using federal cost-sharing programs to implement BMPs, which they estimate will achieve a 25 percent reduction in phosphorus loading.

- Other phosphorus reduction projects—This category includes ongoing, multiyear projects to reduce phosphorus loading from the watershed, funded primarily through public–private partnerships, phosphorus source control grants, dairy best available technologies, and isolated wetlands restoration. These programs have been partially or totally funded by state appropriations. The projects include the following:
 - Phosphorus Source Control Grants—Implement 13 diverse projects to support the goal of reducing phosphorus exports to Lake Okeechobee. The projects include biological, chemical, and physical methods of reduction, either by reducing existing phosphorus loads or preventing future loading. The grant program format allows for early stakeholder involvement at the individual property level or on a regional scale.
 - Dairy Best Available Technologies—Capture farm runoff by a series of berms and ditches and deliver it to a detention/retention area for reuse or chemical treatment prior to discharge off-site.
 - Isolated Wetlands Restoration—Reduce phosphorus by restoring historical water levels and treating water within drained wetlands, using simple water control structures (i.e., culvert risers, earthen ditch plugs).
 - Former Dairy Restoration—Design and implement alternatives to achieve the lowest load reduction amount feasible, based on DACS Agricultural Nutrient Management Assessment recommendations. Alternatives include wetland restoration, soil amendments, and stormwater retention/detention.
 - Water Control Structures Retrofit and Canal Dredging for Maintenance and Water Quality Improvement—(1) Retrofit water control structures and (2) carry out canal dredging for maintenance and water quality improvement. Retrofitting encompasses replacing gate and/or culvert sites, and modifying sites by constructing sediment traps and installing vegetation barriers.
- Regional public works projects—Reductions in phosphorus loads to Lake Okeechobee will occur as a result of other regional public works projects. These include the Everglades Agricultural Area Storage Reservoir (CERP); the Diversion of 298 Districts Flows and BMPs under Chapter 40E-61, F.A.C., and Chapter 40E-63, F.A.C.; the Lake Okeechobee Water Retention Phosphorus Removal Critical Project; and the KRRP. Other regional projects are expected to have an influence on phosphorus loads to Lake Okeechobee, such as the C-44 Basin RASTA (CERP) and the C-43 Caloosahatchee Backpumping with Stormwater Treatment (CERP). These projects

and programs are described in the Indian River Lagoon Feasibility Study (SFWMD, 2002) and the C&SF Comprehensive Review Study (USACOE, 1999). At this time, phosphorus load reductions for these projects have not been estimated.

- Other regional projects—Regional projects are limited to the expansion of the Nubbin Slough pilot STA to include a reservoir and larger STA area. The SFWMD currently owns the land that would be required for this expansion. Additional water from the S-191 Basin will be treated by the two STAs and will result in a potential phosphorus load reduction of 4.56 Mtons per year. The total reduction from all the contributing basins has been accounted for in the S-191 Basin for planning purposes.

Lake Marion Creek Management Plan

Lake Marion Creek flows from Lake Marion to Lake Hatchineha in Polk County. The SFWMD, USFWS, and Polk County are sponsors of the management plan. The primary management activities for the 17,300-acre project area, which contains a mosaic of natural communities, include prescribed burning, exotic plant control, and public access. An additional 300 acres of scrub habitat were purchased in 2003.

Reedy Creek Management Plan

Sponsored by the SFWMD and Osceola County, the management goals for Reedy Creek encompass the preservation and restoration of natural lands, including prescribed burning and exotic plant control. A sizable wetland mitigation bank has been established adjacent to Lake Russell.

Shingle Creek Management Plan

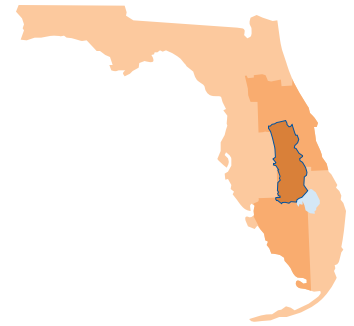
Sponsored by the SFWMD and Orange and Osceola Counties, the Shingle Creek Swamp has been set aside as a mitigation site to offset the wetland impacts of the Orlando Beltway. In 2003, 175 acres were control burned, and 1,650 acres were treated for exotic vegetation.

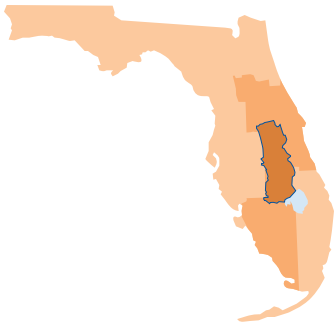
Tibet Butler Preserve Management Plan

A 439-acre environmental education facility on the southwest shore of Lake Tibet Butler is maintained by Orange County, including exotic vegetation control.

Agricultural Best Management Practices

The FWRA authorizes DACS to develop interim measures and agricultural BMPs. Additional authority for agricultural BMPs is provided in legislation on nitrates and ground water (Section 576.045, F.S.), the Lake Okeechobee Protection Program (Section 373.4595, F.S.), Agricultural Water Conservation (Section 570.085, F.S.), and Florida Right to Farm Act Amendments (Section 823.14, F.S.). While BMPs are often adopted by rule, they are voluntary if not covered by regulatory programs. If they are adopted by rule and the Department verifies their effectiveness, then implementation provides a presumption of compliance with water quality standards.





Over the last several years, DACS has worked with agriculturists, soil and water conservation entities, the University of Florida's Institute of Food and Agricultural Sciences, and other major interests to improve product marketability and operational efficiency by implementing agricultural BMPs, while at the same time promoting water quality and water conservation objectives. In addition, programs have been established and are being developed to create a network of state, local, federal, and private sources of funds for developing and implementing BMPs. Some of these are discussed earlier in this chapter, in the section on the **Lake Okeechobee Protection Act**.

Manuals for Best Management Practices

To encourage growers to use BMPs, manuals have been published for a number of agricultural industries, including container-grown plants, blended fertilizer plants, agrichemical handling and farm equipment maintenance, cow/calf operations, aquaculture, citrus, and landscaping. Many of these manuals can be downloaded at <http://www.dep.state.fl.us/water> or <http://www.floridaagwaterpolicy.com>.

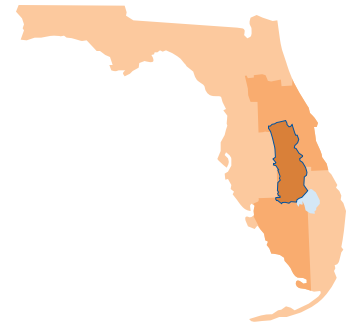
Manuals for row crops, equine or horse farms, and ornamental nurseries are currently being developed. The use of a BMP manual alone, however, does not afford a presumption of compliance with the Department's water quality standards. In general, qualifying for a presumption of compliance requires that a site-specific BMP assessment process be in place or that practices being used have been proven effective through research and demonstration.

BMP manuals pertinent to the Kissimmee River and Fisheating Creek Basins include the following:

- **Guide for Producing Container Grown Plants:** This manual, published in 1995 by the Southern Nurserymen's Association, includes irrigation and fertilization BMPs for the container cultivation of nursery plants. It was produced through a cooperative effort between the University of Florida, Auburn University, Tennessee Tech University, and Virginia Tech. Since the manual is not Florida-specific, an effort is currently under way to use the document in developing a Florida-specific manual.
- **BMPs for Blended Fertilizer Plants in Florida:** The manual for blended fertilizer industrial operations, published in October 1997, was cooperatively produced by the Florida Fertilizer and Agrichemical Association, DACS, and the Department.
- **BMPs for Agrichemical Handling and Farm Equipment Maintenance:** Recently revised and reprinted, this manual gives producers guidance on hazardous materials, proper pesticide handling, and proper disposal of waste products. It was cooperatively produced in 1998 by DACS, the Department, and several industry associations.
- **Water Quality BMPs for Cow/Calf Operations:** Many cattle operators statewide have been trained in using this manual and applying BMPs. The Florida Cattlemen's Association and several

state, federal, and local agencies developed the manual, which was published in 1999. Copies were printed and distributed in 2000 using EPA Section 319 grant funds.

- **Aquaculture BMPs:** As directed by the 1998 Florida legislature, DACS worked cooperatively with industry, state agencies, and the environmental community to develop a comprehensive BMP manual for aquaculture. Florida law requires that the Department adopt the manual by rule and provides regulatory exemptions under Chapters 373 and 403, F.S., for growers who implement BMPs and are certified by DACS' Division of Aquaculture. The manual, which was printed and distributed in 2000, has been adopted by rule.
- **Florida Green Industries BMPs for Protection of Water Resources in Florida:** This manual provides BMPs for professional turfgrass and landscape managers. Published in 2002, it was developed through a cooperative effort by Florida Green Industries (an industry association); the Department; DACS; the DCA; and the St. Johns River, South Florida, and Southwest Florida Water Management Districts.
- **Nitrogen BMPs for Florida Ridge Citrus:** This manual was adopted by rule in 2002 for Florida's Central Ridge region to minimize the risk of leaching nitrates from fertilizers to ground water.
- **Water Quality/Quantity BMPs for Indian River Area Citrus Groves:** The purpose of the manual is to have acceptable and effective BMPs aimed at improving the quality, quantity, and timing of water draining into the St. Lucie Estuary and the Indian River Lagoon. The BMPs from this manual are used in the Kissimmee River and Fisheating Creek Basins for nonridge citrus.
- **Rule-Based Initiatives (Rule 5M-3):** In 2003, DACS adopted Rule 5M-3 BMPs for citrus, cow/calf, and dairies in the Lake Okeechobee priority basins (S-191, S-154, S-65 D, and E). The purpose of this rule is to effect pollutant reduction through the implementation of nonregulatory and incentive-based programs that may be determined to have minimal individual or cumulative adverse impacts to the water resources of the state. The rule defines the phosphorus management requirements of agricultural producers necessary to receive a presumption of compliance with state water quality standards, including those established by the Department's TMDL Program and the SFWMD's Works of the District Program contained in Chapter 40E-61, F.A.C. The implementation of this rule is part of a comprehensive program to achieve water quality standards. Reasonable assurance for achieving water quality standards is enhanced through verification monitoring at representative sites and subsequent identification of additional or modified control measures where needed. As of the writing of this report, DACS is finalizing rulemaking to extend the boundary of the rule to include the entire Lake Okeechobee watershed.





Chapter 3: Surface Water Quality Assessment

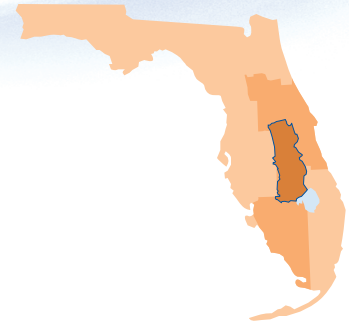
Scope of the Assessment

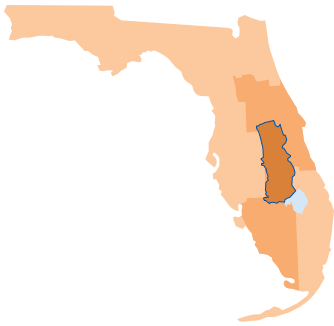
This chapter presents the results of an updated assessment of surface water quality in the Kissimmee River and Fisheating Creek Basins. The primary purpose of the assessment is to determine if waterbodies or waterbody segments are to be placed on the Verified List of impaired waterbodies. The listing will be in accordance with evaluation thresholds and data sufficiency and data quality requirements in the Identification of Impaired Surface Waters Rule (IWR) (Rule 62-303, Florida Administrative Code [F.A.C.]). The results of the assessment will be used to identify waters in the basin for which total maximum daily loads (TMDLs) will be developed.

The chapter describes the planning units in the basins used as a basis for the assessment. A section on each planning unit contains a general description and summary of key water quality indicators (such as nutrients, chlorophyll *a*, dissolved oxygen [DO], and microbiological parameters). Permitted discharges, land uses, ecological status, and water quality improvement plans and projects are summarized for each planning unit. The discussion notes where applicable surface water quality criteria have been exceeded and summarizes the report's findings in maps, noting potentially impaired waterbodies in each planning unit. The chapter also contains background information on sources of data and on designated use attainment, and explains the state's integrated water quality assessment process.

While potentially impaired waters and their causative pollutants are identified, it is not within the scope of this report to identify discrete sources of potential impairments. Information on the sources of impairment will be developed in subsequent phases of the watershed management cycle, including TMDL development and implementation.

Appendix A contains a discussion of the legislative and regulatory background for TMDL development and implementation. **Appendix B** provides additional information on reasonable assurance. **Appendix C** provides the methodology used to develop the Planning and Verified Lists. **Appendix D** contains the integrated water quality assessment (Master List) and the water quality monitoring stations used in the assessment. **Appendix E** lists, by planning unit, permitted wastewater treatment facilities in the basins that discharge to surface water and ground water, as well as landfills and ground water contamination sites. **Appendix F** lists Level I land use by planning unit; and **Appendix G** provides a summary of comments made at the public meetings in Kissimmee and Sebring on July 13–14, 2005. The complete text of the IWR is available at <http://www.dep.state.fl.us/water/tmdl/docs/amendedIWR.pdf>.





Update on Strategic Monitoring and Data-Gathering Activities During Phase 2

During Phase 2 of the watershed management cycle, strategic monitoring and data-gathering activities focused first on waters on the 1998 303(d) list, followed by waters that were placed on the Planning List through the IWR assessment alone. The majority of the strategic monitoring work was conducted by the Florida Department of Environmental Protection's (Department's) Central and South District's staff and included both chemical and biological monitoring and data upload to **STO**rage and **RE**Trieval (STORET) databases. Data-gathering activities included working with environmental monitoring staff in the South and Southwest Florida Water Management Districts (SFWMD and SWFWMD) and local and county governments to obtain applicable monitoring data from their routine monitoring programs and special water quality projects in the two basins.

Nineteen waterbody segments on the Planning List and the 1998 303(d) list needed further data to verify impairment. Parameters included DO, fecal and total coliforms, mercury in fish, nutrients, and turbidity.

Forty-nine waterbody segments were verified impaired for at least one parameter in the Kissimmee River and Fisheating Creek Basins as the result of strategic monitoring and data-gathering activities in Phase 2. **Table D.1** in Appendix D provides the updated impairment status of the basin through October 23, 2005.

Sources of Data

The assessment of water quality in the Kissimmee River and Fisheating Creek Basins includes an analysis of quantitative data from various sources, some of which are readily available to the public. These sources include the U.S. Environmental Protection Agency's (EPA) Legacy and "new" STORET databases, the U.S. Geological Survey (USGS), and the Florida Department of Health. The STORET databases contain water quality data from a number of sources, including the Department, water management districts, local governments, and volunteer monitoring groups. **Appendix C** contains a detailed description of STORET and the methodology used to develop the Planning and Verified Lists, based on the IWR.

Tables 3.1a and **3.1b** summarize the main data providers who contributed to the IWR Database for the Kissimmee River and Fisheating Creek Basins, respectively, for the period of record used in this assessment. **Figures 3.1a** and **3.1b** each contain a pie chart showing the amount of data provided by each source. Individual data providers who contributed to the IWR Database for the Kissimmee River and Fisheating Creek Basins during the period of record used in this assessment (January 1, 1998, through June 30, 2005) include the SFWMD, Orange County, the Reedy Creek Improvement District (RCID), the Florida Fish and Wildlife Conservation Commission (FWC), the Department, SWFWMD, USGS, Polk County, Avon Park Air Force Range, and the city of Orlando.

Table 3.1a: Summary of Data Providers in the Kissimmee River Basin

Organization	Number of Water Quality Observations, 1998–2005
Avon Park Air Force Range	1,862
City of Orlando	7,902
Florida Fish and Wildlife Conservation Commission	9,779
Florida Department of Environmental Protection	44,326
Orange County Environmental Protection	48,573
Polk County Natural Resources Division	5,016
Reedy Creek Improvement District Environmental Services	27,936
South Florida Water Management District	130,122
Southwest Florida Water Management District	4,574
U.S. Geological Survey	11,700
TOTAL	291,790

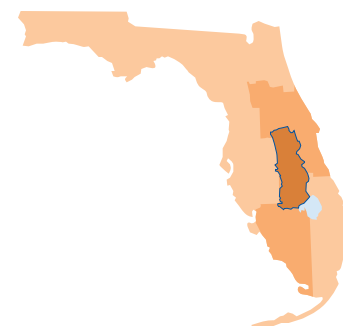
Table 3.1b: Summary of Data Providers in the Fisheating Creek Basin

Organization	Number of Water Quality Observations, 1998–2005
Florida Department of Environmental Protection	5,589
South Florida Water Management District	17,837
TOTAL	23,426

Another source of data is the *Florida Lake Regions Report* (Griffith, Canfield, Horsburgh, Omernik, Azevedo, 1997), which provides background information and was particularly useful to the Department when determining historical lake color.

In 2002, the Department created the IWR Database to evaluate data in accordance with the methodology prescribed in the IWR (Rule 62-303, F.A.C.). For the Planning List assessment, the data evaluation period of record is 10 years, and for the Verified List, 7.5 years. **Table C.2** in Appendix C shows the periods of record for the Verified and Planning Lists in the first basin rotation cycle. Data collected between January 1, 1998, and June 30, 2005, were evaluated to establish the Verified List for the Kissimmee River and Fisheating Creek Basins (IWR Run 22.0).

To support listing decisions, the evaluation of water quality in these basins also includes qualitative information drawn from data in technical reports and documents that are not yet included in the database. Some of these sources include historical water quality or ecological information that was not uploaded to the database because of its qualitative treatment of issues.



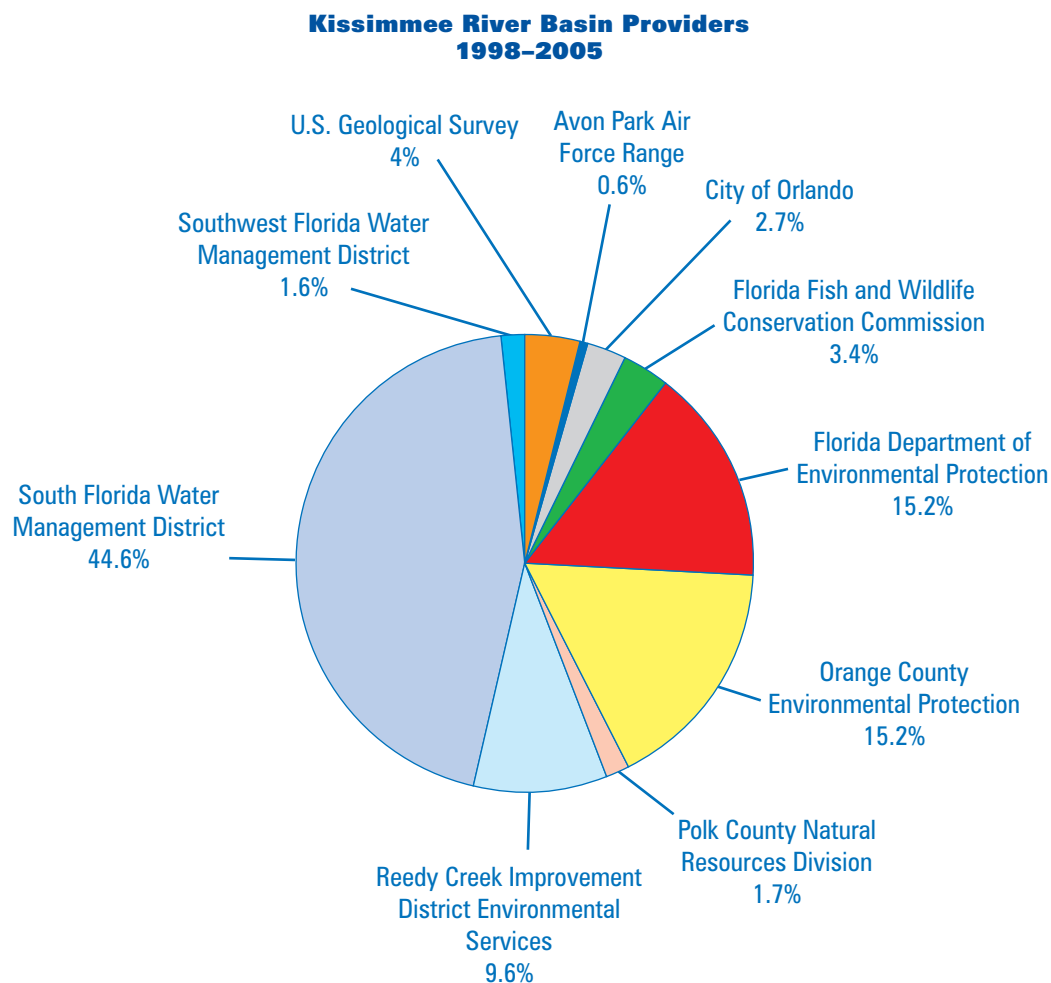


Figure 3.1a: Sources of Data for the Kissimmee River Basin

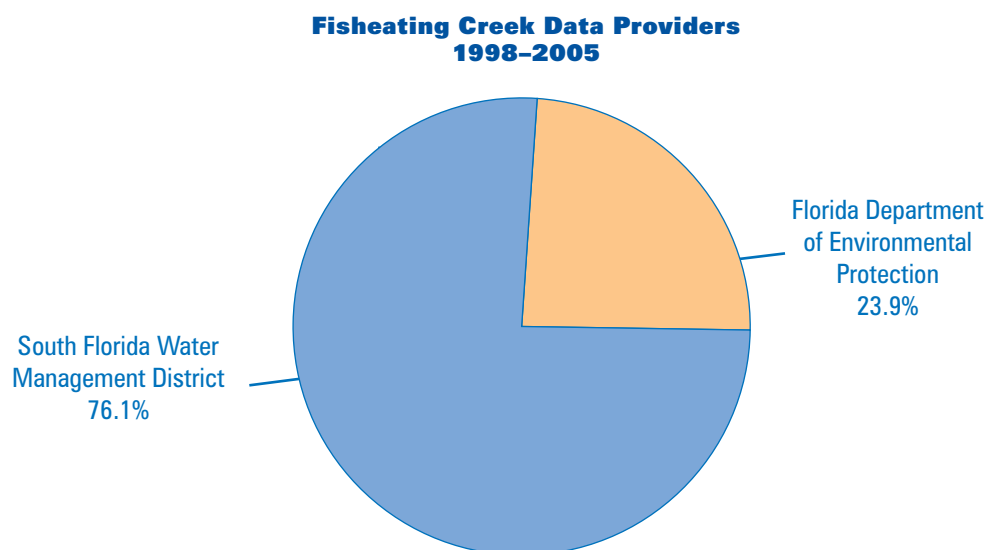


Figure 3.1b: Sources of Data for the Fisheating Creek Basin

Attainment of Designated Use

While the designated uses of a given waterbody are established using the surface water quality classification system described in Chapter 2, it is important to note that the EPA uses slightly different terminology in its description of designated uses. Because the Department is required to provide use attainment status for both the state's 305(b) report and the state's 303(d) list of impaired waters, the Department uses EPA terminology when assessing waters for use attainment. The water quality evaluations and decision processes that are defined in Florida's IWR for listing impaired waters are based on the following designated use attainment categories:

Aquatic Life Use Support-Based Attainment
Primary Contact and Recreation Attainment
Fish and Shellfish Consumption Attainment
Drinking Water Use Attainment
Protection of Human Health

Table 3.2 summarizes the designated uses assigned to Florida's various surface water classes.

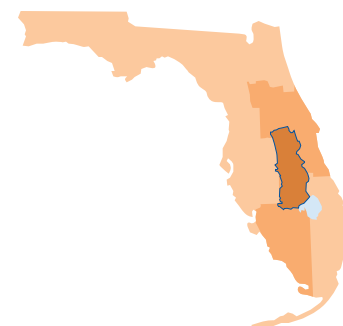
Table 3.2: Designated Use Attainment Categories for Surface Waters in Florida

Designated Use Attainment Category Used in Impaired Surface Waters Rule Evaluation	Applicable Florida Surface Water Classification
Aquatic Life Use Support-Based Attainment	Class I, II, and III
Primary Contact and Recreation Attainment	Class I, II, and III
Fish and Shellfish Consumption Attainment	Class II
Drinking Water Use Attainment	Class I
Protection of Human Health	Class I, II, and III

Integrated Report Categories and Assessment Overview

The EPA has requested that the states merge their reporting requirements under the Clean Water Act for Section 305(b) surface water quality reports and Section 303(d) lists of impaired waters into an *Integrated Water Quality Monitoring and Assessment Report* (Wayland, 2001). This Water Quality Assessment Report integrates the 303(d) list and the 305(b) report for the Kissimmee River and Fisheating Creek Basins.

Following the EPA's guidance, the Department delineated waterbodies or waterbody segments in each of the state's river basins, assessed them for impairment based on individual parameters, and then placed them into one of five major assessment categories and subcategories. These categories provide information on a waterbody's status based on water quality, sufficiency of data, and the need for TMDL development (Table 3.3). This Water Quality Assessment Report contains a comprehensive evaluation of waterbodies that fall into Integrated Report Categories 1 through 5 in the table.



Understanding the Terms "Pollutant" and "Pollution"

For purposes of the TMDL Program, pollutants are chemical and biological constituents, introduced by humans into a waterbody, that may result in pollution (water quality impairment). There are other causes of pollution, such as the physical alteration of a waterbody (for example, canals, dams, and ditches). However, TMDLs are established only for impairments caused by pollutants (a TMDL quantifies how much of a given pollutant a waterbody can receive and still meet its designated uses).

Waterbodies that are verified impaired due to specified pollutants, and therefore require a TMDL, are listed under Category 5 in the Integrated Assessment Report; waterbodies with water quality impairments due to other causes, or unknown causes, are listed under Category 4c. Although TMDLs are not established for Category 4c waterbodies, these waterbodies still may be addressed through a watershed management program (for example, the Kissimmee River restoration).

Table 3.3: Categories for Waterbodies or Waterbody Segments in the Integrated Report

Category	Description	Comments
1	Attaining all designated uses	If use attainment is verified for a waterbody or segment that was previously listed as impaired, the Department will propose that it be delisted.
2	Attaining some designated uses and insufficient or no information or data are present to determine if remaining uses are attained	If attainment is verified for some designated uses of a waterbody or segment, the Department will propose partial delisting for the uses attained. Future monitoring will be recommended to determine if remaining uses are attained.
3a	No data and information are present to determine if any designated use is attained	Future monitoring will be recommended to determine if designated uses are attained.
3b	Some data and information are present but not enough to determine if any designated use is attained	Future monitoring will be recommended to gather sufficient information and data to determine if designated uses are attained.
3c	Enough data and information are present to determine that one or more designated uses may not be attained according to the Planning List methodology	A waterbody or segment is potentially impaired for one or more designated uses. These waters will be prioritized for future monitoring to verify use attainment or impaired status.
3d	Enough data and information are present to determine that one or more designated uses are not attained according to the Verified List methodology	A waterbody or segment exceeds Verified List evaluation criteria and may be listed as impaired at the end of Phase 2 of the watershed management cycle. However, the data have not yet been fully evaluated and the waters have not been formally verified as impaired. Further monitoring and analysis may be necessary. NOTE: This category is applicable only to the Status Report. Waters that pass the Verified List criteria at this stage of the process are placed in Category 5.
4a	Impaired for one or more designated uses but does not require TMDL development because a TMDL has already been completed	After the EPA approves a TMDL for the impaired waterbody or segment, the TMDL will be included in a Basin Management Action Plan to reduce pollutant loading toward attainment of designated use(s).
4b	Impaired for one or more designated uses but does not require TMDL development because the water will attain water quality standards due to existing or proposed measures	Pollutant control mechanisms designed to attain applicable water quality standards within a reasonable time frame are either proposed or in place.
4c	Impaired for one or more designated uses but does not require TMDL development because impairment is not caused by a pollutant	This category includes waterbodies or segments that are impaired because of naturally occurring conditions or other causes of pollution. The impairment is not caused by specific pollutants. (See sidebar on previous page for a discussion of the difference between the terms “pollutant” and “pollution.”)
5	One or more designated uses are not attained and a TMDL is required	Waterbodies or segments in this category are impaired for one or more designated uses by a pollutant or pollutants. Waters in this category are included on the basin-specific Verified List adopted by the Department’s Secretary as Florida’s impaired waters list and submitted to the EPA as Florida’s 303(d) list of impaired waters at the end of Phase 2.

Note: The descriptions in **Table 3.3** are consistent with the EPA’s integrated assessment categories. In the Status Reports for Groups 1 through 3 and in the Assessment Reports for Groups 1 through 2 that were previously produced, Categories 4b and 4c were reversed. That is, the description of Category 4b was previously listed as Category 4c, and the description of Category 4c was listed as Category 4b.

Not enough recent data on chemistry, biology, and fish consumption advisories have been collected; therefore, currently only a few waterbodies or waterbody segments statewide fall into Category 1 (attaining all designated uses). In particular, fish tissues in many waterbodies statewide have not been tested for mercury. Out of 292 waterbodies or waterbody segments in the Kissimmee River and Fisheating Creek Basins, none are in Category 1.

More waterbodies and segments statewide fall into Category 2 (attaining some uses but with insufficient data to assess completely) than Category 1 (attaining all uses), because monitoring programs can sometimes provide sufficient data for partially determining whether a designated use in a particular waterbody is attained. Fifty-six (56) waterbody segments in the basin fall into Category 2.

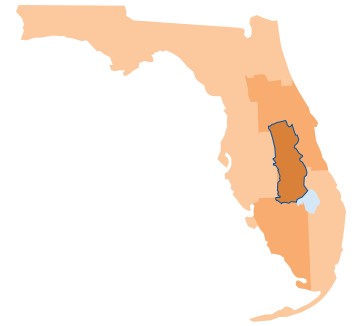
Most waterbodies in the state, however, fall into Category 3 (having insufficient data). In the Kissimmee River and Fisheating Creek Basins, the breakdown of waterbodies or segments in Category 3 is as follows:

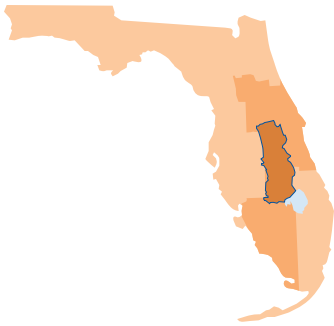
- Category 3a—69 segments for which no data are available to determine their water quality status;
- Category 3b—44 segments with some data but not sufficient data for making any determinations; and
- Category 3c—68 segments that are potentially impaired based on the Planning List criteria.

A number of waters either fail to meet water quality standards for DO or show signs of biological stress or nutrient impairment. According to the IWR, specific pollutants causing DO exceedances or biological stress, or an underlying nutrient imbalance creating an imbalance in flora or fauna, must be documented for a waterbody or segment to be listed as impaired. Sometimes these conditions cannot be linked to a causative pollutant, and sometimes they may reflect natural background conditions.

Currently, six waterbodies in the basins are designated as being in Category 4. This category includes those waterbodies/segments that are impaired but do not require a TMDL for one of three reasons:

- Category 4a—No segments for which a TMDL has already been developed;
- Category 4b—No segments for which there is reasonable assurance that the designated use of an impaired waterbody will be attained by an existing or proposed pollutant control measure; and
- Category 4c—6 segments for which the impairment is not attributable to a pollutant or pollutants, but is due to natural conditions or physical/hydrologic alterations to the waterbody. Four of these segments are also concurrently on the planning list for other potential impairments.





Finally, 49 waterbodies in the basin are in Category 5. These impaired waterbodies are on the Verified List of impaired waters adopted by the Department's Secretary and will require TMDLs. Chapter 6 of this report discusses in detail the waters in this category.

Planning Units

The Kissimmee River and Fisheating Creek Basins encompass approximately 3,789 square miles and a complex hydrologic system. To provide a more detailed geographic basis for identifying and assessing water quality improvement activities, the basins were subdivided into smaller areas called planning units. A planning unit is either an individual large tributary basin or a group of smaller adjacent tributary basins with similar characteristics. Planning units help organize information and management strategies around prominent watershed characteristics.

Water quality assessments were conducted for waterbody segments within planning units. Each of these smaller, hydrologically based drainage areas within a planning unit is assigned a unique waterbody identification number (WBID). Waterbody segments are assessment units (or geographic information system [GIS] polygons) that the Department used to define waterbodies when it biennially inventoried and reported on water quality to the EPA under Section 305(b) of the federal Clean Water Act. These WBIDs are the assessment units identified in the Department's lists of impaired waters submitted to the EPA in reports under Section 303(d) of the Clean Water Act.

The Kissimmee River Basin contains four planning units: Upper Kissimmee, Lower Kissimmee, Lake Istokpoga, and Lake Placid. The Fisheating Creek Basin contains two planning units: Fisheating Creek and Northwest Lake Okeechobee. **Table 3.4** describes these planning units, and **Figure 3.2** shows their locations and boundaries. The remainder of this chapter provides a general description of each planning unit, information on land use and potential point sources of pollution, water quality assessments for individual waterbody segments, summaries of ecological issues, and a description of watershed quality improvement plans and projects.

Appendix D of this report provides, by planning unit, the integrated assessment (Master List) summary and a list of water quality monitoring stations. **Appendix E** includes summary information, by planning unit, for permitted wastewater treatment facilities, permitted landfill facilities, and groundwater contamination sites for ethylene dibromide (EDB). **Appendix F** lists Level I land uses, by planning unit.

Table 3.4: Planning Units in the Kissimmee River and Fisheating Creek Basins

Planning Unit	Description	Square Miles
Kissimmee River Basin		
Upper Kissimmee	Portions of Orange, Osceola and Polk Counties, and a sliver of Lake County. Includes the Upper Kissimmee Chain of Lakes from Orlando southward to the southern tip of Lake Kissimmee.	1,516.4
Lower Kissimmee	Portions of Polk, Osceola, Okeechobee, and Highlands Counties. Includes the Kissimmee River from Lake Kissimmee southward to Lake Okeechobee.	721.6
Lake Istokpoga	Portions of Polk and Highlands Counties. Includes ridge lakes from Lake Wales southward to Lake Josephine, Arbuckle Creek, and Lake Istokpoga.	629.9
Lake Placid	Wholly within Highlands County. Includes ridge lakes from Lake Persimmon southward to Lake Placid.	71.8
Fisheating Creek Basin		
Fisheating Creek	Portions of Highlands and Glades Counties. Includes Fisheating Creek and its tributaries from State Road 66 southeastward to Lake Okeechobee.	443.7
Northwest Lake Okeechobee	Portions of Highlands and Glades Counties. Includes the canals and creek within the Indian Prairie from Lake Istokpoga southeastward to Lake Okeechobee.	405.4
Total		3,788.8

Assessment by Planning Unit

• Upper Kissimmee Planning Unit

General Description

The 1,516-square-mile Upper Kissimmee Planning Unit includes portions of Orange, Osceola and Polk Counties, and a sliver of Lake County, from Orlando southward to the southern tip of Lake Kissimmee. Hundreds of lakes, ranging in size from small sinkholes and ponds to large lakes, dot the planning unit. Most are shallow, with mean depths varying from 6 to 13 feet. The planning unit includes the Butler Chain of Lakes (a series of 12 sinkhole lakes located in southwest Orange County), the Upper Kissimmee Chain of Lakes (a series of 18 interconnected lakes, including Kissimmee, Hatchineha, Cypress, Tohopekaliga, East Tohopekaliga, Ajay, Hart, Mary Jane, Joel, Myrtle, Preston, and Gentry, as well as the Alligator Chain of Lakes), a few lakes from the Lake Wales Ridge (including Marion, Pierce, and Wales), and several creek systems (including but not limited to Reedy and Shingle Creeks). Water generally flows southward to Lake Kissimmee, then onward to Lake Okeechobee via the Kissimmee River (also known as the C-38 Canal).

Communities in this planning unit include the southern end of the city of Orlando (and several adjacent suburbs), the cities of Kissimmee and St. Cloud, a portion of the city of Lake Wales, and all of the RCID.

The RCID, a public corporation of the state of Florida, was created in 1967 to provide a sovereign local government for Disney World. With its own sovereignty, the RCID became self-sufficient on a local level, providing

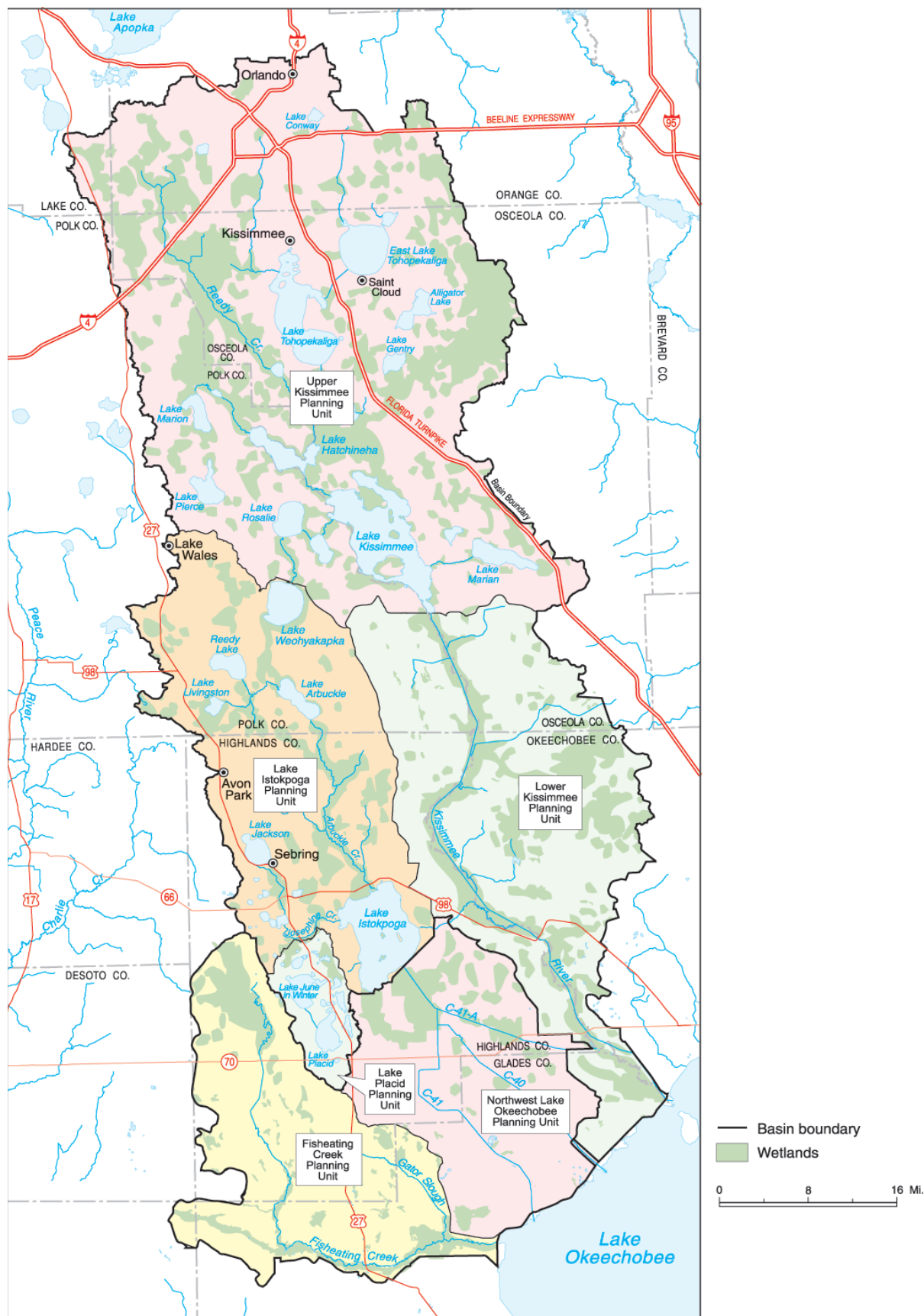


Figure 3.2: Locations and Boundaries of Planning Units in the Kissimmee River and Fisheating Creek Basins

public services including flood and drainage control, wastewater treatment, electrical power, pest control, fire protection, environmental protection, and solid waste collection.

To comply with state law establishing its sovereignty, the RCID established 2 incorporated cities within its boundaries: Bay Lake and Lake Buena Vista. Each city has residents (most of whom are Disney employees) and elected officials. The RCID encompasses 39 square miles, with three-fourths of the property located in Orange County and one-fourth located in Osceola County. Since the opening of Disney World's Magic Kingdom in 1971, 3 other Disney theme parks, as well as 24 hotels, 3 time-share resorts, 2 water parks, 1 sports-themed complex, and a dining, shopping, and entertainment area known as Downtown Disney have opened within the RCID. Furthermore, in 1992 the Disney Company created an additional town called Celebration and subsequently deannexed it from the RCID. Today, Disney World is the region's largest employer, with over 50,000 "cast members."

In addition to Disney World, the planning unit also contains the Universal Studios and Sea World theme parks/shopping complexes and the Orlando International Airport, which ranks 1st in Florida, 12th nationally, and 21st in the world for passenger traffic (*Orlando Business Journal*, 2006). Other land uses in the Upper Kissimmee Planning Unit include urban (in the north around Orlando), agriculture (citrus and cattle), and wetlands. **Table 3.5a** lists significant preserved natural areas in the planning unit, by county. Note that some of the natural areas fall within two or more counties.

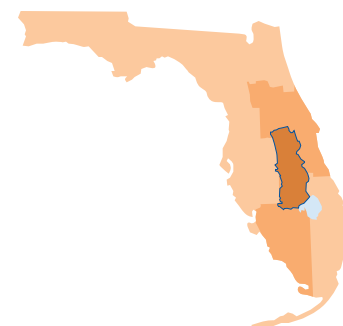
Water Quality Summary

The major water quality problems in the Upper Kissimmee Planning Unit are nutrients (expressed as either chlorophyll *a*, or Trophic State Index [TSI]), low DO, and mercury in fish. In addition, there were several detections of the heavy metals iron, lead, silver, and cadmium at various locations, and a concentration of pesticides in the Reedy Creek drainage area. Elevated nutrients, along with elevated heavy metals and pesticides, can be attributed to urban and/or agricultural land uses. Mercury contamination is thought to result from atmospheric deposition.

Figure 3.3, a composite map of the planning unit, shows waters on the 1998 303(d) list, the Planning List and Verified List, and potential pollution sources. **Table 3.5b** summarizes the water quality assessment status of all waterbody segments in the planning unit.

Permitted Discharges and Land Uses

Point Sources. The Upper Kissimmee Planning Unit has 179 permitted wastewater treatment facilities, of which 174 discharge to ground water and 5 discharge to surface waters. The planning unit also has 24 permitted landfills and 42 delineated ground water contamination areas (for ethylene dibromide [EDB]). **Figure 3.3** shows the permitted wastewater treatment facilities and landfills in the planning unit (see **Noteworthy** for a definition of point sources and a discussion of delineated ground water contamination areas). **Appendix E** lists the basins' domestic and industrial discharge



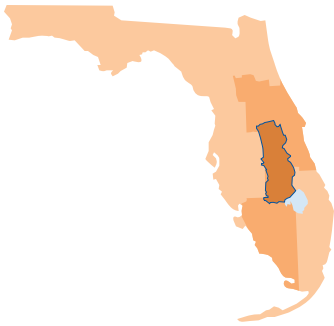


Table 3.5a: Preserved Natural Areas in the Upper Kissimmee Planning Unit, by County

County	Preserved Natural Area	Acres
Orange		
	Moss Park	1,551
	Shadow Bay Park	110
	Shingle Creek	1,134
	RCID Wildlife Management Conservation Area	3,731
	Split Oak Forest Wildlife and Environmental Area (part of the FWC's Mitigation Park Program)	1,689
	Tibet Butler Preserve	439
	Turkey Lake Park	178
Osceola		
	Disney Wilderness Preserve (in part)	11,512
	Holopaw State Forest	58
	Kenneth Okihara Sanctuary	2.5
	Kissimmee Chain of Lakes (in part)	27,374
	Lake Lizzie Nature Preserve	918
	Makinson Island (Cypress Island)	132
	Paradise Island	98
	RCID Wildlife Management Conservation Area	4,959
	River Lakes Conservation Area	34,429
	Shingle Creek Recreational Preserve	1,134
	Split Oak Forest Wildlife and Environmental Area (part of the FWC's Mitigation Park Program)	see above
	Triple N Ranch Wildlife Management Area	15,391
	Upper Lakes Basin Watershed	12,574
	Three Lakes Wildlife Management Area	61,845
Polk		
	Allen Davis Broussard Catfish Creek Preserve	4,218
	Disney Wilderness Preserve (in part)	see above
	Kissimmee Chain of Lakes (in part)	see above
	Lake Kissimmee State Park	5,934
	Lake Wales Ridge National Wildlife Refuge (in part)	1,839
	Upper Lake Marion Creek Watershed	297

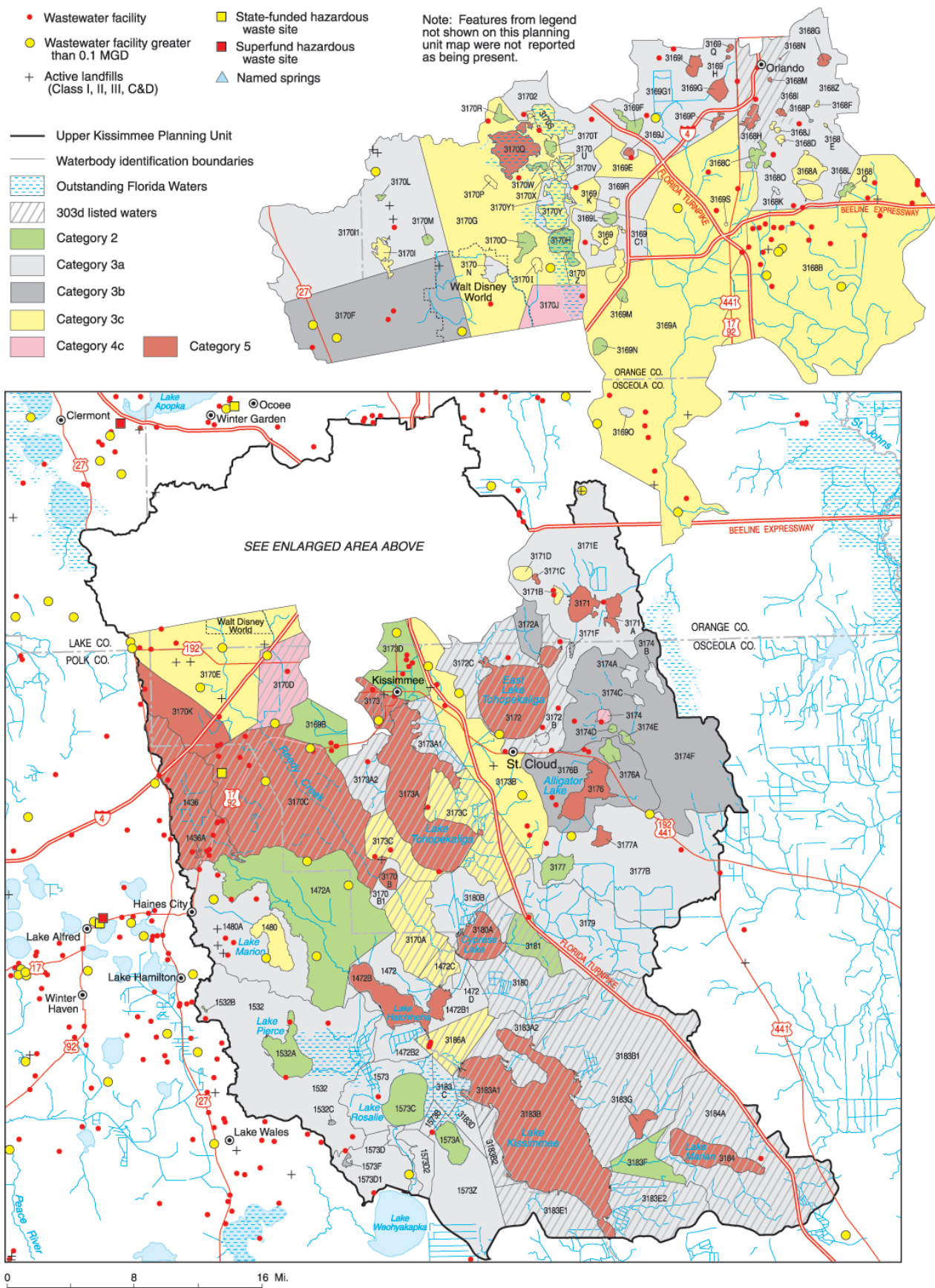


Figure 3.3: Composite Map of the Upper Kissimmee Planning Unit, Including the 1998 303(d) List, Planning List and Verified List Waters, and Potential Pollution Sources

Table 3.5b: Integrated Water Quality Assessment Summary for the Upper Kissimmee Planning Unit

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
1436	Horseshoe Creek	Stream	IIIF	DO, Coliform Bacteria, Nutrients		DO, Fecal Coliforms	Biology, Nutrients (Chlorophyll <i>a</i>), Turbidity	5
1472	Lake Hatchineha Drain	Stream	IIIF					3a
1480	Lake Marion	Lake	IIIF		Nutrients (TSI)		DO, Turbidity, Unionized Ammonia	3c
1532	Catfish Creek	Stream	IIIF					3a
1573	Lake Rosalie Outlet	Lake	IIIF					3a
3171	Lake Hart	Lake	IIIF			Mercury in Fish	DO, Fecal Coliforms, Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	5
3172	East Lake Tohopekaliga	Lake	IIIF	Mercury (Based on Fish Consumption Advisory)		Mercury in Fish	Arsenic, DO, Iron, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Unionized Ammonia	5
3173	City Ditch Canal	Stream	IIIF			DO		5
3174	Lake Center	Lake	IIIF	DO, Nutrients,	DO	Turbidity	Nutrients (Historic TSI), Nutrients (TSI), Unionized Ammonia	4c
3176	Alligator Lake	Lake	IIIF			Mercury in Fish	DO, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Unionized Ammonia	5
3177	Lake Gentry	Lake	IIIF				DO, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Unionized Ammonia	2
3179	S-36A	Stream	IIIF					3a
3180	Lake Cypress Outlet	Lake	IIIF					3a
3181	Canoe Creek	Stream	IIIF	Turbidity			Turbidity	2
3184	Lake Marian	Lake	IIIF	Nutrients		Nutrients (TSI)	DO, Turbidity, Unionized Ammonia	5

Table 3.5b (continued)

					Data Evaluation under the Impaired Surface Waters Rule Criteria ³			
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
31701	South Lake	Lake	IIIF				DO, Fecal Coliforms, Total Coliforms, Turbidity	2
31702	Leftover Reedy Creek	Stream	IIIF					3a
3183E1	Lake Kissimmee S Drain	Lake	IIIF					3a
3183E2	Lake Kissimmee S Drain	Lake	IIIF					3a
1436A	Lake Davenport–Open Water	Lake	IIIF			DO		5
1472A	Snell Creek	Stream	IIIF				DO, Turbidity	2
1472B	Lake Hatchineha	Lake	IIIF			Mercury in Fish	Arsenic, DO, Iron, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Unionized Ammonia	5
1472B1	Lake Hatchineha Drain	Lake	IIIF					3a
1472B2	Lake Hatchineha Drain	Lake	IIIF					3a
1472C	Dead River	Stream	IIIF	Nutrients, Turbidity	Nutrients (Chlorophyll a), Turbidity		Unionized Ammonia	3c
1472D	Hatchinea Canal	Stream	IIIF					3a
1480A	Lake Marion Outlet	Lake	IIIF					3a
1532A	Lake Pierce	Lake	IIIF				DO, Nutrients (TSI), Turbidity	2
1532B	Lake Marie	Lake	IIIF				DO, Turbidity	2
1532C	Cypress Lake	Lake	IIIF					3b
1573A	Tiger Lake	Lake	IIIF				DO, Turbidity	2
1573B	Tiger Creek	Stream	IIIF					3a
1573C	Lake Rosalie	Lake	IIIF				Biology, DO, Nutrients (TSI), Turbidity, Unionized Ammonia	2

Table 3.5b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
1573D	Weohyakapka Creek	Lake	IIIF					3a
1573D1	Weohyakapka Creek	Lake	IIIF					3a
1573D2	Weohyakapka Creek	Lake	IIIF					3a
1573F	Lake Aurora	Lake	IIIF					3b
1573Z	Tiger Lake Outlet	Lake	IIIF					3a
3168A	Lake Conway	Lake	IIIF		Copper		Arsenic, Cadmium, Chromium 3, DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3168B	Boggy Creek	Stream	IIIF		Copper, DO, Iron		Arsenic, Cadmium, Chromium 3, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc, Lead	3c
3168C	Lake Jessamine	Lake	IIIF				DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	2
3168D	Lake Gatlin	Lake	IIIF		Lead, Nutrients (TSI)		DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	3c
3168E	Lake Anderson	Lake	IIIF		Lead		DO, Fecal Coliforms, Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	3c

Table 3.5b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
3168F	Lake Bass	Lake	IIIF		Nutrients (TSI)		DO, Fecal Coliforms, Lead, Total Coliforms, Turbidity, Unionized Ammonia	3c
3168G	Lake Underhill	Lake	IIIF		Lead	Nutrients (TSI)	Copper, DO, Fecal Coliforms, Iron, Nutrients (Historic TSI), Total Coliforms, Turbidity, Unionized Ammonia	5
3168H	Lake Holden	Lake	IIIF	Nutrients, Unionized Ammonia	Lead	Nutrients (TSI)	DO, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia	5
3168I	Pineloch	Lake	IIIF			Nutrients (TSI)	DO, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia	5
3168J	Jennie Jewel Lake	Lake	IIIF		Nutrients (TSI)		DO, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3168K	Bay Lake	Lake	IIIF					3a
3168L	Lake Warren Outlet	Lake	IIIF					3a
3168M	Lake Copeland	Lake	IIIF			Nutrients (TSI)	DO, Fecal Coliforms, Nutrients (Historic TSI), Unionized Ammonia	5
3168N	Lake Olive	Lake	IIIF		Lead	Nutrients (TSI)	DO, Fecal Coliforms, Unionized Ammonia	5
3168O	Lake Mary Jess	Lake	IIIF				Nutrients (TSI)	2
3168P	Lake Margaret	Lake	IIIF					3b
3168Q	Lake Warren (Lake Mare Prairie)	Lake	IIIF				DO	2
3168Z	Lake Underhill Outlet	Lake	IIIF					3a

Table 3.5b (continued)

					Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assess- ment Category for WBID ⁴
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
3169A	Shingle Creek	Stream	IIIF	DO (BOD), Coliform Bacteria, Nutrients, Turbidity	Copper, DO, Iron		Arsenic, Biology, Fecal Coliforms, Lead, Nutrients (Chlorophyll a), Nutrients (Historical Chlorophyll), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3169B	Reedy Canal	Stream	IIIF				Biology	2
3169C	Big Sand Lake	Lake	IIIF		Copper, Lead		DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3169C1	Big Sand Lake Outlet	Lake	IIIF					3a
3169E	Lake Marsha	Lake	IIIF		Cadmium, Lead		DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	3c
3169F	Turkey Lake	Lake	IIIF				Arsenic, Cadmium, Chromium 3, Copper, DO, Fecal Coliforms, Iron, Lead, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	2
3169G	Clear Lake	Lake	IIIF			Nutrients (TSI)	DO, Fecal Coliforms, Nutrients (Historic TSI), Total Coliforms, Turbidity, Unionized Ammonia	5
3169G1	Clear Lake Outlet	Lake	IIIF					3a
3169H	Lake Lorna Doone	Lake	IIIF			Nutrients (TSI)	DO, Fecal Coliforms, Nutrients (Historic TSI), Total Coliforms, Turbidity, Unionized Ammonia	5

Table 3.5b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
3169I	Lake Mann	Lake	IIIF		Copper	Nutrients (TSI)	DO, Fecal Coliforms, Nutrients (Historic TSI), Total Coliforms, Turbidity, Unionized Ammonia	5
3169J	Cane Lake	Lake	IIIF		Copper	Nutrients (TSI)	Cadmium, DO, Fecal Coliforms, Lead, Total Coliforms, Turbidity, Unionized Ammonia	5
3169K	Spring Lake	Lake	IIIF		Lead		DO, Fecal Coliforms, Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	3C
3169L	Little Sand Lake	Lake	IIIF				DO, Fecal Coliforms, Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	2
3169M	Willis Lake	Lake	IIIF				Nutrients (TSI), Nutrients (Historic TSI)	2
3169N	Bryon Lake	Lake	IIIF				Fecal Coliforms, Total Coliforms	2
3169O	Lake Cecile	Lake	IIIF					3a
3169P	Lake Catherine	Lake	IIIF		Lead	DO, Nutrients (TSI)	Alkalinity, Arsenic, Cadmium, Chromium 3, Conductance, Copper, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia, Zinc	5
3169Q	Rock Lake	Lake	IIIF		Lead	Nutrients (TSI)	Conductance, DO, Fecal Coliforms, Nutrients (Historic TSI), Unionized Ammonia	5
3169R	Big Sand Lake Basin	Lake	IIIF					3a
3169S	Christie Lake	Lake	IIIF		Nutrients (TSI)		DO, Lead, Turbidity, Unionized Ammonia	3c

Table 3.5b (continued)

Data Evaluation under the Impaired Surface Waters Rule Criteria ³								EPA's 305(b)/303(d) Integrated Report Assess- ment Category for WBID ⁴
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
3170A	Reedy Creek	Stream	IIIF	Nutrients, Turbidity	Nutrients (Chlorophyll a), Turbidity		Unionized Ammonia	3c
3170B	Lake Russell	Lake	IIIF			Mercury in Fish	Nutrients (TSI), Turbidity	5
3170B1	Reedy Ck Drain	Stream	IIIF					3a
3170C	Reedy Ck Above Lake Russell	Stream	IIIF	DO, Coliform Bacteria, Nutrients, Turbidity	Beta BHC, Chlordane, Chlorine, DDT, Diel- drin, Endrin, Guthion, Heptachlor, Silver	DO	Aldrin, Aluminum, Antimony, Arsenic, Barium, Beryl- lium, Cadmium, Carbon Tetrachlo- ride, Chromium 3, Copper, Endosulfan, Fecal Coliforms, Iron, Lead, Lindane, Methoxychlor, Nickel, Nutrients (Chlorophyll a), Oil/Grease, Sele- nium, Thallium, Total Coliforms, Trichlor- ethylene, Turbidity, Unionized Ammonia, Zinc	5
3170D	Bonnet Creek	Stream	IIIF	Nutrients, Turbidity	Beta BHC, Chlordane, Chlorine, DDT, Diel- drin, Endrin, Guthion, Heptachlor, Silver, Toxaphene	DO, Total Coliforms	Aldrin, Aluminum, Antimony, Arsenic, Beryllium, Cadmium, Carbon Tetrachlo- ride, Chromium 3, Copper, Endosulfan, Fecal Coliforms, Iron, Lead, Lindane, Methoxychlor, Nickel, Nutrients (Chlorophyll a), Selenium, Thallium, Turbidity, Unionized Ammonia, Zinc	4c

Table 3.5b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
3170E	RCID W.	Stream	IIIF		Beta BHC, Chlordane, Chlorine, Dieldrin, DO, Endrin, Guthion, Heptachlor, Mercury, Silver, Toxaphene		1122Tetrachloroethane, 246Tri-chlorophenol, 24Dichlorophenol, 24Dinitrophenol, 24Dinitrotoluene, Acenaphthene, Aldrin, Aluminum, Anthracene, Antimony, Arsenic, Barium, Benzene, Beryllium, Biology, Bromoform, Cadmium, Carbon Tetrachloride, Chlorodibromomethane, Chlorophenol, Chromium 3, Copper, Endosulfan, Fecal Coliforms, Fluoranthene, Fluorene, Hexachlorobutadiene, Iron, Lead, Lindane, Methoxychlor, Methyl Chloride, Methylene Chloride, Nickel, Nutrients (Chlorophyll a), Oil/Grease, Pentachlorophenol, Phenol, Pyrene, Selenium, Tetrachloroethylene, Thallium, Total Coliforms, Trichloroethylene, Turbidity, Unionized Ammonia, Zinc	3c
3170F	Reedy Creek W. Headwater	Blackwater	IIIF					3b
3170G	Lake Speer	Stream	IIIF		Beryllium		Aluminum, Arsenic, Chromium 3, Iron, Nickel, Selenium, Zinc	3c

Table 3.5b (continued)

					Data Evaluation under the Impaired Surface Waters Rule Criteria ³			
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
3170H	Lake Sheen	Lake	IIIF				Copper, DO, Fecal Coliforms, Lead, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	2
3170I	Lake Hickorynut	Lake	IIIF		Copper, Nutrients (Historic TSI)		DO, Fecal Coliforms, Lead, Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	3c
3170I1	Lake Hickorynut Drain	Lake	IIIF					3a
3170J	Cypress Creek	Black-water	IIIF		Beryllium	DO	Aluminum, Arsenic, Cadmium, Chromium 3, Copper, Fecal Coliforms, Iron, Lead, Nickel, Nutrients (Chlorophyll <i>a</i>), Nutrients (Historical Chlorophyll), Selenium, Total Coliforms, Turbidity, Unionized Ammonia, Zinc	4c

Table 3.5b (continued)

				Data Evaluation under the Impaired Surface Waters Rule Criteria ³				
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
3170K	Davenport Creek	Stream	IIIF		Beta BHC, Chlorine, DDT, Dieldrin, Endrin, Guthion, Heptachlor, Silver, Total Coliforms, Toxaphene	DO, Fecal Coliforms	1122Tetrachloroethane, 246Trichlorophenol, 24Dichlorophenol, 24Dinitrophenol, 24Dinitrotoluene, Acenaphthene, Aldrin, Aluminum, Anthracene, Antimony, Arsenic, Barium, Benzene, Beryllium, Biology, Bromoform, Cadmium, Carbon Tetrachloride, Chlorodibromomethane, Chlorophenol, Chromium 3, Endosulfan, Fluoranthene, Fluorene, Hexachlorobutadiene, Iron, Lead, Lindane, Methoxychlor, Methyl Chloride, Methylene Chloride, Nickel, Nutrients (Chlorophyll a), Oil/Grease, Pentachlorophenol, Phenol, Pyrene, Selenium, Tetrachloroethylene, Thallium, Total Coliforms, Trichlorethylene, Turbidity, Unionized Ammonia, Zinc	5
3170L	Lake Ingram	Lake	IIIF				DO, Turbidity, Unionized Ammonia	2
3170M	Huckleberry Lake	Lake	IIIF				DO, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia,	2
3170N	Bay Lake	Lake	IIIF					3a
3170O	Lake Mabel	Lake	IIIF				DO, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia	2

Table 3.5b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
3170P	Sawyer Lake	Lake	IIIF		Nutrients (TSI)		DO, Fecal Coliforms, Nutrients (Historic TSI), Total Coliforms, Turbidity, Unionized Ammonia	3c
3170Q	Lake Butler	Lake	IIIF		Copper, Lead	Nutrients (Historic TSI) Mercury in Fish	Arsenic, Cadmium, Chromium 3, DO, Fecal Coliforms, Nickel, Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	5
3170R	Crescent Lake	Lake	IIIF				DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	2
3170S	Down Lake	Lake	IIIF		Lead		Copper, DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3170T	Lake Bessie	Lake	IIIF				DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	2
3170U	Lake Blanche	Lake	IIIF		Lead		DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	3c
3170V	Lake Chase	Lake	IIIF		Copper, Lead		DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c

Table 3.5b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
3170W	Lake Louise	Lake	IIIF				Copper, DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	2
3170X	Lake Isleworth	Lake	IIIF		Copper, Lead		DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3170Y	Lake Tibet Butler	Lake	IIIF		Lead		DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	3c
3170Y1	Lake Tibet Butler Outlet	Lake	IIIF					3a
3170Z	Pocket Lake	Lake	IIIF		Copper, Lead		Arsenic, Chromium III, DO, Fecal Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3171A	Lake Mary Jane	Lake	IIIF			Lead, Mercury in Fish	DO, Fecal Coliforms, Total Coliforms, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Unionized Ammonia	5
3171B	Lake Whipporwill	Lake	IIIF		Lead		DO, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia	3c

Table 3.5b (continued)

					Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assess- ment Category for WBID ⁴
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	
3171C	Red Lake	Lake	IIIF			Copper	Cadmium, DO, Fecal Coliforms, Lead, Nutrients (Historic TSI), Nutrients (TSI), Total Coliforms, Turbidity, Unionized Ammonia	5
3171D	Lake Nona	Lake	IIIF		Copper, Nickel		Cadmium, DO, Fecal Coliforms, Lead, Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3171E	Hart Branch	Stream	IIIF					3a
3171F	Ajay Lake	Lake	IIIF					3b
3172A	Jim Branch	Lake	IIIF					3b
3172B	Lake Runnymede	Lake	IIIF					3a
3172C	E. Lake Tohopekaliga Drain	Lake	IIIF					3a
3173A	Lake Tohopekaliga	Lake	IIIF	Mercury in Fish, Nutrients, Unionized Ammonia		Mercury in Fish	Arsenic, DO, Iron, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Unionized Ammonia	5
3173A1	Partin Canal	Stream	IIIF					3a
3173A2	Lake Tohopekaliga Drain	Lake	IIIF					3a
3173B	St. Cloud Canal	Stream	IIIF		Iron		Arsenic, DO, Turbidity, Unionized Ammonia	3c
3173C	Lake Tohopekaliga Drain South	Stream	IIIF		Mercury in Fish, Nutri- ents (Chlo- rophyll a), Nutrients (Historical Chlorophyll)		Arsenic, DO, Iron, Turbidity, Unionized Ammonia	3c
3173D	Mill Slough	Stream	IIIF				Turbidity, Unionized Ammonia	2
3174A	Lake Myrtle	Lake	IIIF					3a
3174B	Lake Preston	Lake	IIIF					3a

Table 3.5b (continued)

					Data Evaluation under the Impaired Surface Waters Rule Criteria ³			
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
3174C	Lake Joel	Lake	IIIF					3a
3174D	Coon Lake	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
3174E	Trout Lake	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
3174F	Lake Center Outlet	Stream	IIIF					3b
3176A	Lake Lizzie	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
3176B	Alligator Lake Inlet	Stream	IIIF					3b
3176C	Alligator Lake Outlet	Stream	IIIF					3b
3177A	Brick Lake	Lake	IIIF			Mercury in Fish	Nutrients (Historic TSI), Nutrients (TSI)	5
3177B	Lake Gentry Outlet	Lake	IIIF					3a
3180A	Lake Cypress	Lake	IIIF	Mercury in Fish, Nutrients		Mercury in Fish, Nutrients (TSI)	Arsenic, DO, Iron, Turbidity, Unionized Ammonia	5
3180B	South Port Canal	Stream	IIIF					3a
3183A1	Lake Kissimmee N Drain	Stream	IIIF					3a
3183A2	Lake Kissimmee N Drain	Stream	IIIF					3a
3183B	Lake Kissimmee (Mid)	Lake	IIIF	Mercury in Fish		Mercury in Fish, Nutrients (TSI)	Arsenic, Cadmium, Copper, DO, Fecal Coliforms, Fluoride, Iron, Lead, Nutrients (Historic TSI), Total Coliforms, Turbidity, Unionized Ammonia, Zinc	5
3183B1	Lake Kissimmee Mid Drain	Lake	IIIF					3a
3183B2	Lake Kissimmee Mid Drain	Lake	IIIF					3a
3183C	Rosalie Canal	Stream	IIIF					3a

Data Evaluation under the Impaired Surface Waters Rule Criteria³

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired Cat. 2) for Listed Parameters	EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
3183D	Tiger Creek	Stream	IIIF					3a
3183F	Jackson Canal	Stream	IIIF				Turbidity	2
3183G	Lake Jackson Ocala Co	Lake	IIIF			DO, Nutrients (TSI)	Nutrients (Historic TSI), Turbidity, Unionized Ammonia	5
3184A	Lake Marian Outlet	Lake	IIIF					3a
3186A	Kissimmee River	Stream	IIIF	BOD, DO, Nutrients	Nutrients (Chlorophyll a)		BOD, DO, Turbidity, Unionized Ammonia	3c

Notes:

¹The designation "stream" includes canals, rivers, and sloughs. The designation "lake" includes some marshes.

²The state's surface water classifications are as follows:

Class I: Potable water supplies

Class II: Shellfish propagation or harvesting

Class III: Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife

Class IV: Agricultural water supplies

Class V: Navigation, utility, and industrial use (there are no state waters currently in this class)

³The EPA's 305(b)/303(d) Integrated Report categories are as follows:

1—Attains all designated uses;

2—Attains some designated uses;

3a—No data and information are available to determine if any designated use is attained;

3b—Some data and information are available, but they are insufficient for determining if any designated use is attained;

3c—Meets Planning List criteria and is potentially impaired for one or more designated uses;

3d—Meets Verified List criteria and is potentially impaired for one or more designated uses;

4a—Impaired for one or more designated uses and the TMDL is complete;

4b—Impaired for one or more designated uses, but no TMDL is required because an existing or proposed pollutant control mechanism provides reasonable assurance that the water will attain standards in the future;

4c—Impaired for one or more designated uses but no TMDL is required because the impairment is not caused by a pollutant; and

5—Water quality standards are not attained and a TMDL is required.

⁴The assessment categories listed in this column represent the status of each WBID as a whole, **based on multiple parameters**. The hierarchy for assigning these categories is Category 5, then 4, then 3c, then 2, and then 3b, i.e., each WBID is assigned a category based on the highest category assigned to an individual parameter. For example, if WBID 9999 has total coliforms as Category 5, fecal coliforms as Category 3c, and coliforms-shellfish as Category 2, the single assessment call for the WBID is Category 5.

BHC = Benzene hexachloride

BOD = Biological oxygen demand

DDT = Dichlorodiphenyltrichloroethane

DO = Dissolved oxygen

F = Fresh water

TSI = Trophic State Index

facilities, along with their permitted flows, by planning unit. It also lists the landfills or solid waste facilities and delineated ground water contamination areas, by planning unit.

Nonpoint Sources. The city of Orlando and Orange, Polk, and Osceola Counties currently have regulated municipal separate storm sewer systems (MS4s) operating in the planning unit. Based on Level I land use summary information, the predominant land uses in the Upper Kissimmee Planning Unit are agriculture (28.5 percent) and wetlands (23.8 percent). Other significant land uses include upland forest (9.5 percent), urban and built-up (15.0 percent), and open water (13.7 percent). Of these land uses, the categories most likely associated with nonpoint discharges of pollutants and eroded sediments are agriculture and urban and built-up, which together cover more than 43.5 percent of the planning unit (see **Noteworthy** for a definition of nonpoint sources). **Table 3.5c** shows the land use percentages in the Upper Kissimmee Planning Unit in a broad (Level I) GIS analysis, as identified by the SFWMD in 1999.

Table 3.5c: Level I Land Use in the Upper Kissimmee Planning Unit

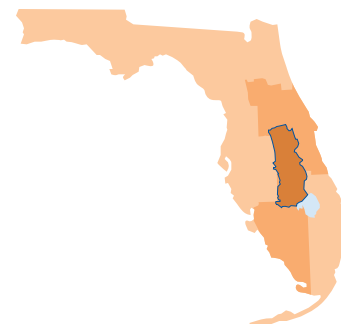
Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	15.0
2000	Agriculture ¹ (includes improved pasture)	28.5
3000	Rangeland	7.1
4000	Upland Forest	9.5
5000	Water (includes open bay)	13.7
6000	Wetlands	23.8
7000	Barren Land	0.3
8000	Transportation, Communications, and Utilities	2.1
Total		100

¹RCID indicates that much of their landholdings depicted as agricultural by SFWMD's GIS coverage is actually planted pine with minimal management activities.

Ecological Summary

The Upper Kissimmee Planning Unit is composed of the following lake regions, which have differing geology, ecology, and ambient water quality (Griffith et al., 1997):

- **Orlando Ridge** is an urbanized karst area of low relief, with elevations from 75 to 120 feet. Longleaf pine and xerophytic oaks were the dominant trees of the natural vegetation. Miocene-age coarse quartz sands and pebbles imbedded in kaolinitic clay form the ridge. Phosphatic sand and clayey sand are at a shallow depth. Lakes in this region can be characterized as clear, alkaline, hardwater lakes of moderate mineral content. They are mesotrophic to eutrophic, with phosphorus levels generally between 20–50 mg/L, but it is



Information on Point Sources in Planning Units

Point sources discharging pollutants to surface water or ground water originate from discrete, well-defined areas such as a facility discharge from the end of a pipe, a disposal well, or a wastewater sprayfield. Point sources generally fall into two major types: domestic wastewater sources (which consist of sewage from homes, businesses, and

institutions) and industrial wastewater sources (which include wastewater, runoff, and leachate from industrial or commercial storage, handling, or processing facilities). Landfills, hazardous waste sites, dry cleaning solvent cleanup program sites, and petroleum facility discharges are also considered point sources. These sites have the potential to leach

contaminants into ground water and surface water.

Identifying the source of water-body impairment is an important part of assessing water quality and developing TMDLs. As part of this report, information is presented on point sources, including permitted facilities that discharge wastewater and landfills.

Delineated Ground Water Contamination Areas

The Department's Delineation Program was established in response to the discovery of ground water contaminated by EDB, a soil fumigant that was historically used in 38 Florida counties to control nematodes in citrus groves and row crops. The program currently includes ground water contaminated by other pesticides, industrial solvents, and nutrients. However, the coverage of delineated areas in this program is not intended to include all sources of contaminated ground water in

Florida. The Delineation Program is designed to ensure the protection of public health when consuming potable ground water supplies and to minimize the potential for cross-contamination of adjacent ground water resources.

The Delineation Program's primary responsibilities are as follows:

- Delineate areas of ground water contamination,
- Implement a water well construction permitting/application process that requires

stringent construction standards, and

- Require water testing after completion of the well to ensure the potable quality of the water source.

Any newly constructed water wells in delineated areas, and existing water wells found to be contaminated, are remediated by installing individual water treatment systems or by connecting the users to public water supply systems.

Nonpoint Sources and Land Uses

Rainfall generates stormwater runoff. As it flows over the land and through the ground, runoff may carry nonpoint source pollutants from many different sources

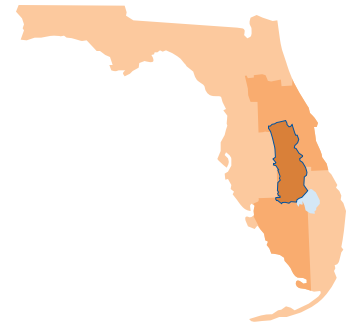
to lakes, rivers, and estuaries in a watershed, and into ground water supplies. Nonpoint sources also include atmospheric deposition and leaching from agricultural

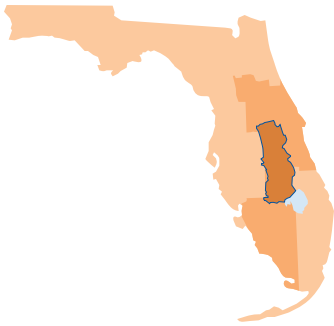
lands, urban areas, and unvegetated lands. The pollutants in runoff often include fertilizers, bacteria, metals, sediments, and petroleum compounds.

difficult to distinguish between effects of urbanization and natural phosphorus levels here.

- **Doctor Phillips Ridge** is a small ridge of thick sands with elevations of 100 to 170 feet and contains over 30 solution depression lakes. The lakes in this region are generally clear, circum-neutral, and low in nutrients. As a group, these are some of the clearest lakes in central Florida. The clearest lakes tend to be deeper than the others in the region, and the slightly darker lakes, such as Lake Sheen, are lower in elevation or have wetter, lowland-type soils near the lake. Lake Floy is darker with unusually high nutrients, but is heavily impacted by road and stormwater drainage.
- **Osceola Slope** is composed of Pleistocene lagoonal deposits with a top layer of medium to fine sands and silts. Elevations are generally 60–90 feet, with Smyrna, Myakka, and Tavares soils on the better-rained low ridges and knolls, and Basinger and Samsula soils in the wet and swampy areas adjacent to parts of some lakes. Vegetation is primarily pine flatwoods, but some low, dry ridges have turkey oak and sand scrub. Osceola Slope lakes are acidic, relatively low nutrient, colored lakes. The lakes have lower color, pH, alkalinity, conductivity, and nutrient values than lakes in the **Kissimmee/Okeechobee Lowland**.
- **Northern Lake Wales Ridge** lake region extends from the Clermont Uplands in Lake County to the Livingston Creek drainage in Highlands County. The narrow ridge, 100 to 300 feet in elevation, forms the topographic crest of central Florida. The well-drained sandy soils are covered by citrus groves, pasture, and urban and residential development. The lakes are mostly alkaline, low-to-moderate nutrient, clear water lakes. Nitrogen values tend to be high.
- **Lake Wales Ridge Transition** includes the ridge margin or transition lakes that are darker colored with higher nutrients than the lakes found on the Southern Lake Wales Ridge. Elevations are 70 to 130 feet, with extensive areas of poorly drained soils. Peaty muck soils border many of the lakes. The lake region also includes the narrow Bombing Range Ridge on the east, and a small area of upland soils near Lake Buffum on the west. Most of the lakes are acidic, although about one-third of them tend to be alkaline. They have low to moderate nutrients, and are slightly to moderately colored.

The Upper Kissimmee Planning Unit is dotted with hundreds of lakes, ranging in size from small sinkholes and ponds to large lakes. The surface water drainage pattern begins with a series of interconnected lakes in the northern portion called the Kissimmee Chain of Lakes. Alligator Lake forms the drainage divide of the chain of lakes, and water can be released either to the north or to the south. Northward flow goes through several canals and smaller lakes to Lake Mary Jane; the flow proceeds through Lake Hart, East Lake Tohopekaliga, and Lake Tohopekaliga, and then finally to Lake Cypress. Southward flow takes a shorter route through





Lake Gentry and then to Lake Cypress. From Lake Cypress, water flows southward to Lake Hatchineha and then to Lake Kissimmee. Most of these lakes are shallow, with mean depths varying from 6 to 13 feet (SFWMD, 2000).

The upper Kissimmee watershed was part of the original Central and Southern Florida (C&SF) Flood Control Project and currently is the subject of much scrutiny because of in-lake water quality and downstream environmental issues. Heavy infestations of the aquatic weed hydrilla and the formation of tussock islands (floating accumulations of plant material) have severely degraded habitat and water quality in the Kissimmee Chain of Lakes. Because the waters of these lakes eventually reach Lake Okeechobee, nutrient loadings from Lake Kissimmee to Okeechobee are of concern. In fact, the Lake Okeechobee Action Plan has identified Lake Kissimmee as a source of phosphorus loading to Lake Okeechobee that needs to be addressed.

Butler Chain of Lakes. The Butler Chain is a series of 12 sinkhole lakes located in southwest Orange County that have been designated as Outstanding Florida Waters. Located on the southwest shore of Lake Tibet Butler is the Tibet Butler Preserve, a 439-acre environmental education facility managed by Orange County. The mosaic of landscapes found within the preserve includes bay and cypress swamps, pine flatwoods, xeric oak scrub, and freshwater marsh. Wildlife sighted on the preserve include pileated woodpeckers, various herons and egrets, gopher tortoises, indigo snakes, red-tailed hawks, and bald eagles. The preserve is the only significant parcel of land within the Butler Chain under public ownership.

Reedy Creek. Reedy Creek, a 25-mile-long blackwater stream, originates in the vicinity of Reedy Lake immediately west of Disney World and meanders southward, terminating in Lake Hatchineha.

The northern reaches of Reedy Creek are channelized and located in or near the RCID (Disney World) property. The RCID watershed includes 67 miles of canals and conveyances constructed for flood control. This system, which includes 55 control structures, was designed to handle the 50-year/3-day storm event and eventually empties into Reedy Creek. The natural (unchannelized segment) of Reedy Creek begins east of Disney's Animal Kingdom and flows southward to the terminus of the RCID property where it adjoins Bonnet Creek. The unchannelized creek is surrounded by floodplain swamp forest. Some of the notable plant species of these forests include bald cypress, red maple, and strangler fig. Furthermore, a diversity of natural habitats occurs including dry prairie, mesic flatwoods, and scrub throughout the system.

The southern portion, known as the Lower Reedy Creek Management Area (LRCMA), extends from Lake Russell to Lake Hatchineha. The SFWMD manages about 5,600 of the 9,000 acres in the LRCMA under the Save Our Rivers (SOR) Program. The Nature Conservancy manages another sizable area.

Endangered wildlife noted within the LRCMA includes the wood stork, snail kite, bald eagle, Everglades kite, and red-cockaded woodpecker. Land management activities include prescribed burning, exotic vegetation eradication and control, and natural community restoration.

Shingle Creek. Shingle Creek, along with Boggy Creek and Mill Slough, are the 3 primary systems forming the headwaters of the Upper Kissimmee Chain of Lakes. Shingle Creek originates in southern Orange County and flows southward for 23 miles, ultimately emptying into Lake Tohopekaliga. While the creek itself is almost completely channelized in Orange County, the 9-mile stretch through Osceola County remains largely in its natural state.

The Shingle Creek floodplain swamp, through which the creek flows, is a largely isolated system comprising about 7,655 acres. Of that acreage, the SFWMD owns and manages 1,650 acres under its SOR land stewardship program. Most of the SFWMD acreage was acquired through wetland mitigation resulting from the construction of the Central Florida Beltway (State Road [S.R.] 417). The swamp itself is a stormwater-driven system, as it receives runoff from the Valencia Water Control District via a series of canals.

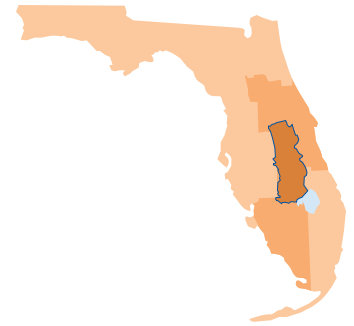
The natural communities of the Shingle Creek swamp are dominated by cypress, loblolly, bay, and red maple, with a scattering of wet pine flat-wood islands. Nuisance exotics include primrose willow, Brazilian pepper, water hyacinth, paragrass, and Bermuda grass. Some of the endangered species documented in the watershed by the SFWMD include the snail kite, bald eagle, wood stork, and grasshopper sparrow.

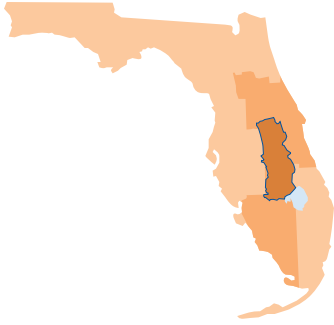
Water Quality Improvement Plans and Projects

Kissimmee Chain of Lakes Long-Term Management Plan. This plan will create a coordinated, multidisciplinary framework (sponsored by the SFWMD) for addressing and resolving the following water management issues:

1. Hydrologic management—Manage water levels in the Kissimmee Chain of Lakes for flood protection, aquatic habitat enhancement, recreational use (navigation), water supply, aquatic weed control, and the protection of downstream water resources.
2. Habitat preservation and enhancement—Manage the Kissimmee Chain of Lakes and adjacent state lands to preserve and enhance habitat, maintain or restore fish and wildlife resources, maintain healthy sportfish populations, and protect threatened and endangered wildlife species.
3. Aquatic plant management—Control aquatic plants in the Kissimmee Chain of Lakes to maintain navigation, reduce risk of damage to in-lake structures, and improve aquatic habitat and ecological integrity.
4. Water quality improvement—Achieve state water quality standards.
5. Recreation and public use—Manage public lakes and state lands for multiple recreational purposes and maintain healthy fish and wildlife communities.

Additionally, the performance measures used as part of the Kissimmee Chain of Lakes Long-Term Management Plan can be used by the U.S.





Army Corps of Engineers (USACOE) in evaluating the regulation schedule alternatives and preparing an Environmental Impact Statement.

Lake Tohopekaliga Extreme Drawdown. Sponsored by the FWC and SFWMD and initiated in 2003, the objective of the lake drawdown is to expose sediments and remove invasive plants (e.g., tussocks) and organic “muck” buildup in order to restore a more native substrate. The muck removal will increase DO levels, decrease suspended nutrients, provide spawning habitat for fish, and allow the establishment of native aquatic plants.

Lake Okeechobee Protection Act. The 2000 Lake Okeechobee Protection Act establishes a restoration and protection program for Lake Okeechobee. The integrated management strategy to restore the lake is based on implementing phosphorus source control programs, including best management practices (BMPs), phosphorus control and flow attenuation projects, and in-lake remediation activities. Elements include the following:

- **Owner-implemented BMPs**—These practices, described in the various BMP manuals adopted by the Florida Department of Agriculture and Consumer Services (DACS) (Rule 5M-3), were selected to represent affordable, cost-effective practices that are not eligible for cost-sharing. Suites of owner-implemented BMPs are land-use specific. For example, cow/calf land uses may reduce phosphorus fertilization, improve grazing management, or result in better management of nitrogen and micronutrients. Additionally, the owner-implemented BMPs for urban areas include reductions in phosphorus fertilization and lawn maintenance activities.
- **Typical cost-sharing BMPs that require future funding**—BMPs for each agricultural landowner (for nontribal lands) will be identified through an assessment described in the BMP manuals prepared by DACS, nutrient management plans, or conservation plans through the U.S. Department of Agriculture–Natural Resources Conservation Service (USDA–NRCS). Examples include internal fencing to keep cows out of wetlands and streams, on-site retention facilities, and/or stormwater management systems. Because the implementation of these BMPs is beyond the financial capabilities of the average landowner, additional funding through cost-sharing is required for implementation. Bottcher and Harper (2003) describe the typical suite of agricultural BMPs for each land use and provide phosphorus load reductions and costs per acre. The urban BMPs (retrofits) include creating retention/detention areas to address phosphorus loading from subdivisions.

- **Lower Kissimmee Planning Unit**

General Description

The 722-square-mile Lower Kissimmee Planning Unit encompasses portions of Polk, Osceola, Highlands, and Okeechobee Counties. Significant waterbodies include the Kissimmee River (the C-38 Canal) and

its tributary watersheds between the outlet of Lake Kissimmee and Lake Okeechobee. The planning unit also receives flow from the Istokpoga Planning Unit via the Istokpoga Canal and the C-41A Canal.

There are no significant named communities in the planning unit to speak of, as the area is entirely rural in nature. However, about half of the 106,110-acre Avon Park Air Force Range (an active military bombing test range) is located in the northern portion of the planning unit, along the Polk–Highlands County line. Land uses are dominated by cattle grazing, wetlands, forestry, military, and a smattering of citrus groves in higher spots.

Table 3.6a lists significant preserved natural areas in the Lower Kissimmee Planning Unit, by county. Note that some of the natural areas fall within two or more counties.

Table 3.6a: Significant Preserved Natural Areas in the Lower Kissimmee Planning Unit, by County

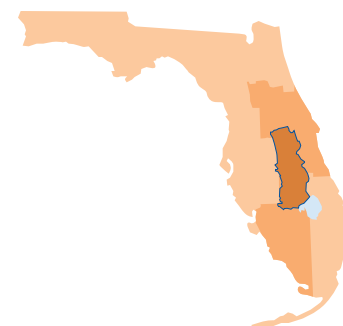
County	Preserved Natural Area	Acres
Polk		
	Avon Park Air Force Range (in part)	106,110
	Kissimmee River (in part)	52,020
Osceola		
	Kissimmee River (in part)	see above
Highlands		
	Avon Park Air Force Range (in part)	see above
	Kissimmee River (in part)	see above
Okeechobee		
	Kissimmee River (in part)	see above
	Kissimmee Prairie Preserve State Park	54,096
	Paradise Run	3,128

Water Quality Summary

The major water quality problems in the Lower Kissimmee Planning Unit are low DO and elevated nutrients (expressed as chlorophyll *a*), which may be attributable to agricultural nutrient loading. Low DO may also be in part attributable to natural conditions in the area (swamp drainage).

It is important to note that several segments of the channelized Kissimmee River (the C-38 Canal) have either been recently backfilled, or are scheduled to be backfilled in the future, as part of the Kissimmee River Restoration Project (Baez-Smith, SFWMD, pers. comm., April 2004). The already-restored portion of the river in WBID 3192A is expected to have better water quality than what is currently indicated in this report.

Figure 3.4, a composite map of the planning unit, shows waters on the 1998 303(d) list, the Planning List and Verified List, and potential pollution sources. **Table 3.6b** summarizes the water quality assessment status of all waterbody segments in the planning unit.



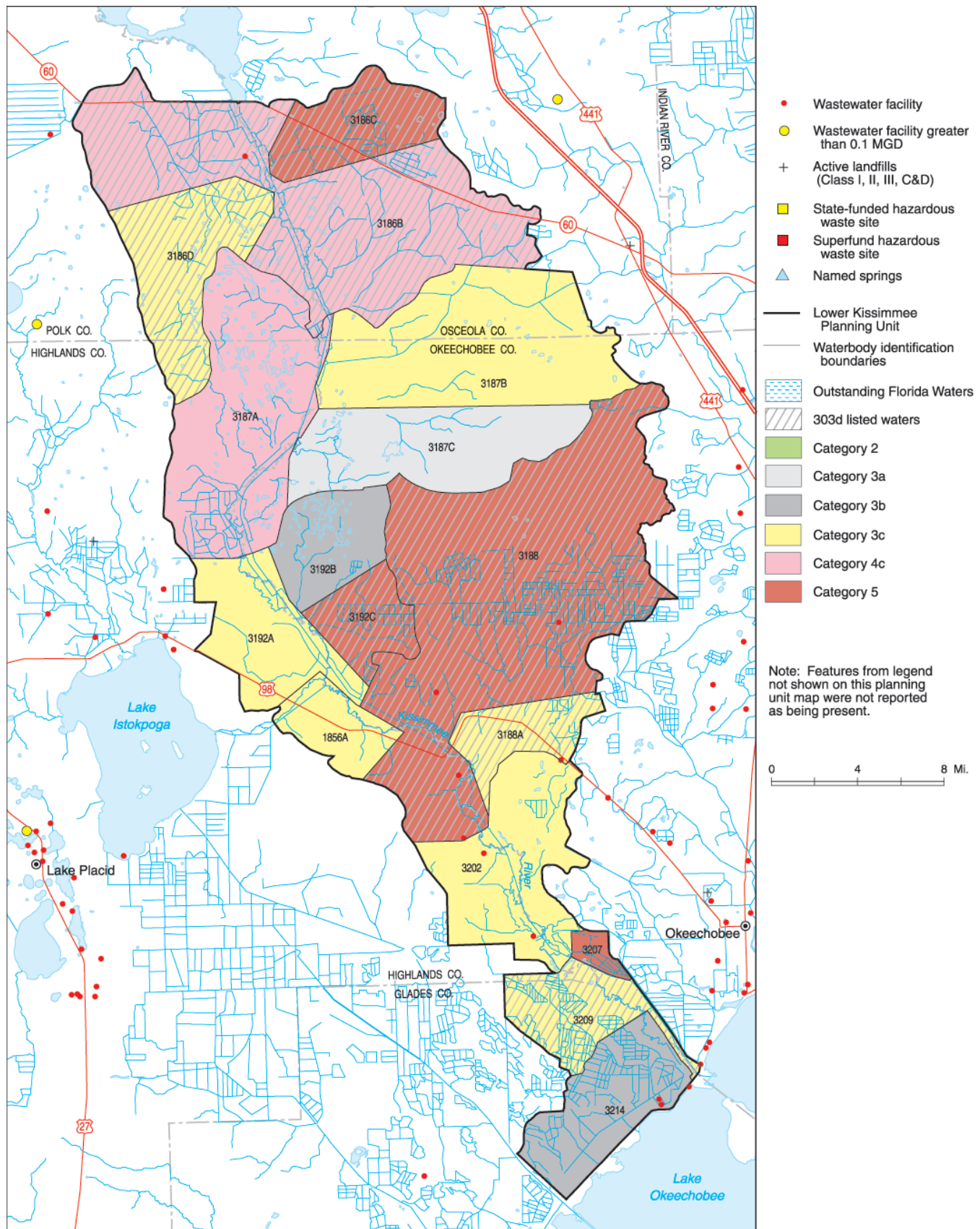


Figure 3.4: Composite Map of the Lower Kissimmee Planning Unit, Including the 1998 303(d) List, Planning List and Verified List Waters, and Potential Pollution Sources

Table 3.6b: Integrated Water Quality Assessment Summary for the Lower Kissimmee Planning Unit

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
3188	Farm Area	Stream	IIIF	DO, Nutrients		DO	Nutrients (Chlorophyll <i>a</i>), Unionized Ammonia	5
3202	Kissimmee River	Stream	IIIF		Beryllium, DO		Antimony, Arsenic, Cadmium, Chromium 3, Copper, Fecal Coliforms, Fluoride, Iron, Lead, Nickel, Nutrients (Chlorophyll <i>a</i>), Nutrients (Historical Chlorophyll), Selenium, Silver, Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
3207	S-154C	Stream	IIIF			DO	Arsenic, Cadmium, Copper, Iron, Lead, Turbidity, Unionized Ammonia, Zinc	5
3209	Kissimmee River	Stream	IIIF	DO, Nutrients	DO		Aldrin, Arsenic, Beta BHC, Cadmium, Chlordane, Copper, Demeton, Dieldrin, Endosulfan, Endrin, Guthion, Heptachlor, Iron, Lead, Lindane, Malathion, Methoxychlor, Mirex, Nutrients (Chlorophyll <i>a</i>), Nutrients (Historical Chlorophyll), Toxaphene, Turbidity, Unionized Ammonia, Zinc	3c
3214	L-48	Stream	IIIF					3b
1856A	Istokpoga Canal	Stream	IIIF		DO, Iron		Arsenic, Nutrients (Chlorophyll <i>a</i>), Nutrients (Historical Chlorophyll), Turbidity, Unionized Ammonia	3c

Table 3.6b (continued)

					Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assess- ment Category for WBID ⁴
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
3186B	Kissimmee River	Stream	IIIF	DO (BOD)		DO	Arsenic, Cadmium, Copper, Iron, Lead, Nutrients (Chloro- phyll a), Nutrients (Historical Chloro- phyll), Turbidity, Unionized Ammonia, Zinc	4c
3186C	Blanket Bay Slough	Stream	IIIF	DO, Nutrients		DO, Nutrients (Chlorophyll a)	Turbidity	5
3186D	Eightmile Slough	Stream	IIIF	DO	DO		Nutrients (Chloro- phyll a), Turbidity	3c
3187A	Kissimmee River	Stream	IIIF		DO	Fecal Coli- forms, Total Coliforms	Nutrients (Chloro- phyll a), Turbidity, Unionized Ammonia	4c
3187B	Pine Island Slough	Stream	IIIF		DO		Turbidity	3c
3187C	Duck Slough	Stream	IIIF					3a
3188A	Chandler Slough	Stream	IIIF	DO, Nutrients	DO, Nutrients (Chlorophyll a)			3c
3192A	Kissimmee River	Stream	IIIF		DO		Arsenic, Cadmium, Copper, Iron, Lead, Nutrients (Chloro- phyll a), Nutrients (Historical Chloro- phyll), Turbidity, Unionized Ammonia, Zinc	3c
3192B	Starvation Slough	Stream	IIIF					3b
3192C	Oak Creek	Stream	IIIF	Nutrients, DO, Coliform Bacteria	DO, Fecal Coliforms, Total Coliforms	Nutrients (Chlorophyll a)		5

Notes:

¹The designation "stream" includes canals, rivers, and sloughs. The designation "lake" includes some marshes.

²The state's surface water classifications are as follows:

Class I: Potable water supplies

Class II: Shellfish propagation or harvesting

Class III: Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife

Class IV: Agricultural water supplies

Class V: Navigation, utility, and industrial use (there are no state waters currently in this class)

Table 3.6b (continued)

³The EPA's 305(b)/303(d) Integrated Report categories are as follows:

- 1—Attains all designated uses;
- 2—Attains some designated uses;
- 3a—No data and information are available to determine if any designated use is attained;
- 3b—Some data and information are available, but they are insufficient for determining if any designated use is attained;
- 3c—Meets Planning List criteria and is potentially impaired for one or more designated uses;
- 3d—Meets Verified List criteria and is potentially impaired for one or more designated uses;
- 4a—Impaired for one or more designated uses and the TMDL is complete;
- 4b—Impaired for one or more designated uses, but no TMDL is required because an existing or proposed pollutant control mechanism provides reasonable assurance that the water will attain standards in the future;
- 4c—Impaired for one or more designated uses but no TMDL is required because the impairment is not caused by a pollutant; and
- 5—Water quality standards are not attained and a TMDL is required.

⁴The assessment categories listed in this column represent the status of each WBID as a whole, **based on multiple parameters**. The hierarchy for assigning these categories is Category 5, then 4, then 3c, then 2, and then 3b, i.e., each WBID is assigned a category based on the highest category assigned to an individual parameter. For example, if WBID 9999 has total coliforms as Category 5, fecal coliforms as Category 3c, and coliforms–shellfish as Category 2, the single assessment call for the WBID is Category 5.

BOD = Biological oxygen demand

DO = Dissolved oxygen

F = Fresh water

TSI = Trophic State Index

Permitted Discharges and Land Uses

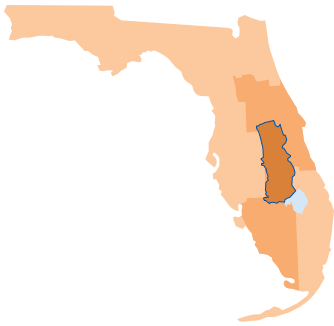
Point Sources. The Lower Kissimmee Planning Unit has 11 permitted ground water discharges, no permitted surface water discharges, no delineated ground water contamination areas (for EDB), and no permitted landfills. **Figure 3.4** shows the permitted wastewater treatment facilities in the planning unit. **Appendix E** lists the basins' domestic and industrial discharge facilities, along with their permitted flows, by planning unit. It also lists the landfills or solid waste facilities and delineated ground water contamination areas, by planning unit.

Nonpoint Sources. Although the Lower Kissimmee Planning Unit includes a small portion of Polk and Osceola Counties, both of which currently have regulated MS4s, there are no urban areas with such permitted sewer systems operating in the planning unit.

Based on Level I land use summary information, the predominant land uses in the planning unit are agriculture (51.2 percent) and wetlands (22.8 percent). Other significant land uses include rangeland (15.8 percent) and upland forest (6.5 percent). Of these land uses, the category most likely associated with the nonpoint discharges of pollutants and eroded sediments is agriculture and urban and built-up, which together comprise 52.4 percent of the planning unit. **Table 3.6c** shows the land use percentages in the Lower Kissimmee Planning Unit in a broad (Level I) GIS analysis, as identified by the SFWMD in 1999.

Ecological Summary

The Lower Kissimmee Planning Unit is composed of the following lake regions, which have differing geology, ecology, and ambient water quality (Griffith et al., 1997):

**Table 3.6c: Level I Land Use in the Lower Kissimmee Planning Unit**

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	1.2
2000	Agriculture (includes improved pasture)	51.2
3000	Rangeland	15.8
4000	Upland Forest	6.5
5000	Water (includes open bay)	1.4
6000	Wetlands	22.8
7000	Barren Land	1.0
8000	Transportation, Communications, and Utilities	0.1
Total		100

- **Lake Wales Ridge Transition** includes the ridge margin or transition lakes that are darker colored with higher nutrients than the lakes found on the Southern Lake Wales Ridge. This lake region also includes the narrow Bombing Range Ridge. Elevations are 70 to 130 feet, with extensive areas of poorly drained soils. Peaty muck soils border many of the lakes. Most of the lakes are acidic, although about one-third of them tend to be alkaline. They have low to moderate nutrients, and are slightly to moderately colored.
- **Kissimmee/Okeechobee Lowland** region includes most of the Kissimmee Valley, a lowland with prairie type grasslands, flatwoods, and some swamp forest. The wet prairies are seasonally flooded, and dry prairies on seldom-flooded flatland have mostly been converted to pasture. Pleistocene lagoonal deposits of coastal sand and shelly silty sand characterize the geology. Lakes are alkaline, eutrophic, and colored.

Historically, the Kissimmee River meandered approximately 103 miles within a 1- to 2-mile-wide floodplain. The floodplain, which is approximately 56 miles long, sloped gradually to the south from an elevation of about 51 feet at Lake Kissimmee to about 15 feet at Lake Okeechobee, dropping an average of about one-third of a foot in elevation over each mile of the river. Under historical conditions, river flows generally exceeded 250 cubic feet per second 95 percent of the time, while overbank flooding occurred 35 to 50 percent of the time during the historical period of hydrologic record (1934–60). The river moved very slowly, with normal river velocities averaging less than 2 feet per second.

Approximately 35,000 acres of wetlands covered the historical floodplain. Major plant communities found within these wetlands included maidencane and beakrush wet prairies, broadleaf marsh, and willow and buttonbush shrub swamps. Other plant communities common in the wetlands, but not distributed extensively, included wetland hardwoods, cypress, oak-cabbage palm hammocks, switchgrass, sawgrass, and floating mats or tussocks. The distribution and maintenance of plant communities

The following text is adapted from the SFWMD's Web site on the Kissimmee River, available at <http://www.sfwmd.gov/org/erd/krr/index.html>.

within the floodplain wetlands depended on prolonged inundation and seasonally fluctuating water levels. A fluctuating hydroperiod, along with the undulating topography of the floodplain, a meandering river channel, oxbows, and natural discontinuous levees, enhanced and maintained habitat diversity, including the mosaic of intermixed vegetation types.

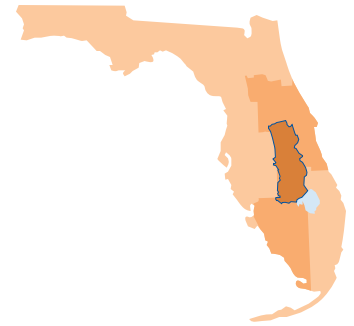
In the mid-1950s, the river fishery produced about 81,000 pounds annually of largemouth bass, black crappie, bluegill, catfish, and redear sunfish (1957 instantaneous fish biomass measurement). The Kissimmee River was renowned for its largemouth bass fishery, and the floodplain harbored a large and diverse wintering waterfowl population, including ring-necked ducks, American widgeon, northern pintail, and blue-winged teal. The historical winter duck population was estimated at about 12,500 birds.

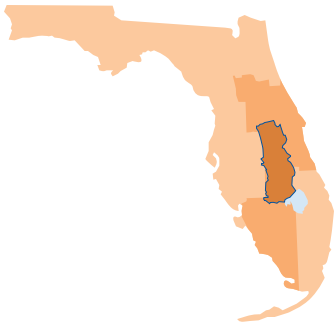
Prior to 1940, human habitation was sparse within the Kissimmee River Basin. Land use consisted primarily of farming and cattle ranching. However, rapid growth and development following World War II set the stage for extensive property damage when a severe hurricane occurred within the basin in 1947. The state responded with a request to the federal government to design a flood control plan for central and southern Florida.

In 1948, Congress authorized the USACOE to initiate the construction of the C&SF Project for flood control and protection. In 1954, Congress specifically authorized the Kissimmee River portion of the project, which was planned and designed from 1954 to 1960. Between 1962 and 1971, the Kissimmee River was channelized and transformed into a series of impounded reservoirs (Pools A–E). Inflow from the upper basin was regulated by six water control structures (S-65 and S-65A, B, C, D, and E). Water control structures and canals were built in the upper lakes region, which allowed regulation of water flow within and between the lakes of the upper basin.

The channelization largely eliminated river and floodplain wetlands and degraded the fish and wildlife values of the Kissimmee River ecosystem. The meandering river was transformed into a 56-mile-long, 30-foot-deep, and 300-foot-wide canal. The excavation of the canal and deposition of the resulting spoil eliminated approximately 35 miles of river channel and 6,200 acres of floodplain wetland habitat. The transformation of the river–floodplain ecosystem into a series of deep impoundments drained much of the floodplain, eliminated historical water level fluctuations, and greatly modified flow characteristics. Approximately 26,000 to 31,000 acres of prechannelized floodplain wetlands were drained, covered with spoil, or converted into canal. The floodplain at the lower end of each pool remained inundated, but prechannelization water level fluctuations were eliminated. Low- and no-flow regimes in remnant river channels resulted in the encroachment of vegetation, especially floating exotics such as water lettuce and water hyacinth, to the center of the river channel. As this encroaching vegetation aged and died, it covered the shifting sand substrate of the historical channel with thick accumulations (up to 3 feet) of organic matter, greatly increasing the biological oxygen demand of the system.

The river channelization and degradation of the floodplain led to severe impacts on the system's biological components. By the early 1970s, the use of the floodplain by wintering waterfowl declined by 92 percent. Wading





bird populations, a highly visible component of the historical system, diminished and were largely replaced by cattle egrets, a species generally associated with upland, terrestrial habitats. Low- and no-flow regimes in the canal and remnant river channels resulted in chronically low DO levels, and sportfish species such as largemouth bass were largely replaced by species tolerant of low DO regimes, such as Florida gar and bowfin. Stabilized water levels and reduced flow also eliminated river–floodplain interactions. The influx of organic matter, invertebrates, and forage fishes to the river from the floodplain during periods of water recession was eliminated. Stabilized water levels also largely eliminated adult spawning and foraging habitat, as well as larval and juvenile refuge sites for fish on the floodplain. As a result of the environmental degradation, the USACOE and SFWMD agreed to create a restoration plan for the Kissimmee River in 1992.

Water Quality Improvement Plans and Projects

Kissimmee River Restoration Project. The project will backfill 22 miles of the C-38, remove 2 water control structures (S-65B and S-65C), and remove floodplain levees, thereby restoring over 40 square miles of river–floodplain ecosystem, including 43 miles of meandering river channel and 27,000 acres of wetlands. The restoration project, which is a joint partnership between the SFWMD and the USACOE, will require approximately 15 years to complete.

The first phase of construction of the Kissimmee River Restoration Project began in June 1999 in Pool C and was completed in March 2001. Navigation through Pool C has been reestablished through the meandering Kissimmee River. As the restoration effort proceeds, some positive changes have been observed. The project is reestablishing the physical form of the river, with its historical water levels and flows, sandbars, and oxbows. Ten thousand acres of wetlands and 15 miles of river have been reestablished. Emergent and shoreline vegetation has reappeared, water quality is improving, and waterfowl are returning. The next phase of construction, Phase IV A, will commence in 2006.

Lake Okeechobee Protection Act. The 2000 Lake Okeechobee Protection Act establishes a restoration and protection program for Lake Okeechobee. The integrated management strategy to restore the lake is based on implementing phosphorus source control programs, including BMPs; phosphorus control and flow attenuation projects; and in-lake remediation activities. Elements include the following:

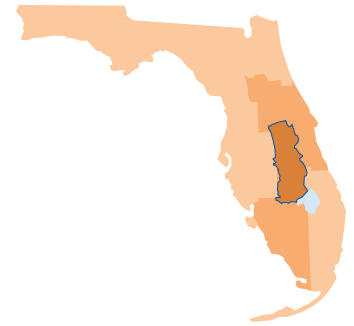
- Owner-implemented BMPs—These practices, described in the various BMP manuals adopted by DACS (Rule 5M-3), were selected to represent affordable, cost-effective practices that are not eligible for cost-sharing. Suites of owner-implemented BMPs are land-use specific. For example, cow/calf land uses may reduce phosphorus fertilization, improve grazing management, or result in better management of nitrogen and micronutrients. Additionally, the owner-implemented BMPs for urban areas include reductions in phosphorus fertilization and lawn maintenance activities.

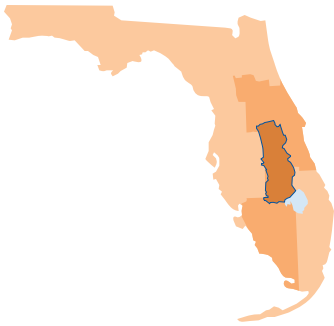
- Typical cost-sharing BMPs that require future funding—BMPs for each agricultural landowner (for nontribal lands) will be identified through an assessment described in the BMP manuals prepared by DACS, nutrient management plans, or conservation plans through the USDA–NRCS. Examples include internal fencing to keep cows out of wetlands and streams, on-site retention facilities, and/or stormwater management systems. Because the implementation of these BMPs is beyond the financial capabilities of the average landowner, additional funding through cost-sharing is required for implementation. Bottcher and Harper (2003) describe the typical suite of agricultural BMPs for each land use and provide phosphorus load reductions and costs per acre. The urban BMPs (retrofits) include creating retention/detention areas to address phosphorus loading from subdivisions.
- Phosphorus Source Control Grant Program projects—These projects are as follows:
 - Lofton Ranch—wetland restoration,
 - Smith Okeechobee Farms—stormwater retention and wetland restoration, and
 - Tampa Farms–Indiantown—composting chicken manure exported from the watershed.
- Dairy Best Available Technology–Butler Oaks—A retention/detention system has been constructed that will allow the dairy to reuse the water. If water is discharged, it will be chemically treated.
- Former Dairy Remediation
 - Lamb Island Dairy (owned by the SFWMD)—Remediation of properties that were previously part of the dairy, using stormwater detention, wetland treatment, lagoon remediation, soil amendments, and wetland restoration
 - Two other former dairy sites that are currently being used for other agricultural operations will implement remediation actions, such as stormwater detention, wetland treatment, lagoon remediation, and soil amendments

- **Lake Istokpoga Planning Unit**

General Description

The 630-square-mile Lake Istokpoga Planning Unit, which lies within portions of Polk and Highlands Counties, extends from the city of Lake Wales southward to just below S.R. 66, and eastward to and including Lake Istokpoga. Significant waters in the planning unit include Lake Weohyakapka (also known as Lake Walk in the Water), Lake Arbuckle, Arbuckle Creek, Josephine Creek, Lake Istokpoga, and the lakes along the Lake Wales Ridge. Of the many lakes along the Lake Wales Ridge, some of the largest include Wales, Crooked, Lenore, Moody, Clinch, Reedy, Livingston, Damon, Lotela, Letta, Bonnet, Sebring, Jackson, Red Beach, and Josephine.





While the lakes along the ridge generally drain downward into the ground, some—including Weohyakapka, Reedy, Livingston, Arbuckle, Jackson, Red Beach, and Josephine—also have surface outlets and drain their waters southward or eastward into Lake Istokpoga via Arbuckle Creek, Josephine Creek, or several other smaller creeks and canals. Two creeks in the Lake Placid Planning Unit (Jack Creek and Grassy Creek) also drain northward into Lake Istokpoga via Josephine Creek.

Lake Istokpoga, whose name in the Seminole Indian language means “dangerous waters” (Florida Department of Natural Resources, 1989), drains either into the Kissimmee River just north of Lake Okeechobee or into the C-41A Canal. At 43.3 square miles (27,692 acres), Lake Istokpoga is Florida’s fifth largest lake. It ranges in depth from 4.3 to 9.8 feet. The lake is so big and so shallow that wind-driven waves quickly create a dangerous chop, with waves that are so close together that small boats cannot recover from an initial wave before being hit and potentially swamped by successive waves (personal experience).

Communities in the planning unit include Lake Wales, Indian Lake Estates, Babson Park, Frostproof, Avon Park, Sebring, Spring Lake, and Lorida. The western half of the Avon Park Air Force Range is situated within the planning unit. Land uses are dominated by agriculture (citrus and cattle), urban, military (the bombing range), and recreation (fishing, boating, and golf). This part of Florida is a popular winter destination for retired midwesterners, and in fact the city of Sebring, Florida, was founded by George Sebring of Sebring, Ohio, in 1911.

The Sebring International Raceway is located in this planning unit adjacent to the Sebring Regional Airport, on the north side of S.R. 98 and Lake Istokpoga. The raceway hosts the world-famous “12 Hours of Sebring Endurance Race” every March.

Table 3.7a lists significant preserved natural areas in the Lake Istokpoga Planning Unit, by county. Note that some of the natural areas fall within two or more counties.

Water Quality Summary

The major water quality problems in the Lake Istokpoga Planning Unit are low DO, elevated nutrients (expressed as TSI), and mercury in fish. Elevated nutrients and low DO may be attributable to agricultural or urban nutrient loading. Low DO may also be in part attributable to natural conditions in the area (swamp drainage). Mercury contamination is thought to result from atmospheric deposition.

Figure 3.5, a composite map of the planning unit, shows waters on the 1998 303(d) list, the Planning List and Verified List, and potential pollution sources. **Table 3.7b** summarizes the water quality assessment status of all waterbody segments in the planning unit.

Permitted Discharges and Land Uses

Point Sources. The Lake Istokpoga Planning Unit has 86 permitted wastewater treatment facilities, 85 of which discharge to ground water and 1 discharges to surface water. The planning unit also has 25 delineated ground water contamination areas (for EDB) and 12 permitted landfills.

Table 3.7a: Significant Preserved Natural Areas in the Lake Istokpoga Planning Unit, by County

County	Preserved Natural Areas	Acres
Polk		
	Avon Park Air Force Range (in part)	106,110
	Hickory Lake Scrub County Park	57
	Lake Wales Ridge State Forest	20,282
	Saddle Blanket Lakes Preserve	663
	Sumica/Lake Walk in the Water Tract	4,301
	Tiger Creek Preserve	4,805
	Walk in the Water Creek Nature Preserve	25
Highlands		
	Avon Park Air Force Range (in part)	see above
	Carter Creek	108
	Lake Wales Ridge National Wildlife Refuge	1,839
	Lake Wales Ridge Wildlife and Environmental Area (in part)	9,935

Figure 3.5 shows permitted wastewater treatment facilities and landfills in the planning unit. Appendix E lists the basin's domestic and industrial discharge facilities, along with their permitted flows, by planning unit. It also lists the landfills or solid waste facilities and delineated ground water contamination areas, by planning unit.

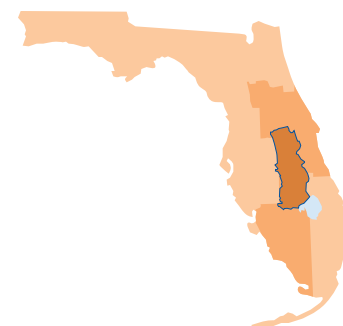
Nonpoint Sources. There are no regulated MS4s operating in the planning unit. Based on Level I land use summary information, the predominant land uses in the Lake Istokpoga Planning Unit are agriculture (33.9 percent) and urban and built-up (12.9 percent). Other significant land uses include open water (14.3 percent), wetlands (15.3 percent), and upland forests (14.7 percent). Of these land uses, the categories most likely associated with the nonpoint discharges of pollutants and eroded sediments are agriculture and urban and built-up, which together comprise more than 46.8 percent of the planning unit.

Table 3.7c shows the land use percentages in the Lake Istokpoga Planning Unit in a broad (Level I) GIS analysis, as identified by the SWFWMD and SFWMD in 1999.

Ecological Summary

The Lake Istokpoga Planning Unit is composed of the following lake regions, which have differing geology, ecology, and ambient water quality (Griffith et al., 1997):

- **Northern Lake Wales Ridge** lake region extends from the Clermont Uplands in Lake County to the Livingston Creek drainage in Highlands County. The narrow ridge, 100 to 300 feet in elevation, forms the topographic crest of central Florida. The well-drained sandy soils are covered by citrus groves, pasture, and urban and residential development. The lakes are mostly alkaline, low-to-moderate nutrient, clear water lakes. Nitrogen values tend to be high.



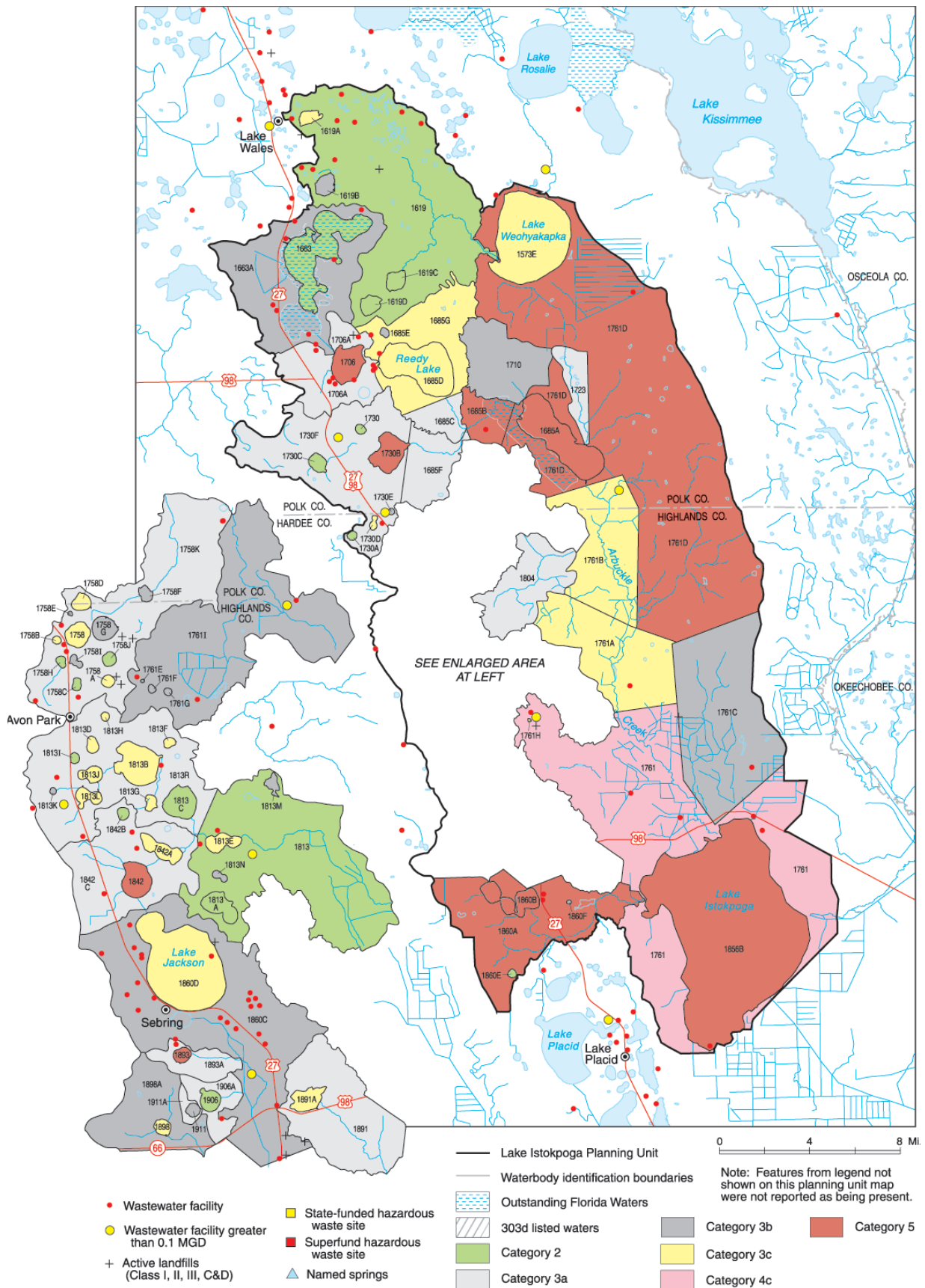


Figure 3.5: Composite Map of the Lake Istokpoga Planning Unit, Including the 1998 303(d) List, Planning List and Verified List Waters, and Potential Pollution Sources

Table 3.7b: Integrated Water Quality Assessment Summary for the Lake Istokpoga Planning Unit

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
1619	Tiger Creek	Stream	IIIF				Biology, DO, Total Coliforms, Turbidity, Unionized Ammonia	2
1663	Crooked Lake	Lake	IIIF				DO, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Unionized Ammonia	2
1706	Lake Clinch	Lake	IIIF		Nutrients (TSI)	Mercury in Fish	DO, Nutrients (Historic TSI), Turbidity, Unionized Ammonia	5
1710	Blue Jordan Swamp	Stream	IIIF					3b
1723	Unnamed Run	Stream	IIIF					3a
1730	Center of Lake Hickory	Lake	IIIF				DO, Turbidity	2
1758	Lake Damon	Lake	IIIF		Nutrients (TSI)			3c
1761	Arbuckle Creek	Stream	IIIF			DO	Arsenic, Chromium 3, Iron, Nutrients (Chlorophyll <i>a</i>) Turbidity, Unionized Ammonia, Zinc	4c
1804	Palmetto Creek	Stream	IIIF					3a
1813	Carter Creek	Stream	IIIF				Biology, DO	2
1842	Lake Sebring	Lake	IIIF		Nutrients (TSI)	Mercury in Fish	Nutrients (Historic TSI)	5
1891	Yellow Bluff Creek	Stream	IIIF					3a
1893	Huckleberry Lake	Lake	IIIF			Nutrients (TSI)	Arsenic, Chromium 3, DO, Fecal Coliforms, Iron, Nutrients (Historic TSI), Turbidity, Zinc	5
1898	Lake Wolf	Lake	IIIF		Iron, Turbidity		DO, Nutrients (TSI)	3c
1906	Lake Charlotte	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
1911	Lake Ruth	Lake	IIIF					3b
1573E	Lake Weohyakapka	Lake	IIIF		Nutrients (TSI)		DO, Nutrients (Historic TSI), Turbidity, Unionized Ammonia	3c

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Table 3.7b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
1619A	Lake Wales	Lake	IIIF		Nutrients (TSI)		DO, Turbidity, Unionized Ammonia	3c
1619B	Lake Easy	Lake	IIIF					3b
1619C	Lake Leonore	Lake	IIIF				DO, Turbidity, Unionized Ammonia	2
1619D	Lake Moody	Lake	IIIF				DO, Turbidity, Unionized Ammonia	2
1663A	Crooked Lake Outlet	Lake	IIIF					3b
1685A	Lake Arbuckle	Lake	IIIF			Total Coliforms, Mercury in Fish	DO, Fecal Coliforms, Turbidity	5
1685B	Livingston Creek	Stream	IIIF			DO	Biology, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia	5
1685C	Reedy Creek	Stream	IIIF					3a
1685D	Reedy Lake	Lake	IIIF		Nutrients (TSI)		DO, Nutrients (Historic TSI), Turbidity, Unionized Ammonia	3c
1685E	Lake Ida	Lake	IIIF					3b
1685F	Livingston Creek West	Stream	IIIF					3a
1685G	Reedy Lake Basin	Lake	IIIF		DO			3c
1706A	Lake Clinch Outlet	Lake	IIIF					3a
1730A	Lake Olivia–Open Water	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
1730B	Livingston Lake	Lake	IIIF			Mercury in Fish	DO, Turbidity, Unionized Ammonia	5
1730C	Streety Lake	Lake	IIIF				Turbidity, Unionized Ammonia	2
1730D	Lake Adelaide–Open Water	Lake	IIIF		Nutrients (TSI)		Nutrients (Historic TSI)	3c
1730E	Pabor Lake–Open Water	Lake	IIIF					3b

Table 3.7b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
1730F	Lake Livingston Drain	Lake	IIIF					3a
1758A	Lake Viola	Lake	IIIF		Iron		Arsenic, Chromium 3, DO, Nutrients (TSI), Turbidity, Zinc	3c
1758B	Lake Lillian	Lake	IIIF		Nutrients (TSI)		Nutrients (Historic TSI)	3c
1758C	Lake Isis	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
1758D	Trout Lake–Open Water	Lake	IIIF		Nutrients (TSI)		Nutrients (Historic TSI)	3c
1758E	Pansy Lake–Open Water	Lake	IIIF					3b
1758F	Lake Isabell–Open Water	Lake	IIIF					3b
1758G	Lake Pythias–Open Water	Lake	IIIF					3b
1758H	Lake Byrd–Open Water	Lake	IIIF				Nutrients (TSI)	2
1758I	Brentwood Lake–Open Water	Lake	IIIF					3b
1758J	Pioneer Lake	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
1758K	Lake Damon Outlet	Lake	IIIF					3a
1761A	Arbuckle C. Ab Wildcat	Stream	IIIF		Biology			3c
1761B	Arbuckle C. Ab Morgan	Stream	IIIF		DO, Fecal Coliforms		Turbidity, Unionized Ammonia	3c
1761C	Arbuckle Branch	Stream	IIIF					3b
1761D	Morgan Hole Creek	Stream	IIIF		DO	Fecal Coliforms, Total Coliforms	Nutrients (Chlorophyll a), Turbidity	5
1761E	Duck Lake–Open Water	Lake	IIIF					3b
1761F	Deer Lake–Open Water	Lake	IIIF					3b
1761G	Fox Lake–Open Water	Lake	IIIF					3b

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Table 3.7b (continued)

					Data Evaluation under the Impaired Surface Waters Rule Criteria ³			
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
1761H	Lake Lucas–Open Water	Lake	IIIF		DO, Iron, Lead		Nutrients (TSI), Turbidity	3c
1761I	Bonnet Creek	Stream	IIIF					3b
1813A	Dinner Lake	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
1813B	Lake Lotela	Lake	IIIF		Iron		DO, Nutrients (Historic TSI), Nutrients (TSI), Turbidity	3c
1813C	Lake Letta	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
1813D	Lake Tulane	Lake	IIIF		Iron, Lead		Arsenic, Chromium 3, DO, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Zinc	3c
1813E	Bonnet Lake	Lake	IIIF		Nutrients (TSI)		Nutrients (Historic TSI)	3c
1813F	Lake Angelo–Open Water	Lake	IIIF		Nutrients (TSI)		Nutrients (Historic TSI)	3c
1813G	Little Bonnet Lake–Open Water	Lake	IIIF		Nutrients (TSI)			3c
1813H	Lake Verona–Open Water	Lake	IIIF		Iron		Arsenic, Chromium 3, DO, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Zinc	3c
1813I	Lake Anoka–Open Water	Lake	IIIF				Nutrients (TSI)	2
1813J	Lake Lelia–Open Water	Lake	IIIF		Nutrients (TSI)		Nutrients (Historic TSI)	3c
1813K	Silver Lake–Open Water	Lake	IIIF					3b
1813L	Lake Glenada–Open Water	Lake	IIIF		Nutrients (TSI)		Nutrients (Historic TSI)	3c
1813M	Grassy Pond–Open Water	Lake	IIIF					3b
1813N	Basket Lake–Open Water	Lake	IIIF					3b
1813R	Lake Letta Outlet	Lake	IIIF					3a

Table 3.7b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
1842A	Little Red Water Lake	Lake	IIIF		Nutrients (TSI)			3c
1842B	Lake Denton–Open Water	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
1842C	Lake Sebring Outlet	Lake	IIIF					3a
1856B	Lake Istokpoga	Lake	IIIF			Nutrients (Historic TSI), Nutrients (TSI)	Arsenic, DO, Fecal Coliforms, Fluoride, Iron, Total Coliforms, Turbidity, Unionized Ammonia	5
1860A	Josephine Creek	Stream	IIIF			DO, Nutrients (Chlorophyll <i>a</i>)	Arsenic, Iron, Turbidity, Unionized Ammonia	5
1860B	Lake Josephine	Lake	IIIF			Nutrients (TSI), Mercury in Fish	Arsenic, Chromium 3, DO, Iron, Nutrients (Historic TSI), Turbidity, Zinc	5
1860C	Jackson Creek	Stream	IIIF					3b
1860D	Lake Jackson	Lake	IIIF		Iron, Nutrients (Historic TSI), Nutrients (TSI)		Arsenic, Chromium 3, DO, Fecal Coliforms, Total Coliforms, Turbidity, Unionized Ammonia, Zinc	3c
1860E	Hill Lake	Lake	IIIF				Nutrients (TSI)	2
1860F	Lake Lynn–Open Water	Lake	IIIF					3b
1891A	Red Beach Lake	Lake	IIIF		Nutrients (TSI)		Nutrients (Historic TSI)	3c
1893A	Huckleberry Lake Outlet	Lake	IIIF					3a
1898A	Lake Wolf Outlet	Lake	IIIF					3b
1906A	Lake Charlotte Outlet	Lake	IIIF					3a
1911A	Lake Ruth Outlet	Lake	IIIF					3a

Table 3.7b (continued)

Notes:

¹The designation “stream” includes canals, rivers, and sloughs. The designation “lake” includes some marshes.²The state’s surface water classifications are as follows:**Class I: Potable water supplies****Class II: Shellfish propagation or harvesting****Class III: Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife****Class IV: Agricultural water supplies****Class V: Navigation, utility, and industrial use (there are no state waters currently in this class)**³The EPA’s 305(b)/303(d) Integrated Report categories are as follows:**1**—Attains all designated uses;**2**—Attains some designated uses;**3a**—No data and information are available to determine if any designated use is attained;**3b**—Some data and information are available, but they are insufficient for determining if any designated use is attained;**3c**—Meets Planning List criteria and is potentially impaired for one or more designated uses;**3d**—Meets Verified List criteria and is potentially impaired for one or more designated uses;**4a**—Impaired for one or more designated uses and the TMDL is complete;**4b**—Impaired for one or more designated uses, but no TMDL is required because an existing or proposed pollutant control mechanism provides reasonable assurance that the water will attain standards in the future;**4c**—Impaired for one or more designated uses but no TMDL is required because the impairment is not caused by a pollutant; and**5**—Water quality standards are not attained and a TMDL is required.⁴The assessment categories listed in this column represent the status of each WBID as a whole, **based on multiple parameters**. The hierarchy for assigning these categories is Category 5, then 4, then 3c, then 2, and then 3b, i.e., each WBID is assigned a category based on the highest category assigned to an individual parameter. For example, if WBID 9999 has total coliforms as Category 5, fecal coliforms as Category 3c, and coliforms–shellfish as Category 2, the single assessment call for the WBID is Category 5.

BOD = Biological oxygen demand

DO = Dissolved oxygen

F = Fresh water

TSI = Trophic State Index

Table 3.7c: Level I Land Use in the Lake Istokpoga Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	12.9
2000	Agriculture (includes improved pasture)	33.9
3000	Rangeland	8.3
4000	Upland Forest	14.7
5000	Water (includes open bay)	14.3
6000	Wetlands	15.3
7000	Barren Land	0.0
8000	Transportation, Communications, and Utilities	0.6
Total		100

- **Lake Wales Ridge Transition** includes the ridge margin or transition lakes that are darker colored with higher nutrients than the lakes found on the Southern Lake Wales Ridge. Elevations are 70 to 130 feet, with extensive areas of poorly drained soils. Peaty muck soils border many of the lakes. The lake region also includes the narrow Bombing Range Ridge on the east, and a small area of upland soils near Lake Buffum on the west. Most of the lakes are acidic, although about one-third of them tend to be alkaline.

They have low to moderate nutrients, and are slightly to moderately colored.

- **Southern Lake Wales Ridge** region contains part of the southern ridge and the “intraridge valley” where there are mostly clear water lakes. Elevations range from 70–150 feet, and soils are generally sandy and well-drained. The landcover is primarily citrus groves, with rapidly expanding urban and residential areas. Lakes in the region range from acidic to alkaline, but almost all are clear with low color and low nutrients.
- **Kissimmee/Okeechobee Lowland** region includes most of the Kissimmee Valley, a lowland with prairie type grasslands, flatwoods, and some swamp forest. The wet prairies are seasonally flooded, and dry prairies on seldom-flooded flatland have mostly been converted to pasture. Pleistocene lagoonal deposits of coastal sand and shelly silty sand characterize the geology. Lakes are alkaline, eutrophic, and colored.

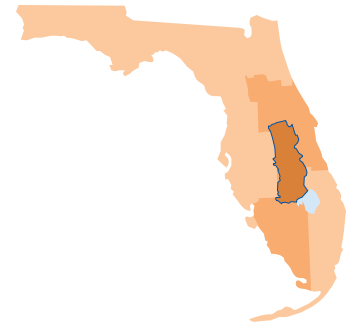
Lake Istokpoga, which was part of the original C&SF Flood Control Project, currently is the subject of much scrutiny because of in-lake water quality and downstream environmental issues. Heavy infestations of the aquatic weed hydrilla and the formation of tussock islands (floating accumulations of plant material) have severely degraded habitat and water quality in the lake. Because the waters of Lake Istokpoga eventually reach Lake Okeechobee, nutrient loadings from Istokpoga to Okeechobee are of concern. In fact, the Lake Okeechobee Action Plan has identified Lake Istokpoga as a significant source of phosphorus loading to Lake Okeechobee.

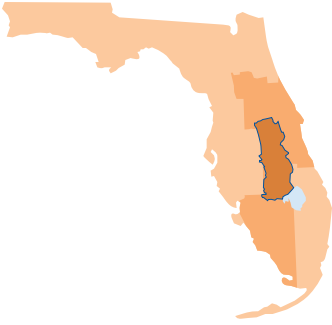
Water Quality Improvement Plans and Projects

Lake Istokpoga Environmental Enhancement Project. This littoral zone restoration was a multiagency (FWC, SFWMD, Department, USACOE, and Highlands County) cooperative effort conducted to restore fish and wildlife habitat and remove some nutrients from Lake Istokpoga. The project included a drawdown of Lake Istokpoga, the mechanical scraping of 21 miles of shoreline, and the removal of 1,308 acres (2.37 million cubic yards) of tussocks. The project, which was completed in 2001, cost \$2,749,690. Aquatic plant management was implemented after the completion of the project and will continue as needed.

Lake Okeechobee Protection Act. The 2000 Lake Okeechobee Protection Act establishes a restoration and protection program for Lake Okeechobee. The integrated management strategy to restore the lake is based on implementing phosphorus source control programs, including BMPs; phosphorus control and flow attenuation projects; and in-lake remediation activities. Elements include the following:

- **Owner-implemented BMPs**—These practices, described in the various BMP manuals adopted by DACS (Rule 5M-3), were selected to represent affordable, cost-effective practices that are not eligible for cost-sharing. Suites of owner-implemented BMPs are land-use





specific. For example, cow/calf land uses may reduce phosphorus fertilization, improve grazing management, or result in better management of nitrogen and micronutrients. Additionally, the owner-implemented BMPs for urban areas include reductions in phosphorus fertilization and lawn maintenance activities.

- Typical cost-sharing BMPs that require future funding—BMPs for each agricultural landowner (for nontribal lands) will be identified through an assessment described in the BMP manuals prepared by DACS, nutrient management plans, or conservation plans through the USDA–NRCS. Examples include internal fencing to keep cows out of wetlands and streams, on-site retention facilities, and/or stormwater management systems. Because the implementation of these BMPs is beyond the financial capabilities of the average landowner, additional funding through cost-sharing is required for implementation. Bottcher and Harper (2003) describe the typical suite of agricultural BMPs for each land use and provide phosphorus load reductions and costs per acre. The urban BMPs (retrofits) include creating retention/detention areas to address phosphorus loading from subdivisions.

Lake Istokpoga Regulation Schedule Modification–Comprehensive Everglades Restoration Program. The major focus of this part of the Comprehensive Everglades Restoration Program is to develop a plan to address water resource problems in the Lake Istokpoga watershed and to create a balance between environmental needs, water supply, and flood control. The purpose of the plan is to examine the watershed to enhance fish and wildlife benefits and develop a long-term, comprehensive management plan.

The operation of Lake Istokpoga's outlet structure (S-68), beginning in 1962, reduced the maximum annual fluctuation of the lake (SFWMD, 1978). While the littoral zone expanded, the amount of quality habitat was reduced by the formation of extensive floating tussocks and dense cattail communities. Persistently lowered lake levels have reduced the natural frequency of seasonal drying and inundation. Without natural dewatering events, the germination of diverse aquatic plant seeds is reduced, the consolidation and compaction of organic sediments cannot occur, and the formation and expansion of floating mats of water hyacinths and other species common to tussock communities are promoted. These mats reduce the overall productivity and diversity of the marsh. The need for flood protection to the perimeter and upstream tributaries, and downstream areas west and east of C-41A, will also be addressed, as well as water supply needs for agriculture and the Seminole Tribe of Florida.

Nitrogen Best Management Practices for Ridge Citrus. This manual, adopted in 2002, was developed to guide growers in the reduction of nitrate discharges from fertilization practices on ridge citrus groves. The purpose of the BMP is to minimize the risk of leaching nitrates from fertilizers to ground water. This can be accomplished by increasing the frequency of fertilizer applications, scheduling fertilizer applications to

avoid periods of excessive rainfall (rainy season), properly managing irrigation inputs, and recognizing the need for variable application rates.

- **Lake Placid Planning Unit**

General Description

The 72-square-mile Lake Placid Planning Unit, wholly within Highlands County, is located on the Lake Wales Ridge, extending from Josephine Creek (about 4 miles south of S.R. 66), through the city of Lake Placid, to just south of S.R. 70. Significant waterbodies in the planning unit include Lakes Persimmon, Francis, Nellie, Apthorpe, Simmons, June in Winter, Clay, Sirena, Pearl, Huntley, Mirror, Placid, Grassy, and Annie. Two waterbodies in this planning unit (Jack Creek and Grassy Creek) drain northward and connect to Josephine Creek, which lies in the Lake Istokpoga Planning Unit.

Although the planning unit contains several residential subdivisions, the main named community is the city of Lake Placid. Originally known as Lake Stearns, the town was renamed Lake Placid in the late 1920s, when educator, librarian, visionary, and Dewey Decimal System inventor Dr. Melvil Dewey developed the town as a winter resort for his wealthy friends from Lake Placid, New York (Walton, 2002).

The city of Lake Placid also touts itself as the “Caladium Capital of the World” (Greater Lake Placid Chamber of Commerce, 2004), although all the caladium farms are actually in the adjoining Northwest Okeechobee Planning Unit, about three miles east of U.S. 27, on the south side of County Road (C.R.) 621 (Y. Marson, Highlands County Cooperative Extension, pers. comm., 2004).

Citrus, urban, open water, and conservation lands dominate land uses. The Archbold Biological Station (ABS) is also located in the planning unit. An independent, not-for-profit research facility dedicated to the long-term ecological research and conservation of the Lake Wales Ridge and central Florida, the station’s program is part of a global effort to understand, interpret, and preserve the earth’s natural diversity (ABS, 2003). **Table 3.8a** lists the significant preserved natural areas in the Lake Placid Planning Unit.

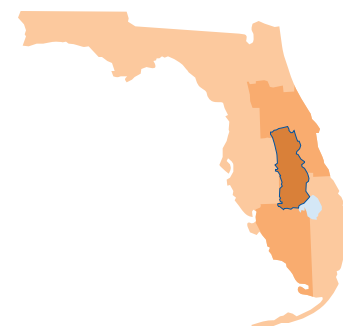
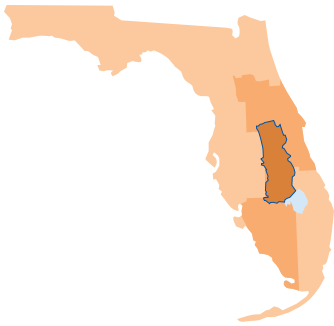


Table 3.8a: Significant Preserved Natural Areas in the Lake Placid Planning Unit, by County

County	Preserved Natural Areas	Acres
Highlands		
	Archbold Biological Station (in part)	5,238
	McJunkin Scrub Carl Purchase	730
	Jack Creek	1,285
	Lake June in Winter Scrub	846
	Lake Placid Wildlife and Environmental Area	3,150
	Lake Wales Ridge Wildlife and Environmental Area (in part)	9,935



Water Quality Summary

The major water quality problems in the Lake Placid Planning Unit are elevated nutrients (expressed as TSI) and mercury in fish. Elevated nutrients may be attributable to agricultural or urban nutrient loading. Mercury contamination is thought to result from atmospheric deposition.

Figure 3.6, a composite map of the planning unit, shows waters on the 1998 303(d) list, the Planning List and Verified List, and potential pollution sources. **Table 3.8b** summarizes the water quality assessment status of all waterbody segments in the planning unit.

Permitted Discharges and Land Uses

Point Sources. The Lake Placid Planning Unit has 16 permitted wastewater treatment facilities, all of which discharge to ground water. The planning unit also has 6 delineated ground water contamination areas (for EDB in citrus areas) and no permitted landfills. **Figure 3.6** shows permitted wastewater treatment facilities in the planning unit. **Appendix E** lists the basin's domestic and industrial discharge facilities, along with their permitted flows, by planning unit. It also lists the landfills or solid waste facilities and delineated ground water contamination areas, by planning unit.

Nonpoint Sources. There are no regulated MS4s operating in the planning unit. Based on Level I land use summary information, the predominant land uses in the Lake Placid Planning Unit are agriculture (28.4 percent) and urban and built-up (23.5 percent). Other significant land uses include open water (23.1 percent), upland forests (7.3 percent), and wetlands (6.1 percent). Of these land uses, the categories most likely associated with the nonpoint discharges of pollutants and eroded sediments are agriculture and urban and built-up, which together comprise more than 51.9 percent of the planning unit. **Table 3.8c** shows the land use percentages in the Lake Placid Planning Unit in a broad (Level I) GIS analysis, as identified by the SWFWMD and SFWMD in 1999.

Ecological Summary

The Lake Placid Planning Unit is composed of the following lake regions, which have differing geology, ecology, and ambient water quality (Griffith et al., 1997):

- **Lake Wales Ridge Transition** includes the ridge margin or transition lakes that are darker colored with higher nutrients than the lakes found on the Southern Lake Wales Ridge. Elevations are 70 to 130 feet, with extensive areas of poorly drained soils. Peaty muck soils border many of the lakes. Most of the lakes are acidic, although about one-third of them tend to be alkaline. They have low to moderate nutrients, and are slightly to moderately colored.
- **Southern Lake Wales Ridge** region contains part of the southern ridge and the "intraridge valley" where there are mostly clear water lakes. Elevations range from 70 to 150 feet, and soils are generally

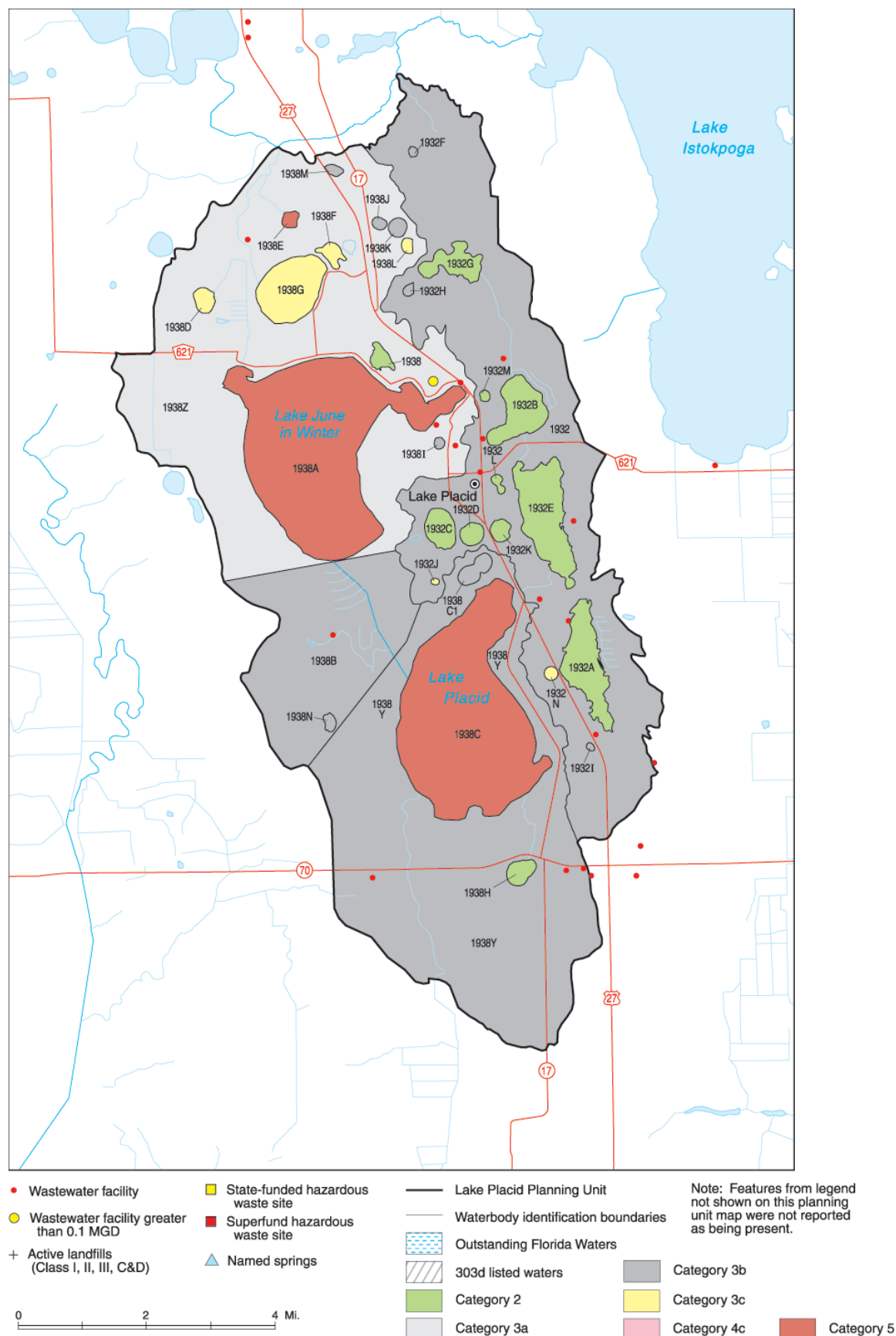


Figure 3.6: Composite Map of the Lake Placid Planning Unit, Including the 1998 303(d) List, Planning List and Verified List Waters, and Potential Pollution Sources

Table 3.8b: Integrated Water Quality Assessment Summary for the Lake Placid Planning Unit

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
1932	Grassy Creek	Stream	IIIF					3b
1938	Lake Henry–Open Water	Lake	IIIF				Nutrients (Historic TSI), Nutrients (TSI)	2
1932A	Lake Grassy	Lake	IIIF				Arsenic, Chromium 3, DO, Iron, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Zinc	2
1932B	Clay Lake	Lake	IIIF				Arsenic, Chromium 3, DO, Iron, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Zinc	2
1932C	Lake Sirena	Lake	IIIF				Nutrients (TSI)	2
1932D	Pearl Lake	Lake	IIIF				Nutrients (TSI)	2
1932E	Lake Huntley	Lake	IIIF				Arsenic, Chromium 3, DO, Iron, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Zinc	2
1932F	Lake Harry–Open Water	Lake	IIIF					3b
1932G	Lake Apthorpe–Open Water	Lake	IIIF				Nutrients (TSI)	2
1932H	Lake Simmons–Open Water	Lake	IIIF					3b
1932I	Buck Lake–Open Water	Lake	IIIF					3b
1932J	Lost Lake–Open Water	Lake	IIIF		Iron			3c
1932K	Lake McCoy–Open Water	Lake	IIIF				Nutrients (TSI)	2
1932L	Saddlebags Lake–Open Water	Lake	IIIF				Nutrients (TSI)	2

Table 3.8b (continued)

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
1932M	Blue Lake–Open Water	Lake	IIIF				Nutrients (TSI)	2
1932N	Unnamed “B” Lake–Open Water	Lake	IIIF		Iron			3c
1938A	Lake June in Winter	Lake	IIIF		Iron	Mercury in Fish	DO, Nutrients (Historic TSI), Nutrients (TSI), Turbidity	5
1938B	Placid June Canal	Stream	IIIF					3b
1938C	Lake Placid	Lake	IIIF			Mercury in Fish	Arsenic, DO, Iron, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Zinc	5
1938C1	Mirror Lake	Lake	IIIF					3b
1938D	Lake Carrie	Lake	IIIF		Iron, Nutrients (Historic TSI)		DO, Nutrients (TSI), Turbidity	3c
1938E	Persimmon Lake	Lake	IIIF			Nutrients (TSI)	Arsenic, Chromium 3, Copper, DO, Iron, Turbidity, Zinc	5
1938F	Red Water Lake	Lake	IIIF		Iron		Arsenic, Chromium 3, DO, Nutrients (Historic TSI), Nutrients (TSI), Turbidity, Zinc	3c
1938G	Lake Francis	Lake	IIIF		Iron, Nutrients (TSI)		DO, Nutrients (Historic TSI), Turbidity	3c
1938H	Lake Annie	Lake	IIIF				Nutrients (TSI)	2
1938I	Lake Lachard–Open Water	Lake	IIIF					3b
1938J	Lake Nellie NW–Open Water	Lake	IIIF					3b
1938K	Lake Nellie Center–Open Water	Lake	IIIF					3b
1938L	Lake Nellie SE–Open Water	Lake	IIIF		Iron			3c

Table 3.8b (continued)

					Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assess- ment Category for WBID ⁴
WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
1938M	Unnamed "E" Lake–Open Water	Lake	IIIF					3b
1938N	Stormwater Pond–Open Water	Lake	IIIF					3b
1938Y	Lake Placid Outlet	Lake	IIIF					3b
1938Z	Lake June in Winter Dr	Lake	IIIF					3a

Notes:

¹The designation "stream" includes canals, rivers, and sloughs. The designation "lake" includes some marshes.

²The state's surface water classifications are as follows:

Class I: Potable water supplies

Class II: Shellfish propagation or harvesting

Class III: Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife

Class IV: Agricultural water supplies

Class V: Navigation, utility, and industrial use (there are no state waters currently in this class)

³The EPA's 305(b)/303(d) Integrated Report categories are as follows:

1—Attains all designated uses;

2—Attains some designated uses;

3a—No data and information are available to determine if any designated use is attained;

3b—Some data and information are available, but they are insufficient for determining if any designated use is attained;

3c—Meets Planning List criteria and is potentially impaired for one or more designated uses;

3d—Meets Verified List criteria and is potentially impaired for one or more designated uses;

4a—Impaired for one or more designated uses and the TMDL is complete;

4b—Impaired for one or more designated uses, but no TMDL is required because an existing or proposed pollutant control mechanism provides reasonable assurance that the water will attain standards in the future;

4c—Impaired for one or more designated uses but no TMDL is required because the impairment is not caused by a pollutant; and

5—Water quality standards are not attained and a TMDL is required.

⁴The assessment categories listed in this column represent the status of each WBID as a whole, **based on multiple parameters**. The hierarchy for assigning these categories is Category 5, then 4, then 3c, then 2, and then 3b, i.e., each WBID is assigned a category based on the highest category assigned to an individual parameter. For example, if WBID 9999 has total coliforms as Category 5, fecal coliforms as Category 3c, and coliforms–shellfish as Category 2, the single assessment call for the WBID is Category 5.

BOD = Biological oxygen demand

DO = Dissolved oxygen

F = Fresh water

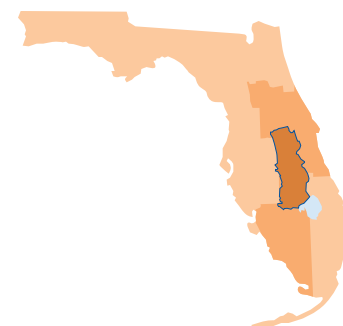
TSI = Trophic State Index

sandy and well-drained. The landcover is primarily citrus groves, with rapidly expanding urban and residential areas. Lakes in the region range from acidic to alkaline, but almost all are clear with low color and low nutrients.

The Lake Placid Planning Unit is found entirely on the Lake Wales Ridge, a narrow, north-south-oriented sandy upland at the center of the Florida peninsula. The xeric scrub community that thrives on the ridge is

Table 3.8c: Level I Land Use in the Lake Placid Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	23.5
2000	Agriculture (includes improved pasture)	28.4
3000	Rangeland	10.6
4000	Upland Forest	7.3
5000	Water (includes open bay)	23.1
6000	Wetlands	6.1
7000	Barren Land	0.1
8000	Transportation, Communications, and Utilities	0.9
Total		100



composed of sand pine, shrubby oaks, scrub hickory, and rosemary. The hill and swale landforms of the Lake Wales Ridge are relict dunes and bays, formed during pre-Pleistocene sea level rises 2 million years ago, when sea level was about 200 feet above its current position. When the ancient ocean levels rose, they covered nearly the entire present-day Florida peninsula, leaving the ridge as an island archipelago whose plants and animals continued to evolve in isolation. This isolation contributed to the evolution of numerous endemic species, and today the Lake Wales Ridge may have the highest concentration of rare and endangered plants and animals in the continental United States, with 24 plants and 19 animals currently having federal or state status as threatened or endangered. Regrettably, more than 70 percent of this unique community has been lost to citrus cultivation and residential development (Myers and Ewel, 1990).

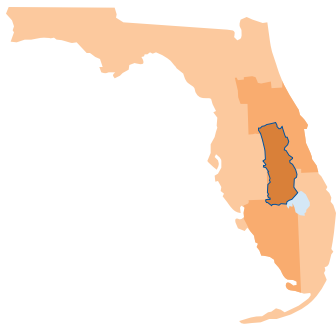
The ridge also contains many sinkhole depressions and lakes, formed by the collapse of limestone caverns deep beneath the overlying sands and clays. Due to the resulting topography, lowland plant communities are sometimes in close proximity to upland communities, where scrub and sandhill habitats grade down to seasonal ponds, bayheads, and lake shores.

At the southern end of the Lake Wales Ridge and the Lake Placid Planning Unit lies the 5,238-acre ABS. This station protects and maintains some of the increasingly rare natural communities of the Lake Wales Ridge, and is a world-class ecological research center dedicated to the long-term ecological research of these communities.

Water Quality Improvement Plans and Projects

Lake Persimmon Whole-Lake Aeration Project. This cooperatively funded (SWFWMD and Highlands County) water quality improvement project installed a whole-lake aeration system in Lake Persimmon in 2002 to remove ammonia from the water column. Water quality has improved markedly (C. Ford, Highlands Soil and Water Conservation District, pers. comm., January 2004).

Nitrogen Best Management Practices for Ridge Citrus. This manual, adopted in 2002, was developed to guide growers in the reduction of nitrate discharges from fertilization practices on ridge citrus groves. The purpose of the BMP is to minimize the risk of leaching nitrates from



fertilizers to ground water. This can be accomplished by increasing the frequency of fertilizer applications, scheduling fertilizer applications to avoid periods of excessive rainfall (rainy season), properly managing irrigation inputs, and recognizing the need for variable application rates.

- **Fisheating Creek Planning Unit**

General Description

The 444-square-mile Fisheating Creek Planning Unit encompasses portions of Highlands and Glades Counties from S.R. 66 southeastward to Lake Okeechobee. Significant waterbodies include Fisheating Creek and its tributaries, Gopher Gully, Gator Slough, and Cowbone Marsh. Fisheating Creek, which is 56 miles long, originates in western Highlands County and flows south into Glades County, where the stream turns east and flows into Lake Okeechobee. Several small tributary drainage ditches, gullies, and sloughs contribute surface runoff and baseflow along its length. The creek drains via gravity flow into Lake Okeechobee on the west shore, north of Moore Haven.

Communities in the planning unit include the villages of Venus and Palmdale. The southern half of the ABS is also located in this planning unit. Agriculture (mostly cattle grazing), forested lands, and wetlands dominate land uses. In recent years, citrus farming has expanded significantly. Of the five major watersheds that provide water flow into Lake Okeechobee, the Fisheating Creek watershed is the least affected by humans in terms of hydrology and land uses, and still contains many natural areas that are suited for preservation (SFWMD, 1989). **Table 3.9a** lists significant preserved natural areas in the Fisheating Creek Planning Unit, by county.

Water Quality Summary

The major water quality problems in the Fisheating Creek Planning Unit are elevated nutrients (expressed as chlorophyll *a*), low DO, and iron. Elevated nutrients may be attributable to agricultural activities. Low DO may either be caused by agricultural nutrient loading or may be naturally

Table 3.9a: Significant Preserved Natural Areas in the Fisheating Creek Planning Unit, by County

County	Preserved Natural Areas	Acres
Highlands		
	Archbold Biological Station (in part)	5,238
	Archbold Biological "Reserve"	3,648
	Lake Wales Ridge Wildlife and Environmental Area (in part)	9,935
	Platt Branch Mitigation Park Wildlife and Environmental Area	1,972
Glades		
	Fisheating Creek Conservation Easement (in part)	41,523
	Fisheating Creek Wildlife Management Area	18,272

occurring due to swamp water. The presence of iron may be caused by ground water seepage into surface waters.

Figure 3.7, a composite map of the planning unit, shows waters on the 1998 303(d) list, the Planning List and Verified List, and potential pollution sources. **Table 3.9b** summarizes the water quality assessment status of all waterbody segments in the planning unit.

Permitted Discharges and Land Uses

Point Sources. The Fisheating Creek Planning Unit has one permitted wastewater treatment facility, which discharges to ground water. The planning unit also has two delineated ground water contamination areas (for EDB) and one permitted landfill. **Figure 3.7** shows the permitted wastewater treatment facility and landfill in the planning unit. **Appendix E** lists the basins' domestic and industrial discharge facilities, along with their permitted flows, by planning unit. It also lists the landfills or solid waste facilities and delineated ground water contamination areas, by planning unit.

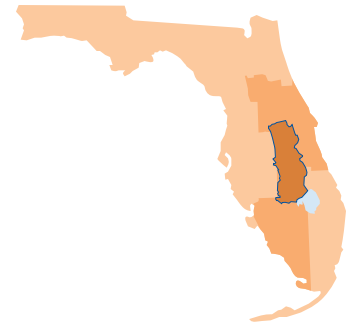
Nonpoint Sources. There are no regulated MS4s operating in the planning unit. Based on Level I land use summary information, the predominant land uses in the Fisheating Creek Planning Unit are agriculture (55.9 percent) and wetlands (21.5 percent). Other significant land uses include upland forests (14.7 percent) and rangeland (6.4 percent). The category most likely associated with the nonpoint discharges of pollutants and eroded sediments is agriculture, which comprises about 55.9 percent of the planning unit. **Table 3.9c** shows the land use percentages in the Fisheating Creek Planning Unit in a broad (Level I) GIS analysis, as identified by the SFWMD in 1999.

Ecological Summary

The Fisheating Creek Planning Unit is found within the **Kissimmee/Okeechobee Lowland** lake region, which includes most of the Kissimmee Valley, a lowland with prairie type grasslands, flatwoods, and some swamp forest. The wet prairies are seasonally flooded, and dry prairies on seldom-flooded flatland have mostly been converted to pasture. Pleistocene lagoonal deposits of coastal sand and shelly silty sand characterize the geology. Lakes are alkaline, eutrophic, and colored (Griffith et al., 1997).

Fisheating Creek is a narrow, meandering blackwater stream that flows southward out of the sandy ridges of Highlands County into Glades County, and then turns eastward to empty into Lake Okeechobee by way of Cowbone Marsh. In its natural state, Fisheating Creek inundated large areas of marsh during the wet season. As agriculture moved into the area, some wetlands were drained and the main creek channel was artificially widened. The Herbert Hoover Dike, constructed by the USACOE to enclose Lake Okeechobee, lines the north and south sides of Cowbone Marsh. Despite this dike, no structures impede the flow of Fisheating Creek into Lake Okeechobee, making this creek the only free-flowing tributary to Lake Okeechobee.

Extensive forested wetlands and floodplain marsh buffer Fisheating Creek for most of its route. Closer to Lake Okeechobee, some areas have



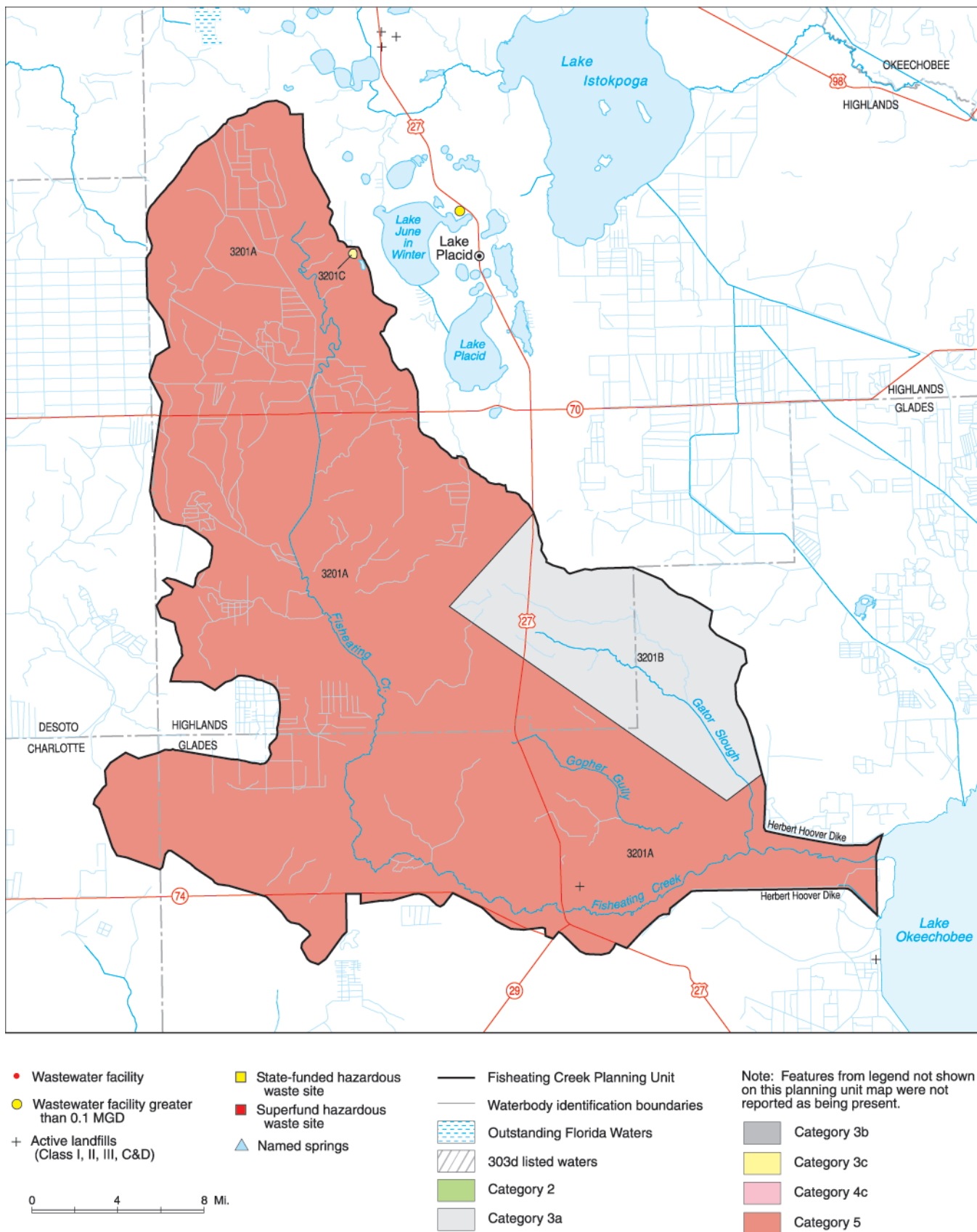


Figure 3.7: Composite Map of the Fisheating Creek Planning Unit, Including the 1998 303(d) List, Planning List and Verified List Waters, and Potential Pollution Sources

Table 3.9b: Integrated Water Quality Assessment Summary for the Fisheating Creek Planning Unit

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
3201A	Fisheating Creek	Stream	IIIF			Nutrients (Chlorophyll a), DO, Iron, Nutrients (Historical Chlorophyll)	Aldrin, Arsenic, Beta BHC, Biology, Cadmium, Chlordane, Conductance, Chromium 3, Copper, Demeton, Dieldrin, Endosulfan, Endrin, Fluoride, Fecal Coliforms, Guthion, Heptachlor, Lead, Lindane, Malathion, Mirex, Toxaphene	5
3201B	Gator Slough	Stream	IIIF					3a
3201C	Lake Crews–Open Water	Lake	IIIF		Copper, Lead		Arsenic, Conductance, Chromium 3, DO, Nutrients (Historic TSI), Nutrients (TSI), Zinc	3c

Notes:

¹The designation “stream” includes canals, rivers, and sloughs. The designation “lake” includes some marshes.

²The state’s surface water classifications are as follows:

Class I: Potable water supplies

Class II: Shellfish propagation or harvesting

Class III: Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife

Class IV: Agricultural water supplies

Class V: Navigation, utility, and industrial use (there are no state waters currently in this class)

³The EPA’s 305(b)/303(d) Integrated Report categories are as follows:

1—Attains all designated uses;

2—Attains some designated uses;

3a—No data and information are available to determine if any designated use is attained;

3b—Some data and information are available, but they are insufficient for determining if any designated use is attained;

3c—Meets Planning List criteria and is potentially impaired for one or more designated uses;

3d—Meets Verified List criteria and is potentially impaired for one or more designated uses;

4a—Impaired for one or more designated uses and the TMDL is complete;

4b—Impaired for one or more designated uses, but no TMDL is required because an existing or proposed pollutant control mechanism provides reasonable assurance that the water will attain standards in the future;

4c—Impaired for one or more designated uses but no TMDL is required because the impairment is not caused by a pollutant; and

5—Water quality standards are not attained and a TMDL is required.

⁴The assessment categories listed in this column represent the status of each WBID as a whole, **based on multiple parameters**. The hierarchy for assigning these categories is Category 5, then 4, then 3c, then 2, and then 3b, i.e., each WBID is assigned a category based on the highest category assigned to an individual parameter. For example, if WBID 9999 has total coliforms as Category 5, fecal coliforms as Category 3c, and coliforms–shellfish as Category 2, the single assessment call for the WBID is Category 5.

BHC = Benzene hexachloride

BOD = Biological oxygen demand

DO = Dissolved oxygen

F = Fresh water

TSI = Trophic State Index

**Table 3.9c: Level I Land Use in the Fisheating Creek Planning Unit**

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	0.8
2000	Agriculture (includes improved pasture)	55.9
3000	Rangeland	6.4
4000	Upland Forest	14.7
5000	Water (includes open bay)	0.4
6000	Wetlands	21.5
7000	Barren Land	0.1
8000	Transportation, Communications, and Utilities	0.2
Total		100

been converted to rangeland near the creek. Fisheating Creek provides habitat for rare and endangered species such as the Florida black bear, Florida panther, eastern indigo snake, Audubon's crested caracara, and Florida sandhill crane.

Water Quality Improvement Plans and Projects

Lake Okeechobee Protection Act. The 2000 Lake Okeechobee Protection Act establishes a restoration and protection program for Lake Okeechobee. The integrated management strategy to restore the lake is based on implementing phosphorus source control programs, including BMPs; phosphorus control and flow attenuation projects; and in-lake remediation activities. Elements include the following:

- Owner-implemented BMPs—These practices, described in the various BMP manuals adopted by DACS (Rule 5M-3), were selected to represent affordable, cost-effective practices that are not eligible for cost-sharing. Suites of owner-implemented BMPs are land-use specific. For example, cow/calf land uses may reduce phosphorus fertilization, improve grazing management, or result in better management of nitrogen and micronutrients. Additionally, the owner-implemented BMPs for urban areas include reductions in phosphorus fertilization and lawn maintenance activities.
- Typical cost-sharing BMPs that require future funding—BMPs for each agricultural landowner (for nontribal lands) will be identified through an assessment described in the BMP manuals prepared by DACS, nutrient management plans, or conservation plans through the USDA–NRCS. Examples include internal fencing to keep cows out of wetlands and streams, on-site retention facilities, and/or stormwater management systems. Because the implementation of these BMPs is beyond the financial capabilities of the average landowner, additional funding through cost-sharing is required for implementation. Bottcher and Harper (2003) describe the typical suite of agricultural BMPs for each land use and provide phosphorus

load reductions and costs per acre. The urban BMPs (retrofits) include creating retention/detention areas to address phosphorus loading from subdivisions.

- Phosphorus Source Grant Control Program—Lazy S Ranch—Stormwater detention/retention and the treatment of stormwater discharge with an iron humate filter.

Nitrogen Best Management Practices for Ridge Citrus. This manual, adopted in 2002, was developed to guide growers in the reduction of nitrate discharges from fertilization practices on ridge citrus groves. The purpose of the BMP is to minimize the risk of leaching nitrates from fertilizers to ground water. This can be accomplished by increasing the frequency of fertilizer applications, scheduling fertilizer applications to avoid periods of excessive rainfall (rainy season), properly managing irrigation inputs, and recognizing the need for variable application rates.

• Northwest Lake Okeechobee Planning Unit

General Description

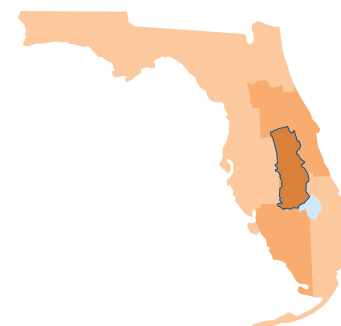
The 405-square-mile Northwest Lake Okeechobee Planning Unit is evenly split between Highlands and Glades Counties. It extends from Lake Istokpoga and C.R. 621, in a southeast direction, until reaching the northwest shore of Lake Okeechobee. Significant waterbodies in the planning unit include the C-41, C-41A, Harney Pond, and Indian Prairie Canals, and numerous other canals and wetlands in the Indian Prairie wetland system. Named communities include the outskirts of Lake Placid, the town of Lakeport, and the Brighton Seminole Indian Reservation. The reservation covers approximately 60 square miles near the northwest shore of Lake Okeechobee in Glades County.

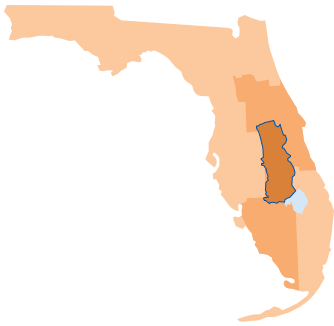
Agriculture (cattle and citrus), wetlands, and upland forest dominate land uses in the planning unit. Caladiums are also grown commercially, just east of the city of Lake Placid (see the discussion on **Lake Placid** and **caladiums** earlier in this chapter). Caladiums, originally from the rainforests of the Amazon Basin, are a popular shade-loving landscape plant with brightly colored leaves. They were first grown in the Lake Placid area in the early 1940s. The industry began to expand in the 1950s and today consists of over 1,200 acres. This acreage is owned and managed by 14 families, some of which have been producing caladiums for over 40 years. Several of the families have their third generation in the business (Greater Lake Placid Chamber of Commerce, 2004).

Table 3.10a lists significant preserved natural areas in the Northwest Lake Okeechobee Planning Unit, by county.

Table 3.10a: Significant Preserved Natural Areas in the Northwest Lake Okeechobee Planning Unit, by County

County	Preserved Natural Areas	Acres
Glades	Fisheating Creek Conservation Easement (in part)	41,523





Water Quality Summary

Based on available data, the major water quality problems in the planning unit are low DO and mercury in fish. Low DO may either be caused by agricultural nutrient loading or may be naturally occurring due to swamp water. Mercury contamination is thought to result from atmospheric deposition. Unfortunately, most of the WBIDs in the planning unit have no water quality data.

Figure 3.8, a composite map of the planning unit, shows waters on the 1998 303(d) list, the Planning List and Verified List, and potential pollution sources. **Table 3.10b** summarizes the water quality assessment status of all waterbody segments in the planning unit.

Permitted Discharges and Land Uses

Point Sources. The Northwest Lake Okeechobee Planning Unit has 11 permitted wastewater treatment facilities, all of which discharge to ground water. The planning unit also has 1 delineated ground water contamination area (for EDB) and no permitted landfills. **Figure 3.8** shows permitted wastewater treatment facilities in the planning unit. **Appendix E** lists the basin's domestic and industrial discharge facilities, along with their permitted flows, by planning unit. It also lists the landfills or solid waste facilities and delineated ground water contamination areas, by planning unit.

Nonpoint Sources. There are no regulated MS4s operating in the planning unit. Based on Level I land use summary information, the predominant land uses in the Northwest Lake Okeechobee Planning Unit are agriculture (77.5 percent) and wetlands (15.6 percent). Other significant land uses include upland forests (1.8 percent) and rangeland (1.2 percent). Of these land uses, the category most likely associated with the nonpoint discharges of pollutants and eroded sediments is agriculture, which comprises about 77.5 percent of the planning unit. **Table 3.10c** shows the land use percentages in the Northwest Lake Okeechobee Planning Unit in a broad (Level I) GIS analysis, as identified by the SFWMD in 1999.

Ecological Summary

The Northwest Lake Okeechobee Planning Unit is found within the **Kissimmee/Okeechobee Lowland** lake region, which includes most of the Kissimmee Valley, a lowland with prairie type grasslands, flatwoods, and some swamp forest. The wet prairies are seasonally flooded, and dry prairies on seldom-flooded flatland have mostly been converted to pasture. Pleistocene lagoonal deposits of coastal sand and shelly silty sand characterize the geology. Lakes are alkaline, eutrophic, and colored (Griffith et al., 1997).

The Northwest Lake Okeechobee Planning Unit encompasses southern Highlands and northeastern Glades Counties from the southern shore of Lake Istokpoga to the northwestern shore of Lake Okeechobee. The area is historically known as the Indian Prairie, and its native plant communities consist of dry prairie, wet prairie, herbaceous marsh, and hardwood hammocks. It supports such distinctive species as sandhill cranes, burrowing owls, river otters, crested caracaras, meadowlarks, and wading birds. Much

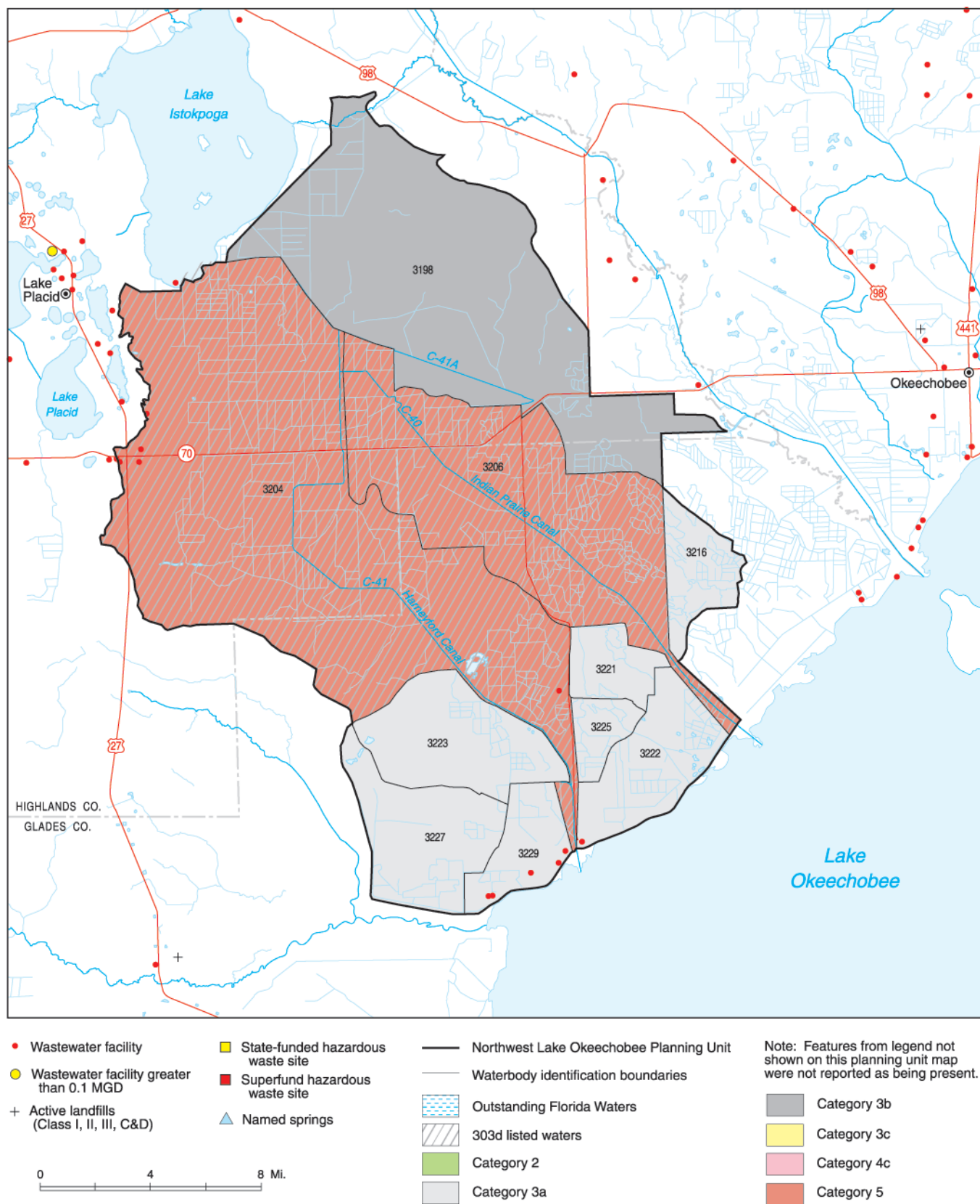


Figure 3.8: Composite Map of the Northwest Lake Okeechobee Planning Unit, Including the 1998 303(d) List, Planning List and Verified List Waters, and Potential Pollution Sources

Table 3.10b: Integrated Water Quality Assessment Summary for the Northwest Lake Okeechobee Planning Unit

WBID	Waterbody Segment	Waterbody Type ¹	Class ²	1998 303(d) List Parameters of Concern	Data Evaluation under the Impaired Surface Waters Rule Criteria ³			EPA's 305(b)/303(d) Integrated Report Assessment Category for WBID ⁴
					Potentially Impaired (Cat. 3c) for Listed Parameters	Verified Impaired (Cat. 4a, 4b, 4c, or 5) for Listed Parameters	Not Impaired (Cat. 2) for Listed Parameters	
3198	C-41A	Stream	IIIF					3b
3204	Harney Pond Canal	Stream	IIIF	DO, Nutrients, Lead		Nutrients (Chlorophyll <i>a</i>), DO	Arsenic, Cadmium, Chromium 3, Copper, Iron, Lead, Turbidity, Unionized Ammonia, Zinc	5
3206	Indian Prairie Canal	Stream	IIIF	Coliform Bacteria, DO, Nutrients	Fecal Coliforms, Total Coliforms	Nutrients (Chlorophyll <i>a</i>), DO	Arsenic, Cadmium, Chromium 3, Copper, Iron, Lead, Turbidity, Unionized Ammonia, Zinc	5
3216	L-59W	Stream	IIIF					3a
3221	L-60E	Stream	IIIF					3a
3222	L-49	Stream	IIIF					3a
3223	L-61E	Stream	IIIF					3a
3225	L-60W	Stream	IIIF					3a
3227	L-61W	Stream	IIIF					3a
3229	S-131	Stream	IIIF					3a

Notes:

¹The designation "stream" includes canals, rivers, and sloughs. The designation "lake" includes some marshes.

²The state's surface water classifications are as follows:

Class I: Potable water supplies

Class II: Shellfish propagation or harvesting

Class III: Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife

Class IV: Agricultural water supplies

Class V: Navigation, utility, and industrial use (there are no state waters currently in this class)

³The EPA's 305(b)/303(d) Integrated Report categories are as follows:

1—Attains all designated uses;

2—Attains some designated uses;

3a—No data and information are available to determine if any designated use is attained;

3b—Some data and information are available, but they are insufficient for determining if any designated use is attained;

3c—Meets Planning List criteria and is potentially impaired for one or more designated uses;

3d—Meets Verified List criteria and is potentially impaired for one or more designated uses;

4a—Impaired for one or more designated uses and the TMDL is complete;

4b—Impaired for one or more designated uses, but no TMDL is required because an existing or proposed pollutant control mechanism provides reasonable assurance that the water will attain standards in the future;

4c—Impaired for one or more designated uses but no TMDL is required because the impairment is not caused by a pollutant; and

5—Water quality standards are not attained and a TMDL is required.

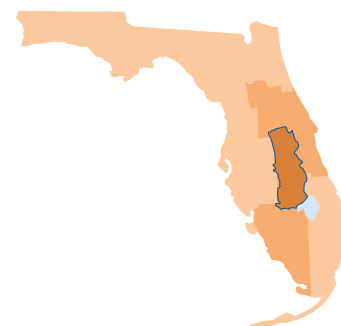
⁴The assessment categories listed in this column represent the status of each WBID as a whole, **based on multiple parameters**. The hierarchy for assigning these categories is Category 5, then 4, then 3c, then 2, and then 3b, i.e., each WBID is assigned a category based on the highest category assigned to an individual parameter. For example, if WBID 9999 has total coliforms as Category 5, fecal coliforms as Category 3c, and coliforms-shellfish as Category 2, the single assessment call for the WBID is Category 5.

DO = Dissolved oxygen

F = Fresh water

Table 3.10c: Level I Land Use in the Northwest Lake Okeechobee Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	1.6
2000	Agriculture (includes improved pasture)	77.5
3000	Rangeland	1.2
4000	Upland Forest	1.8
5000	Water (includes open bay)	1.0
6000	Wetlands	15.6
7000	Barren Land	1.2
8000	Transportation, Communications, and Utilities	0.1
Total		100



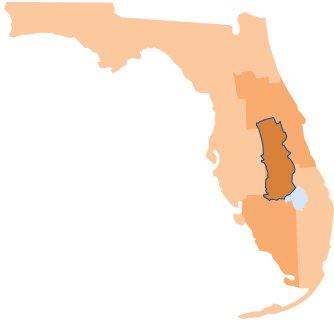
acreage has been converted to improved pasture and citrus groves in recent years, as agriculture is the dominant land use. The principal agricultural activities are cattle ranching, citrus production, and caladium farming.

Of particular note in the planning unit is the presence of the MacArthur Agro-Ecology Research Center. The center is located at the 10,300-acre Buck Island Cattle Ranch, which is on a long-term lease to the ABS from the John D. and Catherine T. MacArthur Foundation. The center is dedicated to a mission of long-term research, education, and outreach related to the ecological and social value of subtropical grazing lands. The ranch is operated at a full commercial scale, allowing researchers to investigate ecological interactions under the economic realities of a working agricultural landscape. It also provides researchers the opportunity to evaluate the relationship between economic and ecological factors and how these change over time.

Water Quality Improvement Plans and Projects

Lake Okeechobee Protection Act: The 2000 Lake Okeechobee Protection Act establishes a restoration and protection program for Lake Okeechobee. The integrated management strategy to restore the lake is based on implementing phosphorus source control programs, including BMPs; phosphorus control and flow attenuation projects; and in-lake remediation activities. Elements include the following:

- Owner-implemented BMPs—These practices, described in the various BMP manuals adopted by DACS (Rule 5M-3), were selected to represent affordable, cost-effective practices that are not eligible for cost-sharing. Suites of owner-implemented BMPs are land-use specific. For example, cow/calf land uses may reduce phosphorus fertilization, improve grazing management, or result in better management of nitrogen and micronutrients. Additionally, the owner-implemented BMPs for urban areas include reductions in phosphorus fertilization and lawn maintenance activities.



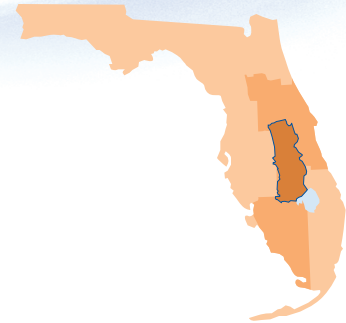
- Typical cost-sharing BMPs that require future funding—BMPs for each agricultural landowner (for nontribal lands) will be identified through an assessment described in the BMP manuals prepared by DACS, nutrient management plans, or conservation plans through the USDA–NRCS. Examples include internal fencing to keep cows out of wetlands and streams, on-site retention facilities, and/or stormwater management systems. Because the implementation of these BMPs is beyond the financial capabilities of the average landowner, additional funding through cost-sharing is required for implementation. Bottcher and Harper (2003) describe the typical suite of agricultural BMPs for each land use and provide phosphorus load reductions and costs per acre. The urban BMPs (retrofits) include creating retention/detention areas to address phosphorus loading from subdivisions.

This category includes phosphorus reductions from lands within the Seminole Brighton Reservation. At this time, the Seminole Tribe, as a sovereign nation, is not participating in the state cost-sharing BMP program, but may participate in the future. The Seminole Tribe is currently using federal cost-sharing programs to implement BMPs, which they have estimated will achieve a 25 percent reduction in phosphorus loading.

- Isolated Wetland Restoration Project—Wetland restoration at the Williams Ranch.
- Wetland Reserve Program—Wetland restoration efforts are ongoing at the Buck Island Ranch Site.

Chapter 4: Evaluation of Ground Water/Geologic Influences on Impaired Waterbodies

This chapter evaluates the potential influences of ground water and the natural geologic, soil, and/or ground water chemistry on surface water quality in the Kissimmee River and Fisheating Creek Basins. A particular focus in this report is the influence of ground water quality on surface waters on the Verified List. However, the chapter also describes some of the more significant ground water quality issues in the basin that pertain to the potable ground water resource. The chapter contains a general and by-planning-unit discussion and presentation of information. It also includes recommendations for alternative listing status for waterbodies that exceed Impaired Surface Waters Rule listing thresholds due to natural conditions. The listing parameters receiving scrutiny include nutrients (identified as chlorophyll *a* in streams/canals and Tropic State Index [TSI] in lakes), dissolved oxygen (DO), and metals (iron, lead, and copper). The report discusses the soils, geology, and ground water setting in the basin. It then describes ground water quality issues of particular concern. Next, for each parameter, it discusses the potential for natural conditions to affect surface water quality and, for each planning unit, ground water quality data as they pertain to the basin's impaired and potentially impaired waterbodies.

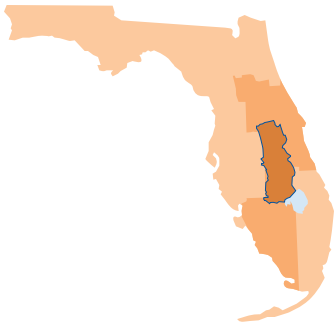


Geology and Ground Water

Setting

The Kissimmee River and Fisheating Creek Basins lie in the Okeechobee Plain, which dips very gradually to the south and is one of the flattest parts of the United States (White, 1970). At its northern boundary the elevation is 30 to 40 feet above the National Geodetic Vertical Datum (NVGD) and slopes gently southward to an elevation of 20 feet above NVGD at the north shore of Lake Okeechobee. The narrow northern portion of this plain consists of the Kissimmee River Valley. The Lake Wales Ridge, which forms the most prominent topographic feature of the Florida peninsula, rises abruptly above the Okeechobee Plain to an elevation of over 150 feet NVGD. The Lake Wales Ridge dominates the topography along the western boundary of the basin.

Surface waterbodies in these basins are in contact with the surficial aquifer system, which consists of undifferentiated sediments that include unconsolidated, medium-grained quartz sand with clay and shell. The base of the surficial aquifer system varies from approximately 40 feet below the land surface in the northernmost portion of the basin, to a depth of over 200 feet below the land surface in the southernmost portion of the basin.



The base of the surficial aquifer system is defined by the top of Miocene-age material, which includes the Hawthorn Group and a remnant of the Peace River Formation in the Lake Wales Ridge area of Polk County. This material includes silts and clays of low permeability that retard the movement of water between the overlying surficial aquifer system and the underlying Floridan aquifer system. Depth to ground water is greatest on the Lake Wales Ridge, yet ground water is particularly vulnerable to contamination from surface sources here because the surficial aquifer consists mainly of sand. Many of the lakes on the ridge are in closed depressions and receive inflows mainly from ground water seepage and precipitation. Lakes in the rest of the Kissimmee River Basin receive inflows from streams and canals, ground water seepage, direct runoff, and precipitation. Many areas within the Kissimmee River and Fisheating Creek Basins to the east and south of the ridge are subject to high water-table conditions and poor drainage. As discussed previously in the report, artificial drainage has been used to make many of these areas suitable for agriculture.

Noteworthy Ground Water Quality Issues

The Lake Wales Ridge area of the Kissimmee River Basin is a well-known area of ground water contamination because the highly vulnerable ground water setting coincides with the intensive agricultural practices that occur there. Citrus farming in this area has historically required heavy applications of fertilizers and agrichemicals because of sandy soils and other challenges posed by the setting. As a result, nitrate concentrations in ground water are uniformly elevated and several highly mobile pesticides, most notably ethylene dibromide (EDB) and bromacil have contaminated potable ground water supplies in many wells within the Lake Wales Ridge citrus area. According to the Department's Water Supply Restoration Program (WSRP) database, approximately 1,000 private potable supply wells have been contaminated by nitrate (exceeding the maximum contaminant level [MCL] of 10 milligrams per liter [mg/L]), approximately 800 exceeded the MCL of 0.02 micrograms per liter ($\mu\text{g/L}$) for EDB, and approximately 60 exceeded the ground water guidance concentration of 90 $\mu\text{g/L}$ for bromacil. **Figure 4.1** shows the locations of private drinking water wells in the basin that exceeded MCLs for these 3 contaminants. The WSRP, in cooperation with the Florida Department of Health, monitors water quality in private wells and provides treatment systems or alternative water sources for affected well owners. In the past several years, agricultural best management practices have promoted more careful application of fertilizers, EDB has been entirely banned from use, and bromacil has essentially been restricted from citrus applications in this area.

In an interagency ground water monitoring study (U.S. Geological Survey [USGS], Florida Department of Agriculture and Consumer Services [DACS], and Southwest Florida Water Management District) on the Lake Wales Ridge, data from 1999 to 2003 showed detections of several other pesticides in ground water samples. These included norflurazon and desmethyl norflurazon (84 percent of wells), simazine (61 percent), diuron (52 percent), deisopropylatrazine (CEAT) (39 percent), aldicarb sulfoxide (32 percent), aldicarb sulfone (32 percent), metalaxyl (10 percent), aldicarb

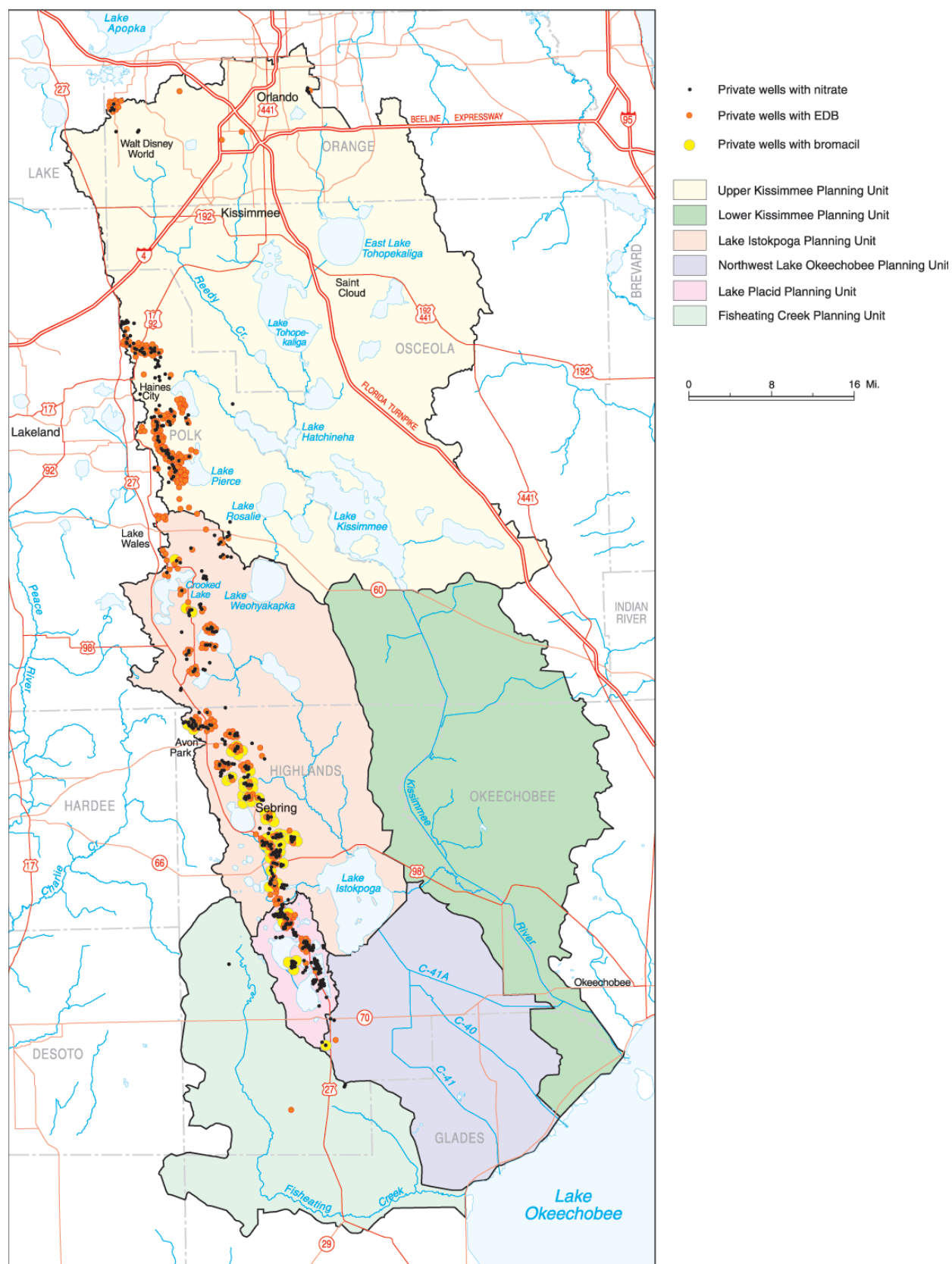
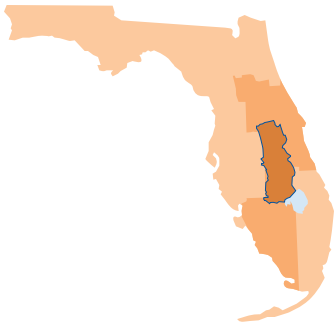


Figure 4.1: Nitrate, EDB, and Bromacil in Private Drinking Water Wells in Kissimmee River and Fisheating Creek Basins

Note: Constituent concentrations in reported wells exceed applicable ground water maximum contaminant level or ground water guidance concentration.



(6 percent), imidacloprid (6 percent), and thiazopyr monoacid (6 percent). The occurrence and potential adverse effects of these pesticides are being monitored by DACS.

Assessment Results, by Parameter

This section discusses the assessment results for nutrients, DO, and metals (iron, lead and copper).

Nutrients

The pollutants responsible for excessive chlorophyll growth, measured as high chlorophyll *a* levels in streams and high TSI values in lakes, are phosphorus and nitrogen. Both of these nutrients exist naturally in the environment, but both can be pollutants released by anthropogenic activities.

Phosphorus occurs naturally in clayey geologic material and in ground water that is in contact with phosphatic material. In the Kissimmee River Basin, particularly the western part along the Lake Wales Ridge (the Istokpoga Planning Unit and the western edge of the Upper Kissimmee Planning Unit), residual deposits of phosphate occur in shallow soil and cause public health concerns due to the release of radon (GEOMET, 1987). **Figure 4.2** shows areas where active and passive radon controls are recommended. Residual material from undifferentiated deposits of the Peace River Formation, located in the western part of the Kissimmee River Basin, may be a source of the phosphate (Campbell, 1986). Statewide, the highest phosphorus levels occur in organic soils (Chen and Ma, 2001), where phosphorus has an affinity for organic carbon, iron, and aluminum. These organic soils occur as peat and muck deposits in lake beds and wetlands, and along the Kissimmee River. The high phosphorus content (350 milligrams per kilogram [mg/kg] geometric mean value) in undisturbed organic soils (Histosols) can be from natural historical accumulations or more recent anthropogenic sources, or a combination. Land use in the vicinity may dictate the extent to which these accumulations are characterized as naturally occurring. In agricultural areas, fertilizer applications and livestock waste can release phosphorus to surface waters via runoff and ground water seepage. Also, activities that drain or disturb phosphorus-containing peat and muck may also allow the conversion of organic phosphorus to the inorganic form that can be released into surface water. Ground water data available for this assessment include dissolved phosphorus and dissolved orthophosphate.

Nitrogen also occurs naturally in both organic and inorganic forms, but elevated detections of inorganic nitrogen in ground water (nitrate, nitrite, ammonia) are typically associated with pollutant sources. As discussed previously, nitrate and nitrate+nitrite (both reported as “nitrate”) are particularly elevated in the citrus-growing region along the Lake Wales Ridge. In their 1999–2003 monitoring, as part of the Lake Wales Ridge Monitoring Study, USGS found that 61 percent of their wells exceeded the maximum contaminant level (MCL) for nitrate, which is reasonably consistent with data from the Department’s ambient monitoring program.

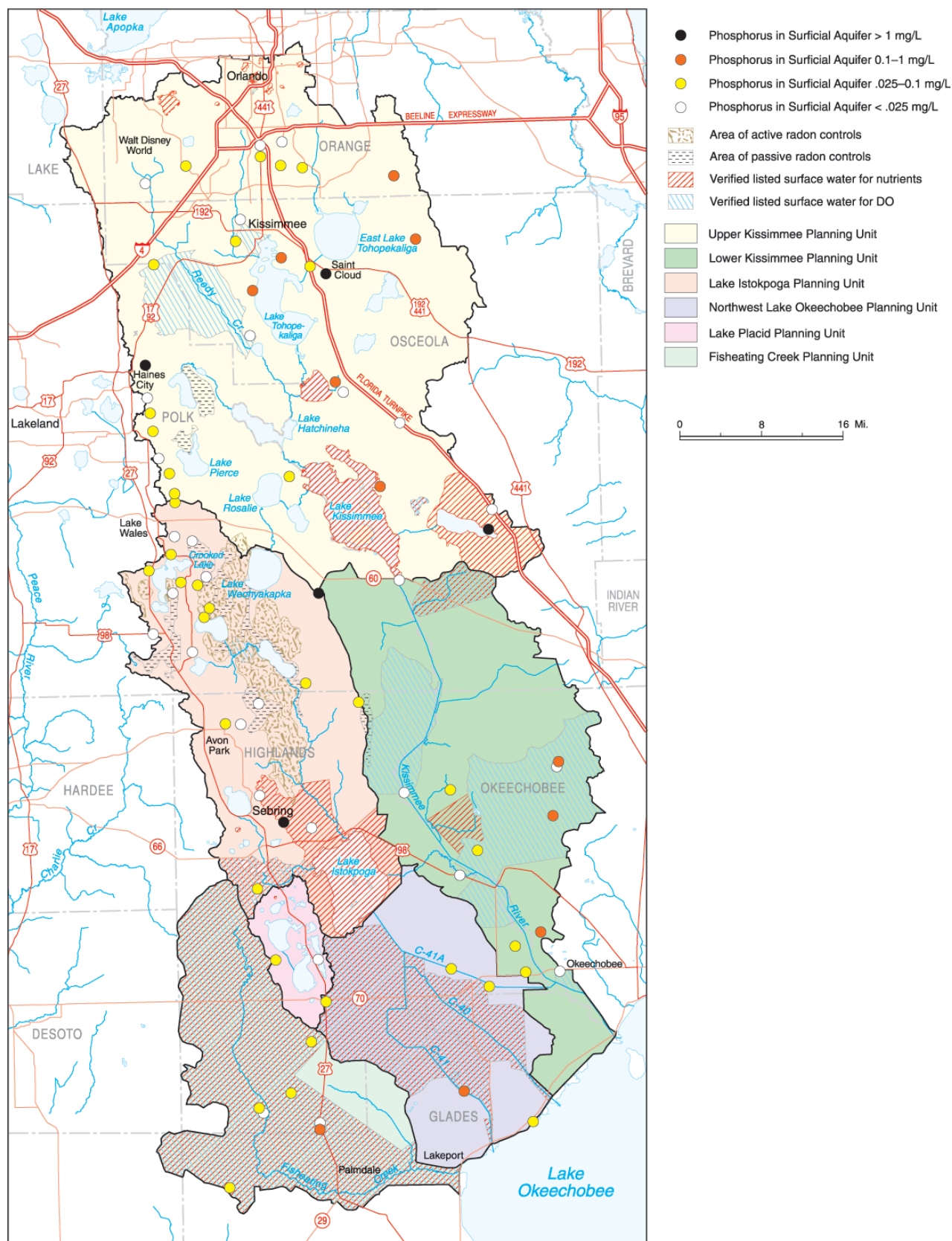


Figure 4.2: Phosphorus Concentrations in the Surficial Aquifer Relative to TSI- and DO-listed Surface Waters

Note: Phosphorus data on map are for dissolved phosphorus and/or dissolved orthophosphate. Ground water data shown on map are from Department's ambient monitoring networks.

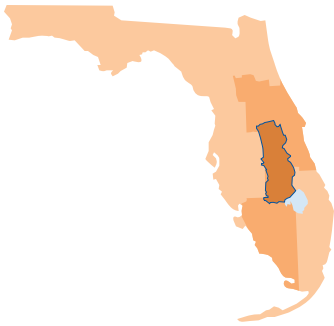


Figure 4.3 shows the distribution of nitrate in ground water samples from ambient monitoring network wells collected by the Department and water management district representatives. Ammonia-nitrogen occurs under natural conditions, but elevated concentrations are related to sources. It is found at lower levels in the ridge area, where the depth to water is greatest, even where nitrogen fertilizers may have been applied heavily. In other parts of the Kissimmee River and Fisheating Creek Basins, where water tables are closer to the land surface, ammonia concentrations in general are higher, and those associated with sources may be greater than 1 mg/L. **Figure 4.3** also shows the distribution of ammonia in the basin. When found at elevated concentrations in ground water, nitrate and ammonia usually come from pollutant sources such as fertilizers, livestock waste, domestic wastewater, or a combination thereof. When high detections of nitrate or ammonia occur along with elevated phosphorus, they may all be caused by anthropogenic sources or a combination of natural and anthropogenic sources. These conditions are discussed by planning unit in a following section.

Dissolved Oxygen

DO levels can be depressed in surface water systems because of nutrient enrichment and/or biological oxygen demand (BOD). Low DO can also be attributed to poor water circulation caused by stream channelization or inhibited flow. In addition, ground water inflows, where significant, can lower DO levels in surface water systems. This is more likely to occur in canals that have been excavated to lower ground water levels and therefore have a significant ground water component. DO levels in ground water are always much lower than the surface water standard. Based on this evaluation, it does not appear that depressed surface water DO levels in any of the DO-listed waterbodies are clearly related to significant ground water inflows. Nutrient and/or BOD levels point to the presence of causative pollutants in most cases and naturally stagnant flow conditions in several waterbodies.

Metals

Iron is the metal most typically identified with a natural source, and elevated iron concentrations are common in the surficial aquifer throughout the state. **Figure 4.4** shows iron concentrations in ambient monitoring wells in the surficial aquifer of the Kissimmee River and Fisheating Creek Basins. Iron oxides leached from clay by slightly acidic rainwater occur naturally in shallow ground water. Iron solubility and mobility are enhanced where ground water pH is low. In soil, elevated iron concentrations can be associated with iron-rich, clayey subsoil or with organic material. In both cases, conditions are acidic.

Like phosphorus, iron accumulates in peat and organic material under certain conditions and, statewide, organic soils (Histosols) have the highest iron concentrations (3.19 grams per kilogram [g/kg]) (Chen and Ma, 2001). Iron is bound to organic material through chelation and can concentrate within organic material as it migrates from iron-rich sources, primarily mineral soils containing iron oxide. In both ground water and

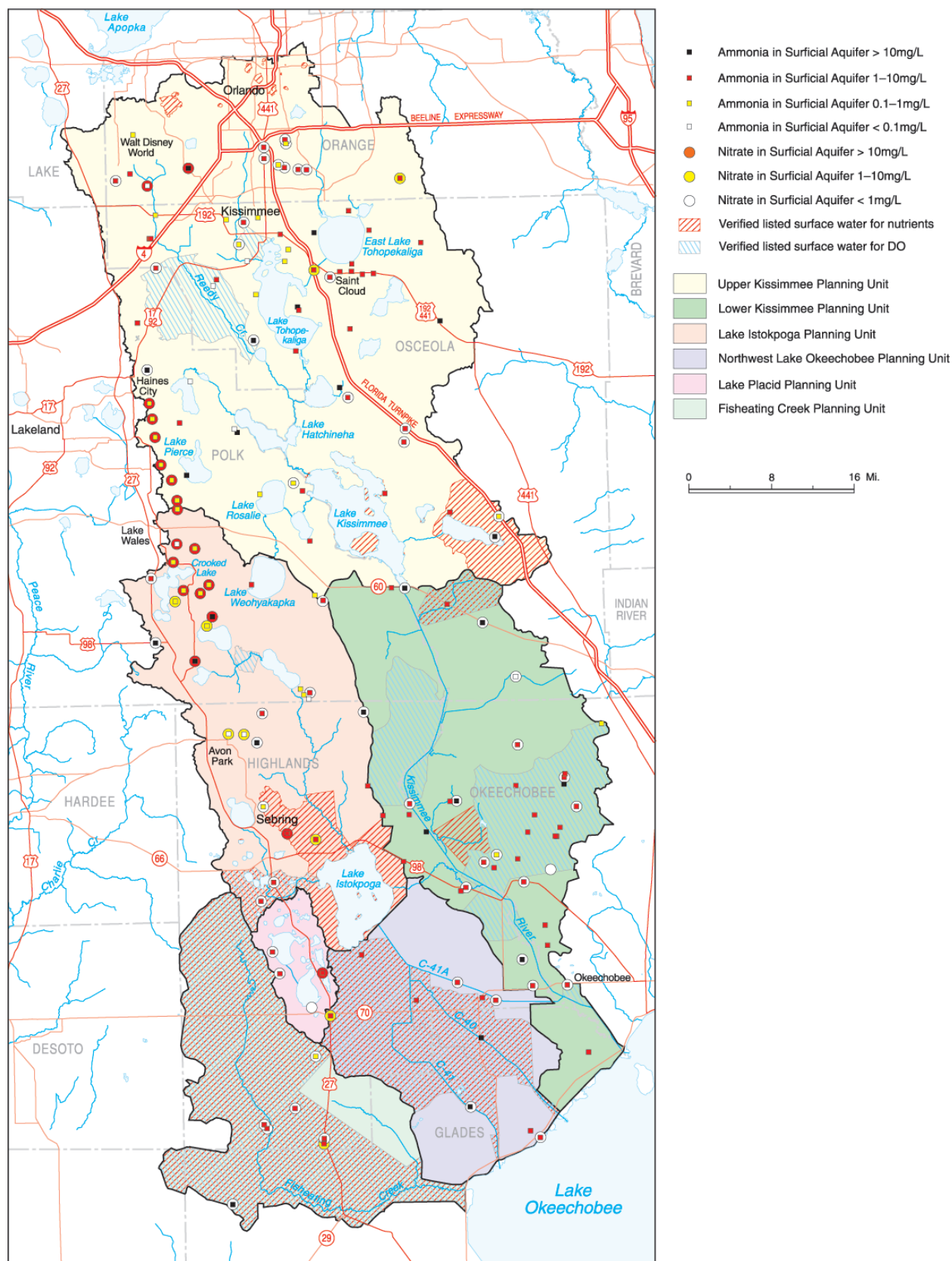


Figure 4.3: Nitrate and Ammonia Concentrations in the Surficial Aquifer Relative to TSI- and DO-listed Surface Waters

Note: Nitrate data on map represent nitrate+nitrite-dissolved, nitrate+nitrite total, and/or nitrate-total. All ammonia data are for ammonia-dissolved. Ground water data shown on map are from Department's ambient monitoring networks.

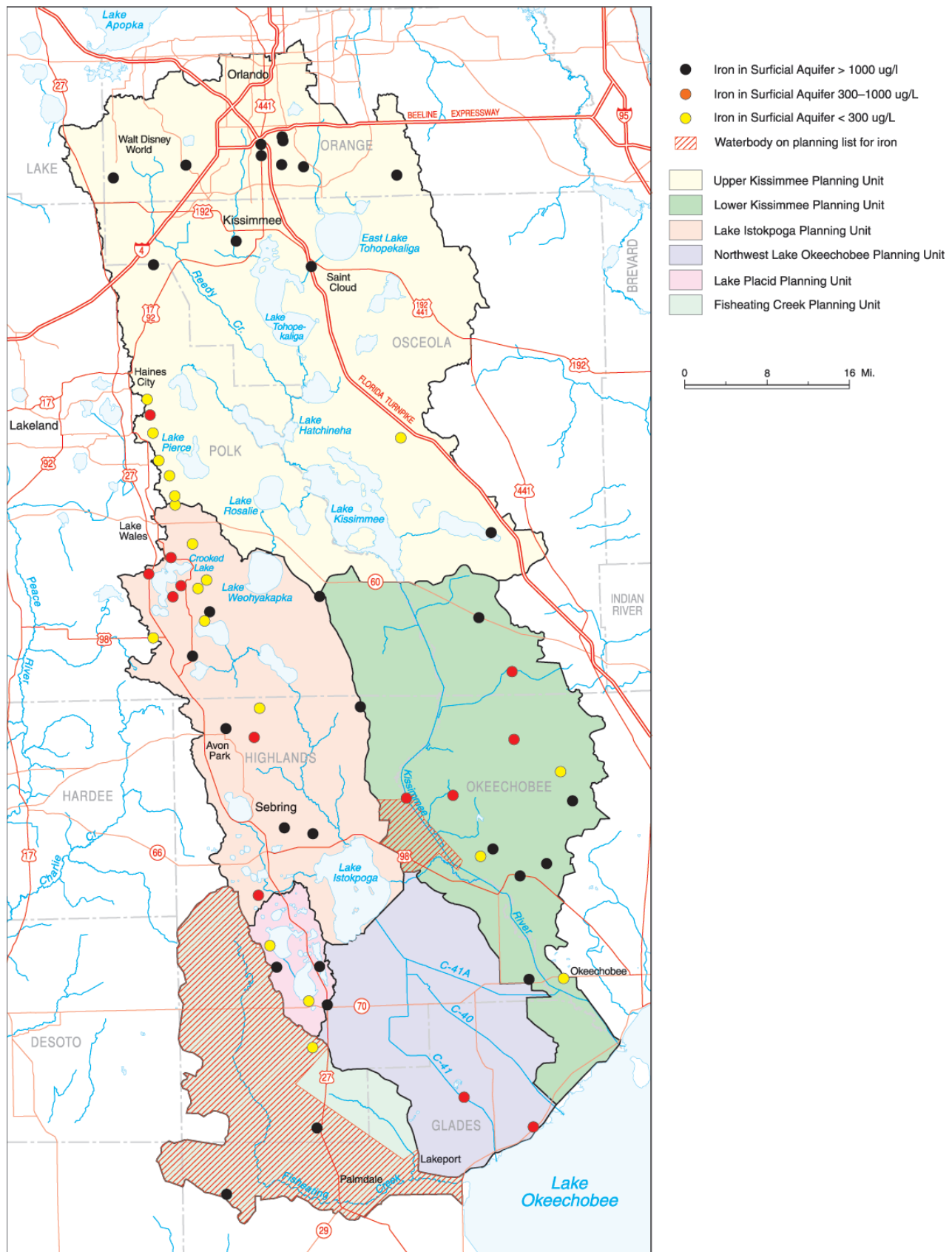


Figure 4.4: Iron Concentrations in the Surficial Aquifer Relative to Listed Surface Waters

Note: Ground water data shown on map are from Department's ambient monitoring networks.

surface water, elevated iron coincides with low pH, high organic content, and high color. The coincidence of iron in surface water with potentially iron-rich soil/organic material also often correlates with elevated concentrations in ground water. Distribution of iron concentrations in the surficial aquifer is shown in **Figure 4.4**. Quality assurance concerns exist for iron data from wells because iron concentrations in ground water samples can be enhanced by well casing materials and improper sampling technique. Outlying iron concentrations were not included in this evaluation.

Lead and copper can occur naturally at low concentrations in soil and ground water, but if present in ground water samples at higher concentrations, they may be associated with pollutant sources. Both can be associated with industrial or waste sites and both can be associated with pesticides. Copper, in particular, is a widely used fungicide in the citrus industry and is also frequently used for algae and aquatic plant control in private lakes, stormwater ponds, and canals. Like iron, concentrations of both of these metals in historical monitoring well data sets can also be qualified due to well construction/sampling artifacts, and quality assurance issues should also be examined.

Overview of Ground Water Quality by Planning Unit

Table 4.1 presents ground water quality statistics for all of the basin's planning units. The data were obtained from the Department's Oracle-Based Ground Water Information System (OGWIS) ambient monitoring database and from the DBHydro database maintained by the South Florida Water Management District (SFWMD). Data retrieved from OGWIS were from surficial aquifer system wells that were sampled by water management districts or Department staff. DBHydro data are from a combination of aquifer sources, mainly the surficial aquifer. Maps developed for this report are from the OGWIS database only.

Median values for all planning units with data indicate that dissolved phosphorus in ground water could pose a significant concern to surface water quality in areas where ground water and surface water interact. Approximately 30 percent of dissolved phosphorus concentrations in the Department's dataset for the surficial aquifer in these basins exceeded 0.1 mg/L. In most of the basins' nutrient-enriched lakes, phosphorus is the limiting nutrient, and the median dissolved ground water values in all of the planning units are comparable with the total phosphorus (TP) medians for nutrient- and DO-listed waterbodies. To varying degrees, elevated phosphorus in ground water may be attributable to its natural occurrence in the aquifer media. However, fertilizer application and livestock waste undoubtedly also contribute in some areas, particularly areas where intense activities occur on soils with low clay or organic content.

Median ammonia concentrations in the surficial aquifer, shown in **Table 4.1**, appear to be representative of regional background conditions for most of the Kissimmee River Basin, although spikes may be due to pollutant sources. Median nitrate concentrations in most of the planning units are relatively low except in two planning units. Median levels of nitrate and nitrate+nitrite in the Lake Istokpoga and Lake Placid Planning

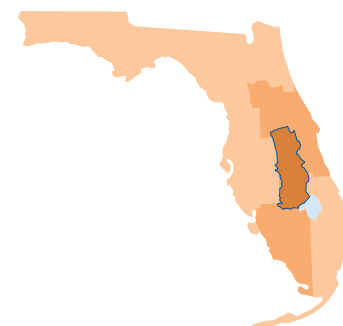


Table 4.1: Ground Water Statistics for Planning Units in the Kissimmee River and Fisheating Creek Basins

	Upper Kissimmee		Lower Kissimmee		Lake Istokpoga		Lake Placid		Fisheating Creek		Northwest Lake Okeechobee	
	# Wells	Median	# Wells	Median	# Wells	Median	# Wells	Median	# Wells	Median	# Wells	Median
Department												
Phosphorus-dissolved	28	0.043	9	0.043	23	0.037	2	0.115	8	0.034	4	0.08
Ortho-phosphorus-dissolved	33	0.083	15	0.005	23	0.047	3	0.065	9	0.026	4	0.037
Nitrite+nitrate-dissolved	30	0.019	9	0.01	23	5.4	2	25.01	8	0.027	3	0.05
Nitrite+nitrate-total	12	0.144	8	0.013	7	0.99	4	0.016	3	0.036	3	0.045
Nitrate-total	9	0.083	7	0.002	4	0.071	2	0.087	3	0.032	3	0.034
Ammonia-dissolved	33	0.18	14	0.43	24	0.1	3	0.38	9	0.46	3	0.79
Iron-total (µg/L)	22	1,600	13	720	20	459	4	980	4	5,260	3	630
Lead-total (µg/L)	22	13.5	12	3.16	21	13	4	50	4	2.75	3	3
Copper-total (µg/L)	22	5.75	12	6.7	21	5	4	13.95	4	3.1	3	14
Dissolved oxygen	22	2.80	10	0.25	21	0.96	2	0.17	7	0.47	5	0.33
SFWMD												
Ortho-phosphorus	26	0.041	23	0.019	—	—	—	—	4	0.025	6	0.029
Nitrite+nitrate	44	0.154	28	0.023	—	—	—	—	39	0.023	28	0.021
Nitrate-total	40	0.13	33	0.013	—	—	—	—	32	0.013	25	0.029
Ammonia-dissolved	53	0.25	38	0.41	12	0.23	2	0.21	2	0.65	8	0.22
Iron-total	16	900	31	510	—	—	—	—	—	—	—	—

Notes: Department data were obtained from the OGWIS database using the Hydroport retrieval system; medians are based on maximum value per well. SFWMD data was obtained from the DBHydro database maintained by the District; some data were redundant with the Department's, and aquifer information was not available. All parameter concentrations are reported in milligrams per liter (mg/L) except for metals, which are reported in micrograms per liter (µg/L). Dissolved versus total parameter concentrations are not differentiated in the SFWMD dataset.

OGWIS = Oracle-Based Ground Water Information System

Units, which include part of the Lake Wales Ridge citrus region, reflect significantly affected ground water quality due to fertilizer use.

For iron, median values in the surficial aquifer wells are high in all of the basin's planning units. Where ground water to surface water pathways exist, elevated iron in ground water is also a source of elevated iron in surface waterbodies. Median concentrations of lead and copper are high in the Lake Placid Planning Unit; however, these medians are based on a relatively small number of wells. Low DO is a natural condition in ground water and is documented as such in all planning units.

Inspecting ground water data in each planning unit, comparing this information with data on surface waters on the Verified List, and analyzing other planning unit-specific characteristics may help to determine more

instances where naturally occurring conditions influence surface water quality.

Upper Kissimmee Planning Unit

According to the Verified List 16 lakes in the planning unit are impaired by nutrients (TSI), and 3 lakes and 2 streams are listed for low DO. Phosphorus is the limiting nutrient in most of the TSI-listed lakes. In addition, one lake is listed for lead and one for copper.

Overall, median dissolved phosphorus and orthophosphate values for the surficial aquifer in the planning unit are similar to the TP medians in a number of lakes, and there are several examples where phosphorus “spikes” in ground water coincide with high phosphorus in lakes. Phosphorus concentrations are elevated (above 0.1 mg/L) in shallow ground water in the vicinity of several of the larger lakes that are listed for nutrients: Lakes Cypress (waterbody identification number [WBID] 3180A), Lake Kissimmee (WBID 3183B), and Lake Marian Outlet (WBID 3184A). Urban and agricultural land uses near all of these lakes (consisting of both urban and agricultural) could contribute to elevated phosphorus levels.

Nitrate and ammonia distribution maps also show evidence of impacts to ground water in the vicinity of all of these lakes. In the ridge area along the western margin of the planning unit, nitrate levels in several surficial aquifer monitoring wells, plus a significant portion of the 1,000 private drinking water wells on the Lake Wales Ridge overall, exceed the drinking water MCL of 10 mg/L. Elsewhere in the planning unit, ammonia levels range between 0.1 and 1 mg/L in most surficial aquifer depth wells. Wells with elevated ammonia (>1 mg/L) are located near Lakes Cypress and Marian Outlet.

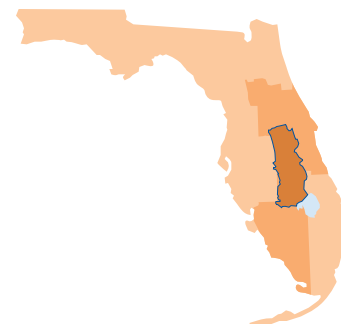
One lake, Mary Jane (WBID 3171A), is listed for lead and one lake, Red Lake (WBID 3171C), is listed for copper. Available ground water data show above-background concentrations in many areas of the basin for these metals. Above-background levels of copper were found in monitoring wells near Reedy Creek North, so ground water may provide a conveyance for copper in this area if there are sources. There are no wells with lead data in the vicinity of the surface waterbodies listed for lead.

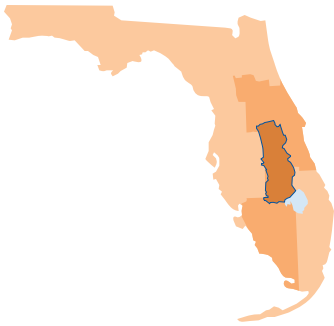
Ground water seepage to the lakes of the Upper Kissimmee Planning Unit has not been quantified, although Lakes Tohopekaliga and Kissimmee have been extensively modeled. Based on a ground water–surface water comparison of the median concentrations of several conservative ions, ground water seepage may account for approximately 30 percent of the water in the two lakes.

Lower Kissimmee Planning Unit

Three stream and canal segments in the planning unit are on the Verified List because of low DO and two streams are listed for nutrients (chlorophyll *a*).

Several of the segments listed due to low DO have very high median phosphorus concentrations. All are either colimited by total nitrogen (TN) and TP, or they are TN limited. In this planning unit, phosphorus detections in ground water are scattered and less prevalent than in the Upper





Kissimmee Planning Unit. However, ammonia detections in several cases are greater than 1 mg/L. The predominant land use is agriculture, mostly cattle farming. Livestock wastes generate significant amounts of phosphorus and ammonia. The cattle operations in the planning unit could be significant sources of elevated nutrients in shallow ground water and surface water.

No published material was obtained to document the extent of ground water seepage into the Kissimmee River. However, a ground water–surface water comparison of median concentrations of alkalinity, chloride, conductivity, and sodium concentrations suggests that ground water seepage may account for approximately 30 percent of the water in the river. Because the river is a controlled system, hydrograph data could not be used to estimate base flow.

Lake Istokpoga Planning Unit

Most waterbodies in this planning unit are lakes that lie within the Lake Wales Ridge and areas along the eastern and southern flanks of the ridge. The planning unit includes three lakes on the Verified List for nutrients (TSI) and two streams on the Verified List for low DO, one of which is also listed for nutrients (chlorophyll *a*).

As stated in Chapter 3, most of the planning unit includes the Lake Wales Ridge, a major citrus-growing region of the state. Fertilizer application on the sandy ridge has resulted in high levels of nitrate in the surficial aquifer and may have also caused elevated phosphorus in ground water. Based on the radon survey, there are high levels of radon in an extensive area on the eastern flank of the ridge covering the central part of the planning unit. This area may have a natural abundance of phosphate in the soil. Livingston Creek (WBID 1685B) lies in this area and is on the Verified List (for nutrients and low DO) but is also adjacent to a dairy farm. Relatively high concentrations of phosphorus are present in wells near several of the other listed waters in the southern part of the planning unit (outside of the high-radon area) and are most likely related to agriculture. Arbuckle Creek (WBID 1761) is located near wells with elevated phosphorus.

The USGS (Sacks, Swancar, and Lee, 1998; Sacks, 2002) used an isotope mass-balance method to estimate the ground water contribution to several lakes in the planning unit. Lakes Clinch (WBID 1706) and Angelo (WBID 1813F), in this planning unit, both had estimated ground water contributions of 39 to 44 percent and Lake Josephine (WBID 1800B), listed for nutrients (TSI), had an estimated ground water input of 80 to 83 percent, according to the USGS study. Comparisons between ground water and surface water medians for several conservative chemical tracers for lakes in the planning unit suggest that 25 to 50 percent of the inflows into the lakes are from ground water.

Lake Placid Planning Unit

This small planning unit consists of a lake area south of the Lake Wales Ridge in which the predominant land uses are urban/built-up and citrus groves. It includes one small lake on the Verified List for nutrients.

Nutrients in the area's lakes are most likely related to land uses, and there are no known natural sources of phosphate in the planning unit, except for those areas with muck soils. Ground water in the surficial aquifer in the vicinity of Lake Placid, which is listed for nutrients, contains somewhat elevated levels of nitrate and phosphorus. Sacks (2002) provided a ground water seepage estimate for one lake in this planning unit. The chemical mass balance method was used by Sacks to estimate that approximately 12 percent of the total inflows into Grassy Lake were from ground water.

Fisheating Creek Planning Unit

This planning unit contains Fisheating Creek and its tributaries. The main land use/land covers are cropland/pastureland, pine tree plantation, and rangeland. Fisheating Creek (WBID 3201A) is on the Verified List for DO, nutrients (chlorophyll *a*), and iron.

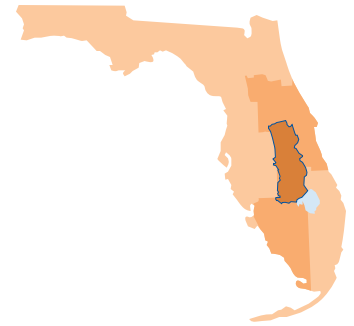
Median nutrient concentrations in the creek are elevated (TN and TP at 1.62 and 0.16 mg/L, respectively). Median ammonia, nitrate, and phosphorus values for the surficial aquifer are lower in most of the wells with data, except for a couple of "hot spots" (where ammonia is greater than 1 mg/L and phosphorus is greater than 0.4 mg/L) that suggest some significant influence by agricultural activities.

As is typical of other areas in this basin, iron occurs at high concentrations in shallow ground water. Two of the three wells in the planning unit with iron data have iron concentrations well over 1,000 mg/L, and the third well is actually much deeper and not actually representative of the shallow zone that comes in contact with surface water. Fisheating Creek is relatively high in color and organic carbon and has a slightly acidic pH. These conditions are favorable for iron from ground water seepage to occur in the dissolved state in the creek at relatively high concentrations.

Northwest Lake Okeechobee Planning Unit

Two stream segments in the planning unit are listed as impaired. Both Harney Pond Canal (WBID 3204) and Indian Prairie Canal (WBID 3206) are listed for DO and nutrients (chlorophyll *a*). The primary land use is pastureland for cattle.

Nutrient and DO impairment of Harney Pond Canal may be borne out by relatively elevated ammonia (>1 mg/L) in two surficial aquifer depth monitoring wells, suggesting sources in that area. From existing data, there are no nitrate issues in the ground water in the planning unit and the median phosphorus concentration is low relative to the surface water medians.





Chapter 5: The Verified List of Impaired Waters

Public Participation

The Florida Department of Environmental Protection (Department) has worked with a variety of stakeholders and held public meetings on developing and adopting the Verified Lists of impaired waters for the six Group 4 basins across the state. **Table 5.1** lists the statewide schedule for the development and adoption of the Group 4 Verified Lists, including the public meetings. The schedule for the Kissimmee River and Fisheating Creek Basins is highlighted in boldface type. **Appendix G** contains documentation provided during the public comment period.

Basin-specific draft Verified Lists of waters for the Withlacoochee, Kissimmee River and Fisheating Creek, and Southeast Coast–Biscayne Bay Basins that met the requirements of the Impaired Surface Waters Rule (IWR) were made available to the public on July 7, 2005, and basin-specific draft Verified Lists of waters for the Pensacola Bay and Nassau–St. Marys Basins were made available to the public on July 19, 2005. The lists were placed on the Department’s Total Maximum Daily Load (TMDL) Web site, at <http://www.dep.state.fl.us/water/tmdl>, and were also sent on request to interested parties by mail or via e-mail.

Citizens were given the opportunity to comment on the draft lists in person and/or in writing. Seven public meetings were held across the state to encourage public participation on a basin-by-basin basis. The Department also accepted written comments for 45 days beginning July 7, 2005, and ending August 22, 2005, for the Withlacoochee, Kissimmee River and Fisheating Creek, and Southeast Coast–Biscayne Bay Basins; and beginning July 19, 2005, and ending September 2, 2005, for the Pensacola Bay and Nassau–St. Marys Basins.

Following the public meetings for the Group 4 basins, which took place between July 12, 2005, and July 27, 2005, revised draft lists were made available to the public on September 22, 2005. There was an additional 30-day comment period on the revised Verified Lists, beginning on September 22, 2005, and ending October 22, 2005. The public had the opportunity to comment on these revised lists either in writing and/or at a final public meeting in Tallahassee. Comments received by November 23, 2005, were considered in preparing the revised draft lists. Comments on any of the lists were accepted and considered throughout the full comment period.

The final basin-specific Verified Lists developed through the public participation process were adopted by Secretarial Order on May 12, 2006, and will be submitted to the U.S. Environmental Protection Agency (EPA) as part of the 2006 update to the state’s 303(d) list of impaired waters, as required by Section 403.067(4), Florida Statutes.

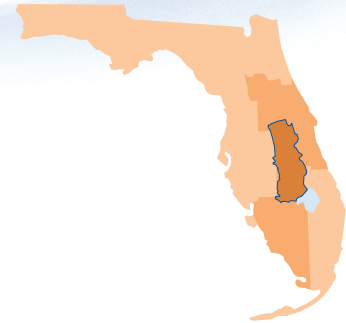


Table 5.1: Schedule for Development and Adoption of the Group 4 Verified Lists

Date	Scheduled Activity
July 7, 2005	Publication of Draft Verified Lists for the Withlacoochee, Kissimmee River and Fisheating Creek, and Southeast Coast–Biscayne Bay Basins and Beginning of Public Comment Period
July 12, 2005	Public Meeting at Homosassa on the Withlacoochee River Basin
July 13, 2005	Public Meeting at Kissimmee on the Kissimmee River and Fisheating Creek Basins (Upper Half)
July 14, 2005	Public Meeting at Sebring on the Kissimmee River and Fisheating Creek Basins (Lower Half)
July 15, 2005	Public Meeting at Davie on the Southeast Coast–Biscayne Bay Basin
July 19, 2005	Publication of Draft Verified Lists for the Pensacola Bay and Nassau–St. Marys Basins and Beginning of Public Comment Period
July 26, 2005	Public Meeting at Pensacola on the Pensacola Bay Basin
July 27, 2005	Public Meeting at Yulee on the St. Marys–Nassau Basin
October 6, 2005	Public Meeting in Tallahassee on Revised Draft Verified Lists for All Basins, and Public Comments and Input from Prior Public Meetings
October 22, 2005	Final Deadline for Receiving Public Comments
May 12, 2006	Adoption of Verified List by Secretarial Order
TBA	Submittal to EPA as State’s 303(d) List of Impaired Waters

Identification of Impaired Waters

As discussed in Chapter 2, waters on the Verified and Planning Lists must meet specific thresholds and data sufficiency and data quality requirements in the IWR (Rule 62-303, Florida Administrative Code [F.A.C.]). **Appendix A** describes the legislative and regulatory background for the development of the Planning and Verified Lists. **Appendix C** contains a methodology that describes the criteria and thresholds required for both lists under the IWR.

Any waters that do not have sufficient data to be analyzed in accordance with the requirements of the IWR will remain on the 1998 303(d) list of impaired waters maintained by the EPA. These waters are not delisted, and they will be sampled during the next phases of the watershed management cycle so that their impairment status can be verified.

The Verified List of Impaired Waters

Table 5.2 contains the Verified List of impaired waters for the Kissimmee River and Fisheating Creek Basins, based on the water quality assessment performed using IWR Run 22.0, as of February 16, 2006. **Figure 5.1** shows waters on the Verified List for the basins and the projected year for TMDL development. For presentation purposes, the entire watershed for the listed water is highlighted. However, only the main waterbody in the assessment unit has been assessed, and other waters in the watershed may not be impaired.

Table 5.2: The Verified List of Impaired Waters in the Kissimmee River and Fisheating Creek Basins

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	1436	Horseshoe Creek	Stream	IIIF	Coliform Bacteria	Fecal Coliforms	High	2005	PP = 0/4, Insufficient data. VP = 7/31, Impaired. Fecal coliforms means 1169 counts/100mL, median 260 counts/100 mL, range 2–20,000 counts/100mL.
Upper Kissimmee	1436A	Lake Davenport–Open Water	Lake	IIIF		DO	Medium	2007*	PP = 3/3, Potentially impaired. VP = 23/25, Impaired. DO met verification threshold of IWR, and BOD is the causative pollutant. 1 TN value, can not calculate median value. 1 TP value, can not calculate median value. 20 BOD values, median 3.2 mg/L. 26 DO values, median 2.24 mg/L, mean 2.52 mg/L, range 0.13–7.65 mg/L.
Upper Kissimmee	1472B	Lake Hatchineha	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.62 ppm in 2003/2004.
Upper Kissimmee	3168G	Lake Underhill	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. All 8 TSI annual means exceeded the threshold. Annual means were 67.9, 65.1, 58.8, 56.6, 60.5, 58.6, 56.1, and 40.5 in 1993 1994, 1995, 1996, 1997, 1999, 2001, and 2002, respectively. 81 chl a values, range 10.0–65.0 µg/L, mean 39.4 µg/L. 76 chl a (corrected) values, range 2.6–61.0 µg/L, mean 29.7 µg/L. VP = Impaired. All 4 TSI annual means exceeded the threshold. Annual means were 58.6, 56.1, 40.5, and 50.6 in 1999, 2001, 2002, and 2003, respectively. 44 chl a (corrected) values, range 1.4–60.7 µg/L, mean 24.2 µg/L. 74 TN values, median 0.78 mg/L. 70 TP values, median 0.03 mg/L. Historical color data from Florida LakeWatch, the SWFWMD, and the EPA's Lake Regions of Florida Reports indicate that this is a low color lake. The community is phosphorus limited based on the median TN/TP ratio of 32.3 calculated from 70 TN/TP ratios.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3168H	Lake Holden	Lake	IIIF	Nutrients	Nutrients (TSI)	Low	2007*	PP = Potentially impaired. 7 TSI annual means exceeded the threshold. Annual means were 67.5, 60.8, 65.7, 67.0, 70.8, 67.1, and 64.2 in 1994, 1996, 1998, 1999, 2000, 2001, and 2002, respectively. 232 chla values, range 1.0–92.0 µg/L, mean 50.2 µg/L. VP = Impaired. 4 TSI annual means exceeded the threshold. Annual TSI means were 53.4, 64.9, 50.1, and 54.0 in 2000, 2001, 2002, and 2003, respectively. 167 chla values, range 21.0–92.0 µg/L, mean 53.7 µg/L. 1 chla (corrected) value: 4.43 µg/L. 86 TN values, median 1.40 mg/L. 89 TP values, median 0.02 mg/L. Limited by phosphorus based on a median TN/TP ratio of 59.4 (86 values) in the verified period.
Upper Kissimmee	3168I	Lake Pineloch	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. All 8 TSI annual mean exceeded the threshold. Annual means were 52.8, 54.0, 53.1, 54.8, 48.4, 48.6, 50.0, and 48.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2002, respectively. 70 chla values, range 6.0–33.0 µg/L, mean 15.8 µg/L. 40 chla (corrected) values, range 3.2–33.0 µg/L, mean 13.6 µg/L. VP = Impaired. All 6 TSI annual means exceeded the threshold. Annual TSI means were 48.6, 50.0, 46.1, 40.4, 46.9, and 46.0 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 20 chla (corrected) values, range 3.2–22.5 µg/L, mean 12.1 µg/L. 56 TN values, median 0.69 mg/L. 55 TP values, median 0.02 mg/L. Historical color data from Florida LakeWatch, the SWFWMD, and the EPA's Lake Regions of Florida Report indicate that this is a low color lake. The community is phosphorus limited based on a median TN/TP ratio of 35.5 calculated from 54 TN/TP ratios in the verified period.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3168M	Lake Copeland	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 7 TSI annual means exceeded the threshold (TSI 40). Annual means were 58.3, 61.4, 60.1, 60.6, 56.8, 56.0, and 55.3 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 104 chla values, range 8.0–113.0 µg/L, mean 32.8 µg/L. 45 chla (corrected) values, range 8.4 - 102.0 µg/L, mean 28.6 µg/L. VP = Impaired. 5 TSI annual mean exceeded the threshold. TSI annual means were 60.6, 56.8, 56, 55.3, and 55.5 in 1999, 2000, 2001, 2002, and 2003, respectively. No color data was available. 81 chla values, range 8.0–113.0 µg/L, mean 34.0 µg/L. 20 chla (corrected) values, range 8.4–102.0 µg/L, mean 29.2 µg/L. 27 TN values, median 0.83 mg/L. 28 TP values, median 0.04 mg/L. Communities are colimited by phosphorus and nitrogen, but are more limited by nitrogen based on a median TN/TP ratio of 18 calculated from 27 TN/TP ratios.
Upper Kissimmee	3168N	Lake Olive	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 6 TSI annual means exceeded the threshold (TSI 40). Annual means were 57.9, 64.9, 66.8, 54.3, 59.5, and 51.8 in 1994, 1995, 1996, 1997, 1999, and 2002, respectively. 20 chla values, range 6.7–99.0 µg/L, mean 1.8 µg/L. 37 chla (corrected) values, range 5.1–99.0 µg/L, median 26.5 µg/L. VP = Impaired. 2 TSI annual means exceeded the threshold. Annual means were 59.5 and 51.8 in 1999 and 2002, respectively. 23 chla (corrected) values, range 5.1–47.5 µg/L, mean 19.5 µg/L. 26 TN values, median 0.795 mg/L. 25 TP values, median 0.07 mg/L. The community is phosphorus and nitrogen colimited, but is more nitrogen limited based on the median TN/TP ratio of 12.2 calculated from 25 TN/TP ratios in the verified period.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3169G	Clear Lake	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 7 TSI annual means exceeded the threshold in 1994, 1995, 1996, and 1997. Annual means were 57.1, 62.5, 67.5, 70.1, 71.3, 68.7, 68.3, 64.4, and 58.6 in 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 265 chla values, range 5.8–129.0 µg/L, mean 54.0 µg/L. 59 chla (corrected) values, range 5.6–72.8 µg/L, mean 28.5 µg/L. VP = Impaired. 2 TSI annual means exceeded the threshold in 1999 and 2000. Annual means were 57.8, 60.2, 63.5, and 58.6 in 1998, 1999, 2000, and 2002, respectively. 114 chla values, range 22.0–83.0 µg/L, mean 50.4 µg/L. 43 chla (corrected) values, range 7.5–72.8 µg/L, mean 28.8 µg/L. 65 TN values, median 1.10 mg/L. 65 TP values, median 0.03 mg/L. Limited by phosphorus based on a median TN/TP ratio of 36.5 (65 values) in the verified period.
Upper Kissimmee	3169H	Lake Lorna Doone	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 10 TSI annual mean exceeded the threshold (TSI 40). Annual means were 59.8, 58.5, 56.1, 60.3, 54.7, 54.5, 54.2, 49.3, 58.5, and 53.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 301 chla values, range 7.8–107.0 µg/L, mean 35.8 µg/L. 40 chla (corrected) values, range 3.9–62.0 µg/L, mean 23.5 µg/L. VP = Impaired. 4 TSI annual means exceeded the threshold. Annual means were 54.5, 54.2, 49.3, 58.5, and 53.5 in 1998, 1999, 2000, 2001, and 2002, respectively. 86 chla values, range 13.0–62.0 µg/L, mean 33.7 µg/L. 20 chla (corrected) values, range 3.9–43.3 µg/L, mean 20.3 µg/L. 31 TN values, median 0.73 mg/L. 31 TP values, median 0.04 mg/L. The community is phosphorus and nitrogen colimited based on a median TN/TP ratio of 20 calculated from 31 TN/TP ratios in the verified period. Historic color data of this waterbody showed it is a low color lake.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3169I	Lake Mann	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 8 TSI annual means exceeded the threshold in 1993, 1994, 1997, 1998, 1999, 2000, 2001, and 2002. Annual means were 63.4, 64.3, 61.2, 62.6, 59.0, 63.2, 62.6, and 59.3 in 1993, 1994, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 33 chla values, range 7.6–62.3 µg/L, mean 31.6 µg/L. 66 chla (corrected) values, range 5.5–120.0 µg/L, mean 31.3 µg/L. VP = Impaired. 6 TSI annual means exceeded the threshold. Annual means were 62.6, 59.0, 63.2, 62.6, 59.3, and 47.9 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 40 chla (corrected) values, range 5.5–120.0 µg/L, mean 31.0 µg/L. 70 TN values, median 1.53 mg/L. 68 TP values, median 0.03 mg/L. Limited by phosphorus based on a median TN/TP ratio of 51.1 (68 values) in the verified period.
Upper Kissimmee	3169J	Cane Lake	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 2 TSI annual means exceeded the threshold. Annual means were 41.0, 31.9, 34.7, 43.8, and 36.2 in 1994, 1996, 1999, 2000, and 2002, respectively. 16 chla values, range 1.0–20.3 µg/L, mean 6.8 µg/L. 15 chla (corrected) values, range 1.0–21.2 µg/L, mean 7.1 µg/L. VP = Impaired. 2 TSI annual means exceeded the threshold. Annual means were 34.7, 43.8, 36.2, and 41.3 in 1999, 2000, 2002, and 2003, respectively. 20 chla (corrected) values, range 1.0–21.2 µg/L, mean 7.4 µg/L. 29 TN values, median 0.60 mg/L. 27 TP values, median 0.02 mg/L. The lake is a low colored lake and therefore TSI 40 was used as the threshold. The community is limited by phosphorus based on a median TN/TP ratio of 40 calculated from 27 TN/TP ratios in the verified period.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3169P	Lake Catherine	Lake	IIIF		DO	Medium	2007*	PP = 7/49, Not impaired; VP = 14/61, Impaired. DO data met the verification threshold, nutrients are considered causative pollutants. 62 DO values in the verified period, range 2.49–9.25 mg/L, mean 6.69 mg/L. 44 TN values, median 0.96 mg/L. 44 TP values, median 0.02, 40 BOD values, median 1.5 mg/L. The community is phosphorus limited based on a median TN/TP ratio of 50.6 calculated from 44 TN/TP ratios.
Upper Kissimmee	3169P	Lake Catherine	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 1 TSI annual mean exceeded the threshold in 2001. Annual means were 56.1 and 61.5 in 1996 and 2001, respectively. 37 chl a values, range 2.5–88.7 µg/L, median 19.2 µg/L. 4 chl a (corrected) values, range 11.4–61.7 µg/L, median 25.2 µg/L. VP = Impaired. 2 TSI annual means exceeded the threshold (LakeWatch data for the verified period were excluded from the assessment). The annual TSI means were 61.5, 42.6, and 49.3 (color = 35 pcu) in 2001, 2003, and 2004, respectively. 9 chl a (corrected) values, range 1.0–61.7 µg/L, mean 15.7 µg/L. 44 TN values, median 0.96 mg/L. 44 TP values, median 0.02 mg/L. The community is phosphorus limited based on a median TN/TP ratio of 50.6 calculated from 44 TN/TP ratios.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3169Q	Rock Lake	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 8 TSI annual means exceeded the threshold (TSI 40). Annual means were 57.8, 56.7, 48.9, 45.3, 43.8, 49.8, 55.1, and 52.8 in 1993, 1994, 1995, 1996, 1997, 2000, 2001, and 2002, respectively. 28 chla values, range 1.0–188.0 µg/L, mean 21.3 µg/L. 38 chla (corrected) values, range 1.0–188.0 µg/L, mean 19.1 µg/L. VP = Impaired. 3 TSI annual means exceeded the threshold. Annual means were 49.8, 52.8, 52.5 in 2000, 2002, and 2003, respectively. 9 chla values, range 6.0–32.0 µg/L, mean 19.2 µg/L. 18 chla (corrected) values, range 1.0–45.5 µg/L, mean 15.7 µg/L. 26 TN values, median 0.76 mg/L. 24 TP values, median 0.04 mg/L. The community is phosphorus and nitrogen colimited based on a median TN/TP ratio of 21.7 calculated from 24 TN/TP ratios in the verified period. The lake did not have color measurements. However, water colors in several surrounding lakes, including Lake Mann (WBID 3169I), Clear Lake (WBID 3169G), and Lake Lorna Doone (WBID 3169H) were mostly below 40 pcu in their periods of record. Therefore, TSI 40 was used as the threshold for Rock Lake.
Upper Kissimmee	3170B	Lake Russell	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 redear sunfish samples averaged 0.53 ppm in 2002.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3170C	Reedy Creek above Lake Russell	Stream	IIIF	DO	DO	High	2005	PP = 169/182, Potentially impaired; VP = 123/140, Impaired. DO met the verification threshold of the IWR, nitrogen is the causative pollutant. 157 DO values for the verified period, range 0.04 to 9.00 mg/L, mean 2.53 mg/L. 142 TN values, median 1.66 mg/L. 129 TP values, median 0.06 mg/L. 21 BOD values, median 1.0 mg/L. This WBID contains 15% of urban and built-up areas, primarily residences; 20% of agriculture land, mainly improved pastureland. The major part of the WBID is wetlands, which comprises about 50% of the WBID area. Upland forest is about 19%. The waterbody has 1 passed and 1 failed SCI in 1998.
Upper Kissimmee	3170K	Davenport Creek	Stream	IIIF		Fecal Coliforms	Medium	2011	PP = 7/49, Not impaired; VP = 7/39, Impaired.
Upper Kissimmee	3170Q	Lake Butler	Lake	IIIF		Nutrients (Historic TSI)	Medium	2007*	PP = Potentially impaired. 2 TSI annual means exceeded the historic minimum (26.6, calculated based on data from the period 1997–2001) by more than 10 TSI units. Annual means were 31.7, 38.8, 27.1, 26.6, 24.6, 29.0, and 37.3 in 1994, 1995, 1996, 1998, 1999, 2000, and 2002, respectively. 333 chl _a values, range 1.0–16.0 µg/L, mean 3.1 µg/L. 3 chl _a (corrected) values, range 1.8–2.2 µg/L, mean 2.0 µg/L. VP = Impaired. 1 TSI annual mean exceeded the historic mean by more than 10 TSI units. The annual TSI mean was 36.6 in 2003. 118 chl _a values, range 1.0–16.0 µg/L, mean 2.7 µg/L. 89 TN values, median 0.69 mg/L. 89 TP values, median 0.005 mg/L. The community is phosphorus limited based on a median TN/TP ratio of 116 calculated from 89 TN/TP ratios.
Upper Kissimmee	3170Q	Lake Butler	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 18 largemouth bass averaged 0.74 mg/kg (ppm) in 2001/2002.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3171	Lake Hart	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 1.32 mg/kg (ppm) in 2003.
Upper Kissimmee	3171A	Lake Mary Jane	Lake	IIIF		Lead	Medium	2011	PP = 3/4, Potentially impaired; VP = 20/21, Impaired.
Upper Kissimmee	3171A	Lake Mary Jane	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 1.06 mg/kg (ppm) in 2003.
Upper Kissimmee	3171C	Red Lake	Lake	IIIF		Copper	Medium	2011	PP = 7/8, Potentially impaired; VP = 20/23, Impaired.
Upper Kissimmee	3172	East Lake Tohopekaliga	Lake	IIIF	Mercury in Fish	Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 16 largemouth bass samples averaged 0.76 ppm in 2002.
Upper Kissimmee	3173	City Ditch Canal	Stream	IIIF		DO	Medium	2007*	PP = No Data; VP = 17/26, Impaired. DO met verification threshold of the IWR, and BOD is the causative pollutant. 18 TN values, median 0.61 mg/L. 18 TP values, median 0.10 mg/L. 28 BOD values, median 2.8 mg/L.
Upper Kissimmee	3173A	Lake Tohopekaliga	Lake	IIIF	Mercury in Fish	Mercury in Fish	Low	2011	Impaired. Mercury met verification threshold of the IWR. Fish tissue levels in 23 largemouth bass samples averaged 0.45 ppm in 2003.
Upper Kissimmee	3176	Alligator Lake	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 1.28 ppm in 2004.
Upper Kissimmee	3177A	Brick Lake	Lake	IIIF		Mercury in Fish	Low	2011	Impaired. Mercury met verification threshold of the IWR. Fish tissue levels in 17 largemouth bass samples averaged 1.07 ppm in 2002 and 2004.
Upper Kissimmee	3180A	Lake Cypress	Lake	IIIF	Mercury in Fish	Mercury in Fish	Low	2011	Impaired. Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass samples averaged 0.52 ppm in 2004.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3180A	Lake Cypress	Lake	IIIF	Nutrients	Nutrients (TSI)	Low	2007*	PP = Potentially impaired. 5 TSI annual means exceeded the threshold (TSI 60, high color lake). Annual means were 65.0, 56.1, 58.3, 62.7, 61.3, 66.8, 62.6, 65.7, and 63.3 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 102 chla values, range 2.1–97.4 µg/L, mean 33.6 µg/L. 110 chla (corrected) values, range 1.0–151.4 µg/L, mean 28.5 µg/L. VP = Impaired. 6 TSI annual means exceeded the threshold. Annual means were 66.8, 62.6, 65.7, 63.3, 61.3, and 61.5 in 1998, 1999, 2000, 2002, 2003, and 2004, respectively. 55 chla values, range 2.1–97.4 µg/L, mean 33.4 µg/L. 52 chla values, range 1.0–151.4 µg/L, mean 31.5 µg/L. 88 TN values, median 1.43 mg/L. 89 TP values, median 0.07 mg/L. Colimited by nitrogen and phosphorus based on a median TN/TP ratio of 20.59 (87 values) in the verified period.
Upper Kissimmee	3183B	Lake Kissimmee–Mid (includes previous 3183E and 3183A)	Lake	IIIF	Mercury in Fish	Mercury in Fish	Low	2011	Impaired. Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.58 mg/kg (ppm) in 2003.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3183B	Lake Kissimmee–Mid (includes previous 3183E and 3183A)	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 6 TSI annual means exceeded the threshold. Annual means were 62.6, 56.2, 57.5, 66.6, 59.3, 64.8, 61.2, 58.4, 64.7, and 61.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 556 chl _a values, range 2.6–145.9 µg/L, mean 28.8 µg/L. 470 chl _a (corrected) values, range 1.0–126.1 µg/L, mean 25.1 µg/L. VP = Impaired. 5 TSI annual means exceeded the threshold. Annual means were 64.8, 61.2, 58.4, 64.7, 61.5, 59.4, and 60.0 in 1998, 1999, 2000, 2002, 2003, and 2004, respectively. 278 chl _a values, range 2.6–128.3 µg/L, mean 28.6 µg/L. 298 chl _a (corrected) values, range 1.0–379.1 µg/L, mean 25.7 µg/L. 475 TN values, median 1.29 mg/L. 1189 TP values, median 0.08 mg/L. Lake is colimited by nitrogen and phosphorus based on a median TN/TP ratio of 22.24 (474 values) in the verified period.
Upper Kissimmee	3183G	Lake Jackson Osceola County	Lake	IIIF		DO	Medium	2007*	PP = 96/155, Potentially impaired. VP = 11/47, Impaired. DO met verification threshold of the IWR, and nutrients and BOD are identified as the causative pollutant based on TSI data, nutrient impairment verification. Colimited by nitrogen and phosphorus based on a median TN/TP ratio of 17.71 (44 values) in the verified period. 47 TN values, median 1.157 mg/L. 49 TP values, median 0.08 mg/L. 17 BOD values, median 2.50 mg/L. 186 DO values, median 4.29 mg/L, mean 4.60 mg/L, range 0.10–11.34 mg/L.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Upper Kissimmee	3183G	Lake Jackson Osceola County	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. All 4 TSI annual means exceeded the threshold. Annual means were 64.3, 68.3, 66.7, and 64.8 in 1997, 1999, 2000, and 2002, respectively. 197 chl _a values, range 1.0–93.2 µg/L, mean 19.0 µg/L. VP = Impaired. 3 TSI annual means exceeded the threshold. Annual means were 68.3, 66.7, 64.8, and 55.9 in 1999, 2000, 2002, and 2003, respectively. 45 chl _a (corrected) values, range 1.0–80.1 µg/L, mean 28.3 µg/L. 47 TN values, median 1.57 mg/L. 49 TP values, median 0.08 mg/L. Colimited by nitrogen and phosphorus based on a median TN/TP ratio of 17.39 (47 values) in the verified period.
Upper Kissimmee	3184	Lake Marian	Lake	IIIF	Nutrients	Nutrients (TSI)	Low	2007*	PP = Potentially impaired. All 3 TSI annual means exceeded the threshold. Annual means were 75.8, 75.1, and 71.6 in 1999, 2000, and 2002, respectively. 9 chl _a values, range 2.8 - 97.4 µg/L, mean 46.9 µg/L. 53 chl _a (corrected) values, range 1.0–124.2 µg/L, mean 60.8 µg/L. VP = Impaired. All 4 TSI annual means exceeded the threshold. Annual means were 75.8, 75.1, 71.6, and 61.0 in 1999, 2000, 2002, and 2003, respectively. 3 chl _a values, range 44.9–61.2 µg/L, mean 54.0 µg/L. 26 chl _a (corrected) values, range 1.0–124.0 µg/L, mean 56.5 µg/L. 30 TN values, median 1.91 mg/L. 28 TP values, median 0.16 mg/L. Colimited by nitrogen and phosphorus based on a median TN/TP ratio of 12.9 (27 values) in the verified period.
Lower Kissimmee	3186C	Blanket Bay Slough	Stream	IIIF	DO	DO	Low	2007*	PP = 20/26, Potentially impaired. VP = 14/20, Impaired. DO met verification threshold, and nutrients are the causative pollutant. 15 TN values, median 1.81 mg/L. 15 TP values, median 0.21 mg/L. 16 BOD values, median 1.8 mg/L. Stream is nitrogen limited based on a median TN/TP ratio of 8.45 (15 values) in the verified period. 46 DO values, median 3.75 mg/L, mean 4.11 mg/L, range 0.61–7.00 mg/L.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Lower Kissimmee	3186C	Blanket Bay Slough	Stream	IIIF	Nutrients	Nutrients (Chla)	Low	2007*	PP = Insufficient data to calculate any chla annual mean. VP = Impaired. 1 chla annual mean exceeded 20 µg/L. The annual mean was 35.29 µg/L in 2004. 20 chla (corrected) values, range 1.4–365.1 µg/L, mean 29.2 µg/L. 15 TN values, median 1.81 mg/L. 15 TP values, median 0.21 mg/L. Communities are limited by nitrogen based on a median TN/TP ratio of 8.45 (15 values) in the verified period.
Lower Kissimmee	3188	Farm Area	Stream	IIIF	DO	DO	High	2005	PP = 417/543, Potentially impaired; VP = 191/261, Impaired. DO met verification threshold of the IWR, and phosphorus and BOD are the causative pollutants. 136 TN values, median 1.47 mg/L. 318 TP values, median 0.41 mg/L. 17 BOD values, median 2.1 mg/L. 576 DO values, median 3.19 mg/L, mean 3.51 mg/L, range 0.40–14.02 mg/L.
Lower Kissimmee	3192C	Oak Creek	Stream	IIIF	Nutrients	Nutrients (Chla)	High	2005	PP = Insufficient data to calculate any mean. VP = Impaired. 1 chla annual mean exceeded the threshold. The annual mean chla concentration was 26.78 µg/L. 12 TN values, median 1.94 mg/L, 11 TP values, median 0.23 mg/L. The community is nitrogen limited based on a median TN/TP ratio of 7.9 calculated from 11 TN/TP ratios.
Lower Kissimmee	3207	S-154C	Stream	IIIF		DO	Medium	2007*	PP = 248/396, Potentially impaired. VP = 99/158, Impaired. DO met verification threshold of the IWR, and phosphorus and nitrogen are causative pollutants. 207 TN values, median 1.63 mg/L. 993 TP values, median 0.42 mg/L. No BOD values. 726 DO values, median 4.12 mg/L, mean 4.21 mg/L, range 0.00–11.62 mg/L.
Lake Istokpoga	1685A	Lake Arbuckle	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 13 largemouth bass averaged 0.75 mg/kg (ppm) in 2002/2003.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Lake Istokpoga	1685B	Livingston Creek	Stream	IIIF		DO	Medium	2007*	PP = 19/72, Potentially impaired. VP = 28/76, Impaired. DO met verification threshold of IWR, and nitrogen is the causative pollutant. 55 TN values, median 1.63 mg/L. 55 TP values, median 0.07 mg/L. 26 BOD values, median 1.55 mg/L. 114 DO values, median 6.01 mg/L, mean 5.66 mg/L, range 1.62–9.80 mg/L. The land use of the WBID is dominated by the upland forest. A dairy farm is located on the southern bank of the creek. Livestock operation may be important source of nitrogen.
Lake Istokpoga	1706	Lake Clinch	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.69 mg/kg (ppm) in 2004.
Lake Istokpoga	1730B	Livingston Lake	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.59 mg/kg (ppm) in 2002/2004.
Lake Istokpoga	1761D	Morgan Hole Creek	Stream	IIIF		Fecal Coliforms	Medium	2011	PP = 0/2, Insufficient data. VP = 10/26, Impaired.
Lake Istokpoga	1761D	Morgan Hole Creek	Stream	IIIF		Total Coliforms	Medium	2011	PP = 0/1, Insufficient data. VP = 22/25, Impaired.
Lake Istokpoga	1842	Lake Sebring	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.62 mg/kg (ppm) in 2002.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Lake Istokpoga	1856B	Lake Istokpoga	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 3 TSI annual means exceeded the threshold in 1998, 1999, and 2002. Annual means were 57.5, 51.3, 50.2, 55.6, 55.7, 64.3, 61.6, 58.4, 58.6, and 65.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 879 chl a values, range 1.0–136.0 µg/L, mean 29.5 µg/L. 422 chl a (corrected) values, range 1.0–140.0 µg/L, mean 17.2 µg/L. VP = Impaired. 4 TSI annual means exceeded the threshold in 1999, 2002, 2003, and 2004 (LakeWatch data for the verified period were excluded from the assessment.) Annual means were 61.6, 58.4, 58.6, 65.5, 62.5, and 63.9 in 1999, 2000, 2001, 2002, 2003, and 2004. 530 chl a values, range 1.0–136.0 µg/L, mean 23.0 µg/L. 139 chl a (corrected) values, range 1.0–140.0 µg/L, mean 25.6 µg/L. 297 TN values, median 1.24 mg/L. 298 TP values, median 0.07 mg/L. The communities are phosphorus and nitrogen colimited based on a median TN/TP ratio of 17.9 calculated from 296 TN/TP ratios.
Lake Istokpoga	1860A	Josephine Creek	Stream	IIIF		DO	Medium	2007*	PP = 43/101, Potentially impaired. VP = 37/73, Impaired. DO met verification threshold of IWR, and nutrients and BOD are the causative pollutants. 76 TN values, median 1.256 mg/L. 76 TP values, median 0.05 mg/L. 13 BOD values, median 2.5 mg/L. 130 DO values, median 5.50 mg/L, mean 5.53 mg/L, range 0.52–9.62 mg/L.
Lake Istokpoga	1860A	Josephine Creek	Stream	IIIF		Nutrients (Chla)	Medium	2007*	PP = Insufficient data to calculate any annual mean chl a. VP = Impaired. 1 annual mean chl a exceeded the threshold in 2004. The annual mean chl a was 51.97 in 2004. 16 chl a values, range 1–510 µg/L, mean 57.1 µg/L. 76 TN values, median 1.256 mg/L. 76 TP values, median 0.05 mg/L. The community is phosphorus and nitrogen colimited, but is more limited by phosphorus based on a median TN/TP ratio of 23.1 from 76 TN/TP ratios.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Lake Istokpoga	1860B	Lake Josephine	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 3 TSI annual means exceeded the threshold in 1999, 2000, and 2002. Annual means were 57.3, 57.4, 58.9, 61.9, 60.7, 59.3, and 62.2 in 1993, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 240 chl _a values, range 9.2–110.0 µg/L, mean 33.5 µg/L. 18 chl _a (corrected) values, range 3.3–42.5 µg/L, mean 19.8 µg/L. VP = Impaired. 1 TSI annual mean exceeded the threshold in 2004 (LakeWatch data for the verified period were excluded from the assessment.) The annual mean TSI was 61.1 in 2004. 38 chl _a values, range 1.0–50.8 µg/L, mean 20.64 µg/L. 3 chl _a (corrected) values, range 9.1–14.7 µg/L, mean 12.0 µg/L. 26 TN values, median 1.16 mg/L. 26 TP values, median 0.10 mg/L. The community is phosphorus and nitrogen colimited, but is more limited by nitrogen based on a median TN/TP ratio of 12.3 from 26 TN/TP ratios.
Lake Istokpoga	1860B	Lake Josephine	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.76 mg/kg (ppm) in 2001.
Lake Istokpoga	1893	Huckleberry Lake	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 3 TSI annual means exceeded the threshold. Annual means were 65.9, 69.2, and 66.2 in 1999, 2000, and 2002, respectively. 79 chl _a values, range 3.9–108.0 µg/L, mean 41.1 µg/L. 4 chl _a (corrected) values, range 1.9–61.0 µg/L, mean 22.2 µg/L. VP = Impaired. 1 TSI annual mean exceeded the threshold (LakeWatch data for the verified period were excluded from the assessment.) The annual mean TSI was 72.6 in 2004. 32 chl _a values, range 3.9–180 µg/L, mean 59.6 µg/L. 30 TN values, median 1.38 mg/L. 26 TP values, median 0.14 mg/L. The community is phosphorus and nitrogen colimited, but is more nitrogen limited, based on a median TN/TP ratio of 13.6 from 26 TN/TP ratios.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Lake Placid	1938A	Lake June in Winter	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 1.02 mg/kg (ppm) in 2003.
Lake Placid	1938C	Lake Placid	Lake	IIIF		Mercury in Fish	Low	2011	VP = Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.99 mg/kg (ppm) in 2003.
Lake Placid	1938E	Persimmon Lake	Lake	IIIF		Nutrients (TSI)	Medium	2007*	PP = Potentially impaired. 9 TSI annual means exceeded the threshold. Annual means were 70.8, 71.4, 69.8, 70.4, 68.7, 71.8, 72.1, 71.8, and 69.6 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 313 chl a values, range 36.0–160.0 µg/L, mean 87.0 µg/L. 9 chl a (corrected) values, range 10.2–142.7 µg/L, mean 85.0 µg/L. VP = Impaired. 1 TSI annual mean exceeded the threshold (LakeWatch data for the verified period were excluded from the assessment.) The annual average TSI was 65.6 in 2004. 18 chl a values, range 3.4–85.8 µg/L, mean 28.1 µg/L. 2 chl a (corrected) values, range 51.3–73.1 µg/L, mean 62.2 µg/L. 32 TN values, median 2.59 mg/L. 31 TP values, median 0.04 mg/L. Limited by phosphorus based on a median TN/TP ratio of 64.2 (31 values) in the verified period.
Fisheating Creek	3201A	Fisheating Creek	Stream	IIIF		DO	Medium	2011	PP = 146/330 Potentially impaired; VP = 99/266 Verified impaired. Nutrients were identified as a causative pollutant based on chl a (µg/L) data/nutrient impairment verification. 331 TN values, median 1.62 mg/L. 351 TP values, median 0.16 mg/L. Waterbody is colimited by nitrogen and phosphorus based on the median TN/TP ratio of 10.68 (327 values).
Fisheating Creek	3201A	Fisheating Creek	Stream	IIIF		Iron	Medium	2011	PP = 2/19; VP = 9/21. 8 iron samples from SFWMD DBHydro have been excluded due to incorrect legacy STORET parameter codes.

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
Fisheating Creek	3201A	Fisheating Creek	Stream	IIIF		Nutrients (Chla)	Medium	2011	PP = Potentially impaired. VP = Verified impaired. Annual average chla ($\mu\text{g/L}$) values exceeded 20 $\mu\text{g/L}$ in 1999 (21.91), 2000 (25.02), and 2001 (20.03). 331 TN values, median 1.62 mg/L. 351 TP values, median 0.16 mg/L. Waterbody is colimited by nitrogen and phosphorus based on the median TN/TP ratio of 10.68 (327 values).
Fisheating Creek	3201A	Fisheating Creek	Stream	IIIF		Nutrients (Historic Chla)	Medium	2011	PP = Potentially impaired. VP = Verified impaired. The annual average chla ($\mu\text{g/L}$) values exceeded the historical minimum value (of 6.15 $\mu\text{g/L}$ for 1977–1981) by more than 50% in 1999 (21.91), 2000 (25.02), 2001 (20.03), 2002 (13.17), 2003 (22.40), and 2004 (15.58). Waterbody is colimited by nitrogen and phosphorus based on the median TN/TP ratio of 10.68 (327 values).
North-west Lake Okeechobee	3204	Harney Pond Canal	Stream	IIIF	DO	DO	Low	2010	PP = 340/551 Potentially impaired; VP = 147/270 Verified impaired. Nutrients were identified as a causative pollutant based on chla ($\mu\text{g/L}$) data/nutrient impairment verification. 377 TN values, median 1.87 mg/L. 378 TP values, median 0.13 mg/L. 17 BOD values, median 2.8 mg/L. 377 TN values, median 1.87 mg/L. 378 TP values, median 0.13 mg/L. Waterbody is colimited by nitrogen and phosphorus based on the median TN/TP ratio of 13.35 (377 values).
North-west Lake Okeechobee	3204	Harney Pond Canal	Stream	IIIF	Nutrients	Nutrients (Chla)	Low	2010	PP = Not impaired; VP = Verified impaired. Annual average chla ($\mu\text{g/L}$) value exceeded 20 $\mu\text{g/L}$ in 2004 (60.59). 377 TN values, median 1.87 mg/L. 378 TP values, median 0.13 mg/L. Waterbody is colimited by nitrogen and phosphorus based on the median TN/TP ratio of 13.35 (377 values).

Table 5.2 (continued)

Planning Unit	WBID	Waterbody Segment	Type	Waterbody Class ¹	Parameters on the 1998 303(d) List	Parameters Identified Using the IWR	Priority for TMDL Development ²	Projected Year for TMDL Development ²	Comments ³ PP = Planning Period VP = Verified Period
North-west Lake Okeechobee	3206	Indian Prairie Canal	Stream	IIIF	Nutrients	Nutrients (chla)	High	2005	PP = Not impaired; VP = Verified impaired. Annual average chla value exceeded 20 µg/L in 2004 (26.85). 149 TN values, median 1.66 mg/L. 149 TP values, median 0.15 mg/L. Waterbody is co-limited by nitrogen and phosphorus based on the median TN/TP ratio of 10.69 (149 values).
North-west Lake Okeechobee	3206	Indian Prairie Canal	Stream	IIIF	DO	DO	High	2005	PP = 149/253 Potentially impaired; VP = 47/110 Verified impaired. Nutrients were identified as a causative pollutant based on chla (µg/L) data/nutrient impairment verification. 149 TN values, median 1.66 mg/L. 149 TP values, median 0.15 mg/L. Waterbody is colimited by nitrogen and phosphorus based on the median TN/TP ratio of 10.69 (149 values).

Notes:

¹Florida's waterbody classifications are defined as follows:

- 1—Potable water supplies,
- 2—Shellfish propagation or harvesting,
- 3—Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife
- 4—Agricultural water supplies,
- 5—Navigation, utility, and industrial use.

²Priority and schedule reflect the priority established for the WBID in the 1998 303(d) list. Where a parameter was 1998 303(d) listed, the priority shown in the 1998 303(d) list was retained if it was originally high, or changed to medium if it was originally low. Newly-listed waters identified are designated as medium priority. In the case of all mercury impairments, the priority remains low. The governor and legislature, via the Lake Okeechobee and Estuary Recovery (LOER) Action Plan, have provided initial funding for a series of "fast-track" capital projects to help provide meaningful water quality improvements to Lake Okeechobee.

³Planning period: January 1, 1993, through December 31, 2002; Verified Period: January 1, 1998, through June 30, 2005. The Group 4 Kissimmee River and Fisheating Creek Basins' Verified List was created on February 15, 2006, and was based on IWR Run 22.

*Since the Kissimmee River and Fisheating Creek Basins discharge to Lake Okeechobee, the completion of nutrient and DO TMDLs in these basins, previously scheduled for 2010/2011, are being accelerated for completion in 2007.

BOD = Biological oxygen demand

chla = Chlorophyll *a*

DO = Dissolved oxygen

EPA = U.S. Environmental Protection Agency

F = Fresh water

IWR = Impaired Surface Water Rule

mg/kg = Milligrams per kilogram

mg/L = Milligrams per liter

mL = Milliliters

pcu = Platinum cobalt units

ppm = Parts per million

SCI = Stream condition index

SFWMD = South Florida Water Management District

SWFWMD = Southwest Florida Water Management District

TN = Total nitrogen

TP = Total phosphorus

TSI = Trophic State Index

µg/L = Micrograms per liter

WBID = Waterbody identification number

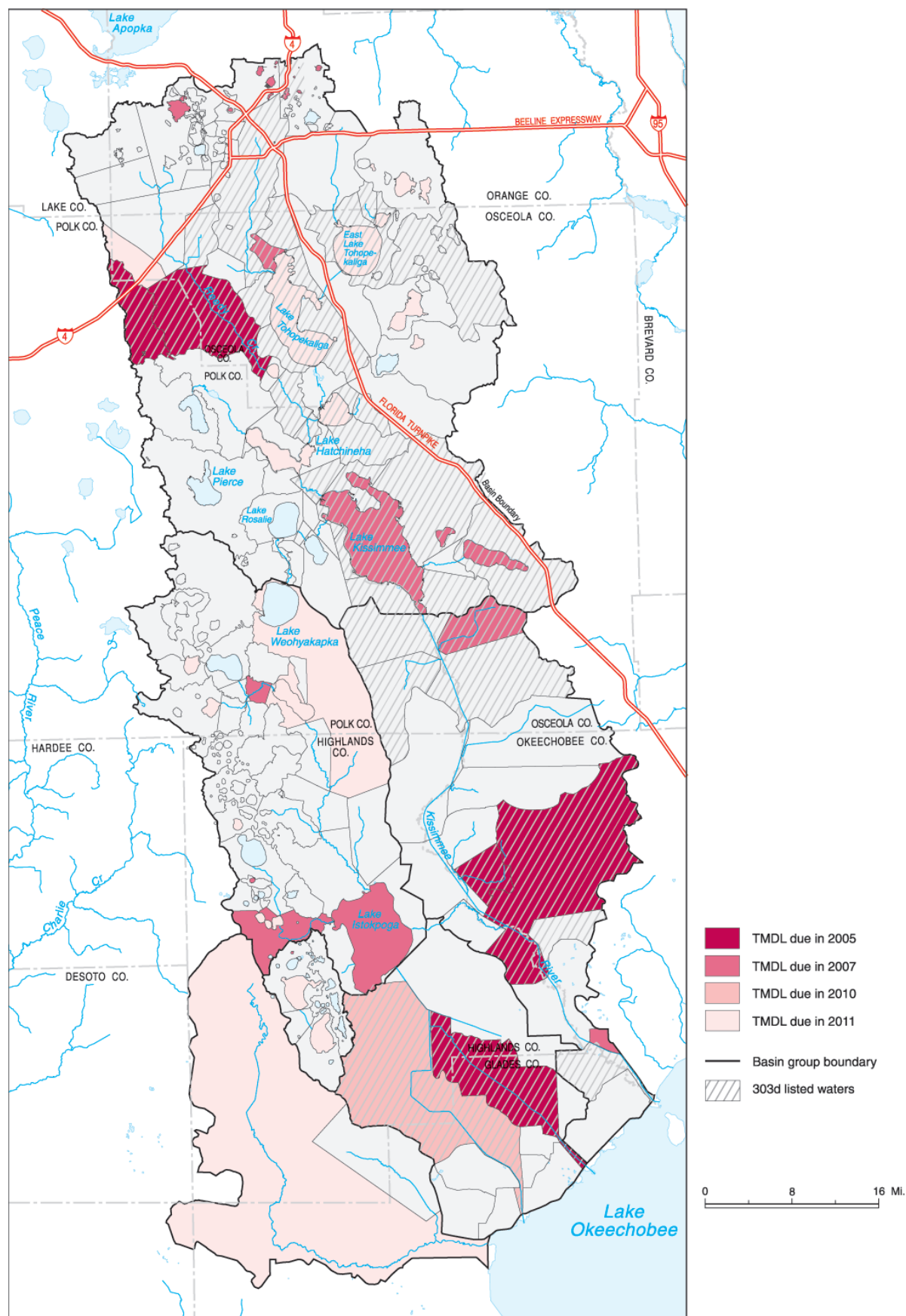


Figure 5.1: Waters on the Verified List, with Projected Year for TMDL Development

Tables D.1 and D.2 in Appendix D contain the Master Lists of all assessed waters in the Kissimmee River and Fisheating Creek Basins.

Pollutants Causing Impairments

Of the 292 water segments in the Kissimmee River and Fisheating Creek Basins, 49 waters are impaired for at least 1 parameter, and a TMDL is required for these waters. There are a total of 69 parameter listings for impairment following the methodology in **Appendix C**. The Upper Kissimmee Planning Unit has the largest number of impaired parameter listings with 36, followed by the Istokpoga Planning Unit with 13 listings, then the Lower Kissimmee Planning Unit with 5 listings, the Lake Placid Planning Unit with 3 listings, and the Fisheating Creek and Northwest Lake Okeechobee Planning Units each with 4 listings.

The most common parameter impairments throughout the Kissimmee River and Fisheating Creek Basins are nutrients with 27 listings, followed by dissolved oxygen (DO) with 13 listings, and bacteria with 4 listings. There are 18 segments listed due to fish consumption advisories for mercury.

As required by the IWR, the Department must identify the pollutants causing or contributing to DO exceedances in order to place a waterbody on the Verified List for DO. If a waterbody segment is on the Verified List for both DO and nutrients, nutrients are identified as a pollutant contributing to DO exceedances. The Department also applies the following analysis to identify the pollutant(s) contributing to DO exceedances:

1. The waterbody segment's median values for biological oxygen demand (BOD), total nitrogen (TN), and total phosphorus (TP) are determined for the verified period (i.e., January 1, 1998, to June 30, 2005).
2. The median values are then compared with the screening levels for the appropriate waterbody type. The screening levels represent the 70th percentile value of data collected from streams, lakes, or estuaries (**Table 5.3**).
3. If a waterbody segment's median value exceeds the screening level, the parameter is identified as a pollutant contributing to the exceedances.

Table 5.3: Screening Level Values (70th Percentile) Based on STORET Data from 1970 to 1987

	BOD (mg/L)	TN (mg/L)	TP (mg/L)
Streams	2.0	1.6	0.22
Lakes	2.9	1.7	0.11
Estuaries	2.1	1.0	0.19

Source: Friedemann and Hand, 1989.

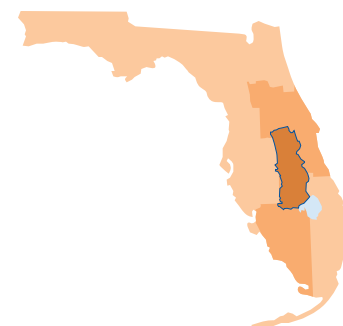


Table 5.4: Kissimmee River and Fisheating Creek Basins, Median Values for the Verified Period

WBID	Waterbody Segment	Waterbody Type	BOD 5 Day (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)
1685B	Livingston Creek	Stream	1.55	1.63	0.07
1860A	Josephine Creek	Stream	2.50	1.26	0.05
3188	Farm Area	Stream	2.10	1.47	0.41
3207	S-154C	Stream	ND	1.63	0.42
3186C	Blanket Bay Slough	Stream	1.80	1.81	0.21
3173	City Ditch Canal	Stream	2.80	0.61	0.10
1436A	Lake Davenport–Open Water	Lake	3.20	ND	ND
3169P	Lake Catherine	Lake	1.50	0.96	0.02
3170C	Reedy Ck Above L. Russ	Stream	1.00	1.66	0.06
3183G	Lake Jackson Oceola County	Lake	2.50	1.57	0.08
3201A	Fisheating Creek	Stream		1.62	0.16
3204	Harney Pond Canal	Stream	2.80	1.87	0.13
3206	Indian Prairie Canal	Stream		1.66	0.15

ND = No data

Table 5.4 provides the median values for waterbody segments where there is a sufficient number of DO exceedances to place the water on the Verified List. If a segment has a sufficient number of exceedances for placement on the Verified List but the median values are less than the screening levels, the DO for that segment is included on the Planning List.

Additionally, to place a water segment on the Verified List for nutrients, the Department must identify the limiting nutrient or nutrients on the Verified List, as required by the IWR. The following method is used to identify the limiting nutrient(s) in streams and lakes:

1. The ratios of TN to TP are calculated for each paired value of TN and TP (per sampling event) collected during the verified period.
2. The individual ratios over the entire verified period are evaluated to determine the limiting nutrient(s). If all the sampling event ratios are less than 10, nitrogen is identified as the limiting nutrient, and if all the ratios are greater than 30, phosphorus is identified as the limiting nutrient. Both nitrogen and phosphorus are identified as limiting nutrients if the ratios are between 10 and 30.

Table 5.5 displays the nitrogen and phosphorus ratios for stream and lake segments potentially impaired by nutrients.

Adoption Process for the Verified List of Impaired Waters

The Verified List must be submitted in a specific format (Section 62-303.710, F.A.C.) before being approved by order of the Department's Secretary. The list must specify the pollutant and concentration causing the impairment. If a waterbody segment is listed based on exceedances of water quality criteria, then the list must provide the applicable criteria.

Table 5.5: Kissimmee River and Fisheating Creek Basins, Nitrogen to Phosphorus Ratios for the Verified Period

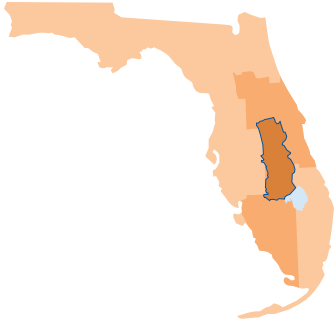
WBID	Waterbody Segment	Waterbody Type	Total Nitrogen Median (mg/L)	Total Phosphorus Median (mg/L)	Nitrogen to Phosphorus Ratio Median	Nitrogen to Phosphorus Ratio Minimum	Nitrogen to Phosphorus Ratio Maximum
1860A	Josephine Creek	Stream	1.26	0.05	23.10	6.68	89.00
3186C	Blanket Bay Slough	Stream	1.81	0.21	8.45	4.21	12.67
3192C	Oak Creek	Stream	1.94	0.23	7.90	3.62	18.10
3170Q	Lake Butler	Lake	0.69	0.01	116.00	6.32	375.00
1893	Huckleberry Lake	Lake	1.38	0.14	13.60	7.39	37.70
1856B	Lake Istokpoga	Lake	1.24	0.07	17.90	3.22	50.53
1860B	Lake Josephine	Lake	1.16	0.10	12.30	6.65	110.00
1938E	Persimmon Lake	Lake	2.59	0.04	64.20	23.79	139.00
3184	Lake Marian	Lake	1.91	0.16	12.90	6.71	25.47
3168G	Lake Underhill	Lake	0.78	0.03	32.30	1.00	143.00
3168H	Lake Holden	Lake	1.40	0.02	59.40	14.91	790.00
3168I	Pineloch	Lake	0.69	0.02	35.50	10.77	188.00
3168M	Lake Copeland	Lake	0.83	0.04	18.00	10.54	34.06
3168N	Lake Olive	Lake	0.80	0.07	12.20	5.14	36.67
3169G	Clear Lake	Lake	1.10	0.03	36.50	5.86	530.00
3169H	Lake Lorna Doone	Lake	0.73	0.04	20.00	6.59	248.00
3169I	Lake Mann	Lake	1.53	0.03	51.10	5.00	563.30
3169J	Cane Lake	Lake	0.60	0.02	40.00	22.22	675.00
3169P	Lake Catherine	Lake	0.96	0.02	50.60	9.22	189.40
3169Q	Rock Lake	Lake	0.76	0.04	21.70	7.45	37.44
3180A	Lake Cypress	Lake	1.43	0.07	20.59	3.96	442.00
3183B	Lake Kissimmee (Mid)	Lake	1.29	0.08	22.24	2.38	1,171.00
3183G	Lake Jackson Ocoola County	Lake	1.57	0.08	17.39	8.19	104.60
3201A	Fisheating Creek	Stream	1.62	0.16	10.68	0.82	35.63
3204	Harney Pond Canal	Stream	1.87	0.13	13.35	4.66	5,070
3206	Indian Prairie Canal	Stream	1.66	0.15	10.67	2.63	25.82

ND = No data

However, if the listing is based on narrative or biological criteria, or impairment of other designated uses, and the water quality criteria are met, the Verified List is required to specify the concentration of the pollutant relative to the water quality criteria and explain why the numeric criterion is not adequate.

For waters with exceedances of the DO criterion, the Department must identify the pollutants causing or contributing to the exceedances and list both the pollutant and DO in the Verified List.

For waters impaired by nutrients, the Department is required to identify whether nitrogen or phosphorus, or both, are the limiting nutrients, and specify the limiting nutrient(s) in the Verified List.



The Verified List must also include the priority and schedule for TMDL development established for a waterbody segment and note any waters that are being removed from the current Planning List. In future watershed management cycles, the list must also note waters that are being removed from any previous Verified List for the basins.

Chapter 6: TMDL Development, Allocation, and Implementation

Prioritization of Listed Waters

Following the identification of impaired waters on the 303(d) list, the Florida Department of Environmental Protection (Department) determines priorities for developing total maximum daily loads (TMDLs) in Phase 3 of the watershed management cycle. When TMDLs are established, general allocations of pollutant load reductions are identified, at least to the level of point and nonpoint source categories.

Because TMDLs cannot be developed for all listed waters during a single watershed management cycle, waterbodies will be prioritized using the criteria in the Impaired Surface Waters Rule (IWR) (Section 62-303.500, Florida Administrative Code). The rule states that when establishing the TMDL development schedule for waters on the Verified List, the Department will prioritize impaired waterbody segments according to the severity of the impairment and each waterbody's designated uses, taking into account the most serious water quality problems, the most valuable and threatened resources, and the risk to human health and aquatic life.

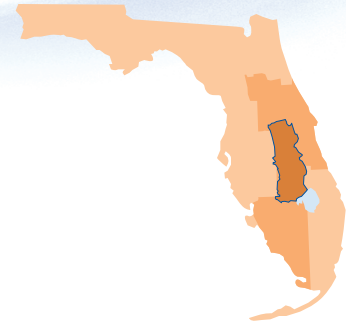
Under the IWR, the determination of high, medium, or low priority waters is based on the following criteria.

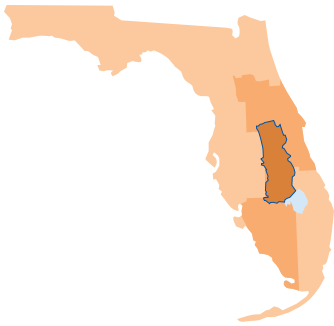
High-priority waters:

- Waterbody segments where the impairment poses a threat to potable water supplies or human health;
- Waterbody segments where the impairment is due to a pollutant regulated by the Clean Water Act and the pollutant has contributed to the decline or extirpation of a federally listed threatened or endangered species, as indicated in the Federal Register listing the species; or
- Waterbody segments verified as impaired that are included on the U.S. Environmental Protection Agency's (EPA) 1998 303(d) list as high priority.

Low-priority waters:

- Waterbody segments that are listed because of fish consumption advisories for mercury (due to the current insufficient understanding of how mercury cycles in the environment);
- Canals, urban drainage ditches, and other artificial waterbody segments that are listed only due to exceedances of dissolved oxygen criteria; or





- Waterbody segments that were not on the Planning List but were identified as impaired during Phase 2 of the watershed management cycle and were included on the Verified List, unless the segment meets the second high-priority criterion.
- The EPA has also proposed assigning to this category the list of additional waterbody segments that the agency developed using its own evaluation methodology, until the Department has had the opportunity to investigate these waterbodies further.

All segments not designated high or low priority are medium priority, and are prioritized based on the following factors:

- The presence of Outstanding Florida Waters;
- The presence of waterbody segments that fail to meet more than one designated use, i.e., aquatic life, primary contact and recreation, fish and shellfish consumption, drinking water, and the protection of human health;
- The presence of waterbody segments that exceed an applicable water quality criterion or alternative threshold with a frequency of greater than 25 percent at a minimum confidence level of 90 percent;
- The presence of waterbody segments that exceed more than one applicable water quality criterion; or
- Administrative needs of the TMDL program, including meeting a TMDL development schedule agreed to with the EPA, basin priorities related to the Department's watershed management approach, and the number of administratively continued permits in the basin.

The Department is adhering to the TMDL schedule established in the Consent Decree between the EPA and Earthjustice for waters on the 1998 303(d) list that are also identified as impaired under the IWR.

Table 6.1 lists the high-priority waters for TMDL development in the Kissimmee River and Fisheating Creek Basins. The nine waterbody segments listed in the table were also high priorities on the 1998 303(d) list. Of these, five segments had sufficient water quality information to verify at least one parameter as the cause of impairment. **Figure 6.1** shows the locations of these priority DEP TMDL waters and their watersheds. The Department could not verify the remaining impairments, and the establishment of those TMDLs will be the responsibility of the EPA.

Total Maximum Daily Load Development

During Phase 3 of the watershed management cycle, TMDLs will be developed for both point and nonpoint sources of pollutants in impaired waterbodies and will be adopted by rule at the end of this phase.

TMDL development involves determining the maximum amount of a given pollutant that a waterbody can assimilate and still meet the

Table 6.1: High Priority Waters for TMDL Development in the Kissimmee River and Fisheating Creek Basins

Planning Unit	WBID	Waterbody Segment	Waterbody Type	Waterbody Class	1998 303(d) Parameters of Concern	Parameters Identified Under the IWR	Assessment Status ¹	Priority Year for TMDL Development	Comments (# Exceedances/# Samples) PP = Planning Period VP = Verified Period
Upper Kissimmee Planning Unit	1436	Horseshoe Creek	Stream	IIIF	Coliform Bacteria	Fecal Coliforms	Impaired	2005	PP = 0/4, Insufficient data. VP = 7/31, Impaired. Fecal coliforms mean 1169 counts/100 mL, median 260 counts/100 mL, range 2–20,000 counts/100 mL.
Upper Kissimmee Planning Unit	1436	Horseshoe Creek	Stream	IIIF	Coliform Bacteria	Total Coliforms	Planning List	2005	PP = 1/10. VP = 4/18.
Upper Kissimmee Planning Unit	1472C	Dead River	Stream	IIIF	Nutrients	Nutrients (Chla)	Planning List	2005	PP = Insufficient data to calculate any mean. VP = Insufficient data to calculate any mean.
Upper Kissimmee Planning Unit	1472C	Dead River	Stream	IIIF	Turbidity	Turbidity	Planning List	2005	PP = 4/11. VP = 0/20. Data in VP were from only 4 independent sampling events.
Upper Kissimmee Planning Unit	3170A	Reedy Creek	Stream	IIIF	Nutrients	Nutrients (Chla)	Planning List	2005	PP = Insufficient data to calculate any annual mean chla. VP = Insufficient data to calculate any annual mean chla.
Upper Kissimmee Planning Unit	3170A	Reedy Creek	Stream	IIIF	Turbidity	Turbidity	Planning List	2005	PP = 7/21. VP = No data.
Upper Kissimmee Planning Unit	3170C	Reedy Ck Above L. Russ	Stream	IIIF	DO	DO	Impaired	2005	PP = 169/182, Potentially impaired. VP = 123/140, Impaired. DO met the verification threshold of the IWR, nitrogen is the causative pollutant. 157 DO values for the verified period, range 0.04 to 9.00 mg/L, mean 2.53 mg/L. 142 TN values, median 1.66 mg/L. 129 TP values, median 0.06 mg/L. 21 BOD values, median 1.0 mg/L. This WBID contains 15% of urban and built-up areas, primarily residences; 20% of agriculture land, mainly improved pasture-land. The major part of the WBID is wetlands, which comprise about 50% of the WBID area. Upland forest is about 19%. The waterbody has 1 passed and 1 failed SCIs in 1998.

Table 6.1 (continued)

Planning Unit	WBID	Waterbody Segment	Waterbody Type	Waterbody Class	1998 303(d) Parameters of Concern	Parameters Identified Under the IWR	Assessment Status ¹	Priority Year for TMDL Development	Comments (# Exceedances/# Samples) PP = Planning Period VP = Verified Period
Lower Kissimmee Planning Unit	3188	Farm Area	Stream	IIIF	DO	DO	Impaired	2005	PP = 417/543, Potentially impaired. VP = 191/261, Impaired. DO met verification threshold of the IWR, and phosphorus and BOD is the causative pollutant. 136 TN values, median 1.47 mg/L. 318 TP values, median 0.41 mg/L. 17 BOD values, median 2.1 mg/L. 576 DO values, median 3.19 mg/L, mean 3.51 mg/L, range 0.40–14.02 mg/L.
Lower Kissimmee Planning Unit	3188A	Chandler Slough	Stream	IIIF	DO	DO	Planning List	2005	PP = 94/110. VP = 60/70. DO met verification threshold of the IWR, but unable to determine the causative pollutant. 76 TN values, median 1.38 mg/L. 78 TP values, median 0.13 mg/L. 5 BOD values, median 1.8 mg/L. 134 DO values, median 2.82 mg/L, mean 3.13 mg/L, range 0.42–8.40 mg/L. This WBID contains 58% human land use. 49% of the Level I land use is characterized as agriculture.
Lower Kissimmee Planning Unit	3188A	Chandler Slough	Stream	IIIF	Nutrients	Nutrients (Chla)	Planning List	2005	PP = Insufficient data to calculate any annual mean chla. VP = Insufficient data to calculate any annual mean chla.
Lower Kissimmee Planning Unit	3192C	Oak Creek	Stream	IIIF	DO	DO	Planning List	2005	PP = 7/7. VP = 8/11. Does not meet verification threshold due to insufficient data in the verified period.
Lower Kissimmee Planning Unit	3192C	Oak Creek	Stream	IIIF	Coliform Bacteria	Fecal Coliforms	Planning List	2005	PP = No data. VP = 2/11.
Lower Kissimmee Planning Unit	3192C	Oak Creek	Stream	IIIF	Nutrients	Nutrients (Chla)	Impaired	2005	PP = Insufficient data to calculate any mean. VP = Impaired. 1 chla annual mean exceeded the threshold. The annual mean chla concentration was 26.78 µg/L. 12 TN values, median 1.94 mg/L, 11 TP values, median 0.23 mg/L. The community is nitrogen limited based on a TN/TP median of 7.9 calculated from 11 TN/TP ratios.

Table 6.1 (continued)

Planning Unit	WBID	Waterbody Segment	Waterbody Type	Waterbody Class	1998 303(d) Parameters of Concern	Parameters Identified Under the IWR	Assessment Status ¹	Priority Year for TMDL Development	Comments (# Exceedances/# Samples) PP = Planning Period VP = Verified Period
Lower Kissimmee Planning Unit	3192C	Oak Creek	Stream	IIIF	Coliform Bacteria	Total Coliforms	Planning List	2005	PP = 0/1. VP = 1/9.
Lower Kissimmee Planning Unit	3209	Kissimmee River	Stream	IIIF	DO	DO	Planning List	2005	PP = 285/753. VP = 128/333. DO met verification threshold of the IWR, and BOD exceeded the screening value (2.0 mg/L). 443 TN values, median 1.35 mg/L. 1277 TP values, median 0.10 mg/L. 8 BOD values, median 2.2 mg/L. 1189 DO values, median 5.90 mg/L, mean 5.48 mg/L, range 0.00–13.42 mg/L. Although BOD slightly exceeded the screening level, all the BOD measurements were collected from two sampling events. At the sites and on the date that high BOD measurements were observed, DO concentrations were all higher than 5.0 mg/L. It is therefore unreasonable to consider BOD as the causative pollutant for low DO in the system.
Northwest Lake Okeechobee	3206	Indian Prairie Canal	Stream	IIIF	DO	DO	Impaired	2005	PP = 149/253, Potentially impaired. VP = 47/110, Verified impaired. Nutrients were identified as a causative pollutant based on chl _a (µg/L) data/nutrient impairment verification. Waterbody is colimited by nitrogen and phosphorus based on TN/TP ratio median 10.69 (149 values). 149 TN values, median 1.66 mg/L. 149 TP values, median 0.15 mg/L.
Northwest Lake Okeechobee	3206	Indian Prairie Canal	Stream	IIIF	Bacteria	Fecal Coliforms	Planning List	2005	PP = 1/8. VP = 2/19.

Table 6.1 (continued)

Planning Unit	WBID	Waterbody Segment	Waterbody Type	Waterbody Class	1998 303(d) Parameters of Concern	Parameters Identified Under the IWR	Assessment Status ¹	Priority Year for TMDL Development	Comments (# Exceedances/# Samples) PP = Planning Period VP = Verified Period
Northwest Lake Okeechobee	3206	Indian Prairie Canal	Stream	IIIF	Nutrients	Nutrients (chla)	Impaired	2005	PP = Not impaired. VP = Verified impaired. Annual average chla value exceeded 20 µg/L in 2004 (26.85). Waterbody is colimited by nitrogen and phosphorus based on TN/TP ratio median 10.69 (149 values). 149 TN values, median 1.66 mg/L. 149 TP values, median 0.15 mg/L.
Northwest Lake Okeechobee	3206	Indian Prairie Canal	Stream	IIIF	Bacteria	Total Coliforms	Planning List	2005	PP = 0/6. VP = 0/17.

¹ Those parameters that could not be verified impaired will have TMDLs established for them by the EPA.

BOD = Biological oxygen demand
chla = Chlorophyll *a*
DO = Dissolved oxygen
EPA = U.S. Environmental Protection Agency
F = Fresh water
IWR = Impaired Surface Water Rule
mg/L = Milligrams per liter
mL = Milliliters
SCI = Stream condition index
TN = Total nitrogen
TP = Total phosphorus
µg/L = Micrograms per liter
WBID = Waterbody identification number

applicable numeric or narrative water quality criterion for the pollutant. In most cases, this “assimilative” capacity will be determined using computer modeling (both hydrodynamic and water quality models) that predicts the fate and transport of pollutants in the receiving waters. Modeling for the typical TMDL will include model setup, calibration, and verification, followed by a variety of model runs that determine the assimilative capacity of the water under worst-case conditions.

State law and federal regulations require that TMDLs include a margin of safety (MOS) that takes into account “any lack of knowledge concerning the relationship between effluent limitations and water quality.” The EPA has allowed states to establish either a specific MOS (typically some percentage of the assimilative capacity) or an implicit MOS based on conservative assumptions in the modeling. To date, the Department has elected to establish an implicit MOS based on predictive model runs that incorporate a variety of conservative assumptions (they examine worst-case ambient flow conditions and worst-case temperature, and assume that all permitted point sources discharge at their maximum permitted amount).

It is important to note that TMDLs will be developed only for the actual pollutants causing the impairment in the listed waterbody. These are called the “pollutants of concern.” In Florida, the most commonly listed pollutants of concern are nutrients, sediments, and coliform bacteria.

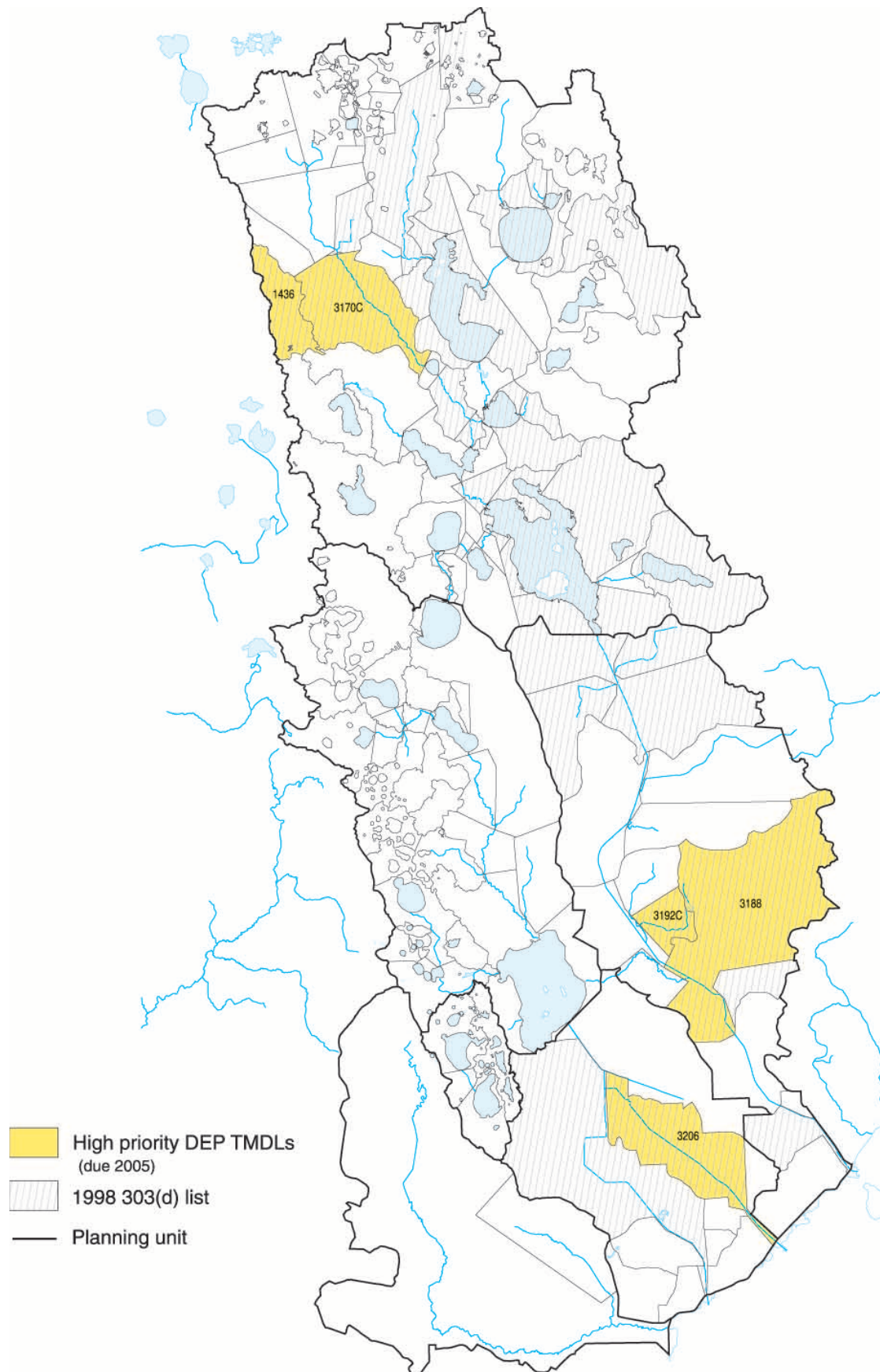
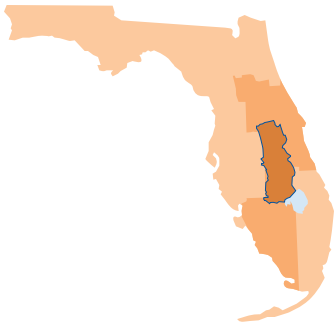


Figure 6.1: Kissimmee River and Fisheating Creek Basins, Priority DEP TMDL Watersheds for 2005



TMDLs will not be developed for impairments not due to pollutant discharges—for example, natural conditions, physical alterations such as dams and channelization, or changes in the flow of the water. In other cases, a waterbody may be deemed potentially impaired based on bioassessment data or toxicity data. In these cases, the Department must determine the actual pollutant causing the impairment before a TMDL can be developed.

Total Maximum Daily Load Allocation and Implementation

Initial Allocation of Pollutant Loadings

The Florida Watershed Restoration Act (FWRA) requires that a TMDL include the “establishment of reasonable and equitable allocations... among point and nonpoint sources...” The Department refers to this as the “initial allocation,” which is adopted by rule. For the purposes of allocating the required pollutant loadings, the term “point sources” primarily includes traditional sources such as domestic and industrial wastewater discharges.

Recent EPA guidance requires states to include as point sources those stormwater systems that are covered by a National Pollutant Discharge Elimination System (NPDES) stormwater permit. However, NPDES-permitted stormwater discharges are not subject to the same types of effluent limitations, cannot be centrally collected and treated, and typically have not invested in treatment controls to the same degree as traditional point sources. Nonpoint sources include intermittent, rainfall-driven, diffuse sources of pollutants associated with everyday human activities, including runoff from urban land uses, agriculture, silviculture, and mining; discharges from failing septic systems; and atmospheric deposition.

These point and nonpoint definitions do not directly relate to whether a source is regulated. Some nonpoint sources such as stormwater systems are permitted under the regulatory programs of the Department or water management districts, while others, such as agricultural stormwater discharges, are not. This distinction is important because the implementation of the allocations to nonpoint sources outside the authority of regulatory programs will require cooperation from dischargers to implement best management practices (BMPs) voluntarily.

While a “detailed allocation” will ultimately be necessary to implement a TMDL fully, a key goal of the initial allocation is to assign responsibility for pollutant load reductions between point and nonpoint sources. For point sources, allocations will be implemented through the Department’s NPDES wastewater and stormwater permitting programs. The implementation of nonpoint source load reductions will be done through a combination of regulatory and nonregulatory processes.

Initial allocations of pollutant loadings will also be made to historical sources (e.g., the phosphorus-laden sediments at the bottom of a lake) and upstream sources (those entering into an impaired waterbody). Upstream sources include sources outside Florida, and these sources will receive reduced allocations similar to in-state sources.

The FWRA provided direction for the allocation of TMDLs and directed the Department to provide guidance on the allocation process by establishing an Allocation Technical Advisory Committee (ATAC), consisting of representatives of key stakeholder groups. The committee's report recommended a three-step process for developing initial allocations and addressed detailed allocations for nonpoint sources, stakeholder involvement, the use of BMPs, and other TMDL implementation issues (Department, 2001). A copy of the ATAC report can be available at <http://www.dep.state.fl.us/water/tmdl/docs/Allocation.pdf>.

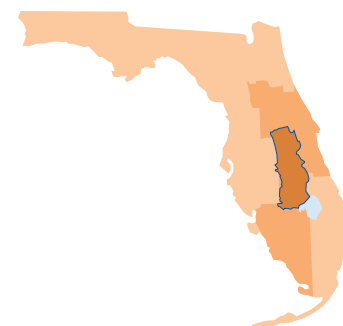
Implementation Programs and Approaches

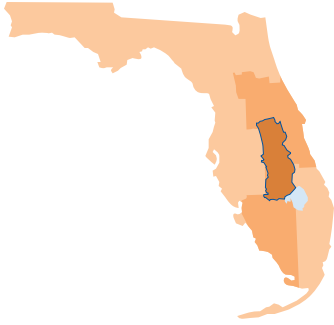
The FWRA designates the Department as the lead agency in coordinating the implementation of TMDLs. Existing programs and approaches through which TMDLs may be carried out include the following:

- Permitting and other existing regulatory programs, such as NPDES permits, domestic and industrial wastewater permits, and stormwater/Environmental Resource Permits (Table 6.2 lists the municipal NPDES stormwater permittees in the Kissimmee River and Fisheating Creek Basins);

Table 6.2: Municipal NPDES Stormwater Permittees in the Kissimmee River and Fisheating Creek Basins

County	Permit/Copermit Name	Permit ID Number	MS4 Type
Orange	City of Orlando	FLS000014	Phase I
Orange	Florida Department of Transportation (DOT) District 5	FLS000011	Phase I
Orange	Orange County	FLS000011	Phase I
Orange	Reedy Creek Improvement District	FLS000010	Phase I
Orange	Town of Belle Isle	FLS000011	Phase I
Orange	Town of Edgewood	FLS000011	Phase I
Orange	Town of Windermere	FLR04E063	Phase II
Orange	Valencia Water Control District	FLS000011	Phase I
Osceola	Osceola County	FLR04E012	Phase II
Osceola	City of Kissimmee	FLR04E064	Phase II
Osceola	City of St. Cloud	FLR04E112	Phase II
Polk	City of Davenport	FLS000015	Phase I
Polk	City of Frostproof	FLS000015	Phase I
Polk	City of Haines City	FLS000015	Phase I
Polk	City of Lake Wales	FLS000015	Phase I
Polk	City of Polk City	FLS000015	Phase I
Polk	Village of Highland Park	FLS000015	Phase I
Polk	DOT District 1	FLS000015	Phase I
Polk	Polk County	FLS000015	Phase I
Polk	Town of Dundee	FLS000015	Phase I
Polk	Town of Hillcrest Heights	FLS000015	Phase I
Polk	Town of Lake Hamilton	FLS000015	Phase I





- Local land development codes;
- Nonregulatory and incentive-based programs, including BMPs, cost sharing, waste minimization, pollution prevention, new approaches to land use design and development, and public education;
- Basin Management Action Plans (B-MAPs) developed under the FWRA;
- Other water quality management and restoration activities, for example, Surface Water Improvement and Management plans approved under Section 373.456, Florida Statutes;
- Pollutant trading or other equitable economically based agreements;
- Public works, including capital facilities; or
- Land acquisition.

These programs and approaches will be carried out at local, regional, state, and possibly federal levels. TMDL implementation will require extensive stakeholder involvement throughout the state and, in some cases, between Florida and other states. **Appendix A** provides additional details on the implementation programs and approaches listed here.

Development of Basin Management Action Plans

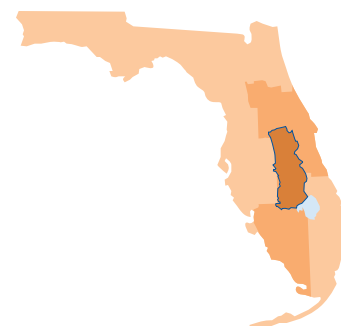
The FWRA authorizes the Department to develop B-MAPs for implementing TMDLs. These plans will be developed with extensive stakeholder input to build consensus on detailed allocations based on the initial general allocations to categories of discharges.

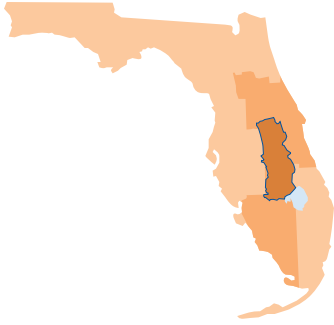
The B-MAPs will contain final allocations, strategies for meeting the allocations, schedules for implementation, funding mechanisms, applicable local ordinances, and other elements. In cases where stakeholder consensus could not be reached on detailed allocations and/or a B-MAP within a reasonable time, the Department will develop the allocations.

Once a B-MAP is developed, the Department will make it available for public review and comment. Guidance for the content and format of the B-MAPs is being developed; the plans are likely to include a description of both regulatory and nonregulatory approaches to meeting specific TMDLs.

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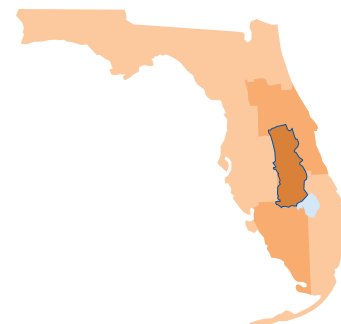
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Kissimmee River and Fisheating Creek Appendices

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Appendix A: Legislative and Regulatory Background on the Watershed Management Approach and the Implementation of Total Maximum Daily Loads

Federal and State Legislation on Surface Water Quality and Total Maximum Daily Loads

Clean Water Act

Congress enacted the Clean Water Act in 1972 with the goal of restoring and maintaining the “chemical, physical, and biological integrity of the nation’s waters” (33 U.S.C. § 1251[a]). The ultimate goal of the act is to eliminate the “discharge of [all] pollutants into navigable waters” (33 U.S.C. § 1251[a][1]).

Section 305(b) of the Clean Water Act requires states to report biennially to the U.S. Environmental Protection Agency (EPA) on their water quality. The 305(b) assessment report provides information on the physical, chemical, biological, and cultural features of each river basin in Florida. This initial assessment provides a common factual basis for identifying information sources and major issues, and for determining the future changes, strategies, and actions needed to preserve, protect, and/or restore water quality. Understanding the physical framework of each basin allows the development of a science-based methodology for assessing water quality and an accurate picture of the waters that are most impaired or vulnerable to contamination.

Section 303(d) of the Clean Water Act requires states to submit to the EPA lists of surface waters that do not meet applicable water quality standards and establish total maximum daily loads (TMDLs) for each of these waters on a schedule. A pollution limit is then allocated to each pollutant source in an individual river basin.

A TMDL represents the maximum amount of a given pollutant that a waterbody can assimilate and meet all of its designated uses (see **Noteworthy** on Florida’s surface water quality classifications for a listing of these classifications). A waterbody that does not meet its designated use is defined as *impaired*.

NOTEWORTHY: FLORIDA’S SURFACE WATER QUALITY CLASSIFICATIONS

Florida’s water quality standards program, the foundation of the state’s program of water quality management, designates the “present and future most beneficial uses” of the waters of the state (Subsection 403.061[10], Florida Statutes [F.S.]). Water quality criteria, expressed as numeric or narrative limits for specific parameters, describe the water quality necessary to maintain these uses for surface water and ground water. Florida’s surface water is protected for five designated use classifications, as follows:

<i>Class I</i>	<i>Potable water supplies</i>
<i>Class II</i>	<i>Shellfish propagation or harvesting</i>
<i>Class III</i>	<i>Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife</i>
<i>Class IV</i>	<i>Agricultural water supplies</i>
<i>Class V</i>	<i>Navigation, utility, and industrial use (there are no state waters currently in this class)</i>

Florida Watershed Restoration Act

In 1998, the EPA settled a lawsuit with the environmental group Earthjustice over Florida's TMDL Program. The Consent Decree resulting from the lawsuit requires all TMDLs on the state's 1998 Section 303(d) list of impaired waters to be developed in thirteen years. If the state fails to develop the TMDLs, the EPA is required to do so.

In response to concerns about the TMDL lawsuit and in recognition of the important role that TMDLs play in restoring state waters, the 1999 Florida legislature enacted the Florida Watershed Restoration Act (Chapter 99-223, Laws of Florida). The act clarified the Florida Department of Environmental Protection's (Department) statutory authority to establish TMDLs, required the Department to develop a methodology for identifying impaired waters, specified that the Department could develop TMDLs only for waters on a future state list of impaired waters developed using this new methodology, and directed the Department to establish an Allocation Technical Advisory Committee to address the allocation process for TMDLs. The act also declared Lake Okeechobee impaired and, as required under the TMDL Consent Decree, allowed the state to develop a TMDL for the lake (see **Noteworthy** for a description of the legislation's major provisions).

NOTEWORTHY: THE FLORIDA WATERSHED RESTORATION ACT

The Florida Watershed Restoration Act contains the following major provisions:

- *Establishes that the 303(d) list submitted to the EPA in 1998 is for planning purposes only.*
- *Requires the Department to adopt 303(d) listing criteria (that is, the methodology used to define impaired waters) by rule.*
- *Requires the Department to verify impairment and then establish a Verified List for each basin. The Department must also evaluate whether proposed pollution control programs are sufficient to meet water quality standards, list the specific pollutant(s) and concentration(s) causing impairment, and adopt the basin-specific 303(d) list by Secretarial Order.*
- *Requires the Department's Secretary to adopt TMDL allocations by rule. The legislation requires the Department to establish "reasonable and equitable" allocations of TMDLs, but does not mandate how allocations will be made among individual sources.*
- *Requires that TMDL allocations consider existing treatment levels and management practices; the differing impacts that pollutant sources may have; the availability of treatment technologies, best management practices (BMPs), or other pollutant reduction measures; the feasibility, costs, and benefits of achieving the allocation; reasonable time frames for implementation; the potential applicability of moderating provisions; and the extent that nonattainment is caused by pollutants from outside Florida, discharges that have ceased, or alteration to a waterbody.*
- *Required a report to the legislature by February 2001 addressing the allocation process.*

- *Authorizes the Department to develop basin plans to implement TMDLs, coordinating with the water management districts, the Florida Department of Agriculture and Consumer Services (DACS), the Soil and Water Conservation Districts, regulated parties, and environmental groups in assessing waterbodies for impairment, collecting data for TMDLs, developing TMDLs, and conducting at least one public meeting in the watershed. Implementation is voluntary if not covered by regulatory programs.*
- *Authorizes the Department and DACS to develop interim measures and BMPs to address nonpoint sources. While BMPs would be adopted by rule, they will be voluntary if not covered by regulatory programs. If they are adopted by rule and the Department verifies their effectiveness, then implementation will provide a presumption of compliance with water quality standards.*
- *Directs the Department to document the effectiveness of the combined regulatory/voluntary approach and report to the legislature by January 1, 2005. The report will include participation rates and recommendations for statutory changes.*

Determining Impairment Based on the State's Impaired Surface Waters Rule

Section 303(d) of the federal Clean Water Act and the Florida Watershed Restoration Act describe impaired waters as those waterbodies or waterbody segments that do not meet applicable water quality standards. "Impairment" is a broad term that includes designated uses, water quality criteria, the Florida antidegradation policy, and moderating provisions (see **Noteworthy** for explanations of these terms).

The state's Identification of Impaired Surface Waters Rule (Rule 62-303, Florida Administrative Code [F.A.C.]) was developed in cooperation with a Technical Advisory Committee and adopted by the Florida Environmental Regulation Commission on April 26, 2001. It provides a science-based methodology for evaluating water quality data in order to identify impaired waters, and it establishes specific criteria for impairment based on chemical parameters, the interpretation of narrative nutrient criteria, biological impairment, fish consumption advisories, and ecological impairment. The complete text of the rule is available at <http://www.dep.state.fl.us/water/tmdl/docs/AmendedIWR.pdf>.

The Impaired Surface Waters Rule also establishes thresholds for data sufficiency and data quality, including the minimum sample size required and the number of exceedances of the applicable water quality standard for a given sample size that identify a waterbody as impaired. The number of exceedances is based on a statistical approach designed to provide greater confidence that the outcome of the water quality assessment is correct. **Waters that are identified as impaired through the Impaired Surface Waters Rule are prioritized for TMDL development and implementation.**

NOTEWORTHY: EXPLANATION OF TERMS

- **Designated uses**, discussed in an earlier sidebar, comprise the five classifications applied to each of the state's surface waterbodies.
- **Water quality criteria** comprise numeric or narrative limits of pollutants.
- **The Florida Antidegradation Policy** (Sections 62-302.300 and 62-4.242, F.A.C.) recognizes that pollution that causes or contributes to new violations of water quality standards or to the continuation of existing violations is harmful to the waters of the state. Under this policy, the permitting of new or previously unpermitted existing discharges is prohibited where the discharge is expected to reduce the quality of a receiving water below the **classification** established for it. Any lowering of water quality caused by a new or expanded discharge to surface waters must be in the public interest (that is, the benefits of the discharge to public health, safety, and welfare must outweigh any adverse impacts on fish and wildlife or recreation). Further, the permittee must demonstrate that other disposal alternatives (for example, reuse) or pollution prevention are not economically and technologically reasonable alternatives to the surface water discharge.
- **Moderating provisions** (provided in Subsection 62-302.300[10] and Rules 62-4 and 62-6, F.A.C., and described in Sections 62-302.300, 62-4.244, 62-302.800, 62-4.243, F.A.C., and Sections 403.201 and 373.414, F.S.) include mixing zones, zones of discharge, site-specific alternative criteria, exemptions, and variances. These provisions are intended to moderate the **applicability** of water quality standards where it has been determined that, under certain special circumstances, the social, economic, and environmental costs of such **applicability** outweigh the benefits.

Determining impairment in individual waterbodies takes place in two phases. First, in each river basin the Department evaluates the existing water quality data, using the methodology prescribed in the Impaired Surface Waters Rule, to determine whether waters are potentially impaired. Waters found to be potentially impaired are included on a *Planning List* for further assessment under Subsections 403.067(2) and (3), F.S. As required by Subsection 403.067(2), F.S., the Planning List is not used to administer or implement any regulatory program. It is submitted to the EPA for informational purposes only.

The second step is to assess waters on the Planning List under Subsection 403.067(3), F.S., as part of the Department's watershed management approach (described in the following section). The Department carries out additional data gathering and strategic monitoring, focusing on these potentially impaired waters, and determines—using the methodology in Part III, Section 62-303.400, F.A.C.—if a waterbody is, in fact, impaired and if the impairment is caused by pollutant discharges.

A Water Quality Assessment Report is produced containing the results of this updated evaluation and a *Verified List* of impaired waters. The criteria for the Verified List are more stringent than those for the Planning List. The Department is required to develop TMDLs for waters on the Verified List under Subsection 403.067(4), F.S. A watershed management plan (called a Basin Management Action Plan, or BMAP) to

reduce the amount of pollutants that cause impairments must also be produced and implemented.

The Verified List is adopted by Secretarial Order in accordance with the Florida Watershed Restoration Act. Once adopted, the list is submitted to the EPA for approval as the state's Section 303(d) list of impaired waters for the basin.

Implementing Total Maximum Daily Loads

The Watershed Management Approach

The Department's statewide approach to water resource management, called the watershed management approach, is the framework for implementing TMDLs as required by the federal and state governments. The approach does not focus on individual causes of pollution. Instead, each basin is assessed as an entire functioning system, and aquatic resources are evaluated from a basinwide perspective that considers the cumulative effects of human activities. Water resources are managed on the basis of natural boundaries, such as river basins, rather than political or regulatory boundaries. Federal, state, regional, tribal, and local governments identify watersheds not meeting clean water or other natural resource goals and work cooperatively to focus resources and implement effective strategies to restore water quality. Extensive public participation in the decision-making process is crucial.

The watershed management approach is not new, nor does it compete with or replace existing programs. Rather than relying on single solutions to water resource issues, it is intended to improve the health of surface water and ground water resources by strengthening coordination among such activities as monitoring, stormwater management, wastewater treatment, wetland restoration, land acquisition, and public involvement.

By promoting the management of entire natural systems and addressing the cumulative effects of human activities on a watershed basis, this approach is intended to protect and enhance the ecological structure, function, and integrity of Florida's watersheds. It provides a framework for setting priorities and focusing the Department's resources on protecting and restoring water quality, and aims to increase cooperation among state, regional, local, and federal interests. By emphasizing public involvement, the approach encourages stewardship by all Floridians to preserve water resources for future generations.

The watershed approach is intended to speed up projects by focusing funding and other resources on priority water quality problems, strengthening public support, establishing agreements, and funding multiagency projects. It avoids duplication by building on existing assessments and restoration activities and promotes cooperative monitoring programs. It encourages accountability for achieving water quality improvements through improved monitoring and the establishment of TMDLs.

The Watershed Management Cycle

As part of the Department's watershed management approach, TMDLs will be developed, and the corresponding pollutant loadings allocated, as part of a watershed management cycle that rotates through the state's 52 river basins over a 9-year period. The cycle's 5 phases are as follows:

- ***Phase 1: Preliminary Watershed Evaluation.*** For each river basin, a **Water Quality Status Report** is developed, containing a *Planning List* of potentially impaired waters that may require the establishment of TMDLs. The report characterizes each basin's hydrologic, ecological, and socioeconomic setting as well as historical, current, and proposed watershed management issues and activities. It also contains a preliminary evaluation of major water quality parameters, water quality issues by planning unit, ecological resources, and basinwide pollutant loading trends related to land uses. At the end of Phase 1, a **Strategic Monitoring Plan** is developed.
- ***Phase 2: Strategic Monitoring and Assessment.*** Additional data are collected through strategic monitoring and uploaded to STORET. The data are used to verify whether potentially impaired waters in each basin are impaired and to calibrate and verify models for TMDL development. At the end of Phase 2, a **Water Quality Assessment Report** is produced for each basin that contains a *Verified List* of impaired waters. The report also provides an updated and more thorough evaluation of water quality, associated biological resources, and current management plans. The Department will adopt the *Verified List* through a Secretarial Order and submit it to the EPA as the state's Section 303(d) list of impaired waters.
- ***Phase 3: Development and Adoption of TMDLs.*** TMDLs for priority impaired waters in the basin will be developed and adopted by rule. Because TMDLs cannot be developed for all listed waters during a single watershed management cycle due to fiscal and technical limitations, waterbodies will be prioritized using the criteria in the Identification of Impaired Surface Waters Rule (Rule 62-303, F.A.C.).
- ***Phase 4: Development of a Basin Management Action Plan.*** A BMAP will be developed for each basin to specify how pollutant loadings from point and nonpoint sources will be allocated and reduced in order to meet TMDL requirements. The plans will include regulatory and nonregulatory (i.e., voluntary) and structural and nonstructural strategies, and existing management plans will be used where feasible. The involvement and support of affected stakeholders in this phase will be especially critical.
- ***Phase 5: Implementation of a Basin Management Action Plan.*** Implementation of the activities specified in the BMAP will begin. This includes carrying out rule development as needed, securing funding, informing stakeholders and the public, and monitoring and evaluating the implementation of the plan.

To implement the watershed cycle, the state's river basins have been divided into five groups within each of the Department's six districts statewide, and each district will assess one basin each year. **Table A.1** shows the basin groups for implementing the cycle in the Department's districts, and **Figure A.1** shows these groups and the rotating cycle in the districts. **Table A.2**, which lists the basin rotation schedule for TMDL development and implementation, shows that it will take nine years to complete one full cycle of the state.

The watershed management cycle is an iterative, or repeated, process. One of its key components is that the effectiveness of management activities (TMDL implementation) will be monitored in successive cycles. Monitoring conducted in Phase 2 of subsequent cycles will be targeted at evaluating whether water quality objectives are being met and whether individual waters are no longer impaired. The Department also will track the implementation of scheduled restoration activities, whether required or voluntary, to ensure continued progress towards meeting the TMDLs.

Table A.1: Basin Groups for Implementing the Watershed Management Cycle, by Department District Office

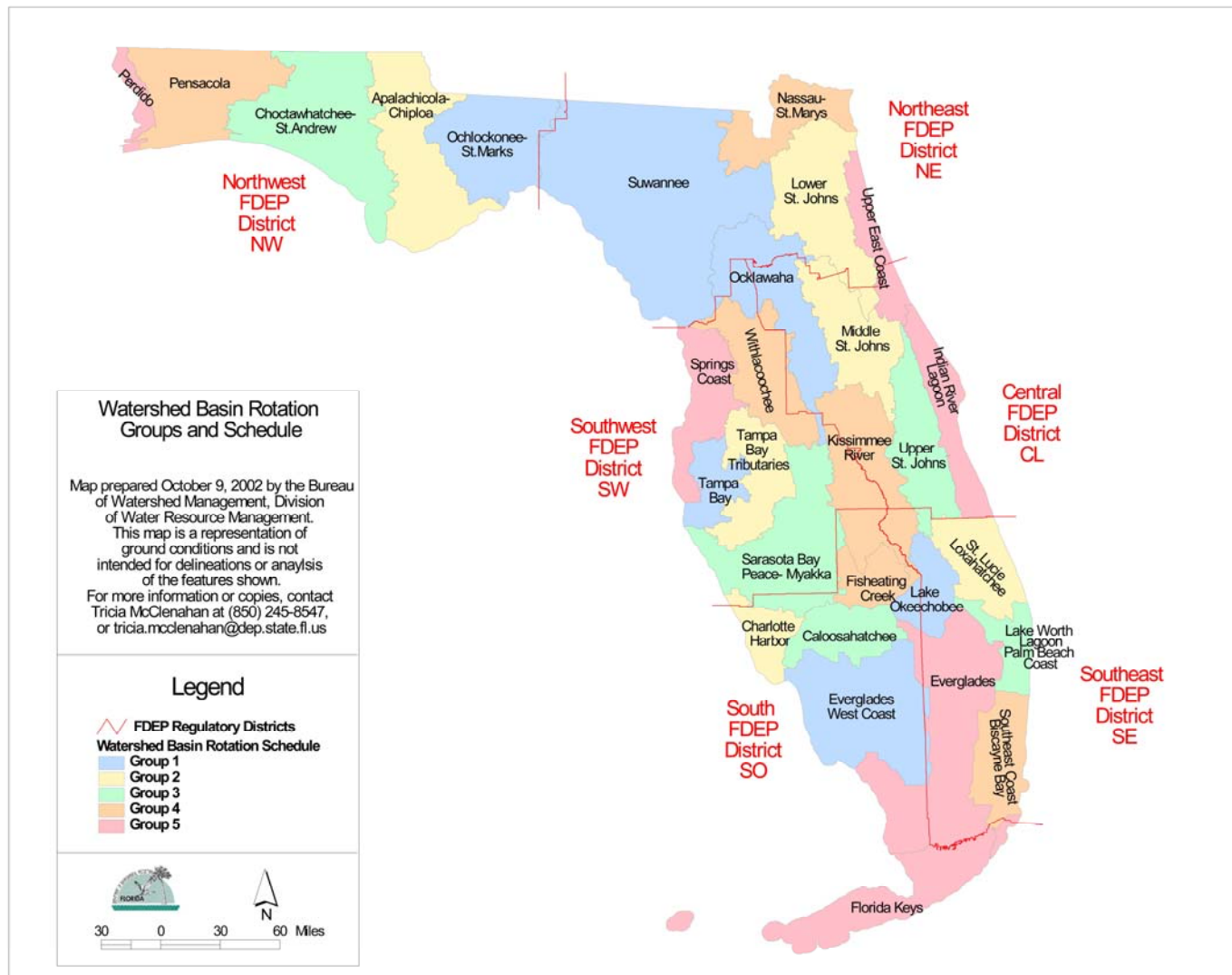
District	Group 1 Basins	Group 2 Basins	Group 3 Basins	Group 4 Basins	Group 5 Basins
Northwest	Ochlockonee–St. Marks Rivers	Apalachicola–Chipola Rivers	Choctawhatchee River and Bay and St. Andrew Bay	Pensacola Bay	Perdido River and Bay
Northeast	Suwannee River	Lower St. Johns River	–	St. Marys–Nassau Rivers	Northeast Coast Lagoons
Central	Ocklawaha River	Middle St. Johns River	Upper St. Johns River	Kissimmee River	Indian River Lagoon
Southwest	Tampa Bay	Tampa Bay Tributaries	Sarasota Bay and Peace–Myakka Rivers	Withlacoochee River	Springs Coast
South	Everglades West Coast	Charlotte Harbor	Caloosahatchee River	Fisheating Creek	Florida Keys
Southeast	Lake Okeechobee	St. Lucie–Loxahatchee Rivers	Lake Worth Lagoon/Palm Beach Coast	Southeast Urban Coast	Everglades

Table A.2: Basin Rotation Schedule for TMDL Development and Implementation

Year	00	01	01	02	02	03	03	04	04	05	05	06	06	07	07	08	08	09	09	10
Group 1	PHASE 1		PHASE 2		PHASE 3		PHASE 4		PHASE 5		PHASE 1		PHASE 2		PHASE 3		PHASE 4		PHASE 5	
Group 2			PHASE 1		PHASE 2		PHASE 3		PHASE 4		PHASE 5		PHASE 1		PHASE 2		PHASE 3		PHASE 4	
Group 3					PHASE 1		PHASE 2		PHASE 3		PHASE 4		PHASE 5		PHASE 1		PHASE 2		PHASE 3	
Group 4							PHASE 1		PHASE 2		PHASE 3		PHASE 4		PHASE 5		PHASE 1		PHASE 2	
Group 5									PHASE 1		PHASE 2		PHASE 3		PHASE 4		PHASE 5		PHASE 1	
	1 st Five-Year Cycle – High-Priority Waters										2 nd Five-Year Cycle – Medium-Priority Waters									

Note: Projected years for Phases 3, 4, and 5 may change due to accelerated local activities, length of plan development, legal challenges, etc.

Figure A.1: Five-Year Rotating Basin Cycle in the Department's Six Districts



Pollutants can enter a waterbody through point source discharges (generally from a specific facility) or nonpoint discharges (e.g., stormwater runoff, septic tanks). Government agencies, businesses, organizations, and individuals who contribute to these discharges will be asked to share the responsibility of attaining TMDLs through load allocations (the amount of a specified pollutant allotted for discharge) that are based on an established TMDL. **Table A.3** summarizes these potentially affected stakeholders, and the actions they may be asked to take to help achieve a TMDL.

Table A.3: Potentially Affected Stakeholders and Actions To Achieve TMDLs

Potentially Affected Stakeholders	Actions To Achieve TMDL
Municipal stormwater/wastewater programs	Reduce and treat urban stormwater runoff through stormwater retrofits, replacement of septic tanks
Commercial developers, homebuilders, individual homeowners	Improve development design and construction, enhance best management practices (BMPs), replace septic tanks
Municipal and industrial wastewater treatment facilities, National Pollutant Discharge Elimination System (NPDES) permitted facilities	Reduce pollutant loadings from permitted discharges
Farming and silviculture operations	Reduce and treat runoff through BMPs
Federal, regional, state agencies; regional and local water quality coalitions	Carry out waterbody restoration projects

Permitting and Other Approaches

NPDES PERMITS

All point sources that discharge to surface waterbodies require a National Pollutant Discharge Elimination System (NPDES) permit. These permits can be classified into two types: domestic or industrial wastewater discharge permits, and stormwater permits. NPDES-permitted point sources may be affected by the development and implementation of a TMDL. All NPDES permits include “reopener clauses” that allow the Department to incorporate new discharge limits when a TMDL is established. These new limitations may be incorporated into a permit when a TMDL is implemented or at the next permit renewal, depending on the timing of the permit renewal and workload. For NPDES municipal stormwater permits, the Department intends to insert the following statement once a BMAP is completed:

“The permittee shall undertake those activities specified in the (Name of Waterbody) Basin Management Action Plan in accordance with the approved schedule set forth in the BMAP.”

DOMESTIC AND INDUSTRIAL WASTEWATER PERMITS

In addition to NPDES-permitted facilities, all of which discharge to surface waters, Florida also regulates domestic and industrial wastewater discharges to ground water via land application. Since ground water and surface water are so intimately linked in much of the state, reductions in loadings from these facilities may be needed to meet TMDL limitations for pollutants in surface waters. If such reductions are identified in the BMAP, they would be implemented through modifications of the existing state permits.

FLORIDA STORMWATER/ENVIRONMENTAL RESOURCE PERMITS

With the implementation of the state's stormwater treatment rule in 1982, Florida became the first state to require the treatment of stormwater from all new development. Today, except in the area served by the Northwest Florida Water Management District, new development projects receive an Environmental Resource Permit that combines stormwater flood protection, stormwater treatment, and wetland protection/mitigation into a single permit. These permits are designed to obtain 80 percent average annual load reduction of total suspended solids. This level of treatment may need to be increased, depending on the allocation of load reductions, especially for nutrients. For example, the St. Johns River Water Management District recently adopted basin-specific criteria for the Lake Apopka Basin that require the phosphorus loading from new development not to exceed predevelopment phosphorus loading.

LOCAL LAND DEVELOPMENT CODES

Since structural stormwater treatment practices can only achieve certain levels of load reductions, and because the hydrologic changes accompanying urban development often cause ecological impacts to aquatic systems, local land development codes that promote "low-impact development" are an important component of restoring impaired waters. Local codes may need to be reviewed to determine how to promote developments that minimize impervious surfaces (such as reduced street widths or the use of pervious pavements), promote the protection of vegetation, promote the protection and restoration of riparian buffers along streams and lakes, and adopt the principles of the Florida Yards and Neighborhoods Program in local landscaping codes.

BEST MANAGEMENT PRACTICES

Typically, BMPs refer to a practice or combination of practices that, based on sound science and best professional judgment, are determined to be the most effective and practicable means of reducing nonpoint source pollutant discharges and improving water quality. Both economic and technological considerations are included in the evaluation of what is practicable. BMPs may include structural controls (such as retention areas or detention ponds) or nonstructural controls (such as street sweeping or public education). Many BMPs have been developed for urban stormwater to reduce pollutant loadings and peak flows. These BMPs accommodate site-specific conditions, including soil type, slope, depth to ground water, and the designation of receiving waters.

The passage of the Florida Watershed Restoration Act increased the emphasis on implementing BMPs to reduce nonpoint source pollutant discharges from agricultural operations. Recognizing that the development and adoption of BMPs might take several years, the legislature authorized the use of Interim Measures (IMs) during the BMP development process for agricultural operations. In essence, IMs are a set of logical conservation practices designed to reduce agricultural nonpoint pollutant discharges based on current knowledge and best professional judgment. These practices will evolve into more formal BMPs as better scientific data on their effectiveness is obtained.

Once the Florida Department of Agriculture and Consumer Services adopts BMPs, the Department is charged with verifying their effectiveness in reducing agricultural nonpoint sources. Once verified, agricultural operations that have implemented BMPs will receive a waiver of liability and presumption of compliance similar to that granted a developer who obtains an Environmental Resource Permit.

OTHER STRATEGIES

The success of implementing nonpoint source TMDL load allocations will require variety, creativity, stakeholder commitment to watershed management, and personal stewardship. In addition to BMPs, other possible strategies for meeting TMDLs, restoring water quality, and preventing the further degradation of Florida's watersheds include cost sharing, waste minimization, pollution prevention, new approaches to land use design and development, and pollutant trading. The Department will assemble a Technical Advisory Committee to help develop a pollutant-trading rule, which must be reviewed by the legislature prior to its adoption. The Department will also continue to work with local stakeholders on TMDL allocation issues and implementation plans.

Sources of Information

For additional information on the Department's Watershed Management Program and TMDLs, please contact the following basin coordinators:

- Southwest Florida and Lake Okeechobee, Pat Fricano (850) 245-8559
- Southeast Florida and Ochlockonee-St. Marks Basins, Kevin O'Donnell (850) 245-7607
- Northwest and Central Florida, Mary Paulic, (850) 245-8560
- Northeast Florida and Suwannee Basin, Jennifer Gihring (850) 245-8418
- West Central Florida and Tampa Bay Region, Tom Singleton (850) 245-8561

For information on establishing and implementing TMDLs, contact Jan Mandrup-Poulsen at (850) 245-8448. Additional information is available on the Department's Web site at <http://www.dep.state.fl.us/water/watersheds/index.htm>.

Appendix B: Information on Reasonable Assurance

TO: Interested Parties

FROM: Mimi Drew, Director
Division of Water Facilities

DATE: September 2002

SUBJECT: Guidance for Development of Documentation To Provide Reasonable Assurance that Proposed Pollution Control Mechanisms Will Result in the Restoration of Designated Uses in Impaired Waters

The purpose of this memo is to describe the types of information that should be considered, and subsequently documented, when evaluating whether there is sufficient reasonable assurance that:

1. Proposed pollution control mechanisms (typically described in watershed management or restoration plans) addressing impaired waters will result in the attainment of applicable water quality standards (designated uses) at a clearly defined point in the future, and
2. Reasonable progress towards restoration of designated uses will be made by the time the next 303(d) list of impaired waters is due to be submitted to the EPA.

There are many site-specific issues related to determining whether reasonable assurance has been provided. Accordingly, this document describes the elements or issues that should be considered when evaluating a submittal or when documenting the basis for the Department's decision, rather than attempting to establish specific criteria on what constitutes reasonable assurance.

It should be noted that the term "reasonable assurance" is used throughout many Department programs and rules, and this guidance specifically addresses the issues related to the "reasonable assurance" provided by proposed pollution control mechanisms. This guidance should not be used to evaluate the meaning of reasonable assurance in other contexts, particularly in permitting decisions.

Background

The Impaired Surface Waters Rule (IWR), Rule 62-303, F.A.C. (Identification of Impaired Surface Waters), establishes a formal mechanism for identifying surface waters in Florida that are impaired (do not meet applicable water quality standards) by pollutants. Most waters that are verified as being impaired by a pollutant will be listed on

the state's 303(d) list pursuant to the Florida Watershed Restoration Act (FWRA) and Section 303(d) of the Clean Water Act. Once listed, Total Maximum Daily Loads (TMDLs) will be developed for the pollutants causing the impairment of the listed waters. However, as required by the FWRA, the Department will evaluate whether existing or proposed pollution control mechanisms will effectively address the impairment before placing a water on the state's Verified List. If the Department can document there is reasonable assurance that the impairment will be effectively addressed by the control measure, then the water will not be listed on the final Verified List (other impaired waters that will not be listed include waters with TMDLs and waters impaired by pollution).

Current Rule Text Relating to Evaluation of Pollution Control Mechanisms

The rule text addressing the evaluation of proposed pollution control mechanisms is as follows:

Section 62-303.600, Evaluation of Pollution Control Mechanisms

1. Upon determining that a waterbody is impaired, the Department shall evaluate whether existing or proposed technology-based effluent limitations and other pollution control programs under local, state, or federal authority are sufficient to result in the attainment of applicable water quality standards.
2. If, as a result of the factors set forth in (1), the waterbody segment is expected to attain water quality standards in the future and is expected to make reasonable progress towards attainment of water quality standards by the time the next 303(d) list is scheduled to be submitted to EPA, the segment shall not be listed on the Verified List. The Department shall document the basis for its decision, noting any proposed pollution control mechanisms and expected improvements in water quality that provide reasonable assurance that the waterbody segment will attain applicable water quality standards.

Responsible Parties for Reasonable Assurance Demonstration

It is ultimately the Department's responsibility to assure adequate documentation in the administrative record whenever the Department decides to not list an impaired waterbody segment for a given pollutant. This documentation will be very important because the Verified Lists will be adopted by Order of the Secretary and third parties will be provided an opportunity to challenge, via an administrative hearing, all listing decisions (both those listing a water and those to not list a water for a given pollutant). However, the Department expects that local stakeholders will often offer to prepare the necessary documentation to demonstrate reasonable assurance that proposed control mechanisms will restore a given waterbody. The Department will provide guidance to stakeholders on what information is needed and how it should be submitted.

Time Frame for Development of Documentation

The Department plans to prepare basin-specific Verified Lists as part of its watershed management cycle, which rotates through all of the state's basins over a five-year, five-phased cycle¹. During the first phase of the cycle, the Department will assess water quality in the basin and prepare a draft Planning List of potentially impaired waters. The Department and interested parties will then have approximately one year (Phase 2) to monitor waters on the planning list and prepare documentation, as appropriate, to provide reasonable assurance that impaired waters will be restored. The Department will review submittals from interested parties during Phase 2, before adopting the Verified List for the basin containing the waterbody segment in question.

What It Means To Be Under Local, State, or Federal Authority

Both the FWRA and the IWR require that the pollution control programs under consideration be “under local, state, or federal authority.” A pollution control program will be considered "under local, state, or federal authority" if the program is subject to or required by a local ordinance, state statute or rule, or federal statute or regulation.

Programs will also be considered under local, state, or federal authority if they are subject to a written agreement, signed by both local stakeholders and at least one governmental entity, that includes measurable goals, performance criteria, benchmarks, and back-up corrective actions to assure the further progress of the program. It is important to note that these written agreements do not need to be enforceable for nonregulated nonpoint sources.

Many nonpoint sources are currently outside of the regulatory programs of EPA, the Department, and the water management districts, and reductions at these nonpoint sources will be voluntary. In fact, pollution control mechanisms for these nonpoint sources would be voluntary even if a TMDL were developed. As such, these agreements may provide the same level of reasonable assurance that can be provided for a TMDL implementation plan as long as they maintain the Department's enforcement capability over all point sources involved.

Time Frame for Attaining Water Quality Standards

The FWRA and the IWR do not establish a specific time limit by which waters must attain applicable water quality standards or designated uses. However, the pollution control mechanisms or watershed restoration plan must provide reasonable assurance that designated uses will be met at some time **in the future**. As such, the documentation submitted to the Department must provide a specific date by which time designated uses are expected to be restored. In cases where designated uses will not be met for many years, the documentation should also provide justification as to why the specified time is needed to restore designated uses.

¹ Federal regulations currently call for state 303(d) lists every two years, but Florida plans to submit annual updates based on the basin-specific Verified Lists.

Parameter-Specific Nature of Demonstration

For the Department not to place an impaired waterbody segment on the Verified List, reasonable assurance must be provided for each pollutant that has been documented to be causing impairment of the waterbody segment. However, some entities, including the Department, may want to provide reasonable assurance addressing only selected pollutants, which could result in the Department not listing the waterbody segment for those pollutants, but still listing it for others. In this event, TMDLs will only be developed for the remaining listed pollutants.

Information To Consider and Document when Assessing Reasonable Assurance in the IWR

To provide reasonable assurance that existing or proposed pollution control mechanisms will restore designated uses, the following information should be evaluated and documented for the Administrative Record:

1. **A Description of the Impaired Water**—name of the water listed on the Verified List, the location of the waterbody and watershed, the watershed/8-digit cataloging unit code, the NHD identifier (when they become available), the type (lake, stream, or estuary) of water, the water use classification, the designated use not being attained, the length (miles) or area (acres) of impaired area, the pollutant(s) of concern (those identified as causing or contributing to the impairment), and the suspected or documented source(s) of the pollutant(s) of concern.
2. **A Description of the Water Quality or Aquatic Ecological Goals**—a description of the water quality-based targets or aquatic ecological goals (both interim and final) that have been established for the pollutant(s) of concern, the averaging period for any numeric water quality goals, a discussion of how these goals will result in the restoration of the waterbody's impaired designated uses, a schedule indicating when interim and final targets are expected to be met, and a description of procedures (with thresholds) to determine whether additional (backup) corrective actions are needed.
3. **A Description of the Proposed Management Actions To Be Undertaken**—names of the responsible participating entities (government, private, others), a summary and list of existing or proposed management activities designed to restore water quality, the geographic scope of any proposed management activities, documentation of the estimated pollutant load reduction and other benefits anticipated from implementation of individual management actions, copies of written agreements committing participants to the management actions, a discussion on how future growth and new sources will be addressed, confirmed sources of funding, an implementation schedule (including interim milestones and

the date by which designated uses will be restored), and any enforcement programs or local ordinances, if the management strategy is not voluntary.

4. **A Description of Procedures for Monitoring and Reporting Results**—a description of the water quality monitoring program to be implemented (including station locations, parameters sampled, and sampling frequencies) to demonstrate reasonable progress; quality assurance/quality control elements that demonstrate the monitoring will comply with Rule 62-160, F.A.C.; procedures for entering all appropriate data into STORET; the responsible monitoring and reporting entity; the frequency and format for reporting results; the frequency and format for reporting on the implementation of all proposed management activities; and methods for evaluating progress towards goals.
5. **A Description of Proposed Corrective Actions**—a description of proposed corrective actions (and any supporting document[s]) that will be undertaken if water quality does not improve after implementation of the management actions or if management actions are not completed on schedule, and a process for notifying the Department that these corrective actions are being implemented.

Water Quality–Based Targets and Aquatic Ecological Goals

Some of the most important elements listed above are the requirements to provide water quality–based targets or aquatic ecological goals and a discussion on how resultant pollutant(s) reduction targets/goals will result in restoration of designated uses. Some people have expressed concern about these targets because they equate a water quality–based restoration target with a TMDL (thus assuming a “Catch 22” that a TMDL is needed to make a demonstration that a TMDL is not needed). However, as is also the case for TMDLs, water quality–based targets can take many forms, and need not be a result of a complex hydrodynamic/water quality model.

In some cases, there may be sufficient historical data (paleolimnological data, loadings from periods predating the impairment, or baseline data for Outstanding Florida Waters², for example) that could be used to determine an appropriate water quality target. In other cases, simplified modeling (including regression analysis) may allow for conservative estimates of the assimilative capacity that could then be used as the basis for restoration goals. And, finally, a water quality target may have been developed that would be scientifically equivalent to (or act as the basis for) a TMDL, but the target has not been administratively adopted as a TMDL. In each of these cases, a sound water quality target could be used to evaluate whether the proposed pollution control mechanisms will sufficiently reduce loadings to meet the assimilative capacity of the water in question and result in attainment of designated uses.

² Baseline data would be data for the year prior to designation of the OFW.

Interim Targets

Because it will usually take many years to restore fully the designated uses of an impaired water, interim water quality targets will often be needed to measure whether reasonable progress is being made towards the restoration of designated uses. Examples of such interim targets are provided in the last section of this document, but site-specific measures are also encouraged.

Averaging Periods for Water Quality Targets

While the averaging period for water quality–based targets should be consistent with how the underlying standard is expressed, they can often be expressed in a variety of ways and need not be expressed as “daily loads.” Annual averages or medians are often appropriate for some parameters, but shorter-term (seasonal, for example) averages may be necessary if the impairment is limited to specific seasons or parts of the year. Multi-year averages may be appropriate in limited circumstances where there is naturally high variation of the water quality target.

Estimates of Pollutant Reductions from Restoration Actions

It will often be difficult to estimate precisely the pollutant reductions that will result from specific restoration activities. This is particularly true for the implementation of best management practices (BMPs). However, to provide reasonable assurance that a BMP or other restoration action will reduce loadings of the pollutant of concern to a level that will restore the water’s designated uses, documentation should address how the reductions were calculated, including providing documented values from the scientific literature for reductions attributed to similar management actions. If the expected reductions are expressed as a range, the midpoint of the range should be used as the basis for estimating reductions, unless documentation is provided supporting the use of different removal efficiencies in this specific application.

New Sources/Growth

Another key element is the discussion on how future growth and new sources will be addressed. Restoration goals must address possible increased loadings of the pollutant of concern that are anticipated due to population growth or land use changes in contributing watersheds, both from point and nonpoint sources. This will be particularly important for waters impaired by nutrients, given that so many Florida watersheds are faced with continuing urban, residential, and agricultural development that results in increased nutrient loading from stormwater, septic tanks, and wastewater discharges.

Examples of Reasonable Progress

The determination of whether there will be reasonable progress towards attainment of water quality standards will be very site- and pollutant-specific. Documentation

should be provided supporting specific progress towards restoration of the designated uses of the impaired water. Possible examples of reasonable progress include, but are not limited to the following:

- A written commitment to implement controls reducing loadings within a specified time frame from watershed stakeholders representing at least 50 percent of the anthropogenic load of the pollutant(s) of concern;
- Evidence of at least a 10 percent reduction (or alternatively, a percent reduction consistent with meeting the water quality target by the specified date) in annual anthropogenic loading of the pollutant(s) of concern;
- Evidence of at least a 10 percent decrease (or alternatively, a percent decrease consistent with meeting the water quality target by the specified date) in the annual average concentration of the pollutant(s) of concern in the water;
- Bioassessment results showing there has been an improvement in the health of the biological community of the water, as measured by bioassessment procedures similar to those used to determine impairment and conducted in similar conditions; or
- Adoption of a local ordinance that specifically provides water quality goals, restricts growth or loads tied to the pollutant(s) of concern, and provides an enforcement option if the proposed management measure(s) are not implemented as required.

Reasonable progress must be made by the time the next 303(d) list is due to be submitted to EPA, which is currently every two years. EPA has contemplated changing the listing cycle to every four or five years, and the IWR was specifically worded to allow a longer time frame for requiring reasonable progress in the event that the listing cycle changes.

Long-Term Requirements

If at any time the Department determines that reasonable assurance and reasonable progress are not being met, the order adopting the Verified List will be amended to include the waterbody on the Verified List for the pollutant(s) in question. Additional reasonable progress must be made each time a waterbody is considered for listing under Rule 62-303, F.A.C. (every five years).

If you have any questions about this guidance memo, contact Daryll Joyner of the Department's Bureau of Watershed Management in Tallahassee at 850-245-8431.

Appendix C: Methodology for Determining Impairment Based on the Impaired Surface Waters Rule

The Impaired Surface Waters Rule

To identify impaired waters in each of the state's river basins, the Florida Department of Environmental Protection (Department) evaluates water quality data using the science-based methodology in the Identification of Impaired Surface Waters Rule (IWR) (Rule 62-303, Florida Administrative Code [F.A.C.]). The rule establishes specific criteria and thresholds for impairment, in addition to data sufficiency and data quality requirements. The methodology described in the rule is based on a statistical approach designed to provide greater confidence that the outcome of the water quality assessment is correct. The complete text of the IWR is available at <http://www.dep.state.fl.us/water/tmdl/docs/AmendedIWR.pdf>.

As part of the watershed management approach, for each river basin in the state the Department will follow the methodology in Section 62-303.300, F.A.C., to develop a Planning List of potentially impaired waters to be assessed under Subsections 403.067(2) and (3), Florida Statutes [F.S.]. The methodology for developing the Planning List includes an evaluation of aquatic life use support, primary contact and recreational use support, fish and shellfish consumption use support, drinking water use support, and protection of human health. Data older than 10 years cannot be used to evaluate water quality criteria exceedances for the Planning List. As required by Subsection 403.067(2), F.S., the Planning List will not be used to administer or implement any regulatory program, and is submitted to the U.S. Environmental Protection Agency (EPA) for informational purposes only.

After further assessment, using the methodology in Part III, Section 62-303.400, F.A.C., the Department will determine if waters on the Planning List are, in fact, impaired and if the impairment is caused by pollutant discharges. These waters are placed on a Verified List. The criteria for the Verified List are more stringent than those for the Planning List. Data older than 7.5 years should not be used to verify impairment. The Verified List will be adopted by Secretarial Order and forwarded to the EPA for approval as Florida's Section 303(d) list of impaired waters. The Department will develop TMDLs for these waters under Subsection 403.067(4), F.S.

Attainment of Designated Use(s)

While the designated uses of a given waterbody are established using the surface water quality classification system described previously, it is important to note that the EPA uses slightly different terminology in its description of designated uses. Because the Department is required to provide use attainment status for both the state's 305(b) report and the state's 303(d) list of impaired waters, the Department uses EPA terminology when assessing waters for use attainment. The water quality evaluations and decision processes for listing impaired waters that are defined in Florida's IWR are based on the following designated use attainment categories:

Aquatic Life Use Support-Based Attainment
Primary Contact and Recreation Attainment
Fish and Shellfish Consumption Attainment
Drinking Water Use Attainment
Protection of Human Health

Table C.1 summarizes the designated uses assigned to Florida's various surface water classifications.

Table C.1: Designated Use Attainment Categories for Surface Waters in Florida

Designated Use Attainment Category Used in IWR Evaluation	Applicable Florida Surface Water Classification
Aquatic Life Use Support-Based Attainment	Class I, II, and III
Primary Contact and Recreation Attainment	Class I, II, and III
Fish and Shellfish Consumption Attainment	Class II
Drinking Water Use Attainment	Class I
Protection of Human Health	Class I, II, and III

Sources of Data

The Department's assessment of water quality for each basin statewide includes an analysis of quantitative data from a variety of sources, many of which are readily available to the public. These sources include the EPA's Legacy and modernized **STORage** and **RETRetrieval** (STORET) databases, the U.S. Geological Survey (USGS), the Department, the Florida Department of Health (DOH), the water management districts, local governments, and volunteer monitoring groups.

Historically, the Department carried out statewide water quality assessments using data available in the EPA's Legacy STORET Database; STORET makes up approximately 60 percent of the statewide data used in the IWR assessment. The Legacy STORET dataset is a repository of data collected and uploaded by numerous organizations through 1999. The Legacy STORET Database can be accessed at <http://www.dep.state.fl.us/water/storet/index.htm>.

In 2000, the EPA created a modernized version of STORET that included new features designed to address data quality assurance/quality control concerns (see the new STORET Web site at <http://www.epa.gov/storet/>). However, because of software difficulties associated with batch uploading of data to the modernized STORET, the data being uploaded to the national repository decreased dramatically, and lingering problems have temporarily reduced STORET's importance as a statewide data source. It houses only about 5 percent of the statewide IWR Database.

Approximately 35 percent of the data used in the IWR assessment was provided by individual organizations that for various reasons, such as time constraints or resource limitations, were not able to enter their data into the national database. The organizations providing the largest datasets include the South Florida, Southwest Florida, and St. Johns River Water Management Districts; the USGS; and the University of Florida LakeWatch volunteer monitoring group. Several of these databases are readily available to the public

via the Internet: the South Florida Water Management District at <http://www.envirobase.usgs.gov/>, the USGS at <http://water.usgs.gov/>, and LakeWatch at <http://lakewatch.ifas.ufl.edu/>.

The Department created the IWR Database in 2002 to evaluate data simultaneously in accordance with the IWR methodology for every basin in the state, based on the appropriate data “window.” For the Verified List assessment, the window is 7.5 years (for the IWR Database), and the Planning List assessment window is 10 years. **Table C.2** shows the periods of record for the Verified and Planning Lists for the five basin groups.

The evaluation of water quality in the state’s basins also includes some qualitative information. These sources are described in the Water Quality Status Reports and Water Quality Assessment Reports for each basin.

Table C.2: Data Used in Developing the Planning and Verified Lists, First Basin Rotation Cycle

Basin Group	Reporting	Period of Data Record Used in IWR Evaluation
Group 1	Planning List	January 1, 1989 – December 31, 1998
	Verified List	January 1, 1995 – June 30, 2002
Group 2	Planning List	January 1, 1991 – December 31, 2000
	Verified List	January 1, 1996 – June 30, 2003
Group 3	Planning List	January 1, 1992 – December 31, 2001
	Verified List	January 1, 1997 – June 30, 2004
Group 4	Planning List	January 1, 1993 – December 31, 2002
	Verified List	January 1, 1998 – June 30, 2005
Group 5	Planning List	January 1, 1994 – December 31, 2003
	Verified List	January 1, 1999 – June 30, 2006

Note: Typically, a 10-year data record is used for the development of the Planning Lists, and a 7.5-year record is used for the Verified Lists.

Methodology

To determine the status of surface water quality in individual river basins in Florida, three categories of data—chemistry data, biological data, and fish consumption advisories—were evaluated to determine potential impairments for the four designated use attainment categories discussed earlier: aquatic life, primary contact and recreation, fish and shellfish consumption, drinking water use, and protection of human health.

Aquatic Life Based Attainment

The IWR follows the principle of independent applicability. A waterbody is listed for potential impairment of aquatic life use support based on exceedances of any one of four types of water quality indicators (numeric water quality criteria, nutrient thresholds, biological thresholds, and toxicity data).

EXCEEDANCES OF NUMERIC WATER QUALITY CRITERIA

The chemistry data from STORET used in evaluating impairment were also used for preparing the state's 305(b) report. Only ambient surface water quality stations were included in the assessment of impairment. Water quality information from point sources or wells was excluded. Monitoring stations were classified as one of five waterbody types—spring, stream, lake, estuary, or blackwater—based on criteria described in the latest 305(b) report. The assessments included the following parameters:

Metals^Y	Arsenic, aluminum, cadmium, chromium VI, chromium III, copper, iron, lead, mercury, nickel, selenium, silver, thallium, and zinc
Nutrients	Chlorophyll <i>a</i> for streams and estuaries, and Trophic State Index (TSI) (chlorophyll <i>a</i> , total nitrogen, and total phosphorus) for lakes
Conventionals	Dissolved oxygen (DO), fecal coliforms, total coliforms, pH, unionized ammonia

The requirements for placing waters on the Planning List included a minimum of 10 temporally independent samples from the 10-year period of record shown in **Tables D.1** and **D.2**, unless there were 3 exceedances of water quality or 1 exceedance of an acute toxicity criterion in a 3-year period. The screening methodology for the Verified List requires at least 20 samples from the last 5 years preceding the Planning List assessment. An exceedance, meaning that water quality criteria or standards are not met, is recorded any time the criterion is exceeded by any amount. An exceedance for DO, however, means that a waterbody does not meet the DO criterion, rather than an actual exceedance of the criterion.

To determine if a waterbody should be placed on the Planning List for each parameter, the chemical data were analyzed using a computer program written to assess the data, based on criteria established in the IWR, with two exceptions. First, unionized ammonia data were not analyzed by the program, but rather with an Excel spreadsheet. Second, because the full complexity of the pH criterion could not be programmed, the incomplete listings for pH are not included. They will be further examined while additional data are collected during Phase 2 of the watershed management cycle. Data analysis and statistical summaries of waterbody identification numbers (WBIDs), waterbody types, and parameters obtained from the STORET Database were conducted using Access, SAS statistical software, and ArcView geographic information system (GIS) applications.

The data for metals and conventional parameters were compared with the state surface water quality criteria in Section 62-302.530, F.A.C. (IWR). The rule contains a table of sample numbers versus exceedances. A waterbody was placed on the Planning

^Y Although Arsenic and Selenium are not true metals, they are treated as metalloids by the US EPA.

List if there was at least 80 percent confidence that the actual criteria exceedance rate was greater than or equal to 10 percent. To be placed on the Verified List, at least a 90 percent confidence rate was required.

EXCEEDANCES OF NUTRIENT THRESHOLDS

The state currently has a narrative nutrient criterion instead of a numeric value for nutrient thresholds. The narrative criterion states, “In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora or fauna.” The IWR provides an interpretation of the narrative nutrient criterion. In general, the Trophic State Index (TSI) and the annual mean chlorophyll *a* values are the primary means for assessing whether a waterbody should be assessed further for nutrient impairment.

The rule also considers other information that might indicate an imbalance in flora or fauna due to nutrient enrichment, such as algal blooms, excessive macrophyte growth, a decrease in the distribution (either in density or aerial coverage) of seagrasses or other submerged aquatic vegetation, changes in algal species richness, and excessive diel oxygen swings.

Potential nutrient impairment was evaluated by calculating annual mean chlorophyll *a* values for estuaries and streams and the TSI for lakes. For lakes, the TSI was calculated using chlorophyll *a*, total phosphorus, and total nitrogen measurements. Direct evidence of imbalances of flora and fauna in waterbodies was also considered in the evaluation of nutrient impairments.

In estuarine areas, a water was considered nutrient enriched if the annual mean chlorophyll *a* values were greater than 11 micrograms per liter (µg/L) or if annual mean chlorophyll *a* values increased by more than 50 percent over historical values for at least two consecutive years. For streams, a water was considered nutrient enriched if the annual mean chlorophyll *a* values were greater than 20 µg/L or if the annual mean increased by more than 50 percent over historical values for at least two consecutive years.

A lake with a mean color greater than 40 platinum cobalt units (PCUs) was considered nutrient enriched if the annual mean TSI exceeded 60. A lake with a mean color less than or equal to 40 PCUs was considered nutrient enriched if the annual mean TSI exceeded 40. In addition, a lake was considered nutrient enriched if there was an increase in TSI over the 1989 to 2000 period or if TSI measurements were 10 units higher than historical values.

EXCEEDANCES OF BIOLOGICAL THRESHOLDS

Bioassessments were carried out for streams, lakes, canals, and rivers using the IWR as guidance and following the Department’s standard operating procedures, which provide definitions and specific methods for the generation and analysis of bioassessment data. These are referenced in the individual bioassessment data tables contained in the Water Quality Status Reports. The purpose behind using a bioassessment methodology in surface water characterizations is that biological components of the environment manifest long-term water quality conditions and thus provide a better indication of a

waterbody's true health than discrete chemical or physical measurements alone. Similar to water quality criteria, bioassessment methods involve the identification of a biological reference condition, based on data from unimpaired or least impacted waters in a given region.

For the Planning and Verified List assessments, the reference condition data were used to establish expected scores, ranging from best to worst, for various measures of community structure and function, such as numbers or percentages of particular species or feeding groups. Data on community structure and function from waters of unknown quality in the same region as reference waters were compared with the expected scores of metrics to evaluate their biological integrity.

Metrics (e.g., number of taxa, percent Diptera, percent filter feeders) were used independently and as an aggregated group called an index. Indices have advantages over individual metrics in that they can integrate several related metrics into one score that reflects a wider range of biological variables. A number of bioassessment metrics and indices exist for assessing populations of plant and animal life, including fish, diatoms (e.g., microscopic algae and unicellular plankton), and macroinvertebrates (e.g., insects, crayfish, snails, and mussels).

Only macroinvertebrate data from ambient sites in state surface waters were used in the bioassessments analyzed for the Planning and Verified Lists. The data included sites designated as test and background sites for NPDES fifth-year inspections, but excluded data from effluent outfalls from discharging facilities or data from monitoring sites not clearly established to collect ambient water quality data. Because site-specific habitat and physicochemical assessment information (e.g., percent suitable macroinvertebrate habitat, water velocities, extent of sand or silt smothering, and riparian [*Definition: Of, on, or relating to the banks of a natural course of water.*] buffer zone widths) was not available at the time of reporting, it was not included. However, this information is instrumental in pinpointing the causes for failed bioassessment metrics and will be included in future reporting.

The data used to develop the Planning and Verified Lists were obtained from the Department's Biological Database (SBIO) and the EPA's STORET Water Quality Database, where it could be substantiated that the data were generated in compliance with the bioassessment standard operating procedures referenced in the IWR (Section 62-303.330, F.A.C.).

The data from these databases are used without regard to the randomness of sample site selection. For the purposes of the Water Quality Status Reports, the seasons are defined as follows: winter (1/1–3/31), spring (4/1–6/30), summer (7/1–9/30), and fall (10/1–12/31). Wet seasons are generally spring and summer, and dry seasons are fall and winter, although conditions can vary in the state as a whole.

LAKE CONDITION INDEX

The scoring of the individual metrics of the Lake Condition Index (LCI), except percent Diptera, was performed according to the following formula:

$100(B/A)$ where A = the 95 percentile of the reference population and B = observed value

For percent Diptera, the following formula was used:

$100 (100-B)/(100-A)$ where A = the 95 percentile of the reference population and B = observed value

An average LCI score was calculated by averaging the scores of the six metrics in the method: total number of taxa; total number of taxa belonging to the orders Ephemeroptera, Odonata, and Trichoptera (EOT taxa); percent EOT taxa; Shannon-Wiener Diversity Index score; Hulbert Index score; and percent Dipteran individuals. LCI calculations were only provided for clear lakes (≤ 20 platinum cobalt units [PCUs]). As macroinvertebrate-based indices have not been shown to assess colored lakes in Florida accurately (> 20 PCUs), they have been excluded from bioassessments. A poor or very poor rating based on the average score constituted a failed bioassessment, based on the IWR.

STREAM CONDITION INDEX

A total Stream Condition Index (SCI) score was calculated by adding the scores of the seven metrics in the method: total number of taxa; total number of taxa belonging to the orders Ephemeroptera, Plecoptera, and Trichoptera (EPT taxa); percent Chironomid taxa; percent dominant taxa; percent Diptera; percent filter feeders; and Florida Index. A poor or very poor rating based on the total score constituted a failed bioassessment, based on the IWR. The Water Quality Status Reports contain definitions and specific methods for the generation and analysis of bioassessment data.

BIORECON

To establish an impairment rating based on BioRecon data, three metrics were used: the Florida Index score, total number of taxa, and total number of EPT taxa. If all three metrics failed to meet thresholds, the water was deemed “impaired” based on the IWR.

BIOLOGICAL INTEGRITY STANDARD

Quantitative data, generated through the use of Hester-Dendy artificial substrate samplers, were used to calculate Shannon-Wiener Diversity Index scores for paired background and test sites, as specified in the Biological Integrity Standard of Subsection 62-302.530(11), F.A.C. One failure of the standard meant that a waterbody segment was listed as potentially impaired.

EVALUATION OF TOXICITY DATA

Although the IWR describes the use of toxicity data for the assessment of aquatic life-based attainment, no ambient toxicity data are available for assessment and this metric was not used.

Primary Contact and Recreation Attainment

For Class I, II, or III waters, a waterbody was potentially impaired if the following criteria were met:

- The waterbody segment did not meet the applicable water quality criteria for bacteriological quality,
- The waterbody segment included a bathing area that was closed by a local health department or county government for more than 1 week or more than once during a calendar year based on bacteriological data,
- The waterbody segment included a bathing area for which a local health department or county government issued closures, advisories, or warnings totaling 21 days or more during a calendar year based on bacteriological data, or
- The waterbody segment included a bathing area that was closed or had advisories or warnings for more than 12 weeks during a calendar year based on previous bacteriological data or on derived relationships between bacteria levels and rainfall or flow.

Fish and Shellfish Consumption Attainment

For Class I, II, or III waters, a waterbody was potentially impaired if it did not meet the applicable Class II water quality criteria for bacteriological quality, or if a fish consumption advisory had been issued. Fish consumption advisories were based on the Florida Department of Health's "limited consumption" or "no consumption" advisories for surface waters because of high levels of mercury in fish tissue. In addition, for Class II waters, waterbody segments that had been approved for shellfish harvesting but were downgraded to a more restrictive classification were listed as potentially impaired.

Drinking Water Attainment and Protection of Human Health

For Class I waters, a waterbody was potentially impaired if it did not meet the applicable Class I water quality criteria.

Appendix D: Integrated Assessment (Master List) for the Kissimmee River and Fisheating Creek Basins

Data collected between January 1, 1998, and June 30, 2005 (IWR Run 22.0), were evaluated to update the listing status of waters in the Kissimmee River and Fisheating Creek Basins.

Tables D.1 and **D.2** contains the listing status of all assessed waters in both basins. All of the waters in the table are Class III fresh water. It should be noted that subsequent to the 1998 update of the 303(d) list, some waterbody segments were further subdivided to produce separate segments for lakes versus their surrounding watersheds. Therefore, **Tables D.1** and **D.2** show the waterbody identification numbers (WBIDs) under which these segments were designated in the 1998 303(d) list, as well as the new or currently recognized WBIDs for them.

Information in this appendix was obtained from an inventory of the Legacy and modernized STORET databases, as well as data contributed directly to the Florida Department of Environmental Protection (Department) by individual data providers. **Table D.3** includes only stations with data from the Verified Assessment period.

Table D.1: Integrated Water Quality Report (Master List) - Kissimmee River Basin by Planning Unit

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
Upper Kissimmee Planning Unit								
1436	HORSESHOE CREEK	STREAM		Biology	2			PP = 1 BIORECON passed in 1999. VP =1 BIORECON passed in 1999, and 1 SCI passed in 2004.
1436	HORSESHOE CREEK	STREAM		Chloride	3B			PP = 0 / 2; VP = 0 / 2
1436	HORSESHOE CREEK	STREAM	Dissolved Oxygen	Dissolved Oxygen	4C			Delist. PP = 15 / 20; VP = 38 / 49. DO met verification threshold of the IWR, but unable to determine the causative pollutant. 40 TN values, median 1.58 mg/L. 43 TP values, median 0.064 mg/L. 25 BOD values, median 1.90 mg/L. This WBID contains 70% human landuse. Forty-two percent of the level 1 landuse is characterized as agriculture, and 19% of the level 1 landuse is characterized as urban and built up. This WBID has two passed bioassessment tests in the Verified Period.
1436	HORSESHOE CREEK	STREAM	Coliform Bacteria	Fecal Coliform	5	High	2005	PP = 0 / 4, Insufficient data; VP = 7 / 31, Impaired. Fecal coliform mean 1169 counts/100mL, median 260 counts/100 mL, range 2 – 20,000 counts/100mL.
1436	HORSESHOE CREEK	STREAM		Fluoride	3B			PP = 0 / 2; VP = 0 / 2
1436	HORSESHOE CREEK	STREAM	Nutrients	Nutrients (Chla)	2			Delist. PP – No data. VP – Not impaired. 0 chla annual means exceeded the threshold. Annual mean was 19.3 µg/L in 2004. 7 chla values, range 1.3 – 7.8 µg/L, mean 2.8 µg/L. 24 chla (corrected) values, range 1.0 – 90.2 µg/L, mean 11.9 µg/L. 40 TN values, median 1.58 mg/L. 43 TP values, median 0.06 mg/L.
1436	HORSESHOE CREEK	STREAM	Coliform Bacteria	Total Coliform	3C	(High)	(2005)	PP = 1 / 10; VP = 4 / 18
1436	HORSESHOE CREEK	STREAM		Turbidity	2			PP = 0 / 20; VP = 0 / 21
1436	HORSESHOE CREEK	STREAM		Unionized Ammonia	3B			PP = 0 / 9; VP = 0 / 1
1436	HORSESHOE CREEK	STREAM			3A			PP = No data; VP = No data
1472	LAKE HATCHINEHA DRAIN	STREAM			3A			PP = No data; VP = No data
1480	LAKE MARION	LAKE		Dissolved Oxygen	2			PP = 1 / 22; VP = 2 / 22
1480	LAKE MARION	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1480	LAKE MARION	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1480	LAKE MARION	LAKE		Nutrients (TSI)	3C			PP – 1 TSI annual mean exceeded the threshold. The one annual mean available was 68.4 in 2002. 26 chla values, range 1.0 – 70.0 µg/L, mean 23.8 µg/L. 12 chla (corrected) values, range 12.0 – 76.1 µg/L, mean 37.7 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 8 chla values, range 3.7 – 56.8 µg/L, mean 29.7 µg/L. 12 chla (corrected) values, range 12.0 – 76.1 µg/L, mean 37.7 µg/L. 26 TN values, median 1.63 mg/L. 26 TP values, median 0.06 mg/L.
1480	LAKE MARION	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1480	LAKE MARION	LAKE		Turbidity	2			PP = 1 / 22; VP = 0 / 22
1480	LAKE MARION	LAKE		Unionized Ammonia	2			PP = 0 / 10; VP = 0 / 1
1532	CATFISH CREEK	STREAM			3A			PP = No data; VP = No data
3171	LAKE HART	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3171	LAKE HART	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3171	LAKE HART	LAKE		Arsenic	3B			PP = 0 / 1; VP = No data
3171	LAKE HART	LAKE		Cadmium	3B			PP = 0 / 1; VP = No data
3171	LAKE HART	LAKE		Chromium3	3B			PP = 0 / 1; VP = No data
3171	LAKE HART	LAKE		Dissolved Oxygen	2			PP = 0 / 32; VP = 0 / 10
3171	LAKE HART	LAKE		Fecal Coliform	2			PP = 0 / 23; VP = 0 / 7
3171	LAKE HART	LAKE		Iron	3B			PP = 0 / 1; VP = No data
3171	LAKE HART	LAKE		Mercury (in fish tissue)	5	Low	2011	VP – Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 1.32 mg/Kg (ppm) in 2003.
3171	LAKE HART	LAKE		Nickel	3B			PP = 0 / 1; VP = No data
3171	LAKE HART	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold (TSI 60 for high colored lake). Annual means were 40.8 in 1993 and 41.8 in 1994. 90 chla values, range 1.0 – 11.0 µg/L, mean 4.7 µg/L. VP – Insufficient data to calculate any mean. 12 TN values, median 1.21 mg/L. 12 TP values, median 0.01 mg/L.
3171	LAKE HART	LAKE		Selenium	3B			PP = 0 / 1; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3171	LAKE HART	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3171	LAKE HART	LAKE		Total Coliform	2			PP = 0 / 21; VP = 0 / 7
3171	LAKE HART	LAKE		Turbidity	2			PP = 0 / 30; VP = 0 / 6
3171	LAKE HART	LAKE		Unionized Ammonia	2			PP = 0 / 26; VP = 0 / 4
3171	LAKE HART	LAKE		Zinc	3B			PP = 0 / 1; VP = No data
3172	EAST LAKE TOHOPEKALIGA	LAKE		Arsenic	2			PP = 0 / 44; VP = No data
3172	EAST LAKE TOHOPEKALIGA	LAKE		Cadmium	3B			PP = 0 / 2; VP = No data
3172	EAST LAKE TOHOPEKALIGA	LAKE		Copper	3B			PP = 0 / 2; VP = No data
3172	EAST LAKE TOHOPEKALIGA	LAKE		Dissolved Oxygen	2			PP = 7 / 282; VP = 3 / 146
3172	EAST LAKE TOHOPEKALIGA	LAKE		Iron	2			PP = 2 / 31; VP = 2 / 24
3172	EAST LAKE TOHOPEKALIGA	LAKE		Lead	3B			PP = 0 / 2; VP = No data
3172	EAST LAKE TOHOPEKALIGA	LAKE	Mercury (Based on Fish Consumption Advisory)	Mercury (in fish tissue)	5	Low	2011	VP – Mercury met verification threshold of the IWR. Fish tissue levels in 16 largemouth bass averaged 0.76 ppm in 2002/2003.
3172	EAST LAKE TOHOPEKALIGA	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (41.78, calculated based on data from the period 2001 – 2005) by more than 10 TSI units. Annual means were 42.2, 43.1, 47.7, 41.5, 40.9, 44.5, 40.5, 47.7, 39.4, and 41.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 520 chla values, range 1.0 – 42.1 µg/L, mean 5.1 µg/L. 303 chla (corrected) values, range 1.0 – 68.6 µg/L, mean 4.8 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than TSI units. Annual means were 44.7, 40.7, 47.9, 38.2, and 44.2 in 1998, 1999, 2000, 2001, and 2003, respectively. 149 chla values, range 1.0 – 20.3 µg/L, mean 5.1 µg/L. 153 chla (corrected) values, range 1.0 – 28.8 µg/L, mean 4.7 µg/L. 242 TN values, median 0.80 mg/L. 245 TP values, median 0.03 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3172	EAST LAKE TOHOPEKALIGA	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 42.2, 43.1, 47.7, 41.5, 40.9, 44.7, 40.7, 47.9, 38.2, and 41.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 520 chla values, range 1.0 – 42.1 µg/L, mean 5.1 µg/L. 303 chla (corrected) values, range 1.0 – 68.6 µg/L, mean 4.8 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual means were 44.7, 40.7, 47.9, 38.2, and 44.2 in 1998, 1999, 2000, 2001, and 2003, respectively. 149 chla values, range 1.0 – 20.3 µg/L, mean 5.1 µg/L. 153 chla (corrected) values, range 1.0 – 28.8 µg/L, mean 4.7 µg/L. 242 TN values, median 0.80 mg/L. 245 TP values, median 0.03 mg/L.
3172	EAST LAKE TOHOPEKALIGA	LAKE		Turbidity	2			PP = 4 / 359; VP = 0 / 146
3172	EAST LAKE TOHOPEKALIGA	LAKE		Unionized Ammonia	2			PP = 0 / 226; VP = 0 / 36
3172	EAST LAKE TOHOPEKALIGA	LAKE		Zinc	3B			PP = 0 / 2; VP = No data
3173	City Ditch Canal	STREAM		Dissolved Oxygen	5	Low	2010	PP = No Data; VP = 17 / 26, Impaired. DO met verification threshold of the IWR, and BOD is the causative pollutant. 18 TN values, median 0.61 mg/L. 18 TP values, median 0.10 mg/L. 28 BOD values, median 2.8 mg/L.
3173	City Ditch Canal	STREAM		Nutrients (Chla)	3B			PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
3173	City Ditch Canal	STREAM		Nutrients (Historic Chla)	3B			PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
3174	LAKE CENTER	LAKE	Dissolved Oxygen	Dissolved Oxygen	3C	(Low)	(2010)	PP = 0 / 2; VP = 5 / 20. Verified Period DO only from 4 independent sampling events. Therefore DO in verified period was considered no sufficient for assessment.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3174	LAKE CENTER	LAKE	Nutrients	Nutrients (Historic TSI)	2			Delist. Delisting based on data from the Planning Period. PP – 0 TSI annual means exceeded the historic minimum value (49.35, calculated based on data from the period 1989 – 1993) by more than 10 TSI units. Annual means were 47.9, 55.7, 46.8, 54.7, and 54.0 in 1993, 1994, 1995, 1999, and 2000, respectively. 190 chla values, range 1.0 – 49.0 µg/L, mean 9.2 µg/L. 34 chla (corrected) values, range 1.0 – 46.5 µg/L, mean 8.4 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 70 chla values, range 1.0 – 49.0 µg/L, mean 9.4 µg/L. Not enough TN and TP data to calculate medians.
3174	LAKE CENTER	LAKE	Nutrients	Nutrients (TSI)	2			Delist. PP – Not impaired. 0 TSI annual means exceeded the threshold (TSI 60, high color lake). Annual means were 47.9, 55.7, 46.8, 54.7, and 54.0 in 1993, 1994, 1995, 1999, and 2000, respectively. 190 chla values, range 1.0 – 49.0 µg/L, mean 9.2 µg/L. 34 chla (corrected) values, range 1.0 – 46.5 µg/L, mean 8.4 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 70 chla values, range 1.0 – 49.0 µg/L, mean 9.4 µg/L. 209 TN values (including LakeWatch data), median 1.25 mg/L, 209 TP values (including LakeWatch data), median 0.07 mg/L. Delisting based on data from the Planning Period.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3174	LAKE CENTER	LAKE		Turbidity	4C			PP = 4 / 13; VP = 9 / 20; Samples in the verified period only represented 4 independent sampling events. In addition, analyses on the spatial distribution of the turbidity inside the lake indicate that the turbidity is mostly likely originated from within the lake, either because of the high phytoplankton biomass or sediment re-suspension. The turbidity is not very likely from the watershed soil erosion.
3174	LAKE CENTER	LAKE		Unionized Ammonia	2			PP = 0 / 13; VP = No data
3176	ALLIGATOR LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 32; VP = 1 / 15
3176	ALLIGATOR LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 6; VP = 1 / 1

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3176	ALLIGATOR LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 1 TSI annual mean exceeded the historic minimum (32.77, calculated based on data from the period 1990 – 1994) by more than 10 TSI units in 2000. However, this year is the driest year for the period of record. The concentration process could physically elevate the TN, TP, and Chla concentration in the lake, causing TSI to increase. Annual means were 31.4, 32.3, 38.5, 38.0, 36.3, 40.5, 41.4, 46.1, and 40.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 522 chla values, range 1.0 – 18.0 µg/L, mean 4.0 µg/L. 57 chla (corrected) values, range 1.0 – 39.7 µg/L, mean 4.0 µg/L. VP – 1 TSI annual mean exceeded the historic minimum (32.77, calculated based on data from the period 1990 – 1994) by more than 10 TSI units in 2000. However, this year is the driest year for the period of record. The concentration process could physically elevate the TN, TP, and Chla concentration in the lake, causing TSI to increase. Annual means were 40.5, 41.4, and 46.1 in 1998, 1999, and 2000, respectively. 220 chla values, range 2.0 – 18.0 µg/L, mean 4.5 µg/L. 30 chla (corrected) values, range 1.0 – 9.6 µg/L, mean 3.5 µg/L. 31 TN values, median 0.72 mg/L. 32 TP values, median 0.03 mg/L. Co-limited by nitrogen and phosphorus based on a TN/TP ratio median of 20.00 (29 values) in the verified period.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3176	ALLIGATOR LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 31.4, 32.3, 38.5, 38.0, 36.3, 40.5, 41.4, 46.1, and 40.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 522 chla values, range 1.0 – 18.0 µg/L, mean 4.0 µg/L. 57 chla (corrected) values, range 1.0 – 39.7 µg/L, mean 4.0 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual means were 40.5, 41.4, and 46.1 in 1998, 1999, and 2000, respectively. 220 chla values, range 2.0 – 18.0 µg/L, mean 4.5 µg/L. 30 chla (corrected) values, range 1.0 – 9.6 µg/L, mean 3.5 µg/L. 31 TN values, median 0.72 mg/L. 32 TP values, median 0.03 mg/L.
3176	ALLIGATOR LAKE	LAKE		Mercury (in fish tissue)	5	Low	2011	VP – Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 1.28 ppm in 2004.
3176	ALLIGATOR LAKE	LAKE		Total Coliform	3B			PP = 0 / 3; VP = No data
3176	ALLIGATOR LAKE	LAKE		Turbidity	2			PP = 0 / 46; VP = 0 / 16
3176	ALLIGATOR LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 28; VP = 0 / 2
3177	LAKE GENTRY	LAKE		Dissolved Oxygen	2			PP = 4 / 17; VP = 5 / 34
3177	LAKE GENTRY	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = No data
3177	LAKE GENTRY	LAKE		Iron	3B			PP = 0 / 5; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3177	LAKE GENTRY	LAKE		Nutrients (Historic TSI)	2			PP – 1 TSI annual mean exceeded the historic minimum value (39.57, calculated based on data from the period 1996 – 2000) by more than 10 TSI units in 1995. However, no annual TSI means in the following years exceeded the historic minimum by more than 10 TSI units. Annual means were 67.0, 36.6, 44.9, 34.8, and 42.0 in 1995, 1997, 1998, 1999, 2000, and 2003, respectively. 48 chla values, range 1.0 – 6.0 µg/L, mean 2.8 µg/L. 40 chla (corrected) values, range 1.0 – 208.5 µg/L, mean 20.5 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 44.9, 34.8, and 42.0 in 1998, 1999, and 2000, respectively. 18 chla values, range 1.0 – 6.0 µg/L, mean 2.2 µg/L. 23 chla (corrected) values, range 1.0 – 25.2 µg/L, mean 5.4 µg/L. 27 TN values, median 0.77 mg/L. 25 TP values, median 0.03 mg/L.
3177	LAKE GENTRY	LAKE		Nutrients (TSI)	2			PP – 1 TSI annual means exceeded the threshold (TSI 60, high color lake) in 1995. However, TSI annual means of the following years were all lower than the threshold. Annual means were 67.0, 36.6, 44.9, 34.8, and 42.0 in 1995, 1997, 1998, 1999, 2000, and 2003, respectively. 48 chla values, range 1.0 – 6.0 µg/L, mean 2.8 µg/L. 40 chla (corrected) values, range 1.0 – 208.5 µg/L, mean 20.5 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual means were 44.9, 34.8, and 42.0 in 1998, 1999, and 2000, respectively. 18 chla values, range 1.0 – 6.0 µg/L, mean 2.2 µg/L. 23 chla (corrected) values, range 1.0 – 25.2 µg/L, mean 5.4 µg/L. 33 TN values, median 0.78 mg/L. 25 TP values, median 0.03 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3177	LAKE GENTRY	LAKE		Total Coliform	3B			PP = 0 / 2; VP = No data
3177	LAKE GENTRY	LAKE		Turbidity	2			PP = 0 / 40; VP = 0 / 19
3177	LAKE GENTRY	LAKE		Unionized Ammonia	2			PP = 0 / 14; VP = No data
3179	S-36A	STREAM			3A			PP = No data; VP = No data
3180	LAKE CYPRESS OUTLET	LAKE			3A			PP = No data; VP = No data
3181	CANOE CREEK	STREAM		Biology	3B			PP = 1 BIORECON suspect in 1999. VP = 1 BIORECON suspect in 1999.
3181	CANOE CREEK	STREAM	Turbidity	Turbidity	2			Delist. PP = 2 / 12; Not impaired. VP = No data, Delisting based on data from the Planning Period.
3181	CANOE CREEK	STREAM		Unionized Ammonia	3B			PP = 0 / 9; VP = No data
3184	LAKE MARIAN	LAKE		Dissolved Oxygen	2			PP = 2 / 33; VP = 4 / 18
3184	LAKE MARIAN	LAKE		Fecal Coliform	3B			PP = 0 / 8; VP = No data
3184	LAKE MARIAN	LAKE	Nutrients	Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (69.23, calculated based on data from the period 2000 – 2004) by more than 10 TSI units. Annual means were 75.8, 75.1, and 71.6 in 1999, 2000, and 2002, respectively. 9 chla values, range 2.8 – 97.4 µg/L, mean 46.9 µg/L. 53 chla (corrected) values, range 1.0 – 124.2 µg/L, mean 60.8 µg/L. VP – 0 TSI annual means exceeded the historic minimum value by more than 10 TSI units. Annual means were 75.8, 75.1, 71.6, and 61.0 in 199, 2000, 2002, and 2003, respectively. 3 chla values, range 44.9 – 61.2 µg/L, mean 54.0 µg/L. 26 chla (corrected) values, range 1.0 – 124.0 µg/L, mean 56.5 µg/L. 30 TN values, median 1.91 mg/L. 28 TP values, median 0.16 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3184	LAKE MARIAN	LAKE	Nutrients	Nutrients (TSI)	5	Low	2010*	PP – Potentially impaired. All 3 TSI annual means exceeded the threshold. Annual means were 75.8, 75.1, and 71.6 in 1999, 2000, and 2002, respectively. 9 chla values, range 2.8 – 97.4 µg/L, mean 46.9 µg/L. 53 chla (corrected) values, range 1.0 – 124.2 µg/L, mean 60.8 µg/L. VP – Impaired. All 4 TSI annual means exceeded the threshold. Annual means were 75.8, 75.1, 71.6, and 61.0 in 1999, 2000, 2002, and 2003, respectively. 3 chla values, range 44.9 – 61.2 µg/L, mean 54.0 µg/L. 26 chla (corrected) values, range 1.0 – 124.0 µg/L, mean 56.5 µg/L. 30 TN values, median 1.91 mg/L. 28 TP values, median 0.16 mg/L. Co-limited by nitrogen and phosphorus based on a TN/TP ratio median of 12.9 (27 values) in the Verified Period.
3184	LAKE MARIAN	LAKE		Total Coliform	3B			PP = 0 / 3; VP = No data
3184	LAKE MARIAN	LAKE		Turbidity	2			PP = 0 / 50; VP = 0 / 18
3184	LAKE MARIAN	LAKE		Unionized Ammonia	2			PP = 0 / 25; VP = 0 / 3
31701	SOUTH LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
31701	SOUTH LAKE	LAKE		Arsenic	3B			PP = 0 / 4; VP = No data
31701	SOUTH LAKE	LAKE		Cadmium	3B			PP = 0 / 2; VP = No data
31701	SOUTH LAKE	LAKE		Chromium3	3B			PP = 0 / 4; VP = No data
31701	SOUTH LAKE	LAKE		Copper	3B			PP = 1 / 2; VP = No data
31701	SOUTH LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 12; VP = 0 / 9
31701	SOUTH LAKE	LAKE		Fecal Coliform	2			PP = 0 / 10; VP = 0 / 5
31701	SOUTH LAKE	LAKE		Iron	3B			PP = 0 / 1; VP = No data
31701	SOUTH LAKE	LAKE		Lead	3B			PP = 1 / 1; VP = No data
31701	SOUTH LAKE	LAKE		Nickel	3B			PP = 0 / 1; VP = No data
31701	SOUTH LAKE	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
31701	SOUTH LAKE	LAKE		Selenium	3B			PP = 0 / 1; VP = No data
31701	SOUTH LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
31701	SOUTH LAKE	LAKE		Total Coliform	2			PP = 0 / 10; VP = 0 / 5

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
31701	SOUTH LAKE	LAKE		Turbidity	2			PP = 0 / 10; VP = 0 / 4
31701	SOUTH LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 9; VP = 0 / 4
31701	SOUTH LAKE	LAKE		Zinc	3B			PP = 0 / 5; VP = No data
31702	LEFTOVER REEDY CK	STREAM			3A			PP = No data; VP = No data
1436A	LAKE DAVENPORT – OPEN	LAKE		Chloride	3B			PP = 0 / 3; VP = 0 / 1
1436A	LAKE DAVENPORT – OPEN	LAKE		Dissolved Oxygen	5	Low	2010	PP = 3 / 3; Potentially impaired. VP = 23 / 25, Impaired. DO met verification threshold of IWR, and BOD is the causative pollutant. 1 TN value, can not consumptive median value. 1 TP value, can not calculate median value. 20 BOD values, median 3.2 mg/L. 26 DO values, median 2.24 mg/L, mean 2.52 mg/L, range 0.13 – 7.65 mg/L.
1436A	LAKE DAVENPORT – OPEN	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1436A	LAKE DAVENPORT – OPEN	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1436A	LAKE DAVENPORT – OPEN	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1436A	LAKE DAVENPORT – OPEN	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual average mean TSI. VP – Insufficient data to calculate any annual average mean TSI.
1436A	LAKE DAVENPORT – OPEN	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1436A	LAKE DAVENPORT – OPEN	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1472A	SNELL CREEK	STREAM		Dissolved Oxygen	2			PP = 2 / 17; VP = 4 / 17
1472A	SNELL CREEK	STREAM		Fecal Coliform	3B			PP = 1 / 4; VP = 2 / 10
1472A	SNELL CREEK	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1472A	SNELL CREEK	STREAM		Nutrients (Chla)	3B			PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
1472A	SNELL CREEK	STREAM		Total Coliform	3B			PP = 0 / 7; VP = 0 / 3
1472A	SNELL CREEK	STREAM		Turbidity	2			PP = 0 / 17; VP = 0 / 17
1472A	SNELL CREEK	STREAM		Unionized Ammonia	3B			PP = 0 / 5; VP = No data
1472B	LAKE HATCHINEHA	LAKE		Arsenic	2			PP = 0 / 40; VP = 0 / 2
1472B	LAKE HATCHINEHA	LAKE		Dissolved Oxygen	2			PP = 23 / 241; VP = 13 / 145

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1472B	LAKE HATCHINEHA	LAKE		Mercury (in fish tissue)	5	Low	2011	VP – Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.62 ppm in 2003/2004.
1472B	LAKE HATCHINEHA	LAKE		Iron	2			PP = 1 / 33; VP = 0 / 24
1472B	LAKE HATCHINEHA	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (54.80, calculated based on data from the period 1995 – 1999) by more than 10 TSI units. Annual means were 59.0, 54.9, 53.0, 52.5, 56.5, 59.8, 52.8, 54.9, 58.8, and 57.7 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 365 chla values, range 1.0 – 74.1 µg/L, mean 15.1 µg/L. 230 chla (corrected) values, range 1.0 – 63.4 µg/L, mean 14.1 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 59.8, 52.1, 54.9, 59.3, 58.7, and 58.2 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 151 chla values, range 1.4 – 69.9 µg/L, mean 17.4 µg/L. 203 chla (corrected) values, range 1.6 – 63.4 µg/L, mean 16.2 µg/L. 173 TN values, median 1.32 mg/L. 176 TP values, median 0.045 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1472B	LAKE HATCHINEHA	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 59.0, 54.9, 53.0, 52.5, 56.5, 59.8, 52.1, 54.9, 59.3, and 58.7 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 365 chla values, range 1.0 – 74.1 µg/L, mean 15.1 µg/L. 230 chla (corrected) values, range 1.0 – 63.4 µg/L, mean 14.1 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual means were 59.8, 52.1, 54.9, 59.3, 58.7, and 58.2 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 151 chla values, range 1.4 – 69.9 µg/L, mean 17.4 µg/L. 203 chla (corrected) values, range 1.6 – 63.4 µg/L, mean 16.2 µg/L. 173 TN values, median 1.32 mg/L. 176 TP values, median 0.045 mg/L.
1472B	LAKE HATCHINEHA	LAKE		Turbidity	2			PP = 6 / 262; VP = 0 / 91
1472B	LAKE HATCHINEHA	LAKE		Unionized Ammonia	2			PP = 3 / 183; VP = 0 / 25
1472B 1	LAKE HATCHINEHA DRAIN	LAKE			3A			PP = No data; VP = No data
1472B 2	LAKE HATCHINEHA DRAIN	LAKE			3A			PP = No data; VP = No data
1472C	DEAD RIVER	STREAM		Dissolved Oxygen	3B			PP = No data; VP = 11 / 19
1472C	DEAD RIVER	STREAM	Nutrients	Nutrients (Chla)	3C	(High)	(2005)	PP – Insufficient data to calculate any mean. VP – Insufficient data to calculate any mean.
1472C	DEAD RIVER	STREAM	Turbidity	Turbidity	3C	(High)	(2005)	PP = 4 / 11; VP = 0 / 20, Data in VP were from only 4 independent sampling events.
1472C	DEAD RIVER	STREAM		Unionized Ammonia	2			PP = 0 / 10; VP = No data
1472D	HATCHINEA CANAL	STREAM			3A			PP = No data; VP = No data
1480A	LAKE MARION OUTLET	LAKE			3A			PP = No data; VP = No data
1532A	LAKE PIERCE	LAKE		Dissolved Oxygen	2			PP = 1 / 20; VP = 0 / 16

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1532A	LAKE PIERCE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. TSI annual mean was 54.2 in 1993. 51 chla values, range 1.4 – 35.0 µg/L, mean 13.6 µg/L. 10 chla (corrected) values, range 4.0 – 41.3 µg/L, mean 16.6 µg/L. VP – No TSI data. 5 chla values, range 5.7 – 29.2 µg/L, mean 15.7 µg/L. 10 chla (corrected) values, range 4.0 – 41.3 µg/L, mean 16.6 µg/L. 20 TN values, median 1.08 mg/L. 20 TP values, median 0.03 mg/L.
1532A	LAKE PIERCE	LAKE		Turbidity	2			PP = 0 / 20; VP = 0 / 16
1532A	LAKE PIERCE	LAKE		Unionized Ammonia	3B			PP = 0 / 9; VP = No data
1532B	LAKE MARIE	LAKE		Dissolved Oxygen	2			PP = 8 / 40; VP = 1 / 32
1532B	LAKE MARIE	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
1532B	LAKE MARIE	LAKE		Turbidity	2			PP = 0 / 40; VP = 0 / 32
1532B	LAKE MARIE	LAKE		Unionized Ammonia	3B			PP = 0 / 21; VP = 0 / 2
1532C	CYPRESS LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 1
1532C	CYPRESS LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1532C	CYPRESS LAKE	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1532C	CYPRESS LAKE	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
1532C	CYPRESS LAKE	LAKE		Turbidity	3B			PP = 0 / 5; VP = 0 / 3
1532C	CYPRESS LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = 0 / 1
1573	LAKE ROSALIE OUTLET	LAKE			3A			PP = No data; VP = No data
1573A	TIGER LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 20; VP = 1 / 16
1573A	TIGER LAKE	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
1573A	TIGER LAKE	LAKE		Turbidity	2			PP = 0 / 20; VP = 0 / 16
1573A	TIGER LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 10; VP = 0 / 1; Data from the Planning Period only represents 2 seasons.
1573B	TIGER CREEK	STREAM			3A			PP = No data; VP = No data
1573C	LAKE ROSALIE	LAKE		Biology	2			PP = 1 BIORECON passed in 2000. VP = 1 BIORECON passed in 2000.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1573C	LAKE ROSALIE	LAKE		Dissolved Oxygen	2			PP = 0 / 22; VP = 0 / 16
1573C	LAKE ROSALIE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = No data
1573C	LAKE ROSALIE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 44.0 and 43.2 in 1998 and 1999. 146 chla values, range 1.6 – 21.0 µg/L, mean 5.7 µg/L. 12 chla (corrected) values, range 1.6 – 19.2 µg/L, mean 7.1 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 5 chla values, range 1.6 – 11.4 µg/L, mean 5.6 µg/L. 10 chla (corrected) values, range 1.6 – 19.2 µg/L, mean 7.4 µg/L. 18 TN values, median 0.77 mg/L. 18 TP values, median 0.03 mg/L.
1573C	LAKE ROSALIE	LAKE		Turbidity	2			PP = 0 / 22; VP = 0 / 16
1573C	LAKE ROSALIE	LAKE		Unionized Ammonia	2			PP = 0 / 12; VP = 0 / 1
1573D	WEOHYAKAPKA CREEK	LAKE			3A			PP = No data; VP = No data
1573D 1	WEOHYAKAPKA CREEK	LAKE			3A			PP = No data; VP = No data
1573D 2	WEOHYAKAPKA CREEK	LAKE			3A			PP = No data; VP = No data
1573F	LAKE AURORA	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = No data
1573F	LAKE AURORA	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
1573F	LAKE AURORA	LAKE		Turbidity	3B			PP = 0 / 2; VP = No data
1573F	LAKE AURORA	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1573Z	TIGER LAKE OUTLET	LAKE			3A			PP = No data; VP = No data
3168A	LAKE CONWAY	LAKE		Aluminum	3B			PP = 0 / 4; VP = No data
3168A	LAKE CONWAY	LAKE		Antimony	3B			PP = 0 / 17; VP = No data; Data from the planning period only represent two seasons.
3168A	LAKE CONWAY	LAKE		Arsenic	2			PP = 0 / 30; VP = No data
3168A	LAKE CONWAY	LAKE		Cadmium	2			PP = 0 / 27; VP = No data
3168A	LAKE CONWAY	LAKE		Chromium3	2			PP = 0 / 30; VP = No data
3168A	LAKE CONWAY	LAKE		Copper	3C			PP = 7 / 32; VP = No data
3168A	LAKE CONWAY	LAKE		Dissolved Oxygen	2			PP = 30 / 324; VP = 14 / 177
3168A	LAKE CONWAY	LAKE		Fecal Coliform	2			PP = 1 / 236; VP = 1 / 135

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168A	LAKE CONWAY	LAKE		Iron	3B			PP = 2 / 19; VP = No data; Data from the planning period only represent two seasons.
3168A	LAKE CONWAY	LAKE		Lead	3B			PP = 14 / 14; VP = No data; Data from the planning period only represent two seasons.
3168A	LAKE CONWAY	LAKE		Nickel	3B			PP = 0 / 17; VP = No data; Data from the planning period only represent two seasons.
3168A	LAKE CONWAY	LAKE		Nutrients (Historic TSI)	2			PP – 3 TSI annual means exceeded the historic minimum (26.7, calculated with data from the period 2000 – 2004) by more than 10 TSI units. TSI annual means were 41.6, 42.6, 37.2, 30.7, 34.6, 32.1, 34.1, 33.6, 34.9, and 33.6 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002. 657 chl _a values, range 1.0 – 26.0 µg/L, mean 5.3 µg/L. 3 chl _a (corrected) values, range 6.5 – 15.6 µg/L, mean 9.7 µg/L. VP – 0 annual average TSI exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSIs were 25.9, 26.9, and 21.7 in 2000, 2001, and 2002, respectively. 230 chl _a values, range 1.0 – 10.0 µg/L, mean 3.6 µg/L. 183 TN values, median 0.56 mg/L. 192 TP values, median 0.005 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168A	LAKE CONWAY	LAKE		Nutrients (TSI)	2			PP – 1 TSI annual mean exceeded the threshold in 1993, but TSI means for 8 consecutive years did not exceed the threshold, so the WBID-parameter is assessed as not impaired. TSI annual means were 41.6, 42.6, 37.2, 30.7, 34.6, 32.1, 34.1, 33.6, 34.9, and 33.6 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002. 657 chla values, range 1.0 – 26.0 µg/L, mean 5.3 µg/L. 3 chla (corrected) values, range 6.5 – 15.6 µg/L, mean 9.7 µg/L. VP – 0 annual average TSI exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSIs were 25.9, 26.9, and 21.7 in 2000, 2001, and 2002, respectively. 230 chla values, range 1.0 – 10.0 µg/L, mean 3.6 µg/L. 183 TN values, median 0.56 mg/L. 192 TP values, median 0.005 mg/L.
3168A	LAKE CONWAY	LAKE		Selenium	3B			PP = 0 / 17; VP = No data; Data from the planning period only represent two seasons.
3168A	LAKE CONWAY	LAKE		Thallium	3B			PP = 0 / 17; VP = No data; Data from the planning period only represent two seasons.
3168A	LAKE CONWAY	LAKE		Total Coliform	2			PP = 0 / 253; VP = 0 / 139
3168A	LAKE CONWAY	LAKE		Turbidity	2			PP = 3 / 239; VP = 0 / 57
3168A	LAKE CONWAY	LAKE		Unionized Ammonia	2			PP = 0 / 209; VP = 0 / 36
3168A	LAKE CONWAY	LAKE		Zinc	2			PP = 1 / 44; VP = No data
3168B	BOGGY CREEK	STREAM		Aluminum	3B			PP = 0 / 9; VP = 0 / 3
3168B	BOGGY CREEK	STREAM		Antimony	3B			PP = 0 / 5; VP = No data
3168B	BOGGY CREEK	STREAM		Arsenic	2			PP = 0 / 30; VP = 0 / 3
3168B	BOGGY CREEK	STREAM		Barium	3B			PP = 0 / 3; VP = 0 / 3
3168B	BOGGY CREEK	STREAM		Boron	3B			PP = 0 / 3; VP = 0 / 3
3168B	BOGGY CREEK	STREAM		Cadmium	2			PP = 1 / 15; VP = 0 / 6
3168B	BOGGY CREEK	STREAM		Chromium3	2			PP = 0 / 13; VP = 0 / 3
3168B	BOGGY CREEK	STREAM		Copper	3C			PP = 7 / 18; VP = 0 / 9

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168B	BOGGY CREEK	STREAM		Dissolved Oxygen	3C			PP = 58 / 222; VP = 40 / 150. Do met verification threshold of the IWR, but unable to determine the causative pollutant. 157 TN values, median 0.72 mg/L. 160 TP values, median 0.04 mg/L. 72 BOD values, median 1.75 mg/L. This WBID contains 61% human landuse. Twenty-two percent of the level 1 land use is characterized as urban and built up, and 20% is characterized as agriculture. The result from a BIORECON conducted in 2004 was "healthy". But the bioassessment was conducted in April. The majority of the DO readings collected before May were higher than 5.0 mg/l. Low DO appears more frequently between May and October.
3168B	BOGGY CREEK	STREAM		Fecal Coliform	2			PP = 9 / 85; VP = 4 / 39
3168B	BOGGY CREEK	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3168B	BOGGY CREEK	STREAM		Iron	3C			PP = 12 / 23; VP = 9 / 12
3168B	BOGGY CREEK	STREAM		Lead	2			PP = 10 / 17; VP = 1 / 25
3168B	BOGGY CREEK	STREAM		Lindane	3B			PP = 0 / 3; VP = 0 / 3
3168B	BOGGY CREEK	STREAM		Nickel	3B			PP = 0 / 7; VP = No data
3168B	BOGGY CREEK	STREAM		Nutrients (Chla)	2			PP – 0 chla annual means exceeded the threshold. Annual means Chla concentrations were 5.1, 8.5, 4.8, 10.2, and 7.5 µg/L in 1993, 1996, 2000, 2001, and 2002, respectively. 51 chla values, range 1.0 – 40.4 µg/L, mean 6.8 µg/L. 5 chla (corrected) values, range 3.6 – 20.0 µg/L, mean 10.6 µg/L. VP – 0 chla annual means exceeded the threshold. Annual mean Chla concentrations were 4.8, 10.2, 7.5, and 17.6 µg/L in 2000, 2001, 2002, and 2003, respectively. 157 TN values, median 0.75 mg/L. 160 TP values, median 0.04 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168B	BOGGY CREEK	STREAM		Nutrients (Historic Chla)	2			PP – No 2 consecutive chla annual means exceeded the historic minimum value (6.82, calculated based on data from the period 1987 – 1991) by more than 50%. Annual means Chla concentrations were 5.1, 8.5, 4.8, 10.2, and 7.5 µg/L in 1993, 1996, 2000, 2001, and 2002, respectively. 51 chla values, range 1.0 – 40.4 µg/L, mean 6.8 µg/L. 5 chla (corrected) values, range 3.6 – 20.0 µg/L, mean 10.6 µg/L. VP – No 2 consecutive Chla annual means exceeded the historic minimum value. Annual mean Chla concentrations were 4.8, 10.2, 7.5, and 17.6 µg/L in 2000, 2001, 2002, and 2003, respectively. 157 TN values, median 0.75 mg/L. 160 TP values, median 0.04 mg/L.
3168B	BOGGY CREEK	STREAM		Selenium	3B			PP = 0 / 8; VP = 0 / 3
3168B	BOGGY CREEK	STREAM		Silver	3B			PP = No Data; VP = 0 / 3
3168B	BOGGY CREEK	STREAM		Thallium	3B			PP = 0 / 5; VP = No data
3168B	BOGGY CREEK	STREAM		Total Coliform	2			PP = 7 / 85; VP = 3 / 39
3168B	BOGGY CREEK	STREAM		Turbidity	2			PP = 3 / 254; VP = 1 / 85
3168B	BOGGY CREEK	STREAM		Unionized Ammonia	2			PP = 0 / 168; VP = 0 / 27
3168B	BOGGY CREEK	STREAM		Zinc	2			PP = 0 / 22; VP = No data
3168C	LAKE JESSAMINE	LAKE		Antimony	3B			PP = 0 / 2; VP = No data
3168C	LAKE JESSAMINE	LAKE		Arsenic	3B			PP = 0 / 6; VP = No data
3168C	LAKE JESSAMINE	LAKE		Cadmium	3B			PP = 1 / 7; VP = No data
3168C	LAKE JESSAMINE	LAKE		Chromium3	3B			PP = 0 / 6; VP = No data
3168C	LAKE JESSAMINE	LAKE		Copper	3B			PP = 1 / 8; VP = No data
3168C	LAKE JESSAMINE	LAKE		Dissolved Oxygen	2			PP = 0 / 46; VP = 0 / 55
3168C	LAKE JESSAMINE	LAKE		Fecal Coliform	2			PP = 0 / 30; VP = 0 / 52
3168C	LAKE JESSAMINE	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3168C	LAKE JESSAMINE	LAKE		Iron	3B			PP = 0 / 3; VP = No data
3168C	LAKE JESSAMINE	LAKE		Lead	3B			PP = 2 / 2; VP = No data
3168C	LAKE JESSAMINE	LAKE		Nickel	3B			PP = 0 / 2; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168C	LAKE JESSAMINE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the minimum value (51.91, calculated based on data from the period 1990 – 1994) by more than 10 TSI units. Annual means were 50.2, 54.9, 53.8, and 55.3 in 1993, 1994, 1995, and 1996. 352 chla values, range 1.0 – 74.0 µg/L, mean 21.9 µg/L. 1 chla value: 1.0 µg/L. VP – 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units. Annual mean TSIs were 28.7 and 37 in 2002 and 2003, respectively. 30 chla values, range 5.0 – 74.0 µg/L, mean 19.7 µg/L. 1 chla (corrected) value: 1.0 µg/L. 57 TN values, median 0.805 mg/L. 59 TP values, median 0.005 mg/L.
3168C	LAKE JESSAMINE	LAKE		Nutrients (TSI)	2			PP – All 4 TSI annual means exceeded the threshold. Annual means were 50.2, 54.9, 53.8, and 55.3 in 1993, 1994, 1995, and 1996. 352 chla values, range 1.0 – 74.0 µg/L, mean 21.9 µg/L. 1 chla value: 1.0 µg/L. VP – 0 TSI annual mean exceeded the threshold. Annual mean TSIs were 28.7 and 37 in 2002 and 2003, respectively. 30 chla values, range 5.0 – 74.0 µg/L, mean 19.7 µg/L. 1 chla (corrected) value: 1.0 µg/L. 57 TN values, median 0.805 mg/L. 59 TP values, median 0.005 mg/L. Historical color data from Florida Lakewatch, the Southwest Florida Water Management District, and the EPA's Lake Regions of Florida Report indicate that this is a low color lake. Therefore TSI 40 was used as the threshold.
3168C	LAKE JESSAMINE	LAKE		Selenium	3B			PP = 0 / 3; VP = No data
3168C	LAKE JESSAMINE	LAKE		Thallium	3B			PP = 0 / 2; VP = No data
3168C	LAKE JESSAMINE	LAKE		Total Coliform	2			PP = 0 / 32; VP = 0 / 52
3168C	LAKE JESSAMINE	LAKE		Turbidity	2			PP = 0 / 24; VP = 0 / 17
3168C	LAKE JESSAMINE	LAKE		Unionized Ammonia	2			PP = 0 / 19; VP = 0 / 4

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3168C	LAKE JESSAMINE	LAKE		Zinc	3B			PP = 0 / 8; VP = No data
3168D	LAKE GATLIN	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3168D	LAKE GATLIN	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3168D	LAKE GATLIN	LAKE		Arsenic	3B			PP = 0 / 3; VP = No data
3168D	LAKE GATLIN	LAKE		Cadmium	3B			PP = 0 / 3; VP = No data
3168D	LAKE GATLIN	LAKE		Chromium3	3B			PP = 0 / 3; VP = No data
3168D	LAKE GATLIN	LAKE		Copper	3B			PP = 2 / 4; VP = No data
3168D	LAKE GATLIN	LAKE		Dissolved Oxygen	2			PP = 1 / 25; VP = 0 / 28
3168D	LAKE GATLIN	LAKE		Fecal Coliform	2			PP = 0 / 19; VP = 0 / 15
3168D	LAKE GATLIN	LAKE		Iron	3B			PP = 1 / 3; VP = No data
3168D	LAKE GATLIN	LAKE		Lead	3C			PP = 4 / 4; VP = 0 / 7
3168D	LAKE GATLIN	LAKE		Nickel	3B			PP = 0 / 5; VP = No data
3168D	LAKE GATLIN	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic al minimum value (56.90, calculated based on data from the period 1994 – 1998) by more than 10 TSI units. Annual means were 56.9, 55.3, 58.8, 56.6, 57.8, and 59.1 in 1995, 1996, 1997, 1998, 1999, and 2002, respectively. 222 chla values, range 7.9 – 99.0 µg/L, mean 34.1 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 107 chla values, range 14.0 – 73.0 µg/L, mean 35.9 µg/L. 23 TN values, median 1.515 mg/L. 24 TP values, median 0.004 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168D	LAKE GATLIN	LAKE		Nutrients (TSI)	3C			PP – 3 TSI annual means exceeded the threshold in 1996 and 1997 and 2002. Annual means were 56.9, 55.3, 58.8, 56.6, 57.8, and 59.1 in 1995, 1996, 1997, 1998, 1999, and 2002, respectively. 222 chla values, range 7.9 – 99.0 µg/L, mean 34.1 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 107 chla values, range 14.0 – 73.0 µg/L, mean 35.9 µg/L. 23 TN values, median 1.515 mg/L. 24 TP values, median 0.004 mg/L.
3168D	LAKE GATLIN	LAKE		Selenium	3B			PP = 0 / 2; VP = No data
3168D	LAKE GATLIN	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3168D	LAKE GATLIN	LAKE		Total Coliform	2			PP = 0 / 19; VP = 0 / 16
3168D	LAKE GATLIN	LAKE		Turbidity	2			PP = 0 / 22; VP = 0 / 11
3168D	LAKE GATLIN	LAKE		Unionized Ammonia	2			PP = 1 / 19; VP = 1 / 4
3168D	LAKE GATLIN	LAKE		Zinc	3B			PP = 0 / 7; VP = No data
3168E	LAKE ANDERSON	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3168E	LAKE ANDERSON	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3168E	LAKE ANDERSON	LAKE		Arsenic	3B			PP = 0 / 2; VP = No data
3168E	LAKE ANDERSON	LAKE		Cadmium	3B			PP = 0 / 2; VP = No data
3168E	LAKE ANDERSON	LAKE		Chromium3	3B			PP = 0 / 2; VP = No data
3168E	LAKE ANDERSON	LAKE		Copper	3B			PP = 1 / 4; VP = No data
3168E	LAKE ANDERSON	LAKE		Dissolved Oxygen	2			PP = 4 / 31; VP = 2 / 34
3168E	LAKE ANDERSON	LAKE		Fecal Coliform	2			PP = 0 / 21; VP = 0 / 14
3168E	LAKE ANDERSON	LAKE		Iron	3B			PP = 0 / 1; VP = No data
3168E	LAKE ANDERSON	LAKE		Lead	3C			PP = 4 / 4; VP = 0 / 16
3168E	LAKE ANDERSON	LAKE		Nickel	3B			PP = 0 / 3; VP = No data
3168E	LAKE ANDERSON	LAKE		Nutrients (TSI)	2			PP – 1 TSI annual mean exceeded the threshold. Annual mean was 43.3 in 1993. 16 chla values, range 2.1 – 174.1 µg/L, mean 27.4 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual mean TSI was 37.4 in 2003. 16 chla (corrected) values, range 6.3 – 75.5 µg/L, mean 43.8 µg/L. 31 TN values, median 1.26 mg/L. 32 TP values, median 0.04 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168E	LAKE ANDERSON	LAKE		Selenium	3B			PP = 0 / 2; VP = No data
3168E	LAKE ANDERSON	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3168E	LAKE ANDERSON	LAKE		Total Coliform	2			PP = 0 / 22; VP = 0 / 14
3168E	LAKE ANDERSON	LAKE		Turbidity	2			PP = 0 / 24; VP = 0 / 5
3168E	LAKE ANDERSON	LAKE		Unionized Ammonia	2			PP = 0 / 21; VP = 0 / 4
3168E	LAKE ANDERSON	LAKE		Zinc	3B			PP = 0 / 5; VP = No data
3168F	LAKE BASS	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3168F	LAKE BASS	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3168F	LAKE BASS	LAKE		Arsenic	3B			PP = 0 / 5; VP = No data
3168F	LAKE BASS	LAKE		Cadmium	3B			PP = 0 / 5; VP = No data
3168F	LAKE BASS	LAKE		Chromium3	3B			PP = 0 / 6; VP = No data
3168F	LAKE BASS	LAKE		Copper	3B			PP = 2 / 7; VP = No data
3168F	LAKE BASS	LAKE		Dissolved Oxygen	2			PP = 2 / 24; VP = 0 / 27
3168F	LAKE BASS	LAKE		Fecal Coliform	2			PP = 0 / 15; VP = 0 / 2
3168F	LAKE BASS	LAKE		Iron	3B			PP = 0 / 2; VP = No data
3168F	LAKE BASS	LAKE		Lead	2			PP = 5 / 6; VP = 1 / 20
3168F	LAKE BASS	LAKE		Nickel	3B			PP = 0 / 4; VP = No data
3168F	LAKE BASS	LAKE		Nutrients (TSI)	3C			PP – 2 TSI annual mean exceeded the threshold in 1993 and 1994. Annual means were 53.6 (color 15 pcu) and 62.2 in 1993 and 1994. 18 chla values, range 4.0 – 43.3 µg/L. VP – Insufficient data to calculate any annual mean. 19 chla (corrected) values, range 1.0 – 44.9 µg/L, mean 29.4 µg/L. 24 TN values, median 0.96 mg/L. 24 TP values, median 0.03 mg/L.
3168F	LAKE BASS	LAKE		Selenium	3B			PP = 0 / 2; VP = No data
3168F	LAKE BASS	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3168F	LAKE BASS	LAKE		Total Coliform	2			PP = 0 / 17; VP = 0 / 3
3168F	LAKE BASS	LAKE		Turbidity	2			PP = 0 / 23; VP = 0 / 5
3168F	LAKE BASS	LAKE		Unionized Ammonia	2			PP = 1 / 20; VP = 0 / 3
3168F	LAKE BASS	LAKE		Zinc	3B			PP = 0 / 9; VP = No data
3168G	LAKE UNDERHILL	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3168G	LAKE UNDERHILL	LAKE		Antimony	3B			PP = 0 / 2; VP = No data
3168G	LAKE UNDERHILL	LAKE		Arsenic	3B			PP = 0 / 5; VP = No data
3168G	LAKE UNDERHILL	LAKE		Cadmium	3B			PP = 1 / 9; VP = 0 / 2
3168G	LAKE UNDERHILL	LAKE		Chromium3	3B			PP = 0 / 6; VP = 0 / 2
3168G	LAKE UNDERHILL	LAKE		Copper	2			PP = 2 / 10; VP = 0 / 4
3168G	LAKE UNDERHILL	LAKE		Dissolved Oxygen	2			PP = 0 / 98; VP = 0 / 85

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168G	LAKE UNDERHILL	LAKE		Fecal Coliform	2			PP = 1 / 42; VP = 0 / 14
3168G	LAKE UNDERHILL	LAKE		Iron	2			PP = 0 / 10; VP = 0 / 6
3168G	LAKE UNDERHILL	LAKE		Lead	3C			PP = 6 / 8; VP = 2 / 2
3168G	LAKE UNDERHILL	LAKE		Nickel	3B			PP = 0 / 2; VP = 0 / 2
3168G	LAKE UNDERHILL	LAKE		Nutrients (Historic TSI)	2			PP – 3 TSI annual means exceeded the historic minimum value (49.0, calculated based on data from the period 2001 – 2005) by more than 10 TSI units. Annual means were 67.9, 65.1, 58.8, 56.6, 60.5, 58.6, 56.1, and 40.5 in 1993, 1994, 1995, 1996, 1997, 1999, 2001, and 2002, respectively. 81 chla values, range 10.0 – 65.0 µg/L, mean 39.4 µg/L. 76 chla (corrected) values, range 2.6 – 61.0 µg/L, mean 29.7 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 58.6, 56.1, 40.5, and 50.6 in 1999, 2001, 2002, and 2003, respectively. 44 chla (corrected) values, range 1.4 – 60.7 µg/L, mean 24.2 µg/L. 74 TN values, median 0.78 mg/L. 70 TP values, median 0.03 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168G	LAKE UNDERHILL	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impact. All 8 TSI annual means exceeded the threshold. Annual means were 67.9, 65.1, 58.8, 56.6, 60.5, 58.6, 56.1, and 40.5 in 1993, 1994, 1995, 1996, 1997, 1999, 2001, and 2002, respectively. 81 chla values, range 10.0 – 65.0 µg/L, mean 39.4 µg/L. 76 chla (corrected) values, range 2.6 – 61.0 µg/L, mean 29.7 µg/L. VP – Impaired. All 4 TSI annual means exceeded the threshold. Annual means were 58.6, 56.1, 40.5, and 50.6 in 1999, 2001, 2002, and 2003, respectively. 44 chla (corrected) values, range 1.4 – 60.7 µg/L, mean 24.2 µg/L. 74 TN values, median 0.78 mg/L. 70 TP values, median 0.03 mg/L. Historical color data from Florida Lakewatch, the Southwest Florida Water Management District, and the EPA's Lake Regions of Florida Report indicate that this is a low color lake. The community is phosphorus limited based on the median TN/TP ratio of 32.3 calculated from 70 TN/TP ratios.
3168G	LAKE UNDERHILL	LAKE		Selenium	3B			PP = 0 / 3; VP = 0 / 2
3168G	LAKE UNDERHILL	LAKE		Thallium	3B			PP = 0 / 2; VP = No data
3168G	LAKE UNDERHILL	LAKE		Total Coliform	2			PP = 0 / 14; VP = No data
3168G	LAKE UNDERHILL	LAKE		Turbidity	2			PP = 0 / 23; VP = 0 / 7
3168G	LAKE UNDERHILL	LAKE		Un-ionized Ammonia	2			PP = 1 / 48; VP = 0 / 5
3168G	LAKE UNDERHILL	LAKE		Zinc	3B			PP = 0 / 8; VP = 0 / 2
3168H	LAKE HOLDEN	LAKE		Cadmium	3B			PP = 2 / 2; VP = 0 / 2
3168H	LAKE HOLDEN	LAKE		Chlorine	3B			PP = No data; VP = 1 / 1
3168H	LAKE HOLDEN	LAKE		Chromium3	3B			PP = 0 / 2; VP = 0 / 4
3168H	LAKE HOLDEN	LAKE		Copper	3B			PP = 2 / 6; VP = 0 / 6
3168H	LAKE HOLDEN	LAKE		Dissolved Oxygen	2			PP = 4 / 101; VP = 1 / 82
3168H	LAKE HOLDEN	LAKE		Fecal Coliform	2			PP = 3 / 66; VP = 3 / 59
3168H	LAKE HOLDEN	LAKE		Iron	3B			PP = 0 / 2; VP = 0 / 6
3168H	LAKE HOLDEN	LAKE		Lead	3C			PP = 4 / 4; VP = 0 / 4
3168H	LAKE HOLDEN	LAKE		Nickel	3B			PP = 0 / 5; VP = 0 / 6

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168H	LAKE HOLDEN	LAKE	Nutrients	Nutrients (Historic TSI)	2			Delist. PP – 4 TSI annual means exceeded the historic minimum value (56.7, calculated based on data from the period 2000 – 2004) by more than 10 TSI units. Annual means were 67.5, 60.8, 65.7, 67.0, 70.8, 67.1, and 64.2 in 1994, 1996, 1998, 1999, 2000, 2001, and 2002, respectively. 232 chla values, range 1.0 – 92.0 µg/L, mean 50.2 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual TSI means were 53.4, 64.9, 50.1, and 54.0 in 2000, 2001, 2002, and 2003, respectively. 167 chla values, range 21.0 – 92.0 µg/L, mean 53.7 µg/L. 1 chla (corrected) value: 4.43 µg/L. 86 TN values, median 1.40 mg/L. 89 TP values, median 0.02 mg/L.
3168H	LAKE HOLDEN	LAKE	Nutrients	Nutrients (TSI)	5	Low	2010*	PP – Potentially impaired. 7 TSI annual means exceeded the threshold. Annual means were 67.5, 60.8, 65.7, 67.0, 70.8, 67.1, and 64.2 in 1994, 1996, 1998, 1999, 2000, 2001, and 2002, respectively. 232 chla values, range 1.0 – 92.0 µg/L, mean 50.2 µg/L. VP – Impaired. 4 TSI annual means exceeded the onsumpti. Annual TSI means were 53.4, 64.9, 50.1, and 54.0 in 2000, 2001, 2002, and 2003, respectively. 167 chla values, range 21.0 – 92.0 µg/L, mean 53.7 µg/L. 1 chla (corrected) value: 4.43 µg/L. 86 TN values, median 1.40 mg/L. 89 TP values, median 0.02 mg/L. Limited by phosphorus based on a TN/TP ratio median of 59.4 (86 values) in the Verified Period.
3168H	LAKE HOLDEN	LAKE		Selenium	3B			PP = No data; VP = 0 / 4
3168H	LAKE HOLDEN	LAKE		Total Coliform	2			PP = 2 / 66; VP = 3 / 49
3168H	LAKE HOLDEN	LAKE		Turbidity	2			PP = 0 / 50; VP = 0 / 12

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168H	LAKE HOLDEN	LAKE	Unionized Ammonia	Unionized Ammonia	2			Delist. PP = 6 / 48, Not impaired; VP = 0 / 11, Insufficient data. Delisting based on data from the Planning Period.
3168H	LAKE HOLDEN	LAKE		Zinc	3B			PP = 0 / 5; VP = 0 / 5
3168I	PINELOCH	LAKE		Antimony	3B			PP = 0 / 2; VP = No data
3168I	PINELOCH	LAKE		Arsenic	3B			PP = 0 / 5; VP = No data
3168I	PINELOCH	LAKE		Cadmium	3B			PP = 0 / 5; VP = No data
3168I	PINELOCH	LAKE		Chromium3	3B			PP = 0 / 5; VP = 0 / 2
3168I	PINELOCH	LAKE		Copper	3B			PP = 1 / 7; VP = 0 / 3
3168I	PINELOCH	LAKE		Dissolved Oxygen	2			PP = 1 / 73; VP = 0 / 58
3168I	PINELOCH	LAKE		Fecal Coliform	2			PP = 3 / 47; VP = 1 / 28
3168I	PINELOCH	LAKE		Iron	3B			PP = 0 / 4; VP = 0 / 3
3168I	PINELOCH	LAKE		Lead	3B			PP = 2 / 4; VP = No data
3168I	PINELOCH	LAKE		Nickel	3B			PP = 0 / 3; VP = 0 / 3
3168I	PINELOCH	LAKE		Nutrients (Historic TSI)	2			PP – 1 TSI annual means exceeded the historic minimum value (44.4, calculated based on data from the period 2001 – 2005) by more than 10 TSI units. Annual means were 52.8, 54.0, 53.1, 54.8, 48.4, 48.6, 50.0, and 48.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2002, respectively. 70 chla values, range 6.0 – 33.0 µg/L, mean 15.8 µg/L. 40 chla (corrected) values, range 3.2 – 33.0 µg/L, mean 13.6 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual TSI means were 48.6, 50.0, 46.1, 40.4, 46.9, and 46.0 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 20 chla (corrected) values, range 3.2 – 22.5 µg/L, mean 12.1 µg/L. 56 TN values, median 0.69 mg/L. 55 TP values, median 0.02 mg/L

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168I	PINELOCH	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. All 8 TSI annual mean exceeded the threshold. Annual means were 52.8, 54.0, 53.1, 54.8, 48.4, 48.6, 50.0, and 48.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2002, respectively. 70 chla values, range 6.0 – 33.0 µg/L, mean 15.8 µg/L. 40 chla (corrected) values, range 3.2 – 33.0 µg/L, mean 13.6 µg/L. VP – Impaired. All 6 TSI annual means exceeded the threshold. Annual TSI means were 48.6, 50.0, 46.1, 40.4, 46.9, and 46.0 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 20 chla (corrected) values, range 3.2 – 22.5 µg/L, mean 12.1 µg/L. 56 TN values, median 0.69 mg/L. 55 TP values, median 0.02 mg/L. Historical color data from Florida Lakewatch, the Southwest Florida Water Management District, and the EPA's Lake Regions of Florida Report indicate that this is a low color lake. The community is phosphorus limited based on a median TN/TP ratio of 35.5 calculated from 54 TN/TP ratios in the verified period.
3168I	PINELOCH	LAKE		Selenium	3B			PP = 0 / 3; VP = 0 / 2
3168I	PINELOCH	LAKE		Thallium	3B			PP = 0 / 2; VP = No data
3168I	PINELOCH	LAKE		Total Coliform	2			PP = 0 / 28; VP = 0 / 23
3168I	PINELOCH	LAKE		Turbidity	2			PP = 0 / 22; VP = 0 / 8
3168I	PINELOCH	LAKE		Unionized Ammonia	2			PP = 0 / 38; VP = 0 / 4
3168I	PINELOCH	LAKE		Zinc	3B			PP = 0 / 7; VP = 0 / 2
3168J	JENNIE JEWEL LAKE	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Antimony	3B			PP = 0 / 4; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Arsenic	3B			PP = 0 / 7; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Cadmium	3B			PP = 0 / 6; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Chromium3	3B			PP = 0 / 7; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Copper	3B			PP = 2 / 9; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 48; VP = 0 / 45
3168J	JENNIE JEWEL LAKE	LAKE		Fecal Coliform	2			PP = 0 / 36; VP = 0 / 17
3168J	JENNIE JEWEL LAKE	LAKE		Iron	3B			PP = 0 / 4; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168J	JENNIE JEWEL LAKE	LAKE		Lead	3B			PP = 2 / 4; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Nickel	3B			PP = 0 / 6; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Nutrients (TSI)	3C			PP – 1 TSI annual mean exceeded the threshold in 1996. Annual means were 56.9 and 52.5 in 1994 and 1996. 28 chla values, range 8.2 – 48.6 µg/L, mean 22.4 µg/L. VP – No TSI annual means available. 16 chla (corrected) values, range 1.0 – 68.2 µg/L, mean 38.7 µg/L. 46 TN values, median 1.01 mg/L. 14 TP values, median 0.02 mg/L.
3168J	JENNIE JEWEL LAKE	LAKE		Selenium	3B			PP = 0 / 4; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Thallium	3B			PP = 0 / 4; VP = No data
3168J	JENNIE JEWEL LAKE	LAKE		Total Coliform	2			PP = 0 / 36; VP = 0 / 17
3168J	JENNIE JEWEL LAKE	LAKE		Turbidity	2			PP = 1 / 37; VP = 1 / 12
3168J	JENNIE JEWEL LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 35; VP = 0 / 8
3168J	JENNIE JEWEL LAKE	LAKE		Zinc	2			PP = 0 / 11; VP = No data
3168K	BAY LAKE	LAKE			3A			PP = No data; VP = No data
3168L	LAKE WARREN OUTLET	LAKE			3A			PP = No Data; VP = No data
3168M	LAKE COPELAND	LAKE		Beryllium	3B			PP = 0 / 1; VP = No data
3168M	LAKE COPELAND	LAKE		Cadmium	3B			PP = 0 / 2; VP = No data
3168M	LAKE COPELAND	LAKE		Chromium3	3B			PP = No data; VP = 0 / 2
3168M	LAKE COPELAND	LAKE		Copper	3B			PP = 0 / 3; VP = 0 / 4
3168M	LAKE COPELAND	LAKE		Dissolved Oxygen	2			PP = 2 / 45; VP = 0 / 27
3168M	LAKE COPELAND	LAKE		Fecal Coliform	2			PP = 0 / 23; VP = 0 / 5
3168M	LAKE COPELAND	LAKE		Iron	3B			PP = 0 / 3; VP = 0 / 4
3168M	LAKE COPELAND	LAKE		Lead	3B			PP = 0 / 1; VP = 0 / 1
3168M	LAKE COPELAND	LAKE		Nickel	3B			PP = 0 / 1; VP = 0 / 3

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168M	LAKE COPELAND	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (55.58, calculated based on data from the period 2000 – 2004) by more than 10 TSI units. Annual means were 58.3, 61.4, 60.1, 60.6, 56.8, 56.0, and 55.3 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 104 chla values, range 8.0 – 113.0 µg/L, mean 32.8 µg/L. 45 chla (corrected) values, range 8.4 – 102.0 µg/L, mean 28.6 µg/L. VP – 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units. TSI annual means were 60.6, 56.8, 56, 55.3, and 55.5 in 1999, 2000, 2001, 2002, and 2003, respectively. No color data was available. 81 chla values, range 8.0 – 113.0 µg/L, mean 34.0 µg/L. 20 chla (corrected) values, range 8.4 – 102.0 µg/L, mean 29.2 µg/L. 27 TN values, median 0.83 mg/L. 28 TP values, median 0.04 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168M	LAKE COPELAND	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 7 TSI annual means exceeded the threshold (TSI 40). Annual means were 58.3, 61.4, 60.1, 60.6, 56.8, 56.0, and 55.3 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 104 chl a values, range 8.0 – 113.0 µg/L, mean 32.8 µg/L. 45 chl a (corrected) values, range 8.4 – 102.0 µg/L, mean 28.6 µg/L. VP – Impaired. 5 TSI annual mean exceeded the threshold. TSI annual means were 60.6, 56.8, 56, 55.3, and 55.5 in 1999, 2000, 2001, 2002, and 2003, respectively. No color data was available. 81 chl a values, range 8.0 – 113.0 µg/L, mean 34.0 µg/L. 20 chl a (corrected) values, range 8.4 – 102.0 µg/L, mean 29.2 µg/L. 27 TN values, median 0.83 mg/L. 28 TP values, median 0.04 mg/L. Communities are co-limited by phosphorus and nitrogen, but are more limited by nitrogen based on a median TN/TP ratio of 18 calculated from 27 TN/TP ratios. This lake did not have color data, but it is located in the Orlando Ridge area. Most of the lakes in this area are low in color.
3168M	LAKE COPELAND	LAKE		Selenium	3B			PP = No data; VP = 0 / 2
3168M	LAKE COPELAND	LAKE		Unionized Ammonia	2			PP = 0 / 21; VP = No data
3168M	LAKE COPELAND	LAKE		Zinc	3B			PP = No data; VP = 0 / 2
3168N	LAKE OLIVE	LAKE		Cadmium	3B			PP = 0 / 1; VP = 0 / 2
3168N	LAKE OLIVE	LAKE		Chromium3	3B			PP = No data; VP = 0 / 2
3168N	LAKE OLIVE	LAKE		Copper	3B			PP = 0 / 2; VP = 0 / 2
3168N	LAKE OLIVE	LAKE		Dissolved Oxygen	2			PP = 3 / 38; VP = 2 / 24
3168N	LAKE OLIVE	LAKE		Fecal Coliform	2			PP = 3 / 17; VP = 0 / 5
3168N	LAKE OLIVE	LAKE		Iron	3B			PP = 0 / 8; VP = 0 / 6
3168N	LAKE OLIVE	LAKE		Lead	3C			PP = 3 / 4; VP = 1 / 2
3168N	LAKE OLIVE	LAKE		Nickel	3B			PP = 0 / 1; VP = 0 / 3

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3168N	LAKE OLIVE	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 6 TSI annual means exceeded the threshold (TSI 40). Annual means were 57.9, 64.9, 66.8, 54.3, 59.5, and 51.8 in 1994, 1995, 1996, 1997, 1999, and 2002, respectively. 20 chla values, range 6.7 – 99.0 µg/L, mean 1.8 µg/L. 37 chla (corrected) values, range 5.1 – 99.0 µg/L, median 26.5 µg/L. VP – Impaired. 2 TSI annual means exceeded the threshold. Annual means were 59.5 and 51.8 in 1999 and 2002, respectively. 23 chla (corrected) values, range 5.1 – 47.5 µg/L, mean 19.5 µg/L. 26 TN values, median 0.795 mg/L. 25 TP values, median 0.07 mg/L. The community is phosphorus and nitrogen co-limited, but is more nitrogen limited based on the median TN/TP ratio of 12.2 calculated from 25 TN/TP ratios in the Verified Period. The lake did not have color data, but it is located in the Orlando Ridge area. Most of lakes located in this area are low in color.
3168N	LAKE OLIVE	LAKE		Selenium	3B			PP = No data ;VP = 0 / 2
3168N	LAKE OLIVE	LAKE		Unionized Ammonia	2			PP = 0 / 17; VP = No Data
3168N	LAKE OLIVE	LAKE		Zinc	3B			PP = No data; VP = 0 / 2
3168O	LAKE MARY JESS	LAKE		Nutrients (TSI)	2			PP – Insufficient data to calculate any mean. VP – 0 TSI annual means exceeded the threshold. Annual mean was 37.3 in 2003. 230 chla values, range 1.0 – 10.0 µg/L, mean 3.6 µg/L. No TN or TP data.
3168P	LAKE MARGARET	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
3168Q	LAKE WARREN (L. MARE PRAIRE)	LAKE		Dissolved Oxygen	2			PP = No data;VP = 0 / 20
3168Z	LAKE UNDERHILL OUTLET	LAKE			3A			PP = No data; VP = No data
3169A	SHINGLE CREEK	STREAM		Aluminum	3B			PP = 0 / 7; VP = 0 / 3
3169A	SHINGLE CREEK	STREAM		Antimony	3B			PP = 0 / 3; VP = No data
3169A	SHINGLE CREEK	STREAM		Arsenic	2			PP = 0 / 25; VP = 0 / 3

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169A	SHINGLE CREEK	STREAM		Barium	3B			PP = 0 / 3; VP = 0 / 3
3169A	SHINGLE CREEK	STREAM		Biology	2			PP – 1 BIORECON passed in 1997. VP – No data.
3169A	SHINGLE CREEK	STREAM		Boron	3B			PP = 0 / 3; VP = 0 / 3
3169A	SHINGLE CREEK	STREAM		Cadmium	3B			PP = 0 / 8; VP = 0 / 18
3169A	SHINGLE CREEK	STREAM		Chromium3	3B			PP = 0 / 8; VP = 0 / 3
3169A	SHINGLE CREEK	STREAM		Copper	3C			PP = 5 / 10; VP = 0 / 14
3169A	SHINGLE CREEK	STREAM	Dissolved Oxygen (BOD)	Dissolved Oxygen	3C	(Low)	(2010)	PP = 45 / 178; VP = 33 / 120. DO met verification threshold of the IWR, but unable to determine the causative pollutant. 126 TN values, median 0.86 mg/L. 127 TP values, median 0.06 mg/L. 54 BOD values, median 1.0 mg/L. 249 DO values, median 6.49 mg/L, mean 6.0 mg/L, range 0.42 – 9.88 mg/L. This WBID contains 57% human landuse. Thirty-five percent of the level 1 landuse is characterized as urban and built up, and 12% is characterized as agriculture. One BIORECON passed in 1997.
3169A	SHINGLE CREEK	STREAM	Coliform Bacteria	Fecal Coliform	2			Delist. PP = 6 / 47, Not impaired; VP = 2 / 26, Not impaired
3169A	SHINGLE CREEK	STREAM		Fluoride	3B			PP = 0 / 3; VP = 0 / 3
3169A	SHINGLE CREEK	STREAM		Iron	3C			PP = 9 / 18; VP = 9 / 12
3169A	SHINGLE CREEK	STREAM		Lead	2			PP = 11 / 14; VP = 4 / 23
3169A	SHINGLE CREEK	STREAM		Lindane	3B			PP = 0 / 5; VP = 0 / 3
3169A	SHINGLE CREEK	STREAM		Nickel	3B			PP = 0 / 6; VP = No data
3169A	SHINGLE CREEK	STREAM	Nutrients	Nutrients (Chla)	2			Delist. PP – Not impaired. 0 chla annual means exceeded the threshold. Annual means were 3.1 µg/L, 7.1 µg/L, and 15.3 µg/L in 1993, 1994, and 1996, respectively. 42 chla values, range 1.0 - 39.6 µg/L, mean 7.1 µg/L. 5 chla (corrected) values, all 1.0 µg/L. VP – Not impaired. 0 Chla annual means exceeded the threshold. The annual average Chla concentration was 4.13 in 2003. 126 TN values, median 0.86 mg/L. 127 TP values, median 0.06 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169A	SHINGLE CREEK	STREAM	Nutrients	Nutrients (Historic Chla)	2			Delist. PP – No 2 consecutive chla annual means exceeded the historic minimum value (2.7 µg/L, calculated based on data from the period 1974 – 1978) by more than 50%. Annual means were 3.1 µg/L, 7.1 µg/L, and 15.3 µg/L in 1993, 1994, and 1996, respectively. 42 chla values, range 1.0 - 39.6 µg/L, mean 7.1 µg/L. 5 chla (corrected) values, all 1.0 µg/L. VP – No 2 consecutive chla annual means exceeded the historic minimum by more than 50%. The Chla annual mean was 4.1 µg/L. 126TN values, median 0.86 mg/L. 127 TP values, median 0.06 mg/L.
3169A	SHINGLE CREEK	STREAM		Selenium	3B			PP = 0 / 8; VP = 0 / 3
3169A	SHINGLE CREEK	STREAM		Thallium	3B			PP = 0 / 3; VP = No data
3169A	SHINGLE CREEK	STREAM	Coliform Bacteria	Total Coliform	2			Delist. PP = 2 / 47, Not impaired; VP = 0 / 29, Not impaired.
3169A	SHINGLE CREEK	STREAM	Turbidity	Turbidity	2			Delist. PP = 8 / 232, Not impaired. VP = 2 / 77, Not impaired.
3169A	SHINGLE CREEK	STREAM		Unionized Ammonia	2			PP = 0 / 169; VP = 0 / 23
3169A	SHINGLE CREEK	STREAM		Zinc	2			PP = 0 / 13; VP = No data
3169B	REEDY CANAL	STREAM		Biology	2			One SCI passed in 1997. Two BIORECON tests passed in 1996 and 2003
3169B	REEDY CANAL	STREAM		Dissolved Oxygen	3B			PP = 0 / 1; VP = No data
3169B	REEDY CANAL	STREAM		Turbidity	3B			PP = 0 / 1; VP = No data
3169B	REEDY CANAL	STREAM		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
3169C	BIG SAND LAKE	LAKE		Antimony	3B			PP = 0 / 2; VP = No data
3169C	BIG SAND LAKE	LAKE		Arsenic	3B			PP = 0 / 7; VP = No data
3169C	BIG SAND LAKE	LAKE		Cadmium	3B			PP = 0 / 6; VP = 0 / 4
3169C	BIG SAND LAKE	LAKE		Chromium3	3B			PP = 0 / 7; VP = No data
3169C	BIG SAND LAKE	LAKE		Copper	3C			PP = 3 / 6; VP = 0 / 17
3169C	BIG SAND LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 40; VP = 0 / 41
3169C	BIG SAND LAKE	LAKE		Fecal Coliform	2			PP = 0 / 17; VP = 0 / 15
3169C	BIG SAND LAKE	LAKE		Iron	3B			PP = 0 / 2; VP = No data
3169C	BIG SAND LAKE	LAKE		Lead	3C			PP = 4 / 5; VP = 4 / 19
3169C	BIG SAND LAKE	LAKE		Nickel	3B			PP = 0 / 2; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169C	BIG SAND LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (37.49, calculated based on data from the period 2001 – 2005) by more than 10 TSI units. Annual means were 38.8, 40.9, 35.8, 39.5, 39.3, and 38.9 in 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 441 chla values, range 1.0 – 59.0 µg/L, mean 5.6 µg/L.VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI unit (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 27.9 in 2003. 310 chla values, range 1.0 – 59.0 µg/L, mean 6.0 µg/L. 2 chla (corrected) values, range 2.3 – 3.1 µg/L, mean 2.7 µg/L. 27 TN values, median 0.51 mg/L. 27 TP values, median 0.005 mg/L.
3169C	BIG SAND LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 38.8, 40.9, 35.8, 39.5, 39.3, and 38.9 in 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 441 chla values, range 1.0 – 59.0 µg/L, mean 5.6 µg/L.VP – 0 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 27.9 in 2003. 310 chla values, range 1.0 – 59.0 µg/L, mean 6.0 µg/L. 2 chla (corrected) values, range 2.3 – 3.1 µg/L, mean 2.7 µg/L. 27 TN values, median 0.51 mg/L. 27 TP values, median 0.005 mg/L.
3169C	BIG SAND LAKE	LAKE		Selenium	3B			PP = 0 / 4; VP = No data
3169C	BIG SAND LAKE	LAKE		Thallium	3B			PP = 0 / 2; VP = No data
3169C	BIG SAND LAKE	LAKE		Total Coliform	2			PP = 0 / 22; VP = 0 / 17
3169C	BIG SAND LAKE	LAKE		Turbidity	2			PP = 0 / 37; VP = 0 / 16
3169C	BIG SAND LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 34; VP = 0 / 8

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169C	BIG SAND LAKE	LAKE		Zinc	2			PP = 0 / 12; VP = No data
3169C 1	BIG SAND LAKE OUTLET	LAKE			3A			PP = No data; VP = No data
3169E	LAKE MARSHA	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3169E	LAKE MARSHA	LAKE		Arsenic	3B			PP = 0 / 3; VP = No data
3169E	LAKE MARSHA	LAKE		Cadmium	3C			PP = 3 / 6; VP = 0 / 20
3169E	LAKE MARSHA	LAKE		Chromium3	3B			PP = 0 / 4; VP = No data
3169E	LAKE MARSHA	LAKE		Copper	3B			PP = 1 / 1; VP = 0 / 14
3169E	LAKE MARSHA	LAKE		Dissolved Oxygen	2			PP = 1 / 24; VP = 0 / 26
3169E	LAKE MARSHA	LAKE		Fecal Coliform	2			PP = 0 / 13; VP = 0 / 3
3169E	LAKE MARSHA	LAKE		Iron	3B			PP = 0 / 1; VP = No data
3169E	LAKE MARSHA	LAKE		Lead	3C			PP = 5 / 5; VP = 0 / 20
3169E	LAKE MARSHA	LAKE		Nickel	3B			PP = 0 / 1; VP = No data
3169E	LAKE MARSHA	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (30.20, calculated based on data from the period 1991 – 1995) by more than 10 TSI units. Annual means were 30.1, 29.5, 29.4, 31.7, 32.9, 30.6, 37.0, 28.1, 27.1, and 32.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 341 chla values, range 1.0 – 18.0 µg/L, mean 3.4 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 158 chla values, range 1.0 – 18.0 µg/L, mean 3.6 µg/L. 6 TN values, median 0.49 mg/L. 6 TP values, median 0.006 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169E	LAKE MARSHA	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 30.1, 29.5, 29.4, 31.7, 32.9, 30.6, 37.0, 28.1, 27.1, and 32.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 341 chla values, range 1.0 – 18.0 µg/L, mean 3.4 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 158 chla values, range 1.0 – 18.0 µg/L, mean 3.6 µg/L. 6 TN values, median 0.49 mg/L. 6 TP values, median 0.006 mg/L.
3169E	LAKE MARSHA	LAKE		Selenium	3B			PP = 0 / 3; VP = No data
3169E	LAKE MARSHA	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3169E	LAKE MARSHA	LAKE		Total Coliform	2			PP = 0 / 15; VP = 0 / 3
3169E	LAKE MARSHA	LAKE		Turbidity	2			PP = 0 / 23; VP = 0 / 5
3169E	LAKE MARSHA	LAKE		Unionized Ammonia	2			PP = 0 / 23; VP = 0 / 3
3169E	LAKE MARSHA	LAKE		Zinc	3B			PP = 0 / 6; VP = No data
3169F	TURKEY LAKE	LAKE		Antimony	3B			PP = 0 / 2; VP = No data
3169F	TURKEY LAKE	LAKE		Arsenic	2			PP = 0 / 12; VP = No data
3169F	TURKEY LAKE	LAKE		Cadmium	2			PP = 1 / 12; VP = 0 / 6
3169F	TURKEY LAKE	LAKE		Chromium ³	2			PP = 0 / 12; VP = 0 / 4
3169F	TURKEY LAKE	LAKE		Copper	2			PP = 5 / 13; VP = 0 / 27
3169F	TURKEY LAKE	LAKE		Dissolved Oxygen	2			PP = 2 / 106; VP = 2 / 75
3169F	TURKEY LAKE	LAKE		Fecal Coliform	2			PP = 0 / 55; VP = 0 / 12
3169F	TURKEY LAKE	LAKE		Iron	2			PP = 0 / 12; VP = 0 / 9
3169F	TURKEY LAKE	LAKE		Lead	2			PP = 12 / 12; VP = 3 / 23
3169F	TURKEY LAKE	LAKE		Nickel	3B			PP = 0 / 2; VP = 0 / 4

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169F	TURKEY LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (37.16, calculated based on data from the period 1997 – 2001) by more than 10 TSI units. Annual means were 41.6, 36.4, 37.0, 38.8, 33.6, 42.2, 35.7, and 38.0 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2002, respectively. 60 chla values, range 1.0 – 12.2 µg/L, mean 3.6 µg/L. 68 chla (corrected) values, range 1.0 – 11.2 µg/L, mean 3.8 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 42.2, 35.7, and 38.0 in 1998, 1999, and 2002, respectively. 33 chla (corrected) values, range 1.0 – 11.2 µg/L, mean 4.7 µg/L. 42 TN values, median 0.65 mg/L. 40 TP values, median 0.03 mg/L. The majority of the color data collected in 1993, 1996, 1997, 1998, and 2003 were higher than 40 pcu. Therefore TSI 60 was used as the consumpti.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169F	TURKEY LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 41.6, 36.4, 37.0, 38.8, 33.6, 42.2, 35.7, and 38.0 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2002, respectively. 60 chla values, range 1.0 – 12.2 µg/L, mean 3.6 µg/L. 68 chla (corrected) values, range 1.0 – 11.2 µg/L, mean 3.8 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual means were 42.2, 35.7, and 38.0 in 1998, 1999, and 2002, respectively. 33 chla (corrected) values, range 1.0 – 11.2 µg/L, mean 4.7 µg/L. 42 TN values, median 0.65 mg/L. 40 TP values, median 0.03 mg/L. The majority of the color data collected in 1993, 1996, 1997, 1998, and 2003 were higher than 40 pcu. Therefore TSI 60 was used as the consumpti.
3169F	TURKEY LAKE	LAKE		Selenium	3B			PP = 0 / 4; VP = 0 / 4
3169F	TURKEY LAKE	LAKE		Silver	3B			PP = 0 / 1; VP = 1 / 2
3169F	TURKEY LAKE	LAKE		Thallium	3B			PP = 0 / 2; VP = No data
3169F	TURKEY LAKE	LAKE		Total Coliform	2			PP = 0 / 28; VP = 0 / 2
3169F	TURKEY LAKE	LAKE		Turbidity	2			PP = 0 / 27; VP = 0 / 2
3169F	TURKEY LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 53; VP = 0 / 2
3169F	TURKEY LAKE	LAKE		Zinc	2			PP = 1 / 19; VP = 1 / 5
3169G	CLEAR LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3169G	CLEAR LAKE	LAKE		Arsenic	3B			PP = 0 / 2; VP = No data
3169G	CLEAR LAKE	LAKE		Beryllium	3B			PP = 1 / 1; VP = 1 / 1
3169G	CLEAR LAKE	LAKE		Cadmium	3B			PP = 0 / 2; VP = 0 / 2
3169G	CLEAR LAKE	LAKE		Chromium3	3B			PP = 0 / 2; VP = 0 / 4
3169G	CLEAR LAKE	LAKE		Copper	3B			PP = 1 / 4; VP = 0 / 5
3169G	CLEAR LAKE	LAKE		Dissolved Oxygen	2			PP = 2 / 96; VP = 1 / 62
3169G	CLEAR LAKE	LAKE		Fecal Coliform	2			PP = 4 / 31; VP = 0 / 16
3169G	CLEAR LAKE	LAKE		Iron	3B			PP = 0 / 11; VP = 0 / 12
3169G	CLEAR LAKE	LAKE		Lead	3B			PP = 2 / 4; VP = 0 / 1
3169G	CLEAR LAKE	LAKE		Nickel	3B			PP = 0 / 6; VP = 0 / 6

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169G	CLEAR LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 1 TSI annual means exceeded the historic minimum value (60.93, calculated based on data from 1998 – 2002) by more than 10 TSI units. Annual means were 57.1, 62.5, 67.5, 70.1, 71.3, 68.7, 68.3, 64.4, and 58.6 in 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 265 chla values, range 5.8 – 129.0 µg/L, mean 54.0 µg/L. 59 chla (corrected) values, range 5.6 – 72.8 µg/L, mean 28.5 µg/L. VP – 0 TSI annual means exceeded the threshold in 1999 and 2000. Annual means were 57.8, 60.2, 63.5, and 58.6 in 1998, 1999, 2000, and 2002, respectively. 114 chla values, range 22.0 – 83.0 µg/L, mean 50.4 µg/L. 43 chla (corrected) values, range 7.5 – 72.8 µg/L, mean 28.8 µg/L. 65 TN values, median 1.10 mg/L. 65 TP values, median 0.03 mg/L. Limited by phosphorus based on a TN/TP ratio of 36.5 (65 values) in the Verified Period.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169G	CLEAR LAKE	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 7 TSI annual means exceeded the threshold in 1994, 1995, 1996, and 1997. Annual means were 57.1, 62.5, 67.5, 70.1, 71.3, 68.7, 68.3, 64.4, and 58.6 in 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 265 chla values, range 5.8 – 129.0 µg/L, mean 54.0 µg/L. 59 chla (corrected) values, range 5.6 – 72.8 µg/L, mean 28.5 µg/L. VP – Impaired. 2 TSI annual means exceeded the threshold in 1999 and 2000. Annual means were 57.8, 60.2, 63.5, and 58.6 in 1998, 1999, 2000, and 2002, respectively. 114 chla values, range 22.0 – 83.0 µg/L, mean 50.4 µg/L. 43 chla (corrected) values, range 7.5 – 72.8 µg/L, mean 28.8 µg/L. 65 TN values, median 1.10 mg/L. 65 TP values, median 0.03 mg/L. Limited by phosphorus based on a TN/TP ratio of 36.5 (65 values) in the Verified Period.
3169G	CLEAR LAKE	LAKE		Selenium	3B			PP = 0 / 2; VP = 0 / 3
3169G	CLEAR LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3169G	CLEAR LAKE	LAKE		Total Coliform	2			PP = 0 / 15; VP = 0 / 6
3169G	CLEAR LAKE	LAKE		Turbidity	2			PP = 0 / 22; VP = 0 / 6
3169G	CLEAR LAKE	LAKE		Unionized Ammonia	2			PP = 2 / 36; VP = 0 / 4
3169G	CLEAR LAKE	LAKE		Zinc	3B			PP = 0 / 6; VP = 0 / 5
3169G 1	CLEAR LAKE OUTLET	LAKE			3A			PP = No data; VP = No data
3169H	LAKE LORNA DOONE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3169H	LAKE LORNA DOONE	LAKE		Arsenic	3B			PP = 0 / 2; VP = No data
3169H	LAKE LORNA DOONE	LAKE		Beryllium	3B			PP = 0 / 1; VP = No data
3169H	LAKE LORNA DOONE	LAKE		Cadmium	3B			PP = 0 / 3; VP = 0 / 1
3169H	LAKE LORNA DOONE	LAKE		Chromium3	3B			PP = 0 / 2; VP = 0 / 2
3169H	LAKE LORNA DOONE	LAKE		Copper	3B			PP = 2 / 5; VP = 0 / 2
3169H	LAKE LORNA DOONE	LAKE		Dissolved Oxygen	2			PP = 3 / 62; VP = 1 / 30
3169H	LAKE LORNA DOONE	LAKE		Fecal Coliform	2			PP = 5 / 35; VP = 0 / 5
3169H	LAKE LORNA DOONE	LAKE		Iron	3B			PP = 0 / 9; VP = 0 / 7
3169H	LAKE LORNA DOONE	LAKE		Lead	3B			PP = 2 / 6; VP = 0 / 1
3169H	LAKE LORNA DOONE	LAKE		Nickel	3B			PP = 0 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169H	LAKE LORNA DOONE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (51.99, calculated based on data from the period 2000 – 2004) by more than 10 TSI units. Annual means were 59.8, 58.5, 56.1, 60.3, 54.7, 54.5, 54.2, 49.3, 58.5, and 53.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 301 chla values, range 7.8 – 107.0 µg/L, mean 35.8 µg/L. 40 chla (corrected) values, range 3.9 – 62.0 µg/L, mean 23.5 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual means were 54.5, 54.2, 49.3, 58.5, and 53.5 in 1998, 1999, 2000, 2001, and 2002, respectively. 86 chla values, range 13.0 – 62.0 µg/L, mean 33.7 µg/L. 20 chla (corrected) values, range 3.9 – 43.3 µg/L, mean 20.3 µg/L. 31 TN values, median 0.73 mg/L. 31 TP values, median 0.04 mg/L. The community is phosphorus and nitrogen co-limited based on a median TN/TP ratio of 20 calculated from 31 TN/TP ratios in the verified period.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169H	LAKE LORNA DOONE	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 10 TSI annual mean exceeded the threshold (TSI 40). Annual means were 59.8, 58.5, 56.1, 60.3, 54.7, 54.5, 54.2, 49.3, 58.5, and 53.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 301 chla values, range 7.8 – 107.0 µg/L, mean 35.8 µg/L. 40 chla (corrected) values, range 3.9 – 62.0 µg/L, mean 23.5 µg/L. VP – Impaired. 4 TSI annual means exceeded the threshold. Annual means were 54.5, 54.2, 49.3, 58.5, and 53.5 in 1998, 1999, 2000, 2001, and 2002, respectively. 86 chla values, range 13.0 – 62.0 µg/L, mean 33.7 µg/L. 20 chla (corrected) values, range 3.9 – 43.3 µg/L, mean 20.3 µg/L. 31 TN values, median 0.73 mg/L. 31 TP values, median 0.04 mg/L. The community is phosphorus and nitrogen co-limited based on a median TN/TP ratio of 20 calculated from 31 TN/TP ratios in the verified period. Historic color data of this waterbody showed it is a low color lake.
3169H	LAKE LORNA DOONE	LAKE		Selenium	3B			PP = 0 / 2; VP = 0 / 2
3169H	LAKE LORNA DOONE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3169H	LAKE LORNA DOONE	LAKE		Total Coliform	2			PP = 0 / 19; VP = No data
3169H	LAKE LORNA DOONE	LAKE		Turbidity	2			PP = 0 / 22; VP = 0 / 4
3169H	LAKE LORNA DOONE	LAKE		Unionized Ammonia	2			PP = 0 / 37; VP = 0 / 4
3169H	LAKE LORNA DOONE	LAKE		Zinc	3B			PP = 0 / 6; VP = 0 / 2
3169I	LAKE MANN	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3169I	LAKE MANN	LAKE		Arsenic	3B			PP = 0 / 2; VP = No data
3169I	LAKE MANN	LAKE		Beryllium	3B			PP = 0 / 1; VP = 0 / 1
3169I	LAKE MANN	LAKE		Cadmium	3B			PP = 0 / 3; VP = 0 / 5
3169I	LAKE MANN	LAKE		Chromium3	3B			PP = 0 / 2; VP = 0 / 4
3169I	LAKE MANN	LAKE		Copper	3C			PP = 3 / 4; VP = 0 / 7
3169I	LAKE MANN	LAKE		Dissolved Oxygen	2			PP = 0 / 86; VP = 0 / 79
3169I	LAKE MANN	LAKE		Fecal Coliform	2			PP = 1 / 33; VP = 0 / 23
3169I	LAKE MANN	LAKE		Iron	3B			PP = 0 / 9; VP = 0 / 12
3169I	LAKE MANN	LAKE		Lead	3B			PP = 1 / 8; VP = 0 / 8

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169I	LAKE MANN	LAKE		Nickel	3B			PP = 0 / 5; VP = 0 / 4
3169I	LAKE MANN	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (56.58, calculated based on data from the period 2001 – 2005) by more than 10 TSI units. Annual means were 63.4, 64.3, 61.2, 62.6, 59.0, 63.2, 62.6, and 59.3 in 1993, 1994, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 33 chla values, range 7.6 – 62.3 µg/L, mean 31.6 µg/L. 66 chla (corrected) values, range 5.5 – 120.0 µg/L, mean 31.3 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual means were 62.6, 59.0, 63.2, 62.6, 59.3, and 47.9 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 40 chla (corrected) values, range 5.5 – 120.0 µg.L, mean 31.0 µg/L. 70 TN values, median 1.53 mg/L. 68 TP values, median 0.03 mg/L. Limited by phosphorus based on a TN/TP ratio median of 51.1 (68 values) in the Verified Period.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169I	LAKE MANN	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 8 TSI annual means exceeded the threshold in 1993, 1994, 1997, 1998, 1999, 2000, 2001, and 2002. Annual means were 63.4, 64.3, 61.2, 62.6, 59.0, 63.2, 62.6, and 59.3 in 1993, 1994, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 33 chla values, range 7.6 – 62.3 µg/L, mean 31.6 µg/L. 66 chla (corrected) values, range 5.5 – 120.0 µg/L, mean 31.3 µg/L. VP – Impaired. 6 TSI annual means exceeded the threshold. Annual means were 62.6, 59.0, 63.2, 62.6, 59.3, and 47.9 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 40 chla (corrected) values, range 5.5 – 120.0 µg/L, mean 31.0 µg/L. 70 TN values, median 1.53 mg/L. 68 TP values, median 0.03 mg/L. Limited by phosphorus based on a TN/TP ratio median of 51.1 (68 values) in the Verified Period.
3169I	LAKE MANN	LAKE		Selenium	3B			PP = 0 / 2; VP = 0 / 4
3169I	LAKE MANN	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3169I	LAKE MANN	LAKE		Total Coliform	2			PP = 0 / 17; VP = 0 / 13
3169I	LAKE MANN	LAKE		Turbidity	2			PP = 0 / 20; VP = 0 / 8
3169I	LAKE MANN	LAKE		Unionized Ammonia	2			PP = 2 / 37; VP = 0 / 4
3169I	LAKE MANN	LAKE		Zinc	3B			PP = 0 / 5; VP = 0 / 4
3169J	CANE LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3169J	CANE LAKE	LAKE		Arsenic	3B			PP = 0 / 5; VP = No data
3169J	CANE LAKE	LAKE		Cadmium	2			PP = 3 / 9; VP = 0 / 20
3169J	CANE LAKE	LAKE		Chromium3	3B			PP = 0 / 6; VP = 0 / 2
3169J	CANE LAKE	LAKE		Copper	3C			PP = 5 / 7; VP = 1 / 18
3169J	CANE LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 37; VP = 4 / 48
3169J	CANE LAKE	LAKE		Fecal Coliform	2			PP = 0 / 16; VP = 0 / 8
3169J	CANE LAKE	LAKE		Iron	3B			PP = 0 / 3; VP = 0 / 4
3169J	CANE LAKE	LAKE		Lead	2			PP = 5 / 5; VP = 1 / 20
3169J	CANE LAKE	LAKE		Nickel	3B			PP = 0 / 1; VP = 0 / 2

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169J	CANE LAKE	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 2 TSI annual means exceeded the threshold. Annual means were 41.0, 31.9, 34.7, 43.8, and 36.2 in 1994, 1996, 1999, 2000, and 2002, respectively. 16 chla values, range 1.0 – 20.3 µg/L, mean 6.8 µg/L. 15 chla (corrected) values, range 1.0 – 21.2 µg/L, mean 7.1 µg/L. VP – Impaired. 2 TSI annual means exceeded the threshold. Annual means were 34.7, 43.8, 36.2, and 41.3 in 1999, 2000, 2002, and 2003, respectively. 20 chla (corrected) values, range 1.0 – 21.2 µg/L, mean 7.4 µg/L. 29 TN values, median 0.60 mg/L. 27 TP values, median 0.02 mg/L. The lake is a low colored lake and therefore TSI 40 was used as the threshold. The community is limited by phosphorus based on a median TN/TP ratio of 40 calculated from 27 TN/TP ratios in the verified period.
3169J	CANE LAKE	LAKE		Selenium	3B			PP = 0 / 2; VP = 0 / 2
3169J	CANE LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3169J	CANE LAKE	LAKE		Total Coliform	2			PP = 0 / 16; VP = 0 / 3
3169J	CANE LAKE	LAKE		Turbidity	2			PP = 0 / 19; VP = 0 / 3
3169J	CANE LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 19; VP = 0 / 3
3169J	CANE LAKE	LAKE		Zinc	3B			PP = 0 / 9; VP = 0 / 3
3169K	SPRING LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3169K	SPRING LAKE	LAKE		Arsenic	3B			PP = 0 / 2; VP = No data
3169K	SPRING LAKE	LAKE		Cadmium	3B			PP = 0 / 3; VP = 0 / 1
3169K	SPRING LAKE	LAKE		Chromium3	3B			PP = 0 / 2; VP = 0 / 2
3169K	SPRING LAKE	LAKE		Copper	3B			PP = 2 / 4; VP = 0 / 3
3169K	SPRING LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 44; VP = 0 / 38
3169K	SPRING LAKE	LAKE		Fecal Coliform	2			PP = 0 / 15; VP = 0 / 13
3169K	SPRING LAKE	LAKE		Iron	3B			PP = 0 / 3; VP = 0 / 4
3169K	SPRING LAKE	LAKE		Lead	3C			PP = 3 / 5; VP = 1 / 1
3169K	SPRING LAKE	LAKE		Nickel	3B			PP = 0 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169K	SPRING LAKE	LAKE		Nutrients (TSI)	2			PP – 1 TSI annual means exceeded the threshold (TSI 40). Annual means were 43.6 and 33.1 in 1994 and 2002, respectively. 17 chla values, range 1.5 – 7.9 µg/L, mean 5.1 µg/L. 22 chla (corrected) values, range 1.1 – 7.9 µg/L, mean 3.7 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual means were 32.1 and 36.3 in 2002 and 2003, respectively. 25 chla (corrected) values, range 1.1 – 13.5 µg/L, mean 4.4 µg/L. 37 TN onsum, median 0.53 mg/L. 30 TP values, median 0.01 mg/L.
3169K	SPRING LAKE	LAKE		Selenium	3B			PP = 0 / 2; VP = 0 / 2
3169K	SPRING LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3169K	SPRING LAKE	LAKE		Total Coliform	2			PP = 0 / 18; VP = 0 / 8
3169K	SPRING LAKE	LAKE		Turbidity	2			PP = 0 / 15; VP = 0 / 4
3169K	SPRING LAKE	LAKE		Unionized Ammonia	2			PP = 1 / 15; VP = 0 / 3
3169K	SPRING LAKE	LAKE		Zinc	3B			PP = 0 / 5; VP = 0 / 2
3169L	LITTLE SAND LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Arsenic	3B			PP = 0 / 5; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Cadmium	3B			PP = 0 / 5; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Chromium3	3B			PP = 0 / 5; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Copper	3B			PP = 1 / 6; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 16; VP = 0 / 8
3169L	LITTLE SAND LAKE	LAKE		Fecal Coliform	2			PP = 0 / 11; VP = 0 / 4
3169L	LITTLE SAND LAKE	LAKE		Iron	3B			PP = 0 / 1; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Lead	3B			PP = 1 / 1; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Nickel	3B			PP = 0 / 1; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
3169L	LITTLE SAND LAKE	LAKE		Selenium	3B			PP = 0 / 1; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3169L	LITTLE SAND LAKE	LAKE		Total Coliform	2			PP = 0 / 10; VP = 0 / 4
3169L	LITTLE SAND LAKE	LAKE		Turbidity	2			PP = 0 / 16; VP = 0 / 5
3169L	LITTLE SAND LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 14; VP = 0 / 4
3169L	LITTLE SAND LAKE	LAKE		Zinc	3B			PP = 0 / 6; VP = No data
3169M	WILLIS LAKE	LAKE		Dissolved Oxygen	3			PP = No Data; VP = 0 / 4

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169M	WILLIS LAKE	LAKE		Fecal Coliform	3B			PP = No Data; VP = 0 / 5
3169M	WILLIS LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (30.23, calculated based on data from the period 1991 – 1995) by more than 10 TSI units. Annual means were 29.1, 35.3, 31.0, 30.8, 32.0, 30.1, 33.4, and 35.9 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 282 chla values, range 1.0 – 10.0 µg/L, mean 3.3 µg/L. VP – Insufficient data to calculate any annual mean TSI (LakeWatch data excluded). 129 chla values, range 1.0 – 8.0 µg/L, mean 3.5 µg/L. 6 TN values, median 0.54 mg/L; 6 TP values, median 0.003 mg/L.
3169M	WILLIS LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 29.1, 35.3, 31.0, 30.8, 32.0, 30.1, 33.4, and 35.9 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 282 chla values, range 1.0 – 10.0 µg/L, mean 3.3 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment).129 chla values, range 1.0 – 8.0 µg/L, mean 3.5 µg/L. 6 TN values, median 0.54 mg/L; 6 TP values, median 0.003 mg/L.
3169M	WILLIS LAKE	LAKE		Total Coliform	3B			PP = No Data; VP = 0 / 6
3169M	WILLIS LAKE	LAKE		Turbidity	3B			PP = No Data; VP = 0 / 2
3169N	BRYON LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 6; VP = 0 / 8
3169N	BRYON LAKE	LAKE		Fecal Coliform	2			PP = 0 / 17; VP = 0 / 9
3169N	BRYON LAKE	LAKE		Lead	3B			PP = 2 / 2; VP = No data
3169N	BRYON LAKE	LAKE		Nickel	3B			PP = 0 / 1; VP = No data
3169N	BRYON LAKE	LAKE		Nutrients (TSI)	3B			PP = Insufficient data to calculate any annual mean TSI; VP = Insufficient data to calculate any annual mean TSI.
3169N	BRYON LAKE	LAKE		Total Coliform	2			PP = 0 / 17; VP = 0 / 10

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169N	BRYON LAKE	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 2
3169N	BRYON LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
3169N	BRYON LAKE	LAKE		Zinc	3B			PP = 0 / 2; VP = No data
3169O	LAKE CECILE	LAKE			3A			PP = No data; VP = No data
3169P	LAKE CATHERINE	LAKE		Alkalinity	2			PP = 5 / 36; VP = 4 / 11
3169P	LAKE CATHERINE	LAKE		Antimony	3B			PP = 0 / 3; VP = No data
3169P	LAKE CATHERINE	LAKE		Arsenic	2			PP = 0 / 12; VP = No data
3169P	LAKE CATHERINE	LAKE		Cadmium	2			PP = 0 / 11; VP = 0 / 17
3169P	LAKE CATHERINE	LAKE		Chromium3	2			PP = 0 / 12; VP = 0 / 2
3169P	LAKE CATHERINE	LAKE		Conductance	2			PP = 0 / 39; VP = 0 / 11
3169P	LAKE CATHERINE	LAKE		Copper	2			PP = 4 / 18; VP = 1 / 20
3169P	LAKE CATHERINE	LAKE		Dissolved Oxygen	5	Low	2010	PP = 7 / 49, Not impaired; VP = 14 / 61, Impaired. DO data met the verification threshold, nutrient was considered causative pollutants. 62 DO values in the Verified Period, range 2.49 – 9.25 mg/l, mean 6.69 mg/l. 44 TN values, median 0.96 mg/l. 44 TP values, median 0.02, 40 BOD values, median 1.5 mg/l.
3169P	LAKE CATHERINE	LAKE		Fecal Coliform	2			PP = 0 / 39; VP = 0 / 23
3169P	LAKE CATHERINE	LAKE		Iron	3B			PP = 0 / 8; VP = 0 / 3
3169P	LAKE CATHERINE	LAKE		Lead	3C			PP = 3 / 6; VP = 0 / 19
3169P	LAKE CATHERINE	LAKE		Nickel	3B			PP = 0 / 6; VP = 0 / 3

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169P	LAKE CATHERINE	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 1 TSI annual mean exceeded the threshold in 2001. Annual means were 56.1 and 61.5 in 1996 and 2001, respectively. 37 chla values, range 2.5 – 88.7 µg/L, median 19.2 µg/L. 4 chla (corrected) values, range 11.4 – 61.7 µg/L, median 25.2 µg/L. VP – Impaired. 2 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual TSI means were 61.5, 42.6, and 49.3 (color = 35 pcu) in 2001, 2003, and 2004, respectively. 9 chla (corrected) values, range 1.0 – 61.7 µg/L, mean 15.7 µg/L. 44 TN values, median 0.96 mg/L. 44 TP values, median 0.02 mg/L. The community is phosphorus limited based on a median TN/TP ratio of 50.6 calculated from 44 TN/TP ratios.
3169P	LAKE CATHERINE	LAKE		Selenium	3B			PP = 0 / 6; VP = 0 / 2
3169P	LAKE CATHERINE	LAKE		Thallium	3B			PP = 0 / 3; VP = No data
3169P	LAKE CATHERINE	LAKE		Total Coliform	2			PP = 0 / 41; VP = 0 / 18
3169P	LAKE CATHERINE	LAKE		Turbidity	2			PP = 0 / 39; VP = 0 / 16
3169P	LAKE CATHERINE	LAKE		Unionized Ammonia	2			PP = 0 / 34; VP = 0 / 10
3169P	LAKE CATHERINE	LAKE		Zinc	2			PP = 0 / 18; VP = 0 / 2
3169Q	ROCK LAKE	LAKE		Cadmium	3B			PP = 0 / 3; VP = 0 / 2
3169Q	ROCK LAKE	LAKE		Chromium3	3B			PP = No data; VP = 0 / 1
3169Q	ROCK LAKE	LAKE		Conductance	2			PP = 0 / 38; VP = 0 / 19
3169Q	ROCK LAKE	LAKE		Copper	3B			PP = 0 / 2; VP = 0 / 1
3169Q	ROCK LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 39; VP = 0 / 26
3169Q	ROCK LAKE	LAKE		Fecal Coliform	2			PP = 0 / 19; VP = 0 / 4
3169Q	ROCK LAKE	LAKE		Iron	3B			PP = 0 / 5; VP = 0 / 4
3169Q	ROCK LAKE	LAKE		Lead	3C			PP = 3 / 3; VP = 2 / 2
3169Q	ROCK LAKE	LAKE		Nickel	3B			PP = No data; VP = 0 / 1

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169Q	ROCK LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 2 TSI annual means exceeded the historic minimum value (45.99, calculated based on data from the period 1995 – 1999) by more than 10 TSI units. Annual means were 57.8, 56.7, 48.9, 45.3, 43.8, 49.8, 55.1, and 52.8 in 1993, 1994, 1995, 1996, 1997, 2000, 2001, and 2002, respectively. 28 chla values, range 1.0 – 188.0 µg/L, mean 21.3 µg/L. 38 chla (corrected) values, range 1.0 – 188.0 µg/L, mean 19.1 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 49.8 and 52.8 in 2000 and 2002, respectively. 9 chla values, range 6.0 – 32.0 µg/L, mean 19.2 µg/L. 18 chla (corrected) values, range 1.0 – 45.5 µg/L, mean 15.7 µg/L. 26 TN values, median 0.76 mg/L. 24 TP values, median 0.04 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169Q	ROCK LAKE	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 8 TSI annual means exceeded the threshold (TSI 40). Annual means were 57.8, 56.7, 48.9, 45.3, 43.8, 49.8, 55.1, and 52.8 in 1993, 1994, 1995, 1996, 1997, 2000, 2001, and 2002, respectively. 28 chla values, range 1.0 – 188.0 µg/L, mean 21.3 µg/L. 38 chla (corrected) values, range 1.0 – 188.0 µg/L, mean 19.1 µg/L. VP – Impaired. 3 TSI annual means exceeded the threshold. Annual means were 49.8, 52.8, 52.5 in 2000, 2002, and 2003, respectively. 9 chla values, range 6.0 – 32.0 µg/L, mean 19.2 µg/L. 18 chla (corrected) values, range 1.0 – 45.5 µg/L, mean 15.7 µg/L. 26 TN values, median 0.76 mg/L. 24 TP values, median 0.04 mg/L. The community is phosphorus and nitrogen co-limited based on a median TN/TP ratio of 21.7 calculated from 24 TN/TP ratios in the verified period. The lake did not have color measurements. However, water colors in several surrounding lakes, including Lake Mann (WBID 3169I), Clear Lake (WBID 3169G), and Lake Lorna Doone (WBID 3169H) were mostly below 40 pcu in their periods of record. Therefore, TSI 40 was used as the onsumpti for Rock Lake.
3169Q	ROCK LAKE	LAKE		Selenium	3B			PP = No data; VP = 0 / 1
3169Q	ROCK LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 18; VP = No data
3169Q	ROCK LAKE	LAKE		Zinc	3B			PP = 0 / 1; VP = 0 / 2
3169R	BIG SAND LAKE BASIN	LAKE			3A			PP = No data; VP = No data
3169S	CHRISTIE LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3169S	CHRISTIE LAKE	LAKE		Arsenic	3B			PP = 0 / 3; VP = No data
3169S	CHRISTIE LAKE	LAKE		Cadmium	3B			PP = 0 / 1; VP = 0 / 4
3169S	CHRISTIE LAKE	LAKE		Chromium3	3B			PP = 0 / 3; VP = No data
3169S	CHRISTIE LAKE	LAKE		Copper	3B			PP = 2 / 2; VP = 0 / 3
3169S	CHRISTIE LAKE	LAKE		Dissolved Oxygen	2			PP = 2 / 27; VP = 1 / 31

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3169S	CHRISTIE LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 5; VP = 0 / 5
3169S	CHRISTIE LAKE	LAKE		Iron	3B			PP = 1 / 4; VP = No data
3169S	CHRISTIE LAKE	LAKE		Lead	2			PP = 3 / 3; VP = 1 / 20
3169S	CHRISTIE LAKE	LAKE		Nickel	3B			PP = 0 / 1; VP = No data
3169S	CHRISTIE LAKE	LAKE		Nutrients (TSI)	3C			PP – 4 TSI annual means exceeded the threshold (TSI 40). Annual means were 51.5, 47.6, 44.1, and 47.5 in 1999, 2000, 2001, and 2002, respectively. 115 chla values, range 2.0 – 36.0 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 115 chla values, range 2.0 – 36.0 µg/L. 10 TN values, median 1.12 mg/L. 10 TP values, median 0.007 mg/L.
3169S	CHRISTIE LAKE	LAKE		Selenium	3B			PP = 0 / 1; VP = No data
3169S	CHRISTIE LAKE	LAKE		Silver	3B			PP = No data; VP = 0 / 2
3169S	CHRISTIE LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3169S	CHRISTIE LAKE	LAKE		Total Coliform	3B			PP = 0 / 5; VP = 0 / 5
3169S	CHRISTIE LAKE	LAKE		Turbidity	2			PP = 0 / 19; VP = 0 / 4
3169S	CHRISTIE LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 15; VP = 0 / 4
3169S	CHRISTIE LAKE	LAKE		Zinc	3B			PP = 1 / 6; VP = No data
3170A	REEDY CREEK	STREAM	Nutrients	Nutrients (Chla)	3C	(High)	(2005)	PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
3170A	REEDY CREEK	STREAM	Turbidity	Turbidity	3C	(High)	(2005)	PP = 7 / 21; VP = No data
3170A	REEDY CREEK	STREAM		Unionized Ammonia	2			PP = 0 / 19; VP = No data
3170B	LAKE RUSSELL	LAKE		Chlorine	3B			VP = 1 / 1; VP = No data
3170B	LAKE RUSSELL	LAKE		Dissolved Oxygen	3B			PP = 2 / 3; VP = 3 / 12
3170B	LAKE RUSSELL	LAKE		Mercury (in fish tissue)	5	Low	2011	VP – Mercury met verification threshold of the IWR. Fish tissue levels in 12 redear sunfish averaged 0.53 ppm in 2002.

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3170B	LAKE RUSSELL	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold (TSI 60). Annual means were 49.3 in 1997 and 52.7 in 1999. 28 chla values, range 1.0 – 16.0 µg/L, mean 3.8 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual mean was 52.7 in 1999. 18 chla values, range 1.0 – 6.4 µg/L, mean 2.8 µg/L. 24 TN values, median 1.99 mg/L. 26 TP values, median 0.10 mg/L. The limited amount of color data collected for the lake indicate that the lake is a high colored system. Water color could be as high as 300 pcu. This was why TSI 60 was used as the threshold.
3170B	LAKE RUSSELL	LAKE		Turbidity	2			PP = 3 / 26; VP = 0 / 12
3170B	LAKE RUSSELL	LAKE		Unionized Ammonia	3B			PP = 0 / 8; VP = No data
3170B ₁	REEDY CK DRAIN	STREAM			3A			PP = No data; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		1122Tetrachloroethane	3B			PP = 0 / 9; VP = 0 / 4
3170C	REEDY CK ABOVE L. RUSS	STREAM		24D	3B			PP = 0 / 4; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		24Dinitrophenol	3B			PP = 0 / 4; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		Aldrin	2			PP = 0 / 36; VP = 0 / 31
3170C	REEDY CK ABOVE L. RUSS	STREAM		Aluminum	2			PP = 0 / 64; VP = 0 / 20
3170C	REEDY CK ABOVE L. RUSS	STREAM		Antimony	2			PP = 0 / 34; VP = 0 / 13
3170C	REEDY CK ABOVE L. RUSS	STREAM		Arsenic	2			PP = 0 / 76; VP = 0 / 31
3170C	REEDY CK ABOVE L. RUSS	STREAM		Barium	2			PP = 0 / 73; VP = 0 / 9
3170C	REEDY CK ABOVE L. RUSS	STREAM		Benzene	3B			PP = 0 / 6; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		Beryllium	2			PP = 3 / 32; VP = 0 / 31
3170C	REEDY CK ABOVE L. RUSS	STREAM		Beta BHC	3C			PP = 5 / 5; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		Biology	3B			PP = 1 SCI passed in 1998, and 1 SCI failed in 1998. VP = 1 SCI passed in 1998, and 1 SCI failed in 1998. Both tests were performed on the same day, at the same site, so the data is suspect.
3170C	REEDY CK ABOVE L. RUSS	STREAM		Bromoform	3B			PP = 0 / 9; VP = 0 / 4
3170C	REEDY CK ABOVE L. RUSS	STREAM		Cadmium	2			PP = 15 / 65; VP = 0 / 37

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170C	REEDY CK ABOVE L. RUSS	STREAM		Carbon Tetrachloride	2			PP = 0 / 14; VP = 0 / 4
3170C	REEDY CK ABOVE L. RUSS	STREAM		Chlordane	3C			PP = 9 / 9; VP = 8 / 8
3170C	REEDY CK ABOVE L. RUSS	STREAM		Chlorine	3C			PP = 12 / 39; VP = 0 / 12
3170C	REEDY CK ABOVE L. RUSS	STREAM		Chloroform	3B			PP = 0 / 9; VP = 0 / 4
3170C	REEDY CK ABOVE L. RUSS	STREAM		Chromium3	2			PP = 0 / 62; VP = 0 / 34
3170C	REEDY CK ABOVE L. RUSS	STREAM		Copper	2			PP = 3 / 64; VP = 0 / 38
3170C	REEDY CK ABOVE L. RUSS	STREAM		DDT	3C			PP = 8 / 8; VP = 8 / 8
3170C	REEDY CK ABOVE L. RUSS	STREAM		Dichloroethylene	3B			PP = 0 / 3; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		Dieldrin	3C			PP = 5 / 5; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM	Dissolved Oxygen	Dissolved Oxygen	5	High	2005	PP = 169 / 182, Potentially impaired; VP = 123 / 140, Impaired. DO met the verification threshold of the IWR, nitrogen is the causative pollutant. 157 DO values for the verified period, range 0.04 to 9.00 mg/L, mean 2.53 mg/L. 142 TN values, median 1.66 mg/L. 129 TP values, median 0.06 mg/L. 21 BOD values, median 1.0 mg/L. This WBID contains 15% of urban and built-up areas, primarily residences; 20% of agriculture land, mainly improved pasturland. The major part of the WBID is wetlands, which composed of about 50% of the WBID area. Upland forest is about 19%. The waterbody has 1 passed and 1 failed SCIs in 1998.
3170C	REEDY CK ABOVE L. RUSS	STREAM		Endosulfan	2			PP = 1 / 20; VP = 0 / 10
3170C	REEDY CK ABOVE L. RUSS	STREAM		Endrin	3C			PP = 6 / 6; VP = No Data
3170C	REEDY CK ABOVE L. RUSS	STREAM	Coliform Bacteria	Fecal Coliform	2			Delist. PP = 0 / 13, Not impaired; VP = No data, Delisting based on data from the Planning Period.
3170C	REEDY CK ABOVE L. RUSS	STREAM		Guthion	3C			PP = 8 / 8; VP = 8 / 8
3170C	REEDY CK ABOVE L. RUSS	STREAM		Heptachlor	3C			PP = 5 / 5; VP = No Data
3170C	REEDY CK ABOVE L. RUSS	STREAM		Iron	2			PP = 7 / 71; VP = 7 / 46
3170C	REEDY CK ABOVE L. RUSS	STREAM		Lead	2			PP = 8 / 61; VP = 1 / 32
3170C	REEDY CK ABOVE L. RUSS	STREAM		Lindane	2			PP = 1 / 39; VP = 0 / 33

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3170C	REEDY CK ABOVE L. RUSS	STREAM		Malathion	3B			PP = 0 / 4; VP = 0 / 5
3170C	REEDY CK ABOVE L. RUSS	STREAM		Mercury	3B			PP = 1 / 1; VP = 1 / 1
3170C	REEDY CK ABOVE L. RUSS	STREAM		Methoxychlor	2			PP = 6 / 24; VP = 0 / 22
3170C	REEDY CK ABOVE L. RUSS	STREAM		Methyl Chloride	3B			PP = 0 / 1; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		Methylene Chloride	3B			PP = 0 / 9; VP = 0 / 4
3170C	REEDY CK ABOVE L. RUSS	STREAM		Nickel	2			PP = 0 / 66; VP = 0 / 38
3170C	REEDY CK ABOVE L. RUSS	STREAM	Nutrients	Nutrients (Chla)	2			Delist. PP – Insufficient data to calculate any annual mean Chla. VP – Not impaired. 0 chla annual means exceeded the threshold. Annual mean was 4.7 µg/L 2004. 4 chla values, range 1.0 – 37.0 µg/L, mean 1.7 µg/L. 12 chla (corrected) values, range 1.0 – 22.8 µg/L, mean 6.5 µg/L. 142 TN values, median 1.66 mg/L. 129 TP values, median 0.06 mg/L.
3170C	REEDY CK ABOVE L. RUSS	STREAM		Oil/Grease	2			PP = 1 / 45; VP = 0 / 12
3170C	REEDY CK ABOVE L. RUSS	STREAM		Parathion	3B			PP = 0 / 4; VP = 0 / 5
3170C	REEDY CK ABOVE L. RUSS	STREAM		Selenium	2			PP = 0 / 66; VP = 0 / 38
3170C	REEDY CK ABOVE L. RUSS	STREAM		Silver	3C			PP = 18 / 18; VP = 0 / 9
3170C	REEDY CK ABOVE L. RUSS	STREAM		Silvex	3B			PP = 0 / 4; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		Tetrachloroethylene	3B			PP = 0 / 9; VP = 0 / 3
3170C	REEDY CK ABOVE L. RUSS	STREAM		Thallium	2			PP = 0 / 19; VP = 0 / 10
3170C	REEDY CK ABOVE L. RUSS	STREAM	Coliform Bacteria	Total Coliform	2			Delist. PP = 0 / 13, Not impaired; VP = No data, Delisting based on data from the Planning Period.
3170C	REEDY CK ABOVE L. RUSS	STREAM		Toxaphene	3B			PP = 2 / 2; VP = No data
3170C	REEDY CK ABOVE L. RUSS	STREAM		Trichlorethylene	2			PP = 0 / 14; VP = 0 / 4
3170C	REEDY CK ABOVE L. RUSS	STREAM	Turbidity	Turbidity	2			Delist. PP = 9 / 209, Not impaired. VP = 1 / 107, Not impaired.
3170C	REEDY CK ABOVE L. RUSS	STREAM		Unionized Ammonia	2			PP = 0 / 125; VP = 0 / 19
3170C	REEDY CK ABOVE L. RUSS	STREAM		Zinc	2			PP = 0 / 62; VP = 0 / 34
3170D	BONNET CREEK	STREAM		1122Tetrachloroethane	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM		246Trichlorophenol	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		24D	3B			PP = 0 / 4; VP = No data

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3170D	BONNET CREEK	STREAM		24Dichlorophenol	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		24Dinitrophenol	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Acenaphthene	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Aldrin	2			PP = 0 / 54; VP = 0 / 51
3170D	BONNET CREEK	STREAM		Aluminum	2			PP = 0 / 43; VP = 0 / 15
3170D	BONNET CREEK	STREAM		Anthracene	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Antimony	2			PP = 0 / 56; VP = 0 / 52
3170D	BONNET CREEK	STREAM		Arsenic	2			PP = 0 / 66; VP = 0 / 48
3170D	BONNET CREEK	STREAM		Barium	3B			PP = 0 / 26; VP = 0 / 5
3170D	BONNET CREEK	STREAM		Benzene	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM		Beryllium	2			PP = 2 / 53; VP = 0 / 69
3170D	BONNET CREEK	STREAM		Beta BHC	3C			PP = 11 / 11; VP = No data
3170D	BONNET CREEK	STREAM		Bromoform	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM		Cadmium	2			PP = 14 / 80; VP = 1 / 89
3170D	BONNET CREEK	STREAM		Carbon Tetrachloride	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM		Chlorodibromomethane	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM		Chlordane	3C			PP = 11 / 11; VP = 11 / 11
3170D	BONNET CREEK	STREAM		Chloroform	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM		Chlorophenol	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Chromium3	2			PP = 2 / 75; VP = 0 / 70
3170D	BONNET CREEK	STREAM		Copper	2			PP = 8 / 57, Not impaired; VP = 2 / 50, Not Impaired. This parameter was on the 1 st draft VL because metal data input error. Assessment was reconducted after the data input error was addressed.
3170D	BONNET CREEK	STREAM		DDT	3C			PP = 10 / 10; VP = 10 / 10
3170D	BONNET CREEK	STREAM		Dieldrin	3C			PP = 11 / 11; VP = No data

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3170D	BONNET CREEK	STREAM		Dissolved Oxygen	4C			PP = 84 / 169; VP = 100 / 193. Do met verification threshold of the IWR, but no causative pollutant could be identified. 105 TN values, median 1.12 mg/L. 67 TP values, median 0.04 mg/L. 51 BOD values, median 1.0 mg/L. 207 DO values, median 4.90 mg/L, mean 4.79 mg/L, range 0.20 – 9.20 mg/L. The majority portion of the WBID is wetland. Based on the analyses on the spatial distribution of DO and BOD concentrations, most of the low DO and most of the high BOD concentrations were observed in the middle of the wetland area, where human impact is least expected. In area with most human activities, DO concentrations are typically around or higher than 5.0 mg/L and BOD concentration lower than 2.0 mg/l. These observations, plus the relatively low TN and TP concentrations, suggesting that low DO of the system is a natural condition. Detailed analysis result available upon request.
3170D	BONNET CREEK	STREAM		Endosulfan	2			PP = 3 / 30; VP = 0 / 13
3170D	BONNET CREEK	STREAM		Endrin	3C			PP = 11 / 11; VP = No data
3170D	BONNET CREEK	STREAM		Fecal Coliform	2			PP = 8 / 41; VP = 5 / 39
3170D	BONNET CREEK	STREAM		Fluoranthene	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Fluorene	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Guthion	3C			PP = 11 / 11; VP = 11 / 11
3170D	BONNET CREEK	STREAM		Heptachlor	3C			PP = 11 / 11; VP = No data
3170D	BONNET CREEK	STREAM		Hexachlorobutadiene	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Iron	2			PP = 1 / 77; VP = 1 / 80
3170D	BONNET CREEK	STREAM		Lead	2			PP = 9 / 81; VP = 2 / 84
3170D	BONNET CREEK	STREAM		Lindane	2			PP = 0 / 59; VP = 0 / 57
3170D	BONNET CREEK	STREAM		Malathion	3B			PP = 1 / 6; VP = 1 / 8
3170D	BONNET CREEK	STREAM		Mercury	3B			PP = 2 / 2; VP = 3 / 3
3170D	BONNET CREEK	STREAM		Methoxychlor	2			PP = 11 / 41; VP = 0 / 41
3170D	BONNET CREEK	STREAM		Methyl Chloride	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM		Nickel	2			PP = 1 / 83; VP = 0 / 77

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3170D	BONNET CREEK	STREAM	Nutrients	Nutrients (Chla)	2			Delist. PP – Not impaired. 0 chla annual means exceeded the threshold. Annual means were 5.3 µg/L, 13.9 µg/L, 4.4 µg/L, 4.4 µg/L, and 2.6 µg/L in 1997, 1998, 2000, 2001, and 2002, respectively. 28 chla values, range 1.5 – 23.2 µg/L, mean 6.6 µg/L. 22 chla (corrected) values, range 1.0 – 17.0 µg/L, mean 4.9 µg/L. VP – Not impaired. 0 chla annual means exceeded the threshold. Annual means were 13.9 µg/L, 4.4 µg/L, 4.4 µg/L, 2.6, and 5.0 µg/L in 1998, 2000, 2001, 2002, and 2003, respectively. 24 chla values, range 1.5 – 23.2 µg/L, mean 6.9 µg/L. 22 chla (corrected) values, range 1.0 – 17.0 µg/L, mean 4.9 µg/L. 105 TN values, median 1.12 mg/L. 67 TP values, median 0.04 mg/L.
3170D	BONNET CREEK	STREAM	Nutrients	Nutrients (Historic Chla)	2			Delist. PP – No 2 consecutive annual means exceeded the historic minimum value (3.8 µg/L, calculated based on data from the period 2000 – 2004) by more than 50%. Annual means were 5.3 µg/L, 13.9 µg/L, 4.4 µg/L, 4.4 µg/L, and 2.6 µg/L in 1997, 1998, 2000, 2001, and 2002, respectively. 28 chla values, range 1.5 – 23.2 µg/L, mean 6.6 µg/L. 22 chla (corrected) values, range 1.0 – 17.0 µg/L, mean 4.9 µg/L. VP – No 2 consecutive annual means exceeded the historic minimum by more than 50%. Annual means were 13.9 µg/L, 4.4 µg/L, 4.4 µg/L, and 2.6 µg/L in 1998, 2000, 2001, and 2002, respectively. 24 chla values, range 1.5 – 23.2 µg/L, mean 6.9 µg/L. 22 chla (corrected) values, range 1.0 – 17.0 µg/L, mean 4.9 µg/L. 105 TN values, median 1.12 mg/L. 67 TP values, median 0.04 mg/L.
3170D	BONNET CREEK	STREAM		Parathion	3B			PP = 0 / 6; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Pentachlorophenol	3B			PP = 0 / 4; VP = 0 / 9

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3170D	BONNET CREEK	STREAM		Phenol	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Pyrene	3B			PP = 0 / 3; VP = 0 / 8
3170D	BONNET CREEK	STREAM		Selenium	2			PP = 2 / 84; VP = 0 / 79
3170D	BONNET CREEK	STREAM		Silver	3C			PP = 14 / 14; VP = 0 / 18
3170D	BONNET CREEK	STREAM		Silvex	3B			PP = 0 / 4; VP = No data
3170D	BONNET CREEK	STREAM		Tetrachloroethylene	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM		Thallium	2			PP = 1 / 46; VP = 0 / 48
3170D	BONNET CREEK	STREAM		Total Coliform	4C			PP = 4 / 28, Not impaired; VP = 5 / 24, Although total coliform meets the verification threshold, fecal coliform is not impaired for this WBID. According to USEPA (http://www.epa.gov/volunteer/stream/vms511.html), total coliform bacteria can occur in human feces, but some can also be present in animal manure, soil, and submerged wood and in other places outside the human body. Thus, the usefulness of total coliforms as an indicator of fecal contamination depends on the extent to which the bacteria species found are fecal and human in origin. As fecal coliform is assessed not impaired for this waterbody, the total coliform is no longer a good index for fecal pollution. Occasional high total coliform concentration could be considered as a natural onsumpti. Therefore, the FDEP decided that the total coliform should not be listed for this WBID.
3170D	BONNET CREEK	STREAM		Toxaphene	3C			PP = 4 / 4; VP = No Data
3170D	BONNET CREEK	STREAM		Trichlorethylene	3B			PP = 0 / 3; VP = 0 / 9
3170D	BONNET CREEK	STREAM	Turbidity	Turbidity	2			Delist. PP = 4 / 112, Not impaired; VP = 1 / 92, Not impaired.
3170D	BONNET CREEK	STREAM		Unionized Ammonia	2			PP = 0 / 47; VP = 0 / 10
3170D	BONNET CREEK	STREAM		Zinc	2			PP = 1 / 81; VP = 0 / 76
3170E	RCID W.	STREAM		1122Tetrachloroethane	2			PP = 0 / 53; VP = 0 / 62
3170E	RCID W.	STREAM		246Trichlorophenol	2			PP = 0 / 21; VP = 0 / 44
3170E	RCID W.	STREAM		24D	3B			PP = 0 / 5; VP = 0 / 1
3170E	RCID W.	STREAM		24Dichlorophenol	2			PP = 0 / 21; VP = 0 / 44

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170E	RCID W.	STREAM		24Dinitrophenol	2			PP = 0 / 36; VP = 0 / 44
3170E	RCID W.	STREAM		24Dinitrotoluene	2			PP = 0 / 20; VP = 0 / 43
3170E	RCID W.	STREAM		Acenaphthene	2			PP = 0 / 21; VP = 0 / 44
3170E	RCID W.	STREAM		Aldrin	2			PP = 0 / 123; VP = 0 / 119
3170E	RCID W.	STREAM		Aluminum	2			PP = 0 / 76; VP = 0 / 21
3170E	RCID W.	STREAM		Anthracene	2			PP = 0 / 22; VP = 0 / 45
3170E	RCID W.	STREAM		Antimony	2			PP = 0 / 206; VP = 0 / 144
3170E	RCID W.	STREAM		Arsenic	2			PP = 3 / 196; VP = 0 / 107
3170E	RCID W.	STREAM		Barium	2			PP = 0 / 210; VP = 0 / 150
3170E	RCID W.	STREAM		Benzene	2			PP = 0 / 54; VP = 0 / 58
3170E	RCID W.	STREAM		Beryllium	2			PP = 9 / 144; VP = 0 / 165
3170E	RCID W.	STREAM		Beta BHC	3C			PP = 22 / 22; VP = No data
3170E	RCID W.	STREAM		Biology	2			PP = 1 BIORECON passed in 2000. VP = 1 BIORECON passed in 2000.
3170E	RCID W.	STREAM		Bromoform	2			PP = 0 / 52; VP = 0 / 61
3170E	RCID W.	STREAM		Cadmium	2			PP = 42 / 269; VP = 0 / 202
3170E	RCID W.	STREAM		Carbon Tetrachloride	2			PP = 4 / 62; VP = 0 / 62
3170E	RCID W.	STREAM		Chlordane	3C			PP = 3 / 3; VP = No data
3170E	RCID W.	STREAM		Chlorine	3C			PP = 12 / 39; VP = 0 / 12
3170E	RCID W.	STREAM		Chlorodibromomethane	2			PP = 0 / 40; VP = 0 / 58
3170E	RCID W.	STREAM		Chloroform	3B			PP = 0 / 1; VP = 0 / 1
3170E	RCID W.	STREAM		Chlorophenol	2			PP = 0 / 20; VP = 0 / 43
3170E	RCID W.	STREAM		Chromium3	2			PP = 0 / 233; VP = 0 / 155
3170E	RCID W.	STREAM		Copper	2			PP = 26 / 205 Potentially impaired; VP = 6 / 109, Not Impaired. This parameter was on the 1 st draft VL because metal data input error. Assessment was recondacted after the data input error was addressed.
3170E	RCID W.	STREAM		DDT	3B			PP = 2 / 2; VP = 2 / 2
3170E	RCID W.	STREAM		Dichloroethylene	3B			PP = 0 / 7; VP = No data
3170E	RCID W.	STREAM		Dieldrin	3C			PP = 24 / 24; VP = 2 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170E	RCID W.	STREAM		Dissolved Oxygen	3C			This WBID is reshaped based on suggestions from Orange County. It covers the stream segment from the headwater to S-40. Two SSACs were granted to this segment by the FDER in 1988. One covers the segment from S-405 to 1000 m above RC-18 (Upper SSAC). The other one covers the segment from 1000 m above RC-18 to RC-14 (Lower SSAC). Verification assessments were conducted based on these SSACs. For the Upper SSAC, 34 out of 82 DO samples exceeded the 2.5 mg/L SSAC in the period from May through October, 23 out of 59 DO samples exceeded 4.0 mg/L SSAC in the period from November through April. For the Lower SSAC, 13 out of 51 DO samples exceed the 2.2 mg/L SSAC for the period from May through October, 12 out of 38 samples exceeded the 4.0 mg/L in the period from November through April. DO failed in segments covered by both SSACs and in both low flow and high flow conditions. However, no causative pollutant could be identified for the verified period. For the entire segment of the stream from the headwater to S-40, there are 137 TN values, median 1.34 mg/L. 122 TP values, median 0.08 mg/L. 25 BOD values, median 1.0 mg/L. This WBID contains 39% human landuse. The largest level 1 land use categories are wetlands: 37%, upland forest: 16%, urban and built up: 16%, and agriculture: 16%. One BIORECON passed in 2000.
3170E	RCID W.	STREAM		Endosulfan	2			PP = 9 / 61; VP = 0 / 26
3170E	RCID W.	STREAM		Endrin	3C			PP = 34 / 34; VP = 2 / 2
3170E	RCID W.	STREAM		Fecal Coliform	2			PP = 7 / 157; VP = 7 / 131
3170E	RCID W.	STREAM		Fluoranthene	2			PP = 0 / 22; VP = 0 / 44
3170E	RCID W.	STREAM		Fluorene	2			PP = 0 / 22; VP = 0 / 45

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170E	RCID W.	STREAM		Fluoride	3B			PP = 0 / 2; VP = 0 / 2
3170E	RCID W.	STREAM		Guthion	3C			PP = 18 / 18; VP = 18 / 18
3170E	RCID W.	STREAM		Heptachlor	3C			PP = 24 / 24; VP = 2 / 2
3170E	RCID W.	STREAM		Hexachlorobutadiene	2			PP = 0 / 22; VP = 0 / 45
3170E	RCID W.	STREAM		Iron	2			PP = 0 / 217; VP = 0 / 183
3170E	RCID W.	STREAM		Lead	2			PP = 32 / 267; VP = 6 / 195
3170E	RCID W.	STREAM		Lindane	2			PP = 8 / 139; VP = 0 / 126
3170E	RCID W.	STREAM		Malathion	3B			PP = 1 / 14; VP = 1 / 15
3170E	RCID W.	STREAM		Mercury	3C			PP = 4 / 4; VP = 5 / 5
3170E	RCID W.	STREAM		Methoxychlor	2			PP = 32 / 111; VP = 0 / 96
3170E	RCID W.	STREAM		Methyl Chloride	2			PP = 0 / 44; VP = 0 / 58
3170E	RCID W.	STREAM		Methylene Chloride	2			PP = 0 / 13; VP = 0 / 4
3170E	RCID W.	STREAM		Nickel	2			PP = 1 / 259; VP = 0 / 179
3170E	RCID W.	STREAM		Nutrients (Chla)	2			PP – 0 annual average Chla exceed the threshold. Annual average Chla concentrations were 1 and 1.7 µg/L in 1997 and 1998, respectively. 18 Chla values, range 1 – 6.3 µg/L, mean 1.5 µg/L. VP – Insufficient data to calculate any annual mean Chla. 8 Chla values, range 1-6.3 µg/L, mean 2.07 µg/L. 250 TN values, median 1.45, 103 TP values, median 0.08
3170E	RCID W.	STREAM		Oil/Grease	2			PP = 0 / 98; VP = 0 / 47
3170E	RCID W.	STREAM		Parathion	3B			PP = 0 / 14; VP = 0 / 15
3170E	RCID W.	STREAM		Pentachlorophenol	2			PP = 0 / 21; VP = 0 / 44
3170E	RCID W.	STREAM		Phenol	2			PP = 0 / 22; VP = 0 / 43
3170E	RCID W.	STREAM		Pyrene	2			PP = 0 / 22; VP = 0 / 45
3170E	RCID W.	STREAM		Selenium	2			PP = 0 / 261; VP = 0 / 182
3170E	RCID W.	STREAM		Silver	3C			PP = 80 / 81; VP = 0 / 20, Verified period data only onumpti 3 independent sampling events.
3170E	RCID W.	STREAM		Silvex	3B			PP = 0 / 4; VP = No data
3170E	RCID W.	STREAM		Tetrachloroethylene	2			PP = 0 / 57; VP = 0 / 61
3170E	RCID W.	STREAM		Thallium	2			PP = 0 / 146; VP = 0 / 142
3170E	RCID W.	STREAM		Total Coliform	2			PP = 2 / 65; VP = 4 / 49
3170E	RCID W.	STREAM		Toxaphene	3C			PP = 17 / 17; VP = No Data
3170E	RCID W.	STREAM		Trichlorethylene	2			PP = 0 / 62; VP = 0 / 62
3170E	RCID W.	STREAM		Turbidity	2			PP = 12 / 283; VP = 1 / 197
3170E	RCID W.	STREAM		Unionized Ammonia	2			PP = 0 / 98; VP = 0 / 18

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170E	RCID W.	STREAM		Zinc	2			PP = 4 / 257; VP = 0 / 179
3170F	REEDY CK W. HEADWATER	BLACKWATER		Dissolved Oxygen	3B			PP = 0 / 1; VP = 0 / 1
3170F	REEDY CK W. HEADWATER	BLACKWATER		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
3170F	REEDY CK W. HEADWATER	BLACKWATER		Fluoride	3B			PP = 0 / 4; VP = 0 / 4
3170F	REEDY CK W. HEADWATER	BLACKWATER		Nutrients (Chla)	3B			PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
3170F	REEDY CK W. HEADWATER	BLACKWATER		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
3170F	REEDY CK W. HEADWATER	BLACKWATER		Turbidity	3B			PP = 0 / 1; VP = 0 / 1
3170G	LAKE SPEER	STREAM		Aldrin	3B			PP = 0 / 5; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Aluminum	2			PP = 0 / 14; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Arsenic	2			PP = 0 / 14; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Beryllium	3C			PP = 3 / 3; VP = No data
3170G	LAKE SPEER	STREAM		Cadmium	3B			PP = No Data; VP = 0 / 2
3170G	LAKE SPEER	STREAM		Chromium3	2			PP = 0 / 14; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Copper	3B			PP = No Data; VP = 3 / 3
3170G	LAKE SPEER	STREAM		Dissolved Oxygen	3B			PP = 1 / 4; VP = 2 / 8.
3170G	LAKE SPEER	STREAM		Endosulfan	3B			PP = 0 / 5; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Fecal Coliform	3B			PP = 0 / 4; VP = 0 / 4
3170G	LAKE SPEER	STREAM		Fluoride	3B			PP = 0 / 5; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Iron	2			PP = 0 / 14; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Lead	3B			PP = No Data; VP = 0 / 3
3170G	LAKE SPEER	STREAM		Lindane	3B			PP = 0 / 5; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Malathion	3B			PP = 1 / 5; VP = 1 / 5
3170G	LAKE SPEER	STREAM		Mercury	3B			PP = 1 / 1; VP = 1 / 1
3170G	LAKE SPEER	STREAM		Methoxychlor	3B			PP = 0 / 5; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Nickel	2			PP = 0 / 14; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Nutrients (Chla)	3B			PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
3170G	LAKE SPEER	STREAM		Parathion	3B			PP = 0 / 5; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Selenium	2			PP = 0 / 14; VP = 0 / 5
3170G	LAKE SPEER	STREAM		Silver	3B			PP = No data;VP = 0 / 3
3170G	LAKE SPEER	STREAM		Total Coliform	3B			PP = 0 / 4; VP = 0 / 4
3170G	LAKE SPEER	STREAM		Turbidity	3B			PP = 0 / 4; VP = 0 / 4
3170G	LAKE SPEER	STREAM		Zinc	2			PP = 0 / 14; VP = 0 / 5
3170H	LAKE SHEEN	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3170H	LAKE SHEEN	LAKE		Antimony	3B			PP = 0 / 5; VP = No data
3170H	LAKE SHEEN	LAKE		Arsenic	3B			PP = 0 / 6; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170H	LAKE SHEEN	LAKE		Cadmium	3B			PP = 0 / 6; VP = No data
3170H	LAKE SHEEN	LAKE		Chromium3	3B			PP = 0 / 6; VP = No data
3170H	LAKE SHEEN	LAKE		Copper	2			PP = 2 / 5; VP = 1 / 35
3170H	LAKE SHEEN	LAKE		Dissolved Oxygen	2			PP = 15 / 65; VP = 9 / 75.
3170H	LAKE SHEEN	LAKE		Fecal Coliform	2			PP = 0 / 36; VP = 0 / 21
3170H	LAKE SHEEN	LAKE		Iron	3B			PP = 0 / 5; VP = No data
3170H	LAKE SHEEN	LAKE		Lead	2			PP = 3 / 4; VP = 0 / 38
3170H	LAKE SHEEN	LAKE		Nickel	3B			PP = 0 / 4; VP = No data
3170H	LAKE SHEEN	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (27.85, calculated based on data from the period 1992 – 1996) by more than 10 TSI units. Annual means were 26.0, 30.7, 32.1, 24.7, 28.3, 31.3, and 29.3 in 1993, 1994, 1995, 1996, 1997, 1998, and 1999, respectively. 182 chla values, range 1.0 – 5.0 µg/L, mean 2.4 µg/L. VP – 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 28.7 in 2003. 48 chla values, range 1.0 – 5.0 µg/L, mean 2.4 µg/L. 32 TN values, median 0.69 mg/L. 33 TP values, median 0.008 mg/L.
3170H	LAKE SHEEN	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 26.0, 30.7, 32.1, 24.7, 28.3, 31.3, and 29.3 in 1993, 1994, 1995, 1996, 1997, 1998, and 1999, respectively. 182 chla values, range 1.0 – 5.0 µg/L, mean 2.4 µg/L. VP – 0 annual mean TSI exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 28.7 in 2003. 48 chla values, range 1.0 – 5.0 µg/L, mean 2.4 µg/L. 32 TN values, median 0.69 mg/L. 33 TP values, median 0.008 mg/L.
3170H	LAKE SHEEN	LAKE		Selenium	3B			PP = 0 / 6; VP = No data
3170H	LAKE SHEEN	LAKE		Silver	3B			PP = 1 / 1; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170H	LAKE SHEEN	LAKE		Thallium	3B			PP = 0 / 5; VP = No data
3170H	LAKE SHEEN	LAKE		Total Coliform	2			PP = 0 / 48; VP = 0 / 22
3170H	LAKE SHEEN	LAKE		Turbidity	2			PP = 0 / 59; VP = 0 / 10
3170H	LAKE SHEEN	LAKE		Unionized Ammonia	2			PP = 0 / 54; VP = 0 / 9
3170H	LAKE SHEEN	LAKE		Zinc	3B			PP = 0 / 9; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Antimony	3B			PP = 0 / 6; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Arsenic	3B			PP = 0 / 6; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Cadmium	3B			PP = 0 / 6; VP = 0 / 4
3170I	LAKE HICKORYNUT	LAKE		Chromium3	3B			PP = 0 / 6; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Copper	3C			PP = 3 / 9; VP = 1 / 17
3170I	LAKE HICKORYNUT	LAKE		Dissolved Oxygen	2			PP = 1 / 70; VP = 0 / 48
3170I	LAKE HICKORYNUT	LAKE		Fecal Coliform	2			PP = 0 / 46; VP = 0 / 17
3170I	LAKE HICKORYNUT	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3170I	LAKE HICKORYNUT	LAKE		Iron	3B			PP = 0 / 3; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Lead	2			PP = 8 / 8; VP = 0 / 20
3170I	LAKE HICKORYNUT	LAKE		Nickel	3B			PP = 0 / 3; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Nutrients (Historic TSI)	3C			PP – 4 TSI annual means exceeded the historic minimum (22.46, calculated based on data from the period 1988 – 1992) by more than 10 TSI units. Annual means were 35.6, 24.9, 27.5, 30.7, 39.8, 36.4, 33.2, and 25.2 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 509 chla values, range 1.0 – 17.0 µg/L, mean 3.2 µg/L. 2 chla (corrected) values, range 15.0 – 16.0 µg/L, mean 15.5 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 200 chla values, range 1.0 – 17.0 µg/L, mean 4.7 µg/L. 3 chla (corrected) values, range 6.3 – 16.0 µg/L, mean 12.4 µg/L. 31 TN values, median 0.82 mg/L. 31 TP values, median 0.001 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170I	LAKE HICKORYNUT	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 35.6, 24.9, 27.5, 30.7, 39.8, 36.4, 33.2, and 25.2 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 509 chla values, range 1.0 – 17.0 µg/L, mean 3.2 µg/L. 2 chla (corrected) values, range 15.0 – 16.0 µg/L, mean 15.5 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 200 chla values, range 1.0 – 17.0 µg/L, mean 4.7 µg/L. 3 chla (corrected) values, range 6.3 – 16.0 µg/L, mean 12.4 µg/L. 31 TN values, median 0.82 mg/L. 31 TP values, median 0.001 mg/L.
3170I	LAKE HICKORYNUT	LAKE		Selenium	3B			PP = 0 / 6; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Thallium	3B			PP = 0 / 3; VP = No data
3170I	LAKE HICKORYNUT	LAKE		Total Coliform	2			PP = 0 / 53; VP = 0 / 17
3170I	LAKE HICKORYNUT	LAKE		Turbidity	2			PP = 0 / 64; VP = 0 / 17
3170I	LAKE HICKORYNUT	LAKE		Unionized Ammonia	2			PP = 0 / 54; VP = 0 / 12
3170I	LAKE HICKORYNUT	LAKE		Zinc	3B			PP = 0 / 12; VP = No data; Data from the Planning Period only represent 4 independent sampling events.
3170I1	LAKE HICKORYNUT DRAIN	LAKE			3A			PP = No data; VP = No data
3170J	CYPRESS CREEK	BLACKWATER		Aldrin	3B			PP = 0 / 4; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Aluminum	2			PP = 0 / 13; VP = 0 / 4
3170J	CYPRESS CREEK	BLACKWATER		Antimony	3B			PP = 0 / 1; VP = No data
3170J	CYPRESS CREEK	BLACKWATER		Arsenic	2			PP = 0 / 17; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Beryllium	3C			PP = 3 / 3; VP = No data
3170J	CYPRESS CREEK	BLACKWATER		Cadmium	2			PP = 1 / 15; VP = No data
3170J	CYPRESS CREEK	BLACKWATER		Chromium3	2			PP = 0 / 17; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Copper	2			PP = 3 / 16; VP = 2 / 18

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170J	CYPRESS CREEK	BLACKWATER		Dissolved Oxygen	4C			PP = 36 / 45; VP = 35 / 45. DO met verification threshold of the IWR, and TN exceeded the screening level for streams (1.60 mg/L). 56 DO values, median 3.46 mg/L, mean 3.77 mg/L, range 1.00 – 9.71 mg/L. 21 TN values, median 1.62 mg/L. 23 TP values, median 0.02 mg/L. 26 BOD values, median 1.4 mg/L. Although TN exceeded the screening value slightly, the FDEP found that majority of the high TN values were found in 2000, 2001, and 2002. Years 2000 and 2001 were part of the three consecutive dry years started in 1999 and 2002 was the first year after the drought. The expose of wetland bottom to the air during the dry years could cause organic nitrogen to be oxidized and hence increase the water column TN concentration when the area was re-flooded. In addition, the majority of the WBID area that drains to the Cypress Creek is wetland. Other landuses include Upland Forest, Open Land, Golf Courses, Reservoirs, and a small amount of commercial service area. Low DO in this WBID is considered natural condition for wetland.
3170J	CYPRESS CREEK	BLACKWATER		Endosulfan	3B			PP = 0 / 4; VP = 0 / 4
3170J	CYPRESS CREEK	BLACKWATER		Fecal Coliform	2			PP = 2 / 17; VP = 1 / 3
3170J	CYPRESS CREEK	BLACKWATER		Iron	2			PP = 0 / 15; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Lead	2			PP = 3 / 16, Not impaired; VP = 4 / 25, Impaired. This parameter was on the 1 st draft VL because metal data input error. Assessment was reconducted after the data input error was addressed.
3170J	CYPRESS CREEK	BLACKWATER		Lindane	3B			PP = 0 / 4; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Malathion	3B			PP = 0 / 4; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Methoxychlor	3B			PP = 0 / 4; VP = 0 / 4

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170J	CYPRESS CREEK	BLACKWATER		Nickel	2			PP = 0 / 14; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Nutrients (Chla)	2			PP – 0 chla annual means exceeded the threshold. Annual means were 1.7 µg/L in 1993 and 6.1 µg/L in 1994. 16 chla values, range 1.0 – 20.4 µg/L, mean 4.1 µg/L. VP – No TSI or chla data. 21 TN values, median 1.62 mg/L. 23 TP values, median 0.02 mg/L.
3170J	CYPRESS CREEK	BLACKWATER		Nutrients (Historic Chla)	2			PP – No 2 consecutive chla value exceeded the historic minimum (3.67 µg/L, calculated based on data from the period 1992 – 1996) by more than 50%. Annual means were 1.7 µg/L in 1993 and 6.1 µg/L in 1994. 16 chla values, range 1.0 – 20.4 µg/L, mean 4.1 µg/L. VP – No chla annual means available.
3170J	CYPRESS CREEK	BLACKWATER		Parathion	3B			PP = 0 / 4; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Selenium	2			PP = 0 / 16; VP = 0 / 5
3170J	CYPRESS CREEK	BLACKWATER		Silver	3B			PP = No data; VP = 0 / 4
3170J	CYPRESS CREEK	BLACKWATER		Thallium	3B			PP = 0 / 1; VP = No data
3170J	CYPRESS CREEK	BLACKWATER		Total Coliform	2			PP = 0 / 16; VP = 1 / 4
3170J	CYPRESS CREEK	BLACKWATER		Turbidity	2			PP = 0 / 33; VP = 0 / 10
3170J	CYPRESS CREEK	BLACKWATER		Unionized Ammonia	2			PP = 0 / 18; VP = 0 / 4
3170J	CYPRESS CREEK	BLACKWATER		Zinc	2			PP = 0 / 19; VP = 0 / 5
3170K	DAVENPORT CREEK	STREAM		1122Tetrachloroethane	2			PP = 0 / 28; VP = 0 / 26
3170K	DAVENPORT CREEK	STREAM		246 Trichlorophenol	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		24D	3B			PP = 0 / 4; VP = No data
3170K	DAVENPORT CREEK	STREAM		24Dichlorophenol	2			PP = 0 / 19; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		24Dinitrophenol	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		24Dinitrotoluene	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		Acenaphthene	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		Aldrin	2			PP = 0 / 57; VP = 0 / 48
3170K	DAVENPORT CREEK	STREAM		Aluminum	2			PP = 0 / 58; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		Anthracene	3B			PP = 0 / 1; VP = 0 / 1
3170K	DAVENPORT CREEK	STREAM		Antimony	2			PP = 0 / 90; VP = 0 / 47
3170K	DAVENPORT CREEK	STREAM		Arsenic	2			PP = 0 / 96; VP = 0 / 58

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170K	DAVENPORT CREEK	STREAM		Barium	2			PP = 0 / 54; VP = 0 / 5
3170K	DAVENPORT CREEK	STREAM		Benzene	2			PP = 0 / 25; VP = 0 / 22
3170K	DAVENPORT CREEK	STREAM		Beryllium	2			PP = 2 / 51; VP = 0 / 56
3170K	DAVENPORT CREEK	STREAM		Beta BHC	3C			PP = 11 / 11; VP = No data
3170K	DAVENPORT CREEK	STREAM		Biology	2			PP = 4 SCIs passed in 1994, 1995, 1997, and 2000. VP = 2 SCIs passed in 2000 and 2002.
3170K	DAVENPORT CREEK	STREAM		Bromoform	2			PP = 0 / 28; VP = 0 / 26
3170K	DAVENPORT CREEK	STREAM		Cadmium	2			PP = 8 / 109; VP = 0 / 63
3170K	DAVENPORT CREEK	STREAM		Carbon Tetrachloride	2			PP = 0 / 33; VP = 0 / 26
3170K	DAVENPORT CREEK	STREAM		Chlordane	3B			PP = 1 / 1; VP = No data
3170K	DAVENPORT CREEK	STREAM		Chlorine	3C			PP = 13 / 49; VP = 1 / 13
3170K	DAVENPORT CREEK	STREAM		Chlorodibromomethane	2			PP = 0 / 16; VP = 0 / 22
3170K	DAVENPORT CREEK	STREAM		Chloroform	2			PP = 0 / 28; VP = 0 / 26
3170K	DAVENPORT CREEK	STREAM		Chlorophenol	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		Chromium3	2			PP = 0 / 99; VP = 0 / 61
3170K	DAVENPORT CREEK	STREAM		Copper	2			PP = 2 / 106; VP = 0 / 70
3170K	DAVENPORT CREEK	STREAM		DDT	3C			PP = 13 / 13; VP = 13 / 13
3170K	DAVENPORT CREEK	STREAM		Dichloroethylene	3B			PP = 0 / 6; VP = No data
3170K	DAVENPORT CREEK	STREAM		Dieldrin	3C			PP = 11 / 11; VP = No data
3170K	DAVENPORT CREEK	STREAM		Dissolved Oxygen	4C			PP = 14 / 157; VP = 39 / 176. DO met verification threshold of the IWR, but unable to determine the causative pollutant. 127 TN values, median 1.57 mg/L. 52 TP values, median 0.04 mg/L. 48 BOD values, median 1.0 mg/L. This WBID contains 57% human landuse. Forty-four percent of the level 1 landuse is characterized as agriculture, and 10% is urban and built up. Two SCIs were performed in the Verified Period, and the results were both excellent.
3170K	DAVENPORT CREEK	STREAM		Endosulfan	2			PP = 3 / 32; VP = 0 / 13
3170K	DAVENPORT CREEK	STREAM		Endrin	3C			PP = 15 / 15; VP = No data
3170K	DAVENPORT CREEK	STREAM		Fecal Coliform	5	Low	2010	PP = 7 / 49, Not impaired; VP = 7 / 39, Impaired.
3170K	DAVENPORT CREEK	STREAM		Fluoranthene	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		Fluorene	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		Fluoride	3B			PP = 0 / 2; VP = 0 / 2
3170K	DAVENPORT CREEK	STREAM		Guthion	3C			PP = 14 / 14; VP = 14 / 14
3170K	DAVENPORT CREEK	STREAM		Heptachlor	3C			PP = 11 / 11; VP = No data
3170K	DAVENPORT CREEK	STREAM		Hexachlorobutadiene	2			PP = 0 / 10; VP = 0 / 16

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170K	DAVENPORT CREEK	STREAM		Iron	2			PP = 2 / 69; VP = 1 / 57
3170K	DAVENPORT CREEK	STREAM		Lead	2			PP = 5 / 112; VP = 4 / 68
3170K	DAVENPORT CREEK	STREAM		Lindane	2			PP = 3 / 63; VP = 0 / 50
3170K	DAVENPORT CREEK	STREAM		Malathion	3B			PP = 0 / 5; VP = 0 / 6
3170K	DAVENPORT CREEK	STREAM		Mercury	3B			PP = 2 / 2; VP = 2 / 2
3170K	DAVENPORT CREEK	STREAM		Methoxychlor	2			PP = 15 / 44; VP = 0 / 36
3170K	DAVENPORT CREEK	STREAM		Methyl Chloride	2			PP = 0 / 20; VP = 0 / 22
3170K	DAVENPORT CREEK	STREAM		Methylene Chloride	2			PP = 0 / 11; VP = 0 / 4
3170K	DAVENPORT CREEK	STREAM		Nickel	2			PP = 0 / 107; VP = 0 / 69
3170K	DAVENPORT CREEK	STREAM		Nutrients (Chla)	3B			PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
3170K	DAVENPORT CREEK	STREAM		Oil/Grease	2			PP = 2 / 99; VP = 0 / 81
3170K	DAVENPORT CREEK	STREAM		Parathion	3B			PP = 0 / 5; VP = 0 / 6
3170K	DAVENPORT CREEK	STREAM		Pentachlorophenol	2			PP = 0 / 11; VP = 0 / 17
3170K	DAVENPORT CREEK	STREAM		Phenol	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		Pyrene	2			PP = 0 / 10; VP = 0 / 16
3170K	DAVENPORT CREEK	STREAM		Selenium	2			PP = 0 / 104; VP = 0 / 66
3170K	DAVENPORT CREEK	STREAM		Silver	3C			PP = 40 / 40; VP = 0 / 5
3170K	DAVENPORT CREEK	STREAM		Silvex	3B			PP = 0 / 4; VP = No data
3170K	DAVENPORT CREEK	STREAM		Tetrachloroethylene	2			PP = 0 / 28; VP = 0 / 25
3170K	DAVENPORT CREEK	STREAM		Thallium	2			PP = 0 / 65; VP = 0 / 44
3170K	DAVENPORT CREEK	STREAM		Total Coliform	3C			PP = 4 / 14; VP = 2 / 24
3170K	DAVENPORT CREEK	STREAM		Toxaphene	3C			PP = 6 / 6; VP = No Data
3170K	DAVENPORT CREEK	STREAM		Trichlorethylene	2			PP = 0 / 33; VP = 0 / 26
3170K	DAVENPORT CREEK	STREAM		Turbidity	2			PP = 0 / 71; VP = 0 / 64
3170K	DAVENPORT CREEK	STREAM		Un-ionized Ammonia	2			PP = 0 / 27; VP = 0 / 6
3170K	DAVENPORT CREEK	STREAM		Zinc	2			PP = 0 / 100; VP = 0 / 62
3170L	LAKE INGRAM	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Arsenic	3B			PP = 0 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Cadmium	3B			PP = 0 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Chromium3	3B			PP = 0 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Copper	3B			PP = 1 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Dissolved Oxygen	2			PP = 0 / 14; VP = 0 / 3
3170L	LAKE INGRAM	LAKE		Fecal Coliform	3B			PP = 0 / 9; VP = No data
3170L	LAKE INGRAM	LAKE		Iron	3B			PP = 0 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Lead	3B			PP = 1 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Nickel	3B			PP = 0 / 1; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170L	LAKE INGRAM	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
3170L	LAKE INGRAM	LAKE		Selenium	3B			PP = 0 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3170L	LAKE INGRAM	LAKE		Total Coliform	3B			PP = 0 / 9; VP = No data
3170L	LAKE INGRAM	LAKE		Turbidity	2			PP = 0 / 14; VP = 0 / 3
3170L	LAKE INGRAM	LAKE		Unionized Ammonia	2			PP = 0 / 14; VP = 0 / 3
3170L	LAKE INGRAM	LAKE		Zinc	3B			PP = 0 / 3; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Arsenic	3B			PP = 0 / 1; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Cadmium	3B			PP = 0 / 1; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Chromium3	3B			PP = 0 / 1; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Copper	3B			PP = 1 / 2; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 18; VP = 0 / 9
3170M	HUCKLEBERRY LAKE	LAKE		Fecal Coliform	2			PP = 0 / 11; VP = 0 / 5
3170M	HUCKLEBERRY LAKE	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3170M	HUCKLEBERRY LAKE	LAKE		Iron	3B			PP = 0 / 1; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Lead	3B			PP = 2 / 2; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Nickel	3B			PP = 0 / 1; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
3170M	HUCKLEBERRY LAKE	LAKE		Selenium	3B			PP = 0 / 1; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3170M	HUCKLEBERRY LAKE	LAKE		Total Coliform	2			PP = 0 / 11; VP = 0 / 5
3170M	HUCKLEBERRY LAKE	LAKE		Turbidity	2			PP = 0 / 16; VP = 0 / 5
3170M	HUCKLEBERRY LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 15; VP = 0 / 4
3170M	HUCKLEBERRY LAKE	LAKE		Zinc	3B			PP = 0 / 3; VP = No data
3170N	BAY LAKE	LAKE			3A			PP = No data; VP = No data
3170O	LAKE MABEL	LAKE		Copper	3B			PP = 1 / 1; VP = No data
3170O	LAKE MABEL	LAKE		Dissolved Oxygen	2			PP = 0 / 15; VP = 0 / 9
3170O	LAKE MABEL	LAKE		Fecal Coliform	2			PP = 0 / 10; VP = 0 / 5
3170O	LAKE MABEL	LAKE		Lead	3B			PP = 1 / 1; VP = No data
3170O	LAKE MABEL	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
3170O	LAKE MABEL	LAKE		Total Coliform	2			PP = 0 / 10; VP = 0 / 5

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170O	LAKE MABEL	LAKE		Turbidity	2			PP = 0 / 14; VP = 0 / 4
3170O	LAKE MABEL	LAKE		Unionized Ammonia	2			PP = 0 / 13; VP = 0 / 4
3170O	LAKE MABEL	LAKE		Zinc	3B			PP = 0 / 2; VP = No data
3170P	SAWYER LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3170P	SAWYER LAKE	LAKE		Arsenic	3B			PP = 0 / 1; VP = No data
3170P	SAWYER LAKE	LAKE		Cadmium	3B			PP = 0 / 1; VP = No data
3170P	SAWYER LAKE	LAKE		Chromium3	3B			PP = 0 / 1; VP = No data
3170P	SAWYER LAKE	LAKE		Copper	3B			PP = 2 / 3; VP = No data
3170P	SAWYER LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 15; VP = 0 / 22
3170P	SAWYER LAKE	LAKE		Fecal Coliform	2			PP = 0 / 12; VP = 0 / 18
3170P	SAWYER LAKE	LAKE		Iron	3B			PP = 0 / 1; VP = No data
3170P	SAWYER LAKE	LAKE		Lead	3B			PP = 1 / 2; VP = No data
3170P	SAWYER LAKE	LAKE		Nickel	3B			PP = 0 / 3; VP = No data
3170P	SAWYER LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (56.45, calculated based on data from the period 1991 – 1995) by more than 10 TSI units. Annual means were 57.3, 57.1, 54.9, and 59.7 in 1993, 1994, 1995, and 1996, respectively. 136 chla values, range 3.5 – 54.0 µg/L, mean 30.7 µg/L. VP – No TSI data available. No chla data. 22 TN values, median 1.07 mg/L. 25 TP values, median 0.005 mg/L.
3170P	SAWYER LAKE	LAKE		Nutrients (TSI)	3C			PP – 4 TSI annual means exceeded the threshold (TSI 40). Annual means were 57.3, 57.1, 54.9, and 59.7 in 1993, 1994, 1995, and 1996, respectively. 136 chla values, range 3.5 – 54.0 µg/L, mean 30.7 µg/L. VP – Insufficient data to calculate any annual mean. 22 TN values, median 1.07 mg/L. 25 TP values, median 0.005 mg/L. The water color measured in 1996, 1997, 1998, and 2004 were all lower than 40 pcu. TSI 40 was therefore used as the threshold.
3170P	SAWYER LAKE	LAKE		Selenium	3B			PP = 0 / 1; VP = No data
3170P	SAWYER LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3170P	SAWYER LAKE	LAKE		Total Coliform	2			PP = 0 / 11; VP = 0 / 21
3170P	SAWYER LAKE	LAKE		Turbidity	2			PP = 0 / 15; VP = 0 / 16

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170P	SAWYER LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 15; VP = 0 / 4
3170P	SAWYER LAKE	LAKE		Zinc	3B			PP = 0 / 3; VP = No data
3170Q	LAKE BUTLER	LAKE		Antimony	3B			PP = 0 / 10; VP = No data. Data from the planning period only represent 2 seasons.
3170Q	LAKE BUTLER	LAKE		Arsenic	2			PP = 0 / 17; VP = No data
3170Q	LAKE BUTLER	LAKE		Cadmium	2			PP = 0 / 15; VP = No data
3170Q	LAKE BUTLER	LAKE		Chromium3	2			PP = 0 / 17; VP = No data
3170Q	LAKE BUTLER	LAKE		Copper	3C			PP = 5 / 20; VP = No data
3170Q	LAKE BUTLER	LAKE		Dissolved Oxygen	2			PP = 6 / 135; VP = 4 / 80
3170Q	LAKE BUTLER	LAKE		Fecal Coliform	2			PP = 0 / 88; VP = 0 / 54
3170Q	LAKE BUTLER	LAKE		Mercury (in fish tissue)	5	Low	2011	VP – Mercury met verification threshold of the IWR. Fish tissue levels in 18 largemouth bass averaged 0.74 mg/Kg (ppm) in 2001/2002.
3170Q	LAKE BUTLER	LAKE		Iron	3B			PP = 1 / 11; VP = No data
3170Q	LAKE BUTLER	LAKE		Lead	3C			PP = 5 / 7; VP = No data
3170Q	LAKE BUTLER	LAKE		Nickel	2			PP = 0 / 16; VP = No data
3170Q	LAKE BUTLER	LAKE		Nutrients (Historic TSI)	5	Low	2010	PP – Potentially impaired. 2 TSI annual means exceeded the historic minimum (26.6, calculated based on data from the period 1997 – 2001) by more than 10 TSI units. Annual means were 31.7, 38.8, 27.1, 26.6, 24.6, 29.0, and 37.3 in 1994, 1995, 1996, 1998, 1999, 2000, and 2002, respectively. 333 chla values, range 1.0 – 16.0 µg/L, mean 3.1 µg/L. 3 chla (corrected) values, range 1.8 – 2.2 µg/L, mean 2.0 µg/L. VP – Impaired. 1 TSI annual mean exceeded the historic mean by more than 10 TSI units. The annual TSI mean 36.6 in 2003. 118 chla values, range 1.0 – 16.0 µg/L, mean 2.7 µg/L. 89 TN values, median 0.69 mg/L. 89 TP values, median 0.005 mg/L. The community is phosphorus limited based on a TN/TP median of 116 calculated from 89 TN/TP ratios.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170Q	LAKE BUTLER	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 31.7, 38.8, 27.1, 26.6, 24.6, 29.0, and 37.3 in 1994, 1995, 1996, 1998, 1999, 2000, and 2002, respectively. 333 chla values, range 1.0 – 16.0 µg/L, mean 3.1 µg/L. 3 chla (corrected) values, range 1.8 – 2.2 µg/L, mean 2.0 µg/L. VP – 0 TSI annual mean exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 36.6 in 2003. 118 chla values, range 1.0 – 16.0 µg/L, mean 2.7 µg/L. 89 TN values, median 0.69 mg/L. 89 TP values, median 0.005 mg/L.
3170Q	LAKE BUTLER	LAKE		Selenium	3B			PP = 0 / 11; VP = No data. Data from the planning period only represent 2 seasons.
3170Q	LAKE BUTLER	LAKE		Silver	3B			PP = 1 / 2; VP = No data
3170Q	LAKE BUTLER	LAKE		Thallium	3B			PP = 0 / 10; VP = No data
3170Q	LAKE BUTLER	LAKE		Total Coliform	2			PP = 0 / 104; VP = 0 / 60
3170Q	LAKE BUTLER	LAKE		Turbidity	2			PP = 0 / 117; VP = 0 / 26
3170Q	LAKE BUTLER	LAKE		Unionized Ammonia	2			PP = 0 / 101; VP = 0 / 18
3170Q	LAKE BUTLER	LAKE		Zinc	2			PP = 0 / 23; VP = No data
3170R	CRESENT LAKE	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3170R	CRESENT LAKE	LAKE		Antimony	3B			PP = 0 / 4; VP = No data
3170R	CRESENT LAKE	LAKE		Arsenic	3B			PP = 0 / 5; VP = No data
3170R	CRESENT LAKE	LAKE		Cadmium	3B			PP = 0 / 5; VP = No data
3170R	CRESENT LAKE	LAKE		Chromium3	3B			PP = 0 / 5; VP = No data
3170R	CRESENT LAKE	LAKE		Copper	3B			PP = 2 / 6; VP = No data
3170R	CRESENT LAKE	LAKE		Dissolved Oxygen	2			PP = 2 / 77; VP = 0 / 31
3170R	CRESENT LAKE	LAKE		Fecal Coliform	2			PP = 0 / 59; VP = 0 / 21
3170R	CRESENT LAKE	LAKE		Iron	3B			PP = 0 / 4; VP = No data
3170R	CRESENT LAKE	LAKE		Lead	3B			PP = 2 / 4; VP = No data
3170R	CRESENT LAKE	LAKE		Nickel	3B			PP = 0 / 8; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170R	CRESENT LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (38.73, calculated based on data from the period 1998 – 2002) by more than 10 TSI units. Annual means were 36.8, 46.7, 40.9, 43.8, 33.8, and 33.6 in 1993, 1995, 1996, 1999, 2001, and 2002, respectively. 162 chla values, range 1.0 – 27.9 µg/L, mean 7.4 µg/L. VP – 0 TSI annual mean exceed historic minimum value by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). 117 chla values, range 1.0 – 17.0 µg/L, mean 6.9 µg/L. 32 TN values, median 0.78 mg/L. 32 TP values, median 0.006 mg/L.
3170R	CRESENT LAKE	LAKE		Nutrients (TSI)	2			PP – 3 TSI annual mean exceeded the threshold (TSI 40). Annual means were 36.8, 46.7, 40.9, 43.8, 33.8, and 33.6 in 1993, 1995, 1996, 1999, 2001, and 2002, respectively. 162 chla values, range 1.0 – 27.9 µg/L, mean 7.4 µg/L. VP – 0 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). Annual mean TSIs were 25.7 and 26.3 in 2000 and 2003, respectively. 117 chla values, range 1.0 – 17.0 µg/L, mean 6.9 µg/L. 32 TN values, median 0.78 mg/L. 32 TP values, median 0.006 mg/L. This lake is a low color lake.
3170R	CRESENT LAKE	LAKE		Selenium	3B			PP = 0 / 5; VP = No data
3170R	CRESENT LAKE	LAKE		Thallium	3B			PP = 0 / 4; VP = No data
3170R	CRESENT LAKE	LAKE		Total Coliform	2			PP = 0 / 60; VP = 0 / 21
3170R	CRESENT LAKE	LAKE		Turbidity	2			PP = 0 / 61; VP = 0 / 10
3170R	CRESENT LAKE	LAKE		Unionized Ammonia	2			PP = 1 / 55; VP = 0 / 10
3170R	CRESENT LAKE	LAKE		Zinc	3B			PP = 0 / 8; VP = No data
3170S	DOWN LAKE	LAKE		Antimony	3B			PP = 0 / 4; VP = No data
3170S	DOWN LAKE	LAKE		Arsenic	3B			PP = 0 / 9; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170S	DOWN LAKE	LAKE		Cadmium	3B			PP = 0 / 8; VP = No data
3170S	DOWN LAKE	LAKE		Chromium3	3B			PP = 0 / 9; VP = No data
3170S	DOWN LAKE	LAKE		Copper	2			PP = 2 / 10; VP = No data
3170S	DOWN LAKE	LAKE		Dissolved Oxygen	2			PP = 3 / 95; VP = 1 / 76
3170S	DOWN LAKE	LAKE		Fecal Coliform	2			PP = 0 / 82; VP = 0 / 60
3170S	DOWN LAKE	LAKE		Iron	3B			PP = 0 / 5; VP = No data
3170S	DOWN LAKE	LAKE		Lead	3C			PP = 3 / 4; VP = No data
3170S	DOWN LAKE	LAKE		Nickel	3B			PP = 0 / 7; VP = No data
3170S	DOWN LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (25.50, calculated based on data from the period 1989 – 1993) by more than 10 TSI units. Annual means were 25.3, 31.1, 35.3, 29.9, 30.9, and 26.4 in 1993, 1994, 1995, 1996, 1997, and 1999, respectively. 262 chla values, range 1.0 – 8.0 µg/L, mean 3.2 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). 66 chla values, range 1.0 – 4.0 µg/L, mean 2.4 µg/L. 82 TN values, median 0.045 mg/L. 82 TP values, median 0.01 mg/L.
3170S	DOWN LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 25.3, 31.1, 35.3, 29.9, 30.9, and 26.4 in 1993, 1994, 1995, 1996, 1997, and 1999, respectively. 262 chla values, range 1.0 – 8.0 µg/L, mean 3.2 µg/L. VP – 0 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). Annual mean TSIs were 21.7, 23.1, and 23.6 in 2000, 2003, and 2004, respectively. 66 chla values, range 1.0 – 4.0 µg/L, mean 2.4 µg/L. 82 TN values, median 0.45 mg/L. 82 TP values, median 0.01 mg/L.
3170S	DOWN LAKE	LAKE		Selenium	3B			PP = 0 / 5; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170S	DOWN LAKE	LAKE		Silver	3B			PP = 0 / 1; VP = No data
3170S	DOWN LAKE	LAKE		Thallium	3B			PP = 0 / 4; VP = No data
3170S	DOWN LAKE	LAKE		Total Coliform	2			PP = 0 / 88; VP = 0 / 65
3170S	DOWN LAKE	LAKE		Turbidity	2			PP = 0 / 60; VP = 0 / 16
3170S	DOWN LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 53; VP = 0 / 8
3170S	DOWN LAKE	LAKE		Zinc	2			PP = 0 / 12; VP = No data
3170T	LAKE BESSIE	LAKE		Antimony	3B			PP = 0 / 4; VP = No data
3170T	LAKE BESSIE	LAKE		Arsenic	3B			PP = 0 / 6; VP = No data
3170T	LAKE BESSIE	LAKE		Cadmium	3B			PP = 0 / 6; VP = No data
3170T	LAKE BESSIE	LAKE		Chromium3	3B			PP = 0 / 6; VP = No data
3170T	LAKE BESSIE	LAKE		Copper	3B			PP = 2 / 8; VP = No data
3170T	LAKE BESSIE	LAKE		Dissolved Oxygen	2			PP = 1 / 65; VP = 0 / 30
3170T	LAKE BESSIE	LAKE		Fecal Coliform	2			PP = 0 / 48; VP = 0 / 19
3170T	LAKE BESSIE	LAKE		Iron	3B			PP = 0 / 4; VP = No data
3170T	LAKE BESSIE	LAKE		Lead	3B			PP = 2 / 2; VP = No data
3170T	LAKE BESSIE	LAKE		Nickel	3B			PP = 0 / 6; VP = No data
3170T	LAKE BESSIE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (26.04, calculated based on data from the period 1993 – 1997) by more than 10 TSI units. Annual means were 25.7, 25.1, 27.3, 32.7, 33.2, 30.9, 26.1, and 24.6 in 1994, 1995, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 217 chla values, range 1.0 – 11.0 µg/L, mean 3.0 µg/L. VP – 0 TSI annual means exceeded the historic minimum value by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). 177 chla values, range 1.0 – 11.0 µg/L, mean 3.5 µg/L. 31 TN values, median 0.62 mg/L. 31 TP values, median 0.005 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170T	LAKE BESSIE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 25.7, 25.1, 27.3, 32.7, 33.2, 30.9, 26.1, and 24.6 in 1994, 1995, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 217 chla values, range 1.0 – 11.0 µg/L, mean 3.0 µg/L. VP – 0 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). Annual mean TSIs were 24.0 and 26.7 in 2000 and 2003, respectively. 177 chla values, range 1.0 – 11.0 µg/L, mean 3.5 µg/L. 31 TN values, median 0.62 mg/L. 31 TP values, median 0.005 mg/L.
3170T	LAKE BESSIE	LAKE		Selenium	3B			PP = 0 / 5; VP = No data
3170T	LAKE BESSIE	LAKE		Thallium	3B			PP = 0 / 4; VP = No data
3170T	LAKE BESSIE	LAKE		Total Coliform	2			PP = 0 / 48; VP = 0 / 9
3170T	LAKE BESSIE	LAKE		Turbidity	2			PP = 0 / 48; VP = 0 / 9
3170T	LAKE BESSIE	LAKE		Unionized Ammonia	2			PP = 1 / 45; VP = 1 / 10
3170T	LAKE BESSIE	LAKE		Zinc	3B			PP = 0 / 8; VP = No data
3170U	LAKE BLANCHE	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3170U	LAKE BLANCHE	LAKE		Antimony	3B			PP = 0 / 5; VP = No data
3170U	LAKE BLANCHE	LAKE		Arsenic	3B			PP = 0 / 6; VP = No data
3170U	LAKE BLANCHE	LAKE		Cadmium	3B			PP = 0 / 6; VP = No data
3170U	LAKE BLANCHE	LAKE		Chromium3	3B			PP = 0 / 6; VP = No data
3170U	LAKE BLANCHE	LAKE		Copper	3B			PP = 1 / 6; VP = 0 / 13
3170U	LAKE BLANCHE	LAKE		Dissolved Oxygen	2			PP = 1 / 72; VP = 0 / 65
3170U	LAKE BLANCHE	LAKE		Fecal Coliform	2			PP = 0 / 39; VP = 0 / 32
3170U	LAKE BLANCHE	LAKE		Iron	3B			PP = 0 / 5; VP = No data
3170U	LAKE BLANCHE	LAKE		Lead	3C			PP = 3 / 4; VP = 0 / 20. Data from the Verified Period only represent 2 seasons.
3170U	LAKE BLANCHE	LAKE		Nickel	3B			PP = 0 / 5; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170U	LAKE BLANCHE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (27.23, calculated based on data from the period 1989 – 1993) by more than 10 TSI units. Annual means were 26.2, 28.7, 33.7, 29.4, 27.8, 30.7, 28.3, and 29.7 in 1993, 1994, 1995, 1996, 1997, 1999, and 2000. 297 chla values, range 1.0 – 14.0 µg/L, mean 3.5 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). 108 chla values, range 1.0 – 7.0 µg/L, mean 3.3 µg/L. 46 TN values, median 0.58 mg/L. 45 TP values, median 0.006 mg/L.
3170U	LAKE BLANCHE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 26.2, 28.7, 33.7, 29.4, 27.8, 30.7, 28.3, and 29.7 in 1993, 1994, 1995, 1996, 1997, 1999, and 2000. 297 chla values, range 1.0 – 14.0 µg/L, mean 3.5 µg/L. VP – 0 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 26.3 in 2003. 108 chla values, range 1.0 – 7.0 µg/L, mean 3.3 µg/L. 46 TN values, median 0.58 mg/L. 45 TP values, median 0.006 mg/L.
3170U	LAKE BLANCHE	LAKE		Selenium	3B			PP = 0 / 6; VP = No data
3170U	LAKE BLANCHE	LAKE		Silver	3B			PP = 1 / 1; VP = No data
3170U	LAKE BLANCHE	LAKE		Thallium	3B			PP = 0 / 5; VP = No data
3170U	LAKE BLANCHE	LAKE		Total Coliform	2			PP = 0 / 48; VP = 0 / 33
3170U	LAKE BLANCHE	LAKE		Turbidity	2			PP = 0 / 56; VP = 0 / 12
3170U	LAKE BLANCHE	LAKE		Unionized Ammonia	2			PP = 1 / 49; VP = 0 / 9
3170U	LAKE BLANCHE	LAKE		Zinc	3B			PP = 0 / 9; VP = No data
3170V	LAKE CHASE	LAKE		Antimony	3B			PP = 0 / 5; VP = No data
3170V	LAKE CHASE	LAKE		Arsenic	3B			PP = 0 / 9; VP = No data
3170V	LAKE CHASE	LAKE		Cadmium	3B			PP = 0 / 6; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170V	LAKE CHASE	LAKE		Chromium3	3B			PP = 0 / 9; VP = No data
3170V	LAKE CHASE	LAKE		Copper	3C			PP = 5 / 10; VP = No data
3170V	LAKE CHASE	LAKE		Dissolved Oxygen	2			PP = 1 / 74; VP = 1 / 51
3170V	LAKE CHASE	LAKE		Fecal Coliform	2			PP = 0 / 59; VP = 0 / 41
3170V	LAKE CHASE	LAKE		Iron	3B			PP = 0 / 5; VP = No data
3170V	LAKE CHASE	LAKE		Lead	3C			PP = 3 / 3; VP = No data
3170V	LAKE CHASE	LAKE		Nickel	3B			PP = 0 / 4; VP = No data
3170V	LAKE CHASE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (32.97, calculated based on data from the period 1998 – 2002) by more than 10 TSI units. Annual means were 33.3, 37.8, 37.9, 34.6, 35.8, 31.9, and 31.2 in 1994, 1995, 1996, 1997, 1998, 1999, and 2000, respectively. 300 chla values, range 1.0 – 12.0 µg/L, mean 4.9 µg/L. VP – 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). 10 chla values, range 1.0 – 11.0 µg/L, mean 4.0 µg/L. 53 TN values, median 0.60 mg/L. 52 TP values, median 0.005 mg/L.
3170V	LAKE CHASE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 33.3, 37.8, 37.9, 34.6, 35.8, 31.9, and 31.2 in 1994, 1995, 1996, 1997, 1998, 1999, and 2000, respectively. 300 chla values, range 1.0 – 12.0 µg/L, mean 4.9 µg/L. VP – 0 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). Annual mean TSIs were 24.9, 22.7, and 31.5 in 2000, 2001, and 2003, respectively. 10 chla values, range 1.0 – 11.0 µg/L, mean 4.0 µg/L. 53 TN values, median 0.60 mg/L. 52 TP values, median 0.005 mg/L.
3170V	LAKE CHASE	LAKE		Selenium	3B			PP = 0 / 5; VP = No data
3170V	LAKE CHASE	LAKE		Silver	3B			PP = 0 / 1; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170V	LAKE CHASE	LAKE		Thallium	3B			PP = 0 / 5; VP = No data
3170V	LAKE CHASE	LAKE		Total Coliform	2			PP = 0 / 59; VP = 0 / 41
3170V	LAKE CHASE	LAKE		Turbidity	2			PP = 0 / 53; VP = 0 / 12
3170V	LAKE CHASE	LAKE		Unionized Ammonia	2			PP = 0 / 45; VP = 0 / 8
3170V	LAKE CHASE	LAKE		Zinc	2			PP = 0 / 12; VP = No data
3170W	LAKE LOUISE	LAKE		Antimony	3B			PP = 0 / 5; VP = No data
3170W	LAKE LOUISE	LAKE		Arsenic	3B			PP = 0 / 9; VP = No data
3170W	LAKE LOUISE	LAKE		Cadmium	3B			PP = 0 / 7; VP = No data
3170W	LAKE LOUISE	LAKE		Chromium3	3B			PP = 0 / 9; VP = No data
3170W	LAKE LOUISE	LAKE		Copper	2			PP = 2 / 11; VP = No data
3170W	LAKE LOUISE	LAKE		Dissolved Oxygen	2			PP = 0 / 55; VP = 0 / 34
3170W	LAKE LOUISE	LAKE		Fecal Coliform	2			PP = 0 / 35; VP = 0 / 21
3170W	LAKE LOUISE	LAKE		Iron	3B			PP = 1 / 8; VP = No data
3170W	LAKE LOUISE	LAKE		Lead	3B			PP = 2 / 3; VP = No data
3170W	LAKE LOUISE	LAKE		Nickel	3B			PP = 0 / 5; VP = No data
3170W	LAKE LOUISE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historical minimum (39.0, calculated based on data from 1994 to 1998) by more than 10 TSI units. Annual means were 45.0, 36.8, 44.1, 37.9, 36.7, 39.5, 42.5, and 41.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2000, respectively. 309 chla values, range 1.0 – 28.0 µg/L, mean 6.8 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The annual TSI was 27.1 in 2003. 108 chla values, range 3.0 – 17.0 µg/L, mean 7.6 µg/L. 32 TN values, median 0.8 mg/L. 34 TP values, median 0.006 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170W	LAKE LOUISE	LAKE		Nutrients (TSI)	2			PP – 4 TSI annual means exceeded the threshold (TSI 40). Annual means were 45.0, 36.8, 44.1, 37.9, 36.7, 39.5, 42.5, and 41.1 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2000, respectively. 309 chla values, range 1.0 – 28.0 µg/L, mean 6.8 µg/L. VP – 0 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 27.1 in 2003. 108 chla values, range 3.0 – 17.0 µg/L, mean 7.6 µg/L. 32 TN values, median 0.8 mg/L. 34 TP values, median 0.006 mg/L. Historical color data from Florida Lakewatch, the Southwest Florida Water Management District, and the EPA's Lake Regions of Florida Report indicate that this is a low color lake.
3170W	LAKE LOUISE	LAKE		Selenium	3B			PP = 0 / 5; VP = No data
3170W	LAKE LOUISE	LAKE		Silver	3B			PP = 0 / 1; VP = No data
3170W	LAKE LOUISE	LAKE		Thallium	3B			PP = 0 / 5; VP = No data
3170W	LAKE LOUISE	LAKE		Total Coliform	2			PP = 0 / 39; VP = 0 / 24
3170W	LAKE LOUISE	LAKE		Turbidity	2			PP = 0 / 47; VP = 0 / 9
3170W	LAKE LOUISE	LAKE		Unionized Ammonia	2			PP = 0 / 45; VP = 0 / 9
3170W	LAKE LOUISE	LAKE		Zinc	2			PP = 0 / 12; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Antimony	3B			PP = 0 / 5; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Arsenic	3B			PP = 0 / 9; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Cadmium	3B			PP = 0 / 8; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Chromium3	3B			PP = 0 / 9; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Copper	3C			PP = 4 / 10; VP = 0 / 10
3170X	LAKE ILSEWORTH	LAKE		Dissolved Oxygen	2			PP = 0 / 83; VP = 2 / 71
3170X	LAKE ILSEWORTH	LAKE		Fecal Coliform	2			PP = 0 / 66; VP = 0 / 41
3170X	LAKE ILSEWORTH	LAKE		Iron	3B			PP = 1 / 6; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Lead	3C			PP = 4 / 5; VP = 0 / 20 Samples of the verified period only represented 2 seasons and 4 independent sampling events.
3170X	LAKE ILSEWORTH	LAKE		Nickel	3B			PP = 0 / 5; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170X	LAKE ILSEWORTH	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (36.55, calculated based on data from the period 1997 – 2001) by more than 10 TSI units. TSI annual means were 42.2, 37.4, 35.1, 38.2, 36.6, and 36.3 in 1995, 1996, 1997, 1998, 1999, and 2000. 270 chla values, range 1.0 – 15.0 µg/L, mean 5.4 µg/L. 0 TSI exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). 108 chla values, range 2.0 – 11.0 µg/L, mean 4.9 µg/L. 54 TN values, median 0.72 mg/L. 53 TP values, median 0.006 mg/L.
3170X	LAKE ILSEWORTH	LAKE		Nutrients (TSI)	2			PP – Although 1 TSI annual exceed the threshold (TSI 40) in 1995, TSI annual means in the following years in the planning period were all lower than the threshold. TSI annual means were 42.2, 37.4, 35.1, 38.2, 36.6, and 36.3 in 1995, 1996, 1997, 1998, 1999, and 2000. 270 chla values, range 1.0 – 15.0 µg/L, mean 5.4 µg/L.VP – 0 TSI annual means exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). TSI annual means were 27.8, 22.8, and 27.7 in 2000, 2001, and 2003, respectively. 108 chla values, range 2.0 – 11.0 µg/L, mean 4.9 µg/L. 54 TN values, median 0.72 mg/L. 53 TP values, median 0.006 mg/L.
3170X	LAKE ILSEWORTH	LAKE		Selenium	3B			PP = 0 / 6; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Silver	3B			PP = 0 / 1; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Thallium	3B			PP = 0 / 5; VP = No data
3170X	LAKE ILSEWORTH	LAKE		Total Coliform	2			PP = 0 / 69; VP = 0 / 44
3170X	LAKE ILSEWORTH	LAKE		Turbidity	2			PP = 0 / 61; VP = 0 / 13
3170X	LAKE ILSEWORTH	LAKE		Unionized Ammonia	2			PP = 1 / 52; VP = 1 / 9
3170X	LAKE ILSEWORTH	LAKE		Zinc	2			PP = 0 / 13; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170Y	LAKE TIBET BUTLER	LAKE		Antimony	3B			PP = 0 / 5; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Arsenic	3B			PP = 0 / 6; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Cadmium	3B			PP = 0 / 6; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Chromium3	3B			PP = 0 / 6; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Copper	3B			PP = 2 / 6; VP = 18 / 29, Data in the verified period only represented 2 seasons and three independent sampling events.
3170Y	LAKE TIBET BUTLER	LAKE		Dissolved Oxygen	2			PP = 15 / 37; VP = 9 / 76.
3170Y	LAKE TIBET BUTLER	LAKE		Fecal Coliform	2			PP = 0 / 42; VP = 0 / 23
3170Y	LAKE TIBET BUTLER	LAKE		Iron	3B			PP = 0 / 5; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Lead	3C			PP = 3 / 4; VP = 1 / 40, Data in the verified period only represented 2 seasons and 4 independent sampling events.
3170Y	LAKE TIBET BUTLER	LAKE		Nickel	3B			PP = 0 / 4; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (28.39, calculated based on data from the period 1988 – 1992) by more than 10 TSI units. Annual means were 30.9, 30.1, 33.8, 33.8, 32.6, 31.4, and 27.1 in 1993, 1994, 1995, 1996, 1997, 1998, and 1999, respectively. 319 chla values, range 1.0 – 9.0 µg/L, mean 3.5 µg/L. VP – 0 TSI annual mean exceed the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 28.5 in 2003. 87 chla values, range 1.0 – 6.0 µg/L, mean 2.3 µg/L. 32 TN values, median 0.66 mg/L. 35 TP values, median 0.006 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170Y	LAKE TIBET BUTLER	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 30.9, 30.1, 33.8, 33.8, 32.6, 31.4, and 27.1 in 1993, 1994, 1995, 1996, 1997, 1998, and 1999, respectively. 319 chla values, range 1.0 – 9.0 µg/L, mean 3.5 µg/L. VP – 0 TSI annual mean exceed the threshold (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 28.5 in 2003. 87 chla values, range 1.0 – 6.0 µg/L, mean 2.3 µg/L. 32 TN values, median 0.66 mg/L. 35 TP values, median 0.006 mg/L.
3170Y	LAKE TIBET BUTLER	LAKE		Selenium	3B			PP = 0 / 6; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Silver	3B			PP = 1 / 1; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Thallium	3B			PP = 0 / 5; VP = No data
3170Y	LAKE TIBET BUTLER	LAKE		Total Coliform	2			PP = 0 / 49; VP = 0 / 24
3170Y	LAKE TIBET BUTLER	LAKE		Turbidity	2			PP = 0 / 30; VP = 0 / 10
3170Y	LAKE TIBET BUTLER	LAKE		Unionized Ammonia	2			PP = 1 / 33; VP = 0 / 9
3170Y	LAKE TIBET BUTLER	LAKE		Zinc	3B			PP = 0 / 9; VP = No data
3170Y 1	LAKE TIBET BUTLER OUTLET	LAKE			3A			PP = No data; VP = No data
3170Z	POCKET LAKE	LAKE		Antimony	3B			PP = 0 / 5; VP = No data
3170Z	POCKET LAKE	LAKE		Arsenic	2			PP = 0 / 10; VP = No data
3170Z	POCKET LAKE	LAKE		Cadmium	3B			PP = 0 / 9; VP = No data
3170Z	POCKET LAKE	LAKE		Chromium3	2			PP = 0 / 10; VP = No data
3170Z	POCKET LAKE	LAKE		Copper	3C			PP = 3 / 9; VP = No data
3170Z	POCKET LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 64; VP = 1 / 34
3170Z	POCKET LAKE	LAKE		Fecal Coliform	2			PP = 0 / 39; VP = 0 / 21
3170Z	POCKET LAKE	LAKE		Iron	3B			PP = 0 / 5; VP = No data
3170Z	POCKET LAKE	LAKE		Lead	3C			PP = 3 / 4; VP = No data
3170Z	POCKET LAKE	LAKE		Nickel	3B			PP = 0 / 5; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170Z	POCKET LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (35.67, calculated based on data from the period 1993 – 1997) by more than 10 TSI units. Annual means were 33.3, 39.7, 38.0, 30.8, 36.5, 38.2, and 40.2 in 1993, 1994, 1995, 1996, 1997, 1998, and 1999, respectively. 241 chla values, range 1.0 – 18.0 µg/L, mean 5.2 µg/L. VP – 0 TSI annual means exceed the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 32.2 in 2003. 51 chla values, range 3.0 – 11.0 µg/L, mean 6.2 µg/L. 34 TN values, median 0.69 mg/L. 34 TP values, median 0.01 mg/L.
3170Z	POCKET LAKE	LAKE		Nutrients (TSI)	2			PP – 1 TSI annual means exceeded the threshold in 1999. Annual means were 33.3, 39.7, 38.0, 30.8, 36.5, 38.2, and 40.2 in 1993, 1994, 1995, 1996, 1997, 1998, and 1999, respectively. 241 chla values, range 1.0 – 18.0 µg/L, mean 5.2 µg/L. VP – 0 TSI annual means exceed the threshold (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 32.2 in 2003. 51 chla values, range 3.0 – 11.0 µg/L, mean 6.2 µg/L. 34 TN values, median 0.69 mg/L. 34 TP values, median 0.01 mg/L. 3 color values were available in the Planning Period, and the mean was 30.0 PCU. Historical color data from Florida Lakewatch, the Southwest Florida Water Management District, and the EPA's Lake Regions of Florida Report indicate that this is a low color lake.
3170Z	POCKET LAKE	LAKE		Selenium	3B			PP = 0 / 6; VP = No data
3170Z	POCKET LAKE	LAKE		Silver	3B			PP = 0 / 1; VP = No data
3170Z	POCKET LAKE	LAKE		Thallium	3B			PP = 0 / 5; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3170Z	POCKET LAKE	LAKE		Total Coliform	2			PP = 0 / 47; VP = 0 / 22
3170Z	POCKET LAKE	LAKE		Turbidity	2			PP = 0 / 63; VP = 0 / 13
3170Z	POCKET LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 55; VP = 0 / 10
3170Z	POCKET LAKE	LAKE		Zinc	2			PP = 0 / 13; VP = No data
3171A	LAKE MARY JANE	LAKE		Aluminum	3B			PP = 0 / 3; VP = 0 / 1
3171A	LAKE MARY JANE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3171A	LAKE MARY JANE	LAKE		Arsenic	3B			PP = 0 / 3; VP = 0 / 1
3171A	LAKE MARY JANE	LAKE		Barium	3B			PP = 0 / 1; VP = 0 / 1
3171A	LAKE MARY JANE	LAKE		Boron	3B			PP = 0 / 1; VP = 0 / 1
3171A	LAKE MARY JANE	LAKE		Cadmium	3B			PP = 1 / 3; VP = No data
3171A	LAKE MARY JANE	LAKE		Chromium3	3B			PP = 0 / 3; VP = 0 / 1
3171A	LAKE MARY JANE	LAKE		Copper	3B			PP = 2 / 3; VP = No data
3171A	LAKE MARY JANE	LAKE		Dissolved Oxygen	2			PP = 1 / 30; VP = 5 / 34
3171A	LAKE MARY JANE	LAKE		Fecal Coliform	2			PP = 0 / 21; VP = 0 / 8
3171A	LAKE MARY JANE	LAKE		Mercury (in fish tissue)	5	Low	2011	VP – Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 1.06 mg/Kg (ppm) in 2003.
3171A	LAKE MARY JANE	LAKE		Iron	3B			PP = 0 / 1; VP = No data
3171A	LAKE MARY JANE	LAKE		Lead	5	Low	2010	PP = 3 / 4, Potentially impaired; VP = 20 / 21, Impaired.
3171A	LAKE MARY JANE	LAKE		Nickel	3B			PP = 0 / 1; VP = No data
3171A	LAKE MARY JANE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (42.8, calculated based on data from the period 1995 – 1999) by more than 10 TSI units. Annual means were 48.2, 45.2, 39.6, 40.7, 47.4, 43.0, 43.3, 45.7, 45.5, and 41.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2002, and 2003, respectively. 331 chla values, range 1.0 – 21.4 µg/L, mean 6.9 µg/L. 4 chla (corrected) values, range 2.5 – 13.2 µg/L, mean 6.7 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment).. 135 chla values, range 2.0 – 16.0 µg/L, mean 7.3 µg/L. 15 TN values, median 1.71 mg/L. 15 TP values, median 0.01 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3171A	LAKE MARY JANE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 48.2, 45.2, 39.6, 40.7, 47.4, 43.0, 43.3, 45.7, and 45.5, in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 331 chla values, range 1.0 – 21.4 µg/L, mean 6.9 µg/L. 4 chla (corrected) values, range 2.5 – 13.2 µg/L, mean 6.7 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 135 chla values, range 2.0 – 16.0 µg/L, mean 7.3 µg/L. 15 TN values, median 1.71 mg/L. 15 TP values, median 0.01 mg/L.
3171A	LAKE MARY JANE	LAKE		Selenium	3B			PP = 0 / 3; VP = 0 / 1
3171A	LAKE MARY JANE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3171A	LAKE MARY JANE	LAKE		Total Coliform	2			PP = 0 / 20; VP = 0 / 8
3171A	LAKE MARY JANE	LAKE		Turbidity	2			PP = 0 / 27; VP = 0 / 5
3171A	LAKE MARY JANE	LAKE		Unionized Ammonia	2			PP = 0 / 23; VP = 0 / 4
3171A	LAKE MARY JANE	LAKE		Zinc	3B			PP = 1 / 5; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Aluminum	3B			PP = 0 / 2; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Arsenic	3B			PP = 0 / 3; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Cadmium	3B			PP = 0 / 3; VP = 0 / 18
3171B	LAKE WHIP-POOR-WILL	LAKE		Chromium3	3B			PP = 0 / 3; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Copper	3B			PP = 2 / 4; VP = 0 / 13
3171B	LAKE WHIP-POOR-WILL	LAKE		Dissolved Oxygen	2			PP = 5 / 24; VP = 3 / 29
3171B	LAKE WHIP-POOR-WILL	LAKE		Fecal Coliform	2			PP = 0 / 15; VP = 0 / 6
3171B	LAKE WHIP-POOR-WILL	LAKE		Iron	3B			PP = 0 / 2; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Lead	3C			PP = 5 / 5; VP = 0 / 18
3171B	LAKE WHIP-POOR-WILL	LAKE		Nickel	3B			PP = 1 / 2; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any annual mean TSI. VP – Insufficient data to calculate any annual mean TSI.
3171B	LAKE WHIP-POOR-WILL	LAKE		Selenium	3B			PP = 0 / 2; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3171B	LAKE WHIP-POOR-WILL	LAKE		Silver	3B			PP = 0 / 1; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3171B	LAKE WHIP-POOR-WILL	LAKE		Total Coliform	2			PP = 0 / 17; VP = 0 / 16
3171B	LAKE WHIP-POOR-WILL	LAKE		Turbidity	2			PP = 0 / 21; VP = 0 / 5
3171B	LAKE WHIP-POOR-WILL	LAKE		Unionized Ammonia	2			PP = 0 / 18; VP = 0 / 4
3171B	LAKE WHIP-POOR-WILL	LAKE		Zinc	3B			PP = 0 / 7; VP = No data
3171C	RED LAKE	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3171C	RED LAKE	LAKE		Antimony	3B			PP = 0 / 1; VP = No data
3171C	RED LAKE	LAKE		Arsenic	3B			PP = 0 / 2; VP = No data
3171C	RED LAKE	LAKE		Cadmium	2			PP = 0 / 4; VP = 0 / 21
3171C	RED LAKE	LAKE		Chromium3	3B			PP = 0 / 2; VP = 0 / 1
3171C	RED LAKE	LAKE		Copper	5	Low	2010	PP = 7 / 8, Potentially impaired; VP = 20 / 23, Impaired.
3171C	RED LAKE	LAKE		Dissolved Oxygen	2			PP = 3 / 50; VP = 4 / 46
3171C	RED LAKE	LAKE		Fecal Coliform	2			PP = 0 / 11; VP = 0 / 5
3171C	RED LAKE	LAKE		Iron	3B			PP = 0 / 9; VP = 0 / 5
3171C	RED LAKE	LAKE		Lead	2			PP = 4 / 5; VP = 1 / 21
3171C	RED LAKE	LAKE		Nickel	3B			PP = 1 / 2; VP = 0 / 1
3171C	RED LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (40.58, calculated based on data from the period 1994 – 1998) by more than 10 TSI units. Annual means were 40.6, 40.8, 40.4, 48.2, and 45.8 in 1995, 1996, 1998, 2001, and 2002, respectively. 14 chla values, range 3.2 – 11.8 µg/L, mean 6.6 µg/L. 30 chla (corrected) values, range 2.0 – 18.2 µg/L, mean 7.9 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 40.4, 48.2, 45.8, and 40.4 in 1998, 2001, 2002, and 2003, respectively. 20 chla (corrected) values, range 3.1 – 18.2 µg/L, mean 8.6 µg/L. 27 TN values, median 0.62 mg/L. 24 TP values, median 0.02 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3171C	RED LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold (TSI 60). Annual means were 40.6, 40.8, 40.4, 48.2, and 45.8 in 1995, 1996, 1998, 2001, and 2002, respectively. 14 chla values, range 3.2 – 11.8 µg/L, mean 6.6 µg/L. 30 chla (corrected) values, range 2.0 – 18.2 µg/L, mean 7.9 µg/L. VP – 0 TSI annual means exceeded the threshold. Annual mean TSIs were 40.4, 48.2, 45.8, and 40.4 in 1998, 2001, 2002, and 2003, respectively. 20 chla (corrected) values, range 3.1 – 18.2 µg/L, mean 8.6 µg/L. 27 TN values, median 0.62 mg/L. 27 TP values, median 0.02 mg/L.
3171C	RED LAKE	LAKE		Selenium	3B			PP = 0 / 1; VP = 0 / 1
3171C	RED LAKE	LAKE		Thallium	3B			PP = 0 / 1; VP = No data
3171C	RED LAKE	LAKE		Total Coliform	2			PP = 0 / 14; VP = No data
3171C	RED LAKE	LAKE		Turbidity	2			PP = 0 / 19; VP = 0 / 4
3171C	RED LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 17; VP = 0 / 4
3171C	RED LAKE	LAKE		Zinc	3B			PP = 0 / 6; VP = 0 / 1
3171D	LAKE NONA	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
3171D	LAKE NONA	LAKE		Antimony	3B			PP = 0 / 2; VP = No data
3171D	LAKE NONA	LAKE		Arsenic	3B			PP = 0 / 6; VP = No data
3171D	LAKE NONA	LAKE		Cadmium	2			PP = 3 / 5; VP = 0 / 21
3171D	LAKE NONA	LAKE		Chromium3	3B			PP = 0 / 5; VP = 0 / 2
3171D	LAKE NONA	LAKE		Copper	3C			PP = 7 / 10; VP = 1 / 17
3171D	LAKE NONA	LAKE		Dissolved Oxygen	2			PP = 1 / 80; VP = 0 / 58
3171D	LAKE NONA	LAKE		Fecal Coliform	2			PP = 0 / 23; VP = 0 / 16
3171D	LAKE NONA	LAKE		Iron	3B			PP = 0 / 8; VP = 0 / 5
3171D	LAKE NONA	LAKE		Lead	2			PP = 10 / 12; VP = 1 / 21
3171D	LAKE NONA	LAKE		Nickel	3C			PP = 3 / 5; VP = 0 / 2

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3171D	LAKE NONA	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 30.60, 29.00, and 29.80 in 1993, 1995, and 1996, respectively. 29 chla values, range 1.0 – 26.6 µg/L, mean 5.7 µg/L. 31 chla (corrected) values, range 1.0 – 14.0 µg/L, mean 2.5 µg/L. VP – 0 TSI annual means exceeded the threshold. The TSI annual mean was 22.7 in 2003. 26 chla (corrected) values, range 1.0 – 14.0 µg/L., mean 2.8 µg/L. 42 TN values, median 0.38 mg/L. 36 TP values, median 0.001 mg/L.
3171D	LAKE NONA	LAKE		Selenium	3B			PP = 0 / 5; VP = 0 / 2
3171D	LAKE NONA	LAKE		Thallium	3B			PP = 0 / 2; VP = No data
3171D	LAKE NONA	LAKE		Total Coliform	2			PP = 0 / 28; VP = 0 / 6
3171D	LAKE NONA	LAKE		Turbidity	2			PP = 0 / 42; VP = 0 / 6
3171D	LAKE NONA	LAKE		Unionized Ammonia	2			PP = 0 / 33; VP = 0 / 6
3171D	LAKE NONA	LAKE		Zinc	2			PP = 1 / 12; VP = 0 / 2
3171E	HART BRANCH	STREAM			3A			PP = No data; VP = No data
3171F	AJAY LAKE	LAKE		Nutrients (TSI)	3B			PP – Insufficient data to calculate any mean. VP – Insufficient data to calculate any mean.
3172A	JIM BRANCH	LAKE		Aluminum	3B			PP = 0 / 1; VP = 0 / 1
3172A	JIM BRANCH	LAKE		Arsenic	3B			PP = 0 / 1; VP = 0 / 1
3172A	JIM BRANCH	LAKE		Barium	3B			PP = 0 / 1; VP = 0 / 1
3172A	JIM BRANCH	LAKE		Boron	3B			PP = 0 / 1; VP = 0 / 1
3172A	JIM BRANCH	LAKE		Chromium3	3B			PP = 0 / 1; VP = 0 / 1
3172A	JIM BRANCH	LAKE		Dissolved Oxygen	3B			PP = 1 / 1; VP = 1 / 1
3172A	JIM BRANCH	LAKE		Selenium	3B			PP = 0 / 1; VP = 0 / 1
3172B	LAKE RUNNYMEADE	LAKE			3A			PP = No data; VP = No data
3172C	E LK TOHOPEKALIGA DR.	LAKE			3A			PP = No data; VP = No data
3173A	LAKE TOHOPEKALIGA	LAKE		Arsenic	2			PP = 0 / 75; VP = 0 / 4
3173A	LAKE TOHOPEKALIGA	LAKE		Dissolved Oxygen	2			PP = 18 / 396; VP = 23 / 250
3173A	LAKE TOHOPEKALIGA	LAKE		Fecal Coliform	3B			PP = 1 / 4; VP = 1 / 2
3173A	LAKE TOHOPEKALIGA	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3173A	LAKE TOHOPEKALIGA	LAKE		Iron	2			PP = 1 / 56; VP = 1 / 39

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3173A	LAKE TOHOPEKALIGA	LAKE	Mercury (Based on Fish Consumption Advisory)	Mercury (in fish tissue)	5	Low	2011	Not impaired. Planning period listing was based on a fish consumption advisory. Fish tissue levels in 23 largemouth bass averaged 0.45 ppm in 2003.
3173A	LAKE TOHOPEKALIGA	LAKE	Nutrients	Nutrients (Historic TSI)	2			Delist. PP – The historic minimum TSI (53.0) appeared in the period from 2001 through 2005, suggesting that the water quality is improved in recent years. Annual means were 63.3, 57.7, 58.2, 57.4, 59.7, 61.2, 55.1, 58.1, 52.8, and 53.7 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 472 chla values, range 1.0 – 77.8 µg/L, mean 21.2 µg/L. 225 chla (corrected) values, range 1.0 – 121.4 µg/L, mean 15.4 µg/L. VP – The historic minimum TSI (53.0) appeared in the period from 2001 through 2005, suggesting that the water quality is improved in recent years. TSI annual means were 61.2, 55.1, 58.1, 52.8, 53.7, 52.9, and 52.8 in 1998, 1999, 2000, 2001, 2002, 2003, and 2004, onsumption . 233 chla values, range 1.0 – 77.8 µg/L, mean 19.0 µg/L. 100 chla (corrected) values, range 1.0 – 121.4 µg/L, mean 16.8 µg/L. 341 TN values, median 1.04 mg/L. 347 TP values, median 0.05 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3173A	LAKE TOHOPEKALIGA	LAKE	Nutrients	Nutrients (TSI)	2			Delist. PP – Not impaired. 2 TSI annual means exceeded the threshold (TSI 60). Annual means were 63.3, 57.7, 58.2, 57.4, 59.7, 61.2, 55.1, 58.1, 52.8, and 53.7 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 472 chla values, range 1.0 – 77.8 µg/L, mean 21.2 µg/L. 225 chla (corrected) values, range 1.0 – 121.4 µg/L, mean 15.4 µg/L. VP – Not impaired. 1 TSI annual mean exceeded the threshold in 1998 (Lakewatch data for the verified period were excluded from the assessment). However, TSI annual means of the following years were all lower than 60. TSI annual means were 61.2, 55.1, 58.1, 52.8, 53.7, 52.9, and 52.8 in 1998, 1999, 2000, 2001, 2002, 2003, and 2004, onsumption . 233 chla values, range 1.0 – 77.8 µg/L, mean 19.0 µg/L. 100 chla (corrected) values, range 1.0 – 121.4 µg/L, mean 16.8 µg/L. 341 TN values, median 1.04 mg/L. 347 TP values, median 0.05 mg/L.
3173A	LAKE TOHOPEKALIGA	LAKE		Total Coliform	3B			PP = 1 / 4; VP = 1 / 2
3173A	LAKE TOHOPEKALIGA	LAKE		Turbidity	2			PP = 10 / 521; VP = 0 / 188
3173A	LAKE TOHOPEKALIGA	LAKE	Unionized Ammonia	Unionized Ammonia	2			Delist. PP = 6 / 315, Not impaired. VP = 0 / 42, Not impaired.
3173A 1	PARTIN CANAL	STREAM			3A			PP = No data; VP = No data
3173A 2	L TOHOPEKALIGA DRAIN	LAKE			3A			PP = No data; VP = No data
3173B	ST CLOUD CANAL	STREAM		Arsenic	2			PP = 0 / 16; VP = No data
3173B	ST CLOUD CANAL	STREAM		Dissolved Oxygen	2			PP = 8 / 122; VP = 2 / 44
3173B	ST CLOUD CANAL	STREAM		Fecal Coliform	3B			PP = 1 / 3; VP = 1 / 1
3173B	ST CLOUD CANAL	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3173B	ST CLOUD CANAL	STREAM		Iron	3C			PP = 9 / 15; VP = 9 / 12

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3173B	ST CLOUD CANAL	STREAM		Nutrients (Chla)	3B			PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
3173B	ST CLOUD CANAL	STREAM		Total Coliform	3B			PP = 0 / 2; VP = 0 / 1
3173B	ST CLOUD CANAL	STREAM		Turbidity	2			PP = 0 / 123; VP = 0 / 46
3173B	ST CLOUD CANAL	STREAM		Unionized Ammonia	2			PP = 0 / 87; VP = 0 / 14
3173C	LAKE TOHOPEKALIGA DRSO. (previous LAKE TOHOPEKALIGA SOUTH)	STREAM	Mercury (Based on Fish Consumption Advisory)	Mercury (in fish tissue)	3C	(Low)	(2011)	Planning period based on fish consumption advisory. Needs to confirm with the 7.5 years data.
3173C	LAKE TOHOPEKALIGA DRSO. (previous LAKE TOHOPEKALIGA SOUTH)	STREAM	Nutrients	Nutrients (Chla)	3C	(Low)	(2010)	PP = No Data, VP = No Data
3173C	LAKE TOHOPEKALIGA DRSO. (previous LAKE TOHOPEKALIGA SOUTH)	STREAM	Unionized Ammonia	Unionized Ammonia	3C	(Low)	(2010)	Delist. PP = 3 / 165; VP = 0 / 22, SHOULD BE NO DATA FOR BOTH PERIOD.
3173D	MILL SLOUGH	STREAM		Biology	3B			PP = 1 BIORECON suspect in 1997. VP = No data.
3173D	MILL SLOUGH	STREAM		Dissolved Oxygen	3B			PP = 2 / 5; VP = 5 / 13
3173D	MILL SLOUGH	STREAM		Fecal Coliform	3B			PP = 1 / 1; VP = 1 / 1
3173D	MILL SLOUGH	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3173D	MILL SLOUGH	STREAM		Nutrients (Chla)	3B			PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean TSI.
3173D	MILL SLOUGH	STREAM		Total Coliform	3B			PP = 1 / 1; VP = 1 / 1
3173D	MILL SLOUGH	STREAM		Turbidity	2			PP = 3 / 36; VP = 1 / 14
3173D	MILL SLOUGH	STREAM		Unionized Ammonia	2			PP = 0 / 14; VP = No data
3174A	LAKE MYRTLE	LAKE			3A			PP = No data; VP = No data
3174B	LAKE PRESTON	LAKE			3A			PP = No data; VP = No data
3174C	LAKE JOEL	LAKE			3A			PP = No data; VP = No data
3174D	COON LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
3174D	COON LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3174D	COON LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (50.70, calculated based on data from the period 1994 – 1998) by more than 10 TSI units. Annual means were 50.7, 52.5, 50.6, 49.0, 54.6, 53.5, 56.2, and 52.8 in 1993, 1994, 1995, 1998, 1999, 2000, 2001, and 2002. 271 chla values, range 1.0 – 106.0 µg/L, mean 12.3 µg/L. 2 chla (corrected) values, range 1.3 – 6.7 µg/L, mean 4.0 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment).. 150 chla values, range 2.0 – 106.0 µg/L, mean 15.2 µg/L. Not enough data to calculate TN and TP medians.
3174D	COON LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 50.7, 52.5, 50.6, 49.0, 54.6, 53.5, 56.2, and 52.8 in 1993, 1994, 1995, 1998, 1999, 2000, 2001, and 2002. 271 chla values, range 1.0 – 106.0 µg/L, mean 12.3 µg/L. 2 chla (corrected) values, range 1.3 – 6.7 µg/L, mean 4.0 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 150 chla values, range 2.0 – 106.0 µg/L, mean 15.2 µg/L. Not enough TN and TP data to calculate medians.
3174D	COON LAKE	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
3174D	COON LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3174E	TROUT LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (39.21, calculated based on data from the period 1990 – 1994) by more than 10 TSI units. Annual means were 40.6, 39.3, 40.2, 38.0, 41.3, 41.6, 49.0, 46.8, and 44.0 in 1993, 1994, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 285 chla values, range 1.0 – 13.0 µg/L, mean 5.5 µg/L. 1 chla (corrected) value: 4.0 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 147 chla values, range 2.0 – 12.0 µg/L, mean 6.0 µg/L. 1 chla (corrected) value: 4.0 µg/L.
3174E	TROUT LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 40.6, 39.3, 40.2, 38.0, 41.3, 41.6, 49.0, 46.8, and 44.0 in 1993, 1994, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 285 chla values, range 1.0 – 13.0 µg/L, mean 5.5 µg/L. 1 chla (corrected) value: 4.0 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 147 chla values, range 2.0 – 12.0 µg/L, mean 6.0 µg/L. 1 chla (corrected) value: 4.0 µg/L. No TN or TP data.
3174F	LAKE CENTER OUTLET	STREAM		Dissolved Oxygen	3B			PP – 1 / 3. VP – 1 / 3.
3174F	LAKE CENTER OUTLET	STREAM		Turbidity	3B			PP – 0 / 3. VP – 0 / 3.
3176A	LAKE LIZZIE	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = 1 / 1
3176A	LAKE LIZZIE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3176A	LAKE LIZZIE	LAKE		Nutrients (Historic TSI)	2			PP – 1 TSI annual mean exceeded the historic minimum (37.95, calculated based on data from the period 1990 – 1994) by more than 10 TSI units in 2000. However, year 2000 was the driest year for the period of record. The concentration process could physically increase the TN, TP, and Chla concentrations in the lake. Annual means were 37.5, 35.9, 42.7, 41.3, 40.2, and 48.4 in 1993, 1994, 1996, 1997, 1999, and 2000, respectively. 236 chla values, range 1.0 – 18.0 µg/L, mean 4.9 µg/L. 2 chla (corrected) values, range 3.7 – 5.5 µg/L, mean 4.6 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 84 chla values, range 2.0 – 18.0 µg/L, mean 5.7 µg/L. 1 chla (corrected) value: 5.5 µg/L.
3176A	LAKE LIZZIE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 37.5, 35.9, 42.7, 41.3, 40.2, and 48.4 in 1993, 1994, 1996, 1997, 1999, and 2000, respectively. 236 chla values, range 1.0 – 18.0 µg/L, mean 4.9 µg/L. 2 chla (corrected) values, range 3.7 – 5.5 µg/L, mean 4.6 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 84 chla values, range 2.0 – 18.0 µg/L, mean 5.7 µg/L. 1 chla (corrected) value: 5.5 µg/L. No TN or TP data.
3176A	LAKE LIZZIE	LAKE		Turbidity	3B			PP = 0 / 2; VP = No data
3176A	LAKE LIZZIE	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
3176B	ALLIGATOR LAKE INLET	STREAM		Dissolved Oxygen	3B			PP = 2 / 4; VP = 2 / 4
3176C	ALLIGATOR LAKE OUTLET	STREAM		Dissolved Oxygen	3B			PP = 0 / 2; VP = 0 / 2
3176B	ALLIGATOR LAKE inLET	STREAM		Turbidity	3B			PP = 0 / 4; VP = 0 / 4

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3176C	ALLIGATOR LAKE OUTLET	STREAM		Turbidity	3B			PP = 0 / 2; VP = 0 / 2
3177A	BRICK LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 1; VP = No data
3177A	BRICK LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = No data
3177A	BRICK LAKE	LAKE		Mercury (in fish tissue)	5	Low	2011	Impaired. Mercury met verification threshold of the IWR. Fish tissue levels in 17 largemouth basses averaged 1.07 ppm in 2002 and 2004.
3177A	BRICK LAKE	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (38.5, calculated based on data from the period 1995 – 1999) by more than 10 TSI units. Annual means were 42.5, 35.9, 39.5, and 40.1 in 1994, 1995, 1998, and 1999, respectively. 207 chla values, range 1.0 – 37.0 µg/L, mean 6.4 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 114 chla values, range 1.0 – 37.0 µg/L, mean 6.4 µg/L. 3 TN values, median 1.18 mg/L. No TP values.
3177A	BRICK LAKE	LAKE		Nutrients (TSI)	2			PP – 0 TSI annual means exceeded the threshold. Annual means were 42.5, 35.9, 39.5, and 40.1 in 1994, 1995, 1998, and 1999, respectively. 207 chla values, range 1.0 – 37.0 µg/L, mean 6.4 µg/L. VP – Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 114 chla values, range 1.0 – 37.0 µg/L, mean 6.4 µg/L. 3 TN values, median 1.18 mg/L. No TP data.
3177A	BRICK LAKE	LAKE		Turbidity	3B			PP = 0 / 1; VP = No data
3177A	BRICK LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
3177B	LAKE GENTRY OUTLET	LAKE			3A			PP = No data; VP = No data
3180A	LAKE CYPRESS	LAKE		Arsenic	2			PP = 0 / 17; VP = No data
3180A	LAKE CYPRESS	LAKE		Dissolved Oxygen	2			PP = 6 / 87; VP = 5 / 65

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3180A	LAKE CYPRESS	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
3180A	LAKE CYPRESS	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3180A	LAKE CYPRESS	LAKE		Iron	2			PP = 0 / 14; VP = 0 / 10
3180A	LAKE CYPRESS	LAKE	Mercury (Based on Fish Consumption Advisory)	Mercury (in fish tissue)	5	Low	2011	Impaired. Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth basses averaged 0.52 ppm in 2004.
3180A	LAKE CYPRESS	LAKE	Nutrients	Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum value (57.39, calculated based on data from the period from 2000 – 2004) by more than 10 TSI units. Annual means were 65.0, 56.1, 58.3, 62.7, 61.3, 66.8, 62.5, 65.7, and 54.8 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 102 chla values, range 2.1 – 97.4 µg/L, mean 33.6 µg/L. 110 chla (corrected) values, range 1.0 – 151.4 µg/L, mean 28.5 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 66.7, 63.2, 54.8, and 51.7 in 1998, 2000, 2002, and 2003, respectively. 55 chla values, range 2.1 – 97.4 µg/L, mean 33.4 µg/L. 52 chla values, range 1.0 – 151.4 µg/L, mean 31.5 µg/L. 88 TN values, median 1.43 mg/L. 89 TP values, median 0.07 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3180A	LAKE CYPRESS	LAKE	Nutrients	Nutrients (TSI)	5	Low	2010*	PP – Potentially impaired. 5 TSI annual means exceeded the threshold (TSI 60, high color lake). Annual means were 65.0, 56.1, 58.3, 62.7, 61.3, 66.8, 62.6, 65.7, and 63.3 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 102 chla values, range 2.1 – 97.4 µg/L, mean 33.6 µg/L. 110 chla (corrected) values, range 1.0 – 151.4 µg/L, mean 28.5 µg/L. VP – Impaired. 6 TSI annual means exceeded the threshold. Annual means were 66.8, 62.6, 65.7, 63.3, 61.3, and 61.5 in 1998, 1999, 2000, 2002, 2003, and 2004, respectively. 55 chla values, range 2.1 – 97.4 µg/L, mean 33.4 µg/L. 52 chla values, range 1.0 – 151.4 µg/L, mean 31.5 µg/L. 88 TN values, median 1.43 mg/L. 89 TP values, median 0.07 mg/L. Co-limited by nitrogen and phosphorus bases on a TN/TP ratio median of 20.59 (87 values) in the Verified Period.
3180A	LAKE CYPRESS	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
3180A	LAKE CYPRESS	LAKE		Turbidity	2			PP = 3 / 117; VP = 0 / 41
3180A	LAKE CYPRESS	LAKE		Unionized Ammonia	2			PP = 0 / 70; VP = 0 / 11
3180B	SOUTH PORT CANAL	STREAM			3A			PP = No data; VP = No data
3183A 1	LAKE KISSIMMEE N DRAIN	STREAM			3A			PP = No data; VP = No data
3183A 2	LAKE KISSIMMEE N DRAIN	STREAM			3A			PP = No data; VP = No data
3183B	LAKE KISSIMMEE (MID)	LAKE		Arsenic	2			PP = 0 / 98; VP = 0 / 14
3183B	LAKE KISSIMMEE (MID)	LAKE		Cadmium	2			PP = 5 / 18; VP = 3 / 26
3183B	LAKE KISSIMMEE (MID)	LAKE		Copper	2			PP = 1 / 18; VP = 1 / 6
3183B	LAKE KISSIMMEE (MID)	LAKE		Dissolved Oxygen	2			PP = 62 / 495; VP = 19 / 399
3183B	LAKE KISSIMMEE (MID)	LAKE		Fecal Coliform	2			PP = 4 / 50; VP = 6 / 75
3183B	LAKE KISSIMMEE (MID)	LAKE		Fluoride	2			PP = 0 / 51; VP = 0 / 63
3183B	LAKE KISSIMMEE (MID)	LAKE		Iron	2			PP = 0 / 87; VP = 0 / 46

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3183B	LAKE KISSIMMEE (MID)	LAKE	Mercury (Based on Fish Consumption Advisory)	Mercury (in fish tissue)	5	Low	2011	Impaired. Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth basses averaged 0.58 ppm in 2003.
3183B	LAKE KISSIMMEE (MID)	LAKE		Lead	2			PP = 1 / 16, Not impaired; VP = 1 / 25, Not Impaired. This parameter was on the 1 st draft VL because metal data input error. Assessment was reconducted after the data input error was addressed.
3183B	LAKE KISSIMMEE (MID)	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (59.5, calculated based on data from the period 1991 – 1995) by more than 10 TSI units. Annual means were 62.6, 54.9, 57.5, 66.6, 59.3, 63.6, 62.0, 59.6, 63.8, and 59.0 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 556 chla values, range 2.6 – 145.9 µg/L, mean 28.8 µg/L. 470 chla (corrected) values, range 1.0 – 126.1 µg/L, mean 25.1 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 63.6, 63.4, 63.4, 63.1, 60.6, and 57.5 in 1998, 1999, 2000, 2002, and 2003, respectively. 278 chla values, range 2.6 – 128.3 µg/L, mean 28.6 µg/L. 298 chla (corrected) values, range 1.0 – 379.1 µg/L, mean 25.7 µg/L. 419 TN values, median 1.30 mg/L. 1029 TP values, median 0.08 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3183B	LAKE KISSIMMEE (MID)	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. 6 TSI annual means exceeded the threshold. Annual means were 62.6, 56.2, 57.5, 66.6, 59.3, 64.8, 61.2, 58.4, 64.7, and 61.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 556 chl _a values, range 2.6 – 145.9 µg/L, mean 28.8 µg/L. 470 chl _a (corrected) values, range 1.0 – 126.1 µg/L, mean 25.1 µg/L. VP – Impaired. 5 TSI annual means exceeded the threshold. Annual means were 64.8, 61.2, 58.4, 64.7, 61.5, 59.4, and 60.0 in 1998, 1999, 2000, 2002, 2003, and 2004, respectively. 278 chl _a values, range 2.6 – 128.3 µg/L, mean 28.6 µg/L. 298 chl _a (corrected) values, range 1.0 – 379.1 µg/L, mean 25.7 µg/L. 475 TN values, median 1.29 mg/L. 1189 TP values, median 0.08 mg/L. Lake is co-limited by nitrogen and phosphorus based on a TN/TP ratio median of 22.24 (474 values) in the Verified Period.
3183B	LAKE KISSIMMEE (MID)	LAKE		Total Coliform	2			PP = 5 / 34; VP = 4 / 32
3183B	LAKE KISSIMMEE (MID)	LAKE		Turbidity	2			PP = 15 / 574; VP = 0 / 288
3183B	LAKE KISSIMMEE (MID)	LAKE		Unionized Ammonia	2			PP = 1 / 302; VP = 0 / 45
3183B	LAKE KISSIMMEE (MID)	LAKE		Zinc	2			PP = 0 / 17; VP = 0 / 6
3183B 1	LAKE KISSIMMEE MID DRAIN	LAKE			3A			PP = No data; VP = No data
3183B 2	LAKE KISSIMMEE MID DRAIN	LAKE			3A			PP = No data; VP = No data
3183C	ROSALIE CANAL	STREAM			3A			PP = No data; VP = No data
3183D	TIGER CREEK	STREAM			3A			PP = No data; VP = No data
3183E 1	LAKE KISSIMMEE S DRAIN	LAKE			3A			PP = No data; VP = No data
3183E 2	LAKE KISSIMMEE S DRAIN	LAKE			3A			PP = No data; VP = No data
3183F	JACKSON CANAL	STREAM		Dissolved Oxygen	3B			pp = 1 / 5; VP = 2 / 13
3183F	JACKSON CANAL	STREAM		Nutrients (Chl _a)	3B			PP – Insufficient data to calculate any annual mean Chl _a . VP – Insufficient data to calculate any annual mean Chl _a .

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3183F	JACKSON CANAL	STREAM		Turbidity	2			PP = 1 / 19; VP = 0 / 11
3183G	LAKE JACKSON OCEOLA CO	LAKE		Dissolved Oxygen	5	Low	2010	PP = 96 / 155, Potentially impaired; VP = 11 / 47, Impaired. DO met verification threshold of the IWR, and nutrients and BOD are identified as the causative pollutant based on TSI data, nutrient impairment verification. Co-limited by nitrogen and phosphorus based on a TN/TP ratio median of 17.71 (44 values) in the Verified Period. 47 TN values, median 1.157 mg/L. 49 TP values, median 0.08 mg/L. 17 BOD values, median 2.50 mg/L. 186 DO values, median 4.29 mg/L, mean 4.60 mg/L, range 0.10 – 11.34 mg/L.
3183G	LAKE JACKSON OCEOLA CO	LAKE		Iron	3B			PP = 8 / 17; VP = No data. Data from the planning period only represent 1 season.
3183G	LAKE JACKSON OCEOLA CO	LAKE		Nutrients (Historic TSI)	2			PP – 0 TSI annual means exceeded the historic minimum (62.46, calculated based on data from the period 2000 – 2004) by more than 10 TSI units. Annual means were 64.3, 68.3, 66.7, and 64.8 in 1997, 1999, 2000, and 2002, respectively. 197 chla values, range 1.0 – 93.2 µg/L, mean 19.0 µg/L. VP – 0 TSI annual means exceeded the historic minimum by more than 10 TSI units. Annual means were 68.3, 66.7, 64.8, and 55.9 in 1999, 2000, 2002, and 2003, respectively. 45 chla (corrected) values, range 1.0 – 80.1 µg/L, mean 28.3 µg/L. 47 TN values, median 1.57 mg/L. 49 TP values, median 0.08 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3183G	LAKE JACKSON OCEOLA CO	LAKE		Nutrients (TSI)	5	Low	2010	PP – Potentially impaired. All 4 TSI annual means exceeded the threshold. Annual means were 64.3, 68.3, 66.7, and 64.8 in 1997, 1999, 2000, and 2002, respectively. 197 chla values, range 1.0 – 93.2 µg/L, mean 19.0 µg/L. VP – Impaired. 3 TSI annual means exceeded the threshold. Annual means were 68.3, 66.7, 64.8, and 55.9 in 1999, 2000, 2002, and 2003, respectively. 45 chla (corrected) values, range 1.0 – 80.1 µg/L, mean 28.3 µg/L. 47 TN values, median 1.57 mg/L. 49 TP values, median 0.08 mg/L. Co-limited by nitrogen and phosphorus based on a TN/TP ratio median of 17.39 (47 values) in the Verified Period.
3183G	LAKE JACKSON OCEOLA CO	LAKE		Turbidity	2			PP = 0 / 189; VP = 0 / 22
3183G	LAKE JACKSON OCEOLA CO	LAKE		Unionized Ammonia	2			PP = 1 / 150; VP = No data
3184A	LAKE MARIAN OUTLET	LAKE			3A			PP = No data; VP = No data
3186A	KISSIMMEE RIVER	STREAM	Dissolved Oxygen	Dissolved Oxygen	2			Delist. PP = 7 / 23, Not impaired; VP = 1 / 32, Not impaired.
3186A	KISSIMMEE RIVER	STREAM		Fecal Coliform	3B			PP = 0 / 1; VP = No data
3186A	KISSIMMEE RIVER	STREAM	Nutrients	Nutrients (Chla)	3C	(Low)	(2010)	PP – Insufficient data to calculate any annual mean Chla. VP – Insufficient data to calculate any annual mean Chla.
3186A	KISSIMMEE RIVER	STREAM		Turbidity	2			PP = 0 / 24; VP = 0 / 3
3186A	KISSIMMEE RIVER	STREAM		Unionized Ammonia	2			PP = 0 / 23; VP = 0 / 2
3186A	KISSIMMEE RIVER	STREAM			3A			PP = No data; VP = No data
Lower Kissimmee Planning Unit								
3188	FARM AREA	STREAM		Arsenic	3B			PP = No data; VP = 0 / 14
3188	FARM AREA	STREAM		Chromium3	3B			PP = No data; VP = 0 / 14
3188	FARM AREA	STREAM		Copper	3B			PP = No data; VP = 1 / 8

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3188	FARM AREA	STREAM	Dissolved Oxygen	Dissolved Oxygen	5	High	2005	PP = 417 / 543, Potentially impaired; VP = 191 / 261, Impaired. DO met verification threshold of the IWR, and phosphorus and BOD is the causative pollutant. 136 TN values, median 1.47 mg/L. 318 TP values, median 0.41 mg/L. 17 BOD values, median 2.1 mg/L. 576 DO values, median 3.19 mg/L, mean 3.51 mg/L, range 0.40 - 14.02 mg/L.
3188	FARM AREA	STREAM		Iron	3B			PP = No data; VP = 8 / 10
3188	FARM AREA	STREAM		Lead	3B			PP = No data; VP = 8 / 8
3188	FARM AREA	STREAM	Nutrients	Nutrients (Chla)	2			Delist. PP - Insufficient data to calculate any annual mean Chla. VP - Not impaired. 0 Chla annual means exceeded the threshold. The Chla annual mean was 8.33 ug/L in 2004. 17 Chla values, range 1 - 74 µg/L, mean 9.4 µg/L. 136 TN values, median 1.47 mg/L, 318 TP values, median 0.41 mg/L.
3188	FARM AREA	STREAM		Turbidity	3B			PP = No data; VP = 2 / 15
3188	FARM AREA	STREAM		Unionized Ammonia	2			PP = 0 / 13; VP = No data
3188	FARM AREA	STREAM		Zinc	3B			PP = No data; VP = 1 / 14
3202	KISSIMMEE RIVER	STREAM		1122Tetrachloroethane	3B			PP = 0 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		246Trichlorophenol	3B			PP = 0 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		24Dichlorophenol	3B			PP = 0 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		24Dinitrotoluene	3B			PP = 0 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		Acenaphthene	3B			PP = 0 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		Aldrin	3B			PP = 0 / 2; VP = 0 / 1
3202	KISSIMMEE RIVER	STREAM		Aluminum	3B			PP = 0 / 5; VP = No data
3202	KISSIMMEE RIVER	STREAM		Anthracene	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Antimony	2			PP = 0 / 39; VP = 0 / 7
3202	KISSIMMEE RIVER	STREAM		Arsenic	2			PP = 0 / 109; VP = 0 / 22
3202	KISSIMMEE RIVER	STREAM		Barium	3B			PP = 0 / 7; VP = No data
3202	KISSIMMEE RIVER	STREAM		Benzene	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Beryllium	3C			PP = 7 / 38; VP = 1 / 7
3202	KISSIMMEE RIVER	STREAM		Bromoform	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Cadmium	2			PP = 0 / 53; VP = 0 / 14
3202	KISSIMMEE RIVER	STREAM		Carbon Tetrachloride	3B			PP = 0 / 1; VP = No Data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3202	KISSIMMEE RIVER	STREAM		Chlorodibromomethane	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Chloroform	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Chlorophenol	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Chromium3	2			PP = 0 / 39; VP = 0 / 7
3202	KISSIMMEE RIVER	STREAM		Copper	2			PP = 1 / 53; VP = 0 / 14
3202	KISSIMMEE RIVER	STREAM		Demeton	3B			PP = 0 / 1; VP = 0 / 1
3202	KISSIMMEE RIVER	STREAM		Dissolved Oxygen	3C			PP = 202 / 386; VP = 132 / 241. DO met verification threshold of the IWR, but there is no causative pollutant. 251 TN values, median 1.19 mg/L. 1200 TP values, median 0.07 mg/L. No BOD values. This WBID contains 75% human landuse. Sixty-seven percent of the level 1 landuse is characterized as agriculture.
3202	KISSIMMEE RIVER	STREAM		Endrin	3B			PP = 0 / 1; VP = 0 / 1
3202	KISSIMMEE RIVER	STREAM		Fecal Coliform	2			PP = 3 / 56; VP = 5 / 75
3202	KISSIMMEE RIVER	STREAM		Fluoranthene	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Fluorene	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Fluoride	2			PP = 0 / 49; VP = 0 / 61
3202	KISSIMMEE RIVER	STREAM		Heptachlor	3B			PP = 0 / 1; VP = 0 / 1
3202	KISSIMMEE RIVER	STREAM		Hexachlorobutadiene	3B			PP = No Data; VP = 8 / 8
3202	KISSIMMEE RIVER	STREAM		Iron	2			PP = 0 / 59, Not impaired; VP = 0 / 19, Insufficient data This parameter was on the 1st draft VL because of some off-scale high iron readings apparently taken from several seepage wells. Assessment was reconducted after these well data were excluded.
3202	KISSIMMEE RIVER	STREAM		Lead	2			PP = 0 / 36; VP = 0 / 0.
3202	KISSIMMEE RIVER	STREAM		Lindane	3B			PP = 0 / 2; VP = 0 / 1
3202	KISSIMMEE RIVER	STREAM		Malathion	3B			PP = 0 / 1; VP = 0 / 1
3202	KISSIMMEE RIVER	STREAM		Mercury	3B			PP = 1 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		Methoxychlor	3B			PP = 0 / 1; VP = 0 / 1
3202	KISSIMMEE RIVER	STREAM		Methyl Chloride	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Nickel	2			PP = 0 / 43; VP = 0 / 6

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3202	KISSIMMEE RIVER	STREAM		Nutrients (Chla)	2			PP - 0 chla annual means exceeded the threshold. Annual means were 10.0 µg/L, 8.8 µg/L, 7.6 µg/L, 7.1 µg/L, 14.8 µg/L, 6.4 µg/L, and 2.1 µg/L in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 217 chla values, range 1.0 - 223.6 µg/L, mean 11.6 µ. 186 chla (corrected) values, range 1.0 - 210.7 µg/L, mean 9.3 µg/L. VP - 0 chla annual means exceeded the threshold. Annual means were 7.6 µg/L, 7.1 µg/L, 14.8 µg/L, 6.4 µg/L, 2.1 µg/L, 5.3 ug/L, and 6.0 µg/L in 1998, 1999, 2000, 2001, 2002, 2003, and 2004, respectively. 150 chla values, range 1.0 - 223.6 µg/L, mean 11.0 µ. 146 chla (corrected) values, range 1.0 - 210.7 µg/L, mean 8.8 µg/L. 251 TN values, median 1.17 mg/L. 1200 TP values, median 0.07 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3202	KISSIMMEE RIVER	STREAM		Nutrients (Historic Chla)	2			PP - 2 consecutive chla annual means exceeded the historic minimum (4.9 µg/L, calculated based on data from the period 2001 - 2005) by more than 50%. Annual means were 10.0 µg/L, 8.8 µg/L, 7.6 µg/L, 7.1 µg/L, 14.8 µg/L, 6.4 µg/L, and 2.1 µg/L in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 217 chla values, range 1.0 - 223.6 µg/L, mean 11.6 µ. 186 chla (corrected) values, range 1.0 - 210.7 µg/L, mean 9.3 µg/L. VP - 0 consecutive chla annual means exceeded the historic minimum by more than 50%. Annual means were 7.6 µg/L, 7.1 µg/L, 14.8 µg/L, 6.2 µg/L, 2.1 µg/L, 5.3 µg/L, and 6.0 µg/L in 1998, 1999, 2000, 2001, 2002, 2003, and 2004, respectively. 150 chla values, range 1.0 - 223.6 µg/L, mean 11.0 µ. 146 chla (corrected) values, range 1.0 - 210.7 µg/L, mean 8.8 µg/L. 251 TN values, median 1.17 mg/L. 1200 TP values, median 0.07 mg/L. Historic minimum appeared in most recent years, indicating the improvement of the water quality condition.
3202	KISSIMMEE RIVER	STREAM		Pentachlorop henol	3B			PP = 0 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		Phenol	3B			PP = 0 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		Pyrene	3B			PP = 0 / 1; VP = No data
3202	KISSIMMEE RIVER	STREAM		Selenium	2			PP = 0 / 46; VP = 0 / 7
3202	KISSIMMEE RIVER	STREAM		Silver	2			PP = 0 / 24; VP = 0 / 2
3202	KISSIMMEE RIVER	STREAM		Tetrachloroet hylene	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Thallium	3B			PP = 0 / 39; VP = 0 / 7
3202	KISSIMMEE RIVER	STREAM		Total Coliform	2			PP = 2 / 34; VP = 2 / 31
3202	KISSIMMEE RIVER	STREAM		Trichlorethyl ene	3B			PP = 0 / 1; VP = No Data
3202	KISSIMMEE RIVER	STREAM		Turbidity	2			PP = 0 / 287; VP = 0 / 174
3202	KISSIMMEE RIVER	STREAM		Unionized Ammonia	2			PP = 0 / 156; VP = 0 / 24
3202	KISSIMMEE RIVER	STREAM		Zinc	2			PP = 0 / 52; VP = 0 / 14
3207	S-154C	STREAM		Arsenic	2			PP = 0 / 57; VP = 0 / 22
3207	S-154C	STREAM		Cadmium	2			PP = 3 / 57; VP = 0 / 22

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3207	S-154C	STREAM		Copper	2			PP = 1 / 57; VP = 0 / 22
3207	S-154C	STREAM		Dissolved Oxygen	5	Low	2010	PP = 248 / 396, Potentially impaired; VP = 99 / 158, Impaired. DO met verification threshold of the IWR, and phosphorus and nitrogen are causative pollutants. 207 TN values, median 1.63 mg/L. 993 TP values, median 0.42 mg/L. No BOD values. 726 DO values, median 4.12 mg/L, mean 4.21 mg/L, range 0.00 - 11.62 mg/L.
3207	S-154C	STREAM		Fecal Coliform	3B			PP = 1 / 1; VP = 1 / 1
3207	S-154C	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3207	S-154C	STREAM		Iron	2			PP = 3 / 16 Not impaired; VP = 2 / 6 Insufficient Data
3207	S-154C	STREAM		Lead	2			PP = 0 / 57; VP = 0 / 22
3207	S-154C	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any Chla annual mean Chla. VP - Insufficient data to calculate any Chla annual mean.
3207	S-154C	STREAM		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
3207	S-154C	STREAM		Turbidity	2			PP = 1 / 358; VP = 1 / 165
3207	S-154C	STREAM		Unionized Ammonia	2			PP = 0 / 273; VP = 0 / 33
3207	S-154C	STREAM		Zinc	2			PP = 1 / 57; VP = 1 / 22
3209	KISSIMMEE RIVER	STREAM		1122Tetrachloroethane	3B			PP = 0 / 3; VP = No data
3209	KISSIMMEE RIVER	STREAM		246 Trichlorophenol	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		24Dichlorophenol	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		24Dinitrophenol	3B			PP = 0 / 3; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		24Dinitrotoluene	3B			PP = 0 / 1; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Acenaphthene	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Aldrin	2			PP = 0 / 44; VP = 0 / 23
3209	KISSIMMEE RIVER	STREAM		Aluminum	3B			PP = 0 / 3; VP = 0 / 3
3209	KISSIMMEE RIVER	STREAM		Anthracene	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Antimony	3B			PP = 0 / 5; VP = 0 / 3
3209	KISSIMMEE RIVER	STREAM		Arsenic	2			PP = 0 / 186; VP = 0 / 71
3209	KISSIMMEE RIVER	STREAM		Barium	3B			PP = 0 / 3; VP = 0 / 3
3209	KISSIMMEE RIVER	STREAM		Benzene	3B			PP = 0 / 3; VP = No data
3209	KISSIMMEE RIVER	STREAM		Beta BHC	2			PP = 0 / 36; VP = 0 / 13
3209	KISSIMMEE RIVER	STREAM		Boron	3B			PP = 0 / 3; VP = 0 / 3
3209	KISSIMMEE RIVER	STREAM		Bromoform	3B			PP = 0 / 3; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3209	KISSIMMEE RIVER	STREAM		Cadmium	2			PP = 12 / 134; VP = 2 / 56
3209	KISSIMMEE RIVER	STREAM		Carbon Tetrachloride	3B			PP = 0 / 3; VP = No data
3209	KISSIMMEE RIVER	STREAM		Chlordane	2			PP = 0 / 13; VP = 0 / 7
3209	KISSIMMEE RIVER	STREAM		Chlorodibromomethane	3B			PP = 0 / 3; VP = No data
3209	KISSIMMEE RIVER	STREAM		Chloroform	3B			PP = 0 / 3; VP = No data
3209	KISSIMMEE RIVER	STREAM		Chlorophenol	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Chromium3	3B			PP = 0 / 5; VP = 0 / 11
3209	KISSIMMEE RIVER	STREAM		Copper	2			PP = 3 / 134; VP = 4 / 60
3209	KISSIMMEE RIVER	STREAM		Demeton	2			PP = 0 / 24; VP = 0 / 12
3209	KISSIMMEE RIVER	STREAM		Dieldrin	2			pp = 0 / 17; VP = 0 / 8
3209	KISSIMMEE RIVER	STREAM		Dinitrotoluene	3B			pp = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM	Dissolved Oxygen	Dissolved Oxygen	3C	(High)	(2005)	PP = 285 / 753; VP = 128 / 333. DO met verification threshold of the IWR, and BOD exceeded the screening value (2.0 mg/L). 443 TN values, median 1.35 mg/L. 1277 TP values, median 0.10 mg/L. 8 BOD values, median 2.2 mg/L. 1189 DO values, median 5.90 mg/L, mean 5.48 mg/L, range 0.00 - 13.42 mg/L. Although BOD slightly exceeded the screening level, all the BOD measurements were collected from two sampling events. At the sites and on the date that high BOD measurements were observed, DO concentrations were all higher than 5.0 mg/L. It is therefore unreasonable to consider BOD as the causative pollutant for low DO in the system.
3209	KISSIMMEE RIVER	STREAM		Endosulfan	2			PP = 0 / 36; VP = 0 / 13
3209	KISSIMMEE RIVER	STREAM		Endrin	2			PP = 0 / 25; VP = 0 / 14
3209	KISSIMMEE RIVER	STREAM		Fecal Coliform	3B			PP = 2 / 2 ; VP = 0 / 4
3209	KISSIMMEE RIVER	STREAM		Fluoranthene	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Fluorene	3B			PP = 0 / 1; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Guthion	2			PP = 0 / 32; VP = 0 / 11
3209	KISSIMMEE RIVER	STREAM		Heptachlor	2			PP = 0 / 31; VP = 0 / 23
3209	KISSIMMEE RIVER	STREAM		Hexachlorobutadiene	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Iron	2			PP = 6 / 90; VP = 3 / 38
3209	KISSIMMEE RIVER	STREAM		Lead	2			PP = 1 / 130; VP = 5 / 59
3209	KISSIMMEE RIVER	STREAM		Lindane	2			PP = 0 / 44; VP = 0 / 23

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3209	KISSIMMEE RIVER	STREAM		Malathion	2			PP = 0 / 33; VP = 0 / 24
3209	KISSIMMEE RIVER	STREAM		Methoxychlor	2			PP = 0 / 31; VP = 0 / 23
3209	KISSIMMEE RIVER	STREAM		Methyl Chloride	3B			PP = 0 / 3; VP = No data
3209	KISSIMMEE RIVER	STREAM		Mirex	2			PP = 0 / 23; VP = 0 / 11
3209	KISSIMMEE RIVER	STREAM		Nickel	3B			PP = 0 / 5; VP = 0 / 3
3209	KISSIMMEE RIVER	STREAM	Nutrients	Nutrients (Chla)	2			Delist. PP - Not impaired. 0 chla annual means exceeded the threshold. Annual means were 8.1 µg/L, 9.1 µg/L, 6.8 µg/L, 7.5 µg/L, 13.0 µg/L, and 6.71 µg/L in 1996, 1997, 1998, 1999, 2000, and 2001, respectively. 217 chla values, range 1.0 - 69.3 µg/L, mean 10.2 µg/L. 147 chla (corrected) values, range 1.0 - 60.7 µg/L, mean 8.8 µg/L. VP - Not impaired. 0 chla annual means exceeded the threshold. Annual means were 6.8 µg/L, 7.5 µg/L, 13.0 µg/L, 6.7 µg/L, and 7.6 µg/L in 1998, 1999, 2000, 2001, and 2004, respectively. 155 chla values, range 1.0 - 69.3 µg/L, mean 9.6 µg/L. 95 chla (corrected) values, range 1.0 - 60.7 µg/L, mean 8.8 µg/L. 443 TN values, median 1.35 mg/L. 1277 TP values, median 0.10 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3209	KISSIMMEE RIVER	STREAM	Nutrients	Nutrients (Historic Chla)	2			Delist. PP - No 2 consecutive annual means exceeded the historic minimum value (8.0 µg/L, calculated based on data from the period 1995 - 1999) by more than 50%. Annual means were 8.1 µg/L, 9.1 µg/L, 6.8 µg/L, 7.5 µg/L, 13.0 µg/L, and 6.71 µg/L in 1996, 1997, 1998, 1999, 2000, and 2001, respectively. 217 chla values, range 1.0 - 69.3 µg/L, mean 10.2 µg/L. 147 chla (corrected) values, range 1.0 - 60.7 µg/L, mean 8.8 µg/L. VP - No 2 consecutive annual means exceeded the historic minimum. 0 chla annual means exceeded the threshold. Annual means were 6.8 µg/L, 7.5 µg/L, 13.0 µg/L, 6.7 µg/L, and 7.6 µg/L in 1998, 1999, 2000, 2001, and 2004, respectively. 155 chla values, range 1.0 - 69.3 µg/L, mean 9.6 µg/L. 95 chla (corrected) values, range 1.0 - 60.7 µg/L, mean 8.8 µg/L. 443 TN values, median 1.35 mg/L. 1277 TP values, median 0.10 mg/L.
3209	KISSIMMEE RIVER	STREAM		Parathion	3B			PP = 0 / 5; VP = No data
3209	KISSIMMEE RIVER	STREAM		Pentachlorophenol	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Phenol	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Pyrene	3B			PP = 0 / 4; VP = 0 / 1
3209	KISSIMMEE RIVER	STREAM		Selenium	3B			PP = 0 / 5; VP = 0 / 3
3209	KISSIMMEE RIVER	STREAM		Silver	3B			PP = 0 / 2; VP = No data
3209	KISSIMMEE RIVER	STREAM		Tetrachloroethylene	3B			PP = 0 / 3; VP = No data
3209	KISSIMMEE RIVER	STREAM		Thallium	3B			PP = 0 / 5; VP = 0 / 3
3209	KISSIMMEE RIVER	STREAM		Total Coliform	3B			PP = 0 / 2; VP = 0/4
3209	KISSIMMEE RIVER	STREAM		Toxaphene	2			PP = 0 / 13; VP = 0 / 7
3209	KISSIMMEE RIVER	STREAM		Trichloroethylene	3B			PP = 0 / 3; VP = No data
3209	KISSIMMEE RIVER	STREAM		Turbidity	2			PP = 11 / 659; VP = 4 / 308
3209	KISSIMMEE RIVER	STREAM		Unionized Ammonia	2			PP = 0 / 494; VP = 0 / 67
3209	KISSIMMEE RIVER	STREAM		Zinc	2			PP = 1 / 134; VP = 0 / 64
3214	L-48	STREAM		Dissolved Oxygen	3B			PP = 1 / 2; VP = 1 / 2
3214	L-48	STREAM		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3214	L-48	STREAM		Fluoride	3B			PP = 0 / 2; VP = 0 / 2
3214	L-48	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
3214	L-48	STREAM		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
3214	L-48	STREAM		Turbidity	3B			PP = 0 / 2; VP = 0 / 2
1856A	ISTOKPOGA CANAL	STREAM		Arsenic	2			PP = 0 / 21; VP = 0 / 1
1856A	ISTOKPOGA CANAL	STREAM		Dissolved Oxygen	3C			PP = 95 / 226; VP = 70 / 94. DO met verification threshold of the IWR, but unable to determine the causative pollutant. 98 TN values, median 1.23 mg/L. 100 TP values, median 0.06 mg/L. No BOD data. 254 DO values, median 5.33 mg/L, mean 4.71 mg/L, range 0.03 - 10.44 mg/L. Almost all the landuses on the west bank of the stream are tree crops and citrus grove. The east bank are mainly upland forest and wetland. It is a mixed condition.
1856A	ISTOKPOGA CANAL	STREAM		Iron	3C			PP = 5 / 27; VP = 3 / 11
1856A	ISTOKPOGA CANAL	STREAM		Nutrients (Chla)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 7.9 µg/L, 8.5 µg/L, 6.0 µg/L, 13.6 µg/L, 11.7 µg/L, and 15.8 µg/L in 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 78 chla values, range 1.0 - 35.0 µg/L, mean 11.6 µg/L. 62 chla (corrected) values, range 1.0 - 33.6 µg/L, mean 9.0 µg/L. VP - 0 TSI annual means exceeded the threshold. Annual means were 8.5 µg/L, 6.0 µg/L, 13.6 µg/L, 11.7 µg/L, and 15.8 µg/L in 1998, 1999, 2000, 2001, and 2002, respectively. 64 chla values, range 1.0 - 35.0 µg/L, mean 12.1 µg/L. 44 chla (corrected) values, range 1.0 - 33.6 µg/L, mean 9.7 µg/L. 98 TN values, median 1.23 mg/L. 100 TP values, median 0.06 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1856A	ISTOKPOGA CANAL	STREAM		Nutrients (Historic Chla)	2			PP - In no two consecutive years chla annual means exceeded the historic minimum value (7.4 µg/L, calculated based on data from the period 1995 - 1999) by more than 50%. Annual means were 16.24, 7.9 µg/L, 8.5 µg/L, 6.0 µg/L, 13.6 µg/L, 10.99 µg/L, and 12.8 µg/L in 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 78 chla values, range 1.0 - 35.0 µg/L, mean 11.6 µg/L. 62 chla (corrected) values, range 1.0 - 33.6 µg/L, mean 9.0 µg/L. VP - In no consecutive two years chla annual means exceeded the historic minimum by more than 50%. Annual means were 8.5 µg/L, 6.0 µg/L, 13.6 µg/L, 10.99 µg/L, 12.8 µg/L, and 7.02 µg/L in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 64 chla values, range 1.0 - 35.0 µg/L, mean 12.1 µg/L. 44 chla (corrected) values, range 1.0 - 33.6 µg/L, mean 9.7 µg/L. 98 TN values, median 1.23 mg/L. 100 TP values, median 0.06 mg/L.
1856A	ISTOKPOGA CANAL	STREAM		Turbidity	2			PP = 1 / 108; VP = 1 / 56
1856A	ISTOKPOGA CANAL	STREAM		Unionized Ammonia	2			PP = 0 / 48; VP = 0 / 4
3186B	KISSIMMEE RIVER	STREAM		Aldrin	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Aluminum	3B			PP = 0 / 1; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Arsenic	2			PP = 0 / 83; VP = 0 / 19
3186B	KISSIMMEE RIVER	STREAM		Beta BHC	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Cadmium	2			PP = 1 / 23; VP = 1 / 11
3186B	KISSIMMEE RIVER	STREAM		Chlordane	3B			PP = 0 / 5; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Copper	2			PP = 0 / 23; VP = 0 / 11
3186B	KISSIMMEE RIVER	STREAM		Demeton	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Dieldrin	3B			PP = 0 / 5; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3186B	KISSIMMEE RIVER	STREAM	Dissolved Oxygen (BOD)	Dissolved Oxygen	4C			Delist. PP = 240 / 383; VP = 105 / 202. DO met verification threshold of the IWR, and BOD slightly exceeded the screen value (2.0 mg/L). 311 TN values, median 1.24 mg/L. 1183 TP values, median 0.07 mg/L. 54 BOD values, median 2.1 mg/L. 340 DO values, 4.7 mg/L, range 0.01 - 12.81 mg/L. The area surrounding the two water quality stations where relatively high BOD were observed are mainly in muck soils. These soils could be a source of dissolved organic carbon for the river channel. Break down of aquatic plant and the falling leaves from mixed wetland area could be other source of dissolved organic carbon for the river. Low DO in the system could be caused by the naturally high input of the organic carbon to the system, and also the periodic stagnant flow condition in the remnant river caused by the channelization of the Kissimmee River.
3186B	KISSIMMEE RIVER	STREAM		Endosulfan	3B			pp = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Endrin	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
3186B	KISSIMMEE RIVER	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3186B	KISSIMMEE RIVER	STREAM		Guthion	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Heptachlor	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Iron	2			PP = 4 / 83 Not impaired; VP = 4 / 47 Not impaired
3186B	KISSIMMEE RIVER	STREAM		Lead	2			PP = 0 / 21; VP = 0 / 10
3186B	KISSIMMEE RIVER	STREAM		Lindane	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Malathion	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Methoxychlor	3B			PP = 0 / 7; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Mirex	3B			PP = 0 / 7; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3186B	KISSIMMEE RIVER	STREAM		Nutrients (Chla)	2			PP - 4 chla annual means exceeded the threshold. Annual means Chla were 28.6 µg/L, 15.8 µg/L, 25.7 µg/L, 27.7 µg/L, 16.7 µg/L, and 29.9 µg/L in 1996, 1997, 1998, 1999, 2000, and 2001, respectively. 269 chla values, range 1.0 - 308.6 µg/L, mean 25.2 µg/L. 201 chla (corrected) values, range 1.0 - 293.8 µg/L, mean 21.7 µg/L. VP - 3 chla values exceeded the threshold. Chla annual means were 25.7 µg/L, 27.7 µg/L, 16.7 µg/L, 29.9 µg/L, 18.7, and 15.5 µg/L in 1998, 1999, 2000, 2001, 2003, and 2004, respectively. 187 chla values, range 1.0 - 308.6 µg/L, mean 25.6 µg/L. 134 chla (corrected) values, range 1.0 - 293.8 µg/L, mean 22.5 µg/L. 311 TN values, median 1.24 mg/L. 1183 TP values, median 0.07 mg/L. This WBID is the outlet of Lake Kissimmee (WBID 3183B) and receives most of its flow from the lake. Detailed analyses indicated that TN, TP, and Chla concentrations of this WBID are consistently lower than those of the lake, suggesting that the input from the area discharge directly to this WBID does not contribute a significant amount of pollutant. In addition, Chla concentration of the WBID is strong correlated with that of the lake, indicating the Chla were mainly passed down from the lake, instead of the Chla grown in the WBID. Most landuse along the river WBID is natural.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3186B	KISSIMMEE RIVER	STREAM		Nutrients (Historic Chla)	2			PP - No 2 consecutive annual means exceeded the historic minimum value (14.7 µg/L, calculated based on data from the period 1985 - 1989) by more than 50%. Annual means Chla were 28.6 µg/L, 15.8 µg/L, 25.7 µg/L, 27.7 µg/L, 16.7 µg/L, and 29.9 µg/L in 1996, 1997, 1998, 1999, 2000, and 2001, respectively. 269 chla values, range 1.0 - 308.6 µg/L, mean 25.2 µg/L. 201 chla (corrected) values, range 1.0 - 293.8 µg/L, mean 21.7 µg/L. VP - No 2 consecutive annual means exceeded the historic minimum by more than 50%. Chla annual means were 25.7 µg/L, 27.7 µg/L, 16.7 µg/L, 29.9 µg/L, 18.7, and 15.5 µg/L in 1998, 1999, 2000, 2001, 2003, and 2004, respectively. 187 chla values, range 1.0 - 308.6 µg/L, mean 25.6 µg/L. 134 chla (corrected) values, range 1.0 - 293.8 µg/L, mean 22.5 µg/L. 311 TN values, median 1.24 mg/L. 1183 TP values, median 0.07 mg/L.
3186B	KISSIMMEE RIVER	STREAM		Total Coliform	3B			PP = 1 / 7; VP = 0 / 1
3186B	KISSIMMEE RIVER	STREAM		Toxaphene	3B			PP = 0 / 5; VP = No data
3186B	KISSIMMEE RIVER	STREAM		Turbidity	2			PP = 4 / 313; VP = 2 / 138
3186B	KISSIMMEE RIVER	STREAM		Unionized Ammonia	2			PP = 0 / 158; VP = 0 / 30
3186B	KISSIMMEE RIVER	STREAM		Zinc	2			PP = 0 / 23; VP = 0 / 11
3186C	BLANKET BAY SLOUGH	STREAM	Dissolved Oxygen	Dissolved Oxygen	5	Low	2010*	PP = 20 / 26, Potentially impaired; VP = 14 / 20, Impaired. DO met verification threshold, and nutrients are the causative pollutant. 15 TN values, median 1.81 mg/L. 15 TP values, median 0.21 mg/L. 16 BOD values, median 1.8 mg/L. Stream is nitrogen limited based on a TN/TP ratio median of 8.45 (15 values) in the Verified Period. 46 DO values, median 3.75 mg/L, mean 4.11 mg/L, range 0.61 - 7.00 mg/L.
3186C	BLANKET BAY SLOUGH	STREAM		Iron	3B			PP = 1 / 1; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3186C	BLANKET BAY SLOUGH	STREAM	Nutrients	Nutrients (Chla)	5	Low	2010*	PP - Insufficient data to calculate any Chla annual mean. VP - Impaired. 1 chla annual mean exceeded 20 µg/L. The annual mean was 35.29 µg/L in 2004. 20 chla (corrected) values, range 1.4 - 365.1 µg/L, mean 29.2 µg/L. 15 TN values, median 1.81 mg/L. 15 TP values, median 0.21 mg/L. Communities are limited by nitrogen based on a TN/TP ratio median of 8.45 (15 values) in the Verified Period.
3186C	BLANKET BAY SLOUGH	STREAM		Total Coliform	3B			PP = 1 / 1; VP = No data
3186C	BLANKET BAY SLOUGH	STREAM		Turbidity	2			PP = 0 / 10; VP = No data
3186C	BLANKET BAY SLOUGH	STREAM		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
3186D	EIGHTMILE SLOUGH	STREAM	Dissolved Oxygen	Dissolved Oxygen	3C	(Low)	(2010)	PP = 22 / 30; VP = 4 / 14; Does not meet verification threshold due to Insufficient data in the verified period.
3186D	EIGHTMILE SLOUGH	STREAM		Fecal Coliform	3B			PP = 1 / 1; VP = 4 / 12
3186D	EIGHTMILE SLOUGH	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3186D	EIGHTMILE SLOUGH	STREAM		Iron	3B			PP = 0 / 4; VP = No data
3186D	EIGHTMILE SLOUGH	STREAM		Nutrients (Chla)	2			PP - Insufficient data to calculate any annual mean Chla. VP - 0 Chla annual means exceeded the threshold. The Chla annual mean was 3.02 ug/L in 2004. 16 TN values, median 1.03 mg/L, 16 TP values, median 0.02 mg/L.
3186D	EIGHTMILE SLOUGH	STREAM		Total Coliform	3B			PP = 2 / 2; VP = 9 / 12
3186D	EIGHTMILE SLOUGH	STREAM		Turbidity	2			PP = 0 / 12; VP = 0 / 13

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3187A	KISSIMMEE RIVER	STREAM		Dissolved Oxygen	3C			PP = 68 / 116, Potentially impaired; VP = 13 / 21, Impaired. DO met the verification threshold and the median BOD values exceeded the screening level. The parameter was put on the 1st draft VL. However, the date at which DO concentrations were low did not match up with the date in which BOD concentrations were high. Therefore it is unreasonable to consider BOD as the causative pollutant. No other possible causative pollutants were identified. 27 TN values, median 1.49 mg/L, 27 TP values, median 0.15 mg/L, 22 BOD values, median 3.7 mg/L.
3187A	KISSIMMEE RIVER	STREAM		Fecal Coliform	4C			PP = 2 / 4, Insufficient data; VP = 6 / 21, Although fecal coliform meets the verification threshold, no major human source could be identified. The majority landuses around the sampling sites are wetlands, wildlife may contribute to coliform bacteria in ambient waters. In addition, high total coliform concentrations were observed when the fecal coliform concentrations were low, suggesting contributions from the soil. The FDEP therefore consider the occasional high fecal coliform concentration observed in this waterbody a natural condition.
3187A	KISSIMMEE RIVER	STREAM		Fluoride	3B			PP = 0 / 4; VP = 0 / 4
3187A	KISSIMMEE RIVER	STREAM		Nutrients (Chla)	2			PP - Insufficient data to calculate any mean. VP - 0 Chla annual means exceeded the threshold. The Chla annual mean was 5.4 mg/L. 27 TN values, median 1.49 mg/L; 27 TP values, median 0.15 mg/L

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3187A	KISSIMMEE RIVER	STREAM		Total Coliform	4C			PP = 2 / 4, Insufficient; VP = 18 / 21, Although total coliform meets the verification threshold, no major human source could be identified. The majority landuses around the sampling sites are wetlands, wildlife may contribute to coliform bacteria in ambient waters. In addition, high total coliform concentrations were observed when the fecal coliform concentrations were low, suggesting contributions from the soil. The FDEP therefore consider the occasional high total coliform bacteria concentration observed in this waterbody a natural condition.
3187A	KISSIMMEE RIVER	STREAM		Turbidity	2			PP = 4 / 247; VP = 0 / 21
3187A	KISSIMMEE RIVER	STREAM		Unionized Ammonia	2			PP = 0 / 111; VP = No data
3187B	PINE ISLAND SLOUGH	STREAM		Dissolved Oxygen	3C			PP = 21 / 27; VP = 5 / 8; Does not meet verification threshold due to Insufficient data in the verified period.
3187B	PINE ISLAND SLOUGH	STREAM		Total Coliform	3B			PP = 0 / 1; VP = No data
3187B	PINE ISLAND SLOUGH	STREAM		Turbidity	2			PP = 0 / 16; VP = 0 / 8
3187C	DUCK SLOUGH	STREAM			3A			PP = No data; VP = No data
3188A	CHANDLER SLOUGH	STREAM		Arsenic	3B			PP = No data; VP = 0 / 4
3188A	CHANDLER SLOUGH	STREAM		Chromium3	3B			PP = No data; VP = 0 / 4
3188A	CHANDLER SLOUGH	STREAM		Copper	3B			PP = No data; VP = 0 / 1
3188A	CHANDLER SLOUGH	STREAM	Dissolved Oxygen	Dissolved Oxygen	3C	(High)	(2005)	PP = 94 / 110; VP = 60 / 70. DO met verification threshold of the IWR, but unable to determine the causative pollutant. 76 TN values, median 1.38 mg/L. 78 TP values, median 0.13 mg/L. 5 BOD values, median 1.8 mg/L. 134 DO values, median 2.82 mg/L, mean 3.13 mg/L, range 0.42 - 8.40 mg/L. This WBID contains 58% human landuse. Forty-nine percent of the level 1 land use is characterized as agriculture.
3188A	CHANDLER SLOUGH	STREAM		Iron	3B			PP = No data; VP = 1 / 3
3188A	CHANDLER SLOUGH	STREAM		Lead	3B			PP = No data; VP = 1 / 1

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3188A	CHANDLER SLOUGH	STREAM	Nutrients	Nutrients (Chla)	3C	(High)	(2005)	PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
3188A	CHANDLER SLOUGH	STREAM		Turbidity	3B			PP = No data; VP = 0 / 5
3188A	CHANDLER SLOUGH	STREAM		Zinc	3B			PP = No data; VP = 0 / 4
3192A	KISSIMMEE RIVER	STREAM		Aldrin	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Arsenic	2			PP = 0 / 157; VP = 0 / 31
3192A	KISSIMMEE RIVER	STREAM		Beta BHC	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Cadmium	2			PP = 3 / 34; VP = 2 / 15
3192A	KISSIMMEE RIVER	STREAM		Chlordane	3B			PP = 0 / 5; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Copper	2			PP = 0 / 43; VP = 0 / 15
3192A	KISSIMMEE RIVER	STREAM		Demeton	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Dieldrin	3B			PP = 0 / 5; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Dissolved Oxygen	3C			PP = 380 / 610; VP = 224 / 345. DO met verification threshold of the IWR, but unable to determine the causative pollutant. 357 TN values, median 1.21 mg/L. 2187 TP values, median 0.07 mg/L. 256 BOD values, median 1.00 mg/L. This WBID contains 60% human landuse. Fifty-six percent of the level 1 landuse is characterized as agriculture.
3192A	KISSIMMEE RIVER	STREAM		Endosulfan	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Endrin	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Guthion	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Heptachlor	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Iron	2			PP = 166 / 331, Potentially impaired; VP = 8 / 59, Not impaired. This parameter was on the 1st draft VL. However, based on the information from the SFWMD, some off-scale high iron concentrations that put this parameter on the 1st draft VL were measurements from seepage wells. Assessment was reconducted after these well data were excluded.
3192A	KISSIMMEE RIVER	STREAM		Lead	2			PP = 1 / 40; VP = 1 / 14
3192A	KISSIMMEE RIVER	STREAM		Lindane	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Malathion	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Methoxychlor	3B			PP = 0 / 7; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Mirex	3B			PP = 0 / 7; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3192A	KISSIMMEE RIVER	STREAM		Nutrients (Chla)	2			PP - 0 chla annual means exceeded the threshold. Annual means were 14.7 µg/L, 9.3 µg/L, 11.8 µg/L, 11.9 µg/L, 12.8 µg/L, 15.5 µg/L, and 14.3 µg/L in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 417 chla values, range 1.0 - 127.2 µg/L, mean 14.7 µg/L. 292 chla (corrected) values, range 1.0 - 124.1 µg/L, mean 12.2 µg/L. VP - 0 chla annual means exceeded the threshold. Annual means were 11.8 µg/L, 11.9 µg/L, 12.8 µg/L, 15.5 µg/L, 14.3 µg/L, 9.6 µg/L, and 9.4 µg/L in 1998, 1999, 2000, 2001, 2002, 2003, and 2004, respectively. 277 chla values, range 1.0 - 105.9 µg/L, mean 14.5 µg/L. 186 chla (corrected) values, range 1.0 - 103.4 µg/L, mean 12.5 µg/L. 357 TN values, median 1.21 mg/L. 2187 TP values, median 0.07 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3192A	KISSIMMEE RIVER	STREAM		Nutrients (Historic Chla)	2			PP - No 2 consecutive chla annual means exceeded the historic minimum value (11.9 µg/L, calculated based on data from the period 1995 - 1999) by more than 50%. Annual means were 14.7 µg/L, 9.3 µg/L, 11.8 µg/L, 11.9 µg/L, 12.8 µg/L, 15.5 µg/L, and 14.3 µg/L in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 417 chla values, range 1.0 - 127.2 µg/L, mean 14.7 µg/L. 292 chla (corrected) values, range 1.0 - 124.1 µg/L, mean 12.2 µg/L. VP - No 2 consecutive chla annual means exceeded the historic minimum by more than 50%. Annual means were 11.8 µg/L, 11.9 µg/L, 12.8 µg/L, 15.5 µg/L, 14.3 µg/L, 9.6 µg/L, and 9.4 µg/L in 1998, 1999, 2000, 2001, 2002, 2003, and 2004, respectively. 277 chla values, range 1.0 - 105.9 µg/L, mean 14.5 µg/L. 186 chla (corrected) values, range 1.0 - 103.4 µg/L, mean 12.5 µg/L. 357 TN values, median 1.21 mg/L. 2187 TP values, median 0.07 mg/L.
3192A	KISSIMMEE RIVER	STREAM		Total Coliform	3B			PP = 0 / 6; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Toxaphene	3B			PP = 0 / 5; VP = No data
3192A	KISSIMMEE RIVER	STREAM		Turbidity	2			PP = 3 / 456; VP = 3 / 196
3192A	KISSIMMEE RIVER	STREAM		Unionized Ammonia	2			PP = 2 / 414; VP = 0 / 118
3192A	KISSIMMEE RIVER	STREAM		Zinc	2			PP = 0 / 43; VP = 0 / 15
3192B	STARVATION SLOUGH	STREAM		Dissolved Oxygen	3B			PP = 1 / 1; VP = 1 / 1
3192B	STARVATION SLOUGH	STREAM		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
3192B	STARVATION SLOUGH	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3192B	STARVATION SLOUGH	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
3192B	STARVATION SLOUGH	STREAM		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
3192B	STARVATION SLOUGH	STREAM		Turbidity	3B			PP = 0 / 1; VP = 0 / 1
3192C	OAK CREEK	STREAM		Arsenic	3B			PP = No data; VP = 0 / 10

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
3192C	OAK CREEK	STREAM		Chromium3	3B			PP = No data; VP = 1 / 10
3192C	OAK CREEK	STREAM		Copper	3B			PP = No data; VP = 5 / 8
3192C	OAK CREEK	STREAM	Dissolved Oxygen	Dissolved Oxygen	3C	(High)	(2005)	PP = 7 / 7; VP = 8 / 11; Does not meet verification threshold due to Insufficient data in the verified period.
3192C	OAK CREEK	STREAM	Coliform Bacteria	Fecal Coliform	3C	(High)	(2005)	PP = No data; VP = 2 / 11
3192C	OAK CREEK	STREAM		Iron	3B			PP = No data; VP = 3 / 7
3192C	OAK CREEK	STREAM		Lead	3B			PP = No data; VP = 8 / 8
3192C	OAK CREEK	STREAM	Nutrients	Nutrients (Chla)	5	High	2005	PP - Insufficient data to calculate any mean. VP - Impaired. 1 Chla annual mean exceeded the threshold. The annual mean Chla concentration was 26.78 µg/L. 12 TN values, median 1.94 mg/L, 11 TP values, median 0.23 mg/L. The community is nitrogen limited based on a TN/TP median of 7.9 calculated from 11 TN/TP ratios.
3192C	OAK CREEK	STREAM	Coliform Bacteria	Total Coliform	3C	(High)	(2005)	PP = 0 / 1; VP = 1 / 9
3192C	OAK CREEK	STREAM		Turbidity	3B			PP = 0 / 7; VP = 3 / 11
3192C	OAK CREEK	STREAM		Zinc	3B			PP = No data; VP = 0 / 10
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1619	TIGER CREEK	STREAM		Biology	2			PP = 8 SCIs passed in 1993, 1994, 1995, 1997, 1999, and 2002. VP = 2 SCIs passed in 1999 and 2002.
1619	TIGER CREEK	STREAM		Chlorine	3B			PP = 1 / 1; VP = 1 / 1
1619	TIGER CREEK	STREAM		Dissolved Oxygen	2			PP = 7 / 81; VP = 3 / 57
1619	TIGER CREEK	STREAM		Fecal Coliform	3B			PP = 2 / 9; VP = 3 / 13
1619	TIGER CREEK	STREAM		Fluoride	3B			PP = 0 / 3; VP = 0 / 3
1619	TIGER CREEK	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
1619	TIGER CREEK	STREAM		Total Coliform	2			PP = 2 / 24; VP = 1 / 7
1619	TIGER CREEK	STREAM		Turbidity	2			PP = 0 / 35; VP = 0 / 23
1619	TIGER CREEK	STREAM		Unionized Ammonia	2			PP = 0 / 20; VP = 0 / 2
1663	CROOKED LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 70; VP = 2 / 68
1663	CROOKED LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1663	CROOKED LAKE	LAKE		Iron	3B			PP = 2 / 6; VP = 0 / 6

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1663	CROOKED LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 annual means exceeded the historic minimum (36.45, calculated based on data from the period 1997 - 2001) by more than 10 TSI units. Annual means were 36.4, 34.1, 38.8, and 38.0 in 1997, 2000, 2001, and 2002, respectively. 311 chla values, range 1.0 - 15.9 µg/L, mean 4.7 µg/L. 39 chla (corrected) values, range 1.0 - 20.8 µg/L, mean 5.3 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 25 chla values, range 1.3 - 13.9 µg/L, mean 5.5 µg/L. 37 chla (corrected) values, range 1.0 - 20.8 µg/L, mean 5.4 µg/L. 73 TN values, median 0.63 mg/L. 72 TP values, median 0.02 mg/L.
1663	CROOKED LAKE	LAKE		Nutrients (TSI)	2			PP - 0 annual means exceeded the threshold. Annual means were 36.4, 34.1, 38.8, and 38.0 in 1997, 2000, 2001, and 2002. 311 chla values, range 1.0 - 15.9 µg/L, mean 4.7 µg/L. 35 chla (corrected) values, range 1.0 - 20.8 µg/L, mean 5.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 224 chla values, range 1.3 - 13.9 µg/L, mean 5.5 µg/L. 37 chla (corrected) values, range 1.0 - 20.8 µg/L, mean 5.4 µg/L. 73 TN values, median 0.63 mg/L. 72 TP values, median 0.02 mg/L.
1663	CROOKED LAKE	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1663	CROOKED LAKE	LAKE		Turbidity	2			PP = 2 / 70; VP = 1 / 67
1663	CROOKED LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 29; VP = 0 / 2
1706	LAKE CLINCH	LAKE		Dissolved Oxygen	2			PP = 2 / 24; VP = 1 / 18

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1706	LAKE CLINCH	LAKE		Mercury (in fish tissue)	5	Low	2011	VP - Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.69 mg/Kg (ppm) in 2004.
1706	LAKE CLINCH	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 3
1706	LAKE CLINCH	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum value (42.64, calculated based on data from 1997 - 2001) by more than 10 TSI units. Annual means were 46.2, 42.0, 44.5, 43.0, and 41.1 in 1996, 1997, 1998, 1999, and 2000, respectively. 147 chla values, range 3.0 - 20.0 µg/L, mean 9.5 µg/L. 14 chla (corrected) values, range 4.1 - 13.6 µg/L, mean 7.9 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 8 chla values, range 3.3 - 9.2 µg/L, mean 6.5 µg/L. 12 chla (corrected) values, range 4.1 - 13.6 µg/L, mean 7.8 µg/L. 21 TN values, median 0.52 mg/L. 21 TP values, median 0.01 mg/L.
1706	LAKE CLINCH	LAKE		Nutrients (TSI)	3C			PP - 5 TSI annual means exceeded the threshold (TSI 40 was used as the assessment threshold because the water color is lower than 40 pcu). Annual means were 46.2, 42.0, 44.5, 43.0, and 41.1 in 1996, 1997, 1998, 1999, and 2000, respectively. 147 chla values, range 3.0 - 20.0 µg/L, mean 9.5 µg/L. 14 chla (corrected) values, range 4.1 - 13.6 µg/L, mean 7.9 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 12 chla (corrected) values, range 4.1 - 13.6 µg/L, mean 7.8 µg/L. 21 TN values, median 0.52 mg/L. 21 TP values, median 0.01 mg/L.
1706	LAKE CLINCH	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1706	LAKE CLINCH	LAKE		Turbidity	2			PP = 0 / 24; VP = 0 / 18

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1706	LAKE CLINCH	LAKE		Unionized Ammonia	2			PP = 0 / 10; VP = No data
1710	BLUE JORDAN SWAMP	STREAM		Dissolved Oxygen	3B			PP = 0 / 1; VP = No data
1723	UNNAMED RUN	STREAM			3A			PP = No data; VP = No data
1730	CENTER OF LAKE HICKORY	LAKE		Dissolved Oxygen	2			PP = 0 / 15; VP = 0 / 18
1730	CENTER OF LAKE HICKORY	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 2
1730	CENTER OF LAKE HICKORY	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 3
1730	CENTER OF LAKE HICKORY	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1730	CENTER OF LAKE HICKORY	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1730	CENTER OF LAKE HICKORY	LAKE		Turbidity	2			PP = 2 / 15; VP = 2 / 18
1730	CENTER OF LAKE HICKORY	LAKE		Unionized Ammonia	3B			PP = 0 / 3; VP = 0 / 1
1758	LAKE DAMON	LAKE		Dissolved Oxygen	3B			PP = 1 / 6; VP = 1 / 4
1758	LAKE DAMON	LAKE		Fecal Coliform	3B			PP = 1 / 5; VP = 1 / 5
1758	LAKE DAMON	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1758	LAKE DAMON	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1758	LAKE DAMON	LAKE		Nutrients (TSI)	3C			PP - 1 TSI annual mean in 2000 exceeded the threshold. TSI annual means were 42.3 and 42.5 in 1999 and 2000, respectively. 117 chla values, range 1.0 - 16.0 µg/L, mean 6.8 µg/L. 5 chla (corrected) values, range 1.0 - 6.9 µg/L, mean 4.2 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chla values, range 1.0 - 8.0 µg/L, median 3.1 µg/L. 3 chla (corrected) values, range 1.0 - 6.8 µg/L, mean 3.1 µg/L. 5 TN values, median 0.55 mg/L. 3 TP values, median 0.02 mg/L.
1758	LAKE DAMON	LAKE		Total Coliform	3B			PP = 1 / 5; VP = 1 / 5
1758	LAKE DAMON	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 4
1758	LAKE DAMON	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1761	ARBUCKLE CREEK	STREAM		Arsenic	2			PP = 0 / 22; VP = 0 / 21
1761	ARBUCKLE CREEK	STREAM		Chromium3	2			PP = No data; VP = 0 / 20
1761	ARBUCKLE CREEK	STREAM		Copper	3B			PP = No data; VP = 11 / 16

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1761	ARBUCKLE CREEK	STREAM		Dissolved Oxygen	4c	Low	2010	PP = 25 / 68; VP = 14 / 35. This WBID was on the 2 nd draft Verified List for DO impairment because DO met verification threshold and nutrients were assessed as the causative pollutants. 45 TN values, median 1.30 mg/L. 49 TP values, median 0.11 mg/L. 16 BOD values, median 1.4 mg/L. 103 DO values, median 6.00 mg/L, mean 5.86 mg/L, range 0.34 - 12.00 mg/L. However, After re-examine the data in a more detailed fashion, it was found that high chlorophyll concentrations were only observed at two water quality stations including 21FLFTM 26010661FTM and 21FLFTM 26010662FTM and these two stations were mistakenly assigned to WBID 1761. After data from these two stations were removed, nutrient was assessed not impaired for this WBID and therefore should not be considered as causative pollutant. Further analysis on the factors causing low DO indicted that DO negatively correlated with water color, suggesting the low DO condition is caused by wetland low DO discharge and therefore should be considered a natural condition.
1761	ARBUCKLE CREEK	STREAM		Fecal Coliform	3B			PP = 1 / 5; VP = 0 / 1
1761	ARBUCKLE CREEK	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1761	ARBUCKLE CREEK	STREAM		Iron	2			PP = 1 / 22; VP = 3 / 27
1761	ARBUCKLE CREEK	STREAM		Lead	3B			PP = No data; VP = 12 / 16

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1761	ARBUCKLE CREEK	STREAM		Nutrients (Chla)	2	Low	2010	PP - Not impaired. 0 chla annual averages exceeded the threshold. Chla annual averages were 4.98 µg/L and 5.05 µg/L in 1993 and 1994. 7 chla values, range 2.7 - 9.0 µg/L, mean 6.0 µg/L. 12 chla (corrected) values, range 1.0 - 22.0 µg/L, mean 7.2 µg/L. 9 VP – Not impaired. 0 chla annual average exceeded the assessment threshold. Chla annual average was 4.53 µg/L in 2004. 15 Chla values, range 1 - 28 µg/L, mean Chla = 4.54 µg/L; 37 TN values, median 1.283 mg/L. 39 TP values, median 0.10 mg/L. The WBID was on the 2 nd draft Verified List for nutrient impairment. However, after re-examined the data in a more detailed fashion, it was found that high chlorophyll concentrations were only observed at two water quality stations including 21FLFTM 26010661FTM and 21FLFTM 26010662FTM and these two stations were mistakenly assigned to WBID 1761. After data from these two stations were removed, nutrient was assessed not impaired for this WBID.
1761	ARBUCKLE CREEK	STREAM		Total Coliform	3B			PP = 0 / 2; VP = 0 / 1
1761	ARBUCKLE CREEK	STREAM		Turbidity	2			PP = 0 / 61; VP = 0 / 32
1761	ARBUCKLE CREEK	STREAM		Unionized Ammonia	2			PP = 0 / 50; VP = 0 / 4
1761	ARBUCKLE CREEK	STREAM		Zinc	2			PP = No data; VP = 0 / 20
1804	PALMETTO CREEK	STREAM			3A			PP = No data; VP = No data
1813	CARTER CREEK	STREAM		Biology	2			PP = 2 SCIs passed in 1994 and 1995. VP = No data
1813	CARTER CREEK	STREAM		Dissolved Oxygen	2			PP = 0 / 51; VP = 0 / 35
1813	CARTER CREEK	STREAM		Fecal Coliform	3B			PP = 2 / 2; VP = 1 / 1
1813	CARTER CREEK	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1813	CARTER CREEK	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean TSI.
1813	CARTER CREEK	STREAM		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813	CARTER CREEK	STREAM		Turbidity	3B			PP = 0 / 5; VP = 0 / 1
1813	CARTER CREEK	STREAM		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
1842	LAKE SEBRING	LAKE		Dissolved Oxygen	3B			PP = 1 / 6; VP = 1 / 4
1842	LAKE SEBRING	LAKE		Fecal Coliform	3B			PP = 1 / 3; VP = 1 / 3
1842	LAKE SEBRING	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1842	LAKE SEBRING	LAKE		Mercury (in fish tissue)	5	Low	2011	VP - Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.62 mg/Kg (ppm) in 2002.
1842	LAKE SEBRING	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1842	LAKE SEBRING	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (47.3, calculated based on data from 2000 - 2005) by more than 10 TSI units. Annual means were 52.1, 49.0, 51.9, 50.8, 50.6, and 47.2 in 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 229 chla values, range 3.0 - 43.0 µg/L, mean 11.9 µg/L. 5 chla (corrected) values, range 1.0 - 18.9 µg/L, mean 8.9 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 7.1 - 35.9 µg/L, mean 22.1 µg/L. 3 chla (corrected) values, range 1.0 - 18.9 µg/L, mean 8.2 µg/L. 4 TN values, median 0.69 mg/L. 3 TP values, median 0.03 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1842	LAKE SEBRING	LAKE		Nutrients (TSI)	3C			PP - 5 TSI annual means exceeded the threshold (TSI 40) in 1996, 1997, 1998, 1999, and 2002. Annual means were 52.1, 49.0, 51.9, 50.8, 50.6, and 47.2 in 1996, 1997, 1998, 1999, 2000, and 2002. 229 chla values, range 3.0 - 43.0 µg/L, mean 11.9 µg/L. 5 chla (corrected) values, range 1.0 - 18.9 µg/L, mean 8.9 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 7.1 - 35.9 µg/L, mean 22.1 µg/L. 3 chla (corrected) values, range 1.0 - 18.9 µg/L, mean 8.2 µg/L. 4 TN values, median 0.69 mg/L. 3 TP values, median 0.03 mg/L. The lake did not have color data in 1996, 1997, 1998, 1999, and 2002. However, color data from several surrounding lakes, including Lake Jackson (WBID 1860D, Little Red Water Lake (WBID 1842A), Dinner Lake (1813A), Bonnet Lake (1813E), and Lake Letta (WBID 1813C), were all lower than 40 for the period of record. Therefore, TSI 40 was used as the assessment threshold for Lake Sebring when color data were not available. In addition, the dominant landuse around Lake Sebring are almost all medium and high density residential.
1842	LAKE SEBRING	LAKE		Total Coliform	3B			PP = 1 / 3; VP = 1 / 3
1842	LAKE SEBRING	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 4
1842	LAKE SEBRING	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1891	YELLOW BLUFF CREEK	STREAM			3A			PP = No data; VP = No data
1893	HUCKLEBERRY LAKE	LAKE		Arsenic	2			PP = No data; VP = 0 / 24
1893	HUCKLEBERRY LAKE	LAKE		Chromium3	2			PP = No data; VP = 0 / 24
1893	HUCKLEBERRY LAKE	LAKE		Copper	3B			PP = No data; VP = 8 / 16
1893	HUCKLEBERRY LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 3; VP = 0 / 26
1893	HUCKLEBERRY LAKE	LAKE		Fecal Coliform	2			PP = 0 / 2; VP = 0 / 26

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1893	HUCKLEBERRY LAKE	LAKE		Iron	2			PP = 2 / 4; VP = 0 / 22
1893	HUCKLEBERRY LAKE	LAKE		Lead	3B			PP = No data; VP = 16 / 16
1893	HUCKLEBERRY LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 65.9, 69.2, and 66.2 in 1999, 2000, and 2002, respectively. 79 chla values, range 3.9 - 108.0 µg/L, mean 41.1 µg/L. 4 chla (corrected) values, range 1.9 - 61.0 µg/L, mean 22.2 µg/L. VP - 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 72.6 in 2004 (Lakewatch data for the verified period were excluded from the assessment). 2 chla (corrected) values, range 17.2 - 61.0 µg/L, mean 39.1 µg/L. 30 TN values, median 1.38 mg/L. 26 TP values, median 0.14 mg/L.
1893	HUCKLEBERRY LAKE	LAKE		Nutrients (TSI)	5	Low	2010	PP - Potentially impaired. 3 TSI annual means exceeded the threshold. Annual means were 65.9, 69.2, and 66.2 in 1999, 2000, and 2002, respectively. 79 chla values, range 3.9 - 108.0 µg/L, mean 41.1 µg/L. 4 chla (corrected) values, range 1.9 - 61.0 µg/L, mean 22.2 µg/L. VP - Impaired. 1 TSI annual mean exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 72.6 in 2004. 32 chla values, range 3.9 - 180 µg/L, mean 59.6 µg/L. 30 TN values, median 1.38 mg/L. 26 TP values, median 0.14 mg/L. The community is phosphorus and nitrogen co-limited but is more nitrogen limited based on a median TN/TP ratio of 13.6 from 26 TN/TP ratios.
1893	HUCKLEBERRY LAKE	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1893	HUCKLEBERRY LAKE	LAKE		Turbidity	2			PP = 0 / 4; VP = 0 / 22

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1893	HUCKLEBERRY LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1893	HUCKLEBERRY LAKE	LAKE		Zinc	2			PP = No data; VP = 0 / 24
1898	LAKE WOLF	LAKE		Arsenic	3B			PP = No data; VP = 0 / 14
1898	LAKE WOLF	LAKE		Chromium3	3B			PP = No data; VP = 1 / 14
1898	LAKE WOLF	LAKE		Copper	3B			PP = No data; VP = 9 / 12
1898	LAKE WOLF	LAKE		Dissolved Oxygen	2			PP = 1 / 12; VP = 1 / 17
1898	LAKE WOLF	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1898	LAKE WOLF	LAKE		Iron	3C			PP = 6 / 8; VP = 0 / 13
1898	LAKE WOLF	LAKE		Lead	3B			PP = No data; VP = 12 / 12
1898	LAKE WOLF	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 55.9 and 59.3 in 1993 and 2000. 7 chl a values, range 5.0 - 27.0 µg/L, mean 13.8 µg/L. 12 chl a (corrected) values, range 1.1 - 20.7 µg/L, mean 9.2 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 15 chl a values, range 1.4 - 15.0 µg/L. mean 5.4 µg/L. 2 chl a (corrected) values, range 8.1 - 11.5 µg/L, mean 9.8 µg/L. 15 chl a values, range 1.4 - 15.0 µg/L, mean 5.4 µg/L. 2 chl a (corrected) values, range 8.1 - 11.5 µg/L, mean 9.8 µg/L. 17 TN values, median 1.82 mg/L. 16 TP values, median 0.38 mg/L.
1898	LAKE WOLF	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1898	LAKE WOLF	LAKE		Turbidity	3C			PP = 5 / 11; VP = 12 / 15
1898	LAKE WOLF	LAKE		Unionized Ammonia	3B			PP = 0 / 7; VP = No data
1898	LAKE WOLF	LAKE		Zinc	3B			PP = No data; VP = 1 / 14
1906	LAKE CHARLOTTE	LAKE		Dissolved Oxygen	3B			PP = 2 / 6; VP = 1 / 3
1906	LAKE CHARLOTTE	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 3
1906	LAKE CHARLOTTE	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1906	LAKE CHARLOTTE	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1906	LAKE CHARLOTTE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (46.81, calculated based on data from the period 1993 - 1997) by more than 10 TSI units. Annual means were 43.8, 45.6, 51.0, 48.4, 49.9, 52.1, 50.8, and 49.3 in 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 295 chla values, range 2.0 - 50.0 µg/L, mean 11.8 µg/L. VP - Insufficient data to calculate any annual mean TSI (LakeWatch data for the verified period were excluded from the assessment). 2 chla values, range 10.6 - 38.3 µg/L, mean 24.5 µg/L. 3 chla (corrected) values, range 6.9 - 30.8 µg/L, mean 18.2 µg/L. 3 TN values, median 0.9 mg/L. 3 TP values, median 0.14 mg/L.
1906	LAKE CHARLOTTE	LAKE		Nutrients (TSI)	2			PP - 1 TSI annual mean exceeded the threshold. However, TSI annual means of all the following years were lower than the threshold. Annual means were 43.8, 45.6, 51.0, 48.4, 49.9, 52.1, 50.8, and 49.3 in 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 295 chla values, range 2.0 - 50.0 µg/L, mean 11.8 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 10.6 - 38.3 µg/L, mean 24.5 µg/L. 3 chla (corrected) values, range 6.9 - 30.8 µg/L, mean 18.2 µg/L. 3 TN values, median 0.9 mg/L. 3 TP values, median 0.14 mg/L.
1906	LAKE CHARLOTTE	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 3
1906	LAKE CHARLOTTE	LAKE		Turbidity	3B			PP = 0 / 9; VP = 0 / 3
1906	LAKE CHARLOTTE	LAKE		Unionized Ammonia	3B			PP = 0 / 6; VP = No data
1911	LAKE RUTH	LAKE		Dissolved Oxygen	3B			PP = 1 / 4; VP = 0 / 2

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1911	LAKE RUTH	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1911	LAKE RUTH	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1911	LAKE RUTH	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1911	LAKE RUTH	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1911	LAKE RUTH	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1911	LAKE RUTH	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1573E	LAKE WEOHYAKAPKA	LAKE		Dissolved Oxygen	2			PP = 1 / 45; VP = 0 / 19
1573E	LAKE WEOHYAKAPKA	LAKE		Fecal Coliform	3B			PP = 0 / 6; VP = 0 / 1
1573E	LAKE WEOHYAKAPKA	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1573E	LAKE WEOHYAKAPKA	LAKE		Nutrients (Historic TSI)	2			PP - 0 annual means exceeded the historic minimum (45.14, calculated based on data from the period 1998 - 2002) by more than 10 TSI units. Annual means were 41.3, 48.2, 46.5, 47.9, 43.7, and 43.3 in 1993, 1995, 1999, 2000, 2001, and 2002, respectively. 269 chla values, range 1.0 - 83.0 µg/L, mean over the entire period 9.8 µg/L. 35 chla (corrected) values, range 2.4 - 38.1 µg/L, mean over the entire period 8.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 16 chla (corrected) values, range 2.4 - 16.0 µg/L, mean over the entire period 6.6 µg/L. 25 TN values, median 0.72 mg/L. 25 TP values, median 0.02 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1573E	LAKE WEOHYAKAPKA	LAKE		Nutrients (TSI)	3C			PP -3 TSI annual means exceeded the threshold in 1993, 1999, and 2000. Annual means were 41.3 (color 19 pcu), 48.2 (color 62.5 pcu), 46.5 (color 25 pcu), 47.9 (color 40 pcu), 43.7 (no color), and 43.3 (no color) in 1993, 1995, 1999, 2000, 2001, and 2002, respectively. 269 chla values, range 1.0 - 83.0 µg/L, mean over the entire period 9.8 µg/L. 35 chla (corrected) values, range 2.4 - 38.1 µg/L, mean over the entire period 8.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 6 chla (corrected) values, range 2.4 - 16.0 µg/L, mean over the entire period 6.6 µg/L. 25 TN values, median 0.72 mg/L. 25 TP values, median 0.02 mg/L.
1573E	LAKE WEOHYAKAPKA	LAKE		Total Coliform	3B			PP = 0 / 4; VP = 0 / 1
1573E	LAKE WEOHYAKAPKA	LAKE		Turbidity	2			PP = 0 / 46; VP = 0 / 20
1573E	LAKE WEOHYAKAPKA	LAKE		Unionized Ammonia	2			PP = 1 / 32; VP = 0 / 2
1619A	LAKE WALES	LAKE		Dissolved Oxygen	2			PP = 0 / 24; VP = 0 / 18
1619A	LAKE WALES	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1619A	LAKE WALES	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1619A	LAKE WALES	LAKE		Nutrients (TSI)	3C			PP - 1 annual means exceeded the threshold. Annual mean was 58.0 in 2002. This lake does not have any color data for 2002, but color data collected in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2003, and 2004 were all lower than 40 pcu. Therefore the lake is considered low colored lake and TSI 40 was used for the assessment. 59 chl _a values, range 3.1 - 46.7 µg/L, mean 7.8 µg/L. 15 chl _a (corrected) values, range 1.0 - 32.0 µg/L, mean 8.5 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 7 chl _a values, range 3.1 - 25.5 µg/L, mean 7.8 µg/L. 13 chl _a (corrected) values, range 1.0 - 32.0 µg/L, mean 8.9 µg/L. 21 TN values, median 0.85 mg/L. 21 TP values, median 0.02 mg/L.
1619A	LAKE WALES	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1619A	LAKE WALES	LAKE		Turbidity	2			PP = 0 / 24; VP = 0 / 18
1619A	LAKE WALES	LAKE		Unionized Ammonia	2			PP = 0 / 10; VP = No data
1619B	LAKE EASY	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = 0 / 1
1619B	LAKE EASY	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1619B	LAKE EASY	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1619B	LAKE EASY	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1619B	LAKE EASY	LAKE		Turbidity	3B			PP = 0 / 2; VP = 0 / 1
1619B	LAKE EASY	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1619C	LAKE LEONORE	LAKE		Dissolved Oxygen	2			PP = 0 / 16; VP = 0 / 4
1619C	LAKE LEONORE	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1619C	LAKE LEONORE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1619C	LAKE LEONORE	LAKE		Turbidity	2			PP = 0 / 16; VP = 0 / 4

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1619C	LAKE LEONORE	LAKE		Unionized Ammonia	2			PP = 0 / 10; VP = No data
1619D	LAKE MOODY	LAKE		Dissolved Oxygen	2			PP = 1 / 19; VP = 0 / 7
1619D	LAKE MOODY	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1619D	LAKE MOODY	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1619D	LAKE MOODY	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1619D	LAKE MOODY	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1619D	LAKE MOODY	LAKE		Turbidity	2			PP = 0 / 19; VP = 0 / 7
1619D	LAKE MOODY	LAKE		Unionized Ammonia	2			PP = 0 / 12; VP = 0 / 2
1663A	CROOKED LAKE OUTLET	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1685A	LAKE ARBUCKLE	LAKE		Dissolved Oxygen	2			PP = 0 / 20; VP = 0 / 38
1685A	LAKE ARBUCKLE	LAKE		Fecal Coliform	2			PP = No data; VP = 0 / 20
1685A	LAKE ARBUCKLE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1685A	LAKE ARBUCKLE	LAKE		Total Coliform	4C			PP = No data; VP = 14 / 20, Although the total coliform met the verification threshold, fecal coliform is assessed not impaired. According to USEPA (http://www.epa.gov/volunteer/stream/vms511.html), total coliform bacteria can occur in human feces, but some can also be present in animal manure, soil, and submerged wood and in other places outside the human body. Thus, the usefulness of total coliforms as an indicator of fecal contamination depends on the extent to which the bacteria species found are fecal and human in origin. As fecal coliform is assessed not impaired for this waterbody, the total coliform is no longer a good index for fecal pollution. Therefore occasional high total coliform concentration is considered as natural condition.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1685A	LAKE ARBUCKLE	LAKE		Mercury (in fish tissue)	5	Low	2011	VP - Mercury met verification threshold of the IWR. Fish tissue levels in 13 largemouth bass averaged 0.75 mg/Kg (ppm) in 2002/2003.
1685A	LAKE ARBUCKLE	LAKE		Turbidity	2			PP = 1 / 20; VP = 2 / 36
1685A	LAKE ARBUCKLE	LAKE		Unionized Ammonia	3B			PP = 0 / 10; VP = 0 / 1; Data from the Planning Period only represents 2 seasons.
1685B	LIVINGSTON CREEK	STREAM		Biology	2			PP = 8 SCIs passed in 1993, 1994, 1995, 1997, 1999, and 2001. VP = 3 SCIs passed in 1999, 2001, and 2004.
1685B	LIVINGSTON CREEK	STREAM		Dissolved Oxygen	5	Low	2010	PP = 19 / 72, Potentially impaired; VP = 28 / 76, Impaired. DO met verification threshold of IWR, and nitrogen is the causative pollutant. 55 TN values, median 1.63 mg/L. 55 TP values, median 0.07 mg/L. 26 BOD values, median 1.55 mg/L. 114 DO values, median 6.01 mg/L, mean 5.66 mg/L, range 1.62 - 9.80 mg/L. The landuse of the WBID is dominated by the upland forest. A dairy farm is located on the southern bank of the creek. Live stock operation may be important source of nitrogen.
1685B	LIVINGSTON CREEK	STREAM		Fecal Coliform	2			PP = 3 / 6; VP = 2 / 30
1685B	LIVINGSTON CREEK	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
1685B	LIVINGSTON CREEK	STREAM		Total Coliform	2			PP = 1 / 10; VP = 1 / 3
1685B	LIVINGSTON CREEK	STREAM		Turbidity	2			PP = 0 / 26; VP = 0 / 19
1685B	LIVINGSTON CREEK	STREAM		Unionized Ammonia	2			PP = 0 / 12; VP = No data
1685C	REEDY CREEK	STREAM			3A			PP = No data; VP = No data
1685D	REEDY LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 25; VP = 1 / 19
1685D	REEDY LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1685D	REEDY LAKE	LAKE		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1685D	REEDY LAKE	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 3

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1685D	REEDY LAKE	LAKE		Nutrients (Historic TSI)	2			PP - No TSI annual mean exceeded the historic minimum value (54.00, calculated based on data from 1996 - 2000) by more than 10 TSI units. Annual means were 52.8, 56.8, 53.4, 53.0, 62.6, 57.5, and 59.0 in 1997, 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 234 chla values, range 2.0 - 74.0 µg/L, mean 25.3 µg/L. 16 chla (corrected) values, range 5.6 - 50.5 µg/L, mean 19.7 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 7 chla values, range 5.2 - 31.8 µg/L, mean 16.0 µg/L. 14 chla (corrected) values, range 5.6 - 50.5 µg/L, mean 20.9 µg/L. 23 TN values, median 1.32 mg/L. 23 TP values, median 0.02 mg/L.
1685D	REEDY LAKE	LAKE		Nutrients (TSI)	3C			PP - 5 TSI annual means exceeded the threshold in 1997, 1998, 1999, 2000, and 2001. Annual means were 52.8, 56.8, 53.4, 53.0, 62.6, and 57.5 in 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 234 chla values, range 2.0 - 74.0 µg/L, mean 25.3 µg/L. 16 chla (corrected) values, range 5.6 - 50.5 µg/L, mean 19.7 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 7 chla values, range 5.2 - 31.8 µg/L, mean 16.0 µg/L. 14 chla (corrected) values, range 5.6 - 50.5 µg/L, mean 20.9 µg/L. 23 TN values, median 1.32 mg/L. 23 TP values, median 0.02 mg/L.
1685D	REEDY LAKE	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1685D	REEDY LAKE	LAKE		Turbidity	2			PP = 0 / 25; VP = 0 / 19
1685D	REEDY LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 11; VP = 0 / 1
1685E	LAKE IDA	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1685E	LAKE IDA	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1685E	LAKE IDA	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1685E	LAKE IDA	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1685E	LAKE IDA	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1685E	LAKE IDA	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1685E	LAKE IDA	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1685F	LIVINGSTON CREEK WEST	STREAM			3A			PP = No data; VP = No data
1685G	REEDY LAKE BASIN	LAKE		Dissolved Oxygen	3C			PP = 21 / 69; VP = 0 / 0. DO does not meet verification threshold of the IWR due to Insufficient data in the verified period.
1706A	LAKE CLINCH OUTLET	LAKE			3A			PP = No data; VP = No data
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Boron	3B			PP = 0 / 3; VP = No data
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Dissolved Oxygen	3B			PP = 1 / 7; VP = 0 / 5
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 4
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum value (37.74, calculated based on data from 1994 - 1998) by more than 10 TSI units. Annual means were 34.0, 33.2, 37.0, 37.8, 38.1, and 36.8 in 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 208 chla values, range 2.0 - 14.4 µg/L, mean 5.5 µg/L. 4 chla (corrected) values, range 2.2 - 13.1 µg/L, mean 5.5 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chla values, range 1.0 - 14.4 µg/L, mean 5.2 µg/L. 2 chla (corrected) values, range 3.9 - 13.1 µg/L, mean 8.5 µg/L. 5 TN values, median 0.72 mg/L. 2 TP values, median 0.012 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold value. Annual means were 34.0, 33.2, 37.0, 37.8, 38.1, and 36.8 in 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 208 chla values, range 2.0 - 14.4 µg/L, mean 5.5 µg/L. 4 chla (corrected) values, range 2.2 - 13.1 µg/L, mean 5.5 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chla values, range 1.0 - 14.4 µg/L, mean 5.2 µg/L. 2 chla (corrected) values, range 3.9 - 13.1 µg/L, mean 8.5 µg/L. 5 TN values, median 0.72 mg/L. 2 TP values, median 0.012 mg/L.
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 3
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 5
1730A	LAKE OLIVIA - OPEN WAT	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1730B	LIVINGSTON LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 24; VP = 0 / 12
1730B	LIVINGSTON LAKE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1730B	LIVINGSTON LAKE	LAKE		Turbidity	2			PP = 1 / 24; VP = 0 / 12
1730B	LIVINGSTON LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 15; VP = 0 / 1
1730B	LIVINGSTON LAKE	LAKE		Mercury (in fish tissue)	5	Low	2011	VP - Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.59 mg/Kg (ppm) in 2002/2004.
1730C	STREETY LAKE	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1730C	STREETY LAKE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1730C	STREETY LAKE	LAKE		Turbidity	2			PP = 0 / 13; VP = 0 / 1
1730C	STREETY LAKE	LAKE		Unionized Ammonia	2			PP = 0 / 10; VP = No data
1730D	LAKE ADELAIDE - OPEN W	LAKE		Dissolved Oxygen	3B			PP = 0 / 5; VP = 0 / 3
1730D	LAKE ADELAIDE - OPEN W	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 3

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1730D	LAKE ADELAIDE - OPEN W	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1730D	LAKE ADELAIDE - OPEN W	LAKE		Nutrients (Historic TSI)	2			PP - O TSI annual means exceeded the historic minimum (39.31, calculated based on data from 1996 - 2000) by more than 10 TSI units. Annual means were 38.5, 40.4, 41.0, 39.7, 37.0, and 43.6 in 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 201 chla values, range 1.0 - 16.0 µg/L, mean 7.1 µg/L. 4 chla (corrected) values, range 4.2 - 6.1 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chla values, range 1.0 - 8.1 µg/L, mean 5.1 µg/L. 2 chla (corrected) values, range 5.0 - 6.1 µg/L, mean 5.6 µg/L. 4 TN values, median 0.67 mg/L. 2 TP values, median 0.02 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1730D	LAKE ADELAIDE - OPEN W	LAKE		Nutrients (TSI)	3C			PP - 3 TSI annual means exceeded the threshold (TSI 40) in 1997, 1998, and 2002. Annual means were 38.5, 40.4, 41.0, 39.7, 37.0, and 43.6 in 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 201 chla values, range 1.0 - 16.0 µg/L, mean 7.1 µg/L. 4 chla (corrected) values, range 4.2 - 6.1 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chla values, range 1.0 - 8.1 µg/L, mean 5.1 µg/L. 2 chla (corrected) values, range 5.0 - 6.1 µg/L, mean 5.6 µg/L. 4 TN values, median 0.67 mg/L. 2 TP values, median 0.02 mg/L. The color data are missing except one year when the TSI was below 40. In that year, the color value was 5 PCU. Color data for this lake were also available for 1994, 1995, 2000, and 2001. All of them are lower than 40 pcu. In addition, the FDEP examined the water colors in several lakes adjacent to Lake Adelaide, including Pabor Lake (WBID 1730), Trout Lake (WBID 1758D), Lake Damon (WBID 1758), and Lake Pythias (WBID 1758G). For the periods of record, colors of these lakes were all lower than 40 pcu. The FDEP was therefore decided that TSI 40 should be used as the assessment threshold.
1730D	LAKE ADELAIDE - OPEN W	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 3
1730D	LAKE ADELAIDE - OPEN W	LAKE		Turbidity	3B			PP = 1 / 6; VP = 1 / 4
1730D	LAKE ADELAIDE - OPEN W	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1730E	PABOR LAKE - OPEN WATE	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
1730E	PABOR LAKE - OPEN WATE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1730E	PABOR LAKE - OPEN WATE	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1730E	PABOR LAKE - OPEN WATE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1730E	PABOR LAKE - OPEN WATE	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1730E	PABOR LAKE - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1730E	PABOR LAKE - OPEN WATE	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1730F	LAKE LIVINGSTON DRAIN	LAKE			3A			PP = No data; VP = No data
1758A	LAKE VIOLA	LAKE		Aldrin	3B			PP = 0 / 1; VP = No data
1758A	LAKE VIOLA	LAKE		Arsenic	2			PP = No data; VP = 0 / 20
1758A	LAKE VIOLA	LAKE		Beta BHC	3B			PP = 0 / 1; VP = No data
1758A	LAKE VIOLA	LAKE		Chromium3	2			PP = No data; VP = 1 / 20
1758A	LAKE VIOLA	LAKE		Copper	3B			PP = No data; VP = 12 / 16
1758A	LAKE VIOLA	LAKE		Dissolved Oxygen	2			PP = 0 / 13; VP = 0 / 25
1758A	LAKE VIOLA	LAKE		Endosulfan	3B			PP = 0 / 1; VP = No data
1758A	LAKE VIOLA	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 4
1758A	LAKE VIOLA	LAKE		Iron	3C			PP = 6 / 8; VP = 0 / 14
1758A	LAKE VIOLA	LAKE		Lead	3B			PP = No data; VP = 16 / 16
1758A	LAKE VIOLA	LAKE		Lindane	3B			PP = 0 / 1; VP = No data
1758A	LAKE VIOLA	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual mean was 29.0 in 1993. 58 chla values, range 1.0 - 10.0 µg/L, mean 4.0 µg/L. 9 chla (corrected) values, range 1.0 - 3.9 µg/L, mean 2.0 µg/L. VP - 0 TSI annual mean exceeded the threshold. Annual mean was 33.8 in 2004. 27 chla values, range 1.0 - 8.4 µg/L, mean 1.6 µg/L. 2 chla (corrected) values, range 2.2 - 2.9 µg/L, mean 2.5 µg/L. 28 TN values, median 0.90 mg/L. 24 TP values, median 0.02 mg/L.
1758A	LAKE VIOLA	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 4
1758A	LAKE VIOLA	LAKE		Turbidity	2			PP = 0 / 14; VP = 0 / 22
1758A	LAKE VIOLA	LAKE		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
1758A	LAKE VIOLA	LAKE		Zinc	2			PP = No data; VP = 0 / 20
1758B	LAKE LILLIAN	LAKE		Dissolved Oxygen	3B			PP = 1 / 4; VP = 0 / 2
1758B	LAKE LILLIAN	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758B	LAKE LILLIAN	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1758B	LAKE LILLIAN	LAKE		Nutrients (Historic TSI)	2			PP - 1 TSI annual mean exceeded the historic minimum (36.07, calculated based on data from 1993 - 1997) by more than 10 TSI units in 1998, but the 4 annual means that followed did not, so the WBID-parameter is not impaired.. Annual means were 35.6, 36.7, 35.9, 49.7, 40.0, 37.8, 40.4, and 36.7 in 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 288 chla values, range 2.0 - 53.0 µg/L, mean 8.2 µg/L. 4 chla (corrected) values, range 1.0 - 11.1 µg/L, mean 4.4 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 3.9 - 12.4 µg/L, mean 8.2 µg/L. 2 chla (corrected) values, range 3.3 - 11.1 µg/L, mean 7.2 µg/L. 2 TN values, median 1.05 mg/L. 2 TP values, median 0.01 mg/L.
1758B	LAKE LILLIAN	LAKE		Nutrients (TSI)	3C			PP - 1 TSI annual mean exceeded the threshold in 2001. Annual means were 35.6, 36.7, 35.9, 49.7, 40.0, 37.8, 40.4, and 36.7 in 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 288 chla values, range 2.0 - 53.0 µg/L, mean 8.2 µg/L. 4 chla (corrected) values, range 1.0 - 11.1 µg/L, mean 4.4 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 3.9 - 12.4 µg/L, mean 8.2 µg/L. 2 chla (corrected) values, range 3.3 - 11.1 µg/L, mean 7.2 µg/L. 2 TN values, median 1.05 mg/L. 2 TP values, median 0.01 mg/L.
1758B	LAKE LILLIAN	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758B	LAKE LILLIAN	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1758B	LAKE LILLIAN	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1758C	LAKE ISIS	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
1758C	LAKE ISIS	LAKE		Boron	3B			PP = 0 / 6; VP = No data
1758C	LAKE ISIS	LAKE		Dissolved Oxygen	3B			PP = 1 / 7; VP = 0 / 2
1758C	LAKE ISIS	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758C	LAKE ISIS	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1758C	LAKE ISIS	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum TSI (17.06, calculated based on the data from 2001 to 2005). TSI annual means were 19.7 and 15.7 in 2001 and 2002, respectively. 97 chla values, range 1.0 - 6.0 µg/L, mean 1.8 µg/L. 4 chla (corrected), range 1.0 - 2.3 µg/L, mean 1.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 1.7 - 2.6 µg/L, mean 2.1 µg/L. 2 chla (corrected) values, range 1.6 - 2.3 µg/L, mean 1.9 µg/L. 2 TN values, median 3.35 mg/L. 2 TP values, median 0.01 mg/L.
1758C	LAKE ISIS	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. TSI annual means were 19.7 and 15.7 in 2001 and 2002, respectively. 97 chla values, range 1.0 - 6.0 µg/L, mean 1.8 µg/L. 4 chla (corrected), range 1.0 - 2.3 µg/L, mean 1.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 1.7 - 2.6 µg/L, mean 2.1 µg/L. 2 chla (corrected) values, range 1.6 - 2.3 µg/L, mean 1.9 µg/L. 2 TN values, median 3.35 mg/L. 2 TP values, median 0.01 mg/L.
1758C	LAKE ISIS	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758C	LAKE ISIS	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1758C	LAKE ISIS	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1758D	TROUT LAKE - OPEN WATE	LAKE		Dissolved Oxygen	3B			PP = 0 / 5; VP = 0 / 3
1758D	TROUT LAKE - OPEN WATE	LAKE		Fecal Coliform	3B			PP = 0 / 4; VP = 0 / 4

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1758D	TROUT LAKE - OPEN WATE	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1758D	TROUT LAKE - OPEN WATE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual mean exceeded the historic minimum (42.97, calculated based on data from 1997 through 2001) by more than 10 TSI units. Annual means were 38.0, 42.4, and 48.5 in 1997, 1999, and 2001, respectively. 131 chla values, range 1.0 - 30.0 µg/L, mean 8.1 µg/L. 4 chla (corrected) values, range 2.7 - 9.9 µg/L, mean 4.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chla values, range 1.0 - 11.7 µg/L, mean 6.7 µg/L. 2 chla (corrected) values, range 3.3 - 9.9 µg/L, mean 6.6 µg/L. 4 TN values, median 0.64 mg/L. 2 TP values, median 0.02 mg/L.
1758D	TROUT LAKE - OPEN WATE	LAKE		Nutrients (TSI)	3C			PP - 1 TSI annual mean exceeded the threshold in 2001. Annual means were 38.0, 42.4, and 48.5 in 1997, 1999, and 2001, respectively. 131 chla values, range 1.0 - 30.0 µg/L, mean 8.1 µg/L. 4 chla (corrected) values, range 2.7 - 9.9 µg/L, mean 4.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chla values, range 1.0 - 11.7 µg/L, mean 6.7 µg/L. 2 chla (corrected) values, range 3.3 - 9.9 µg/L, mean 6.6 µg/L. 4 TN values, median 0.64 mg/L. 2 TP values, median 0.02 mg/L.
1758D	TROUT LAKE - OPEN WATE	LAKE		Total Coliform	3B			PP = 0 / 4; VP = 0 / 4
1758D	TROUT LAKE - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 4
1758D	TROUT LAKE - OPEN WATE	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1758E	PANSY LAKE - OPEN WATE	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = No data
1758E	PANSY LAKE - OPEN WATE	LAKE		Iron	3B			PP = 2 / 2; VP = No data

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1758E	PANSY LAKE - OPEN WATE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1758E	PANSY LAKE - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 2; VP = No data
1758F	LAKE ISABELL - OPEN WA	LAKE		Dissolved Oxygen	3B			PP = 1 / 3; VP = 1 / 1
1758F	LAKE ISABELL - OPEN WA	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758F	LAKE ISABELL - OPEN WA	LAKE		Iron	3B			PP = 2 / 3; VP = 0 / 1
1758F	LAKE ISABELL - OPEN WA	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1758F	LAKE ISABELL - OPEN WA	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758F	LAKE ISABELL - OPEN WA	LAKE		Turbidity	3B			PP = 1 / 3; VP = 1 / 1
1758F	LAKE ISABELL - OPEN WA	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1758G	LAKE PYTHIAS - OPEN WA	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
1758G	LAKE PYTHIAS - OPEN WA	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758G	LAKE PYTHIAS - OPEN WA	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1758G	LAKE PYTHIAS - OPEN WA	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any mean TSI.
1758G	LAKE PYTHIAS - OPEN WA	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758G	LAKE PYTHIAS - OPEN WA	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1758G	LAKE PYTHIAS - OPEN WA	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1758H	LAKE BYRD - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
1758H	LAKE BYRD - OPEN WATER	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758H	LAKE BYRD - OPEN WATER	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1758H	LAKE BYRD - OPEN WATER	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. TSI annual means were 15.4 and 23.5 in 1997 and 1998, respectively. 75 chla values, range 1.0 - 3.0 µg/L, mean 1.4 µg/L. 4 chla (corrected) values, range 1.0 - 1.9 µg/L, mean 1.5 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, 1.0 - 2.2 µg/L, mean 1.6 µg/L. 2 chla (corrected) values, range 1.0 - 1.9 µg/L, mean 1.5 µg/L. 2 TN values, median 3.55 mg/L. 2 TP values, median 0.01 mg/L.
1758H	LAKE BYRD - OPEN WATER	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758H	LAKE BYRD - OPEN WATER	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1758H	LAKE BYRD - OPEN WATER	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1758I	BRENTWOOD LAKE - OPEN	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
1758I	BRENTWOOD LAKE - OPEN	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758I	BRENTWOOD LAKE - OPEN	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1758I	BRENTWOOD LAKE - OPEN	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1758I	BRENTWOOD LAKE - OPEN	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758I	BRENTWOOD LAKE - OPEN	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1758I	BRENTWOOD LAKE - OPEN	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1758J	PIONEER LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 1; VP = 0 / 1
1758J	PIONEER LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1758J	PIONEER LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (30.93, calculated based on data from 1999 through 2003) by more than 10 TSI units. Annual means were 31.1 and 30.5 in 2001 and 2002, respectively. 70 chla values, range 1.0 - 8.0 µg/L, mean 3.9 µg/L. 70 TN values, median 0.54 mg/L. 69 TP values, median 0.01 mg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 1 chla value, 1.0 µg/L. 1 TN value, median 0.75 mg/L. No TP data.
1758J	PIONEER LAKE	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 31.1 and 30.5 in 2001 and 2002, respectively. 70 chla values, range 1.0 - 8.0 µg/L, mean 3.9 µg/L. 70 TN values, median 0.54 mg/L. 69 TP values, median 0.01 mg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 1 chla value, 1.0 µg/L. 1 TN value, median 0.75 mg/L. No TP data.
1758J	PIONEER LAKE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1758J	PIONEER LAKE	LAKE		Turbidity	3B			PP = 0 / 1; VP = 0 / 1
1758K	LAKE DAMON OUTLET	LAKE			3A			PP = No data; VP = No data
1761A	ARBUCKLE C. AB WILDCAT	STREAM		Biology	3C			There was one SCI conducted in August 1995, and the result was poor. The Biology thus made the Planning List. There were two independent SCI's conducted in 1996 and 2004, and both passed; however, neither SCI was conducted in the same season as the 1995 SCI.
1761A	ARBUCKLE C. AB WILDCAT	STREAM		Dissolved Oxygen	3B			PP = 1 / 1; VP = 1 / 2
1761A	ARBUCKLE C. AB WILDCAT	STREAM		Fecal Coliform	3B			PP = 1 / 1; VP = 1 / 1
1761A	ARBUCKLE C. AB WILDCAT	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1761A	ARBUCKLE C. AB WILDCAT	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1761A	ARBUCKLE C. AB WILDCAT	STREAM		Total Coliform	3B			PP = 1 / 1; VP = 1 / 1
1761A	ARBUCKLE C. AB WILDCAT	STREAM		Turbidity	3B			PP = 0 / 1; VP = 0 / 2
1761B	ARBUCKLE C. AB MORGAN	STREAM		Dissolved Oxygen	3C			PP = 60 / 113; VP = 1 / 2. DO does not meet IWR threshold due to Insufficient data in the Verified Period.
1761B	ARBUCKLE C. AB MORGAN	STREAM		Fecal Coliform	3C			PP = 3 / 11; VP = 1 / 1
1761B	ARBUCKLE C. AB MORGAN	STREAM		Fluoride	3B			PP = 0 / 2; VP = 0 / 1
1761B	ARBUCKLE C. AB MORGAN	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
1761B	ARBUCKLE C. AB MORGAN	STREAM		Total Coliform	3B			PP = 0 / 5; VP = 1 / 1
1761B	ARBUCKLE C. AB MORGAN	STREAM		Turbidity	2			PP = 0 / 16; VP = 0 / 2
1761B	ARBUCKLE C. AB MORGAN	STREAM		Unionized Ammonia	2			PP = 0 / 13; VP = 0 / 1
1761C	ARBUCKLE BRANCH	STREAM		Dissolved Oxygen	3B			PP = 2 / 3; VP = 1 / 1
1761C	ARBUCKLE BRANCH	STREAM		Fecal Coliform	3B			PP = 1 / 1; VP = 1 / 1
1761C	ARBUCKLE BRANCH	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1761C	ARBUCKLE BRANCH	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
1761C	ARBUCKLE BRANCH	STREAM		Total Coliform	3B			PP = 1 / 1; VP = 1 / 1
1761C	ARBUCKLE BRANCH	STREAM		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1761C	ARBUCKLE BRANCH	STREAM		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1761D	MORGAN HOLE CREEK	STREAM		Dissolved Oxygen	3C			PP = 0 / 3; VP = 21 / 65; DO met verification threshold, but unable to determine the causative pollutant. 77 TN values, median 0.89 mg/L. 77 TP values, median 0.03 mg/L. 76 BOD values, median 1.0 mg/L. This park is part of the Avon Park Air Force Range. The landuse of th
1761D	MORGAN HOLE CREEK	STREAM		Fecal Coliform	5	Low	2010	PP = 0 / 2, insufficient data, VP = 10 / 26, Impaired
1761D	MORGAN HOLE CREEK	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1761D	MORGAN HOLE CREEK	STREAM		Nutrients (Chla)	2			PP - Insufficient data to calculate any mean. VP - 0 annual average Chla concentration exceeded the assessment threshold. The annual average Chla concentration was 1.2 µg/L in 2004. 80 Chla values, range 1 - 2.9 µg/L, 77 TN values, median 0.89 mg/L, 77 TP values, median 0.03 mg/L.
1761D	MORGAN HOLE CREEK	STREAM		Total Coliform	5	Low	2010	PP = 0 / 1, Insufficient data; VP = 22 / 25, Impaired
1761D	MORGAN HOLE CREEK	STREAM		Turbidity	2			PP = 0 / 3; VP = 2 / 60
1761D	MORGAN HOLE CREEK	STREAM		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1761E	DUCK LAKE - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 2 / 3; VP = 1 / 1
1761E	DUCK LAKE - OPEN WATER	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1761E	DUCK LAKE - OPEN WATER	LAKE		Iron	3B			PP = 2 / 3; VP = 0 / 1
1761E	DUCK LAKE - OPEN WATER	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1761E	DUCK LAKE - OPEN WATER	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1761E	DUCK LAKE - OPEN WATER	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1761F	DEER LAKE - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = No data
1761F	DEER LAKE - OPEN WATER	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1761F	DEER LAKE - OPEN WATER	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1761F	DEER LAKE - OPEN WATER	LAKE		Turbidity	3B			PP = 0 / 2; VP = No data
1761F	DEER LAKE - OPEN WATER	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1761G	FOX LAKE - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = No data
1761G	FOX LAKE - OPEN WATER	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1761G	FOX LAKE - OPEN WATER	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1761G	FOX LAKE - OPEN WATER	LAKE		Turbidity	3B			PP = 0 / 2; VP = No data
1761H	LAKE LUCAS - OPEN WATER	LAKE		Arsenic	3B			PP = No data; VP = 0 / 19
1761H	LAKE LUCAS - OPEN WATER	LAKE		Chromium3	3B			PP = No data; VP = 0 / 19

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1761H	LAKE LUCAS - OPEN WATE	LAKE		Copper	3B			PP = No data; VP = 10 / 14
1761H	LAKE LUCAS - OPEN WATE	LAKE		Dissolved Oxygen	3C			PP = 2 / 3; VP = 16 / 20, Data met the verification threshold but caustive pollutant could not be identified. 22 TN values, median 0.855 mg/L. 20 TP values, median 0.026 mg/L. No BOD measurements. The major landuses surrounding the lake include high and medium density residential areas, cropland and pasture lands, and tree crop.
1761H	LAKE LUCAS - OPEN WATE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1761H	LAKE LUCAS - OPEN WATE	LAKE		Iron	3C			PP = 3 / 3; VP = 2 / 14
1761H	LAKE LUCAS - OPEN WATE	LAKE		Lead	3C			PP = No data; VP = 14 / 14
1761H	LAKE LUCAS - OPEN WATE	LAKE		Nutrients (TSI)	2			PP - Insufficient data to calculate any mean. VP - 0 annual mean TSI exceeded the assessment threshold. The annual average TSI was 36.6 in 2004. 22 Chla values, range 1 - 14.4 µg/L, mean 2.08 µg/L. 22 TN values, median TN 0.855 mg/L. 20 TP values, median TP 0.026 mg/L.
1761H	LAKE LUCAS - OPEN WATE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1761H	LAKE LUCAS - OPEN WATE	LAKE		Turbidity	2			PP = 0 / 3; VP = 0 / 20
1761H	LAKE LUCAS - OPEN WATE	LAKE		Zinc	3B			PP = No data; VP = 0 / 19
1761I	BONNET CREEK	STREAM		Dissolved Oxygen	3B			PP = 2 / 2; VP = No data
1761I	BONNET CREEK	STREAM		Fecal Coliform	3B			PP = 0 / 1; VP = No data
1761I	BONNET CREEK	STREAM		Turbidity	3B			PP = 0 / 2; VP = No data
1761I	BONNET CREEK	STREAM		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1813A	DINNER LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 9; VP = 0 / 3
1813A	DINNER LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813A	DINNER LAKE	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813A	DINNER LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (33.84, calculated based on data from 1998 through 2002) by more than 10 TSI units. Annual means were 35.6, 33.1, and 32.8 in 2000, 2001, and 2002, respectively. 108 chla values, range 1.0 - 11.0 µg/L, mean 5.0 µg/L. 8 chla (corrected) values, range 1.4 - 7.2 µg/L, mean 4.5 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 2.1 - 3.9 µg/L, mean 3.0 µg/L. 2 chla (corrected) values, range 1.4 - 3.6 µg/L, mean 2.5 µg/L. 3 TN values, median 0.65 mg/L. 3 TP values, median 0.01 mg/L.
1813A	DINNER LAKE	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 35.6, 33.1, and 32.8 in 2000, 2001, and 2002, respectively. 108 chla values, range 1.0 - 11.0 µg/L, mean 5.0 µg/L. 8 chla (corrected) values, range 1.4 - 7.2 µg/L, mean 4.5 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 2.1 - 3.9 µg/L, mean 3.0 µg/L. 2 chla (corrected) values, range 1.4 - 3.6 µg/L, mean 2.5 µg/L. 3 TN values, median 0.65 mg/L. 3 TP values, median 0.01 mg/L.
1813A	DINNER LAKE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813A	DINNER LAKE	LAKE		Turbidity	3B			PP = 0 / 9; VP = 0 / 3
1813A	DINNER LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 7; VP = 0 / 1
1813B	LAKE LOTELA	LAKE		Arsenic	3B			PP = No data; VP = 0 / 19
1813B	LAKE LOTELA	LAKE		Chromium3	3B			PP = No data; VP = 0 / 19
1813B	LAKE LOTELA	LAKE		Copper	3B			PP = No data; VP = 9 / 15
1813B	LAKE LOTELA	LAKE		Dissolved Oxygen	2			PP = 0 / 13; VP = 0 / 21
1813B	LAKE LOTELA	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813B	LAKE LOTELA	LAKE		Iron	3C			PP = 6 / 8; VP = 0 / 17

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813B	LAKE LOTELA	LAKE		Lead	3B			PP = No data; VP = 15 / 15
1813B	LAKE LOTELA	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum value (35.17, calculated based on data from the period 2001 - 2005) by more than 10. Annual means were 39.5, 38.2, 36.1, 38.8, 37.4, and 36.5 in 1993, 1998, 1999, 2000, 2001, and 2002, respectively. 203 chla values, range 1.0 - 16.0 µg/L, mean 4.9 µg/L. 13 chla (corrected) values, range 1.0 - 7.8 µg/L, mean 3.3 µg/L. VP - 0 TSI annual means exceeded the historic minimum value by more than 10 TSI units. Annual means were 38.2, 36.1, 38.8, 37.4, 36.5, and 32.5 in 1998, 1999, 2000, 2001, 2002, and 2003, respectively. 18 chla values, range 1.0 - 6.6 µg/L, mean 1.6 µg/L. 2 chla (corrected) values, range 1.5 - 5.3 µg/L, mean 3.4 µg/L. 22 TN values, median 0.50 mg/L. 2 TP values, median 0.02 mg/L.
1813B	LAKE LOTELA	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 39.5, 38.2, 36.1, 38.8, 37.4, and 36.5 in 1993, 1998, 1999, 2000, 2001, and 2002, respectively. 203 chla values, range 1.0 - 16.0 µg/L, mean 4.9 µg/L. 13 chla (corrected) values, range 1.0 - 7.8 µg/L, mean 3.3 µg/L. VP - 0 TSI annual means exceeded the threshold. Annual means were 30.4 in 2004. LakeWatch data were excluded from the assessment for verified period. 22 chla values, range 1.0 - 6.6 µg/L, mean 1.5 µg/L. 2 chla (corrected) values, range 1.5 - 5.3 µg/L, mean 3.4 µg/L. 22 TN values, median 0.50 mg/L. 2 TP values, median 0.02 mg/L.
1813B	LAKE LOTELA	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813B	LAKE LOTELA	LAKE		Turbidity	2			PP = 0 / 12; VP = 0 / 21

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813B	LAKE LOTELA	LAKE		Unionized Ammonia	3B			PP = 0 / 9; VP = No data
1813B	LAKE LOTELA	LAKE		Zinc	3B			PP = No data; VP = 1 / 19
1813C	LAKE LETTA	LAKE		Dissolved Oxygen	3B			PP = 0 / 6; VP = 0 / 2
1813C	LAKE LETTA	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 1
1813C	LAKE LETTA	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1813C	LAKE LETTA	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum value (39.74, calculated based on data from 1998 - 2002) by more than 10 TSI units. Annual means were 41.6, 39.4, 39.8, 39.4, and 38.6 in 1998, 1999, 2000, 2001, and 2002, respectively. 199 chla values, range 2.0 - 9.2 µg/L, mean 5.9 µg/L. 6 chla (corrected) values, range 1.3 - 7.1 µg/L, mean 3.9 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 2.9 - 9.2 µg/L, mean 6.1 µg/L. 2 chla (corrected) values, range 1.8 - 7.1 µg/L, mean .5 µg/L. 2 TN values, median 0.59 mg/L. 2 TP values, median 0.03 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813C	LAKE LETTA	LAKE		Nutrients (TSI)	2			PP - 1 TSI annual mean exceeded the threshold (TSI 40 because this lake is considered a low colored lake). However, TSI in the following 4 years did not exceed the threshold. Annual means were 41.6, 39.4, 39.8, 39.4, and 38.6 in 1998, 1999, 2000, 2001, and 2002, respectively. 199 chla values, range 2.0 - 9.2 µg/L, mean 5.9 µg/L. 6 chla (corrected) values, range 1.3 - 7.1 µg/L, mean 3.9 µg/L. VP - insufficient data to calculate any annual mean TSI. 2 chla values, range 2.9 - 9.2 µg/L, mean 6.1 µg/L. 2 chla (corrected) values, range 1.8 - 7.1 µg/L, mean .5 µg/L. 2 TN values, median 0.59 mg/L. 2 TP values, median 0.03 mg/L. Historical color data from Florida Lakewatch, the Southwest Florida Water Management District, and the EPA's Lake Regions of Florida Report indicate that this is a low color lake.
1813C	LAKE LETTA	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 1
1813C	LAKE LETTA	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 2
1813C	LAKE LETTA	LAKE		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
1813D	LAKE TULANE	LAKE		Arsenic	2			PP = No data; VP = 0 / 20
1813D	LAKE TULANE	LAKE		Chromium3	2			PP = 0 / 1; VP = 0 / 21
1813D	LAKE TULANE	LAKE		Copper	3B			PP = 0 / 1; VP = 8 / 17
1813D	LAKE TULANE	LAKE		Dissolved Oxygen	2			PP = 0 / 9; VP = 0 / 24
1813D	LAKE TULANE	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 3
1813D	LAKE TULANE	LAKE		Iron	3C			PP = 6 / 8; VP = 0 / 18
1813D	LAKE TULANE	LAKE		Lead	3C			PP = No data; VP = 16 / 16

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813D	LAKE TULANE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (25.29, based on data from the period 1997 - 2001) by more than 10 TSI units. Annual means were 29.4, 25.7, 26.1, and 24.1 in 1993, 1999, 2000, and 2001, respectively. 106 chla values, range 1.0 - 6.0 µg/L, mean 3.0 µg/L. 8 chla (corrected) values, range 1.2 - 3.9 µg/L, mean 2.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 21 chla values, range 1.0 - 3.6 µg/L, mean 1.6 µg/L. 2 chla (corrected) values, range 1.2 - 2.5 µg/L, mean 1.8 µg/L. 22 TN values, median 0.53 mg/L. 22 TP values, median 0.02 mg/L.
1813D	LAKE TULANE	LAKE		Nutrients (TSI)	2			PP - 0 annual means exceeded the threshold. Annual means were 29.4, 25.7, 26.1, and 24.1 in 1993, 1999, 2000, and 2001, respectively. 106 chla values, range 1.0 - 6.0 µg/L, mean 3.0 µg/L. 8 chla (corrected) values, range 1.2 - 3.9 µg/L, mean 2.6 µg/L. VP - 0 annual means exceeded the threshold. Annual mean TSI was 31.4 in 2004 (Lakewatch data for the verified period were excluded from the assessment). 21 chla values, range 1.0 - 3.6 µg/L, mean 1.6 µg/L. 2 chla (corrected) values, range 1.2 - 2.5 µg/L, mean 1.8 µg/L. 22 TN values, median 0.53 mg/L. 22 TP values, median 0.02 mg/L.
1813D	LAKE TULANE	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 3
1813D	LAKE TULANE	LAKE		Turbidity	2			PP = 0 / 10; VP = 0 / 25
1813D	LAKE TULANE	LAKE		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
1813D	LAKE TULANE	LAKE		Zinc	2			PP = 0 / 1; VP = 0 / 21
1813E	BONNET LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 6; VP = 0 / 2
1813E	BONNET LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 1
1813E	BONNET LAKE	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813E	BONNET LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historical minimum (65.93, calculated based on data from 1998 to 2002) by more than 10 TSI units. Annual means were 66.6, 64.8, and 66.3 in 2000, 2001, and 2002, respectively. 112 chla values, range 26.0 - 105.0 µg/L, mean 53.5 µg/L. 5 chla (corrected) values, range 16.5 - 42.5 µg/L, mean 30.9 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 46.4 - 56.4 µg/L, mean 51.4 µg/L. 2 chla (corrected) values, range 39.8 - 42.5 µg/L, mean 41.2 µg/L. 2 TN values, median 1.25 mg/L. 2 TP values, median 0.04 mg/L.
1813E	BONNET LAKE	LAKE		Nutrients (TSI)	3C			PP - 3 TSI annual means exceeded the threshold. Annual means were 66.6, 64.8, and 66.3 in 2000, 2001, and 2002, respectively. 112 chla values, range 26.0 - 105.0 µg/L, mean 53.5 µg/L. 5 chla (corrected) values, range 16.5 - 42.5 µg/L, mean 30.9 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 46.4 - 56.4 µg/L, mean 51.4 µg/L. 2 chla (corrected) values, range 39.8 - 42.5 µg/L, mean 41.2 µg/L. 2 TN values, median 1.25 mg/L. 2 TP values, median 0.04 mg/L.
1813E	BONNET LAKE	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 1
1813E	BONNET LAKE	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 2
1813E	BONNET LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 3; VP = No data
1813F	LAKE ANGELO - OPEN WAT	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
1813F	LAKE ANGELO - OPEN WAT	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813F	LAKE ANGELO - OPEN WAT	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1813F	LAKE ANGELO - OPEN WAT	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historical minimum (43.25, calculated based on data from 1995 to 1999) by more than 10 TSI units. Annual means were 41.4, 43.6, 44.8, and 49.3 in 1997, 1998, 1999, and 2000, respectively. 167 chla values, range 3.0 - 66.0 µg/L, mean 12.0 µg/L. 4 chla (corrected) values, range 1.1 - 24.9 µg/L, mean 13.7 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 17.0 - 29.5 µg/L, mean 2.3 µg/L. 2 chla (corrected) values, range 15.4 - 24.9 µg/L, median 20.2 µg/L. 2 TN values, median 0.96 mg/L. 2 TP values, mean 0.03 mg/L.
1813F	LAKE ANGELO - OPEN WAT	LAKE		Nutrients (TSI)	3C			PP - 1 TSI annual mean exceeded the threshold in 2000. Annual means were 41.4, 43.6, 44.8, and 49.3 in 1997, 1998, 1999, and 2000, respectively. 167 chla values, range 3.0 - 66.0 µg/L, mean 12.0 µg/L. 4 chla (corrected) values, range 1.1 - 24.9 µg/L, mean 13.7 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 17.0 - 29.5 µg/L, mean 2.3 µg/L. 2 chla (corrected) values, range 15.4 - 24.9 µg/L, median 20.2 µg/L. 2 TN values, mean 0.96 mg/L. 2 TP values, median 0.03 mg/L.
1813F	LAKE ANGELO - OPEN WAT	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813F	LAKE ANGELO - OPEN WAT	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1813F	LAKE ANGELO - OPEN WAT	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1813G	LITTLE BONNET LAKE - O	LAKE		Dissolved Oxygen	3B			PP = 0 / 6; VP = 0 / 4
1813G	LITTLE BONNET LAKE - O	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 3

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813G	LITTLE BONNET LAKE - O	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1813G	LITTLE BONNET LAKE - O	LAKE		Nutrients (TSI)	3C			PP - 1 TSI annual mean exceeded the threshold in 2001. Annual means were 58.4 and 59.6 in 2001 and 2002, respectively. 93 chl a values, range 16.0 - 57.0 µg/L, mean 34.1 µg/L. 4 chl a (corrected) values, range 17.0 - 37.4 µg/L, mean 28.1 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chl a values, range 18.8 - 49.5 µg/L, mean 35.7 µg/L. 2 chl a (corrected) values, range 35.1 - 37.4 µg/L, 36.3 µg/L. 4 TN values, median 1.63 mg/L. 2 TP values, median 0.03 mg/L.
1813G	LITTLE BONNET LAKE - O	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 3
1813G	LITTLE BONNET LAKE - O	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 4
1813G	LITTLE BONNET LAKE - O	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1813H	LAKE VERONA - OPEN WAT	LAKE		Arsenic	2			PP = No data; VP = 0 / 20
1813H	LAKE VERONA - OPEN WAT	LAKE		Chromium3	2			PP = No data; VP = 0 / 20
1813H	LAKE VERONA - OPEN WAT	LAKE		Copper	3B			PP = No data; VP = 8 / 12
1813H	LAKE VERONA - OPEN WAT	LAKE		Dissolved Oxygen	2			PP = 3 / 10; VP = 0 / 25
1813H	LAKE VERONA - OPEN WAT	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 3
1813H	LAKE VERONA - OPEN WAT	LAKE		Iron	3C			PP = 5 / 8; VP = 0 / 18
1813H	LAKE VERONA - OPEN WAT	LAKE		Lead	3B			PP = No data; VP = 12 / 12

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813H	LAKE VERONA - OPEN WAT	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (36.23, calculated based on data from the period 2001 - 2005) by more than 10 TSI units. Annual means were 36.3, 36.9, 32.7, 42.0, and 35.6 in 1993, 1998, 1999, 2000, and 2002, respectively. 133 chla values, range 1.0 - 52.0 µg/L, mean 7.5 µg/L. 8 chla (corrected) values, range 2.2 - 12.8 µg/L, mean 6.5 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla (corrected) values, range 2.2 - 12.8 µg/L, mean 7.5 µg/L. 25 TN values, median 0.33 mg/L. 22 TP values, median 0.02 mg/L.
1813H	LAKE VERONA - OPEN WAT	LAKE		Nutrients (TSI)	2			PP - 1 TSI annual mean exceeded the threshold in 2000. Annual means were 36.3, 36.9, 32.7, 42.0, and 35.7 in 1993, 1998, 1999, 2000, and 2002, respectively. 133 chla values, range 1.0 - 52.0 µg/L, mean 7.5 µg/L. 8 chla (corrected) values, range 2.2 - 12.8 µg/L, mean 6.5 µg/L. VP - 0 TSI annual mean exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 26.4 in 2004. 25 chla values, range 1.0 - 16.6 µg/L, mean 1.7 µg/L. 2 chla (corrected) values, range 2.2 - 12.8 µg/L, mean 7.5 µg/L. 25 TN values, median 0.334 mg/L. 22 TP values, median 0.02 mg/L.
1813H	LAKE VERONA - OPEN WAT	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 3
1813H	LAKE VERONA - OPEN WAT	LAKE		Turbidity	2			PP = 0 / 10; VP = 0 / 25
1813H	LAKE VERONA - OPEN WAT	LAKE		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
1813H	LAKE VERONA - OPEN WAT	LAKE		Zinc	2			PP = No data; VP = 0 / 20
1813I	LAKE ANOKA - OPEN WATE	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 1

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813I	LAKE ANOKA - OPEN WATE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813I	LAKE ANOKA - OPEN WATE	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1813I	LAKE ANOKA - OPEN WATE	LAKE		Nutrients (TSI)	2			PP = 0 TSI annual means exceeded the threshold. The 1 annual mean was 23.0 in 2000. 56 chla values, range 2.0 - 9.7 µg/L, mean 2.9 µg/L. 3 chla (corrected) values, range 1.6 - 3.5 µg/L, mean 2.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 1 chla value: 3.0 µg/L. 1 chla (corrected) value: 2.6 µg/L. 1 TN value, 0.73 mg/L. 1 TP value, 0.002 mg/L.
1813I	LAKE ANOKA - OPEN WATE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813I	LAKE ANOKA - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1813J	LAKE LELIA - OPEN WATE	LAKE		Dissolved Oxygen	3B			PP = 0 / 5; VP = 0 / 2
1813J	LAKE LELIA - OPEN WATE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 1
1813J	LAKE LELIA - OPEN WATE	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1813J	LAKE LELIA - OPEN WATE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual mean exceeded the historic minimum (45.4, calculated based on data from 2000 through 2004) by more than 10 TSI units. Annual means were 49.8 and 47.8 in 1999 and 2000. 97 chla values, range 4.9 - 38.0 µg/L, mean 18.5 µg/L. 4 chla (corrected) values, range 3.1 - 16.3 µg/L, mean 10.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 12.6 - 20.5 µg/L, mean 16.6 µg/L. 2 chla (corrected) values, range 10.8 - 16.3 µg/L, mean 13.6 µg/L. 2 TN values, median 0.86 mg/L. 2 TP values, median 0.01 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813J	LAKE LELIA - OPEN WATE	LAKE		Nutrients (TSI)	3C			PP - 1 TSI annual mean exceeded the threshold in 2000. Annual means were 49.8 and 47.8 in 1999 and 2000. 97 chla values, range 4.9 - 38.0 µg/L, mean 18.5 µg/L. 4 chla (corrected) values, range 3.1 - 16.3 µg/L, mean 10.6 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 12.6 - 20.5 µg/L, mean 16.6 µg/L. 2 chla (corrected) values, range 10.8 - 16.3 µg/L, mean 13.6 µg/L. 2 TN values, median 0.86 mg/L. 2 TP values, median 0.01 mg/L. Phosphorus limited based on a TN/TP ratio median of 65.5 (2 values) in the Verified Period.
1813J	LAKE LELIA - OPEN WATE	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 1
1813J	LAKE LELIA - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 5; VP = 0 / 2
1813J	LAKE LELIA - OPEN WATE	LAKE		Unionized Ammonia	3B			PP = 0 / 3; VP = No data
1813K	SILVER LAKE - OPEN WAT	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
1813K	SILVER LAKE - OPEN WAT	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813K	SILVER LAKE - OPEN WAT	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1813K	SILVER LAKE - OPEN WAT	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1813K	SILVER LAKE - OPEN WAT	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813K	SILVER LAKE - OPEN WAT	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1813K	SILVER LAKE - OPEN WAT	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1813L	LAKE GLENADA - OPEN WA	LAKE		Dissolved Oxygen	3B			PP = 0 / 5; VP = 0 / 2
1813L	LAKE GLENADA - OPEN WA	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 1
1813L	LAKE GLENADA - OPEN WA	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813L	LAKE GLENADA - OPEN WA	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum value (70.0 mg/L, calculated based on data from 1996 - 2000) by more than 10 TSI units. Annual means were 70.1, 67.9, 72.0, and 75.0 in 1998, 1999, 2000, and 2001, respectively. 162 chla values, range 26.0 - 143.0 µg/L, mean 68.7 µg/L. 4 chla (corrected) values, range 26.4 - 81.7 µg/L, mean 47.4 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 36.7 - 93.3 µg/L, mean 65.0 µg/L. 2 chla (corrected) values, range 26.4 - 81.7 µg/L, mean 54.1 µg/L. 2 TN values, median 1.8 mg/L. 2 TP values, median 0.08 mg/L.
1813L	LAKE GLENADA - OPEN WA	LAKE		Nutrients (TSI)	3C			PP - 4 TSI annual means exceeded the threshold. Annual means were 70.1, 67.9, 72.0, and 75.0 in 1998, 1999, 2000, and 2001, respectively. 162 chla values, range 26.0 - 143.0 µg/L, mean 68.7 µg/L. 4 chla (corrected) values, range 26.4 - 81.7 µg/L, mean 47.4 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 36.7 - 93.3 µg/L, mean 65.0 µg/L. 2 chla (corrected) values, range 26.4 - 81.7 µg/L, mean 54.1 µg/L. 2 TN values, median 1.8 mg/L. 2 TP values, median 0.08 mg/L.
1813L	LAKE GLENADA - OPEN WA	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 1
1813L	LAKE GLENADA - OPEN WA	LAKE		Turbidity	3B			PP = 0 / 5; VP = 0 / 2
1813L	LAKE GLENADA - OPEN WA	LAKE		Unionized Ammonia	3B			PP = 1 / 3; VP = No data
1813M	GRASSY POND - OPEN WAT	LAKE		Dissolved Oxygen	3B			PP = 2 / 3; VP = 1 / 1
1813M	GRASSY POND - OPEN WAT	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1813M	GRASSY POND - OPEN WAT	LAKE		Iron	3B			PP = 2 / 3; VP = 0 / 1
1813M	GRASSY POND - OPEN WAT	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1813M	GRASSY POND - OPEN WAT	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1813M	GRASSY POND - OPEN WAT	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1813N	BASKET LAKE - OPEN WAT	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = No data
1813N	BASKET LAKE - OPEN WAT	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1813N	BASKET LAKE - OPEN WAT	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1813N	BASKET LAKE - OPEN WAT	LAKE		Turbidity	3B			PP = 0 / 2; VP = No data
1813N	BASKET LAKE - OPEN WAT	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1813R	LAKE LETTA OUTLET	LAKE			3A			PP = No data; VP = No data
1842A	LITTLE RED WATER LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 7; VP = 0 / 3
1842A	LITTLE RED WATER LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 2
1842A	LITTLE RED WATER LAKE	LAKE		Iron	3B			PP = 2 / 5; VP = 0 / 3

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1842A	LITTLE RED WATER LAKE	LAKE		Nutrients (TSI)	3C			PP - 2 TSI annual mean exceeded the threshold (TSI 40). Annual means were 49.9 and 42.4 in 2000 and 2002. 87 chla values, range 4.0 - 59.0 µg/L, mean 15.6 µg/L. 8 chla (corrected) values, range 3.0 - 37.7 µg/L, mean 17.1 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 4 chla annual means, range 20.1 - 50.8 µg/L, mean 34.3 µg/L. 4 chla (corrected) values, range 17.4 - 37.7 µg/L, mean 26.2 µg/L. 4 TN values, median 1.35 mg/L. 4 TP values, median 0.03 mg/L. The lake did not have color data in 1996, 1997, 1998, 1999, and 2002. However, color data from several surrounding lakes, including Lake Jackson (WBID 1860D), Dinner Lake (1813A), Bonnet Lake (1813E), and Lake Letta (WBID 1813C), were all lower than 40 for the period of record. Therefore, TSI 40 were used as the assessment threshold for Little Red Water Lake when color data were not available. In addition, the dominant landuse around Lake Sebring are almost all medium density residential and tree crops.
1842A	LITTLE RED WATER LAKE	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 2
1842A	LITTLE RED WATER LAKE	LAKE		Turbidity	3B			PP = 0 / 7; VP = 0 / 3
1842A	LITTLE RED WATER LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
1842B	LAKE DENTON - OPEN WAT	LAKE		Dissolved Oxygen	3B			PP = 1 / 6; VP = 0 / 2
1842B	LAKE DENTON - OPEN WAT	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 1
1842B	LAKE DENTON - OPEN WAT	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1842B	LAKE DENTON - OPEN WAT	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum level (18.6, calculated based on data from the period 1995 - 1999) by more than 10 TSI units. Annual means were 14.4, 26.9, 17.7, 15.4, and 24.1 in 1996, 1997, 1998, 1999, and 2001, respectively. 153 chla values, range 1.0 - 4.7 µg/L, mean 1.8 µg/L. 5 chla (corrected) values, range 1.0 - 5.6 µg/L, mean 2.1 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 1.0 - 1.9 µg/L, mean 1.5 µg/L. 2 chla (corrected) values, range 1.0 - 1.8 µg/L, mean 1.4 µg/L. 2 TN values, median 3.4 mg/L. 2 TP values, median 0.01 mg/L.
1842B	LAKE DENTON - OPEN WAT	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 14.4, 26.9, 17.7, 15.4, and 24.1 in 1996, 1997, 1998, 1999, and 2001, respectively. 153 chla values, range 1.0 - 4.7 µg/L, mean 1.8 µg/L. 5 chla (corrected) values, range 1.0 - 5.6 µg/L, mean 2.1 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 1.0 - 1.9 µg/L, mean 1.5 µg/L. 2 chla (corrected) values, range 1.0 - 1.8 µg/L, mean 1.4 µg/L. 2 TN values, median 3.4 mg/L. 2 TP values, median 0.01 mg/L.
1842B	LAKE DENTON - OPEN WAT	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 1
1842B	LAKE DENTON - OPEN WAT	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 2
1842B	LAKE DENTON - OPEN WAT	LAKE		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
1842C	LAKE SEBRING OUTLET	LAKE			3A			PP = No data; VP = No data
1856B	LAKE ISTOKPOGA	LAKE		Arsenic	2			PP = 0 / 167; VP = 0 / 8
1856B	LAKE ISTOKPOGA	LAKE		Dissolved Oxygen	2			PP = 21 / 558; VP = 14 / 263
1856B	LAKE ISTOKPOGA	LAKE		Fecal Coliform	2			PP = 6 / 69; VP = 6 / 75

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1856B	LAKE ISTOKPOGA	LAKE		Fluoride	2			PP = 0 / 54; VP = 0 / 65
1856B	LAKE ISTOKPOGA	LAKE		Iron	2			PP = 0 / 224; VP = 0 / 88
1856B	LAKE ISTOKPOGA	LAKE		Nutrients (Historic TSI)	5	Low	2010	PP - 2 TSI annual means exceeded the historic minimum value (52.7, calculated based on data from the period 1986 - 1990) by more than 10 TSI units in 1998 and 2002. Annual means were 56.6, 51.6, 50.2, 55.6, 55.7, 64.3, 61.6, 58.3, 59.3, and 63.2 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 879 chla values, range 1.0 - 136.0 µg/L, mean 29.5 µg/L. 422 chla (corrected) values, range 1.0 - 140.0 µg/L, mean 17.2 µg/L. VP - 2 TSI annual means exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). Annual means were 61.6, 58.4, 58.6, 65.5, 62.5, and 63.9 in 1999, 2000, 2001, 2002, 2003, and 2004. 530 chla values, range 1.0 - 136.0 µg/L, mean 23.0 µg/L. 139 chla (corrected) values, range 1.0 - 140.0 µg/L, mean 25.6 µg/L. 297 TN values, median 1.24 mg/L. 298 TP values, median 0.07 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1856B	LAKE ISTOKPOGA	LAKE		Nutrients (TSI)	5	Low	2010	PP - Potentially impaired. 3 TSI annual means exceeded the threshold in 1998, 1999, and 2002. Annual means were 57.5, 51.3, 50.2, 55.6, 55.7, 64.3, 61.6, 58.4, 58.6, and 65.5 in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 879 chla values, range 1.0 - 136.0 µg/L, mean 29.5 µg/L. 422 chla (corrected) values, range 1.0 - 140.0 µg/L, mean 17.2 µg/L. VP - Impaired. 4 TSI annual means exceeded the threshold in 1999, 2002, 2003, and 2004 (Lakewatch data for the verified period were excluded from the assessment). Annual means were 61.6, 58.4, 58.6, 65.5, 62.5, and 63.9 in 1999, 2000, 2001, 2002, 2003, and 2004. 530 chla values, range 1.0 - 136.0 µg/L, mean 23.0 µg/L. 139 chla (corrected) values, range 1.0 - 140.0 µg/L, mean 25.6 µg/L. 297 TN values, median 1.24 mg/L. 298 TP values, median 0.07 mg/L. The communities are phosphorus and nitrogen co-limited based on a TN/TP median of 17.9 calculated from 296 TN/TP ratios.
1856B	LAKE ISTOKPOGA	LAKE		Total Coliform	2			PP = 4 / 43; VP = 4 / 35
1856B	LAKE ISTOKPOGA	LAKE		Turbidity	2			PP = 5 / 520; VP = 1 / 163
1856B	LAKE ISTOKPOGA	LAKE		Unionized Ammonia	2			PP = 26 / 398; VP = 0 / 33
1860A	JOSEPHINE CREEK	STREAM		Arsenic	2			PP = 0 / 22; VP = 0 / 17
1860A	JOSEPHINE CREEK	STREAM		Chromium3	3B			PP = No data; VP = 0 / 16
1860A	JOSEPHINE CREEK	STREAM		Copper	3B			PP = 0 / 2; VP = 9 / 10
1860A	JOSEPHINE CREEK	STREAM		Dissolved Oxygen	5	Low	2010	PP = 43 / 101, Potentially impaired; VP = 37 / 73, Impaired. DO met verification threshold of IWR, and nutrients and BOD are the causative pollutants. 76 TN values, median 1.256 mg/L. 76 TP values, median 0.05 mg/L. 13 BOD values, median 2.5 mg/L. 130 DO values, median 5.50 mg/L, mean 5.53 mg/L, range 0.52 - 9.62 mg/L.

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1860A	JOSEPHINE CREEK	STREAM		Iron	2			PP = 0 / 25; VP = 0 / 26
1860A	JOSEPHINE CREEK	STREAM		Lead	3B			PP = No data; VP = 10 / 10
1860A	JOSEPHINE CREEK	STREAM		Nutrients (Chla)	5	Low	2010	PP - Insufficient data to calculate any annual mean Chla. VP - Impaired. 1 annual mean Chla exceeded the threshold in 2004. The annual mean Chla was 51.97 in 2004. 16 Chla values, range 1-510 µg/l, mean 57.1 µg/L. 76 TN values, median 1.256 mg/L. 76 TP values, median 0.05 mg/L. The community is phosphorus and nitrogen co-limited, but is more limited by phosphorus based on a median TN/TP ratio of 23.1 from 76 TN/TP ratios.
1860A	JOSEPHINE CREEK	STREAM		Turbidity	2			PP = 0 / 45; VP = 2 / 26
1860A	JOSEPHINE CREEK	STREAM		Unionized Ammonia	2			PP = 0 / 36; VP = 0 / 3
1860A	JOSEPHINE CREEK	STREAM		Zinc	3B			PP = No data; VP = 0 / 16
1860B	LAKE JOSPHINE	LAKE		Arsenic	2			PP = No data; VP = 0 / 23
1860B	LAKE JOSPHINE	LAKE		Chromium3	2			PP = No data; VP = 1 / 23
1860B	LAKE JOSPHINE	LAKE		Copper	3B			PP = No data; VP = 12 / 16
1860B	LAKE JOSPHINE	LAKE		Dissolved Oxygen	2			PP = 2 / 21; VP = 2 / 26
1860B	LAKE JOSPHINE	LAKE		Fecal Coliform	3B			PP = 0 / 9; VP = 0 / 3
1860B	LAKE JOSPHINE	LAKE		Mercury (in fish tissue)	5	Low	2011	VP - Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.76 mg/Kg (ppm) in 2001.
1860B	LAKE JOSPHINE	LAKE		Iron	2			PP = 12 / 15; VP = 0 / 22
1860B	LAKE JOSPHINE	LAKE		Lead	3B			PP = No data; VP = 16 / 16

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1860B	LAKE JOSPHINE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum value (57.85, calculated based on data from the period 1993 - 1997) by more than 10 TSI units. Annual means were 57.3, 57.4, 58.9, 61.9, 60.7, 59.3, and 62.2 in 1993, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 240 chla values, range 9.2 - 110.0 µg/L, mean 33.5 µg/L. 18 chla (corrected) values, range 3.3 - 42.5 µg/L, mean 19.8 µg/L. VP - 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 61.1 in 2004. 19 chla values, range 1.0 - 48.0 µg/L, mean 19.9 µg/L. 3 chla (corrected) values, range 9.1 - 14.7 µg/L, mean 12.0 µg/L. 26 TN values, median 1.16 mg/L. 26 TP values, median 0.10 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1860B	LAKE JOSPHINE	LAKE		Nutrients (TSI)	5	Low	2010	PP - Potentially impaired. 3 TSI annual means exceeded the threshold in 1999, 2000, and 2002. Annual means were 57.3, 57.4, 58.9, 61.9, 60.7, 59.3, and 62.2 in 1993, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 240 chla values, range 9.2 - 110.0 µg/L, mean 33.5 µg/L. 18 chla (corrected) values, range 3.3 - 42.5 µg/L, mean 19.8 µg/L. VP - Impaired. 1 TSI annual mean exceeded the threshold in 2004 (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 61.1 in 2004. 38 chla values, range 1.0 - 50.8 µg/L, mean 20.64 µg/L. 3 chla (corrected) values, range 9.1 - 14.7 µg/L, mean 12.0 µg/L. 26 TN values, median 1.16 mg/L. 26 TP values, median 0.10 mg/L. The community is phosphorus and nitrogen co-limited but is more limited by nitrogen based on a median TN/TP ratio of 12.3 from 26 TN/TP ratios
1860B	LAKE JOSPHINE	LAKE		Total Coliform	3B			PP = 0 / 9; VP = 0 / 3
1860B	LAKE JOSPHINE	LAKE		Turbidity	2			PP = 0 / 21; VP = 2 / 26
1860B	LAKE JOSPHINE	LAKE		Unionized Ammonia	3B			PP = 0 / 9; VP = No data
1860B	LAKE JOSPHINE	LAKE		Zinc	2			PP = No data; VP = 0 / 23
1860C	JACKSON CREEK	STREAM		Arsenic	3B			PP = No data; VP = 0 / 4
1860C	JACKSON CREEK	STREAM		Chromium3	3B			PP = No data; VP = 0 / 4
1860C	JACKSON CREEK	STREAM		Copper	3B			PP = No data; VP = 4 / 4
1860C	JACKSON CREEK	STREAM		Dissolved Oxygen	3B			PP = 0 / 2; VP = 2 / 4
1860C	JACKSON CREEK	STREAM		Iron	3B			PP = No data; VP = 0 / 4
1860C	JACKSON CREEK	STREAM		Lead	3B			PP = No data; VP = 0 / 4
1860C	JACKSON CREEK	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
1860C	JACKSON CREEK	STREAM		Turbidity	3B			PP = 0 / 2; VP = 0 / 4
1860C	JACKSON CREEK	STREAM		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1860C	JACKSON CREEK	STREAM		Zinc	3B			PP = No data; VP = 0 / 4
1860D	LAKE JACKSON	LAKE		Arsenic	2			PP = No data; VP = 0 / 20

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1860D	LAKE JACKSON	LAKE		Chromium3	2			PP = No data; VP = 0 / 20
1860D	LAKE JACKSON	LAKE		Copper	3B			PP = No data; VP = 12 / 16
1860D	LAKE JACKSON	LAKE		Dissolved Oxygen	2			PP = 1 / 41; VP = 1 / 29
1860D	LAKE JACKSON	LAKE		Fecal Coliform	2			PP = 0 / 13; VP = 0 / 8
1860D	LAKE JACKSON	LAKE		Fluoride	3B			PP = 0 / 2; VP = 0 / 1
1860D	LAKE JACKSON	LAKE		Iron	3C			PP = 22 / 24; VP = 0 / 14
1860D	LAKE JACKSON	LAKE		Lead	3B			PP = No data; VP = 16 / 16
1860D	LAKE JACKSON	LAKE		Nutrients (Historic TSI)	3C			PP - 6 TSI annual means exceeded the historic minimum value (38.7, calculated based on data from the period 1990 - 1994) by more than 10 TSI units. Annual means were 32.1, 56.9, 61.3, 53.1, 45.5, 53.1, 56.3, 45.2, and 56.7 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2001, respectively. 495 chla values, range 1.0 - 191.0 µg/L, mean 9.7 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 24 chla values, range 1.0 - 57.2 µg/L mean 4.8 µg/L. 2 chla (corrected) values, range 24.9 - 47.7 µg/L, mean 36.3 µg/L. 29 TN values, median 0.43 mg/L. 23 TP values, median 0.02 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1860D	LAKE JACKSON	LAKE		Nutrients (TSI)	3C			PP - 5 TSI annual means exceeded the threshold in 1994, 1995, 1997, 2000, and 2001. Annual means were 32.1, 56.9, 61.3, 53.1, 45.5, 53.1, 56.3, 45.2, and 56.7 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2001, respectively. 495 chla values, range 1.0 - 191.0 µg/L, mean 9.7 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 24 chla values, range 1.0 - 57.2 µg/L mean 4.8 µg/L. 2 chla (corrected) values, range 24.9 - 47.7 µg/L, mean 36.3 µg/L. 29 TN values, median 0.43 mg/L. 23 TP values, median 0.02 mg/L. Lake is co-limited by nitrogen and phosphorus based on a TN/TP ratio median of 19.7 from 23 TN/TP ratios in the Verified Period.
1860D	LAKE JACKSON	LAKE		Total Coliform	2			PP = 0 / 10; VP = 0 / 8
1860D	LAKE JACKSON	LAKE		Turbidity	2			PP = 0 / 41; VP = 0 / 25
1860D	LAKE JACKSON	LAKE		Unionized Ammonia	2			PP = 0 / 27; VP = 0 / 1
1860D	LAKE JACKSON	LAKE		Zinc	2			PP = No data; VP = 0 / 20
1860E	HILL LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 1
1860E	HILL LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1860E	HILL LAKE	LAKE		Iron	3B			PP = 2 / 3; VP = 0 / 1
1860E	HILL LAKE	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 36.0 and 33.8 in 1996 and 1998, respectively. 81 chla values, range 1.0 - 22.0 µg/L, mean 5.2 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 1 chla value: 5.3 µg/L. 1 chla (corrected) value: 4.3 µg/L. 1 TN value: 0.39 mg/L. 1 TP value: 0.01 mg/L.
1860E	HILL LAKE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1860E	HILL LAKE	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 1

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1860E	HILL LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 3; VP = No data
1860F	LAKE LYNN - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 1
1860F	LAKE LYNN - OPEN WATER	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1860F	LAKE LYNN - OPEN WATER	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1860F	LAKE LYNN - OPEN WATER	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment).
1860F	LAKE LYNN - OPEN WATER	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1860F	LAKE LYNN - OPEN WATER	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1891A	RED BEACH LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 5; VP = 0 / 2
1891A	RED BEACH LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1891A	RED BEACH LAKE	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1891A	RED BEACH LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum value (41.34, calculated based on data from the period 1997 - 2001) by more than 10 TSI units. Annual means were 44.8, 44.7, 37.8, 38.9, 41.2, 44.2, and 47.5 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 247 chla values, range 2.0 - 26.0 µg/L, mean 8.7 µg/L. 4 chla (corrected) values, range 5.2 - 13.3 µg/L, mean 8.1 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 7.6 - 16.5 µg/L, mean 12.1 µg/L. 2 chla (corrected) values, range 5.2 - 13.3 µg/L, mean 9.2 µg/L. 2 TN values, median 0.76 mg/L. 2 TP values, median 0.02 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1891A	RED BEACH LAKE	LAKE		Nutrients (TSI)	3C			PP - 2 TSI annual means exceeded the threshold in 2000 and 2001. Annual means were 44.8, 44.7, 37.8, 38.9, 41.2, 44.2, and 47.5 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 247 chla values, range 2.0 - 26.0 µg/L, mean 8.7 µg/L. 4 chla (corrected) values, range 5.2 - 13.3 µg/L, mean 8.1 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 7.6 - 16.5 µg/L, mean 12.1 µg/L. 2 chla (corrected) values, range 5.2 - 13.3 µg/L, mean 9.2 µg/L. 2 TN values, median 0.76 mg/L. 2 TP values, median 0.02 mg/L. The community is phosphorus limited based on a median TN/TP ratio of 43.8 from 2 TN/TP ratios
1891A	RED BEACH LAKE	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1891A	RED BEACH LAKE	LAKE		Turbidity	3B			PP = 0 / 5; VP = 0 / 2
1891A	RED BEACH LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 3; VP = No data
1893A	HUCKLEBERRY LAKE OUTLET	LAKE			3A			PP = No data; VP = No data
1898A	LAKE WOLF OUTLET	LAKE		Arsenic	3B			PP = No data; VP = 0 / 5
1898A	LAKE WOLF OUTLET	LAKE		Chromium3	3B			PP = No data; VP = 0 / 5
1898A	LAKE WOLF OUTLET	LAKE		Copper	3B			PP = No data; VP = 3 / 4
1898A	LAKE WOLF OUTLET	LAKE		Dissolved Oxygen	3B			PP = No data; VP = 0 / 5
1898A	LAKE WOLF OUTLET	LAKE		Iron	3B			PP = No data; VP = 0 / 4
1898A	LAKE WOLF OUTLET	LAKE		Lead	3B			PP = No data; VP = 4 / 4
1898A	LAKE WOLF OUTLET	LAKE		Nutrients (TSI)	3B			PP = Insufficient data to calculate any annual mean TSI; VP = Insufficient data to calculate any annual mean TSI.
1898A	LAKE WOLF OUTLET	LAKE		Turbidity	3B			PP = No data; VP = 4 / 4
1898A	LAKE WOLF OUTLET	LAKE		Zinc	3B			PP = No data; VP = 0 / 5
1906A	LAKE CHARLOTTE OUTLET	LAKE			3A			PP = No data; VP = No data
1911A	LAKE RUTH OUTLET	LAKE			3A			PP = No data; VP = No data
Lake Placid Planning Unit								
1932	GRASSY CREEK	STREAM		Arsenic	3B			PP = No data; VP = 0 / 4
1932	GRASSY CREEK	STREAM		Chromium3	3B			PP = No data; VP = 0 / 4

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1932	GRASSY CREEK	STREAM		Copper	3B			PP = No data; VP = 4 / 4
1932	GRASSY CREEK	STREAM		Dissolved Oxygen	3B			PP = 2 / 3; VP = 2 / 8
1932	GRASSY CREEK	STREAM		Lead	3B			PP = No Data; VP = 4 / 4
1932	GRASSY CREEK	STREAM		Nutrients (Chla)	3B			PP - Insufficient data to calculate any annual mean Chla. VP - Insufficient data to calculate any annual mean Chla.
1932	GRASSY CREEK	STREAM		Turbidity	3B			PP = 0 / 7; VP = 0 / 10
1932	GRASSY CREEK	STREAM		Zinc	3B			PP = No data; VP = 0 / 4
1938	LAKE HENRY - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 1
1938	LAKE HENRY - OPEN WATER	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938	LAKE HENRY - OPEN WATE	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1938	LAKE HENRY - OPEN WATE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (43.99, calculated based on data from the period 1994 - 1998) by more than 10 TSI units. Annual means were 41.5, 43.2, 47.3, 46.3, 48.9, 45.0, and 46.4 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 237 chla values, range 1.0 - 26.0 µg/L, mean 10.8 µg/L. 2 chla (corrected) values, range 2.5 - 3.5 µg/L, mean 3.0 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 1 chla value: 1.0 µg/L. 1 TN value: 0.53 mg/L. No TP data.
1938	LAKE HENRY - OPEN WATE	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 41.5, 43.2, 47.3, 46.3, 48.9, 45.0, and 46.4 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002. 237 chla values, range 1.0 - 26.0 µg/L, mean 10.8 µg/L. 2 chla (corrected) values, range 2.5 - 3.5 µg/L, mean 3.0 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 1 chla value: 1.0 µg/L. 1 TN value: 0.53 mg/L. No TP data.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938	LAKE HENRY - OPEN WATE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938	LAKE HENRY - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1938	LAKE HENRY - OPEN WATE	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1932A	LAKE GRASSY	LAKE		Arsenic	2			PP = No data; VP = 0 / 36
1932A	LAKE GRASSY	LAKE		Chromium3	2			PP = No data; VP = 1 / 36
1932A	LAKE GRASSY	LAKE		Copper	3B			PP = No data; VP = 0 / 1, This parameter was on the first version of the VL based on some data reported at MDLs. This issue was addressed in updated VL.
1932A	LAKE GRASSY	LAKE		Dissolved Oxygen	2			PP = 0 / 5; VP = 0 / 39
1932A	LAKE GRASSY	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 3
1932A	LAKE GRASSY	LAKE		Iron	2			PP = 3 / 3; VP = 0 / 32
1932A	LAKE GRASSY	LAKE		Lead	3B			PP = No data; VP = 1 / 2 This parameter was on the first version of the VL based on some data reported at MDLs. This issue was addressed in updated VL.
1932A	LAKE GRASSY	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (28.96, calculated based on data from 1999 - 2003) by more than 10 TSI units. Annual means were 29.1, 30.9, 31.7, 33.9, 32.3, 30.2, 26.0, and 29.4 in 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 298 chla values, range 1.0 - 10.0 µg/L, mean 3.6 µg/L. 6 chla (corrected) values, range 1.2 - 4.4 µg/L, mean 2.3 µg/L. VP - 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 39.1 in 2004. 18 chla values, range 1.0 - 15.0 µg/L, mean 1.9 µg/L. 1 chla (corrected) values: 1.3 µg/L. 43 TN values, median 0.73 mg/L. 39 TP value: 0.02 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1932A	LAKE GRASSY	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 29.1, 30.9, 31.7, 33.9, 32.3, 30.2, 26.0, and 29.4 in 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 298 chl a values, range 1.0 - 10.0 µg/L, mean 3.6 µg/L. 6 chl a (corrected) values, range 1.2 - 4.4 µg/L, mean 2.3 µg/L. VP - 0 TSI exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 39.1 in 2004. 18 chl a values, range 1.0 - 15.0 µg/L, mean 1.9 µg/L. 1 chl a (corrected) values: 1.3 µg/L. 43 TN values, median 0.73 mg/L. 39 TP value: 0.02 mg/L.
1932A	LAKE GRASSY	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 3
1932A	LAKE GRASSY	LAKE		Turbidity	2			PP = 0 / 6; VP = 0 / 39
1932A	LAKE GRASSY	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1932A	LAKE GRASSY	LAKE		Zinc	2			PP = No data; VP = 0 / 36
1932B	CLAY LAKE	LAKE		Arsenic	2			PP = No data; VP = 0 / 24
1932B	CLAY LAKE	LAKE		Chromium3	2			PP = No data; VP = 0 / 24
1932B	CLAY LAKE	LAKE		Copper	3B			PP = No data; VP = 12 / 16
1932B	CLAY LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 7; VP = 0 / 28
1932B	CLAY LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 3
1932B	CLAY LAKE	LAKE		Iron	2			PP = 0 / 2; VP = 0 / 22
1932B	CLAY LAKE	LAKE		Lead	3B			PP = No data; VP = 16 / 16

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1932B	CLAY LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (35.91, calculated based on data from the period 2000 - 2004) by more than 10 TSI units. Annual means were 36.5, 36.4, 39.1, 38.5, 32.1, 40.1, and 35.8 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 231 chla values, range 1.0 - 17.0 µg/L, mean 6.0 µg/L. 7 chla (corrected) values, range 2.8 - 14.6 µg/L, mean 7.1 µg/L. VP - 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 31.1 in 2004. 19 chla values, range 1.0 - 3.2 µg/L, mean 1.2 µg/L. 2 chla (corrected) values, range 2.8 - 3.0 µg/L, mean 2.9 µg/L. 28 TN values, median 0.53 mg/L. 28 TP values, median 0.02 mg/L.
1932B	CLAY LAKE	LAKE		Nutrients (TSI)	2			PP - 1 TSI annual mean exceeded the threshold in 2001. Annual means were 36.5, 36.4, 39.1, 38.5, 32.1, 40.1, and 35.8 in 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 231 chla values, range 1.0 - 17.0 µg/L, mean 6.0 µg/L. 7 chla (corrected) values, range 2.8 - 14.6 µg/L, mean 7.1 µg/L. VP - 0 TSI exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 31.1 in 2004. 19 chla values, range 1.0 - 3.2 µg/L, mean 1.2 µg/L. 2 chla (corrected) values, range 2.8 - 3.0 µg/L, mean 2.9 µg/L. 28 TN values, median 0.53 mg/L. 28 TP values, median 0.02 mg/L.
1932B	CLAY LAKE	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 3
1932B	CLAY LAKE	LAKE		Turbidity	2			PP = 0 / 7; VP = 0 / 24
1932B	CLAY LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 5; VP = 0 / 1

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1932B	CLAY LAKE	LAKE		Zinc	2			PP = No data; VP = 0 / 24
1932C	LALE SIRENA	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
1932C	LALE SIRENA	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932C	LALE SIRENA	LAKE		Iron	3B			PP = 1 / 3; VP = 0 / 2
1932C	LALE SIRENA	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 24.5 and 25.2 in 1997 and 1998, respectively. 121 chla values, range 1.7 - 13.1 µg/L, mean 3.0 µg/L. 4 chla (corrected) values, range 1.2 - 8.0 µg/L, mean 3.4 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 1.7 - 13.1 µg/L, mean 7.4 µg/L. 2 chla (corrected) values, range 1.7 - 8.0 µg/L, mean 4.8 µg/L. 2 TN values, median 0.57 mg/L. 2 TP values, median 0.02 mg/L.
1932C	LALE SIRENA	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932C	LALE SIRENA	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1932C	LALE SIRENA	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1932D	PEARL LAKE	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 1
1932D	PEARL LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932D	PEARL LAKE	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1932D	PEARL LAKE	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual mean was 16.7 in 1996. 60 chla values, range 1.0 - 4.1 µg/L, mean 1.8 µg/L. 3 chla (corrected) values, range 1.0 - 3.3 µg/L, mean 1.9 µg/L. VP - Insufficient data to calculate any mean. 1 chla value: 4.1 µg/L. 1 chla (corrected) value: 3.3 µg/L. 1 TN value: 0.47 mg/L. 1 TP value: 0.01 mg/L.
1932D	PEARL LAKE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932D	PEARL LAKE	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1932E	LAKE HUNTLEY	LAKE		Arsenic	2			PP = No data; VP = 0 / 24
1932E	LAKE HUNTLEY	LAKE		Chromium3	2			PP = No data; VP = 0 / 24
1932E	LAKE HUNTLEY	LAKE		Copper	3B			PP = No data; VP = 12 / 16

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1932E	LAKE HUNTLEY	LAKE		Dissolved Oxygen	2			PP = 0 / 9; VP = 0 / 27
1932E	LAKE HUNTLEY	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 3
1932E	LAKE HUNTLEY	LAKE		Iron	2			PP = 2 / 3; VP = 0 / 21
1932E	LAKE HUNTLEY	LAKE		Lead	3B			PP = No data; VP = 16 / 16
1932E	LAKE HUNTLEY	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (38.49, calculated based on data from 2001 - 2005) by more than 10 TSI units. Annual means were 40.9, 44.4, 43.2, 41.4, 45.0, 44.7, 40.1, and 38.6 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 273 chla values, range 3.0 - 13.0 µg/L., mean 6.7 µg/L. 8 chla (corrected) values, range 1.0 - 7.6 µg/L, mean 2.9 µg/L. VP - 0 TSI annual mean exceeded the historic annual minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 31.5 in 2004. 18 chla values, range 1.0 - 3.9 µg/L, mean 1.2 µg/L. 1 chla (corrected) value: 2.2 µg/L. 28 TN values, median 0.65 mg/L. 27 TP values, median 0.02 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1932E	LAKE HUNTLEY	LAKE		Nutrients (TSI)	2			PP - 3 TSI annual means exceeded the threshold in 1994, 1995, and 1996. Annual means were 40.9, 44.4, 43.2, 41.4, 45.0, 44.7, 40.1, and 38.6 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2002, respectively. 273 chla values, range 3.0 - 13.0 µg/L., mean 6.7 µg/L. 8 chla (corrected) values, range 1.0 - 7.6 µg/L, mean 2.9 µg/L. VP - 0 TSI exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual mean TSI was 31.5 in 2004. 18 chla values, range 1.0 - 3.9 µg/L, mean 1.2 µg/L. 1 chla (corrected) value: 2.2 µg/L. 28 TN values, median 0.65 mg/L. 27 TP values, median 0.02 mg/L.
1932E	LAKE HUNTLEY	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1932E	LAKE HUNTLEY	LAKE		Turbidity	2			PP = 0 / 9; VP = 0 / 23
1932E	LAKE HUNTLEY	LAKE		Unionized Ammonia	3B			PP = 1 / 6; VP = 1 / 1
1932E	LAKE HUNTLEY	LAKE		Zinc	2			PP = No data; VP = 0 / 24
1932F	LAKE HARRY - OPEN WATE	LAKE		Dissolved Oxygen	3B			PP = 0 / 1; VP = No data
1932F	LAKE HARRY - OPEN WATE	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1932F	LAKE HARRY - OPEN WATE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1932F	LAKE HARRY - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 2; VP = No data
1932F	LAKE HARRY - OPEN WATE	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1932G	LAKE APTHORPE - OPEN W	LAKE		Dissolved Oxygen	3B			PP = 0 / 5; VP = 0 / 2
1932G	LAKE APTHORPE - OPEN W	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 2
1932G	LAKE APTHORPE - OPEN W	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2

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1932G	LAKE APTHORPE - OPEN W	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual mean was 43.5 in 1998. 52 chla values, range 2.4 - 24.0 µg/L, mean 11.6 µg/L. 4 chla (corrected) values, range 1.7 - 13.1 µg/L, mean 7.3 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, range 2.4 - 14.6 µg/L, mean 8.5 µg/L. 2 chla (corrected) values, range 1.7 - 13.1 µg/L, mean 7.4 µg/L. 2 TN values, median 1.15 mg/L. 2 TP values, median 0.01 mg/L.
1932G	LAKE APTHORPE - OPEN W	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 2
1932G	LAKE APTHORPE - OPEN W	LAKE		Turbidity	3B			PP = 0 / 5; VP = 0 / 2
1932G	LAKE APTHORPE - OPEN W	LAKE		Unionized Ammonia	3B			PP = 0 / 3;
1932H	LAKE SIMMONS - OPEN WA	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 2
1932H	LAKE SIMMONS - OPEN WA	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1932H	LAKE SIMMONS - OPEN WA	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1932H	LAKE SIMMONS - OPEN WA	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1932H	LAKE SIMMONS - OPEN WA	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1932H	LAKE SIMMONS - OPEN WA	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1932H	LAKE SIMMONS - OPEN WA	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1932I	BUCK LAKE - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 0 / 4; VP = 0 / 2
1932I	BUCK LAKE - OPEN WATER	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932I	BUCK LAKE - OPEN WATER	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1932I	BUCK LAKE - OPEN WATER	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1932I	BUCK LAKE - OPEN WATER	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932I	BUCK LAKE - OPEN WATER	LAKE		Turbidity	3B			PP = 0 / 5; VP = 0 / 2
1932I	BUCK LAKE - OPEN WATER	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data

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1932J	LOST LAKE - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = No data
1932J	LOST LAKE - OPEN WATER	LAKE		Iron	3C			PP = 3 / 3; VP = No data
1932J	LOST LAKE - OPEN WATER	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1932J	LOST LAKE - OPEN WATER	LAKE		Turbidity	3B			PP = 0 / 3; VP = No data
1932J	LOST LAKE - OPEN WATER	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1932K	LAKE MCCOY - OPEN WATE	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 1
1932K	LAKE MCCOY - OPEN WATE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932K	LAKE MCCOY - OPEN WATE	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1932K	LAKE MCCOY - OPEN WATE	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual mean was 17.5 in 1998. 98 chla values, range 1.0 - 4.0 µg/L, mean 1.8 µg/L. 3 chla (corrected) values, range 1.0 - 2.2 µg/L, mean 1.7 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 1 chla value: 1.8 µg/L. 1 chla (corrected) value: 2.2 µg/L. 1 TN value: 0.97 mg/L. 1 TP value: 0.00 mg/L.
1932K	LAKE MCCOY - OPEN WATE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932K	LAKE MCCOY - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1932L	SADDLEBAGS LAKE - OPEN	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 1
1932L	SADDLEBAGS LAKE - OPEN	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932L	SADDLEBAGS LAKE - OPEN	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1932L	SADDLEBAGS LAKE - OPEN	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual mean was 26.9 in 1997. 47 chla values, range 2.0 - 5.6 µg/L, mean 2.9 µg/L. 2 chla (corrected) values, range 2.4 - 3.8 µg/L, 3.1 µg/L. VP - Insufficient data to calculate any annual mean. 1 chla value: 4.5 µg/L, mean 3.1 µg/L. 1 chla (corrected) value: 3.8 µg/L. 1 TN value: 0.51 mg/L. 1 TP value: 0.002 mg/L.

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1932L	SADDLEBAGS LAKE - OPEN	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932L	SADDLEBAGS LAKE - OPEN	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1932M	BLUE LAKE - OPEN WATER	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 2
1932M	BLUE LAKE - OPEN WATER	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1932M	BLUE LAKE - OPEN WATER	LAKE		Iron	3B			PP = 2 / 4; VP = 0 / 2
1932M	BLUE LAKE - OPEN WATER	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 32.4, 34.0, and 36.3 in 1996, 1998, and 2001, respectively. 122 chla values, range 2.0 - 19.0 µg/L, mean 5.2 µg/L. 4 chla (corrected) values, range 1.7 - 9.9 µg/L, mean 5.0 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chla values, both 4.9 µg/L. 2 chla (corrected) values, range 4.0 - 4.2 µg/L, mean 4.1 µg/L. 2 TN values, median 0.84 mg/L. 2 TP values, median 0.01 mg/L.
1932M	BLUE LAKE - OPEN WATER	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 2
1932M	BLUE LAKE - OPEN WATER	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 2
1932M	BLUE LAKE - OPEN WATER	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1932N	UNNAMED "B" LAKE - OPE	LAKE		Dissolved Oxygen	3B			PP = 0 / 2; VP = 0 / 1
1932N	UNNAMED "B" LAKE - OPE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932N	UNNAMED "B" LAKE - OPE	LAKE		Iron	3C			PP = 3 / 3; VP = No data
1932N	UNNAMED "B" LAKE - OPE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1932N	UNNAMED "B" LAKE - OPE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1932N	UNNAMED "B" LAKE - OPE	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 1
1938A	LAKE JUNE IN WINTER	LAKE		Arsenic	3B			PP = No data; VP = 0 / 17
1938A	LAKE JUNE IN WINTER	LAKE		Chromium3	3B			PP = No data; VP = 0 / 17
1938A	LAKE JUNE IN WINTER	LAKE		Copper	3B			PP = No data; VP = 5 / 13
1938A	LAKE JUNE IN WINTER	LAKE		Dissolved Oxygen	2			PP = 0 / 6; VP = 0 / 27

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938A	LAKE JUNE IN WINTER	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 10
1938A	LAKE JUNE IN WINTER	LAKE		Mercury (in fish tissue)	5	Low	2011	VP - Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 1.02 mg/Kg (ppm) in 2003.
1938A	LAKE JUNE IN WINTER	LAKE		Iron	3C			PP = 5 / 7; VP = 0 / 15
1938A	LAKE JUNE IN WINTER	LAKE		Lead	3B			PP = No data; VP = 13 / 13
1938A	LAKE JUNE IN WINTER	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (39.41, calculated based on data from the period 1992 - 1996) by more than 10 TSI units. Annual means were 33.4, 40.4, 44.4, 43.6, 48.2, 47.8, 37.2, 37.4, and 38.1 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002. 285 chl a values, range 1.0 - 26.0 µg/L, mean 10.2 µg/L. 10 chl a (corrected) values, range 3.4 - 16.2 µg/L, mean 7.0 µg/L. VP - 0 TSI annual mean exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 38.0 in 2004. 26 chl a values, range 1.0 - 12.0 µg/L, mean 2.7 µg/L. 5 chl a (corrected) values, range 3.4 - 16.2 µg/L, mean 7.0 µg/L. 35 TN values, median 0.60 mg/L. 5 TP values, median 0.02 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938A	LAKE JUNE IN WINTER	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 33.4, 40.4, 44.4, 43.6, 48.2, 47.8, 37.2, 37.4, and 38.1 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002. 285 chl _a values, range 1.0 - 26.0 µg/L, mean 10.2 µg/L. 10 chl _a (corrected) values, range 3.4 - 16.2 µg/L, mean 7.0 µg/L. VP - 0 TSI annual mean exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 38.0 in 2004. 26 chl _a values, range 1.0 - 12.0 µg/L, mean 2.7 µg/L. 5 chl _a (corrected) values, range 3.4 - 16.2 µg/L, mean 7.0 µg/L. 35 TN values, median 0.60 mg/L. 5 TP values, median 0.02 mg/L.
1938A	LAKE JUNE IN WINTER	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 7
1938A	LAKE JUNE IN WINTER	LAKE		Turbidity	2			PP = 0 / 9; VP = 0 / 26
1938A	LAKE JUNE IN WINTER	LAKE		Unionized Ammonia	3B			PP = 0 / 5; VP = No data
1938A	LAKE JUNE IN WINTER	LAKE		Zinc	3B			PP = No data; VP = 0 / 17
1938B	PLACID JUNE CANAL	STREAM		Dissolved Oxygen	3B			PP = 0 / 1; VP = 0 / 1
1938B	PLACID JUNE CANAL	STREAM		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938B	PLACID JUNE CANAL	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
1938B	PLACID JUNE CANAL	STREAM		Nutrients (Chl _a)	3B			PP - Insufficient data to calculate any annual mean Chl _a . VP - Insufficient data to calculate any annual mean Chl _a .
1938B	PLACID JUNE CANAL	STREAM		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938B	PLACID JUNE CANAL	STREAM		Turbidity	3B			PP = 0 / 1; VP = 0 / 1
1938C	LAKE PLACID	LAKE		Arsenic	2			PP = No data; VP = 0 / 25
1938C	LAKE PLACID	LAKE		Chromium3	3B			PP = No data; VP = 1 / 19
1938C	LAKE PLACID	LAKE		Copper	3B			PP = No data; VP = 8 / 16
1938C	LAKE PLACID	LAKE		Dissolved Oxygen	2			PP = 0 / 12; VP = 0 / 31
1938C	LAKE PLACID	LAKE		Fecal Coliform	3B			PP = 0 / 6; VP = 0 / 12
1938C	LAKE PLACID	LAKE		Fluoride	3B			PP = 0 / 2; VP = 0 / 2

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938C	LAKE PLACID	LAKE		Mercury (in fish tissue)	5	Low	2011	VP - Mercury met verification threshold of the IWR. Fish tissue levels in 12 largemouth bass averaged 0.99 mg/Kg (ppm) in 2003.
1938C	LAKE PLACID	LAKE		Iron	2			PP = 5 / 7; VP = 0 / 23
1938C	LAKE PLACID	LAKE		Lead	3B			PP = No data; VP = 16 / 16
1938C	LAKE PLACID	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (37.82, calculated based on data from the period 1993 - 1997) by more than 10 TSI units. Annual means were 40.9, 35.8, 38.6, 36.0, 42.8, 40.1, 41.2, 42.6, and 42.5 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 285 chla values, range 1.0 - 21.0 µg/L, mean 8.2 µg/L. 11 chla (corrected) values, range 1.0 - 11.9 µg/L, mean 7.0 µg/L. VP - 0 TSI annual means exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). 23 chla values, range 1.0 - 10.7 µg/L, mean 2.6 µg/L. 6 chla (corrected) values, range 1.0 - 9.0 µg/L, mean 6.4 µg/L. 38 TN values, median 0.47mg/L. 31 TP values, median 0.02 mg/L.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938C	LAKE PLACID	LAKE		Nutrients (TSI)	2			PP - 2 TSI annual means exceeded the threshold in 1994 and 2001. Annual means were 40.9, 35.8, 38.6, 36.0 42.8, 40.1, 41.2, 42.6, and 42.5 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 285 chla values, range 1.0 - 21.0 µg/L, mean 8.2 µg/L. 11 chla (corrected) values, range 1.0 - 11.9 µg/L, mean 7.0 µg/L. VP - 0 annual mean TSI exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 25.3 in 2004. 23 chla values, range 1.0 - 10.7 µg/L, mean 2.6 µg/L. 6 chla (corrected) values, range 1.0 - 9.0 µg/L, mean 6.4 µg/L. 38 TN values, median 0.47mg/L. 31 TP values, median 0.02 mg/L.
1938C	LAKE PLACID	LAKE		Total Coliform	3B			PP = 0 / 6; VP = 0 / 11
1938C	LAKE PLACID	LAKE		Turbidity	2			PP = 0 / 12; VP = 0 / 28
1938C	LAKE PLACID	LAKE		Unionized Ammonia	3B			PP = 0 / 3; VP = No data
1938C	LAKE PLACID	LAKE		Zinc	2			PP = No data; VP = 0 / 25
1938C 1	MIRROR LAKE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1938D	LAKE CARRIE	LAKE		Arsenic	3B			PP = No data; VP = 0 / 12
1938D	LAKE CARRIE	LAKE		Chromium3	3B			PP = No data; VP = 0 / 12
1938D	LAKE CARRIE	LAKE		Copper	3B			PP = No data; VP = 8 / 12
1938D	LAKE CARRIE	LAKE		Dissolved Oxygen	2			PP = 0 / 6; VP = 0 / 20
1938D	LAKE CARRIE	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 3
1938D	LAKE CARRIE	LAKE		Iron	3C			PP = 3 / 5; VP = 0 / 10
1938D	LAKE CARRIE	LAKE		Lead	3B			PP = No data; VP = 12 / 12

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938D	LAKE CARRIE	LAKE		Nutrients (Historic TSI)	3C			PP - 2 TSI annual means exceeded the historic minimum value (41.19, calculated based on data from the period 1990 - 1994) by more than 10 TSI units in 2000 and 2002. Annual averages were 42.7, 39.6, 48.9, 51.0, 48.7, 53.1, 49.9, 52.3, and 54.8 in 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 214 chla values, range 1.0 - 76.0 µg/L, mean 14.5 µg/L. 5 chla (corrected) values, range 3.2 - 28.4 µg/L, mean 15.8 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 21 chla values, range 1.0 - 57.0 µg/L, mean 16.4 µg/L. 2 chla (corrected) values, range 6.3 - 28.0 µg/L, mean 17.1 µg/L. 21 TN values, median 0.92 mg/L. 18 TP values, median 0.05 mg/L.
1938D	LAKE CARRIE	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual averages were 42.7, 39.6, 48.9, 51.0, 48.7, 53.1, 49.9, 52.3, and 54.8 in 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 214 chla values, range 1.0 - 76.0 µg/L, mean 14.5 µg/L. 5 chla (corrected) values, range 3.2 - 28.4 µg/L, mean 15.8 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 21 chla values, range 1.0 - 57.0 µg/L, mean 16.4 µg/L. 2 chla (corrected) values, range 6.3 - 28.0 µg/L, mean 17.1 µg/L. 21 TN values, median 0.92 mg/L. 18 TP values, median 0.05 mg/L.
1938D	LAKE CARRIE	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 3
1938D	LAKE CARRIE	LAKE		Turbidity	2			PP = 0 / 7; VP = 0 / 21
1938D	LAKE CARRIE	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1938D	LAKE CARRIE	LAKE		Zinc	3B			PP = No data; VP = 0 / 12

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938E	PERSIMMON LAKE	LAKE		Arsenic	2			PP = No data; VP = 0 / 27
1938E	PERSIMMON LAKE	LAKE		Chromium3	2			PP = No data; VP = 0 / 27
1938E	PERSIMMON LAKE	LAKE		Copper	2			PP = No data; VP = 4 / 24
1938E	PERSIMMON LAKE	LAKE		Dissolved Oxygen	2			PP = 1 / 10; VP = 0 / 31
1938E	PERSIMMON LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 4
1938E	PERSIMMON LAKE	LAKE		Iron	2			PP = 7 / 9; VP = 0 / 22
1938E	PERSIMMON LAKE	LAKE		Lead	3B			PP = No data; VP = 15 / 15
1938E	PERSIMMON LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum value (67.17, calculated based on data from the period 2001 - 2005) by more than 10 TSI units. Annual means were 70.8, 71.4, 69.8, 70.4, 68.7, 71.8, 72.1, 71.8, and 69.6 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 313 chla values, range 36.0 - 160.0 µg/L, mean 87.0 µg/L. 9 chla (corrected) values, range 10.2 - 142.7 µg/L, mean 85.0 µg/L. VP - 0 TSI annual means exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 65.6 in 2004. 18 chla values, range 3.4 - 85.8 µg/L, mean 28.1 µg/L. 2 chla (corrected) values, range 51.3 - 73.1 µg/L, mean 62.2 µg/L. 32 TN values, median 2.59 mg/L. 31 TP values, median 0.04 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938E	PERSIMMON LAKE	LAKE		Nutrients (TSI)	5	Low	2010	PP - Potentially impaired. 9 TSI annual means exceeded the threshold. Annual means were 70.8, 71.4, 69.8, 70.4, 68.7, 71.8, 72.1, 71.8, and 69.6 in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002, respectively. 313 chla values, range 36.0 - 160.0 µg/L, mean 87.0 µg/L. 9 chla (corrected) values, range 10.2 - 142.7 µg/L, mean 85.0 µg/L. VP - Impaired. 1 TSI annual mean exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 65.6 in 2004. 18 chla values, range 3.4 - 85.8 µg/L, mean 28.1 µg/L. 2 chla (corrected) values, range 51.3 - 73.1 µg/L, mean 62.2 µg/L. 32 TN values, median 2.59 mg/L. 31 TP values, median 0.04 mg/L. Limited by phosphorus based on a median TN/TP ratio of 64.2 (31 values) in the Verified Period.
1938E	PERSIMMON LAKE	LAKE		Total Coliform	3B			PP = 0 / 3; VP = 0 / 4
1938E	PERSIMMON LAKE	LAKE		Turbidity	2			pp = 6 / 10; VP = 3 / 27
1938E	PERSIMMON LAKE	LAKE		Unionized Ammonia	3B			pp = 0 / 4; VP = 0 / 1
1938E	PERSIMMON LAKE	LAKE		Zinc	2			PP = No data; VP = 0 / 27
1938F	RED WATER LAKE	LAKE		Arsenic	2			PP = No data; VP = 0 / 20
1938F	RED WATER LAKE	LAKE		Chromium3	2			PP = No data; VP = 0 / 20
1938F	RED WATER LAKE	LAKE		Copper	3B			PP = No data; VP = 12 / 16
1938F	RED WATER LAKE	LAKE		Dissolved Oxygen	2			PP = 0 / 4; VP = 0 / 22
1938F	RED WATER LAKE	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 2
1938F	RED WATER LAKE	LAKE		Iron	3C			PP = 4 / 6; VP = 0 / 18
1938F	RED WATER LAKE	LAKE		Lead	3B			PP = No data; VP = 16 / 16

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938F	RED WATER LAKE	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (48.33, calculated based on data from the period 1990 - 1994) by more than 10 TSI units. Annual averages were 49.3, 45.7, 53.2, 51.2, 48.4, 54.2, and 53.8 in 1993, 1994, 1995, 1996, 1997, 1998, and 1999, respectively 258 chla values, range 4.0 - 72.0 µg/L, mean 22.8 µg/L. 6 chla (corrected) values, range 6.5 - 30.9 µg/L, mean 14.3 µg/L. VP - 0 TSI annual means exceeded the historic minimum by more than 10 TSI units (Lakewatch data for the verified period were excluded from the assessment). The TSI annual mean was 52.9 in 2004. 19 chla values, range 1.2 - 34.9 µg/L, mean 11.6 µg/L. 2 chla (corrected) values, range 12.0 - 30.9 µg/L, mean 21.5 µg/L. 23 TN values, median 0.88 mg/L. 23 TP values, median 0.03 mg/L.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938F	RED WATER LAKE	LAKE		Nutrients (TSI)	2			PP - All 7 TSI annual means exceeded the threshold. Annual averages were 49.3, 45.7, 53.2, 51.2, 48.4, 54.2, and 53.8 in 1993, 1994, 1995, 1996, 1997, 1998, and 1999, respectively. 258 chla values, range 4.0 - 72.0 µg/L, mean 22.8 µg/L. 6 chla (corrected) values, range 6.5 - 30.9 µg/L, mean 14.3 µg/L. VP - 0 annual average TSI exceeded the threshold (Lakewatch data for the verified period were excluded from the assessment). The annual average TSI was 52.9 (water color 56.9 pcu) in 2004. 19 chla values, range 1.2 - 34.9 µg/L, mean 11.6 µg/L. 2 chla (corrected) values, range 12.0 - 30.9 µg/L, mean 21.5 µg/L. 23 TN values, median 0.88 mg/L. 23 TP values, median 0.03 mg/L. Historical color data from Florida Lakewatch, the Southwest Florida Water Management District, and the EPA's Lake Regions of Florida Report indicate that this is a low color lake. But in 2004, the water color was higher than 40 pcu. Therefore TSI 60 was used as the threshold for the year.
1938F	RED WATER LAKE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 2
1938F	RED WATER LAKE	LAKE		Turbidity	2			PP = 0 / 6; VP = 0 / 22
1938F	RED WATER LAKE	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1938F	RED WATER LAKE	LAKE		Zinc	2			PP = No data; VP = 0 / 20
1938G	LAKE FRANCIS	LAKE		Arsenic	3B			PP = No data; VP = 0 / 12
1938G	LAKE FRANCIS	LAKE		Chromium3	3B			PP = No data; VP = 0 / 12
1938G	LAKE FRANCIS	LAKE		Copper	3B			PP = No data; VP = 8 / 12
1938G	LAKE FRANCIS	LAKE		Dissolved Oxygen	2			PP = 0 / 10; VP = 0 / 19
1938G	LAKE FRANCIS	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1938G	LAKE FRANCIS	LAKE		Iron	3C			PP = 6 / 8; VP = 0 / 10
1938G	LAKE FRANCIS	LAKE		Lead	3B			PP = No data; VP = 12 / 12

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938G	LAKE FRANCIS	LAKE		Nutrients (Historic TSI)	2			PP - 0 TSI annual means exceeded the historic minimum (40.94, calculated based on data from the period 1990 - 1994) by more than 10 TSI units. Annual means were 43.9, 38.6, 47.2, 46.1, 46.2, 46.9, 43.6, 44.5, and 46.1 in 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 313 chla values, range 36.0 - 160.0 µg/L, mean 87.0 µg/L. 9 chla (corrected) values, range 10.2 - 142.7 µg/L, mean 85.0 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 18 chla values, range 3.4 - 85.8 µg/L, mean 28.1 µg/L. 2 chla (corrected) values, range 51.3 - 73.1 µg/L, mean 62.2 µg/L. 20 TN values, median 0.529 mg/L. 19 TP values, median 0.02 mg/L.
1938G	LAKE FRANCIS	LAKE		Nutrients (TSI)	3C			PP - 4 TSI annual means exceeded the threshold in 1993, 1995, 2000, and 2001. Annual means were 43.9, 38.6, 47.2, 46.1, 46.2, 46.9, 43.6, 44.5, and 46.1 in 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, and 2002, respectively. 313 chla values, range 36.0 - 160.0 µg/L, mean 87.0 µg/L. 9 chla (corrected) values, range 10.2 - 142.7 µg/L, mean 85.0 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 18 chla values, range 3.4 - 85.8 µg/L, mean 28.1 µg/L. 2 chla (corrected) values, range 51.3 - 73.1 µg/L, mean 62.2 µg/L. 20 TN values, median 0.529 mg/L. 19 TP values, median 0.02 mg/L.
1938G	LAKE FRANCIS	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 2
1938G	LAKE FRANCIS	LAKE		Turbidity	2			PP = 0 / 10; VP = 0 / 19

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938G	LAKE FRANCIS	LAKE		Unionized Ammonia	3B			PP = 0 / 5; VP = No data
1938G	LAKE FRANCIS	LAKE		Zinc	3B			PP = No data; VP = 0 / 12
1938H	LAKE ANNIE	LAKE		Aluminum	3B			PP = 0 / 1; VP = No data
1938H	LAKE ANNIE	LAKE		Boron	3B			PP = 0 / 3; VP = No data
1938H	LAKE ANNIE	LAKE		Dissolved Oxygen	3B			PP = 0 / 9; VP = 0 / 2
1938H	LAKE ANNIE	LAKE		Fecal Coliform	3B			PP = 0 / 2; VP = 0 / 2
1938H	LAKE ANNIE	LAKE		Nutrients (TSI)	2			PP - 0 TSI annual means exceeded the threshold. Annual means were 25.3 and 30.4 in 2001 and 2002, respectively. 4 chl a values, range 1.6 - 2.3 µg/L, mean 1.9 µg/L. 4 chl a (corrected) values, range 1.0 - 1.6 µg/L, mean 1.4 µg/L. VP - Insufficient data to calculate any annual mean TSI (Lakewatch data for the verified period were excluded from the assessment). 2 chl a values, range 1.6 - 1.7 µg/L, mean 1.6 µg/L. 2 chl a (corrected) values, both 1.6 µg/L. 2 TN values, median 0.44 mg/L. No TP data.
1938H	LAKE ANNIE	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938H	LAKE ANNIE	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 2
1938H	LAKE ANNIE	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1938I	LAKE LACHARD - OPEN WA	LAKE		Dissolved Oxygen	3B			PP = 2 / 5; VP = 0 / 1
1938I	LAKE LACHARD - OPEN WA	LAKE		Fecal Coliform	3B			PP = 0 / 3; VP = 0 / 1
1938I	LAKE LACHARD - OPEN WA	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1938I	LAKE LACHARD - OPEN WA	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1938I	LAKE LACHARD - OPEN WA	LAKE		Total Coliform	3B			PP = 0 / 2; VP = 0 / 1
1938I	LAKE LACHARD - OPEN WA	LAKE		Turbidity	3B			PP = 0 / 5; VP = 0 / 1
1938I	LAKE LACHARD - OPEN WA	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
1938J	LAKE NELLIE NW - OPEN	LAKE		Dissolved Oxygen	3B			PP = 2 / 4; VP = 0 / 1
1938J	LAKE NELLIE NW - OPEN	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938J	LAKE NELLIE NW - OPEN	LAKE		Iron	3B			PP = 2 / 2; VP = No data

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938J	LAKE NELLIE NW - OPEN	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1938J	LAKE NELLIE NW - OPEN	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938J	LAKE NELLIE NW - OPEN	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 1
1938K	LAKE NELLIE CENTER - O	LAKE		Dissolved Oxygen	3B			PP = 1 / 4; VP = 0 / 1
1938K	LAKE NELLIE CENTER - O	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938K	LAKE NELLIE CENTER - O	LAKE		Iron	3B			PP = 2 / 2; VP = No data
1938K	LAKE NELLIE CENTER - O	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1938K	LAKE NELLIE CENTER - O	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938K	LAKE NELLIE CENTER - O	LAKE		Turbidity	3B			PP = 0 / 4; VP = 0 / 1
1938L	LAKE NELLIE SE - OPEN	LAKE		Dissolved Oxygen	3B			PP = 0 / 5; VP = 0 / 1
1938L	LAKE NELLIE SE - OPEN	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938L	LAKE NELLIE SE - OPEN	LAKE		Iron	3C			PP = 4 / 4; VP = No data
1938L	LAKE NELLIE SE - OPEN	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1938L	LAKE NELLIE SE - OPEN	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938L	LAKE NELLIE SE - OPEN	LAKE		Turbidity	3B			PP = 0 / 6; VP = 0 / 1
1938L	LAKE NELLIE SE - OPEN	LAKE		Unionized Ammonia	3B			PP = 0 / 1; VP = No data
1938M	UNNAMED "E" LAKE - OPE	LAKE		Dissolved Oxygen	3B			PP = 0 / 1; VP = No data
1938M	UNNAMED "E" LAKE - OPE	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1938M	UNNAMED "E" LAKE - OPE	LAKE		Turbidity	3B			PP = 0 / 1; VP = No data
1938N	STORMWATER POND - OPEN	LAKE		Dissolved Oxygen	3B			PP = 0 / 3; VP = 0 / 1
1938N	STORMWATER POND - OPEN	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938N	STORMWATER POND - OPEN	LAKE		Iron	3B			PP = 2 / 3; VP = 0 / 1
1938N	STORMWATER POND - OPEN	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period
1938N	STORMWATER POND - OPEN	LAKE		Total Coliform	3B			PP = 0 / 1; VP = 0 / 1
1938N	STORMWATER POND - OPEN	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 1
1938Y	LAKE PLACID OUTLET	LAKE		Arsenic	3B			PP = No data; VP = 0 / 9
1938Y	LAKE PLACID OUTLET	LAKE		Chromium3	3B			PP = No data; VP = 0 / 5
1938Y	LAKE PLACID OUTLET	LAKE		Copper	3B			PP = No data; VP = 3 / 3
1938Y	LAKE PLACID OUTLET	LAKE		Dissolved Oxygen	3B			PP = 0 / 1; VP = 8 / 12
1938Y	LAKE PLACID OUTLET	LAKE		Fecal Coliform	3B			PP = 0 / 1; VP = 2 / 11
1938Y	LAKE PLACID OUTLET	LAKE		Iron	3B			PP = No data; VP = 0 / 7
1938Y	LAKE PLACID OUTLET	LAKE		Lead	3B			PP = No data; VP = 2 / 2
1938Y	LAKE PLACID OUTLET	LAKE		Nutrients (TSI)	3B			PP - Insufficient data to calculate any annual mean TSI. VP - Insufficient data to calculate any annual mean TSI.
1938Y	LAKE PLACID OUTLET	LAKE		Total Coliform	3B			PP = No data; VP = 1 / 6
1938Y	LAKE PLACID OUTLET	LAKE		Turbidity	3B			PP = 0 / 1; VP = 0 / 10
1938Y	LAKE PLACID OUTLET	LAKE		Zinc	3B			PP = No data; VP = 0 / 9
1938Z	LAKE JUNE IN WINTER DR	LAKE			3A			PP = No data; VP = No data

¹The designation "stream" includes canals, rivers, and sloughs. The designation "lake" includes some marshes.

²The EPA's 305(b)/303(d) Integrated Report categories are as follows:

- 1—Attains all designated uses;
- 2—Attains some designated uses;
- 3a—No data and information are available to determine if any designated use is attained;
- 3b—Some data and information are available, but they are insufficient for determining if any designated use is attained;
- 3c—Meets Planning List criteria and is potentially impaired for one or more designated uses;
- 3d—Meets Verified List criteria and is potentially impaired for one or more designated uses;
- 4a—Impaired for one or more designated uses and the TMDL is complete;
- 4b—Impaired for one or more designated uses, but no TMDL is required because an existing or proposed pollutant control mechanism provides reasonable assurance that the water will attain standards in the future;
- 4c—Impaired for one or more designated uses but no TMDL is required because the impairment is not caused by a pollutant; and
- 5—Water quality standards are not attained and a TMDL is required.

Table D.2: Integrated Water Quality Report (Master List) - Fisheating Creek Basin by Planning Unit

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period ⁵
Fisheating Creek Planning Unit								
3201A	FISHEATING CREEK	STREAM		Arsenic	2			PP = 0 / 31; VP = 0 / 32
3201A	FISHEATING CREEK	STREAM		Copper	2			PP = 1 / 33; VP = 4 / 23
3201A	FISHEATING CREEK	STREAM		Fecal Coliform	2			PP = 2 / 63; VP = 3 / 71
3201A	FISHEATING CREEK	STREAM		Fluoride	2			PP = 0 / 50; VP = 0 / 77
3201A	FISHEATING CREEK	STREAM		Parathion	2			PP = 0 / 5; VP = No data
3201A	FISHEATING CREEK	STREAM		Total Coliform	2			PP = 2 / 40; VP = 2 / 27
3201A	FISHEATING CREEK	STREAM		Turbidity	2			PP = 6 / 318; VP = 6 / 206
3201A	FISHEATING CREEK	STREAM		Unionized Ammonia	2			PP = 1 / 179; VP = 0 / 32
3201A	FISHEATING CREEK	STREAM		Zinc	2			PP = 0 / 32; VP = 0 / 32
3201A	FISHEATING CREEK	STREAM		Dissolved Oxygen	5	Medium	2010	PP = 146 / 330 Potentially impaired; VP = 99 / 266 Verified impaired. Nutrients were identified as a causative pollutant based on chlorophyll (ug/L) data/nutrient impairment verification. Waterbody is co-limited by nitrogen and phosphorus based on TN/TP ratio median 10.68 (327 values). 331 TN values, median 1.62 mg/L. 351 TP values, median 0.16 mg/L.
3201A	FISHEATING CREEK	STREAM		Iron	5	Medium	2010	PP = 2 / 19; VP = 9 / 21. 8 iron samples from SFWMD dbHydro have been excluded due to incorrect legacy STORET parameter codes.
3201A	FISHEATING CREEK	STREAM		Lead	2			PP = 0 / 31; VP = 0 / 11. Originally this waterbody was verified for lead. However, due to flaw in original analysis, resultant from missing lab remark codes, 12 samples were excluded from this dataset.

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period ⁵
3201A	FISHEATING CREEK	STREAM		Nutrients (Chla)	5	Medium	2010	PP - Potentially impaired. VP - Verified impaired. Annual average Chl(a) ug/L values exceeded 20 ug/L in 1999 (21.91), 2000 (25.02), and 2001 (20.03). Waterbody is co-limited by nitrogen and phosphorus based on TN/TP ratio median 10.68 (327 values). 331 TN values, median 1.62 mg/L. 351 TP values, median 0.16 mg/L.
3201A	FISHEATING CREEK	STREAM		Nutrients (Historic Chla)	5	Medium	2010	PP - Potentially impaired. VP - Verified impaired. For the historical listing (1977-1981), annual average Chl(a) ug/L values in the verified period exceeded the minimum historical annual average value of 6.15 ug/L by more than 50% and 1999 (21.91), 2000 (25.02), 2001 (20.03), 2002 (13.17), 2003 (22.40), and 2004 (15.58). Waterbody is co-limited by nitrogen and phosphorus based on TN/TP ratio median 10.68 (327 values).
3201A	FISHEATING CREEK	STREAM		Biology	3A			PP = No data; VP = No data
3201A	FISHEATING CREEK	STREAM		Aldrin	2			PP = 0 / 39; VP = 0 / 20
3201A	FISHEATING CREEK	STREAM		Beta BHC	2			PP = 0 / 35; VP = 0 / 12. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Cadmium	2			PP = 3 / 33; VP = 1 / 11. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Chlordane	2			PP = 0 / 17; VP = 0 / 5. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Chromium3	2			PP = 0 / 13 VP = 0 / 21
3201A	FISHEATING CREEK	STREAM		Demeton	2			PP = 0 / 23; VP = 0 / 10. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Dieldrin	2			PP = 0 / 23; VP = 0 / 7. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Endosulfan	2			PP = 0 / 35; VP = 0 / 12. WBID not impaired based on data in the planning period.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period ⁵
3201A	FISHEATING CREEK	STREAM		Endrin	2			PP = 0 / 35; VP = 0 / 12. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Guthion	2			PP = 0 / 31; VP = 0 / 10. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Heptachlor	2			PP = 0 / 33; VP = 0 / 18. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Lindane	2			PP = 0 / 38; VP = 0 / 19. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Malathion	2			PP = 0 / 36; VP = 0 / 18. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Manganese	3B			PP = 0 / 3; VP = No data
3201A	FISHEATING CREEK	STREAM		Mercury	3B			PP = 3 / 3; VP = No data
3201A	FISHEATING CREEK	STREAM		Methoxychlor	2			PP = 0 / 34; VP = 0 / 19. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Mirex	2			PP = 0 / 22; VP = 0 / 10. WBID not impaired based on data in the planning period.
3201A	FISHEATING CREEK	STREAM		Nickel	3B			PP = 0 / 3; VP = No data
3201A	FISHEATING CREEK	STREAM		Selenium	3B			PP = 0 / 3; VP = No data
3201A	FISHEATING CREEK	STREAM		Toxaphene	2			PP = 0 / 17; VP = 0 / 5. WBID not impaired based on data in the planning period.
3201B	GATOR SLOUGH	STREAM			3A			PP = No data; VP = No data
3201C	LAKE CREWS - OPEN WATE	LAKE		Arsenic	2			PP = 0 / 16; VP = 0 / 20
3201C	LAKE CREWS - OPEN WATE	LAKE		Chromium3	2			PP = 0 / 16; VP = 0 / 20
3201C	LAKE CREWS - OPEN WATE	LAKE		Copper	3C			PP = 12 / 16; VP = No data. Placed on Planning List pursuant to Rule 62-303.300(1)
3201C	LAKE CREWS - OPEN WATE	LAKE		Dissolved Oxygen	2			PP = 0 / 3; VP = 0 / 20
3201C	LAKE CREWS - OPEN WATE	LAKE		Iron	3B			PP = 3 / 3; VP = 0 / 12
3201C	LAKE CREWS - OPEN WATE	LAKE		Lead	3C			PP = 16 / 16; VP = No data. Placed on Planning List pursuant to Rule 62-303.300(1)
3201C	LAKE CREWS - OPEN WATE	LAKE		Turbidity	3B			PP = 0 / 3; VP = 0 / 16
3201C	LAKE CREWS - OPEN WATE	LAKE		Unionized Ammonia	3B			PP = 0 / 2; VP = No data
3201C	LAKE CREWS - OPEN WATE	LAKE		Zinc	2			PP = 0 / 16; VP = 0 / 20

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period ⁵
3201C	LAKE CREWS - OPEN WATER	LAKE		Nutrients (Historic TSI)	2			PP - Not impaired. VP - Not impaired.
3201C	LAKE CREWS - OPEN WATER	LAKE		Nutrients (TSI)	2			PP - Not impaired. VP - Not impaired.
Northwest Lake Okeechobee Planning Unit								
3198	C-41A	STREAM		Copper	3B			PP = 0 / 2; VP = No data
3198	C-41A	STREAM		Dissolved Oxygen	3B			PP = 0 / 4; VP = No data
3198	C-41A	STREAM		Iron	3B			PP = 0 / 4; VP = No data
3198	C-41A	STREAM		Mercury	3B			PP = 1 / 1; VP = No data
3198	C-41A	STREAM		Turbidity	3B			PP = 0 / 4; VP = No data
3198	C-41A	STREAM		Unionized Ammonia	3B			PP = 0 / 4; VP = No data
3204	HARNEY POND CANAL	STREAM		Arsenic	2			PP = 0 / 121; VP = 0 / 72
3204	HARNEY POND CANAL	STREAM		Cadmium	2			PP = 2 / 120; VP = 0 / 52
3204	HARNEY POND CANAL	STREAM		Copper	2			PP = 0 / 120; VP = 8 / 65
3204	HARNEY POND CANAL	STREAM		Iron	2			PP = 28 / 63; VP = 29 / 68
3204	HARNEY POND CANAL	STREAM		Turbidity	2			PP = 1 / 572; VP = 3 / 252
3204	HARNEY POND CANAL	STREAM		Unionized Ammonia	2			PP = 0 / 391; VP = 0 / 64
3204	HARNEY POND CANAL	STREAM		Zinc	2			PP = 0 / 120; VP = 0 / 71
3204	HARNEY POND CANAL	STREAM	Dissolved Oxygen	Dissolved Oxygen	5	Low	2010	PP = 340 / 551 Potentially impaired; VP = 147 / 270 Verified impaired. Nutrients were identified as a causative pollutant based on chlorophyll a (ug/L) data/nutrient impairment verification. 377 TN values, median 1.87 mg/L. 378 TP values, median 0.13 mg/L. 17 BOD values, median 2.8 mg/L. Waterbody is co-limited by nitrogen and phosphorus based on TN/TP ratio median 13.35 (377 values). 377 TN values, median 1.87 mg/L. 378 TP values, median 0.13 mg/L.
3204	HARNEY POND CANAL	STREAM	Lead	Lead	2			Delisted. PP = 2 / 121; VP = 0 / 53. Originally this waterbody was verified for lead. However, due to flaw in original analysis, resultant from missing lab remark codes, 11 samples were excluded from this dataset.

WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period ⁵
3204	HARNEY POND CANAL	STREAM	Nutrients	Nutrients (Chla)	5	Low	2010	PP - Not impaired; VP - Verified impaired. Annual average Chl(a) ug/L value exceeded 20 ug/L in 2004 (60.59). Waterbody is co-limited by nitrogen and phosphorus based on TN/TP ratio median 13.35 (377 values). 377 TN values, median 1.87 mg/L. 378 TP values, median 0.13 mg/L.
3204	HARNEY POND CANAL	STREAM		Chromium3	2			PP = 1 / 11; VP = 1 / 19. WBID not impaired based on data in the planning period.
3206	INDIAN PRAIRIE CANAL	STREAM		Arsenic	2			PP = 0 / 60; VP = 0 / 43
3206	INDIAN PRAIRIE CANAL	STREAM		Cadmium	2			PP = 1 / 60; VP = 1 / 22
3206	INDIAN PRAIRIE CANAL	STREAM		Iron	2			PP = 15 / 30; VP = 16 / 38
3206	INDIAN PRAIRIE CANAL	STREAM		Turbidity	2			PP = 1 / 263 VP = 0 / 114
3206	INDIAN PRAIRIE CANAL	STREAM		Unionized Ammonia	2			PP = 1 / 196; VP = 0 / 32
3206	INDIAN PRAIRIE CANAL	STREAM		Zinc	2			PP = 0 / 59; VP = 0 / 43
3206	INDIAN PRAIRIE CANAL	STREAM		Copper	2			PP = 0 / 60; VP = 0 / 25. Originally this waterbody was verified for copper. However, due to flaw in original analysis, resultant from missing lab remark codes, 8 samples were excluded from this dataset.
3206	INDIAN PRAIRIE CANAL	STREAM		Lead	2			PP = 0 / 60; VP = 0 / 22. Originally this waterbody was verified for lead. However, due to flaw in original analysis, resultant from missing lab remark codes, 9 samples were excluded from this dataset.
3206	INDIAN PRAIRIE CANAL	STREAM	Nutrients	Nutrients (Chla)	5	High	2005	PP - Not impaired; VP - Verified impaired. Annual average Chl(a) value exceeded 20 ug/L in 2004 (26.85). Waterbody is co-limited by nitrogen and phosphorus based on TN/TP ratio median 10.69 (149 values). 149 TN values, median 1.66 mg/L. 149 TP values, median 0.15 mg/L.
3206	INDIAN PRAIRIE CANAL	STREAM		Chromium3	2			PP = 0 / 9; VP = 0 / 21
3206	INDIAN PRAIRIE CANAL	STREAM	Coliform Bacteria	Fecal Coliform	3C	High	2005	PP = 1 / 8; VP = 2 / 19

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WBID	Waterbody Segment	Waterbody Type ¹	Parameters Included on the 1998 303(d) List	Parameters Identified Under the Impaired Waters Rule	Proposed Status ²	Priority for TMDL Development	Projected Year for TMDL Development	Comments (# of Exceedances/ # of Samples) PP=Planning Period VP=Verified Period ⁵
3206	INDIAN PRAIRIE CANAL	STREAM		Fluoride	3B			PP = 0 / 1; VP = 0 / 1
3206	INDIAN PRAIRIE CANAL	STREAM	Coliform Bacteria	Total Coliform	3C	High	2005	PP = 0 / 6; VP = 0 / 17
3206	INDIAN PRAIRIE CANAL	STREAM	Dissolved Oxygen	Dissolved Oxygen	5	High	2005	PP = 149 / 253 Potentially impaired; VP = 47 / 110 Verified impaired. Nutrients were identified as a causative pollutant based on chlorophyll a (ug/L) data/nutrient impairment verification. Waterbody is co-limited by nitrogen and phosphorus based on TN/TP ratio median 10.69 (149 values). 149 TN values, median 1.66 mg/L. 149 TP values, median 0.15 mg/L.
3216	L-59W	STREAM			3A			PP = No data; VP = No data
3221	L-60E	STREAM			3A			PP = No data; VP = No data
3222	L-49	STREAM			3A			PP = No data; VP = No data
3223	L-61E	STREAM			3A			PP = No data; VP = No data
3225	L-60W	STREAM			3A			PP = No data; VP = No data
3227	L-61W	STREAM			3A			PP = No data; VP = No data
3229	S-131	STREAM			3A			PP = No data; VP = No data

¹The designation "stream" includes canals, rivers, and sloughs. The designation "lake" includes some marshes.

²The EPA's 305(b)/303(d) Integrated Report categories are as follows:

- 1—Attains all designated uses;
- 2—Attains some designated uses;
- 3a—No data and information are available to determine if any designated use is attained;
- 3b—Some data and information are available, but they are insufficient for determining if any designated use is attained;
- 3c—Meets Planning List criteria and is potentially impaired for one or more designated uses;
- 3d—Meets Verified List criteria and is potentially impaired for one or more designated uses;
- 4a—Impaired for one or more designated uses and the TMDL is complete;
- 4b—Impaired for one or more designated uses, but no TMDL is required because an existing or proposed pollutant control mechanism provides reasonable assurance that the water will attain standards in the future;
- 4c—Impaired for one or more designated uses but no TMDL is required because the impairment is not caused by a pollutant; and
- 5—Water quality standards are not attained and a TMDL is required.

Table D.3: Water Quality Monitoring Stations Used in the Assessment for the Kissimmee River and Fisheating Creek Basins, by Planning Unit

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
Upper Kissimmee Planning Unit							
1436	Horseshoe Creek	Stream	21FLPOLKHORSESHOECR DO3	Horseshoecr DO3	2004	2004	1
1436	Horseshoe Creek	Stream	21FLGW 7873	Sfa-SI-1047	2000	2000	31
1436	Horseshoe Creek	Stream	21FLGW 7862	Sfa-SI-1017	2000	2000	31
1436	Horseshoe Creek	Stream	21FLCEN 26010018	Horseshoe Creek Just Downstream Of Horseshoe Creek Road	2004	2004	124
1436	Horseshoe Creek	Stream	21FLCEN 26010030	Horseshoe Creek @ Lee Jackson Hwy (Cr547)	2004	2004	87
1436	Horseshoe Creek	Stream	21FLPOLKHORSESHOE CR2	Horseshoe Cr @ Sr 547 At Rr Trestle	1998	2005	233
1436	Horseshoe Creek	Stream	21FLCEN 26010031	Horseshoe Creek @ U.S.17	2004	2004	131
1436	Horseshoe Creek	Stream	21FLPOLKHORSESHOECR DO1	Horseshoecr DO1	2004	2004	1
1436	Horseshoe Creek	Stream	21FLPOLKHORSESHOECR DO2	Horseshoecr DO2	2004	2004	1
1436	Horseshoe Creek	Stream	21FLPOLKHORSESHOECR DO4	Horseshoecr DO4	2004	2004	1
1436A	Lake Davenport - Open	Lake	21FLCEN 26010126	Lake Davenport @ SW Lobe	2004	2004	39
1436A	Lake Davenport - Open	Lake	21FLCEN 26010125	Lake Davenport @ West Lobe	2004	2004	38
1436A	Lake Davenport - Open	Lake	21FLGW 7876	Sfa-SI-1050	2000	2000	27
1436A	Lake Davenport - Open	Lake	21FLCEN 26010124	Lake Davenport @ NW Lobe	2004	2004	38
1436A	Lake Davenport - Open	Lake	21FLCEN 26010123	Lake Davenport @ NE Lobe	2004	2004	37
1472	Lake Hatchineha Drain	Lake	21FLGFWF03090101-LH-21	Lake Hatchineha Station 21	1998	2005	395
1472A	Snell Creek	Stream	21FLGW 7853	Sfa-SI-1003	2000	2000	30
1472A	Snell Creek	Stream	21FLPOLKMARION CREEK1	Marion Cr N Of 542-Br On Poinciana Pkw	1998	2005	198
1472B	Lake Hatchineha	Lake	21FLSFWMD02	Lake Hatchineha Water Quality Station	1998	2004	1929
1472B	Lake Hatchineha	Lake	21FLSFWMD03	Lake Hatchineha Water Quality Station	1998	2004	1765
1472B	Lake Hatchineha	Lake	21FLA 26010080	Lake Hatchineha, Central Lobe	1998	1998	82
1472B	Lake Hatchineha	Lake	21FLPOLKHATCHINEHA1	Lake Hatchineha Center	1998	2005	201
1472C	Dead River	Stream	21FLCEN 26011060	Dead River @ 0.52 Mi Downstream Of Confluence W/Reedy Cre	2004	2004	53
1472C	Dead River	Stream	21FLCEN 26011062	Dead River @ 175m Downstream Of Confluence With Reedy Creek	2004	2004	42

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1472C	Dead River	Stream	21FLSFWMCREEDYCR	Aprox..25 Mile Upstream From Mouth Of Creedy C	2003	2003	6
1472C	Dead River	Stream	21FLCEN 26011059	Dead River @ 0.8miles Downstream Of Confluence W/Reedy Creek	2004	2004	65
1472C	Dead River	Stream	21FLCEN 26011063	Dead River @ 175 M Upstream Of Confluence W/Reedy Creek	2004	2004	50
1472C	Dead River	Stream	21FLCEN 26011061	Dead River @ 475m Downstream Of Confluence W/Reedy Creek	2004	2004	66
1480	Lake Marion	Lake	21FLPOLKMARION1	Lake Marion Center	1998	2005	327
1480	Lake Marion	Lake	21FLGW 7863	Sfa-SI-1018	2000	2000	31
1532A	Lake Pierce	Lake	21FLPOLKPIERCE1	Pierce Lake Center	1998	2005	242
1532B	Lake Marie	Lake	21FLPOLKMARIE1N	North Lake Marie Center Of Lake	1998	2005	221
1532B	Lake Marie	Lake	21FLPOLKMARIE1S	South Lake Marie Center Of Lake	1998	2005	231
1532C	Cypress Lake	Lake	21FLPOLKCYPRESS5	Behind House At 1871 Cypress Lk Rd	1998	1998	43
1573A	Tiger Lake	Lake	21FLPOLKTIGER1	Tiger Lake Center	1998	2005	234
1573C	Lake Rosalie	Lake	21FLPOLKROSALIE1	Rosalie Lake Center	1998	2005	221
1573F	Lake Aurora	Lake	112WRD 275256081275900	Lake Aurora At Hesperides Fl	1999	2000	4
3168A	Lake Conway	Lake	21FLORANBC9	Lake Conway - South Lobe	1998	2005	1425
3168A	Lake Conway	Lake	21FLORANBC6	Lake Conway - N.E. Lobe	1998	2005	1502
3168A	Lake Conway	Lake	21FLORANBC8	Lake Conway - Mid Lobe	1998	2005	1189
3168A	Lake Conway	Lake	21FLCEN 26010878	Lake Conway, Center Of Lake	2004	2004	24
3168A	Lake Conway	Lake	21FLCEN 26010879	Lake Conway, Center Of South Lobe	2004	2004	16
3168A	Lake Conway	Lake	21FLORANBC7	Lake Conway - N.W. Lobe	1998	2005	1494
3168B	Boggy Creek	Stream	21FLORANBCA	Boggy Cr. At Mccoy Rd. (Beeline)	1998	2004	555
3168B	Boggy Creek	Stream	112WRD 02262900	Boggy Creek Nr Taft, Fla.	2000	2001	111
3168B	Boggy Creek	Stream	21FLORANBCB	Boggy Cr. At Boggy Creek Rd. (Sr 527a)	1998	2000	143
3168B	Boggy Creek	Stream	21FLORANBCC	Boggy Cr. At Hwy 530	1998	2004	341
3168B	Boggy Creek	Stream	21FLGW 7864	Sfa-SI-1020	2000	2000	27
3168B	Boggy Creek	Stream	21FLSFWMABOGG	Boggy Creek Tributary To E. Lake Toho At Sr5 O	1998	2001	978

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3168B	Boggy Creek	Stream	21FLORANBCE	Boggy Cr. At Sr 527	1998	2002	479
3168B	Boggy Creek	Stream	21FLCEN 26010153	Boggy Creek At SR 530 Bridge	2004	2004	80
3168B	Boggy Creek	Stream	21FLCEN 26010154	Boggy Creek At SR 527A, Just South Of Mccoy AFB	2004	2004	72
3168B	Boggy Creek	Stream	21FLCEN 26010920	Boggy Creek @ 475m North Of Central Florida Greenway	2004	2004	83
3168B	Boggy Creek	Stream	21FLCEN 26010919	NW Branch Of Boggy Creek @ 450m North Of Boggy Creek Rd	2004	2004	60
3168B	Boggy Creek	Stream	21FLGFWF03090101-BC-01	Boggy Creek Station B-1	1998	2005	340
3168B	Boggy Creek	Stream	21FLGFWF03090101-BC-03	Boggy Creek Station B-3	1998	2005	365
3168C	Lake Jessamine	Lake	21FLORANBC17	Lake Jessamine	1998	1998	96
3168C	Lake Jessamine	Lake	21FLGW 7854	Sfa-SI-1005	2000	2000	31
3168C	Lake Jessamine	Lake	21FLORANBC17NE	Jessamine NE	1998	2005	586
3168C	Lake Jessamine	Lake	21FLORANBC17M	Jessamine M	1998	2005	585
3168C	Lake Jessamine	Lake	21FLORANBC17SW	Jessamine SW	1998	2005	564
3168D	Lake Gatlin	Lake	21FLCEN 26010881	Lake Gatlin, Center Of Lake	2004	2004	33
3168D	Lake Gatlin	Lake	21FLCEN 26010880	Lake Gatlin @ Mouth Of Canal, 275m SE Of Center Of Lake	2004	2004	35
3168D	Lake Gatlin	Lake	21FLORANBC11	Lake Gatlin	1998	2005	619
3168E	Lake Anderson	Lake	21FLORANBC1	Lake Anderson	1998	2004	507
3168E	Lake Anderson	Lake	21FLCEN 26011047	Lake Anderson @ 130m NW Of Center Of Lake	2004	2004	126
3168E	Lake Anderson	Lake	21FLCEN 26011048	Lake Anderson @ 130m SE Of Center Of Lake	2004	2004	154
3168F	Lake Bass	Lake	21FLCEN 26011089	Bass Lake @ 250m NE Of Center	2004	2004	83
3168F	Lake Bass	Lake	21FLCEN 26011092	Bass Lake @ 125m SE Of Center	2004	2004	82
3168F	Lake Bass	Lake	21FLCEN 26011091	Bass Lake @ 200m SW Of Center	2004	2004	82
3168F	Lake Bass	Lake	21FLCEN 26011090	Bass Lake @ 75m NW Of Center	2004	2004	85
3168F	Lake Bass	Lake	21FLORANBC3	Bass Lake	1998	2004	181
3168G	Lake Underhill	Lake	21FLORL UNDERHILL SW	Lake Underhill (Southwest Station) In Orlando FI	2004	2004	25
3168G	Lake Underhill	Lake	21FLCEN 20010311	Lk Underhill - South Of Hiway 50	2004	2004	55
3168G	Lake Underhill	Lake	21FLCEN 20010371	Lake Underhill @ NW Quad	2004	2004	61
3168G	Lake Underhill	Lake	21FLCEN 20010370	Lake Underhill @ SW Quad	2004	2004	54
3168G	Lake Underhill	Lake	21FLCEN 20010369	Lake Underhill @ SE Quad	2004	2004	69

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3168G	Lake Underhill	Lake	21FLORANLE31	Lake Underhill	1998	2002	97
3168G	Lake Underhill	Lake	21FLCEN 20010372	Lake Underhill @ NE Quad	2004	2004	53
3168G	Lake Underhill	Lake	21FLORL UNDERHILL NE	Lake Underhill (Northeast Station) In Orlando Fl	2004	2004	57
3168G	Lake Underhill	Lake	21FLA 20010311	Lk Underhill - South Of Hiway 50	1998	1998	23
3168G	Lake Underhill	Lake	21FLORL UNDERHILL NORTH	Lake Underhill North Center Of Lk	1998	2004	368
3168G	Lake Underhill	Lake	21FLORL UNDERHILL SOUTH	Lake Underhill South Center Of Lk	1998	2004	355
3168H	Lake Holden	Lake	21FLORL HOLDEN NORTH	Lake Holden (North Station) In Orlando, Fl	2001	2004	242
3168H	Lake Holden	Lake	21FLCEN 26010884	Lake Holden- Center Of Lake	2003	2004	55
3168H	Lake Holden	Lake	21FLORL HOLDEN SOUTH	Lake Holden (South Station) In Orlando, Fl	2001	2004	245
3168H	Lake Holden	Lake	21FLORANBC14S	Center Of Lake Holden's South Lobe	1998	2004	1003
3168H	Lake Holden	Lake	21FLORANBC14N	Lake Holden Center Of North Lobe	1998	2004	791
3168I	Pineloch	Lake	21FLORANBC22E	Pineloch East	2004	2004	16
3168I	Pineloch	Lake	21FLORL PINELOCH SOUTH	Lake Pineloch (South Station) In Orlando, Fl	2004	2004	69
3168I	Pineloch	Lake	21FLORL PINELOCH	Lake Pineloch	1998	2004	354
3168I	Pineloch	Lake	21FLORANBC22N	Pineloch North	2004	2004	3
3168I	Pineloch	Lake	21FLORANBC22S	Pineloch South	2004	2004	114
3168I	Pineloch	Lake	21FLORANBC22	Center Of Lake Pineloch	1998	2004	714
3168J	Jennie Jewel Lake	Lake	21FLCEN 26010926	Jennie Jewel Lake @ Center Of SE Lobe	2004	2004	75
3168J	Jennie Jewel Lake	Lake	21FLCEN 26010925	Jennie Jewel Lake @ 285m NE Of Center	2004	2004	78
3168J	Jennie Jewel Lake	Lake	21FLORANBC16W	Lake Jennie Jewel W	1998	2005	378
3168J	Jennie Jewel Lake	Lake	21FLORANBC16E	Lake Jennie Jewel E	1998	2005	466
3168J	Jennie Jewel Lake	Lake	21FLCEN 26010886	Lake Jennie Jewel, Center Of Lake	2004	2004	87
3168M	Lake Copeland	Lake	21FLORL COPELAND	Lake Copeland Center	1998	2004	401
3168N	Lake Olive	Lake	21FLORL OLIVE	Lake Olive Center Of Lake	1998	2004	365
3168Q	Lake Warren (L. Mare Praire)	Lake	21FLCEN 26010899	Lake Mare Prairie (Aka Lake Warren) @ 400m SW Of Center	2004	2004	67
3168Q	Lake Warren (L. Mare Praire)	Lake	21FLCEN 26010898	Lake Mare Prairie (Aka Lake Warren) @ 450m West Of Center	2004	2004	60
3168Q	Lake Warren (L. Mare Praire)	Lake	21FLCEN 26010895	Lake Mare Prairie (Aka Lake Warren), Center Of Lake	2004	2004	32

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3168Q	Lake Warren (L. Mare Praire)	Lake	21FLCEN 26010891	Lake Mare Prairie (Aka Lake Warren) @ 250m East Of Center	2004	2004	58
3168Q	Lake Warren (L. Mare Praire)	Lake	21FLCEN 26010890	Lake Mare Prairie (Aka Lake Warren) @ 425m NE Of Center	2004	2004	60
3169A	Shingle Creek	Stream	21FLORANSCH	Shingle Cr. At Br. 1/4 Mi. N. Of Mcleod Rd. Stp	1998	2004	323
3169A	Shingle Creek	Stream	21FLSFWMBSHNGLE	Shingle Creek On Sr531 Bridge Near Kissimmee	1998	2001	993
3169A	Shingle Creek	Stream	21FLORANSCD	Shingle Cr. At Hwy 192	1998	2004	247
3169A	Shingle Creek	Stream	21FLGW 7865	Sfa-SI-1021	2000	2000	31
3169A	Shingle Creek	Stream	21FLORANSCN	Shingle Creek At Conroy Rd (Formerly SC33)	2002	2004	251
3169A	Shingle Creek	Stream	21FLCEN 26010927	Shingle Creek @ Oakridge Rd	2004	2004	68
3169A	Shingle Creek	Stream	21FLGFWF03090101-SC-08	Shingle Creek Station 8	1998	2005	340
3169A	Shingle Creek	Stream	21FLGW 7860	Sfa-SI-1011	2000	2000	31
3169A	Shingle Creek	Stream	21FLCEN 26010021	Shingle Creek At Andersen Beeline Expressway	2004	2004	67
3169A	Shingle Creek	Stream	21FLCEN 26010928	Shingle Creek @ Town Center Blvd	2004	2004	83
3169A	Shingle Creek	Stream	21FLCEN 26010001	Shingle Creek At Sandlake Rd. Bridge	2004	2004	64
3169A	Shingle Creek	Stream	21FLORANSCC	Shingle Cr. At Taft-Vineland Rd. Bridge	1998	2004	286
3169A	Shingle Creek	Stream	21FLCEN 26010929	Shingle Creek @ 225m North Of Central Florida Parkway	2004	2004	57
3169A	Shingle Creek	Stream	112WRD 02263800	Shingle Creek At Airport Nr Kissimmee, Fla.	2000	2001	106
3169A	Shingle Creek	Stream	21FLCEN 26010185	Shingle Creek At Taft-Vineland Rd. Bridge	1999	2004	17
3169A	Shingle Creek	Stream	21FLSFWMSC-09.55	B2 Bridge Off Of Taft-Vineland Rd Orlando	2003	2003	6
3169A	Shingle Creek	Stream	21FLGW 7882	Sfa-SI-1057	2000	2000	31
3169C	Big Sand Lake	Lake	21FLORANSC30	Big Sand Lake - Mid Of South Lobe	1998	2004	343
3169C	Big Sand Lake	Lake	21FLCEN 26010142	Big Sand Lake - Geometric Center Of Middle Lobe	2004	2004	72
3169C	Big Sand Lake	Lake	21FLORANSC27	Big Sand Lake - Mid Of North Lobe	1998	2004	313
3169C	Big Sand Lake	Lake	21FLCEN 26011055	Big Sand Lake @ Center Of South Lobe	2004	2004	55
3169C	Big Sand Lake	Lake	21FLCEN 26010112	Big Sand Lake - Geometric Middle Of North Lobe	2004	2004	71
3169C	Big Sand Lake	Lake	21FLCEN 26011054	Big Sand Lake @ 625m NE Of Center Of North Lobe	2004	2004	52

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3169E	Lake Marsha	Lake	21FLORANSC13	Lake Marsha	1998	2004	160
3169E	Lake Marsha	Lake	21FLCEN 26010934	Lake Marsha @ 175m SW Of Center Of Lake	2004	2004	47
3169E	Lake Marsha	Lake	21FLCEN 26010933	Lake Marsha @ 300m SE Of Center Of Lake	2004	2004	47
3169E	Lake Marsha	Lake	21FLCEN 26010932	Lake Marsha @ 175m NE Of Center Of Lake	2004	2004	45
3169E	Lake Marsha	Lake	21FLCEN 26010930	Lake Marsha @ Center Of West Lobe	2004	2004	47
3169E	Lake Marsha	Lake	21FLCEN 26010931	Lake Marsha @ 300m NW Of Center Of Lake	2004	2004	47
3169F	Turkey Lake	Lake	21FLORANSC26N	Turkey N	2003	2003	27
3169F	Turkey Lake	Lake	21FLORANSC26S	Turkey S	2003	2003	27
3169F	Turkey Lake	Lake	21FLCEN 26011077	Turkey Lake @ Center Of Middle Lobe	2004	2004	50
3169F	Turkey Lake	Lake	21FLORL TURKEY NORTH	Turkey Lake North	1998	2004	365
3169F	Turkey Lake	Lake	21FLORL TURKEY SOUTH	Turkey Lake South	1998	2004	370
3169F	Turkey Lake	Lake	21FLCEN 26010101	Turkey Lake - Geometric Center Of Lake- SW Orlando Vicinity	2004	2004	58
3169F	Turkey Lake	Lake	21FLORANSC26	Turkey Lake	1998	1998	55
3169F	Turkey Lake	Lake	21FLCEN 26011076	Turkey Lake @ 350m South Of Center Of SE Lobe	2004	2004	50
3169F	Turkey Lake	Lake	21FLCEN 26011078	Turkey Lake @ Center Of NW Lobe	2004	2004	50
3169G	Clear Lake	Lake	21FLORANSC7	Clear Lake	1998	2004	302
3169G	Clear Lake	Lake	21FLORL CLEAR SOUTH	Clear Lake (South Station) In Orlando, Fl	1998	2004	374
3169G	Clear Lake	Lake	21FLORL CLEAR NORTH	Clear Lake (North Station) In Orlando, Fl	1998	2004	374
3169H	Lake Lorna Doone	Lake	21FLORL LORNA DOONE	Lake Lorna Doone Center Of Lake	1998	2004	383
3169H	Lake Lorna Doone	Lake	21FLORANSC11	Lake Lorna Doone	1998	1998	96
3169I	Lake Mann	Lake	21FLORANSC12	Lake Mann	1998	2004	311
3169I	Lake Mann	Lake	21FLCEN 20010085	L Mann Sw Orlando Se Lake	2004	2004	34
3169I	Lake Mann	Lake	21FLCEN 20010088	L Mann At Cnl Mouth East Side	2004	2004	38
3169I	Lake Mann	Lake	21FLORANSC12S	Mann South	2004	2004	75
3169I	Lake Mann	Lake	21FLORL MANN SOUTH	Lake Mann South	1998	2004	395
3169I	Lake Mann	Lake	21FLORANSC12N	Mann North	2004	2004	75
3169I	Lake Mann	Lake	21FLORL MANN NORTH	Lake Mann North	1998	2004	392
3169J	Cane Lake	Lake	21FLCEN 26010902	Lake Cane @ NE Quad Of Lake	2004	2004	57
3169J	Cane Lake	Lake	21FLCEN 26010904	Lake Cane @ SE Quad Of Lake	2004	2004	57
3169J	Cane Lake	Lake	21FLCEN 26010903	Lake Cane @ SW Quad Of	2004	2004	52

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
				Lake			
3169J	Cane Lake	Lake	21FLORANSC4	Lake Cane	1998	2003	162
3169J	Cane Lake	Lake	21FLORANAAL57	Cane	2000	2000	1
3169J	Cane Lake	Lake	21FLORL CANE	Lake Cane (Nr S.R. 439 / Conroy Rd) In Orlando, Fl	1999	2004	337
3169J	Cane Lake	Lake	21FLCEN 26010901	Lake Cane @ NW Quad Of Lake	2004	2004	71
3169K	Spring Lake	Lake	21FLORL SPRING STHWEST	Spring Lake(Nr Interstate 4 / Sr482)In Southwest Orlando, Fl	1998	2004	367
3169K	Spring Lake	Lake	21FLORANSC21	Lake Spring	1998	2004	310
3169L	Little Sand Lake	Lake	21FLORANSC17	Lake Little Sand Center	1998	2004	207
3169M	Willis Lake	Lake	21FLORANSC40	Willis	2003	2004	161
3169N	Bryon Lake	Lake	112WRD 02263776	Lake Bryan, Nr Vineland, Fla.	1998	1998	3
3169N	Bryon Lake	Lake	21FLORANSC1	Geographic Center Of Lake Bryan	2002	2004	287
3169P	Lake Catherine	Lake	21FLORANSC6	Lake Catherine Center	1998	2004	277
3169P	Lake Catherine	Lake	21FLORANSC29	Geographical Center Of Lake Catherine North Lobe	1998	2004	281
3169P	Lake Catherine	Lake	21FLORANSC28	Geographical Center Of Lake Catherine South Lobe	1998	2004	250
3169P	Lake Catherine	Lake	21FLCEN 26010127	Lake Catherine @ 525m NE Of Center Of Lake	2004	2004	57
3169P	Lake Catherine	Lake	21FLCEN 26010128	Lake Catherine @ 270m NE Of Center Of Lake	2004	2004	53
3169P	Lake Catherine	Lake	21FLCEN 26010120	Lake Catherine - Geometric Middle Of Lake	2004	2004	56
3169P	Lake Catherine	Lake	21FLORL CATHERINE	Lake Catherine (Nr Interstate 4 / 33rd St) In Orlando, Fl	2001	2004	239
3169P	Lake Catherine	Lake	21FLCEN 26010129	Lake Catherine @ 350m SW Of Center Of Lake	2004	2004	56
3169Q	Rock Lake	Lake	21FLORL ROCK	Lake Rock	1998	2004	359
3169S	Christie Lake	Lake	21FLCEN 26010008	Lake Christie @ Center	2004	2004	224
3169S	Christie Lake	Lake	21FLORANBC29	Geographical Center Of Lake Christie	1998	2002	324
31701	South Lake	Lake	21FLORANRC32	Lake South Center	1998	2004	251
3170B	Lake Russell	Lake	21FLGFWF03090101-LR-06	Lake Russell Station R-6	1998	2005	355
3170B	Lake Russell	Lake	21FLCEN 26011121	Lake Russell- Mid-Radial South	2003	2003	33
3170C	Reedy Ck Above L. Russ	Stream	21FLCEN 26011058	Reedy Creek @ 845m Upstrm Of Confluence W/Dead River	2004	2004	41

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3170C	Reedy Ck Above L. Russ	Stream	21FLCEN 26011057	Reedy Creek @ 630m Upstream Of Confluence With Dead River	2004	2004	50
3170C	Reedy Ck Above L. Russ	Stream	21FLCEN 26010979	Reedy Creek @ 200m Upstream Of Confluence W/Dead River	2004	2004	51
3170C	Reedy Ck Above L. Russ	Stream	112WRD 02266550	Reedy Creek At Sr531 Near Poinsinna, Fl	1998	2003	61
3170C	Reedy Ck Above L. Russ	Stream	112WRD 02266500	Reedy Creek Nr Loughman, Fla.	1998	2003	520
3170C	Reedy Ck Above L. Russ	Stream	21FLCEN 26011056	Reedy Creek @ 415m Upstream Of Confluence With Dead River	2004	2004	50
3170C	Reedy Ck Above L. Russ	Stream	21FLCEN 26011094	Reedy Creek @ Boardwalk 1.5 Miles NW Of Pleasant Hill Rd	2004	2004	65
3170C	Reedy Ck Above L. Russ	Stream	21FLSFWMCREEDYBR	Reedy Creek Bridge At Rt. 531	1998	2003	811
3170C	Reedy Ck Above L. Russ	Stream	21FLGFWF03090101-RC-05	Reedy Creek Station R-5	1998	2005	277
3170C	Reedy Ck Above L. Russ	Stream	21FLRCIDRC-15	Reedy Creek	1999	2004	1351
3170C	Reedy Ck Above L. Russ	Stream	21FLCEN 26011096	Reedy Creek @ Us Hwy 17 (Orange Blossom)	2004	2004	54
3170C	Reedy Ck Above L. Russ	Stream	21FLRCIDRC-15-02266500	Reedy Creek Near Loughman Fl	1998	1998	335
3170C	Reedy Ck Above L. Russ	Stream	21FLGFWF03090101-RC-04	Reedy Creek Station R-4	1998	2005	353
3170C	Reedy Ck Above L. Russ	Stream	21FLCEN 26011093	Reedy Creek @ Pleasant Hill Bridge	2004	2004	64
3170C	Reedy Ck Above L. Russ	Stream	21FLA 26010236	Reedy Cr At Us 17-92	1998	1998	19
3170D	Bonnet Creek	Stream	112WRD 02264100	Bonnet Creek Nr Vineland, Fla.	1998	2003	705
3170D	Bonnet Creek	Stream	21FLCEN 26011053	Bonnet Creek @ 3.0 Mi Upstream Of Confluence W/Reedy Creek	2004	2004	64
3170D	Bonnet Creek	Stream	21FLCEN 26011051	Bonnet Creek @ 4.75mi Upstream Of Confluence W/Reedy Creek	2004	2004	53
3170D	Bonnet Creek	Stream	21FLRCIDC-12C	Bonnet Creek/C1 Canal	1999	2004	2403
3170D	Bonnet Creek	Stream	21FLCEN 26011052	Bonnet Creek @ 4.25mi Upstream Of Confluence W/Reedy Creek	2004	2004	53
3170D	Bonnet Creek	Stream	21FLGW 7880	Sfa-SI-1055	2000	2000	30
3170D	Bonnet Creek	Stream	21FLGW 8074	Sfa-Ls-1027	2000	2000	31
3170D	Bonnet Creek	Stream	21FLCEN 26010175	Bonnet Creek 1 Mile Upstream Of Confluence With Reedy Ck.	2004	2004	53
3170D	Bonnet Creek	Stream	21FLCEN 26010174	Bonnet Creek At US Hwy 192 Bridge	1999	2004	58
3170D	Bonnet Creek	Stream	112WRD 02264140	Bonnet Creek Near Kissimmee, Fl.	2000	2003	389

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3170D	Bonnet Creek	Stream	21FLRCIDC-12A	Bonnet Creek/C1 Canal	1999	2004	173
3170D	Bonnet Creek	Stream	21FLRCIDC-12B	Bonnet Creek/C1 Canal	1999	2004	1485
3170D	Bonnet Creek	Stream	21FLRCIDC-12B-02264100	Bonnet Creek Near Vineland Fl	1998	1998	510
3170E	Reedy Ck North	Stream	21FLRCIDRC-12	Reedy Creek	1999	2004	3033
3170E	Reedy Ck North	Stream	21FLRCIDRC-12-02266298	Reedy Creek Above Us Hwy 192 Near Vineland Fl	1998	1998	588
3170E	Reedy Ck North	Stream	21FLRCIDRC-19A	Reedy Creek	1999	2004	6816
3170E	Reedy Ck North	Stream	21FLRCIDRC-13	Reedy Creek	1999	2004	1812
3170E	Reedy Ck North	Stream	21FLCEN 26010970	Reedy Creek At US Hwy I-4 Bridge	2004	2004	64
3170E	Reedy Ck North	Stream	21FLRCIDRC-13-02266320	Reedy Creek At I-4 Near Loughman Fl	1998	1998	205
3170E	Reedy Ck North	Stream	112WRD 02266294	10b Lateral 405 Bl S-405 Near Vineland Fla	1998	2002	258
3170E	Reedy Ck North	Stream	21FLRCIDRC-14-02266495	Reedy Creek At S-40 Near Loughman Fl	1998	1998	806
3170E	Reedy Ck North	Stream	21FLCEN 26010166	Reedy Creek And Reedy Ck Improvement District Canal L-410	2004	2004	61
3170E	Reedy Ck North	Stream	112WRD 282135081345500	Lateral 405 Bl L-410 Nr Vineland, Fla	1998	2001	207
3170E	Reedy Ck North	Stream	112WRD 02266300	Reedy Creek Nr Vineland, Fla.	1998	2003	627
3170E	Reedy Ck North	Stream	21FLGW 8084	Sfa-Ls-1042	2000	2000	31
3170E	Reedy Ck North	Stream	21FLCEN 26010966	Reedy Creek 0.25 Miles Downstream Of RCID STP Outfall	2004	2004	38
3170E	Reedy Ck North	Stream	21FLCEN 26011049	East Reedy Creek @ 500m Downstream Of RCID Structure S-405	2004	2004	47
3170E	Reedy Ck North	Stream	21FLCEN 26010968	Reedy Creek 0.5 Miles Upstream Of RCID STP Outfall	2004	2004	47
3170E	Reedy Ck North	Stream	21FLCEN 26010967	Reedy Creek 0.25 Miles Upstream Of RCID STP Outfall	2004	2004	46
3170E	Reedy Ck North	Stream	21FLGFWF03090101-RC-01	Reedy Creek Station R-1	1998	2005	325
3170E	Reedy Ck North	Stream	21FLCEN 26010170	Reedy Creek At Reedy Cr Improvement Dist. Structure S-405	2004	2004	34
3170E	Reedy Ck North	Stream	21FLCEN 26011072	Reedy Creek @ 0.78 Miles North If RCID L-410 Canal	2004	2004	39
3170E	Reedy Ck North	Stream	21FLGW 7875	Sfa-SI-1049	2000	2000	31
3170E	Reedy Ck North	Stream	21FLGW 8088	Sfa-Ls-1047	2000	2000	31

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3170F	Reedy Ck W. Headwater	Blackwater	21FLGW 7867	Sfa-SI-1023	2000	2000	31
3170G	Reedy Ck E. Headwater	Stream	21FLGW 7858	Sfa-SI-1009	2000	2000	27
3170G	Reedy Ck E. Headwater	Stream	21FLGW 7879	Sfa-SI-1054	2000	2000	54
3170G	Reedy Ck E. Headwater	Stream	21FLCEN 26011050	Bonnet Creek @ Golf Cart Crossing	2004	2004	48
3170G	Reedy Ck E. Headwater	Stream	21FLGW 7859	Sfa-SI-1010	2000	2000	31
3170G	Reedy Ck E. Headwater	Stream	21FLGW 7861	Sfa-SI-1012	2000	2000	27
3170H	Lake Sheen	Lake	21FLCEN 26011081	Lake Sheen @ SW Quad Of Lake	2004	2004	57
3170H	Lake Sheen	Lake	21FLCEN 26011080	Lake Sheen @ NE Quad Of Lake	2004	2004	60
3170H	Lake Sheen	Lake	21FLCEN 26011079	Lake Sheen @ NW Quad Of Lake	2004	2004	54
3170H	Lake Sheen	Lake	21FLCEN 26011083	Pocket Lake @ 385m NW Of Center Of Lake	2004	2004	51
3170H	Lake Sheen	Lake	21FLCEN 26011084	Pocket Lake @ 275m South Of Center Of Lake	2004	2004	55
3170H	Lake Sheen	Lake	21FLCEN 26011085	Pocket Lake @ 425m SE Of Center Of Lake	2004	2004	55
3170H	Lake Sheen	Lake	21FLCEN 26011082	Lake Sheen @ SE Quad Of Lake	2004	2004	72
3170H	Lake Sheen	Lake	21FLCEN 26010108	Lake Sheen - Geometric Middle Of Lake (SW Orange Cnty)	2004	2004	14
3170H	Lake Sheen	Lake	21FLORANCC17	Center Of Lake Sheen	1998	2005	909
3170H	Lake Sheen	Lake	21FLCEN 26010111	Lake Pocket - Geometric Center Of Lake (SW Orange County)	2004	2004	55
3170I	Lake Hickorynut	Lake	21FLCEN 26011043	Lake Hickorynut @ 550m North Of Center Of Main Lobe	2004	2004	55
3170I	Lake Hickorynut	Lake	21FLORANRC13M	Lake Hickorynut - Middle Lobe	1998	2004	255
3170I	Lake Hickorynut	Lake	21FLORANRC13S	Lake Hickorynut - South Lobe	1998	2004	246
3170I	Lake Hickorynut	Lake	21FLGW 7869	Sfa-SI-1027	2000	2000	50
3170I	Lake Hickorynut	Lake	21FLCEN 26011046	Lake Hickorynut @ Center Of South Lobe	2004	2004	54
3170I	Lake Hickorynut	Lake	21FLCEN 26011045	Lake Hickorynut @ 500m SE Of Center Of Main Lobe	2004	2004	54
3170I	Lake Hickorynut	Lake	21FLCEN 26011044	Lake Hickorynut @ Center Of Main Lobe	2004	2004	65
3170I	Lake Hickorynut	Lake	21FLORANRC13N	Lake Hickorynut - North Lobe	1998	2004	285
3170J	Cypress Creek	Blackwater	21FLCEN 26010169	Cypress Creek At Reedy Cr Improvement Dist. Structure S-103A	2004	2004	56
3170J	Cypress Creek	Blackwater	112WRD 02264000	Cypress Creek At Vineland, Fla.	1998	2003	404

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3170J	Cypress Creek	Blackwater	112WRD 02264003	Cypress Creek Canal At S-103a Nr Vineland	1998	2003	8
3170J	Cypress Creek	Blackwater	21FLCEN 26011007	Cypress Creek @ Vista Dr	2004	2004	54
3170J	Cypress Creek	Blackwater	21FLCEN 26011009	Cypress Creek @ 0.17miles SW Of Buena Vista Dr	2004	2004	59
3170J	Cypress Creek	Blackwater	21FLORANCCA	Cypress Cr. At St. Hwy 535	1998	2004	228
3170J	Cypress Creek	Blackwater	21FLCEN 26011008	Cypress Creek @ Service Area Boat Ramp	2004	2004	58
3170K	Davenport Creek	Stream	21FLCEN 26011037	North Branch Of Davenport Creek @ 50m E Of Old Lake Wilson	2004	2004	55
3170K	Davenport Creek	Stream	112WRD 02266480	Davenport Creek Nr Loughman, Fla.	1998	2003	669
3170K	Davenport Creek	Stream	21FLCEN 26011040	South Branch Of Davenport Crk @ Happy Trls, E Of Shelly Trls	2004	2004	57
3170K	Davenport Creek	Stream	21FLCEN 26011038	North Branch Of Davenport Crk @ 175m NW Of Old Lake Wilson	2004	2004	59
3170K	Davenport Creek	Stream	21FLCEN 26010972	Davenport Creek At Highway 545	2000	2004	95
3170K	Davenport Creek	Stream	21FLGW 7883	Sfa-SI-1058	2000	2000	27
3170K	Davenport Creek	Stream	21FLRCIDRC-16	Davenport Creek	1999	2004	4348
3170K	Davenport Creek	Stream	21FLRCIDRC-16-02266480	Davenport Creek Near Loughman Fl	1998	1998	779
3170K	Davenport Creek	Stream	21FLCEN 26011039	South Branch Of Davenport Creek @ Happy Trails Rd	2004	2004	58
3170K	Davenport Creek	Stream	21FLGW 8057	Sfa-Ls-1004	2000	2000	27
3170L	Lake Ingram	Lake	21FLORANRC15	Lake Ingram Center	1998	1998	71
3170M	Huckleberry Lake	Lake	21FLORANRC14	Lake Huckleberry Center	1998	2004	246
3170M	Huckleberry Lake	Lake	21FLGW 7878	Sfa-SI-1053	2000	2000	31
3170O	Lake Mabel	Lake	21FLORANRC17	Lake Mabel Center	1998	2004	252
3170P	Sawyer Lake	Lake	21FLORANRC29S	Sawyer South (A.K.A: Butt South)	2004	2004	176
3170P	Sawyer Lake	Lake	21FLORANRC29N	Sawyer North (A.K.A: Butt North)	2004	2004	176
3170P	Sawyer Lake	Lake	21FLORANRC29	Lake Sawyer	1998	2004	273
3170Q	Lake Butler	Lake	112WRD 02263900	Lake Butler At Windermere, Fla.	1998	1998	1
3170Q	Lake Butler	Lake	21FLORANCC4	Center Of Lake Butler	1998	2005	1629
3170Q	Lake Butler	Lake	21FLORANCC21	Center Of Wauseon Bay	1998	2005	939
3170R	Cressent Lake	Lake	21FLORANCC7	Center Of Lake Cresent	1998	2003	1019

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3170S	Down Lake	Lake	21FLORANCC9E	Geographical Center Of Lake Down	1998	2005	981
3170S	Down Lake	Lake	21FLORANCC9	Center Of Lake Down	1998	2005	1547
3170T	Lake Bessie	Lake	21FLORANCC1	Lake Bessie Center	1998	2003	984
3170U	Lake Blanche	Lake	21FLCEN 26010954	Lake Blanche @ 260m SW Of Center Of Lake	2004	2004	38
3170U	Lake Blanche	Lake	21FLCEN 26010957	Lake Blanche @ 375m NE Of Center Of Lake	2004	2004	38
3170U	Lake Blanche	Lake	21FLCEN 26010956	Lake Blanche @ 225m SE Of Center Of Lake	2004	2004	39
3170U	Lake Blanche	Lake	21FLCEN 26010955	Lake Blanche @ 350m South Of Center Of Lake	2004	2004	36
3170U	Lake Blanche	Lake	21FLORANCC3	Center Of Lake Blanche	1998	2005	1409
3170U	Lake Blanche	Lake	21FLCEN 26010953	Lake Blanche @ 350m NW Of Center Of Lake	2004	2004	38
3170V	Lake Chase	Lake	21FLORANCC6	Lake Chase Center	1998	2005	1602
3170W	Lake Louise	Lake	21FLORANCC13	Center Of Lake Louise	1998	2005	914
3170X	Lake Ilseworth	Lake	21FLCEN 26011031	Lake Ilseworth @ 210m NW Of Center Of Lake	2004	2004	36
3170X	Lake Ilseworth	Lake	21FLORANCC11	Center Of Lake Ilseworth	1998	2005	1677
3170X	Lake Ilseworth	Lake	21FLCEN 26011029	Lake Ilseworth @ 225m SE Of Center Of Lake	2004	2004	37
3170X	Lake Ilseworth	Lake	21FLCEN 26011030	Lake Ilseworth @ 225m West Of Center Of Lake	2004	2004	36
3170X	Lake Ilseworth	Lake	21FLCEN 26011032	Lake Ilseworth @ 300m NE Of Center Of Lake	2004	2004	37
3170X	Lake Ilseworth	Lake	21FLCEN 26010861	Lake Ilseworth, Center Of Lake	2004	2004	37
3170Y	Lake Tibet Butler	Lake	21FLCEN 26010856	Lake Chase, Geometric Center Of Lake	2004	2004	38
3170Y	Lake Tibet Butler	Lake	21FLCEN 26010109	Lake Tibet @ Center	2004	2004	56
3170Y	Lake Tibet Butler	Lake	21FLCEN 26011035	Lake Tibet @ 0.45 Miles SW Of Center Of Lake	2004	2004	42
3170Y	Lake Tibet Butler	Lake	21FLCEN 26011033	Lake Tibet @ 0.8 Miles North Of Center Of Lake	2004	2004	41
3170Y	Lake Tibet Butler	Lake	21FLCEN 26010959	Lake Chase @ 300m NW Of Center Of Lake	2004	2004	38
3170Y	Lake Tibet Butler	Lake	21FLCEN 26011036	Lake Tibet @ 0.8 Miles South Of Center Of Lake	2004	2004	42
3170Y	Lake Tibet Butler	Lake	21FLCEN 26011034	Lake Tibet @ 0.45 Miles North Of Center Of Lake	2004	2004	40
3170Y	Lake Tibet Butler	Lake	21FLORANCC18	Center Of Lake Tibet Butler	1998	2005	971
3170Y	Lake Tibet Butler	Lake	21FLCEN 26010961	Lake Chase @ 450m SE Of Center Of Lake	2004	2004	39
3170Y	Lake Tibet Butler	Lake	21FLCEN 26010969	Lake Chase @ 450m South Of Center Of Lake	2004	2004	38

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3170Y	Lake Tibet Butler	Lake	21FLCEN 26010958	Lake Chase @ 500m North Of Center Of Lake	2004	2004	38
3170Z	Pocket Lake	Lake	21FLORANCC22	Center Of Lake Pockets	1998	2005	956
3171	Lake Hart	Lake	21FLGW 8744	Sfa-LI-1036	2000	2000	24
3171	Lake Hart	Lake	21FLORANH2	Lake Hart	1998	2004	288
3171A	Lake Mary Jane	Lake	21FLCEN 26010145	Lake Mary Jane @ 0.82 Miles South Of Center Of Lake	2004	2004	35
3171A	Lake Mary Jane	Lake	112WRD 02261900	Lake Mary Jane Nr Narcoossee, Fla.	2000	2000	34
3171A	Lake Mary Jane	Lake	21FLORANH3	Lake Mary Jane	1998	2004	375
3171A	Lake Mary Jane	Lake	21FLCEN 26011001	Lake Mary Jane, Mid-Radial South	2004	2004	36
3171A	Lake Mary Jane	Lake	21FLCEN 26011002	Lake Mary Jane, Mid-Radial North	2004	2004	36
3171A	Lake Mary Jane	Lake	21FLCEN 26010102	Lake Mary Jane-Geometric Middle Of Lake (SE Orange County)	2004	2004	56
3171A	Lake Mary Jane	Lake	21FLCEN 26010144	Lake Mary Jane @ 625m North Of Center Of Lake	2004	2004	36
3171B	Lake Whip-Poor-Will	Lake	21FLORANH6	Lake Whip-Poor-Will	1998	2004	307
3171B	Lake Whip-Poor-Will	Lake	21FLCEN 26010859	Lake Whipperwill, Center Of Lake	2004	2004	50
3171B	Lake Whip-Poor-Will	Lake	21FLCEN 26010917	Lake Whip-Poor-Will @ 325m SW Of Center Of Lake	2004	2004	42
3171B	Lake Whip-Poor-Will	Lake	21FLCEN 26010916	Lake Whip-Poor-Will @ 425m NE Of Center Of Lake	2004	2004	41
3171B	Lake Whip-Poor-Will	Lake	21FLCEN 26010915	Lake Whip-Poor-Will @ 875m NW Of Center Of Lake	2004	2004	46
3171B	Lake Whip-Poor-Will	Lake	21FLCEN 26010918	Lake Whip-Poor-Will @ 725m SW Of Center Of Lake	2004	2004	47
3171C	Red Lake	Lake	21FLORANH5	Red Lake	1998	1998	92
3171C	Red Lake	Lake	21FLORL RED	Red Lake In Orlando, Fl	1998	2004	318
3171C	Red Lake	Lake	21FLCEN 26010910	Red Lake @ 325m North Of Center Of Lake	2004	2004	43
3171C	Red Lake	Lake	21FLCEN 26010911	Red Lake @ 325m NW Of Center Of Lake	2004	2004	42
3171C	Red Lake	Lake	21FLCEN 26010914	Red Lake @ 475m South Of Center Of Lake	2004	2004	43
3171C	Red Lake	Lake	21FLCEN 26010912	Red Lake @ Center Of Lake	2004	2004	43
3171C	Red Lake	Lake	21FLCEN 26010913	Red Lake @ 325m SE Of Center Of Lake	2004	2004	43
3171D	Lake Nona	Lake	21FLCEN 26010906	Lake Nona @ 625m NE Of Center Of Lake	2004	2004	42
3171D	Lake Nona	Lake	21FLCEN 26010907	Lake Nona @ Center Of Lake	2004	2004	51

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3171D	Lake Nona	Lake	21FLCEN 26010908	Lake Nona @ 625m SW Of Center Of Lake	2004	2004	42
3171D	Lake Nona	Lake	21FLCEN 26010909	Lake Nona @ 625m SE Of Center Of Lake	2004	2004	41
3171D	Lake Nona	Lake	21FLORL NONA NORTH	Lake Nona (North Station) In Orlando, Fl	1998	2004	320
3171D	Lake Nona	Lake	21FLCEN 26010905	Lake Nona @ 625m NW Of Center Of Lake	2004	2004	42
3171D	Lake Nona	Lake	21FLORANH1	Buck Lake	1998	1998	48
3171D	Lake Nona	Lake	21FLORL NONA SOUTH	Lake Nona (South Station) In Orlando, Fl	2003	2004	101
3171D	Lake Nona	Lake	21FLORANH4	Lake Nona	1998	2003	276
3172	East Lake Tohopekaliga	Lake	21FLGFWF03090101-ET-05	East Lake Tohopekaliga Station B-5	1998	2005	435
3172	East Lake Tohopekaliga	Lake	21FLGFWF03090101-ET-04	East Lake Tohopekaliga Station B-4	1998	2005	409
3172	East Lake Tohopekaliga	Lake	21FLSFWMA03	East Lake Tohopekaliga Water Quality Station	1998	2004	1805
3172	East Lake Tohopekaliga	Lake	21FLSFWMA01	East Lake Tohopekaliga Water Quality Station	1998	2000	1162
3172	East Lake Tohopekaliga	Lake	21FLGFWF03090101-ET-06	East Lake Tohopekaliga Station B-6	1998	2005	371
3172	East Lake Tohopekaliga	Lake	21FLSFWMA04	East Lake Tohopekaliga Water Quality Station	1998	2000	1113
3172A	Jim Branch	Lake	112WRD 282043081155900		2001	2001	31
3173	City Ditch Canal	Stream	21FLCEN 26010061	Lake Tohopekaliga: City Of Kissimmee STP Drainage Ditch	2004	2004	81
3173	City Ditch Canal	Stream	21FLCEN 26011070	City Ditch Canal @ Intersection Of Patrick St & Viola St	2004	2004	68
3173	City Ditch Canal	Stream	21FLCEN 26011069	City Ditch Canal @ Patrick St. E Of Kiss. Municipal Airport	2004	2004	69
3173	City Ditch Canal	Stream	21FLCEN 26011068	City Ditch Canal @ Mabbette St.	2004	2004	21
3173	City Ditch Canal	Stream	21FLCEN 26011071	City Ditch Canal @ West Clay St.	2004	2004	69
3173A	Lake Tohopekaliga	Lake	21FLSFWMB02	Lake Tohopekaliga Water Quality Station	1998	2004	1308
3173A	Lake Tohopekaliga	Lake	21FLSFWMB06	Lake Tohopekaliga Water Quality Station	1998	2000	1048
3173A	Lake Tohopekaliga	Lake	21FLSFWMB04	Lake Tohopekaliga Water Quality Station	1998	2004	1754
3173A	Lake Tohopekaliga	Lake	21FLSFWMB09	Lake Tohopekaliga Water Quality Station	1998	2004	1710
3173A	Lake Tohopekaliga	Lake	21FLSFWMB08	Lake Tohopekaliga Water Quality Station	2002	2003	17
3173A	Lake Tohopekaliga	Lake	21FLGW 7855	Sfa-SI-1006	2000	2000	54
3173A	Lake Tohopekaliga	Lake	21FLGW 8747	Sfa-LI-1041	2000	2000	50
3173A	Lake Tohopekaliga	Lake	21FLA 26010073	Lk Toho Pns Station	1998	1998	83
3173A	Lake Tohopekaliga	Lake	21FLGFWF03090101-LT-16	Lake Tohopekaliga Station 16	1998	2005	419

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3173A	Lake Tohopekaliga	Lake	21FLCEN 26010068	Lake Tohopekaliga East Of Paradise Island	2004	2004	49
3173A	Lake Tohopekaliga	Lake	21FLGFWF03090101-LT-33	Lake Tohopekaliga Station 33	1998	2005	382
3173A	Lake Tohopekaliga	Lake	21FLGFWF03090101-LT-15	Lake Tohopekaliga Station 15	1998	2005	415
3173A	Lake Tohopekaliga	Lake	21FLGFWF03090101-LT-27	Lake Tohopekaliga Station 27	1998	2005	415
3173B	St Cloud Canal	Stream	21FLGW 7885	Sfa-SI-1060	2000	2000	31
3173B	St Cloud Canal	Stream	21FLSFWMBS-59	Sfwm Structure S-59 On S.Side Of E.Lake Toho A	1998	2001	969
3173B	St Cloud Canal	Stream	21FLA 26010058	St Cloud Canal At Sr 523	1998	1998	100
3173D	Mill Slough	Stream	21FLGW 7386	Sfa-Hs-1026	2000	2000	27
3173D	Mill Slough	Stream	21FLGFWF03090101-MS-11	Mill Slough Station 11	1998	2005	334
3174	Lake Center	Lake	21FLCEN 26010992	Center Lake, Mid-Radial North	2004	2004	32
3174	Lake Center	Lake	21FLCEN 26010951	Lake Center @ 525m SE Of Center Of Lake	2004	2004	32
3174	Lake Center	Lake	21FLCEN 26010950	Lake Center @ 500m NW Of Center Of Lake	2004	2004	32
3174	Lake Center	Lake	21FLCEN 26010991	Center Lake, Mid-Radial South	2004	2004	32
3174	Lake Center	Lake	21FLCEN 26010035	Lake Center; Center Of Lake	1999	2004	44
3174D	Coon Lake	Lake	21FLCEN 26010140	Canal Connecting Lake Lizzie And Coon Lake At Bass	2000	2000	32
3174E	Trout Lake	Lake	21FLA 26010039	Trout Lake Center	1998	1998	2
3174F	Lake Center Outlet	Lake	21FLCEN 26010141	Canal Flowing Into NE Corner Of Center Lk At End O	2000	2000	14
3174F	Lake Center Outlet	Lake	21FLCEN 26010137	Canal Flowing Into The NW Corner In Center Lake	2000	2000	14
3174F	Lake Center Outlet	Lake	21FLCEN 26010136	Canal Flowing Into The SW Corner Of Center Lake	2000	2000	14
3176	Alligator Lake	Lake	21FLA 26010032	Alligator Lk Ctr Sw Lobe	1998	1998	2
3176	Alligator Lake	Lake	21FLA 26010033	Alligator Lk Ctr East Lobe	1998	1998	2
3176	Alligator Lake	Lake	21FLCEN 26010032	Alligator Lake; Center Of SW Lobe	2004	2004	14
3176	Alligator Lake	Lake	21FLA 26010038	Alligator Lk Ctr Of North Half	1998	1998	102
3176	Alligator Lake	Lake	21FLGFWF03090101-AL-01	Alligator Lake Station A-1	1998	2005	433
3176A	Lake Lizzie	Lake	21FLA 26010037	Lake Lizzie	1998	1998	2
3176A	Lake Lizzie	Lake	21FLCEN 26010036	Lake Lizzie - North End	2004	2004	7
3176B	Alligator Lake Inlet	Stream	21FLCEN 26010133	Unnamed Drain Flowing East Into SW Lobe Of Alligat	2000	2000	31
3176B	Alligator Lake Inlet	Stream	21FLCEN 26010135	Canal Linking Alligator Lake With Sardine Lake Fro	2000	2000	14

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3176B	Alligator Lake Inlet	Stream	21FLCEN 26010134	Canal Linking Buck Lake To The NE Lobe Of Alligato	2000	2000	14
3176C	Alligator Lake Outlet	Stream	21FLCEN 26010138	Canal Connecting SW Lobe Of Alligator Lake With La	2000	2000	31
3177	Lake Gentry	Lake	21FLCEN 26010041	Lake Gentry - Center Of Lake	2004	2004	26
3177	Lake Gentry	Lake	21FLCEN 26011000	Lake Gentry, Mid-Radial Northwest	2004	2004	26
3177	Lake Gentry	Lake	21FLCEN 26010131	Canal Flowing Into Lake Gentry From The East	2000	2000	30
3177	Lake Gentry	Lake	21FLCEN 26010121	Short Canal Flowing Into SW Corner Of Lake Gentry	2000	2000	30
3177	Lake Gentry	Lake	21FLGFWF03090101-LG-01	Lake Gentry Station G-1	1998	2005	443
3177	Lake Gentry	Lake	21FLCEN 26011102	Lake Gentry @ 0.7 Miles SW Of Center	2004	2004	7
3177	Lake Gentry	Lake	21FLCEN 26011103	Lake Gentry @ 750m SE Of Center	2004	2004	7
3177	Lake Gentry	Lake	21FLCEN 26010989	Lake Gentry, Center Of Southwest Cove	2004	2004	25
3177	Lake Gentry	Lake	21FLCEN 26010988	Lake Gentry, Center Of Northeast Cove	2004	2004	56
3180A	Lake Cypress	Lake	21FLGW 8762	Sfa-LI-1017	2000	2000	31
3180A	Lake Cypress	Lake	21FLSFWMC03	Lake Cypress Water Quality Station	1998	2004	1563
3180A	Lake Cypress	Lake	21FLGFWF03090101-LC-20	Lake Cypress Station 20	1998	2005	380
3180B	South Port Canal	Stream	21FLSFWMCS-61	Sfwmd Structure S-61 On S.Side Of L.ToHo At Sout	2003	2004	77
3183B	Lake Kissimmee (Mid)	Lake	21FLCEN 26010088	Lake Kissimmee, Center Between Bird Island And Brahma Island	2004	2004	38
3183B	Lake Kissimmee (Mid)	Lake	21FLGW 8076	Sfa-Ls-1030	2000	2000	27
3183B	Lake Kissimmee (Mid)	Lake	21FLSFWMS65	S-65 Spillway On Lake Kissimmee At Canal C-38	1998	2005	5060
3183B	Lake Kissimmee (Mid)	Lake	21FLGFWF03090101-LK-22	Lake Kissimmee Station 22	1998	2005	389
3183B	Lake Kissimmee (Mid)	Lake	21FLGFWF03090101-LK-30	Lake Kissimmee Station 30	1998	2005	395
3183B	Lake Kissimmee (Mid)	Lake	21FLCEN 26010085	Lake Kissimmee - Center Of Northwest Sector	2004	2004	39
3183B	Lake Kissimmee (Mid)	Lake	21FLGFWF03090101-LK-29	Lake Kissimmee Station 29	1998	2005	400
3183B	Lake Kissimmee (Mid)	Lake	21FLGW 8760	Sfa-LI-1015	2000	2000	31
3183B	Lake Kissimmee (Mid)	Lake	21FLCEN 26010089	Lake Kissimmee, South	2004	2004	39
3183B	Lake Kissimmee (Mid)	Lake	21FLCEN 26010087	Lake Kissimmee - 1-1/4 Miles Due South Of Lemon Point	2004	2004	47
3183B	Lake Kissimmee (Mid)	Lake	21FLCEN 26010086	Lake Kissimmee - Center Of Northeast Cove	2004	2004	40
3183B	Lake Kissimmee (Mid)	Lake	21FLGW 3506	S65	1999	2005	2195

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3183B	Lake Kissimmee (Mid)	Lake	21FLSFWME02	Lake Kissimmee Water Quality Station	1998	2004	1897
3183B	Lake Kissimmee (Mid)	Lake	21FLGW 7389	Sfa-Hs-1032	2000	2000	27
3183B	Lake Kissimmee (Mid)	Lake	21FLGW 8769	Sfa-LI-1028	2000	2000	31
3183B	Lake Kissimmee (Mid)	Lake	21FLSFWME04	Lake Kissimmee Water Quality Station	1998	2004	2162
3183B	Lake Kissimmee (Mid)	Lake	21FLSFWME03	Lake Kissimmee Water Quality Station	2000	2000	24
3183C	Rosalie Canal	Stream	112WRD 275634081211801	756121-- 29s30e19 Kiss Stpk Nr Lk Kissimmee	2003	2003	19
3183F	Jackson Canal	Stream	21FLGFWF03090101-LK-31	Lake Kissimmee Station 31	1998	2005	324
3183G	Lake Jackson Ocala Co	Lake	21FLGFWF03090101-LJ-01	Lake Jackson Station J-1	1998	2005	378
3183G	Lake Jackson Ocala Co	Lake	21FLCEN 26010027	Lake Jackson @ Center	2004	2004	41
3183G	Lake Jackson Ocala Co	Lake	21FLGFWF03090101-LK-32	Lake Kissimmee Station 32	1998	2005	363
3183G	Lake Jackson Ocala Co	Lake	21FLCEN 26011101	Lake Jackson @ 0.8 Miles South Of Center	2004	2004	7
3183G	Lake Jackson Ocala Co	Lake	21FLCEN 26011099	Lake Jackson @ 575m NW Of Center	2004	2004	7
3183G	Lake Jackson Ocala Co	Lake	21FLCEN 26010024	Lake Jackson @ 375m NW Of Boat Ramp	2004	2004	18
3183G	Lake Jackson Ocala Co	Lake	21FLCEN 26010026	Lake Jackson @ 650m North Of Center	2004	2004	26
3183G	Lake Jackson Ocala Co	Lake	21FLCEN 26010028	Lake Jackson @ 875m South Of Center	2004	2004	26
3183G	Lake Jackson Ocala Co	Lake	21FLCEN 26011098	Lake Jackson @ 600m NE Of Center	2004	2004	8
3183G	Lake Jackson Ocala Co	Lake	21FLCEN 26010025	Lake Jackson @ 0.66miles NW Of Boat Ramp	2004	2004	26
3184	Lake Marian	Lake	21FLGFWF03090101-LM-01	Lake Marian Station M-1	1998	2005	389
3184	Lake Marian	Lake	21FLA 26010952	Lake Marian - Center	1998	1998	87
3184	Lake Marian	Lake	21FLCEN 26011014	Lake Marian 1.5 Miles Off Of The Eastern Shore	1999	1999	15
3184	Lake Marian	Lake	21FLCEN 26011013	Lake Marian 3 Miles Off Of The Eastern Shore	1999	1999	15
3184	Lake Marian	Lake	21FLCEN 26011012	Lake Marian 1.5 Miles Off The Western Shore	1999	1999	15
3186A	Kissimmee River	Stream	21FLCEN 26011154	Kissimmee R. @ 2.15 Miles Upstream Of Mouth Of L. Kissimmee	2004	2004	20
3186A	Kissimmee River	Stream	21FLA 26010984	Kissimmee River At Powerline Crossing	1998	1998	76
3186A	Kissimmee River	Stream	21FLCEN 26010052	Kissimmee River Below Lake Hatchinea	2004	2004	50
3186A	Kissimmee River	Stream	21FLCEN 26011064	Kissimmee River @ 2.9miles Upstrm Of Mouth Of Lake Kissimmee	2004	2004	52

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3186A	Kissimmee River	Stream	21FLCEN 26011065	Kissimmee River @ 2.4miles Upstrm Of Mouth Of Lake Kissimmee	2004	2004	51
3186A	Kissimmee River	Stream	21FLCEN 26011066	Kissimmee River @ 1.9 Miles Upstrm Of Mouth Of Lake Kissimmee	2004	2004	51
3186A	Kissimmee River	Stream	21FLCEN 26011067	Kissimmee River @ 1.15 Mi Upstrm Of Mouth Of Lake Kissimmee	2004	2004	51
3186A	Kissimmee River	Stream	21FLCEN 26011151	Kissimmee Riv. @ .95 Miles Upstream Of Mouth Of L. Kissimmee	2004	2004	20
3186A	Kissimmee River	Stream	21FLCEN 26011153	Kissimmee Riv. @ 1.7 Miles Upstream Of Mouth Of L. Kissimmee	2004	2004	20
3186A	Kissimmee River	Stream	21FLCEN 26011155	Kissimmee R. @ 2.7 Miles Upstream Of Mouth Of L. Kissimmee	2004	2004	21
3186A	Kissimmee River	Stream	21FLCEN 26011152	Kissimmee Riv. @ 1.3 Miles Upstream Of Mouth Of L. Kissimmee	2004	2004	20
Lower Kissimmee Planning Unit							
1856A	Istokpoga Canal	Stream	21FLSFWMKREA 95	Istokpoga Oxbow	1998	2005	1812
1856A	Istokpoga Canal	Stream	21FLSFWMISTKC621	In The Istokpoga Canal At County Road 621	1998	2005	599
3186B	Kissimmee River	Stream	21FLSFWMKREA 97	Kissimmee River Station At River Ranch Oxbow	1998	2003	1170
3186B	Kissimmee River	Stream	21FLGW 8059	Sfa-Ls-1007	2000	2000	50
3186B	Kissimmee River	Stream	21FLSFWMKRFNS	Water Sampling Stations On The Kissimmee River	1998	1998	1
3186B	Kissimmee River	Stream	21FLSFWMKRFNC38	Krgw Grab Samples	1998	2001	872
3186B	Kissimmee River	Stream	21FLSFWMKRENICE	Krgw Grab Sample	1998	2001	675
3186B	Kissimmee River	Stream	21FLCEN 26010091	Kissimmee River 1.5 Mi S Of S-65 Lock At Hwy 60	2004	2004	7
3186B	Kissimmee River	Stream	21FLSFWMS65A	S-65a Spillway On Canal C-38	1998	2005	6772
3186C	Blanket Bay Slough	Stream	21FLCEN 26010924	Blanket Bay Slough @ 225m Upstream Of Culvert On Adams Ranch	2004	2004	62
3186C	Blanket Bay Slough	Stream	21FLCEN 26010923	Blanket Bay Slough @ 225m Dwnstrm Of Culvert On Adams Ranch	2004	2004	69
3186C	Blanket Bay Slough	Stream	21FLCEN 26010922	Blanket Bay Slough @ Culvert On Adams Ranch	2004	2004	66
3186C	Blanket Bay Slough	Stream	21FLCEN 26010921	Blankt Bay Slough @ Sr 60	2004	2004	69
3186D	Eightmile Slough	Stream	21FLGW 7402	Sfa-Hs-1049	2000	2000	27
3186D	Eightmile Slough	Stream	21FLAVONAPAFRTMDL10	Eight-Mile Culvert	2004	2005	260

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3187A	Kissimmee River	Stream	21FLAVONAPAFRTMDL8	Upper Kissimmee Marsh	2004	2005	243
3187A	Kissimmee River	Stream	21FLGW 8083	Sfa-Ls-1041	2000	2000	31
3187A	Kissimmee River	Stream	21FLGW 7375	Sfa-Hs-1010	2000	2000	50
3187A	Kissimmee River	Stream	21FLGW 8065	Sfa-Ls-1013	2000	2000	27
3187A	Kissimmee River	Stream	21FLAVONAPAFRTMDL11	Kissimmee River At Lower Marsh	2004	2005	146
3187A	Kissimmee River	Stream	21FLGW 8055	Sfa-Ls-1001	2000	2000	27
3187B	Pine Island Slough	Stream	21FLSFWMKREA 86	Pool B Pine Slough U.S.	1998	1998	193
3188	Farm Area	Stream	21FLFTM 26010743FTM	Farm Area Wbid 3188 Site 3	2004	2004	148
3188	Farm Area	Stream	21FLFTM 26010742FTM	Farm Area Wbid 3188 Site 2	2004	2004	133
3188	Farm Area	Stream	21FLFTM 26010733FTM	Farm Area Wbid 3188 Site 1	2004	2004	155
3188	Farm Area	Stream	21FLSFWMKREA 07	Larson Dairy West Nw 160 Dr.	1998	2003	255
3188	Farm Area	Stream	21FLSFWMKREA 08	Larson Dairy East Nw 160 Dr.	1998	2003	365
3188	Farm Area	Stream	21FLSFWMKREA 09	Larson Dairy 203 Ave Old Peavine Tr.	1998	2003	217
3188	Farm Area	Stream	21FLSFWMKREA 21	Dad Island At Nw 240th St	1998	1998	98
3188	Farm Area	Stream	21FLSFWMKREA 01	Fish Slough Nw 240 St.	1998	2005	1549
3188A	Chandler Slough	Stream	21FLFTM 26010741FTM	Chandler Slough Wbid 3188a Site 4	2004	2004	125
3188A	Chandler Slough	Stream	21FLSFWMKREA 04	Chandler Slough N. Bridge Us98	1998	2005	925
3192A	Kissimmee River	Stream	21FLSFWMS65C	S-65c Spillway On Canal C-38	1998	2005	5477
3192A	Kissimmee River	Stream	21FLSFWMS65B	S-65b Spillway & Lock On Canal C-38	1998	2000	3550
3192A	Kissimmee River	Stream	21FLSFWMKREA 98	Montsdeoca Oxbow Kissimmee River	1998	2005	1559
3192A	Kissimmee River	Stream	21FLSFWMKRBNS	Kissimmee River Restoration Site B Near Wells	1998	2001	189
3192A	Kissimmee River	Stream	21FLSFWMKRDRMONT	Krgw Grab Sample	1998	2001	634
3192A	Kissimmee River	Stream	21FLSFWMKRDNNM1	Kissimmee River Restoration Site D Near Wells	1998	2001	190
3192A	Kissimmee River	Stream	21FLSFWMKRDNND1	Kissimmee River Restoration Site D Near Wells	1998	2001	192
3192A	Kissimmee River	Stream	21FLSFWMKRDFFS	Kissimmee River Restoration Site D Far Wells	1998	2001	191

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3192A	Kissimmee River	Stream	21FLSFWMKRDFFM	Kissimmee River Restoration Site D Far Wells	1998	2001	216
3192A	Kissimmee River	Stream	21FLSFWMKRCNNS	Kissimmee River Restoration Site C Near Wells	1998	2001	186
3192A	Kissimmee River	Stream	21FLSFWMKRCNNM	Kissimmee River Restoration Site C Near Wells	1998	2001	196
3192A	Kissimmee River	Stream	21FLSFWMKRCNC38	Krgw Grab Sample	1998	2000	687
3192A	Kissimmee River	Stream	21FLSFWMKRCFFS	Kissimmee River Restoration Site C Far Wells	1998	2001	187
3192A	Kissimmee River	Stream	21FLSFWMKRANNM	Kissimmee River Restoration Site A Near Wells	1998	2001	190
3192A	Kissimmee River	Stream	21FLSFWMKRBNOX13	Krgw Grab Sample	1998	2001	694
3192A	Kissimmee River	Stream	21FLSFWMKRAFFM	Kissimmee River Restoration Site A Far Wells	1998	2001	188
3192A	Kissimmee River	Stream	21FLSFWMKRBNNM	Kissimmee River Restoration Site B Near Wells	1998	2001	194
3192A	Kissimmee River	Stream	21FLSFWMKRBND	Kissimmee River Restoration Site B Near Wells	1998	2001	188
3192A	Kissimmee River	Stream	21FLSFWMKRBFFS	Kissimmee River Restoration Site B Far Wells	1998	2001	214
3192A	Kissimmee River	Stream	21FLSFWMKRBFFM	Kissimmee River Restoration Site B Far Wells	1998	2000	185
3192A	Kissimmee River	Stream	21FLSFWMKRANNS	Kissimmee River Restoration Site A Near Wells	1998	2001	197
3192A	Kissimmee River	Stream	21FLSFWMKRCNND	Kissimmee River Restoration Site C Near Wells	1998	2001	188
3192A	Kissimmee River	Stream	21FLSFWMKRANND	Kissimmee River Restoration Site A Near Wells	1998	2001	211
3192A	Kissimmee River	Stream	21FLSFWMKRANC38	Krgw Station	1998	2000	412
3192A	Kissimmee River	Stream	21FLSFWMKRAFFS	Kissimmee River Restoration Site A Far Wells	1998	2001	187
3192A	Kissimmee River	Stream	21FLSFWMKRCFFM	Kissimmee River Restoration Site C Far Wells	1998	2001	196
3192A	Kissimmee River	Stream	21FLSFWMKRDNNS1	Kissimmee River Restoration Site D Near Wells	1998	2001	202
3192B	Starvation Slough	Stream	21FLGW 8073	Sfa-Ls-1025	2000	2000	27
3192C	Oak Creek	Stream	21FLFTM 26010731FTM	Oak Creek Wbid 3192c Site 1	2004	2004	272
3192C	Oak Creek	Stream	21FLFTM 26010732FTM	Oak Creek Wbid 3192c Site 2	2004	2004	54

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3202	Kissimmee River	Stream	112WRD 02273000	Kissimmee R At S-65e Nr Okeechobee, Fla.	1998	1998	207
3202	Kissimmee River	Stream	21FLGW 3501	S65e	1999	2005	2192
3202	Kissimmee River	Stream	21FLGW 8071	Sfa-Ls-1023	2000	2000	27
3202	Kissimmee River	Stream	21FLSFWMS65D	S-65d Spillway On Canal C-38	1998	2005	5804
3202	Kissimmee River	Stream	21FLSFWMKREA 46A	C Williamson Dairy At Convergence Of Flood Water	1998	2003	160
3207	S-154c	Stream	21FLGW 7382	Sfa-Hs-1021	2000	2000	27
3207	S-154c	Stream	21FLSFWMS154C	Gated Structure On The East Side Of C-38 Next	1998	2004	1718
3207	S-154c	Stream	21FLSFWMS154	Autosampler At S154 L-62 Outfall At C-38	1998	2005	3435
3209	Kissimmee River	Stream	21FLSFWML59E	L-59 Canal At C-38	1998	2004	1089
3209	Kissimmee River	Stream	21FLSFWMC38W	Gated Structure On West End Of C-38 3 Miles Sou	1998	2001	1168
3209	Kissimmee River	Stream	21FLSFWMKS78	Kissimmee River At State Road 78	1999	1999	4
3209	Kissimmee River	Stream	21FLFTM 26010736FTM	Kissimmee Wbid 3209 Site 1 In Canal West Of Structure S65e	2004	2004	63
3209	Kissimmee River	Stream	21FLSFWMS65E	S-65e Spillway/Lock On C-38 At Lake Okeechobee	1998	2005	6842
3209	Kissimmee River	Stream	21FLFTM 26010737FTM	Kissimmee Wbid 3209 Site 1 In Canal West Of Structure S65e	2004	2004	63
3209	Kissimmee River	Stream	21FLSFWMS84	S-84 Spillway On Canal C-41a At Lake Okeechobee	1998	2004	2289
3209	Kissimmee River	Stream	21FLFTM 26010738FTM	Kissimmee Wbid 3209 Site 1 In Canal West Of Structure S65e	2004	2004	63
3209	Kissimmee River	Stream	112WRD 270905080520900	Kissimmee R Nw Of Okee-Tantie Nr Okeechobee,Fl	1999	2000	123
3209	Kissimmee River	Stream	21FLFTM 26010735FTM	Kissimmee Wbid 3209 Site 1 In Canal West Of Structure S65e	2004	2004	63
3214	L-48	Stream	21FLGW 7392	Sfa-Hs-1035	2000	2000	27
3214	L-48	Stream	21FLGW 7378	Sfa-Hs-1016	2000	2000	31

Lake Istokpoga Planning Unit

1573E	Lake Weohyakapka	Lake	21FLGW 8766	Sfa-LI-1024	2000	2000	31
1573E	Lake Weohyakapka	Lake	21FLPOLKWEOHYAKAPKA1	Weohyakapka Lk Center	1998	2005	225
1573E	Lake Weohyakapka	Lake	21FLA 26010311	L Weohyakapka Nr Co Landing	1998	1998	124
1619	Tiger Creek	Stream	21FLPOLKTIGER CREEK1	Tiger Creek Call 813-678-1551	1998	1998	26

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1619	Tiger Creek	Stream	112WRD 02268390	Tiger Creek Nr Babson Park, Fl	1998	2003	440
1619	Tiger Creek	Stream	21FLGW 7872	Sfa-SI-1046	2000	2000	31
1619	Tiger Creek	Stream	21FLCEN 26011020	Tiger Creek 50 Yd Upstream Of Lake Walk At Walking	1999	2004	38
1619	Tiger Creek	Stream	21FLGW 7868	Sfa-SI-1024	2000	2000	31
1619	Tiger Creek	Stream	21FLGW 7857	Sfa-SI-1007	2000	2000	31
1619	Tiger Creek	Stream	21FLSWFDSAINT ANNE		2001	2001	22
1619	Tiger Creek	Stream	21FLPOLKTIGER CREEK3	Tiger Cr On Walk In Water Rd Call 813-678-1551	1998	2005	205
1619A	Lake Wales	Lake	112WRD 275414081350100	Crystal Lake At Lake Wales Fl	1999	2000	4
1619A	Lake Wales	Lake	21FLPOLKWAILES1	Wailes Lake Center	1998	2005	234
1619A	Lake Wales	Lake	21FLSWFDWALES		1999	2000	56
1619A	Lake Wales	Lake	112WRD 02268200	Lake Wales At Lake Wales, Fla.	1999	2000	5
1619B	Lake Easy	Lake	21FLTPA 25023002	L53p- Lake Easy	2000	2000	12
1619C	Lake Leonore	Lake	21FLPOLKLEONORE1	Leonore Lake Center	1998	2000	71
1619D	Lake Moody	Lake	21FLSWFDMOODY		1999	2000	56
1619D	Lake Moody	Lake	21FLPOLKMOODY1	Moody Lake Center	1998	2000	88
1663	Crooked Lake	Lake	21FLPOLKCROOKED5	Babson Park Northeast Shore Of Lake	1998	2005	280
1663	Crooked Lake	Lake	21FLPOLKCROOKED3	Babson Park South Shore Of Lake	1998	2005	303
1663	Crooked Lake	Lake	21FLPOLKLT L CROOKED1	Little Crooked Lk Center	1998	2005	277
1663	Crooked Lake	Lake	112WRD 02269200	Crooked Lake Nr Babson Park, Fla.	1999	2000	6
1663	Crooked Lake	Lake	21FLSWFDCROOKED		1999	2000	56
1663	Crooked Lake	Lake	21FLSWFDLITTLE CROOKED		1999	2000	57
1685A	Lake Arbuckle	Lake	21FLPOLKARBUCKLE1	East Of Frostproof Center Of Lake	1998	2005	238
1685A	Lake Arbuckle	Lake	21FLAVONAPAFRTMDL1	Arbuckle Creek Boat Ramp	2004	2005	353
1685B	Livingston Creek	Stream	21FLCEN 26011019	Livingston Creek 50 Yds Upstream Of Ruck's Dairy R	1999	2004	97
1685B	Livingston Creek	Stream	21FLCEN 26011073	Livingston Creek @ 800m Downstream Of Rucks Dairy Rd	2004	2004	47

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1685B	Livingston Creek	Stream	21FLCEN 26011075	Livingston Creek @ 210m Downstream Of Rucks Dairy Rd	2004	2004	46
1685B	Livingston Creek	Stream	112WRD 02269520	Livingston Creek Nr Frostproof, Fl	1998	2003	442
1685B	Livingston Creek	Stream	21FLPOLKREEDY CREEK1	Reedy Cr @ Rucks Dairy Rd At Bridge	1998	2005	202
1685B	Livingston Creek	Stream	21FLCEN 26011074	Livingston Creek @ 425m Downstream Of Rucks Dairy Rd	2004	2004	47
1685D	Reedy Lake	Lake	21FLGW 8764	Sfa-LI-1022	2000	2000	31
1685D	Reedy Lake	Lake	21FLPOLKREEDY1	Reedy Lake Center	1998	2005	248
1685D	Reedy Lake	Lake	21FLSWFDREEDY		1999	2000	58
1685E	Lake Ida	Lake	21FLSWFDIDA (FROSTPROOF		2000	2001	58
1685F	Livingston Creek West	Stream	21FLSFWMVLV14322813	Livingston Creek At Hwy C-627	2005	2005	3
1685G	Reedy Lake Basin	Lake	21FLSFWMRD01322813	Lake Reedy Outfall At Lake Reedy Rd.	2005	2005	3
1706	Lake Clinch	Lake	21FLSWFDCLINCH		1999	2000	56
1706	Lake Clinch	Lake	21FLPOLKCLINCH1	Frostproof Center Of Lake	1998	2005	238
1706	Lake Clinch	Lake	112WRD 02269300	Lake Clinch At Frostproof, Fla.	1999	2000	6
1730	Center Of Lake Hickory	Lake	112WRD 274201081320900	Hickory Lake Near Frostproof Fl	1999	2000	4
1730	Center Of Lake Hickory	Lake	21FLSWFDHICKORY		2000	2001	59
1730	Center Of Lake Hickory	Lake	21FLPOLKHICKORY1	Center Of Lake Hickory Lk Ests Alt27s	1998	2005	229
1730A	Lake Olivia - Open Wat	Lake	21FLSWFDOLIVIA		2000	2001	59
1730A	Lake Olivia - Open Wat	Lake	21FLFTM 26010652FTM	Lake Olivia Mid Lake	2003	2003	61
1730A	Lake Olivia - Open Wat	Lake	112WRD 02269172	Lake Olivia At Avon Park Fl	2000	2000	1
1730B	Livingston Lake	Lake	21FLPOLKLIVINGSTON1	Center	1998	2005	172
1730C	Streety Lake	Lake	21FLPOLKSTREETY1	Streety Lake Center	1998	1998	34
1730D	Lake Adelaide - Open W	Lake	21FLSWFDADELAIDE		2000	2001	57
1730D	Lake Adelaide - Open W	Lake	21FLFTM 26010325	Lake Adelaide	1999	1999	31
1730E	Pabor Lake - Open Wate	Lake	21FLSWFDPABOR		2000	2001	58
1758	Lake Damon	Lake	21FLGW 8062	Sfa-Ls-1010	2000	2000	27
1758	Lake Damon	Lake	21FLSWFDDAMON		2000	2001	58

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1758	Lake Damon	Lake	21FLFTM 26010336FTM	Lake Damon Center Of Lake	2001	2001	32
1758A	Lake Viola	Lake	21FLFTM 26010719FTM	Lake Viola Site 4 Northern Middle Section	2004	2004	126
1758A	Lake Viola	Lake	21FLFTM 26010718FTM	Lake Viola Site 3 Eastern Middle Section	2004	2004	126
1758A	Lake Viola	Lake	21FLSWFDVIOLA		2000	2001	57
1758A	Lake Viola	Lake	112WRD 273656081294200	Lake Viola At Avon Park Fl	1999	2000	6
1758A	Lake Viola	Lake	21FLA 26010608	Lake Viola Near Mid N Shore	1998	1998	7
1758A	Lake Viola	Lake	21FLFTM 26010717FTM	Lake Viola Site 1 East Of Boat Ramp	2004	2004	126
1758A	Lake Viola	Lake	21FLFTM 26010605	Center Of Lake Viola	1999	2004	201
1758B	Lake Lillian	Lake	21FLSWFDLILLIAN		2000	2001	56
1758C	Lake Isis	Lake	21FLSWFDISIS		2000	2001	56
1758C	Lake Isis	Lake	112WRD 02269184	Lake Isis At Avon Park Fl	2000	2000	3
1758D	Trout Lake - Open Water	Lake	21FLSWFDTROUT		2000	2001	58
1758D	Trout Lake - Open Water	Lake	21FLFTM 26010327	Lake Trout	2000	2000	31
1758F	Lake Isabell - Open Wa	Lake	21FLSWFDISABELL		2000	2000	29
1758G	Lake Pythias - Open Wa	Lake	21FLSWFDPYTHIAS		2000	2001	56
1758H	Lake Byrd - Open Water	Lake	21FLSWFDBYRD		2000	2001	56
1758I	Brentwood Lake - Open	Lake	21FLSWFDBRENTWOOD		2000	2001	57
1758J	Pioneer Lake	Lake	21FLFTM 26010651FTM	Lake Pioneer Mid -Lake	2002	2002	16
1758J	Pioneer Lake	Lake	112WRD 273709081294000	Pioneer Lake Near Avon Park Fl	1999	2000	5
1761	Arbuckle Creek	Stream	21FLFTM 26010660FTM	Arbuckle Creek-2	2004	2004	127
1761	Arbuckle Creek	Stream	21FLSFWMARBKSR98	In Arbuckle Creek At State Road 98	1998	2005	634
1761	Arbuckle Creek	Stream	21FLFTM 26010659FTM	Arbuckle Creek-1	2004	2004	128
1761	Arbuckle Creek	Stream	21FLGW 7395	Sfa-Hs-1038	2000	2000	31
1761A	Arbuckle C. Ab Wildcat	Stream	21FLGW 8617	Sfa-Ls-1081	2000	2000	50
1761A	Arbuckle C. Ab Wildcat	Stream	21FLSFWMAR18343012	Arbuckle Creek At Arbuckle Creek Rd.	2005	2005	3
1761A	Arbuckle C. Ab Wildcat	Stream	21FLCEN 26011087	Arbuckle Creek @ 100m North Of Arbuckle Creek Rd	2004	2004	14

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1761B	Arbuckle C. Ab Morgan	Stream	21FLAVONAPAFRTMDL4	Arbuckle Marsh Culvert/Internal Dike	2004	2005	41
1761B	Arbuckle C. Ab Morgan	Stream	21FLSFWMAR06333013	Arbuckle Creek At East End Of Arbuckle Rd	2005	2005	3
1761B	Arbuckle C. Ab Morgan	Stream	21FLCEN 26011086	Arbuckle Creek @ 6.0 Miles Downstream Of Lake Arbuckle	2004	2004	20
1761B	Arbuckle C. Ab Morgan	Stream	21FLA 26010029	Arbuckle Cr At Arbuckle Cr Rd	1998	1998	24
1761C	Arbuckle Branch	Stream	21FLGW 8080	Sfa-Ls-1038	2000	2000	27
1761C	Arbuckle Branch	Stream	21FLSFWMAB27343014	Arbuckle Branch At Arbuckle Creek Rd.	2005	2005	3
1761D	Morgan Hole Creek	Stream	21FLGW 7372	Sfa-Hs-1006	2000	2000	27
1761D	Morgan Hole Creek	Stream	21FLAVONAPAFRTMDL5	Morgan Hole Creek	2004	2005	524
1761D	Morgan Hole Creek	Stream	21FLAVONAPAFRTMDL2	Willingham Creek Bridge	2004	2005	713
1761E	Duck Lake - Open Water	Lake	21FLSWFDDUCK		2001	2001	28
1761H	Lake Lucas - Open Water	Lake	21FLFTM 26010689FTM	Lake Lucas Site 2	2004	2004	280
1761H	Lake Lucas - Open Water	Lake	21FLFTM 26010688FTM	Lake Lucas Site 1	2004	2004	254
1761H	Lake Lucas - Open Water	Lake	21FLSWFDLUCAS		2001	2001	28
1761I	Bonnet Creek	Stream	21FLSFWMBN08332912	Bonnet Creek On Old Bombing Range Rd.	2005	2005	3
1761I	Bonnet Creek	Stream	21FLSFWMBN03332911	Bonnet Creek At Hwy 64 Bridge	2005	2005	3
1804	Palmetto Creek	Stream	21FLSFWMPC20332914	Palmetto Creek At Avon Pines Rd.	2005	2005	3
1804	Palmetto Creek	Stream	21FLSFWMPC15332911	Palmetto Creek At North End Of Roberts Rd.	2005	2005	3
1813	Carter Creek	Stream	21FLSFWMCA11342914	Carter Creek At Arbuckle Creek Rd.	2005	2005	3
1813	Carter Creek	Stream	112WRD 02270000	Carter Creek Nr Sebring, Fla.	1998	2003	442
1813	Carter Creek	Stream	21FLGW 7377	Sfa-Hs-1015	2000	2000	27
1813A	Dinner Lake	Lake	21FLA 26010591	Dinner Lake Center Of N Basin	1998	1998	16
1813A	Dinner Lake	Lake	21FLSWFDDINNER		2000	2001	56
1813B	Lake Lotela	Lake	21FLFTM 26010698FTM	Lake Lotela Middle Site 3	2004	2004	129
1813B	Lake Lotela	Lake	112WRD 02269790	Lake Lotela Nr Avon Park, Fla.	1999	2000	6
1813B	Lake Lotela	Lake	21FLFTM 26010696FTM	Lake Lotela Northwest Site 1	2004	2004	155
1813B	Lake Lotela	Lake	21FLSWFDLOTELA		2000	2001	57

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1813B	Lake Lotela	Lake	21FLFTM 26010697FTM	Lake Lotela Northeast Site 2	2004	2004	129
1813B	Lake Lotela	Lake	21FLFTM 26010699FTM	Lake Lotela South Site 4	2004	2004	103
1813C	Lake Letta	Lake	21FLSWFDLETTA		2000	2001	56
1813D	Lake Tulane	Lake	21FLFTM 26010702FTM	Lake Tulane Middle East Site 3	2004	2004	129
1813D	Lake Tulane	Lake	21FLSWFDTULANE		2000	2001	57
1813D	Lake Tulane	Lake	21FLFTM 26010703FTM	Lake Tulane South Site 4	2004	2004	129
1813D	Lake Tulane	Lake	21FLFTM 26010340FTM	Lake Tulane Mid Lake	2000	2003	54
1813D	Lake Tulane	Lake	21FLFTM 26010701FTM	Lake Tulane Middle West Site 2	2004	2004	129
1813D	Lake Tulane	Lake	21FLFTM 26010700FTM	Lake Tulane North Site 1	2004	2004	129
1813D	Lake Tulane	Lake	112WRD 273518081301900	Lake Tulane At Avon Park FI	1999	2000	6
1813E	Bonnet Lake	Lake	21FLSWFDBONNET		2000	2001	56
1813F	Lake Angelo - Open Wat	Lake	21FLSWFDANGELO		2000	2001	58
1813F	Lake Angelo - Open Wat	Lake	112WRD 273516081280400	Lake Angelo Near Avon Park FI	1999	2000	6
1813G	Little Bonnet Lake - O	Lake	21FLFTM 26010326	Little Bonnet Lake	1999	1999	32
1813G	Little Bonnet Lake - O	Lake	21FLSWFDLITTLE BONNET		2000	2001	58
1813H	Lake Verona - Open Wat	Lake	21FLSWFDVERONA		2000	2001	57
1813H	Lake Verona - Open Wat	Lake	21FLFTM 26010722FTM	Lake Verona Site 4 Southwestern Section	2004	2004	134
1813H	Lake Verona - Open Wat	Lake	112WRD 273559081295200	Lake Verona At Avon Park FI	1999	2000	12
1813H	Lake Verona - Open Wat	Lake	21FLFTM 26010721FTM	Lake Verona Site 3 Northeastern Section	2004	2004	134
1813H	Lake Verona - Open Wat	Lake	21FLFTM 26010339FTM	Lake Verona Mid Lake	2000	2004	179
1813H	Lake Verona - Open Wat	Lake	21FLFTM 26010720FTM	Lake Verona Site 1 Middle Section	2004	2004	134
1813I	Lake Anoka - Open Wate	Lake	21FLSWFDANOKA		2001	2001	28
1813J	Lake Lelia - Open Wate	Lake	21FLSWFDLELIA		2000	2001	57
1813K	Silver Lake - Open Wat	Lake	21FLSWFDSILVER		2000	2001	56
1813L	Lake Glenada - Open Wa	Lake	21FLSWFDGLENDA		2000	2001	58
1813M	Grassy Pond - Open Wat	Lake	21FLSWFDGRASSY POND		2001	2001	28

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1842	Lake Sebring	Lake	21FLFTM 26010556	Lake Sebring-Center-Highlands Co	1999	1999	15
1842	Lake Sebring	Lake	21FLSWFDSEBRING		2000	2001	55
1842	Lake Sebring	Lake	21FLGW 8066	Sfa-Ls-1016	2000	2000	27
1842A	Little Red Water Lake	Lake	21FLSWFDLITTLE RED WATE		2000	2001	113
1842B	Lake Denton - Open Wat	Lake	21FLSWFDDENTON		2000	2001	56
1842B	Lake Denton - Open Wat	Lake	112WRD 273323081290800	Lake Denton Near Avon Park Fl	1999	2000	9
1856B	Lake Istokpoga	Lake	21FLGW 7391	Sfa-Hs-1034	2000	2000	50
1856B	Lake Istokpoga	Lake	21FLGW 7390	Sfa-Hs-1033	2000	2000	27
1856B	Lake Istokpoga	Lake	21FLGW 3503	S68	1999	2004	2122
1856B	Lake Istokpoga	Lake	21FLSFWMISTK4	In Lake Istokpoga Half Way Between Bumblebee	1998	2005	759
1856B	Lake Istokpoga	Lake	21FLA 26010502	L Istokpoga S Sec L Out From Ram	1998	1998	25
1856B	Lake Istokpoga	Lake	21FLSFWMS68	S-68 Spillway On Canal C-41a Lake Istokpoga	1998	2005	591
1856B	Lake Istokpoga	Lake	21FLFTM 26010502	L Istokpoga S Sec L Out From Ram	2001	2001	17
1856B	Lake Istokpoga	Lake	21FLGW 8754	Sfa-LI-1009	2000	2000	31
1856B	Lake Istokpoga	Lake	21FLGW 8770	Sfa-LI-1029	2000	2000	31
1856B	Lake Istokpoga	Lake	21FLSFWMISTK7	In Middle Of Lake Istokpoga Between Big Islan	1998	2005	711
1856B	Lake Istokpoga	Lake	21FLSFWMISTK5	In Lake Istokpoga .5 Miles Off South End Of La	1998	2005	730
1856B	Lake Istokpoga	Lake	21FLGW 8759	Sfa-LI-1014	2000	2000	27
1856B	Lake Istokpoga	Lake	21FLSFWMISTK3	In Lake Istokpoga .25 Miles East Of Entrance	1998	2005	765
1856B	Lake Istokpoga	Lake	21FLSFWMISTK2	In Lake Istokpoga North Of Little Grassy Is	1998	2005	735
1856B	Lake Istokpoga	Lake	21FLSFWMISTK1	In Lake Istokpoga Due East Of Entrance	1998	2005	790
1856B	Lake Istokpoga	Lake	21FLGW 8756	Sfa-LI-1011	2000	2000	31
1856B	Lake Istokpoga	Lake	21FLSFWMISTK6	In Lake Istokpoga Half Way Between Istok. Can	1998	2005	731
1860A	Josephine Creek	Stream	21FLSFWMJOSNCR17	In Josephine Creek At County Road 17	1998	2005	577
1860A	Josephine Creek	Stream	21FLFTM 26010675FTM	Josephine Creek Site 4	2004	2004	160
1860A	Josephine Creek	Stream	112WRD 02271500	Josephine Creek Nr De Soto City, Fla	1998	2003	603

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1860A	Josephine Creek	Stream	21FLFTM 26010674FTM	Josephine Creek Site 3	2004	2004	157
1860A	Josephine Creek	Stream	21FLFTM 26010673FTM	Josephine Creek Site 2	2004	2004	104
1860B	Lake Josphine	Lake	21FLFTM 26010646	Lake Josephine, West Basin, Mid-Lake	2004	2004	155
1860B	Lake Josphine	Lake	21FLSWFDJOSEPHINE WEST		2001	2001	28
1860B	Lake Josphine	Lake	21FLSWFDJOSEPHINE EAST		2001	2001	28
1860B	Lake Josphine	Lake	21FLFTM 26010644	Lake Josephine, East Basin, Mid-Lake	2004	2004	155
1860B	Lake Josphine	Lake	21FLSWFDJOSEPHINE CENTE		2001	2001	28
1860B	Lake Josphine	Lake	21FLFTM 26010552	Lake Josephine, Center Of Middle	2004	2004	155
1860B	Lake Josphine	Lake	21FLFTM 26010319	L. Josephine At Shallow Qual Sit	2004	2004	129
1860C	Jackson Creek	Stream	21FLFTM 26010667FTM	Jackson Creek-4	2004	2004	26
1860C	Jackson Creek	Stream	21FLFTM 26010666FTM	Jackson Creek-3	2004	2004	26
1860C	Jackson Creek	Stream	21FLFTM 26010665FTM	Jackson Creek-2	2004	2004	26
1860C	Jackson Creek	Stream	21FLFTM 26010664FTM	Jackson Creek-1	2004	2004	26
1860D	Lake Jackson	Lake	21FLFTM 26010677FTM	Lake Jackson Site 3	2004	2004	125
1860D	Lake Jackson	Lake	21FLFTM 26010531	Lk Jax White Dock	2000	2000	34
1860D	Lake Jackson	Lake	21FLFTM 26010676FTM	Lake Jackson Site 1	2004	2004	125
1860D	Lake Jackson	Lake	21FLFTM 26010526	Lk Jax Center Nw Alc	2000	2004	159
1860D	Lake Jackson	Lake	21FLFTM 26010528	Lk Jax Off Cond	2000	2000	34
1860D	Lake Jackson	Lake	21FLA 26010529	Lk Jax Center	1998	1998	24
1860D	Lake Jackson	Lake	21FLSWFDLITTLE JACKSON		2000	2001	58
1860D	Lake Jackson	Lake	21FLFTM 26010529	Lk Jax Center	2004	2004	125
1860E	Hill Lake	Lake	21FLSWFDHILL		2001	2001	29
1860F	Lake Lynn - Open Water	Lake	21FLSWFDLYNN		2001	2001	29
1891A	Red Beach Lake	Lake	21FLSWFDRED BEACH		2000	2001	58
1893	Huckleberry Lake	Lake	21FLFTM 26010670FTM	Lake HUCKLEBERRY-3	2004	2004	190
1893	Huckleberry Lake	Lake	21FLFTM 26010668FTM	Lake HUCKLEBERRY-1	2004	2004	190

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1893	Huckleberry Lake	Lake	21FLFTM 26010671FTM	Lake HUCKLEBERRY-4	2004	2004	189
1893	Huckleberry Lake	Lake	21FLSWFDHUCKLEBERRY		2000	2001	60
1893	Huckleberry Lake	Lake	21FLFTM 26010669FTM	Lake Huckleberry-2	2004	2004	190
1898	Lake Wolf	Lake	21FLFTM 26010612	Wolf Lake Near Mid N Shore	2004	2004	128
1898	Lake Wolf	Lake	21FLFTM 26010613		2003	2004	141
1898	Lake Wolf	Lake	21FLFTM 26010611	Wolf Lake Near Mid S Shore	2004	2004	26
1898	Lake Wolf	Lake	21FLFTM 26010716FTM	Wolf Lake Site 4, South End	2004	2004	76
1898	Lake Wolf	Lake	21FLSWFDWOLF		2000	2001	59
1898A	Lake Wolf Outlet	Lake	21FLFTM 26010610	Wolf Lk Shorlin Litorl Zn W Boatramp	2004	2004	128
1906	Lake Charlotte	Lake	21FLGW 8087	Sfa-Ls-1045	2000	2000	27
1906	Lake Charlotte	Lake	21FLSWFDCHARLOTTE		2000	2001	58
1911	Lake Ruth	Lake	21FLSWFDRUTH		2000	2001	59
Lake Placid Planning Unit							
1932	Grassy Creek	Stream	21FLPOLKGROSS1	Lake Grassy Center Of Lake	1998	2003	49
1932	Grassy Creek	Stream	21FLFTM 26010710FTM	Grassy Creek Site 1 On Lake Aphorpe Rd	2004	2004	25
1932	Grassy Creek	Stream	21FLFTM 26010713FTM	Grassy Creek Site 4 On Country Club Dr	2004	2004	24
1932	Grassy Creek	Stream	21FLFTM 26010711FTM	Grassy Creek Site 2 On Lake Clay Rd	2004	2004	25
1932	Grassy Creek	Stream	21FLFTM 26010712FTM	Grassy Creek Site 3 On 621 East	2004	2004	25
1932A	Lake Grassy	Lake	21FLFTM 26010725FTM	Little Lake Grassy Western Edge Site 1	2004	2004	232
1932A	Lake Grassy	Lake	21FLFTM 26010622	Center Of Lake Grassy	2004	2004	35
1932A	Lake Grassy	Lake	21FLSWFDGRASSY		2001	2001	28
1932A	Lake Grassy	Lake	21FLFTM 26010726FTM	Little Lake Grassy North Eastern Edge Site 2	2004	2004	206
1932A	Lake Grassy	Lake	21FLFTM 26010744FTM	Little Lake Grassy Middle	2004	2004	35
1932A	Lake Grassy	Lake	21FLFTM 26010549	Lake Grassy 200 Yds. From S. End	2004	2004	128
1932A	Lake Grassy	Lake	21FLFTM 26010315	Lake Grassy Middle Of North Half	2004	2004	153
1932A	Lake Grassy	Lake	21FLFTM 26010621	Lake Grassy S Of Center	2004	2004	128

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1932A	Lake Grassy	Lake	21FLFTM 26010620	Lake Grassy N Of Center	2004	2004	128
1932B	Clay Lake	Lake	21FLA 26010304	Lake Clay-Ne Of L.Placid, Center	1998	1998	16
1932B	Clay Lake	Lake	21FLFTM 26010550	Lake Clay-200 Yds Off W. End	2004	2004	18
1932B	Clay Lake	Lake	21FLFTM 26010304	Lake Clay-Ne Of L.Placid, Center	2004	2004	153
1932B	Clay Lake	Lake	21FLFTM 26010658FTM	Clay Lake-4	2004	2004	153
1932B	Clay Lake	Lake	21FLSWFDCLAY		2000	2001	58
1932B	Clay Lake	Lake	21FLFTM 26010606	Lake Clay Nr Mid S Shore Main Basin	2004	2004	153
1932B	Clay Lake	Lake	21FLFTM 26010338	Lake Clay 50m. East Of Boat Ramp	2004	2004	153
1932C	Lale Sirena	Lake	21FLSWFDSIRENA		2000	2001	56
1932D	Pearl Lake	Lake	21FLSWFDPEARL		2001	2001	29
1932E	Lake Huntley	Lake	21FLFTM 26010599	Lk Huntley 2500' N Of S Mid Shorline	2004	2004	154
1932E	Lake Huntley	Lake	21FLSWFDHUNTLEY		2001	2001	28
1932E	Lake Huntley	Lake	21FLFTM 26010598	Lk Huntley 1000' S Of N Mid Shorline	2004	2004	153
1932E	Lake Huntley	Lake	21FLFTM 26010331	Lake Huntley At Center Of Lake	2004	2004	33
1932E	Lake Huntley	Lake	21FLA 26010331	Lake Huntley At Center Of Lake	1998	1998	18
1932E	Lake Huntley	Lake	21FLFTM 26010663FTM	Lake HUNTLEY-2	2004	2004	154
1932E	Lake Huntley	Lake	21FLFTM 26010557	Lake Huntley 1/4 Mi Out From M.H	2004	2004	154
1932G	Lake Apthorpe - Open W	Lake	21FLSWFDAPTHORPE		2000	2001	60
1932H	Lake Simmons - Open Wa	Lake	21FLSWFDSIMMONS		2000	2001	59
1932I	Buck Lake - Open Water	Lake	21FLSWFDBUCK		2000	2001	58
1932K	Lake Mccoy - Open Wate	Lake	21FLSWFDMCCOY		2001	2001	28
1932L	Saddlebags Lake - Open	Lake	21FLSWFDSADDLEBAGS		2001	2001	29
1932M	Blue Lake - Open Water	Lake	21FLSWFDBLUE		2000	2001	59
1932N	Unnamed "B" Lake - Ope	Lake	21FLSWFDUNNAMED B		2001	2001	28
1938	Lake Henry - Open Water	Lake	21FLFTM 26010649FTM	Lake Henry At Middle Of Lake	2001	2001	17
1938A	Lake June In Winter	Lake	21FLFTM 26010569	Lake June - Mid Section - West S	2003	2003	32

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1938A	Lake June In Winter	Lake	21FLFTM 26010568	Lake June - Center Of Lake	2004	2004	128
1938A	Lake June In Winter	Lake	21FLFTM 26010567	Lake June - Mid Section - East S	2003	2003	32
1938A	Lake June In Winter	Lake	21FLFTM 26010559	L June-Center Ne Cove	2003	2004	174
1938A	Lake June In Winter	Lake	21FLFTM 26010560	Lake June-Center-North Section	2003	2004	161
1938A	Lake June In Winter	Lake	21FLFTM 26010690FTM	Lake June In Winter South End Site1	2004	2004	153
1938A	Lake June In Winter	Lake	21FLSWFDJUNE IN WINTER		2000	2001	110
1938A	Lake June In Winter	Lake	21FLSARA980714-LB-1	Date-Grid_Location	1998	1998	11
1938B	Placid June Canal	Stream	21FLGW 8060	Sfa-Ls-1009	2000	2000	31
1938C	Lake Placid	Lake	21FLFTM 26010746FTM	Lake Placid Sw Site 6	2005	2005	27
1938C	Lake Placid	Lake	21FLGW 8086	Sfa-Ls-1044	2000	2000	27
1938C	Lake Placid	Lake	21FLFTM 26010542	Lk Placid S End High Co	2002	2002	17
1938C	Lake Placid	Lake	21FLFTM 26010563	L Placid Center Of N 1/3 Of Lake	2004	2005	180
1938C	Lake Placid	Lake	21FLFTM 26010543	Lake Placid East Side Highlands	2002	2002	17
1938C	Lake Placid	Lake	21FLGW 8758	Sfa-LI-1013	2000	2000	31
1938C	Lake Placid	Lake	21FLFTM 26010650FTM	Lake Placid Middle Of North Lobe	2002	2005	171
1938C	Lake Placid	Lake	21FLFTM 26010544	Lake Placid East Bank - Highland	2004	2005	180
1938C	Lake Placid	Lake	21FLFTM 26010691FTM	Lake Placid South End Site 4	2004	2005	180
1938C	Lake Placid	Lake	21FLFTM 26010745FTM	Lake Placid Se Site 5	2005	2005	27
1938C	Lake Placid	Lake	21FLSWFDPLACID		2000	2001	108
1938D	Lake Carrie	Lake	21FLFTM 26010685FTM	Lake Carrie Site 2	2004	2004	95
1938D	Lake Carrie	Lake	21FLFTM 26010585	Lake Carrie Near Northeast Shore	1999	2003	43
1938D	Lake Carrie	Lake	21FLFTM 26010684FTM	Lake Carrie Site 1	2004	2004	95
1938D	Lake Carrie	Lake	21FLSWFDCARRIE		2000	2001	55
1938D	Lake Carrie	Lake	21FLFTM 26010686FTM	Lake Carrie Site 3	2004	2004	95
1938D	Lake Carrie	Lake	21FLFTM 26010687FTM	Lake Carrie Site 4	2004	2004	95
1938E	Persimmon Lake	Lake	21FLFTM 26010681FTM	Lake Persimmon Site4	2004	2004	152

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
1938E	Persimmon Lake	Lake	21FLFTM 26010303	L.Persimmon N Of L.Francis,Centr	2004	2004	35
1938E	Persimmon Lake	Lake	21FLFTM 26010678FTM	Lake Persimmon Site1	2004	2004	177
1938E	Persimmon Lake	Lake	21FLFTM 26010679FTM	Lake Persimmon Site2	2004	2004	177
1938E	Persimmon Lake	Lake	21FLFTM 26010680FTM	Lake Persimmon Site3	2004	2004	177
1938E	Persimmon Lake	Lake	21FLA 26010303	L.Persimmon N Of L.Francis,Centr	1998	1998	18
1938E	Persimmon Lake	Lake	21FLSWFDPERSIMMON		2000	2001	58
1938F	Red Water Lake	Lake	21FLSWFDRD WATER		2000	2001	56
1938F	Red Water Lake	Lake	21FLFTM 26010692FTM	Red Water Lake Northwest End Site 1	2004	2004	129
1938F	Red Water Lake	Lake	21FLFTM 26010694FTM	Red Water Lake Middle Site 3	2004	2004	147
1938F	Red Water Lake	Lake	21FLFTM 26010695FTM	Red Water Lake South End Site 4	2004	2004	129
1938F	Red Water Lake	Lake	21FLFTM 26010693FTM	Red Water Lake Northeast End Site 2	2004	2004	129
1938G	Lake Francis	Lake	21FLFTM 26010683FTM	Lake Francis Site4	2004	2004	95
1938G	Lake Francis	Lake	21FLFTM 26010333	Lake Francis Near Mid W Shore	2004	2004	95
1938G	Lake Francis	Lake	21FLFTM 26010334	Center Of Lake Francis	2004	2004	130
1938G	Lake Francis	Lake	21FLFTM 26010682FTM	Lake Francis Site1	2004	2004	94
1938G	Lake Francis	Lake	21FLSWFDFRANCIS		2000	2001	56
1938H	Lake Annie	Lake	21FLFTM 26010314	Lake Annie Middle Of North Shore	2001	2001	33
1938I	Lake Lachard - Open Wa	Lake	21FLSWFDLACHARD		2001	2001	29
1938J	Lake Nellie Nw - Open	Lake	21FLSWFDNELLIE NW		2001	2001	28
1938K	Lake Nellie Center - O	Lake	21FLSWFDNELLIE CENTER		2001	2001	28
1938L	Lake Nellie Se - Open	Lake	21FLSWFDNELLIE SE		2001	2001	28
1938N	Stormwater Pond - Open	Lake	21FLSWFDDSTORMWATER POND		2001	2001	28
1938Y	Lake Placid Outlet	Lake	21FLFTM 26010545	Lake Placid West Bank Highlands	2002	2002	17
1938Y	Lake Placid Outlet	Lake	21FLFTM 26010655FTM	Unnamed Creek A T Conservation Area Foot Bridge	2005	2005	82
1938Y	Lake Placid Outlet	Lake	21FLFTM 26010654FTM		2003	2005	91
1938Y	Lake Placid Outlet	Lake	21FLFTM 26010653FTM		2003	2005	90

WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
Fisheating Creek Planning Unit							
3201A	Fisheating Creek	Stream	21FLSFWMFE35362812	SR 70 West Of US 27 Fisheating Creek On Henscratch Ranch	2004	2005	14
3201A	Fisheating Creek	Stream	21FLA 26010043	Fisheating Cr Us 27 Br S Plmdale	1998	1998	25
3201A	Fisheating Creek	Stream	21FLFTM 26010704FTM	Fisheating Creek West 731 Site 2	2004	2004	130
3201A	Fisheating Creek	Stream	21FLFTM 26010593	Fisheating Creek Above Us 27	2000	2003	58
3201A	Fisheating Creek	Stream	21FLGW 3497	Fishcr27	1999	2005	2114
3201A	Fisheating Creek	Stream	21FLSFWMFE21392913	Fisheating Creek Bridge On CR 731	2004	2005	89
3201A	Fisheating Creek	Stream	21FLFTM 26010705FTM	Fisheating Creek East 731 Site 3	2004	2004	130
3201A	Fisheating Creek	Stream	21FLSFWMFE26362812	FEC At Clark Rd.	2005	2005	3
3201A	Fisheating Creek	Stream	21FLSFWMFE36382811	FEC Bridge On BHR	2005	2005	3
3201A	Fisheating Creek	Stream	21FLSFWMFEBIN	Fisheating Bay In Station Open Water	1998	2005	1847
3201A	Fisheating Creek	Stream	21FLSFWMFEBOUT	Fisheating Bay Out Station Open Water	1998	2005	1582
3201A	Fisheating Creek	Stream	21FLSFWMFECSR78	Fisheating Creek At State Road 78	1998	2003	2045
3201A	Fisheating Creek	Stream	21FLFTM 26010592	Fisheating Creek S Of Palmdale	2004	2004	129
3201A	Fisheating Creek	Stream	21FLFTM 26010516	Fisheating Cr Sr 70 Br W Us 27 H	2004	2004	129
3201A	Fisheating Creek	Stream	21FLA 26010593	Fisheating Creek Above Us 27	1998	1998	22
3201A	Fisheating Creek	Stream	21FLA 26010582	Fisheating Creek At Sr.78	1998	1998	25
3201A	Fisheating Creek	Stream	21FLSFWMFE21392914	East Of Fisheating Creek Bridge On CR 731	2004	2005	102
3201C	Lake Crews - Open Water	Lake	21FLFTM 26010709FTM	Lake Crews North End Site 4	2004	2004	149
3201C	Lake Crews - Open Water	Lake	21FLFTM 26010708FTM	Lake Crews Middle West End Site 3	2004	2004	149
3201C	Lake Crews - Open Water	Lake	21FLFTM 26010707FTM	Lake Crews Middle East Site 2	2004	2004	149
3201C	Lake Crews - Open Water	Lake	21FLFTM 26010706FTM	Lake Crews South End Site 1	2004	2004	149
Northwest Lake Okeechobee Planning Unit							
3204	Harney Pond Canal	Stream	21FLFTM 26010574	Harney Pond Canal (C-41) At Sr 70	2004	2004	231
3204	Harney Pond Canal	Stream	21FLFTM 26010714FTM	Harney Pond Canal Site 1 At Intersection Of 78 And 721	2004	2004	257

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WBID	Waterbody Segment	Waterbody Type	Station ID	Station Name	From	To	No. of Obs.
3204	Harney Pond Canal	Stream	21FLSFWML60W	Culvert Located At The West End Of L-60 Canal Ne	1998	2004	1017
3204	Harney Pond Canal	Stream	21FLSFWML61E	Culvert Located At E End Of L-61 Near S71 On Har	1998	2004	1292
3204	Harney Pond Canal	Stream	21FLSFWMS71	S-71 Spillway On Canal C-41 At Lake Okeechobee	1998	2004	2599
3206	Indian Prairie Canal	Stream	21FLSFWML59W	Culvert Located At The West End Of L-59 Canal Ne	1998	2004	1425
3206	Indian Prairie Canal	Stream	21FLFTM 26010583	Indian Prairie Canal At Sr.78	2004	2004	190
3206	Indian Prairie Canal	Stream	21FLSFWML60E	Culvert At The East End Of L-60 Canal Near S-72	1998	2004	1081
3206	Indian Prairie Canal	Stream	21FLFTM 26010573	Indian Prairie Canal At Sr 70	2004	2004	189
3206	Indian Prairie Canal	Stream	21FLA 26010583	Indian Prairie Canal At Sr.78	1998	1998	25
3206	Indian Prairie Canal	Stream	21FLFTM 26010715FTM	Indian Prairie Canal Site 2 At 721	2004	2004	193
3206	Indian Prairie Canal	Stream	21FLSFWMS72	S-72 Spillway On Canal C-40 At Lake Okeechobee	1998	2004	1701

Appendix E: Permitted Facilities in the Kissimmee River and Fisheating Creek Basins, by Planning Unit

Table E.1: Permitted Facilities with Discharges in the Kissimmee River Basin, by Planning Unit

FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLG110179	FLORIDA ROCK/CAMPBELL CITY CONCRETE BATCH PLANT	CAMPBELL CITY	CBP	A	Y	0.0017	Upper Kissimmee
FLA010630	LAKE GROVES WWTF (DW) MCI, INC. BUS WASH & STEAM	CLERMONT	DW	A	N	0.5000	Upper Kissimmee
FLA011048	CLEANER RECYCLE OUTDOOR RESORTS @ ORLANDO	CLERMONT	IW	A	N	0.0012	Upper Kissimmee
FLA011047	WWTF	CLERMONT	DW	A	N	0.0990	Upper Kissimmee
FLA010546	THOUSAND TRAILS RV PARK WWTF	CLERMONT	DW	A	N	0.1400	Upper Kissimmee
FLA010985	21 PALMS RV RESORT (DW) BASEBALL CITY SPORTS COMPLEX	DAVENPORT	DW	A	N	0.0200	Upper Kissimmee
FLA013029	WWTP	DAVENPORT	DW	A	N	0.0600	Upper Kissimmee
FLA013057	BISHOP GRAY INN WWTF	DAVENPORT	DW	A	N	0.0250	Upper Kissimmee
FLG110429	CEMEX, INC - DAVENPORT CBP	DAVENPORT	CBP	A	Y		Upper Kissimmee
FLA013110	CENTER CREST RVP WWTF DAVENPORT ELEMENTARY SCHOOL	DAVENPORT	DW	A	N	0.0600	Upper Kissimmee
FLA012965	WWTP HOLLY HILL FRUIT PRODUCTS CO , INC	DAVENPORT	DW	A	N	0.0100	Upper Kissimmee
FLA013169		DAVENPORT	IW	A	N		Upper Kissimmee
FLA016530	LAKEWOOD FAMILY CAMPGROUND MOUSE MOUNTAIN RV & MOBILE	DAVENPORT	DW	A	N	0.0600	Upper Kissimmee
FLA013060	HOME RESORT	DAVENPORT	DW	A	N	0.0300	Upper Kissimmee
FLA013032	RAINBOW CHASE R V RESORT RINKER MATERIALS CORPORATION	DAVENPORT	DW	A	N	0.0200	Upper Kissimmee
FLG110347	- DAVENPORT FACILITY RINKER MATERIALS CORPORATION-	DAVENPORT	CBP	A	Y		Upper Kissimmee
FLA013244	DAVENPORT SAND MINE RMC EWELL, INC. - DAVENPORT	DAVENPORT	IW	A	N		Upper Kissimmee
FLG110456	PLANT CBP	DAVENPORT	CBP	A	Y		Upper Kissimmee
FLA013023	SHADY OAKS MHP	DAVENPORT	DW	A	N	0.0100	Upper Kissimmee
FLA013113	SUNLAKE TERRACE ESTATES WWTF THREE WORLDS RV AND MOBILE	DAVENPORT	DW	A	N	0.0550	Upper Kissimmee
FLA012991	HOME PARK	DAVENPORT	DW	A	N	0.0390	Upper Kissimmee
FLA011033	VILLAGE WESTGATE WWTP RINKER MATERIALS/SOUTH	DAVENPORT	DW	A	N	0.0500	Upper Kissimmee
FLA010853	ORANGE CONCRETE BATCH PLANT	DR PHILLIPS	IW	A	N	0.0075	Upper Kissimmee
FLA013124	CAMP ENDEAVOR WWTP LAKE WALES UTILITY CO -	DUNDEE	DW	A	N	0.0200	Upper Kissimmee
FLA110434	NALCREST DAVENPORT MOBILE HOME	FEDHAVEN	DW	A	N	0.4500	Upper Kissimmee
FLA012997	ESTATES	HAINES	DW	A	N	0.0150	Upper Kissimmee
FLA296635	SOUTHERN OAK	HAINES	IW	A	N		Upper Kissimmee
FLA013016	GRENELEFE RESORT CENTER	HAINES CITY	DW	A	N	0.6800	Upper Kissimmee
FLA176966	HAINES CITY SAND MINE	HAINES CITY	IW	A	N		Upper Kissimmee
FLA012977	HAINES CITY WWTP	HAINES CITY	DW	A	N	2.9700	Upper Kissimmee
FLA184608	IMAGINATION FARMS	HAINES CITY	AFO	A	N		Upper Kissimmee
FLA013125	MIDWAY RV PARK WWTP	HAINES CITY	DW	A	N	0.0150	Upper Kissimmee
FLA017398	S&R TRANSPORT INC RELIANT ENERGY/OSCEOLA PLANT	HAINES CITY	IW	A	N		Upper Kissimmee
FLA187992	(IW) CANE ISLAND POWER PLANT(KISS	HOLOPAW INTERCESSION	IW	A	N	0.0388	Upper Kissimmee
FLA010961	UTL)	CITY	IW	A	N	1.2000	Upper Kissimmee

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FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLA010989	LAKE MARIAN PARADISE MHP (DW)	KENANSVILLE	DW	A	N	0.0200	Upper Kissimmee
FLA011002	ALOHA RV PARK (DW)	KISSIMMEE	DW	A	N	0.0072	Upper Kissimmee
FL0039446	BUENAVENTURA LAKES (DW)	KISSIMMEE	DW	A	Y	1.8000	Upper Kissimmee
FLRNEE092	CARGILL ANIMAL NUTRITION CEMEX/KISSIMMEE CONCRETE BATCH PLANT	KISSIMMEE	NEX	A	Y		Upper Kissimmee
FLG110007		KISSIMMEE	CBP	A	Y		Upper Kissimmee
FLA010996	CYPRESS COVE MHP WWTF (DW)	KISSIMMEE	DW	A	N	0.0900	Upper Kissimmee
FLA010993	EAST LAKE FISH CAMP (DW)	KISSIMMEE	DW	A	N	0.0400	Upper Kissimmee
FLG110234	EWELL/KISSIMMEE	KISSIMMEE	CBP	A	N		Upper Kissimmee
FLA010975	GATE PRECAST CONCRETE GOOD SAMARITAN RETIREMENT VILLAGE (DW)	KISSIMMEE	IW	A	N	0.0010	Upper Kissimmee
FLA010974		KISSIMMEE	DW	A	N	0.2050	Upper Kissimmee
FLA010972	GREAT OAKS RV PARK (DW)	KISSIMMEE	DW	A	N	0.0240	Upper Kissimmee
FLA010997	HOLIDAY INN EXPRESS EAST (DW)	KISSIMMEE	DW	A	N	0.0400	Upper Kissimmee
FLA179141	KISSIMMEE SUPER WASH	KISSIMMEE	IW	A	N		Upper Kissimmee
FLA010983	KISSIMMEE/CAMELOT S/D, STP	KISSIMMEE	DW	A	N	5.0000	Upper Kissimmee
FLA010960	KISSIMMEE/PARKWAY WWTF KISSIMMEE/SANDHILL ROAD STP (DW)	KISSIMMEE	DW	A	N	1.5000	Upper Kissimmee
FLA010958		KISSIMMEE	DW	A	N	4.8620	Upper Kissimmee
FLA010957	KISSIMMEE/SOUTH BERMUDA (DW)	KISSIMMEE	DW	A	N	7.0000	Upper Kissimmee
FLA110256	KISSIMMEE/WEST WWTF (DW)	KISSIMMEE	DW	A	N	1.5000	Upper Kissimmee
FLA010995	MILL CREEK RV PARK (DW) ORANGE GROVE CAMPGROUND WWTF	KISSIMMEE	DW	A	N	0.0200	Upper Kissimmee
FLA011005		KISSIMMEE	DW	A	N	0.0350	Upper Kissimmee
FLA011003	ORLANDO HYATT HOTEL (DW)	KISSIMMEE	DW	A	N	0.3000	Upper Kissimmee
FLA010990	PLEASANT HILL VILLAGE LLC (DW)	KISSIMMEE	DW	A	N	0.0300	Upper Kissimmee
FLA011008	PONDEROSA RV PARK (DW)	KISSIMMEE	DW	A	N	0.0200	Upper Kissimmee
FLA011027	PORT-O-CALL CAMPGROUND PRESTIGE CONCRETE/KISSIMMEE BATCH PLANT (IW)	KISSIMMEE	DW	A	N	0.0600	Upper Kissimmee
FLG110504		KISSIMMEE	CBP	A	Y		Upper Kissimmee
FLA010894	RACCOON LAKE CAMP RESORT WWTF/ YOGI BEAR'S JELLYSTONE RAMADA INN/HAWAIIAN VILLAGE INN WWTF (DW)	KISSIMMEE	DW	A	N	0.0600	Upper Kissimmee
FLA010976		KISSIMMEE	DW	A	N	0.0300	Upper Kissimmee
FLG110491	RINKER MATERIALS/KISSIMMEE CONCRETE BATCH PLANT (IW) SNOW WHITE VACATION VILLAGE (DW)	KISSIMMEE	CBP	A	Y	0.0150	Upper Kissimmee
FLA010998		KISSIMMEE	DW	A	N	0.0150	Upper Kissimmee
FLA011023	SOUTHPORT LIME STABILIZATION RMF	KISSIMMEE	DW	A	N	0.0500	Upper Kissimmee
FLA011029	SOUTHPORT PARK (DW)	KISSIMMEE	DW	A	N	0.0160	Upper Kissimmee
FLG911107	TEXACO #457-24-025-1312 (IW)	KISSIMMEE	PET	A	Y		Upper Kissimmee
FLA010987	TROPICAL PALMS RESORT (DW)	KISSIMMEE	DW	A	N	0.0670	Upper Kissimmee
FLA010978	WHISPERING PINES MHP (DW) WINDSOR MOBILE HOME VILLAGE WWTF	KISSIMMEE	DW	A	N	0.0800	Upper Kissimmee
FLA011007		KISSIMMEE	DW	A	N	0.0150	Upper Kissimmee
FLA010794	OCUD/CYPRESS WALK SUBREGIONAL WWTF	LAKE BUENA VISTA	DW	A	N	1.0000	Upper Kissimmee
FLA108219	REEDY CREEK IMPROVEMENT DISTRICT (DW)	LAKE BUENA VISTA	DW	A	N	20.0000	Upper Kissimmee
FL0169986	WALT DISNEY WORLD/PRODUCED GROUNDWATER DISCH	LAKE BUENA VISTA	IW	A	Y		Upper Kissimmee
FLA011034	BREEZE HILL MHP WWTP	LAKE WALES	DW	A	N	0.0400	Upper Kissimmee
FLA011053	CAMP MACK STP PHASE I	LAKE WALES	DW	A	N	0.0300	Upper Kissimmee
FLA011035	FLORIDA LIONS CAMP STP	LAKE WALES	DW	A	N	0.0100	Upper Kissimmee

FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLA011041	HARBOR CAMPGROUND WWTF	LAKE WALES	DW	A	N	0.0200	Upper Kissimmee
FLA011052	JENNINGS RESORT STP	LAKE WALES	DW	A	N	0.0120	Upper Kissimmee
FLA011046	KISSIMMEE RIVER PARK WWTP	LAKE WALES	DW	A	N	0.0200	Upper Kissimmee
FLA013046	LAKE AURORA CHRISTIAN ASSEMBLY CAMP	LAKE WALES	DW	A	N	0.0160	Upper Kissimmee
FLA011042	LAKE KISSIMMEE MHP STP	LAKE WALES	DW	A	N	0.0100	Upper Kissimmee
FLA011050	MASTERPIECE GARDENS WWTF	LAKE WALES	DW	A	N	0.0200	Upper Kissimmee
FLA011045	ROSALIE OAKS S/D WWTP	LAKE WALES	DW	A	N	0.0150	Upper Kissimmee
FLA013117	SADDLEBAG LAKE RESORT	LAKE WALES	DW	A	N	0.0950	Upper Kissimmee
FL0035122	SUNNY GEM KEY INC	LAKE WALES	DW	A	Y	0.0025	Upper Kissimmee
FLA181153	MAJIK MART (FORMERLY LOUGHMAN PLAZA LAUNDROMAT)	LAUGHMAN	IW	A	N		Upper Kissimmee
FLA011049	OAK HILL ESTATES STP	LOUGHMAN	DW	A	N	0.2000	Upper Kissimmee
FLA321184	GULFSTREAM NGS STATION #457 (IW)	NA ORANGE COUNTY	IW	N	N		Upper Kissimmee
FLA010792	MOSS PARK (DW)	ORLANDO	DW	A	N	0.0200	Upper Kissimmee
FLA010843	AIR LIQUIDE/ORLANDO (IW)	ORLANDO	IW	A	N	0.0490	Upper Kissimmee
FLA010838	AIRCRAFT SERVICE INTERNATIONAL, INC	ORLANDO	IW	A	N	0.0360	Upper Kissimmee
FLRNEE040	ASF ORLANDO	ORLANDO	NEX	A	Y		Upper Kissimmee
FLA189103	BAY HILL GOLF MAINTENANCE FACILITY RECYCLE SYSTEM (IW)	ORLANDO	IW	A	N		Upper Kissimmee
FLG110269	BEDROCK INDUSTRIES (IW)	ORLANDO	CBP	A	Y		Upper Kissimmee
FLA016826	BENNETT TRUCK EQUIPMENT WASH RECYCLE SYSTEM	ORLANDO	IW	A	N	0.0000	Upper Kissimmee
FLA287954	BRIGGS CONSTRUCTION EQUIPMENT - BOGGY CREEK (IW)	ORLANDO	IW	A	N		Upper Kissimmee
FLRNEE134	BROTHERS SCRAP METALS, INC.	ORLANDO	NEX	A	Y		Upper Kissimmee
FLG110398	CEMEX/MARY JESS PLANT (IW)	ORLANDO	CBP	A	Y		Upper Kissimmee
FLA010852	CEMEX/PINECASTLE CONCRETE BATCH PLANT	ORLANDO	IW	A	N	0.0018	Upper Kissimmee
FL0037711	CENTRAL FLORIDA PIPELINE/HYDROSTATIC TEST DISCHARGES	ORLANDO	IW	A	Y	1.5000	Upper Kissimmee
FLA010879	CENTRAL FLORIDA PIPELINE/TAFT CLARKLIFT OF ORLANDO	ORLANDO	IW	N	N	0.1870	Upper Kissimmee
FLA010939	EQUIPMENT WASH	ORLANDO	IW	A	N		Upper Kissimmee
FLRNEE192	COLEMAN AEROSPACE A DIVISION OF L-3 COMMUNICATIONS	ORLANDO	NEX	A	Y		Upper Kissimmee
FLA109371	CSX INTERMODAL	ORLANDO	IW	A	N	0.0450	Upper Kissimmee
FLA177253	DOT/ORLANDO MAINTENANCE YD (IW)	ORLANDO	IW	N	N		Upper Kissimmee
FLRNEE139	DOW JONES & CO., INC.	ORLANDO	NEX	A	Y		Upper Kissimmee
FLA010927	DYNAMIC TOURS BUS WASH (IW)	ORLANDO	IW	A	N		Upper Kissimmee
FLG110116	EWELL/DOWNTOWN ORLANDO	ORLANDO	CBP	A	Y		Upper Kissimmee
FLG110327	BATCH PLANT	ORLANDO	CBP	A	Y		Upper Kissimmee
FLG110268	FLORIDA ROCK/CR 545 (IW)	ORLANDO	CBP	A	Y		Upper Kissimmee
FLG110159	FLORIDA ROCK/EAST ORLANDO	ORLANDO	CBP	A	Y		Upper Kissimmee
FLG910620	FLORIDA ROCK/TAFT CONCRETE BATCH PLANT	ORLANDO	CBP	A	Y	0.0030	Upper Kissimmee
FLA182460	GOAA (IW)	ORLANDO	PET	A	Y		Upper Kissimmee
FL0043770	GOAA/BUS MAINTENANCE RECYCLE SYSTEM	ORLANDO	IW	A	N		Upper Kissimmee
FLA010863	GODWIN'S GATORLAND	ORLANDO	IW	A	Y	3.0000	Upper Kissimmee
	GOLDEN ACRES MOBILE HOME PARK	ORLANDO	DW	A	N	0.0050	Upper Kissimmee

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FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLA109118	HIDDEN VALLEY MOBILE HOME COMMUNITY (DW)	ORLANDO	DW	A	N	0.0900	Upper Kissimmee
FLA010936	HOWARD FERTILIZER TRUCK WASH HUBBARD CONSTRUCTION COMPANY	ORLANDO	IW	A	N		Upper Kissimmee
FLA010902	JOHN CARLO/JETPORT DR/CBP (IW)	ORLANDO	IW	A	N	0.0002	Upper Kissimmee
FLG110485	NATIONSRENT/ORLANDO CEWRS (IW)	ORLANDO	CBP	A	Y		Upper Kissimmee
FLA185728	OCPS/ OAK RIDGE ROAD FAC BUS & EQUIPMENT WASH RECYCLE SYSTEM	ORLANDO	IW	A	N		Upper Kissimmee
FLA017150	OCUD/SOUTH WRF (DW)	ORLANDO	IW	A	N		Upper Kissimmee
FLA107972	ORLANDO KOA (AKA LAKE WHIPPOORWILL KOA) (DW)	ORLANDO	DW	A	N	30.5000	Upper Kissimmee
FLA010825	ORLANDO PLANT	ORLANDO	DW	A	N	0.0220	Upper Kissimmee
FLRNEE054	ORLANDO/CONSERV I WWTF (DW)	ORLANDO	NEX	A	Y		Upper Kissimmee
FLA010816	ORLANDO/CONSERV II WRF (DW)	ORLANDO	DW	A	N	7.5000	Upper Kissimmee
FLA010814	PERSHING ELEM SCHOOL (DW)	ORLANDO	DW	A	N	25.0000	Upper Kissimmee
FLA010808	QUALEX OSP	ORLANDO	DW	A	N	0.0100	Upper Kissimmee
FLRNEE021	RINKER MATERIALS/DIVISION & GRANT CONCRETE BATCH PLANT	ORLANDO	NEX	A	Y		Upper Kissimmee
FLA010949	RINKER MATERIALS/EAST ORLANDO CONCRETE BATCH PLANT	ORLANDO	IW	A	N	0.0025	Upper Kissimmee
FLG110217	RINKER MATERIALS/WEST ORANGE RMC EWELL/NARCOSSEE ROAD CBP (IW)	ORLANDO	CBP	A	Y	0.0030	Upper Kissimmee
FLG110226	SHINERS CAR WASH RECYCLE SYSTEM/S O B TRAIL	ORLANDO	CBP	A	Y		Upper Kissimmee
FLG110496	SMITH EQUIPMENT WASH SUNBELT RENTALS RECYCLE SYSTEM/OLD WINTER GARDEN RD(IW)	ORLANDO	CBP	A	N	0.0036	Upper Kissimmee
FLA010925	SUNBELT RENTALS RECYCLE SYSTEM/WEST LANDSTREET RD (IW)	ORLANDO	IW	A	N	0.0048	Upper Kissimmee
FLA016246	SUNBELT RENTALS/EAST LANDSTREET RD (IW)	ORLANDO	IW	A	N		Upper Kissimmee
FLA284424	TARMAC/SOUTH ORANGE CONCRETE BATCH PLANT	ORLANDO	IW	A	N	0.0090	Upper Kissimmee
FLA017045	TOTAL DISTRIBUTION SERVICES CAR WASH RECYCLE SYSTEM	ORLANDO	CBP	A	N	0.0180	Upper Kissimmee
FLG110581	UDELSON EQUIPMENT WASH RECYCLE SYSTEM (IW)	ORLANDO	IW	A	N		Upper Kissimmee
FLA010946	UNITED WASTEWATER RECOVERY CENTER (BROWNIE'S)(DW)	ORLANDO	IW	A	N	0.1880	Upper Kissimmee
FLA180980	UNIVERSAL STUDIOS/ JAWS LAGOON	ORLANDO	DW	A	N		Upper Kissimmee
FLA185108	US AUTOWASH CLOSED LOOP RECYCLE SYSTEM	ORLANDO	IW	A	Y	0.0500	Upper Kissimmee
FL0168581	US SEATING PRODUCTS (IW)	ORLANDO	IW	A	N		Upper Kissimmee
FLA329282	VALLEY CREST LANDSCAPE RECYCLE SYSTEM	ORLANDO	IW	A	N		Upper Kissimmee
FLA277959	WHIPPOORWILL MHP (DW)	ORLANDO	IW	N	N	0.0100	Upper Kissimmee
FLA016988	WINDY RIDGE ELEMENTARY SCHOOL WWTF	ORLANDO	DW	A	N	0.0030	Upper Kissimmee
FLA010916	POINCIANA INDUSTRIAL PARK #1 (DW)	ORLANDO	DW	A	N	0.0130	Upper Kissimmee
FLA010809	LINDER EQUIPMENT WASH RACK/SOBT	OSCEOLA COUNTY	DW	A	N	0.7000	Upper Kissimmee
FLA010968	FLORIDA ROCK INDUSTRIES, INC - POINCIANA FACILITY	PLANT CITY	IW	A	N	0.0015	Upper Kissimmee
FLA016800		POINCIANA	CBP	N	Y		Upper Kissimmee
FLG110259				A			Upper Kissimmee

FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLA109843	POINCIANA STP #2 (DW)	POINCIANA	DW	A	N	3.0000	Upper Kissimmee
FL0036862	POINCIANA STP #3 (DW)	POINCIANA	DW	A	Y	0.3500	Upper Kissimmee
FLA010979	POINCIANA STP #5 (DW)	POINCIANA	DW	A	N	1.2000	Upper Kissimmee
FLA011021	BALLMAN FISH FARMS	ST CLOUD	IW	N	N		Upper Kissimmee
FLA011020	BLACKWATER FISHERY	ST CLOUD	IW	N	N	0.0880	Upper Kissimmee
FLA011017	EARTHPORT TROPICAL FISH FARM	ST CLOUD	IW	N	N	0.0195	Upper Kissimmee
FLA011015	EXOTIC FISH	ST CLOUD	IW	N	N	0.0846	Upper Kissimmee
FLA010980	GATOR RV RESORT (DW)	ST CLOUD	DW	A	N	0.0120	Upper Kissimmee
FLA011011	MAKO TROPICALS	ST CLOUD	IW	N	N	0.0216	Upper Kissimmee
FLA011014	MANN FISH	ST CLOUD	IW	N	N		Upper Kissimmee
FLA011013	MOONLIGHT FISHERIES	ST CLOUD	IW	N	N	0.1196	Upper Kissimmee
FLA011010	RAINBOW FISHERIES	ST CLOUD	IW	N	N	0.0460	Upper Kissimmee
FLA011000	CANOE CREEK CAMPGROUND	ST CLOUD	DW	A	N	0.0300	Upper Kissimmee
FLA011028	CANOE CREEK SERVICE PLAZA (DW)	ST CLOUD	DW	A	N	0.0950	Upper Kissimmee
FLG830344	CITGO #21 (IW)	ST CLOUD	PET	A	Y		Upper Kissimmee
FLA010991	FLORIDIAN RV RESORT (DW)	ST CLOUD	DW	A	N	0.0800	Upper Kissimmee
FLA010986	LAKE RUNNYMEDE MHP	ST CLOUD	DW	A	N	0.0200	Upper Kissimmee
FLA010965	LAKE TOHO RESORT (DW)	ST CLOUD	DW	A	N	0.0170	Upper Kissimmee
FLG110235	RMC EWELL/ST CLOUD PLANT	ST CLOUD	CBP	A	Y		Upper Kissimmee
FLA010971	SHARP'S MHP (DW)	ST CLOUD	DW	A	N	0.0133	Upper Kissimmee
FLA011006	SHELTER COVE CONDO (DW)	ST CLOUD	DW	A	N	0.0400	Upper Kissimmee
FLA010962	ST CLOUD SOUTHSIDE #2 WWTF	ST CLOUD	DW	A	N	1.6000	Upper Kissimmee
FLA109568	ST CLOUD/LAKESHORE STP #1 KISSIMMEE/ HARMONY COMMUNITY	ST CLOUD	DW	A	N	2.4000	Upper Kissimmee
FLA267872	DEV. DISTRICT WWTF ISLEWORTH CC CLOSED LOOP	ST. CLOUD	DW	A	N	0.4000	Upper Kissimmee
FLA321010	RECYCLE SYSTEM (IW) WINDERMERE COUNTRY CLUB OF	WINDERMERE	IW	A	N		Upper Kissimmee
FLA010897	BULTER BAY WINDERMERE ELEMENTARY	WINDERMERE	DW	A	N	0.0100	Upper Kissimmee
FLA010801	SCHOOL (DW) ORANGE CO NATIONAL GOLF	WINDERMERE	DW	A	N	0.0100	Upper Kissimmee
FLA017457	CENTER	WINTER GARDEN	DW	A	N	0.0600	Upper Kissimmee
FLA010886	OUTDOOR WORLD RESORT (DW)	WINTER GARDEN	DW	A	N	0.0250	Upper Kissimmee
FLA013898	LARSON DAIRY-BARN #1	BASSINGER BUCKHEAD	AFO	A	N		Lower Kissimmee
FLA014251	LAKE VIEW ESTATES MHP	RIDGE	DW	A	N		Lower Kissimmee
FLA011032	RIVER RANCH RESORT WWTF	LAKE WALES	DW	A	N	0.0950	Lower Kissimmee
FLA013657	B-4 DAIRY (FKA BUTLER BARN #1) BUTLER OAKS FARM (FKA BUTLER	LORIDA	AFO	A	N		Lower Kissimmee
FLA013655	BARN #2)	LORIDA	AFO	A	N		Lower Kissimmee
FLA014327	HIDDEN ACRES ESTATES	LORIDA	DW	A	N	0.0200	Lower Kissimmee
FLA013909	C & M RUCKS DAIRY	OKEECHOBEE	AFO	A	N		Lower Kissimmee
FLA014390	KISSIMMEE RIVER FISHING RESORT	OKEECHOBEE	DW	A	N	0.0200	Lower Kissimmee
FLA013939	OKEE-TANTI REC AREA	OKEECHOBEE	DW	A	N	0.0350	Lower Kissimmee
FLA013890	P W BISHOP DAIRY, INC PEARCE MARINA AKA BUCKHEAD	OKEECHOBEE	AFO	A	N		Lower Kissimmee
FLA014268	RIDGE MARINA	OKEECHOBEE	DW	A	N	0.0100	Lower Kissimmee
FLA014358	ADELAIDE SHORES RV RESORT AVON PARK CORRECTIONAL	AVON PARK	DW	A	N	0.0550	Lake Istokpoga
FL0040029	INSTITUTE	AVON PARK	DW	A	Y	0.5000	Lake Istokpoga

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FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLA014318	BANYAN WOODS APARTMENTS WWTF	AVON PARK	DW	A	N		Lake Istokpoga
FLA014333	BONNET LAKE R V PARK WWTP	AVON PARK	DW	A	N	0.0180	Lake Istokpoga
FLA014345	BRENTWOOD MOBILE COURT CARGILL CITRO PURE FKA SUN PURE	AVON PARK	DW	A	N	0.0025	Lake Istokpoga
FLA014380	CITY OF AVON PARK WWTP	AVON PARK	IW	A	N	1.0000	Lake Istokpoga
FLA014313	CWS COMMUNITIES LP AKA CRYSTAL LAKE CLUB	AVON PARK	DW	A	N	1.5000	Lake Istokpoga
FLA014342	DAMON UTILITIES INC AKA CASA DEL LAGO	AVON PARK	DW	A	N	0.0900	Lake Istokpoga
FLA014334	LAKE BONNET VILLAGE MAHARISHI SCHOOL OF VEDIC SCIENCE	AVON PARK	DW	A	N	0.0500	Lake Istokpoga
FLA014372	ORANGE BLOSSOM FELLOWSHIP COMMUNITY	AVON PARK	DW	A	N	0.0400	Lake Istokpoga
FLA014324	REFLECTIONS ON SILVER LAKE INC ROYAL CARE OF AVON PARK (AKA HILLCREST NURSING HOME)	AVON PARK	DW	A	N	0.0088	Lake Istokpoga
FLA014331	VALENCIA ACRES	AVON PARK	DW	A	N	0.0100	Lake Istokpoga
FLA014332	VILLAGES OF HIGHLANDS RIDGE WABASSO ROAD DAIRY (FKA L C DAIRY, FKA DRESSEL DAIRY)	AVON PARK	DW	A	N	0.0850	Lake Istokpoga
FLA014398	BOB'S LANDING WWTP	AVON PARK	DW	A	Y	0.0100	Lake Istokpoga
FLA014320	WEBBER COLLEGE WWTP	AVON PARK	DW	A	N	0.2000	Lake Istokpoga
FL0143391	BEN HILL GRIFFIN, INC -PACKING HOUSE & FERTILIZER PLANT	AVON PARK	DW	A	Y		Lake Istokpoga
FLA136603	C & C DAIRY	AVON PARK	CFO	A	N		Lake Istokpoga
FLA013058	CAMP INN RESORTS NO 1 & 2	BABSON PARK	DW	A	N	0.0060	Lake Istokpoga
FLA013050	CAMP INN RESORTS PH 3 & 4 CARGILL CITRO PURE, L P (FORMERLY CARGILL CITRO-AMERICA)	BABSON PARK	DW	A	N	0.0190	Lake Istokpoga
FLA013274	FROSTPROOF JR/SR HIGH SCH	FROSTPROOF	IW	A	N		Lake Istokpoga
FLA013015	FROSTPROOF TOWN OF	FROSTPROOF	AFO	A	N	0.0320	Lake Istokpoga
FLA013080	FROSTPROOF TRAILER PARK	FROSTPROOF	DW	A	N	0.0800	Lake Istokpoga
FLA013079	LAKEMONT RIDGE MHP	FROSTPROOF	DW	A	N	0.0120	Lake Istokpoga
FLA013144	RAINBOW RESORT WWTF	FROSTPROOF	DW	A	N	0.0300	Lake Istokpoga
FLA012963	SEBRING CAR WASH	FROSTPROOF	DW	A	N	0.0500	Lake Istokpoga
FLA012983	SOUTHERN PINES RV & MH WWTP	FROSTPROOF	IW	X	N		Lake Istokpoga
FLA012996	SUGAR SANDS MOBILE HOME PARK	FROSTPROOF	DW	A	N	0.0450	Lake Istokpoga
FLA012998	SUN RAY WWTP	FROSTPROOF	DW	A	N	0.0105	Lake Istokpoga
FLA179086	WHIDDEN MHP & RV PARK SOUTH	FROSTPROOF	DW	A	N	0.2000	Lake Istokpoga
FLA013259	WHISPERING PINES MHP	FROSTPROOF	DW	A	N	0.0160	Lake Istokpoga
FLA013128	INDIAN LAKE ESTATES WWTP	INDIAN LAKE ESTATES	DW	A	N	0.0110	Lake Istokpoga
FLA013089	EAGLE'S NEST WWTP	LAKE PLACID	DW	A	N	0.0150	Lake Istokpoga
FLA012949	CHELETTE MANOR MHP WWTP CITROSUCO NORTH AMERICA, INC (FORMERLY ALCOMA PACKING CO)	LAKE WALES	DW	A	N	0.0100	Lake Istokpoga
FLA016786	COUNTRY CLUB VILLAGE CROOKED LAKE PARK SEWERAGE COMPANY	LAKE WALES	IW	A	N		Lake Istokpoga
FLA013005	FLORIDA ROCK INDUSTRIES, INC - SANDLAND PLANT	LAKE WALES	DW	A	N	0.0453	Lake Istokpoga
FLA011040			DW	A	N	0.0600	Lake Istokpoga
FLA014364			IW	A	N		Lake Istokpoga
FLA013112			DW	A	N		Lake Istokpoga
FLA013139			DW	A	N		Lake Istokpoga
FLA013092			DW	A	N		Lake Istokpoga
FLA013038			DW	A	N		Lake Istokpoga
FLA177105			IW	A	N		Lake Istokpoga

FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLA013252	HUNT BROTHERS COOPERATIVE, INC	LAKE WALES	IW	A	N		Lake Istokpoga
FLA013078	LA CASA CONDOMINIUMS	LAKE WALES	DW	A	N	0.0300	Lake Istokpoga
FLRNEE014	LIQUI-BOX CORP	LAKE WALES	NEX	A	Y		Lake Istokpoga
FLA013114	PARAKEET MHP	LAKE WALES	DW	A	N	0.0150	Lake Istokpoga
FLA013322	RINKER MATERIALS CORPORATION- LAKE WALES SAND MINE	LAKE WALES	IW	A	N		Lake Istokpoga
FLA013077	WARNER SOUTHERN COLLEGE EAST	LAKE WALES	DW	A	N	0.0200	Lake Istokpoga
FLA012995	LAKEFRONT TRAILER PARK	LAKELAND	DW	A	N	0.0057	Lake Istokpoga
FLA014397	MALLARD MOBILE HOME PARK	LORIDA	DW	A	N	0.0100	Lake Istokpoga
FLA014396	PALMS ESTATES OF HIGHLANDS CO , INC	LORIDA	DW	A	N		Lake Istokpoga
FLA013656	BISHOP BROTHERS DAIRY, INC	SEBRING	AFO	A	N		Lake Istokpoga
FLA014326	BRASWELL HERITAGE ESTATES INC	SEBRING	DW	A	N	0.0234	Lake Istokpoga
FLA014369	BRUNNERS MOBILE HOME ESTATES	SEBRING	DW	A	N	0.0150	Lake Istokpoga
FLA014348	BUTTONWOOD BAY UTILITIES, INC	SEBRING	DW	A	N	0.0980	Lake Istokpoga
FLA014310	CRACKER TRAIL ELEMENTARY SCHOOL	SEBRING	DW	A	N	0.0150	Lake Istokpoga
FLA014359	DESOTO MOBILE HOME PARK	SEBRING	DW	A	N	0.0300	Lake Istokpoga
FLA014387	FAIRMOUNT UTILITIES THE 2ND INC	SEBRING	DW	A	N	0.0400	Lake Istokpoga
FLA014385	FRANCIS MOBILE ESTATES WWTP	SEBRING	DW	A	N		Lake Istokpoga
FLA014384	HAMMOCK MOBILE ESTATES WWTF	SEBRING	DW	A	N	0.0220	Lake Istokpoga
FLA014336	HARDER HALL WWTP	SEBRING	DW	A	N		Lake Istokpoga
FLA014316	HIGHLANDS OAKS RESORT	SEBRING	DW	A	N	0.0150	Lake Istokpoga
FLA014346	HIGHLANDS WHEEL ESTATES MHP	SEBRING	DW	A	N		Lake Istokpoga
FLA014379	JIM'S IMPORT AUTO SALVAGE INC	SEBRING	IW	A	N		Lake Istokpoga
FLA014357	LAKE JOSEPHINE R V PARK	SEBRING	DW	A	N	0.0250	Lake Istokpoga
FLA014378	LAKEVIEW MOBILE HOME COURT	SEBRING	DW	A	N	0.0150	Lake Istokpoga
FLA014383	LEISURE ACRES MHP	SEBRING	DW	A	N	0.0450	Lake Istokpoga
FLA014391	MARANATHA VILLAGE	SEBRING	DW	A	N	0.0500	Lake Istokpoga
FLA014352	MIDWEST MHP AKA BUCHANAN MHP	SEBRING	DW	A	N		Lake Istokpoga
FLA014367	OAK RIDGE MOBILE HOME PARK	SEBRING	DW	A	N		Lake Istokpoga
FLA014382	OHRTS MOBILE VILLAGE	SEBRING	DW	A	N		Lake Istokpoga
FLA014309	SEBRING AIRPORT AUTHORITY	SEBRING	DW	A	N	0.1000	Lake Istokpoga
FLA014311	SEBRING CITY OF WWTF	SEBRING	DW	A	N	2.0000	Lake Istokpoga
FLA014377	SEBRING GARDENS TRAILER PARK	SEBRING	DW	A	N		Lake Istokpoga
FLA014349	SEBRING RIDGE UTILITIES	SEBRING	DW	A	N		Lake Istokpoga
FLA014325	SILVER OAKS MOBILE HOME PARK STP	SEBRING	DW	A	N	0.0150	Lake Istokpoga
FLA014315	SPRING LAKE GOLF & COUNTRY CLUB	SEBRING	DW	A	N	0.0500	Lake Istokpoga
FLA014392	SUDAN INTERIOR MISSION	SEBRING	DW	A	N	0.0200	Lake Istokpoga
FLA016268	SUN'N LAKE OF SEBRING UNIT 4	SEBRING	DW	A	N	0.0990	Lake Istokpoga
FLA014393	SUNNY PINES RV & MHP	SEBRING	DW	A	N	0.0200	Lake Istokpoga
FLA014337	THUNDERBIRD HILLS STP	SEBRING	DW	A	N	0.0550	Lake Istokpoga
FLA014344	TOWN & COUNTRY MOBILE ESTATES STP	SEBRING	DW	A	N	0.0150	Lake Istokpoga
FLA013659	TRIPLE G DAIRY	SEBRING	AFO	A	N		Lake Istokpoga
FLA014374	TU-CO-2 PEAT MINE	SEBRING	IW	A	N	2.1600	Lake Istokpoga
FLA014354	WHISPERING PINES VILLAGE MHP	SEBRING	DW	A	N	0.0200	Lake Istokpoga

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FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLA014335	WOODY'S RV PARK/CYPRESS CENTER	SEBRING	DW	A	N		Lake Istokpoga
FLA014360	GEORGIA PACIFIC CORP FORM ST REGIS	LAKE PLACID	IW	A	N	0.0108	Lake Placid
FLA014370	GRAND PLACID RESORT AKA LAKE JUNE MOTEL FISH & SKI	LAKE PLACID	DW	A	N	0.0050	Lake Placid
FLA014353	HIGHLANDS UTIL CORP AKA PUGH #1	LAKE PLACID	DW	A	N	0.0600	Lake Placid
FLA014363	LAKE COUNTRY LAUNDRY AND CLEANERS	LAKE PLACID	IW	A	N	0.0100	Lake Placid
FLA014347	LAKE JUNE HILLS STP	LAKE PLACID	DW	A	N	0.0200	Lake Placid
FLA014340	LAKE PLACID CAMP FLORIDA RESORT	LAKE PLACID	DW	A	N		Lake Placid
FLA014400	LAKE PLACID GROVES	LAKE PLACID	IW	A	N	0.0350	Lake Placid
FLA014356	LAKESIDE VILLAGE M H P	LAKE PLACID	DW	A	N	0.0300	Lake Placid
FLA014388	LEISURE LAKES UTILITIES AKA:COVERED BRIDGE	LAKE PLACID	DW	A	N		Lake Placid
FLA014368	PARADISE MOBILE VILLAGE WWTF	LAKE PLACID	DW	A	N	0.0150	Lake Placid
FLA014350	PLACID LAKES CONDOMINIUM APTS	LAKE PLACID	DW	A	N	0.0150	Lake Placid
FLA284611	POSEY DAIRY	LAKE PLACID	AFO	X	N		Lake Placid
FLA014329	TOMOKA HEIGHTS WWTP/PLACID UTILITIES	LAKE PLACID	DW	A	N	0.2000	Lake Placid
FLA014312	TOWN OF LAKE PLACID	LAKE PLACID	DW	A	N		Lake Placid
FLA014371	TROPICAL HARBOR MHP WWTF	LAKE PLACID	DW	A	N		Lake Placid
FLA014389	SUN'N LAKE OF SEBRING UNIT 23 WWTP	SEBRING	DW	A	N		Lake Placid

¹ DW = Domestic Wastewater Treatment Plant
 IW = Industrial Wastewater Treatment Plant
 CBP = Concrete Batch Plant
 NEX = Stormwater No Exposure Certification
 PET = Petroleum Cleanup GP (long term)
 AFO = Animal Feeding Operation

² A = Active,
 C = Closed But Monitored
 N = Active Permit Not Required
 P = Plugged and Abandoned (UIC)
 X = Active Unpermitted Discharge

Table E.2: Permitted Facilities with Discharges in the Fisheating Creek Basin, by Planning Unit

FACILITY ID	NAME	LOCATION	TYPE ¹	STATUS ²	NPDES	DESIGN CAPACITY	PLANNING UNIT
FLA014269	LYKES FISHEATING CREEK CAMPGROUND WWTP	PALMDALE	DW	A	N		Fisheating Creek
FLA014395	ALPINE MHP AKA ALPINE VILLAGE R O C , INC	LAKE PLACID	DW	A	N	0.0100	NW Lake Okeechobee
FLA014341	DOUGLASS FERTILIZER AND CHEM INC	LAKE PLACID	IW	N	N		NW Lake Okeechobee
FLA014386	LAKE PLACID UTILITIES AKA SUN'N LAKE, LAKE PLACID	LAKE PLACID	DW	A	N		NW Lake Okeechobee
FLA014321	SUNBURST RV PARK, FKA: PINE RIDGE PARK	LAKE PLACID	DW	A	N	0.0350	NW Lake Okeechobee
FLA014249	ARUBA CAMP RESORT	LAKEPORT	DW	A	N		NW Lake Okeechobee
FLA014266	NORTHLAKE ESTATES RV PARK	LAKEPORT	DW	A	N	0.0300	NW Lake Okeechobee
FLA014253	CALUSA LODGE MHP	MOORE HAVEN	DW	A	N	0.0150	NW Lake Okeechobee
FLA014254	CANAL FRONT RV PARK	MOORE HAVEN	DW	A	N	0.0054	NW Lake Okeechobee
FLA014264	FISHEATING BAY VILLAGE	MOORE HAVEN	DW	A	N		NW Lake Okeechobee
FLA014247	BRIGHTON INDIAN RESERVATION	OKEECHOBEE	DW	C	N		NW Lake Okeechobee
FLA014252	LAKEPORT LODGE	OKEECHOBEE	DW	A	N	0.0200	NW Lake Okeechobee

¹ DW = Domestic Wastewater Treatment Plant
 IW = Industrial Wastewater Treatment Plant
 CBP = Concrete Batch Plant
 NEX = Stormwater No Exposure Certification
 PET = Petroleum Cleanup GP (long term)
 AFO = Animal Feeding Operation

² A = Active,
 C = Closed But Monitored
 N = Active Permit Not Required
 P = Plugged and Abandoned (UIC)
 X = Active Unpermitted Discharge

Table E.3: Permitted Landfill Facilities in the Kissimmee Basin, by Planning Unit

FACILITY ID	FACILITY NAME	CITY	STATUS*	FACILITY TYPE	PLANNING UNIT
25473	SOUTHPORT RD SLF, PHASE I & II	(RURAL)	A	SOLID WASTE	Upper Kissimmee
49710	LAKE HAMILTON LF	BARTOW	K	SOLID WASTE	Upper Kissimmee
87004	NORTHEAST POLK C&D	HAINES CITY	A	SOLID WASTE	Upper Kissimmee
85218	BASS ROAD C&D (ALSO SEE 25470)	KISSIMMEE	A	SOLID WASTE	Upper Kissimmee
25470	BASS ROAD LANDFILL - CLASS I	KISSIMMEE	K	SOLID WASTE	Upper Kissimmee
26040	BEST DIVERSIFIED INC(AKA: P&D)	KISSIMMEE	J	SOLID WASTE	Upper Kissimmee
25553	OAK ISLAND/CENTRAL FL. INVESTMENT	KISSIMMEE	P	SOLID WASTE	Upper Kissimmee
25535	OAK STREET LANDFILL	KISSIMMEE	K	SOLID WASTE	Upper Kissimmee
25982	PONCHO'S CONSTRUCTION CO (C & D) ROCKING A CONSTRUCTION(AKA:MEDLIN,SHADOW OAKS)	KISSIMMEE	P	SOLID WASTE	Upper Kissimmee
25572		KISSIMMEE LAKE BUENA	I	SOLID WASTE	Upper Kissimmee
22316	WALT DISNEY WORLD SLF	VISTA LAKE	J	SOLID WASTE	Upper Kissimmee
49777	NORTHEAST POLK LF (SITE 204)	HAMILTON	K	SOLID WASTE	Upper Kissimmee
89811	ROCOR C&D LANDFILL	MASCOTTE	A	SOLID WASTE	Upper Kissimmee
23787	BAY LAKE CONST.DEBRIS L/F (CLASS 3)	ORLANDO	A	SOLID WASTE	Upper Kissimmee
25291	CWI(C & D) (AKA SCHOFIELD)	ORLANDO	A	SOLID WASTE	Upper Kissimmee
21785	ORANGE CO SLF (AKA DEMONSTRATION)	ORLANDO	I	SOLID WASTE	Upper Kissimmee
24673	ORLANDO ROCK & SEALING (C&D)	ORLANDO	P	SOLID WASTE	Upper Kissimmee
22013	ORLANDO LF (MCCOY JETPORT)	S ORLANDO	J	SOLID WASTE	Upper Kissimmee
25469	CITY OF ST. CLOUD LANDFILL, CLASS I	ST CLOUD	A	SOLID WASTE	Upper Kissimmee
85524	CDS SITEWORK & TRUCKING INC ORANGE CO HWY/ AVALON C&D(WACS 24674)	WINTER GARDEN WINTER	A	SOLID WASTE	Upper Kissimmee
22331		GARDEN WINTER	I	SOLID WASTE	Upper Kissimmee
24674	PINE RIDGE (AKA SANIFILL OF FLORIDA) PINE RIDGE C&D/CLOSED CLASS III LANDFILL	GARDEN WINTER GARDEN	A	SOLID WASTE	Upper Kissimmee
23442			K	SOLID WASTE	Upper Kissimmee
74974	AVON PARK BUILDING DEBRIS SITE	AVON PARK	I	SOLID WASTE	Lake Istokpoga
74977	AVON PARK C & D FACILITY	AVON PARK	K	SOLID WASTE	Lake Istokpoga
74994	AVON PARK LF	AVON PARK	I	SOLID WASTE	Lake Istokpoga
49711	FROSTPROOF LF	FROSTPROOF	K	SOLID WASTE	Lake Istokpoga
49723	SOUTHEAST POLK LF (SITE 203)	LAKE WALES	A	SOLID WASTE	Lake Istokpoga
74959	DESOTO CITY SLF	SEBRING	K	SOLID WASTE	Lake Istokpoga
75423	DISPOSITORIUM INC	SEBRING	A	SOLID WASTE	Lake Istokpoga
74956	HIGHLANDS COUNTY SW MGMT.CENTER	SEBRING	A	SOLID WASTE	Lake Istokpoga
75364	HOWERTON PIT C & D DEBRIS LF	SEBRING	K	SOLID WASTE	Lake Istokpoga
75434	SEBRING LANDFILL INC (C&D DISPOSAL)	SEBRING	A	SOLID WASTE	Lake Istokpoga
74992	SEBRING TRASH SITE	SEBRING	A	SOLID WASTE	Lake Istokpoga
75363	STILES PIT C & D DEBRIS LF	SEBRING	K	SOLID WASTE	Lake Istokpoga

*Status:

A = Active

I = Inactive

J = Closed, no monitoring

K = Closed, monitoring

O = Never operated; permit never used

P = Pending

Table E.4: Permitted Landfill Facilities in the Fisheating Creek Basin, by Planning Unit

FACILITY ID	NAME	CITY	STATUS	TYPE	PLANNING UNIT
74639	PALMDALE LF	PALMDALE	INACTIVE	SOLID WASTE	FISHEATING CREEK

*Status:

A = Active

I = Inactive

J = Closed, no monitoring

K = Closed, monitoring

O = Never operated; permit never used

P = Pending

Table E.5: Ground Water Contamination Sites for EDB in the Kissimmee Basin, by Planning Unit

ZONEID	COUNTY	WMD ¹	PLANNING UNIT
35263249	LAKE	SJ	Upper Kissimmee
35263261	LAKE	SJ	Upper Kissimmee
48263204	ORANGE	SJ,SF	Upper Kissimmee
48263212	ORANGE	SJ,SF	Upper Kissimmee
48263212	ORANGE	SJ,SF	Upper Kissimmee
48263214	ORANGE	SF	Upper Kissimmee
48263217	ORANGE	SF	Upper Kissimmee
48263228	ORANGE	SJ,SF	Upper Kissimmee
48263233	ORANGE	SF	Upper Kissimmee
48263241	ORANGE	SF	Upper Kissimmee
48263246	ORANGE	SF	Upper Kissimmee
48263248	ORANGE	SF	Upper Kissimmee
48263250	ORANGE	SF	Upper Kissimmee
48263254	ORANGE	SF	Upper Kissimmee
48263255	ORANGE	SF	Upper Kissimmee
49263262	OSCEOLA	SF	Upper Kissimmee
49263263	OSCEOLA	SF	Upper Kissimmee
49263265	OSCEOLA	SF	Upper Kissimmee
49263267	OSCEOLA	SF	Upper Kissimmee
49263268	OSCEOLA	SF	Upper Kissimmee
49263270	OSCEOLA	SF	Upper Kissimmee
49263271	OSCEOLA	SF	Upper Kissimmee
49263277	OSCEOLA	SF	Upper Kissimmee
53263269	POLK	SJ	Upper Kissimmee
53263272	POLK	SJ,SW	Upper Kissimmee
53263273	POLK	SW	Upper Kissimmee
53263274	POLK	SW	Upper Kissimmee
53263278	POLK	SW	Upper Kissimmee
53263296	POLK	SW	Upper Kissimmee
53263326	POLK	SW	Upper Kissimmee
53263335	POLK	SW,SF	Upper Kissimmee
53263354	POLK	SW	Upper Kissimmee
53263356	POLK	SF	Upper Kissimmee
53263383	POLK	SW	Upper Kissimmee
53263384	POLK	SW	Upper Kissimmee
53263388	POLK	SF	Upper Kissimmee

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ZONEID	COUNTY	WMD ¹	PLANNING UNIT
53263391	POLK	SF	Upper Kissimmee
53263429	POLK	SW,SF	Upper Kissimmee
53263430	POLK	SW,SF	Upper Kissimmee
53263445	POLK	SW	Upper Kissimmee
53263703	POLK	SJ,SW	Upper Kissimmee
53263703	POLK	SJ,SW	Upper Kissimmee
28263521	HIGHLANDS	SW	Lake Istokpoga
28263524	HIGHLANDS	SW	Lake Istokpoga
28263525	HIGHLANDS	SW	Lake Istokpoga
28263532	HIGHLANDS	SW	Lake Istokpoga
28263536	HIGHLANDS	SW	Lake Istokpoga
28263539	HIGHLANDS	SW	Lake Istokpoga
28263578	HIGHLANDS	SW	Lake Istokpoga
28263585	HIGHLANDS	SW	Lake Istokpoga
28263716	HIGHLANDS	SW	Lake Istokpoga
28993755	HIGHLANDS	SW	Lake Istokpoga
53263447	POLK	SW	Lake Istokpoga
53263476	POLK	SW	Lake Istokpoga
53263478	POLK	SW	Lake Istokpoga
53263480	POLK	SW,SF	Lake Istokpoga
53263485	POLK	SW	Lake Istokpoga
53263493	POLK	SW,SF	Lake Istokpoga
53263495	POLK	SW	Lake Istokpoga
53263507	POLK	SW	Lake Istokpoga
53263508	POLK	SW	Lake Istokpoga
53263514	POLK	SW	Lake Istokpoga
53263515	POLK	SW	Lake Istokpoga
53263516	POLK	SW	Lake Istokpoga
53263518	POLK	SW,SF	Lake Istokpoga
53263714	POLK	SW	Lake Istokpoga
53263715	POLK	SW	Lake Istokpoga
28263622	HIGHLANDS	SW	Lake Placid
28263636	HIGHLANDS	SW	Lake Placid
28263659	HIGHLANDS	SW	Lake Placid
28263668	HIGHLANDS	SW	Lake Placid
28263669	HIGHLANDS	SW	Lake Placid
28263670	HIGHLANDS	SW	Lake Placid

¹ WMD

SF = South Florida Water Management

SJ = St. Johns River Water Management District

SW = Southwest Florida Water Management District

Table E.6: Ground Water Contamination Sites for EDB in the Fisheating Creek Basin, by Planning Unit

ZONEID	COUNTY	WMD¹	PLANNING UNIT
28263670	HIGHLANDS	sw	Fisheating Creek Planning Unit
28263673	HIGHLANDS	sf	Fisheating Creek Planning Unit
28263670	HIGHLANDS	sw	Northwest Lake Okeechobee Planning Unit

¹ **WMD**

SF = South Florida Water Management

SW = Southwest Florida Water Management District

Appendix F: Level I Land Use in the Kissimmee River and Fisheating Creek Basins, by Planning Unit

Table F.1: Level I Land Use in the Upper Kissimmee Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	15.0
2000	Agriculture (includes improved pasture)	28.5
3000	Rangeland	7.1
4000	Upland Forest	9.5
5000	Water (includes open bay)	13.7
6000	Wetlands	23.8
7000	Barren Land	0.3
8000	Transportation, Communications, and Utilities	2.1
Total		100

Table F.2: Level I Land Use in the Lower Kissimmee Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	1.2
2000	Agriculture (includes improved pasture)	51.2
3000	Rangeland	15.8
4000	Upland Forest	6.5
5000	Water (includes open bay)	1.4
6000	Wetlands	22.8
7000	Barren Land	1.0
8000	Transportation, Communications, and Utilities	0.1
Total		100

Table F.3: Level I Land Use in the Lake Istokpoga Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	12.9
2000	Agriculture (includes improved pasture)	33.9
3000	Rangeland	8.3
4000	Upland Forest	14.7
5000	Water (includes open bay)	14.3
6000	Wetlands	15.3
7000	Barren Land	0.0
8000	Transportation, Communications, and Utilities	0.6
Total		100

Table F.4: Level I Land Use in the Lake Placid Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	23.5
2000	Agriculture (includes improved pasture)	28.4
3000	Rangeland	10.6
4000	Upland Forest	7.3
5000	Water (includes open bay)	23.1
6000	Wetlands	6.1
7000	Barren Land	0.1
8000	Transportation, Communications, and Utilities	0.9
Total		100

Table F.5: Level I Land Use in the Fisheating Creek Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	0.8
2000	Agriculture (includes improved pasture)	55.9
3000	Rangeland	6.4
4000	Upland Forest	14.7
5000	Water (includes open bay)	0.4
6000	Wetlands	21.5
7000	Barren Land	0.1
8000	Transportation, Communications, and Utilities	0.2
Total		100

Table F.6: Level I Land Use in the Northwest Lake Okeechobee Planning Unit

Level I	Type	Percentage of Planning Unit
1000	Urban and Built-up	1.6
2000	Agriculture (includes improved pasture)	77.5
3000	Rangeland	1.2
4000	Upland Forest	1.8
5000	Water (includes open bay)	1.0
6000	Wetlands	15.6
7000	Barren Land	1.2
8000	Transportation, Communications, and Utilities	0.1
Total		100

Appendix G: Comments Provided at Public Meetings

Kissimmee River / Fisheating Creek Basins

Kissimmee, July 13, 2005

George Mann, City of Kissimmee: What is TSI?

Answer: Trophic State Index

Carla Palmer, SFWMD: What is the source of Iron?

Answer: Anthropogenically derived and /or groundwater or soils.

Brad Jones, SFWMD: How you do we know what sampling stations you used?

Answer: We have a station list.

Kevin McCann, City of Orlando: Who do we contact to get a copy of the database.

Answer: Any one of us.

Kevin McCann, City of Orlando: Lake Underhill is physically in Group 4, but discharges to the upper St. John's Group 2.

Answer: Eric said we haven't decided what to do with that yet.

Richard Baird, Orange County: How many more IWR runs will be conducted before the Group 4 Verified List becomes final.

Answer: One more (which was Run 22).

Brad Jones, SFWMD: WBIDS often don't follow watershed boundaries.

Answer: Eric said WBIDs are based on EPA sub basins currently on a 1: 100,000 scale, but soon to be on a 1:24:000 scale.

Larry Pearsin, SFWMD: What is a WBID?

Answer: A waterbody identification unit. For every stream it would be a five mile section, and for lakes a WBID could represent an entire lake.

Richard Baird, Orange County: Where can you get GIS down loads?

Answer: The Department's Basin 411 website, or get with one of our GIS staff.

Brad Jones, SFWMD: Is there a way to determine what agency collected the data.

Answer: Yes.

Brad Jones, SFWMD: How are we going to deal with Hg?

Answer: It's the Federal Government's problem, which will require changes to the Clean Air Act.

Brad Jones, SFWMD: Once a TMDL is deemed necessary, what models will be used?

Answer: Watershed, EPA SWIM and WamView models.

Brad Jones, SFWMD: Will there be opportunities for comment during that process?

Answer: Yes.

Kim Lawrence, Osceola County: Asked about land use and noted agricultures affect.

Answer: Eric pointed out the availability of DACS/BMP's that farmers can sign up for. If farmers don't sign up, they will hit with burdensome monitoring requirements, so BMP's should be easier.

Chris Carlson, SFWMD: Based on the implementation schedule, when will DACS funding be available for the agricultural community?

Answer: Eric said funding is already available and more will come on line in 2008 / 2009.

Katherine Disterhaft, Disney Wilderness Preserve: How do we create priorities for TMDLs?

Answer: Eric said first priorities are based on consent decree, then waterbodies on the 1998 303(d) list, the waterbodies of regional significance, and finally local input.

Carmen Baez-Smith, SFWMD: What about WBIDs with TMDL due in 2005 that don't have enough data yet?

Answer: EPA will propose a TMDL for those waterbodies.

Sebring, July 14, 2005

Hillary Swain, Archbold Biological Station: Why is the number of data samples going down?

Answer: Data gets filtered out if it does not meet QA/QC or too old.

Hillary Swain, Archbold Biological Station: It appears that the problem started in 2000.

Answer: Karen Bickford said the SFWMD scaled back its monitoring and in some cases subcontracted the data collection with local government. So the data may be listed under local government org id. Also, QA/QC is causing data to be filtered out. Dr. Gao said that there is also a lag time in data upload from the SFWMD, so we will see more data in the next run of the IWR.

Hillary Swain, Archbold Biological Station: Don't you want high flow data?

Answer: Yes, but not hurricane data.

Hillary Swain, Archbold Biological Station: How do you deal with flow; water quality data under low flow conditions and high flow conditions?

Answer: We use concentration, not flow during the listing process, but when we set the TMDL we use flow in our loading analysis. Furthermore, we take samples in at least 3 of the 4 seasons to address seasonality.

Clell Ford, Highlands County: Why wasn't SWFWMD data included?

Answer: It may have not been input into STORET. We have been collaborating with Keith Kolasa of the SWFWMD. We will follow up.

Paul Ebersbach, Avon Park Air Force Range: A lot of WBIDs in the urban areas are classified as 3A or 3B. If the urban basins are likely to be the most stressed, why aren't we sampling these waterbodies?

Answer: Our highest priority waterbodies are dictated by the 1998 303(d) list. We hope that local governments can help us pick up the slack or at least point to waterbodies that should be given a higher priority than normal.

Clell, Highlands County: The only lake on the Verified List in Highlands County for nutrients is Lake Letta, which shouldn't be on the VL. So why is Lake Letta on the VL for nutrients and why is Lake Grassy on the VL for metals?

Answer: Lake Letta was listed in error for lack of data and should be dropped to category 3c. However, Lake Grassy in fact did meet the data sufficiency for metal and the impairments are valid. (Note, it was later determined that the metals data for Lake Grassy could not be trusted, so it was removed from the Verified List).

Clell Ford, Highlands County: Said that Arbuckle Creek should be listed.

Answer: Gao said that we have found several mis-assigned stations in various waterbodies.







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