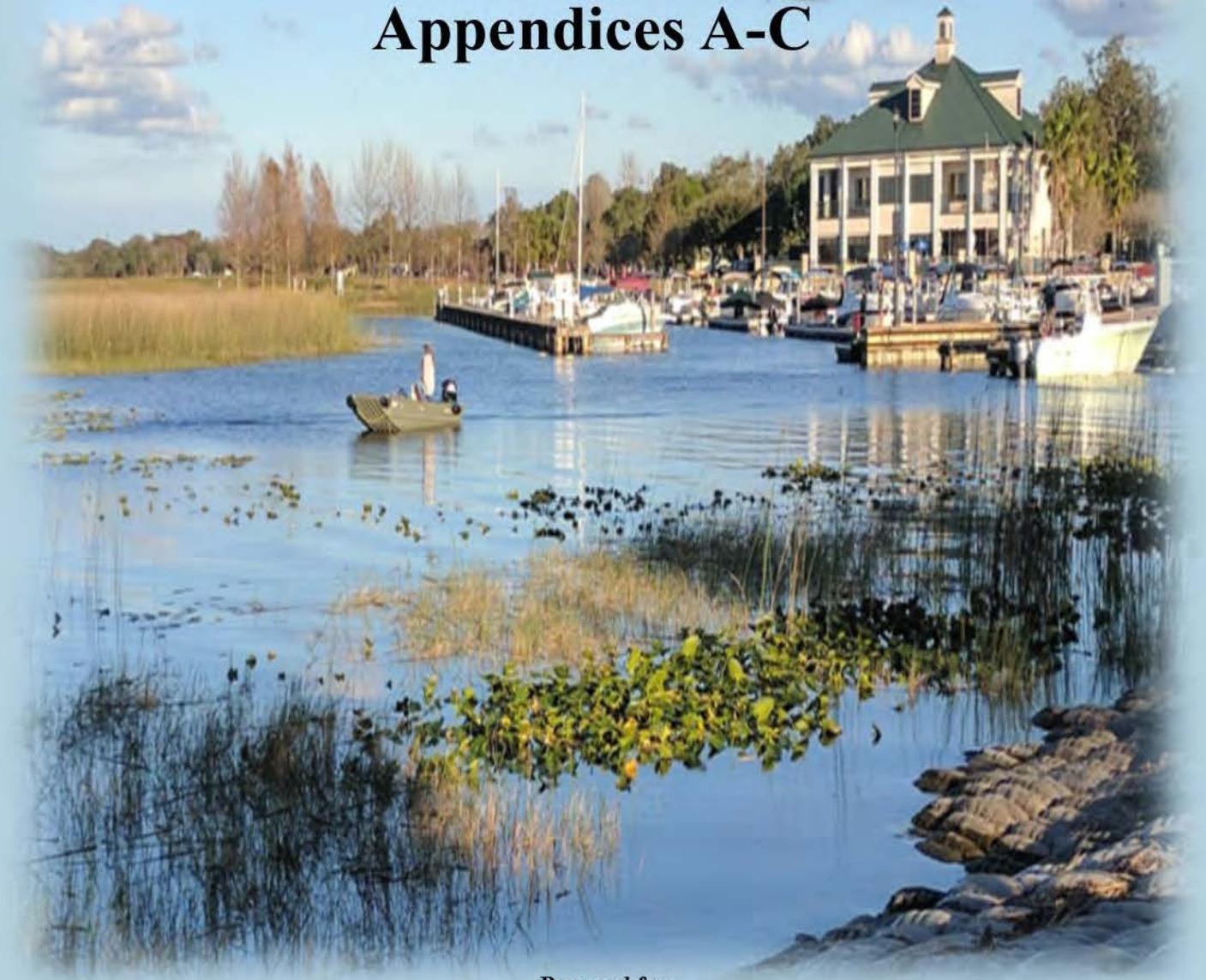


# **East Lake Tohopekaliga Drawdown and Habitat Enhancement Final Environmental Impact Statement Appendices A-C**



Prepared for:  
**United States Army Corps of Engineers  
Jacksonville Division  
Cocoa Permit Section  
Cocoa, Florida**



Prepared by:  
**South Florida Engineering and Consulting LLC  
West Palm Beach, Florida**

**July 2019**

## Table of Contents

### Appendix A Scoping Summary Report

- Main Document
- Appendix A Notice of Intent and News Release
- Appendix B Letters to State and Federal Agencies
- Appendix C Site Visit Topics of Discussion
- Appendix D Agency Coordination Meeting Agenda
- Appendix E Agency Coordination Meeting Summary
- Appendix F Attendees of Public Scoping Meeting
- Appendix G Public Scoping Meeting Agenda
- Appendix H Comment Card
- Appendix I Comment Summary Table
- Appendix J EPA Acceptance Letter

### Appendix B

- Biological Assessment (Main Document)
- Appendix A Consultation Area Maps
- Appendix B Guidance Documents and Reports
- Biological Opinion (Main Document)

### Appendix C Pump Analysis

- Main Document
- Appendix A

**Appendix A**  
**Scoping Summary Report**

**Final**  
**Scoping Summary Report**

**Environmental Impact Statement**  
**for the**  
**Drawdown and Habitat Enhancement**  
**of**  
**East Lake Tohopekaliga**

February 2018

## Table of Contents

<b>Table of Contents .....</b>	<b>i</b>
<b>Table of Appendices.....</b>	<b>ii</b>
<b>Table of Figures.....</b>	<b>ii</b>
<b>Glossary of Terms and Acronyms .....</b>	<b>iii</b>
<b>Terms</b>	<b>iii</b>
<b>Acronyms .....</b>	<b>v</b>
<b>1.0 Project Background.....</b>	<b>1-1</b>
<b>2.0 Purpose and Need for Agency Action .....</b>	<b>2-1</b>
2.1 Project Purpose.....	2-4
2.2 Need .....	2-4
2.3 Proposed Federal Action .....	2-4
2.4 Resources Summary.....	2-5
<b>3.0 Scoping Process for The Environmental Impact Statement .....</b>	<b>3-1</b>
3.1 Notice of Intent.....	3-1
3.2 Agency Coordination and Consultation .....	3-1
3.2.1 Agency Communication .....	3-1
3.2.2 Site Visit with Agency Representatives.....	3-2
3.2.2 Agency Coordination Meeting.....	3-3
3.3 Public Scoping Meeting .....	3-3
3.3.1 Meeting Facilities.....	3-4
3.3.2 Publicity .....	3-4
3.3.3 Meeting Materials .....	3-5
3.3.4 Meeting Process .....	3-5
<b>4.0 Summary of Agency Coordination and Public Scoping Comments .....</b>	<b>4-1</b>
4.1 Water Management .....	4-2
<b>5.0 Issues Emerging from Scoping Process to be Addressed in Draft Environmental Impact Statement .....</b>	<b>5-1</b>
5.1 Issues to be Addressed in Chapter 1: Project Overview and Background.....	5-1
5.2 Issues to be Addressed in Chapter 2: Proposed Action and Alternatives .....	5-1
5.3 Issues to be Addressed in Chapter 3: Affected Environment and Environmental Consequences.....	5-1
5.4 Issues to be Addressed in Chapter 4: Cumulative Impacts .....	5-2

5.5 Issues Outside the Scope of Action and Not Analyzed..... 5-2

**6.0 Preliminary Alternatives ..... 6-1**

6.1 Proposed Action Description: East Lake Toho Drawdown and Habitat Enhancement  
..... 6-1

6.2 No-Action Alternative..... 6-2

**7.0 Summary Results of Scoping Process ..... 7-1**

**Table of Appendices**

Appendix A: Notice of Intent and News Release ..... A-1

Appendix B: Letters to State and Federal Agencies ..... B-1

Appendix C: Site Visit Topics of Discussion ..... C-1

Appendix D: Agency Coordination Meeting Agenda ..... D-1

Appendix E: Agency Coordination Meeting Summary.....E-1

Appendix F: Attendees at Public Scoping Meeting..... F-1

Appendix G: Public Scoping Meeting Agenda..... G-1

Appendix H: Comment Card ..... H-1

Appendix I: Comment Summary Table .....I-1

Appendix J: EPA Acceptance Letter ..... J-1

**Table of Figures**

Figure 1-1: Proposed Project Area ..... 1-2

Figure 2-1: Proposed Scrape Sites (white crosshatched polygon) and Spoil Island Locations  
..... 2-2

Figure 2-2: Proposed Spray and Burn Areas ..... 2-3

## Glossary of Terms and Acronyms

### Terms

**Preferred Alternative.** The preferred alternative is that alternative that the lead agency expects will fulfill its statutory mission and responsibilities (goals and objectives), giving consideration to environmental, economic, technical, and other factors. The environmentally preferred alternative may be different than the agency's preferred alternative.

**Environmentally Preferable Alternative.** The environmentally preferable alternative is that alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Generally, this indicates the alternative that will cause the least damage to the biological and physical environment; and that best protects, preserves and enhances historic, cultural and natural resources while still meeting project goals and objectives.

**Littoral Zone.** The littoral zone is part of a lake, sea or river that is close to the shore. In coastal environments, the littoral zone extends from the high water mark, which rarely is inundated, to shoreline areas that are permanently submerged.

**National Environmental Policy Act (NEPA) of 1970.** NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.

**No Action Alternative.** The alternatives analysis in the Environmental Impact Statement (EIS) must include the alternative of no action. Two distinct interpretations of "no action" must be considered, depending upon the nature of the proposal under evaluation. Depending upon the situation, "no action" is synonymous with "no change" from the current management direction or level of management intensity. In other situations, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed.

**Proposed Action.** The proposed action may be a proposal in its initial form before undergoing analysis in the EIS process. Depending upon the situation, the proposed action may eventually be identified as the lead agency's preferred alternative

**Range of Alternatives.** The range of alternatives is comprised of the reasonable alternatives of a project, which are discussed in environmental documents. The range of alternatives must be rigorously explored and objectively evaluated. Other alternatives, which are eliminated from detailed study, are identified along with a brief discussion of reasons for eliminating them.

**Scoping.** Scoping is a useful tool for discovering alternatives to a proposal, or significant effects that may occur. Scoping is preceded by a Notice of Intent to prepare an EIS.

**Section 404 Permit.** Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands.

**Water Control Plan.** A water control plan is a document that includes coordinated regulation schedules for regulation of a water resources project or system in the interest of flood control, navigation and other authorized purposes.

**Water Drawdown.** Water drawdown is the lowering of water stage below background conditions. Drawdown is a tool that can be used to manage aquatic weed and water quality problems.

**Water Quality.** The physical, chemical, biological and radiological characteristics of surface and groundwater affecting abiotic (physical) and biotic (living) relationships.

**Acronyms**

ACM	Agency Coordination Meeting
ADA	Americans with Disabilities Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
cfs	cubic feet per second
East Lake Toho	East Lake Tohopekaliga
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FL DEP	Florida Department of Environmental Protection
FWC	Florida Fish and Wildlife Conservation Commission
KRRP	Kissimmee River Restoration Project
NEPA	National Environmental Policy Act of 1970
NGVD	National Geodetic Vertical Datum of 1929
NOI	Notice of Intent
SFEC	South Florida Engineering and Consulting, LLC
SFWMD	South Florida Water Management District
SHPO	State Historic Preservation Office
STOF	Seminole Tribe of Florida
THPO	Tribal Historic Preservation Office
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TSS	Total Suspended Solids
USACE	U. S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WCP	Water Control Plan

## 1.0 PROJECT BACKGROUND

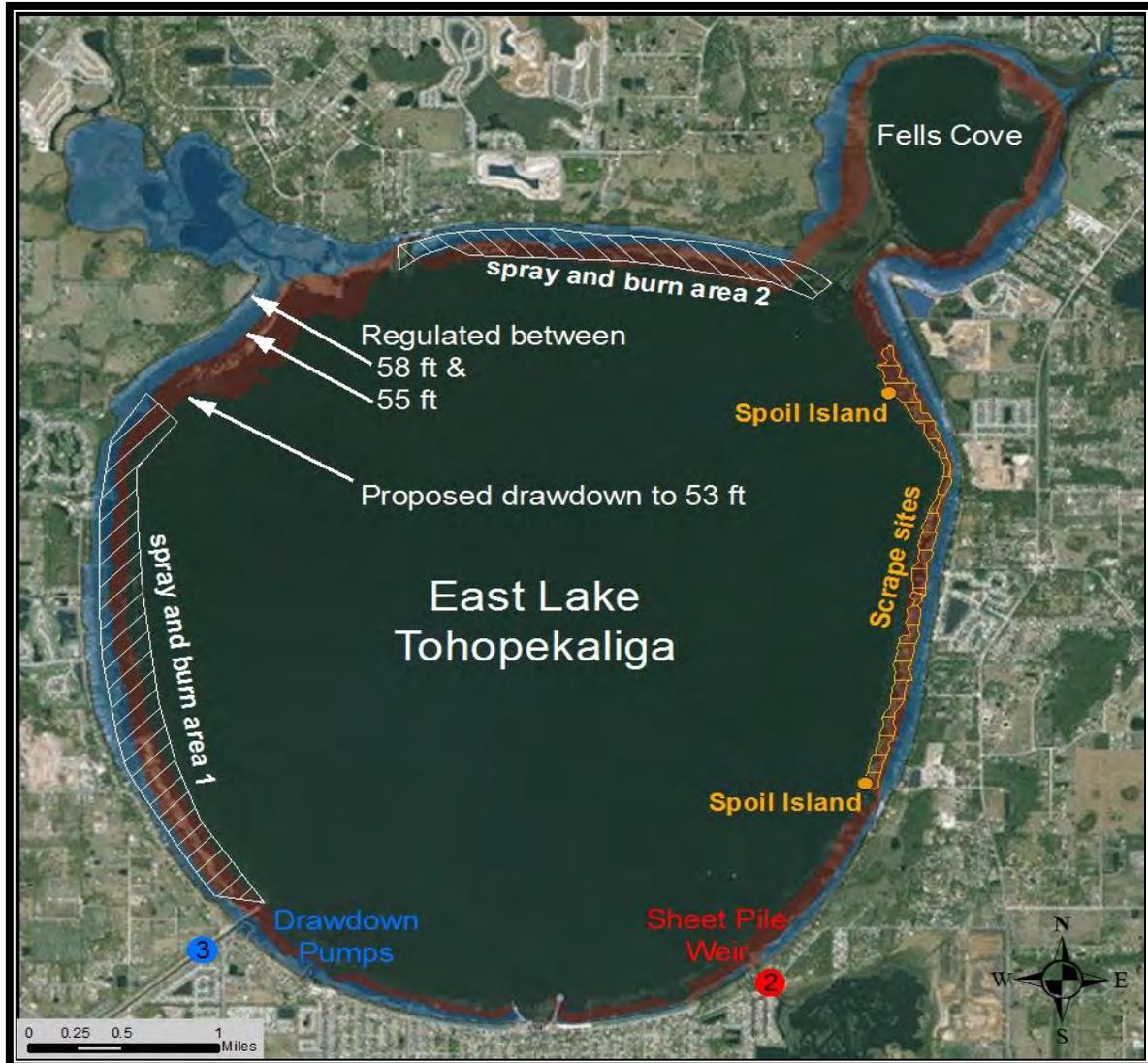
Historically, lakes in the Kissimmee Chain of Lakes fluctuated up to 10 feet. Water control structures, constructed for flood control, and lake regulation schedules, have stabilized water levels, which now fluctuate 3 to 3.5 feet. Decreased variability in water fluctuation negatively affects fish and wildlife habitat. To mitigate these negative effects, the Florida Fish and Wildlife Conservation (FWC) has previously conducted managed drawdowns on:

- Lake Tohopekaliga (1971, 1979, 1987, 2004);
- Lake Kissimmee (1977, 1996);
- Lake Jackson (1994, 1995, 1997);
- Alligator Chain of Lakes (2000); and
- East Lake Tohopekaliga (East Lake Toho) (1990).

FWC applied to the U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa, Florida Permits Section field office, for activities associated with a new proposed drawdown, vegetation removal, and demucking of East Lake Toho to improve habitat conditions for fish and wildlife. The application requires Department of the Army authorization, as the proposed project activities can have substantial environmental effects.

East Lake Toho is an approximately 11,968-acre lake, in Osceola County, Florida. The proposed Project includes the following activities (*Figure 1-1*):

- Modify the East Lake Toho regulation schedule, as established by the USACE Water Control Plan (WCP), to allow a temporary deviation in water levels;
- Install sheet piling in the canal between East Lake Toho and Lake Runnymede;
- Install four flood control pumps in the canal between East Lake Toho and Lake Tohopekaliga;
- Scrape approximately 115 acres of littoral zone along the eastern shore of East Lake Toho;
- Pile and burn all woody vegetation scraped from the littoral zone of East Lake Toho;
- Consolidate scraped materials into two in-lake spoil islands in East Lake Toho, approximately one to two acres each;
- Spray herbicides on vegetation along the northern and western shores of East Lake Toho; and
- Burn the treated vegetation from the northern and western shores of East Lake Toho.



**Figure 1-1: Proposed Project Area**

As lead agency, USACE, is gathering information necessary to prepare an Environmental Impact Statement (EIS) for the proposed drawdown and habitat enhancement project. South Florida Engineering and Consulting, LLC (SFEC), in partnership with Louis Berger Group (together comprising the SFEC Team), will prepare the EIS pursuant to the National Environmental Policy Act of 1969 (NEPA). The EIS will evaluate the potential significant direct, indirect and cumulative effects of the proposed East Lake Toho drawdown and demucking activities.

NEPA requires federal agencies to conduct an environmental analysis of such proposed actions to determine whether the actions may significantly affect the human environment. Under NEPA, a reasonable range of alternatives to the proposed Project will be developed and considered in the federal environmental review process. The Project will be planned and executed in compliance with Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbor Act of 1989 and Florida Statutes.

## 2.0 PURPOSE AND NEED FOR AGENCY ACTION

The purpose of the proposed Project is aquatic habitat improvement in East Lake Toho. Mechanical scraping of organic matter and removal of invasive plant species is expected to enhance conditions along the shore and in shallow lake waters, thereby improving sport fishing and water quality.

The proposed action requires USACE approval of a Section 404 permit to authorize placement of spoils material in waters of the United States. The FWC is pursuing authorization from the USACE to conduct a temporary drawdown of the East Lake Toho to perform demucking and vegetation removal activities.

The FWC proposes to drawdown East Lake Toho from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 feet beginning in October-November 2019. Organic sediments, scraped from the lake's littoral zone, will be consolidated into two spoil islands for long-term storage. The proposed scrape sites and spoil island locations are depicted in *Figure 2-1*. No potential upland locations to deposit spoil were found within 5 to 10 miles of the project site; hauling spoils material more than 10 miles from the project site is not considered feasible or economical.

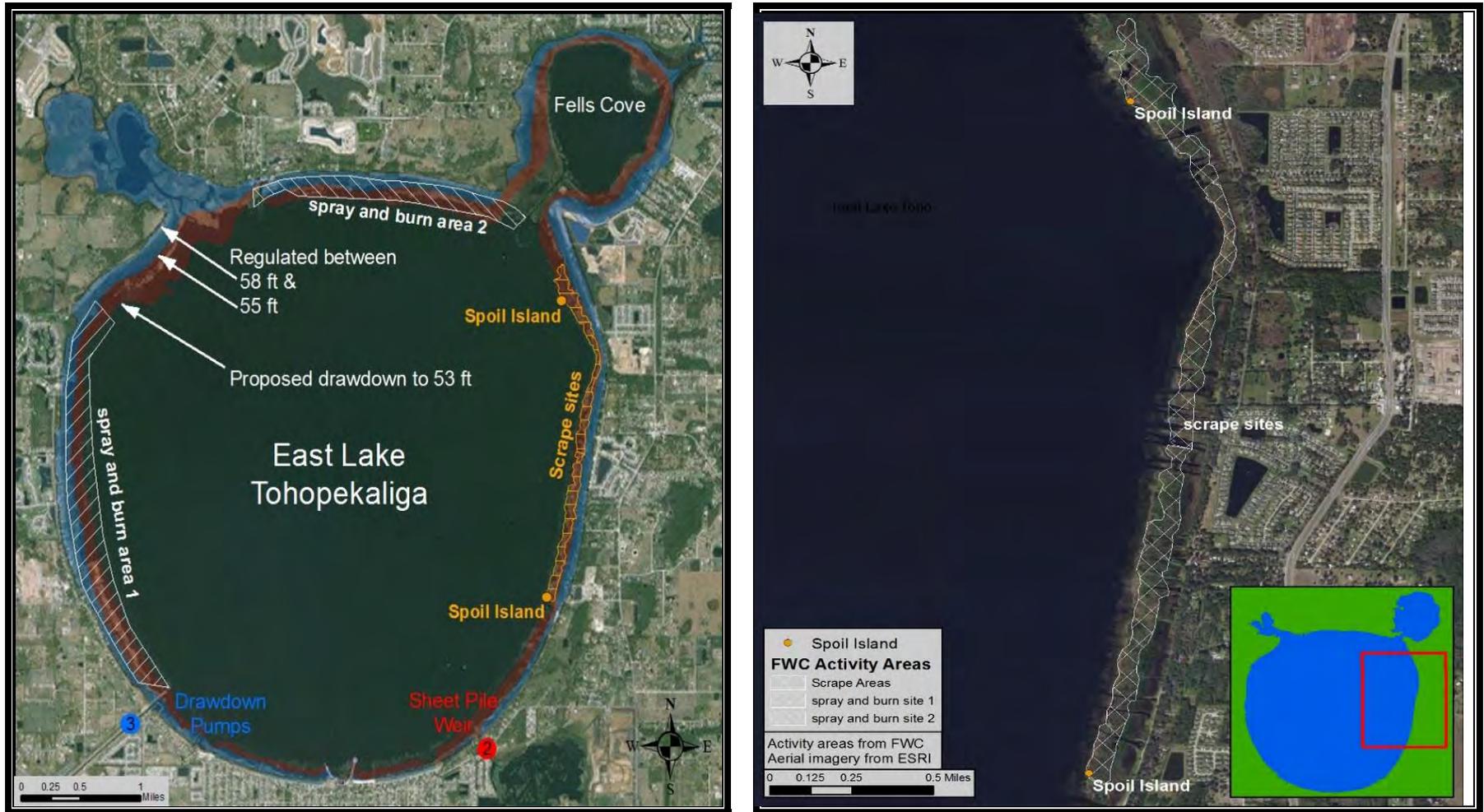
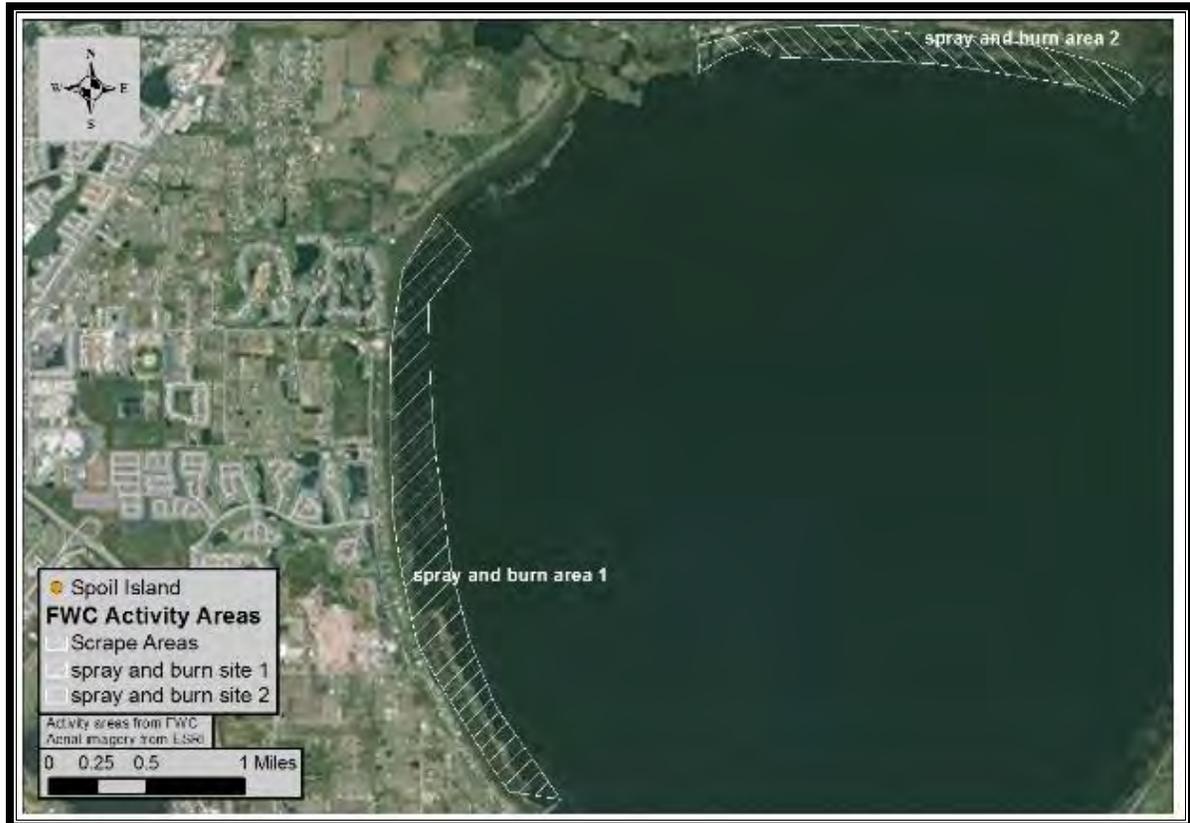


Figure 2-1: Proposed Scrape Sites (white crosshatched polygon) and Spoil Island Locations

Invasive plant species will be treated with herbicide, and prescribed burning will be performed. Herbicides specific for invasive species in the project area will be used. Smoke, ash and health concerns from burning of woody vegetation will be monitored by FWC with the support of the State of Florida Forestry Department and Osceola County. **Figure 2-2** depicts the proposed spray and burn areas.



**Figure 2-2: Proposed Spray and Burn Areas**

The USACE coordinates with appropriate federal and state agencies, as well as with federally-recognized tribes that may be affected, and the interested public, during preparation of the EIS. This coordination includes the following actions:

- Identify reasonable alternatives to meet the project purpose and need, including a no action alternative
- Identify prospective issues to be addressed; and
- Receive and address agency, tribal, and public comments.

A primary purpose of a USACE EIS is to provide full and fair discussion of the significant environmental effects of a proposed project seeking a U.S. Department of the Army permit. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to a project that may avoid or minimize potential effects, or enhance the quality of the environment.

## 2.1 PROJECT PURPOSE

The purpose of the proposed Project is aquatic habitat improvement in East Lake Toho. Major contributors to deteriorating aquatic habitat in East Lake Toho are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in exotic and invasive aquatic plant density and biomass, and accumulation of organic (muck) sediments.

The FWC's proposed Project to drawdown the level of East Lake Toho and implement habitat enhancements requires USACE approval of a Section 404 Permit to authorize placement of spoils material within the lake.

## 2.2 NEED

Dense bands of organic material have formed along the East Lake Toho eastern shore. Combined with aquatic plants such as pickerelweed, cattail and tussocks, the organic materials along the lakeshore form a barrier that keeps fish from shallow spawning areas. Decline in desirable aquatic vegetation negatively affects the diversity and abundance of foraging species, which depend on these plant communities. This directly contributes to reduced sport fish production and wading bird utilization.

The need for FWC's proposed project is habitat enhancement through water-level drawdown, vegetation spray and burn, soil and vegetation scraping, and the creation of spoil islands within East Lake Toho. The need for the USACE's proposed action is to respond to the FWC's application for a Section 404 permit and determine whether permit issuance is appropriate.

## 2.3 PROPOSED FEDERAL ACTION

The proposed federal action is the completion of an EIS preparatory to drawing down the water level of East Lake Toho to enhance wildlife habitat and consideration of the FWC permit application. The EIS will analyze reasonable alternatives to meet the project purpose and need, including a no action alternative. Project alternatives will include actions to:

- Effectuate the drawdown using pumps;
- Conduct the drawdown without pumps;
- Haul and dispose all muck and treated exotic species off-site; and
- Dispose muck and exotic species following treatment on in-lake spoil islands.

Applicable federal regulations under which the EIS will be developed include:

- NEPA Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [40 CFR] 1500 *et seq*)
- Section 404 of the Clean Water Act (33 U.S.C. 1344)
- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Coastal Zone Management Act
- Clean Air Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Endangered Species Act

- Fish and Wildlife Coordination Act
- National Historic Preservation Act
- Archeological and Historic Preservation Act
- Executive Order 11990, Protection of Wetlands

The drawdown will require deviation to the WCP for East Lake Toho and a Department of the Army permit for proposed fill in waters of the United States. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

## **2.4 RESOURCES SUMMARY**

The East Lake Toho Drawdown and Habitat Enhancement EIS will address the following resource categories as determined by environmental analyses of previous drawdown projects conducted by FWC:

- Water Management
- Water Quality
- Soils and Geology
- Vegetation
- Wetlands
- Fish and Wildlife
- Threatened and Endangered Species (Federal and State)
- Land Use
- Navigation
- Transportation
- Cultural Resources
- Air Quality
- Noise
- Visual Aesthetics
- Recreation
- Public Health and Safety
- Hazardous Materials
- Socioeconomics
- Environmental Justice

### **3.0 SCOPING PROCESS FOR THE ENVIRONMENTAL IMPACT STATEMENT**

The primary purpose of the Scoping Process is for the public to assist the USACE and FWC by identifying important issues and alternatives related to the proposed East Lake Toho Drawdown and Habitat Enhancement Project. Additionally during the scoping process USACE confers with other cooperating and contributing federal and state agencies.

#### **3.1 NOTICE OF INTENT**

The Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Toho in Osceola County, Florida, was published in the Federal Register November 3, 2017 (*Appendix A*). The NOI can be found on the Federal Register website at <https://www.federalregister.gov/>.

The NOI initiated a 60-day period for the public to review and comment on the topics to be addressed in the Draft EIS, which will assess the natural and human effects of issuing a permit to authorize the placement of spoil materials in waters of the United States. The scoping comment period allows agency staff to receive public comment and address concerns regarding the scope of issues and level of analyses to be considered. Participation in the public Scoping Meeting by federal, state, local agencies, and other interested organizations and persons was encouraged. Interested parties were advised that a detailed description of the study area would be developed following the Scoping Meeting, at which time, USACE would determine the final study area for the EIS.

#### **3.2 AGENCY COORDINATION AND CONSULTATION**

The USACE coordinated and consulted with federal, state and local agencies seeking input on the development of alternatives to be evaluated in the EIS and the issues and concerns for which detailed effects analyses should be conducted. During the agency coordination effort each state and federal agency was asked if they wanted to be a cooperating agency during the EIS preparation process. EPA responded indicating they did want to be included as a cooperating agency (see Appendix L for a letter from EPA).

USACE and its NEPA consultant, the SFEC Team, conducted a site visit and convened an Agency Coordination Meeting to identify significant issues of potential concern to the public. These internal discussions were used to guide the Scoping Meeting format, develop informational posters and hand-out materials, and identify the staff resources best suited to address potential concerns and issues raised by attendees.

##### **3.2.1 Agency Communication**

Letters to pertinent federal and state agencies were prepared and submitted during the spring of 2018 (after this report was finalized). A template of the agency letter is included as *Appendix B*. The agencies contacted included:

- Federal Agencies
  - o U.S. Fish and Wildlife Service

- o U.S. National Marine Fisheries Service
- o U.S. Environmental Protection Agency
- State and Local Agencies
  - o Florida Department of State, Division of Historical Resources
  - o Florida Department of Environmental Protection
  - o Florida State Historic Preservation Officer
  - o Florida Forest Service
  - o Osceola County
  - o City of St. Cloud
- Tribal
  - o Seminole Tribe

### 3.2.2 Site Visit with Agency Representatives

Agency personnel and consultant staff toured the East Lake Toho proposed project site on November 1, 2017. Present for the site visit were:

- **USACE:** Jeff Collins and Rachel Gray
- **Osceola County:** Terry Torrens
- **City of St. Cloud:** Stephanie Holtkamp
- **FWC:** Mahmoud Madkour, Don Fox, Tim Coughlin, Beacham Furse and Tyler Beck
- **USFWS:** Marla Hamilton
- **SFEC Team:** Tom St. Clair (Louis Berger), Andy Gottlieb, Chris McVoy, Michael Adler and David Niemi

Following introductions, the goals and objectives for the proposed Project were stated; and the need for an EIS was explained. The sites visited were: East Lake Toho proposed northern spray and burn site, Fells Cove connection to East Lake Toho, spoil island sites, the proposed scrape areas, and the canal connecting East Lake Toho to Lake Runnymede.

The site visit provided an opportunity for the participants to understand the need for proposed weirs in Lake Runnymede and Fells Cove. Viewing of the scrape areas encouraged discussion of proposed spray-and-burn operations. Possible effects to threatened and endangered species were discussed, as were access issues for business and recreational users.

Topics raised during the site visit included:

- The need for a Biological Assessment and subsequent Biological Opinion related to snail kite nesting;
- Potential costs and timelines related to possible construction of a sheet piling weir between East Lake Toho and Fells Cove;
- Areas proposed for spraying and burning for vegetation management;
- Potential disposal areas – disposal sites, lake depth at sites, sizes of spoil islands, future vegetation disposal, management of the sites, and current amount of muck accumulation;

- Equipment staging and vegetation at the proposed scrape area for the eastern shore of East Lake Toho;
- Construction of a sheet piling weir between East Lake Toho and Lake Runnymede; and
- Boat access via the City of St. Cloud marina and boat ramp.

A summary of discussions during the site visit are presented in *Appendix C* of this document.

### 3.2.2 Agency Coordination Meeting

An Agency Coordination Meeting was held December 5, 2017, at Osceola Heritage Park, Kissimmee, Florida. This meeting included a review of the proposed project components, project alternatives, NEPA process, communication protocols, the draft EIS outline, and critical schedule milestones.

Attendees at this meeting (in-person or by phone) were:

- **U.S. Army Corps of Engineers**
  - Jeff Collins, Stephanie Raulerson and Andy Loschiavo
- **Florida Fish and Wildlife Conservation Commission**
  - Mahmoud Madkour, Tim Coughlin, Beacham Furse and Donald Fox
- **U.S. Environmental Protection Agency**
  - Jamie Higgins
- **U.S. Fish and Wildlife Service**
  - Marla Hamilton
- **Florida Department of Environmental Protection**
  - Jeff Prather and Nicole Mae
- **Osceola County**
  - Rick Baird and Jeremy Buchanon
- **City of St. Cloud:**
  - Stephanie Holtkamp
- **South Florida Water Management District**
  - Zach Welch and Bill Graf
- **South Florida Engineering and Consulting Team**
  - Tom Conboy, Andy Gottlieb, Michael Adler, Chris McVoy, Tom St. Clair (Louis Berger Group), Sue Byrd, and Terry Clark (Staff Connections)

A copy of the Agency Coordination Meeting Agenda is attached as *Appendix D*. A summary of the meeting is included as *Appendix E*.

### 3.3 PUBLIC SCOPING MEETING

The SFEC Team coordinated and facilitated the public Scoping Meeting for the Draft EIS on December 5, 2017. The USACE and FWC made a formal presentation and staffed technical stations during the open house portion of the meeting. The meeting was held at:

Osceola Heritage Park  
1875 Silver Spur Lane  
Kissimmee, Florida 34744

The USACE invited federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the meeting, and to provide comments. Public comments help to identify the full range of issues related to the permit request, and ensure that these issues are addressed.

### 3.3.1 Meeting Facilities

The SFEC Team's criteria for the selected Scoping Meeting facility included proximity to the proposed project area, Americans with Disabilities Act (ADA) accessibility, and accommodations for up to 50 participants.

<b>Date</b>	<b>Time</b>	<b>Location</b>	<b>Attendance</b>
December 5, 2017	7:00 p.m. Eastern Standard Time	Osceola Heritage Park 1875 Silver Spur Lane Kissimmee, Florida 34744	61

The number of attendees reflects the number of attendees who signed in. The actual attendance exceeded this number. Participants who signed in were included *Appendix F*.

The Scoping Meeting Agenda items were:

- Brief Project Overview
- Why is the USACE Involved?
- Meeting Purpose
- Environmental Impact Statement Process
- Detailed Project Description
- Receive Public Comments

Also discussed was the Revitalization of the Kissimmee Chain of Lakes Project, scheduled for completion during 2020, which may affect the East Lake Toho project schedule. Excessively wet or dry years also may affect the project schedule. The Public Scoping Meeting Summary is included as *Appendix H*.

### 3.3.2 Publicity

On November 3, 2017, the NOI was published in the Federal Register (*Appendix A*). Also on this date, the USACE Regulatory Division issued a Public Notice announcing the public scoping process and encouraging interested parties to submit comments. The public announcement was posted on the USACE's website and sent to all parties listed on the USACE's regulatory affairs distribution list.

SFEC Team mailed over 650 notices of the public meeting, which included the public meeting announcement and a map of East Lake Toho with proposed actions depicted. The public

announcement was also posted at the City of St Cloud's marina and boat ramp and on the City's social media page.

### 3.3.3 Meeting Materials

The SFEC Team coordinated with FWC and USACE to develop posters and handouts for the Scoping Meeting. Posters included:

- **Poster 1: Project Location and Summary** (one page). This poster displayed an aerial map of the proposed project area and detailed the project elements.
- **Poster 2: EIS Process** (two pages). This poster depicted the steps in the EIS process from publication of the NOI in the Federal Register through the Record of Decision, along with dates and opportunities for public input.
- **Poster 3: Vegetation Changes and Spoil Islands** (one page). This poster depicted the vegetation types to be removed, desirable vegetation to be kept, and a comparable spoil island in Lake Tohopekaliga.

Comment cards (*Appendix I*) were prepared for submitting written comments. All public scoping meeting materials were thoroughly reviewed by USACE and FWS staff prior to publication.

### 3.3.4 Meeting Process

A facilitator from the SFEC Team provided advance training to agency representatives, and greeted participants upon arrival for the Scoping Meeting. The facilitator explained the meeting format, invited participants to sign up for further communications regarding the proposed Project. Each participant received a comment card for providing written comments. The comment period, which ended January 4, 2018, was noted during the presentation.

Three informational stations relating to the proposed Project and EIS process were displayed around the room allowing attendees of the Scoping Meeting to interact with agency staff during the open house portion of the meeting.

Before, during and after the Scoping Meeting, participants, experts and agency representatives were able to engage in dialogue. Participants could ask questions and express their ideas and concerns. This kind of interaction is invaluable in helping the USACE and FWC to identify the full range of potential issues and concerns regarding the proposed Project, which is the primary purpose of the scoping process.

To ensure participants' comments were captured in the public record, the facilitator encouraged participants to submit written comments after they were finished discussing the issues. Participants were advised that the interaction with subject matter experts (at the 3 informational stations) would not be recorded, and only written comments and comments made as part of the formal presentation would become part of the public record. The facilitator collected all written comments at the meetings, and participants were advised that they could also submit comments online, via mail, facsimile, or e-mail prior to the close of the comment period on January 4, 2018.

A copy of the Public Scoping Meeting Agenda is attached as *Appendix G* and a summary of the meeting is included as *Appendix H*.

#### 4.0 SUMMARY OF AGENCY COORDINATION AND PUBLIC SCOPING COMMENTS

Following completion of the Scoping Meeting, the SFEC Team organized, collated and summarized all public and agency comments received. The team received comments from two agencies, one tribal interest and four local landowners.

In addition to the public Scoping Meeting, an Agency Coordination Meeting was convened, at which time potential project issues and concerns were raised. The Agency Coordination Meeting included representatives from the USACE, FWC, U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), Florida Department of Environmental Protection (FL DEP), Osceola County, City of St Cloud, South Florida Water Management District (SFWMD) and SFEC Team.

Issues and concerns raised in the Agency Coordination Meeting are identified as “ACM” comments later in this document to distinguish them from those raised during the Public Scoping Meeting or received later from agency staff.

- During the scoping process, comments, concerns and issues raised were:
  - Scott Davis, Homeowner, Oakbank Court community
  - Jamie Higgins, NEPA Program Office, Resource Conservation and Restoration Division, EPA
  - Frederick Gaske, Director, Florida Department of State, Division of Historical Resources (letter dated January 6, 2009)
  - Timothy Parsons, Ph.D., Director, Florida Department of State, Division of Historical Resources
  - Victoria Menchaca, MA, Compliance Review Specialist, Seminole Tribe of Florida (STOF), Tribal Historic Preservation Office (THPO), Compliance Review Section
  - Jeffrey Buak, Partner, Quintarios, Prieto, Wood & Boyer, P.A., representing Plaza Lakes, LLC, which owns approximately 800 undeveloped acres adjacent to the northwest corner of East Lake Toho and along portions of Boggy Creek to the north.
  - Valerie Anderson, Homeowner
  - Richard Beam, Homeowner

Scoping comments are summarized in *Appendix H*, which is annotated as to whether comment topics are within the scope of the proposed Project. Each comment is uniquely numbered in the appendix, and categorized by topic in the subsections below. In the appendix and the subsections below, comments addressing multiple topics are separated by topic, and lengthy comments are summarized.

Presented below is a summary of the public comments received for each topic category identified during the public scoping period. Most comments related to cultural resources.

#### 4.1 WATER MANAGEMENT

- If the goal to remove organic matter/muck in the lake is to remove nutrients and improve habitat, the mud that is scraped off the berm should not be redeposited within the lake. (Valerie Anderson, Homeowner)
- Lake Runnymede needs to be lowered at the same time as East Lake Toho, so residents can clean that area. (Richard Beam, Homeowner)
- Concern for potential drawdown of retention ponds within East Lake Toho's cone of influence for area north of lake (ACM):
  - Determine if landowners will be affected;
  - Determine number of landowners that may be affected;
  - SFEC Team can conduct additional analyses if tasked (i.e., MVLR model analysis or other).

#### 4.2 Water Quality

- Adverse effects to water quality, especially total suspended solids (TSS), total phosphorous (TP) and total nitrogen (TN). (EPA)
- East Lake Toho is impaired for mercury and nutrients. (EPA)
- There is an approved total maximum daily load (TMDL) for mercury, but none for nutrients. (EPA)
- A study of a previous drawdown and habitat enhancement project (Hoyer, Mark V., et. al, "Evaluation of Lake Tohopekaliga Habitat Enhancement Project", University of Florida, Institute of Food and Agricultural Sciences, December 2006) is under review; would like to discuss results with FWC and USACE later. (EPA)
- Consider water quality monitoring program like that described in the above-mentioned study. (EPA)

#### 4.3 Soils and Geology

- It does not make sense to partially scrape the East Lake Toho shore areas only to have to repeat the process later for those areas not included in the proposal. (Scott Davis, Homeowner)

#### 4.4 Vegetation

- East Lake Toho's shore behind Oakbank Court properties needs scraping. (Scott Davis, Homeowner)
- Dense vegetation behind Oakbank Court includes vines, which overtake other vegetation. (Scott Davis, Homeowner)
- Consider burning the vegetation behind Oakbank Court properties as is planned for the western and northern shores of East Lake Toho. (Scott Davis, Homeowner)
- Removal of vegetative barrier adjacent to Plaza Lakes property (immediately north of Kissimmee Bay Country Club) will be beneficial visually, and for passive entertainment and fishing. (Counsel for Plaza Lakes, LLC)
- Request area from the entrance to Boggy Creek south and west be cleaned up. (Counsel for Plaza Lakes, LLC)
- Property owner may be willing to receive spoil from the Project, and has received the same in past enhancement activities. (Counsel for Plaza Lakes, LLC)

- USACE and FWC: Continue to analyze best approach to balancing invasive species eradication and avoidance of potential negative effects of herbicide application and controlled burns. (EPA)
- Spoil islands will harbor invasive species (and will provide minimal wildlife habitat – See 4.6 Fish and Wildlife). (Valerie Anderson, Homeowner)
- If the spoil island alternative is chosen, please plant appropriate native vegetation on and around the islands to provide a more appealing visual appearance. (Valerie Anderson, Homeowner)

#### **4.5 Wetlands**

- (See comments above for vegetation). FWC and USACE should consider the wetland function and storm water quality functions of the wetlands behind the berm area. (Valerie Anderson, Homeowner)

#### **4.6 Fish and Wildlife**

- Many waterfowl and wading birds would benefit from clearing of vegetation behind Oakbank Court. (Scott Davis, Homeowner)
- Spoil islands may not benefit East Lake Toho or aquatic life. (Scott Davis, Homeowner)
- Spoil islands (will harbor invasive species – See 4.4 Vegetation) will provide minimal wildlife habitat. (Valerie Anderson, Homeowner)

#### **4.7 Threatened and Endangered Species**

- All agreed that drawdown of East Lake Toho would not proceed if snail kites were observed to be nesting (ACM)
- A Biological Assessment will be submitted to the FWS as the same time as the Draft EIS is published (AMC)

#### **4.8 Land Use**

- Spoil islands may negatively affect property values. (Scott Davis, Homeowner)

#### **4.9 Navigation**

- Previously dredged areas have filled in, reducing the ability for navigation. (Scott Davis, Homeowner)
- Can you dredge the canal from Runnymede to East Lake Toho? You cannot get through with a boat. It will be worse if dammed for months. (Richard Beam, Homeowner)

#### **4.10 Transportation**

- Because of potential travel restriction during construction of the weir between East Lake Toho and Fells Cove, a decision was made to include transportation as a topic to be addressed in the Draft EIS.

#### **4.11 Cultural Resources**

- Several locations within or adjacent to project areas have been subjected previously to some level of cultural resource assessment. (SHPO 2009)
- Archaeological sites have been identified near the Project. (SHPO 2009)

- A “general vicinity” site mound, 8OS16, is located within Project Area C. (SHPO 2009)
- There may be unrecorded archaeological resources, especially at the interface of the wetlands and uplands. (SHPO 2009)
- Proposed habitat enhancement activities may adversely affect potentially significant archaeological resources; therefore, an archaeological consultant should be retained to develop a plan for protection of cultural resources. (SHPO 2009)
- An archaeological consultant should identify sensitive areas of East Lake Toho and disposal sites. (SHPO 2009)
- An archaeological consultant should be on site periodically to monitor project activities. (SHPO 2009)
- An archaeological consultant should develop a short training session for heavy equipment operators and agency staff; training should cover what may be found during demucking activities and steps to be taken should artifacts be found. (SHPO 2009)
- An archaeological consultant should be the contact person should residents or the media have questions regarding project cultural resources aspects. (SHPO 2009)
- Proposed Project should be subject to Section 106 of the National Historic Preservation Act. (SHPO)
- Include development and execution of a plan for the identification and protection of cultural resources. (SHPO)
- Proposed Project falls within the STOF area of interest. (STOF)
- Continue to consult STOF on this Project. (STOF)
- Drawdown and subsequent muck removal may disturb unknown archaeological resources located within East Lake Toho. (STOF)
- Canoes or burials may be present with East Lake Toho. (STOF)
- Several mound sites around East Lake Toho shore contain human remains. (STOF)
- Conduct a Cultural Resources Assessment Survey that consists of underwater surveying techniques such as magnetometry and side-scan sonar. (STOF)

#### **4.12 Air Quality**

- Rotting vegetation may affect air quality. (Scott Davis, Homeowner)
- Burning of woody vegetation may create smoke and present a health concern. (ACM)

#### **4.13 Noise**

- No comments.

#### **4.14 Visual Aesthetics**

- Clearing of vegetative overgrowth behind Oakbank Courts will allow residents to enjoy viewing of water fowl and wading birds. (Scott Davis, Homeowner)
- Spoil islands may affect sight lines. (Scott Davis, Homeowner)
- Removal of vegetative barrier adjacent to Plaza Lakes property (immediately north of Kissimmee Bay Country Club) will be beneficial visually, and for passive entertainment. (Counsel for Plaza Lakes, LLC)

**4.15 Recreation**

- Work closely with recreational users such as fishermen, boaters, personal water craft users, canoers and kayakers to avoid effects on recreation. (EPA)
- USACE and FWC: Solicit user input regarding temporary effects associated with construction. (EPA)
- USACE: Solicit user input regarding long-term effects associated with muck removal and island creation. (EPA)
- The City of St Cloud will attempt to provide boat access at city operated marina during East Lake Toho drawdown and refill period.

**4.16 Public Health and Safety**

- USACE and FWC: Continue community and business outreach to local officials and residents to ensure education on effects of herbicide application and controlled burn activities. (EPA)

**4.17 Hazardous Materials**

- No comments.

**4.18 Socioeconomics**

- USACE: Evaluate and document potential adverse and positive effects associated with temporary economic effects of various alternatives. (EPA)
- USACE: Evaluate and document potential adverse and positive effects associated with long-term economic effects of various alternatives. (EPA)
- Boggy Creek air boats may not be available during drawdown period – need to document economic impact. (ACM)

**4.19 Environmental Justice**

- USACE: Consider proposed project's effects on low income, minority populations as described in Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 16, 1994). (EPA)
- USACE: Disclose any effects on low income, minority communities in the NEPA document. (EPA)

## **5.0 ISSUES EMERGING FROM SCOPING PROCESS TO BE ADDRESSED IN DRAFT ENVIRONMENTAL IMPACT STATEMENT**

NEPA requires development and analysis of a reasonable range of alternatives, including the proposed action. These alternatives present different approaches for meeting the purpose and need of the Project. The range of issues identified during the scoping process helps determine the selection of feasible and reasonable alternatives for the Project.

Issues identified in the Scoping Report will be used to assist in developing a full range of reasonable alternatives for the Draft EIS and identifying those resource topics which need detailed analysis to determine potential environmental effects. While most scoping comments were determined to be within the scope of the Draft EIS and will be considered during its development, this section describes the primary issues raised by commenters to be addressed in each Draft EIS chapter.

### **5.1 ISSUES TO BE ADDRESSED IN CHAPTER 1: PROJECT OVERVIEW AND BACKGROUND**

No comments were received that related to the purpose and need for the Project. In fact, while adjacent landowners expressed some concern about the Project, they overwhelming were in support of the FWC initiative and inquired how they could take advantage of the drawdown period for their individual properties. The SFEC Team will proceed to deliver a clearly-articulated purpose and justification for the Project, which will be stated in the Draft EIS.

### **5.2 ISSUES TO BE ADDRESSED IN CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES**

Generally commenters did not question the proposed scope of the Project. There were multiple recommendations, however, for expanding that scope to include removal of vegetation along longer areas of shoreline. These comments were received from an affected landowner and counsel for another landowner. Additionally, several attendees at the scoping meeting spoke to agency staff about extending the Project to their individual properties and/or requested guidance on how they could proceed with individual initiatives (e.g., vegetation removal) during the drawdown period. Additionally, a member of the City of St Cloud city council suggested that consideration of Chisholm Park as a potential upland disposal site (as did another adjacent land owner) as an alternative to in-lake spoil island creation.

### **5.3 ISSUES TO BE ADDRESSED IN CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

During the scoping process a decision was made to add transportation as a resource topic to be addressed in the EIS and to separate water quality from water management as a separate topic. The identification and protection of cultural heritage sites received most of comments. These comments were provided by the State Historical Protection Office (SHPO) and the Seminole Tribe of Florida.

Of concern to commenters were potential temporary and long-term environmental topics. Potential water quality effects, predominantly short-term, were noted both due to construction

activities as well as loss of wetland function. Possible impacts to wading birds and the snail kites were raised. Several members of the public noted long-term lake management should include more frequent muck removal and vegetation treatment.

#### **5.4 ISSUES TO BE ADDRESSED IN CHAPTER 4: CUMULATIVE IMPACTS**

Agency representatives noted potential interactions with the Kissimmee River Restoration Program (KRRP) upon refilling of East Lake Toho depending on timing and hydrologic conditions. Representatives expressed concern that lowering water levels in East Lake Toho may have downstream effects on Lake Okeechobee water levels and discharge to neighboring estuaries.

#### **5.5 ISSUES OUTSIDE THE SCOPE OF ACTION AND NOT ANALYZED**

Many agency and public comments received during the scoping process were determined to be outside the scope of action and thus were not analyzed for inclusion in the EIS. These comments included: expansion of the scope of shoreline vegetative removal; retaining a consultant to develop a cultural resources plan; provide training and provide on-site monitoring; and conducting extensive underwater archaeological surveys for cultural resources.

## **6.0 PRELIMINARY ALTERNATIVES**

Presented below are preliminary descriptions of the alternatives to be evaluated in the EIS that will be expanded during preparation of Chapter 2 of the Draft EIS. Issues raised during the scoping process will be integrated into the final iteration of alternatives. At the end of the scoping period only two alternatives had been identified to achieve the drawdown and habitat enhancement of East Lake Toho in Osceola County, Florida. More alternatives may emerge or the components of the proposed action altered

### **6.1 PROPOSED ACTION DESCRIPTION: EAST LAKE TOHO DRAWDOWN AND HABITAT ENHANCEMENT**

FWC proposes to drawdown East Lake Toho in Osceola County from 57.0 NGVD feet to 53.0 NGVD feet. This will be a temporary drawdown to accomplish demucking and vegetation removal activities for purposes of littoral zone wildlife habitat enhancement.

Four pumps with a combined capacity of 400 cubic feet per second (cfs) are proposed to be used to drain East Lake Toho. Pumps are necessary, as gravity-fed conveyance becomes inefficient as the lower East Lake Toho stage approaches that of Lake Tohopekaliga. The proposed drawdown will begin in October-November 2019 with work to be conducted in February-May 2019. Refill of East Lake Toho is proposed to begin in June 2019.

Modification of the Lake Tohopekaliga and East Lake Toho regulation schedules, which are established by the USACE WCP, will allow the temporary deviation in water levels in both lakes. Temporary WCP modification authorization is needed for East Lake Toho but should not be needed for Lake Tohopekaliga since water levels should remain within operating criteria.

Sheet piling and a flood control pump are planned be installed in the canal between East Lake Toho and Fells Cove, and in the canal between East Lake Toho and Lake Runnymede. These elements may be necessary to maintain normal lake stages upstream of the canals.

Approximately 114 acres of littoral zone will be mechanically scraped along the eastern shore and consolidated into two approximately one to two acre in-lake spoil islands. Woody vegetation on the western shore will be sprayed with herbicide and subsequently burned.

The proposed federal action is the USACE authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Toho to improve habitat conditions for fish and wildlife. The drawdown will require a deviation of East Lake Toho's WCP, and a Department of the Army permit for proposed fill in waters of the United States.

## **6.2 NO-ACTION ALTERNATIVE**

The No-Action Alternative assumes that no project will be implemented. This, then, will be the expected future condition of East Lake Toho if the requested Section 404 and Section 10 authorizations are not received, and the drawdown and habitat enhancements are not undertaken. Under the No-Action Alternative, the purpose and need for the Project will remain unmet, and needs may become increasingly worse in the future.

## 7.0 SUMMARY RESULTS OF SCOPING PROCESS

Input received from cooperating agencies during the scoping process changed the proposed action and added a companion component to the Project. FWC decided not to install sheet piling between East Lake Toho and Fells Cove. This decision was made because extensive sheet pile would be needed to isolate Fells Cove and it was assumed that the limited muck deposits in Fells Cove would not significantly impact East Lake Toho water quality upon refilling. It was noted that drawdown would provide muck consolidation and habitat benefits to Fells Cove.

Additionally, the City of St Cloud agreed to dredge the access canal of the City Marina and boat ramp prior to drawdown of East Lake Toho as a companion Project to provide boat access during the drawdown period (assuming funding availability).

As a result of the Agency Coordination Meeting, several changes were made to the preliminary EIS outline, including inclusion of an additional environmental resources (i.e., transportation) and modification of other topics (e.g., water quality was identified as needing to be a separate resource category). All parties agreed that drawdown of East Lake Toho will not start if snail kites are observed nesting. Florida SHPO and the Seminole Indian Tribe expressed concerns regarding cultural resources and recommended site surveys.

Comments received from the public were generally favorable of the proposed action, although concern was expressed about potential for visual intrusion with the creation of two spoils islands in East Lake Toho. Members of the public expressed interest in having the Project extended to their properties or inquired as to how to proceed with various activities on their own properties during the drawdown period (e.g., vegetation clearing and installation of boat docks).

These issues will be used in the development of alternatives to be addressed in the EIS process and the resources to be evaluated.

**Appendix A: Notice of Intent  
and  
News Release**



facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102-3.105(j) and 102-3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102-3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**  
Army Federal Register Liaison Officer.  
[FR Doc. 2017-23976 Filed 11-2-17; 8:45 am]  
BILLING CODE 5001-05-P

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

[Docket DARS-2017-0007; OMB Control Number 0704-0248]

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

**Title, Associated Form, and OMB Number:** Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704-0248.

**Type of Request:** Revision of a currently approved collection.

**Affected Public:** Businesses or other for-profit and not-for profit institutions.

**Respondent's Obligation:** Required to obtain or retain benefits.

**Reporting Frequency:** On occasion.

**Number of Respondents:** 153,000.

**Responses per Respondent:** 18, approximately.

**Annual Responses:** 2,800,000.

**Average Burden per Response:** .05 hours (3 minutes).

**Annual Burden Hours:** 140,000 hours.  
**Needs and Uses:** The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

**OMB Desk Officer:** Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at [Oiro\\_submission@omb.eop.gov](mailto:Oiro_submission@omb.eop.gov). Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

**Federal eRulemaking Portal:** <http://www.regulations.gov>. Follow the instructions for submitting comments.

**DoD Clearance Officer:** Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350-3100.

**Jennifer L. Hawes,**  
Editor, Defense Acquisition Regulations System.

[FR Doc. 2017-23984 Filed 11-2-17; 8:45 am]

BILLING CODE 5001-06-P

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

51228

Federal Register / Vol. 82, No. 212 / Friday, November 3, 2017 / Notices

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:** Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

**7. Public Involvement.** The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

**8. Coordination.** The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

**9. Agency Role.** The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

**10. Draft EIS Preparation.** The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

Donald W. Kinard,

Chief, Regulatory Division.

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

BILLING CODE 3720-68-P

#### DELAWARE RIVER BASIN COMMISSION

##### Notice of Public Hearing and Business Meeting November 15 and December 13, 2017

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

**Public Hearing.** The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

**Public Meeting.** The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

**Advance Sign-Up for Oral Comment.** Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

**Addresses for Written Comment.** Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

Regulatory Division  
North Permits Branch  
Cocoa Permits Section

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
COCOA PERMIT SECTION  
400 HIGH POINT DRIVE  
COCOA, FLORIDA 32926

November 3, 2017

## **PUBLIC NOTICE FOR SCOPING ENVIRONMENTAL IMPACT STATEMENT**

Permit Application Number SAJ-2015-02343 (SP-JSC)

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The *Drawdown and Habitat Enhancement of East Lake Tohopekaliga* (Osceola County) would require a deviation to the Water Control Plan for ELT, DA permit and Environmental Impact Statement for proposed fill in waters of the United States.

**SCOPING PROCESS:** USACE is furnishing this notice to advise other Federal and State agencies, affected federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process in preparation of the Draft EIS. A public scoping meeting (see DATES) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

**DATES:** The USACE will hold a public scoping meeting in preparation of the Draft Environmental Impact Statement (EIS) on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:** Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. Background / Project Authorization. USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 et seq.), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

2. Need or Purpose of Project. The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. Project Description. East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include herbicide application, prescribed burning and consolidation of organic sediments into two muck islands for long-term storage.

**NOTICE OF INTENT:** The Notice of Intent (NOI) to Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida will be published in the Federal Register November 3, 2017. The NOI can be found on the Federal Register website: <https://www.federalregister.gov/>

**Appendix B: Letters to State and Federal Agencies**



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Marla Hamilton, PhD  
Fish and Wildlife Biologist  
South Florida Ecological Services Field Office  
U.S. Fish and Wildlife Service  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960-3559

Dear Dr. Hamilton,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. By way of this letter, the Corps invites, and details opportunities for, the U.S. Fish and Wildlife Service (FWS) to participate in the EIS process.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the FWS does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions regarding the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

Copies furnished:

Marla Hamilton, Fish and Wildlife Biologist, South Florida Ecological Services Field Office, U.S. Fish and Wildlife Service (via email: [marla\\_hamilton@fws.gov](mailto:marla_hamilton@fws.gov))

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at [Oira\\_submission@omb.eop.gov](mailto:Oira_submission@omb.eop.gov). Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Marla Hamilton, PhD  
Fish and Wildlife Biologist  
South Florida Ecological Services Field Office  
U.S. Fish and Wildlife Service  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960-3559

Dear Dr. Hamilton,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. By way of this letter, the Corps invites, and details opportunities for, the U.S. Fish and Wildlife Service (FWS) to participate in the EIS process.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the FWS does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions regarding the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

Copies furnished:

Marla Hamilton, Fish and Wildlife Biologist, South Florida Ecological Services Field Office, U.S. Fish and Wildlife Service (via email: [marla\\_hamilton@fws.gov](mailto:marla_hamilton@fws.gov))

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at *Oira\_submission@omb.eop.gov*. Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Kimberly Rush  
Permitting Program Administrator  
Florida Department of Environmental Protection, Central District  
3319 Maquire Boulevard  
Orlando, Florida 32803

Dear Ms. Rush,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. By way of this letter, the Corps invites, and details opportunities for, the Florida Department of Environmental Protection (FDEP) to participate in the EIS process.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the FDEP does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions regarding the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

Copies furnished:

Jeff Prather, Director, Florida Department of Environmental Protection, Central District  
(via email: [jeff.prather@dep.state.fl.us](mailto:jeff.prather@dep.state.fl.us))

Kimberly Rush, Permitting Program Administrator, Florida Department of Environmental Protection, Central District (via email: [kim.rush@dep.state.fl.us](mailto:kim.rush@dep.state.fl.us))

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at *Oira\_submission@omb.eop.gov*. Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Dr. Timothy Parsons, SHPO  
ATTN: Compliance & Review-4th  
RA Gray Bldg  
500 South Bronough St  
Tallahassee, FL 32399-0250

Dear Mr. Parsons,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. By way of this letter, the Corps invites, and details opportunities for, the State Historic Preservation Office (SHPO) to participate in the EIS process.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the SHPO does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions regarding the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at *Oira\_submission@omb.eop.gov*. Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Zach Welch  
Senior Scientist  
South Florida Water Management District  
3301 Gun Club Road  
West Palm Beach, Florida 33406

Dear Mr. Welch,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. By way of this letter, the Corps invites, and details opportunities for, the South Florida Water Management District (SFWMD) to participate in the EIS process.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the SFWMD does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions regarding the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

Copies furnished:

Zach Welch, South Florida Water Management District (via email: [zwelch@sfwmd.gov](mailto:zwelch@sfwmd.gov))

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at *Oira\_submission@omb.eop.gov*. Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Gene Duncan  
Water Resources Director  
Miccosukee Tribe of Indians of Florida  
P.O. Box 440021  
Tamiami Station  
Miami, FL 33144

Dear Mr. Duncan,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. By way of this letter, the Corps invites, and details opportunities for, the Miccosukee Tribe of Indians of Florida (MTIF) to participate in the EIS process.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the MTIF does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions regarding the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at [Oira\\_submission@omb.eop.gov](mailto:Oira_submission@omb.eop.gov). Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Terry Torrens  
Natural Resources Manager  
Osceola County Board of County Commissioners  
1 Courthouse Square  
Kissimmee, Florida 34741

Dear Ms. Torrens,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. This letter details opportunities for Osceola County to participate in the process, as the County's input is integral to formulation of this EIS.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If Osceola County does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions about the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at *Oira\_submission@omb.eop.gov*. Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Cherise Maples  
Director, Environmental Resource Management  
Seminole Tribe of Florida  
6300 Stirling Road  
Hollywood, FL 33024

Dear Ms. Maples,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. By way of this letter, the Corps invites, and details opportunities for, the Seminole Tribe of Florida (STOF) to participate in the EIS process.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the STOF does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions regarding the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

Copies furnished:

Cherise Maples, STOF (via email: [cmaples@semtribe.com](mailto:cmaples@semtribe.com))

Stacey Myers, STOF (via email: [staceymyers@semtribe.com](mailto:staceymyers@semtribe.com))

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at [Oira\\_submission@omb.eop.gov](mailto:Oira_submission@omb.eop.gov). Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

Dr. Paul N. Backhouse, PhD  
Museum Director and Tribal Historic Preservation Officer  
Seminole Tribe of Florida  
Ah-Tah-Thi-Ki Museum  
30290 Josie Billie Hwy, PMB 1004  
Clewiston, FL 33440

Dear Mr. Backhouse,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. By way of this letter, the Corps invites, and details opportunities for, the Seminole Tribe of Florida (STOF) to participate in the EIS process.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the STOF does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions regarding the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payne  
Branch Chief, North Permits Branch

Copies furnished:  
STOF THPO (via email: [THPOCompliance@semtribe.com](mailto:THPOCompliance@semtribe.com))

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at [Oira\\_submission@omb.eop.gov](mailto:Oira_submission@omb.eop.gov). Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
**COCOA PERMITS SECTION**  
**400 HIGH POINT DRIVE, SUITE 600**  
**COCOA, FLORIDA 32926**

November 16, 2017

Regulatory Division  
North Permits Branch  
Cocoa Permits Section  
SAJ-2015-02343 (EIS-JSC)

The Honorable Nathan Blackwell  
Mayor of St. Cloud  
1300-9th Street  
St. Cloud, Florida 34769

Dear Mayor Blackwell,

The U.S. Army Corps of Engineers, Jacksonville District Regulatory Division (Corps) has initiated the process to develop an Environmental Impact Statement (EIS) for the Florida Fish and Wildlife Conservation Commission (FFWCC) proposed East Lake Tohopekaliga Drawdown and Habitat Enhancement Project. This letter details opportunities for the City of St. Cloud to participate in the process, as the City's input is integral to formulation of this EIS.

Pursuant to National Environmental Policy Act (NEPA) implementing regulations, the Corps is the lead Federal agency in the EIS process as defined in 40 CFR §1501.5. A copy of the Notice of Intent (NOI) to prepare an EIS, as published in the Federal Register, is enclosed. The NOI describes the proposed project and announces the beginning of the formal scoping period (November 5, 2017 - January 4, 2018) for the project. As part of the scoping process for identifying project alternatives and issues, the Corps invites you to participate in the following scoping meetings:

**Agency Scoping Meeting**

Tuesday, December 5, 2017 from 10:00 am – 12:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

**Public Scoping Meeting**

Tuesday, December 5, 2017 from 7:00 pm – 9:00 pm  
Osceola Heritage Park  
921 Kissimmee Valley Lane, Kissimmee, FL (Conference Rooms 161 and 162)

We also invite your participation as a Cooperating Agency in accordance with 40 CFR §1501.6; Cooperating Agency responsibilities are outlined at 40 CFR §1501.6. The

degree of your involvement in the process will be determined by the resource issues relevant to your special expertise and resource availability and commitments. We encourage your full participation in the EIS process within the scope of your jurisdiction and special expertise. As a Cooperating Agency, your participation would be established in a signed Memorandum of Understanding with the Corps at a later date. Generally, a Cooperating Agency is requested to provide the following during the development of the EIS:

- Meaningful and early input on the purpose and need, range of alternatives, methodologies and level of detail required by your agency to evaluate impacts to your resource(s);
- Participation in coordination meetings and/or field visits, as appropriate;
- Timely reviews and comments on the NEPA documents that explain the views and concerns of your agency on the adequacy of the document, anticipated impacts and mitigation; and
- Identification of the impacts and important issues to be addressed in the EIS relative to the alternatives and resource(s) in your jurisdiction.

If the City of St. Cloud does not wish to be a Cooperating Agency, you will have the opportunity to provide input as a Participating Agency. If you would like to become either a Cooperating or Participating Agency, the Corps respectfully requests that you respond to this invitation in writing. Your written response may be transmitted electronically to Jeffrey S. Collins (Senior Project Manager) by email at: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil) or by letter to U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Questions about the Proposed Action, Scoping and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771.

Sincerely,



Clif Payhe  
Branch Chief, North Permits Branch

Copy Furnished:

Deputy Mayor Dave Askew, City of St. Cloud  
Council Member Donny Shroyer, City of St. Cloud  
Council Member Linette Matheny, City of St. Cloud  
Council Member Chuck Cooper, City of St. Cloud  
City Manager, Bill Sturgeon, City of St. Cloud  
Assistant City Manager, Veronica Miller, City of St. Cloud  
Stephanie Holtkamp, Director, Parks and Recreation, City of St. Cloud

facility is fully handicap accessible. Wheelchair access is available at the main entrance of the building. For additional information about public access procedures, contact Mr. Kesten, the subcommittee's Alternate Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

**Written Comments or Statements:** Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the subcommittee, in response to the stated agenda of the open meeting or in regard to the subcommittee's mission in general. Written comments or statements should be submitted to Mr. Kesten, the subcommittee Alternate Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Alternate Designated Federal Official will review all submitted written comments or statements and provide them to members of the subcommittee for their consideration. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Alternate Designated Federal Official at least seven business days prior to the meeting to be considered by the subcommittee. Written comments or statements received after this date may not be provided to the subcommittee until its next meeting.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least seven business days in advance to the subcommittee's Alternate Designated Federal Official, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. The Alternate Designated Federal Official will log each request, in the order received, and in consultation with the Subcommittee Chair, determine whether

the subject matter of each comment is relevant to the Subcommittee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three minutes during the period, and will be invited to speak in the order in which their requests were received by the Alternate Designated Federal Official.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2017–23976 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–03–P**

## DEPARTMENT OF DEFENSE

### Defense Acquisition Regulations System

**[Docket DARS–2017–0007; OMB Control Number 0704–0248]**

#### Submission for OMB Review; Comment Request

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD)

**ACTION:** Notice.

**SUMMARY:** The Defense Acquisition Regulations System has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

**DATES:** Consideration will be given to all comments received by December 4, 2017.

#### SUPPLEMENTARY INFORMATION:

*Title, Associated Form, and OMB Number:* Defense Federal Acquisition Regulation Supplement (DFARS), Appendix F, Material Inspection and Receiving Report; OMB Control Number 0704–0248.

*Type of Request:* Revision of a currently approved collection.

*Affected Public:* Businesses or other for-profit and not-for profit institutions.

*Respondent's Obligation:* Required to obtain or retain benefits.

*Reporting Frequency:* On occasion.

*Number of Respondents:* 153,000.

*Responses per Respondent:* 18, approximately.

*Annual Responses:* 2,800,000.

*Average Burden per Response:* .05 hours (3 minutes).

*Annual Burden Hours:* 140,000 hours.

*Needs and Uses:* The collection of this information is necessary to process

shipping and receipt documentation for goods and services provided by contractors and permit payment under DoD contracts.

*OMB Desk Officer:* Ms. Jasmeet Seehra.

Comments and recommendations on the proposed information collection should be sent to Ms. Jasmeet Seehra, DoD Desk Officer, at *Oira\_submission@omb.eop.gov*. Please identify the proposed information collection by DoD Desk Officer and the Docket ID number and title of the information collection.

You may also submit comments, identified by docket number and title, by the following method:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*DoD Clearance Officer:* Mr. Frederick C. Licari.

Written requests for copies of the information collection proposal should be sent to Mr. Licari at: WHS/ESD Directives Division, 4800 Mark Center Drive, 2nd Floor, East Tower, Suite 03F09, Alexandria, VA 22350–3100.

**Jennifer L. Hawes,**

*Editor, Defense Acquisition Regulations System.*

[FR Doc. 2017–23984 Filed 11–2–17; 8:45 am]

**BILLING CODE 5001–06–P**

## DEPARTMENT OF DEFENSE

### Department of the Army; Corps of Engineers

#### Notice of Intent To Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army Corps of Engineers (USACE), Jacksonville District, Cocoa Permits Section field office, has received a request for Department of the Army (DA) authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899, from the Florida Fish and Wildlife Conservation Commission (FWC) for activities associated with the proposed drawdown, vegetation removal, and demucking of East Lake Tohopekaliga (ELT) to improve habitat conditions for fish and wildlife. The drawdown would require a deviation to the Water Control Plan for ELT and a DA permit for

proposed fill in waters of the United States.

**DATES:** The USACE will hold a public scoping meeting for the Draft EIS on December 5, 2017, at 7:00 p.m. Eastern Standard Time. Interested parties are invited to submit scoping comments to USACE by January 4, 2018.

**ADDRESSES:** The public scoping meeting will be held at Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Scoping comments may be submitted by mail or hand-delivered to: Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocoa Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926. Comments may also be submitted by email to: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil). All comments should include "East Lake Tohopekaliga Drawdown Comments" in the subject line.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the Proposed Action and Draft EIS should be directed to Mr. Collins by telephone at (321) 504-3771 or by email: [jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil).

**SUPPLEMENTARY INFORMATION:**

1. *Background/Project Authorization.* USACE is preparing this Draft EIS in accordance with National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulation [CFR] 1500 *et seq.*), and USACE provisions for implementing the procedural requirements of NEPA (33 CFR 230, USACE Engineering Regulation [ER] 200-2-2). A primary purpose of a USACE Regulatory Program EIS is to provide disclosure of the significant impacts of a proposal seeking a DA permit on the human environment. The Draft EIS and Final EIS are used to inform the public and agency decision-makers of alternatives to an applicant's project that may avoid or minimize impacts or enhance the quality of the human environment.

The EIS will address all the requirements of NEPA including applicable federal and state laws, regulations, and executive orders. A partial list of statutes to be addressed in the EIS includes: Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); Coastal Zone Management Act; Clean Air Act; Magnuson-Stevens Fishery Conservation and Management Act; Endangered Species Act; Fish and Wildlife Coordination Act; National Historic Preservation Act; Archeological and Historic Preservation Act; and Executive Order 11990, Protection of

Wetlands. Additional authority is provided in 33 CFR 222.5, Water Control Management (ER 1110-2-240).

2. *Need or Purpose of Project.* The purpose of the proposed activity is aquatic habitat improvement in ELT. Major contributors to deteriorating aquatic habitat in the ELT are water level stabilization and pollution from watershed development. Negative environmental changes include an increase in aquatic plant density and biomass, organic sediments, and a shift to invasive species. Dense bands of organic material have formed along the lakeshore and, combined with aquatic plants such as pickerelweed, cattail, and tussucks, form a barrier that keeps fish from shallow spawning areas. Decline in coverage of desirable aquatic vegetation negatively impact the diversity and abundance of forage organisms that depend on these plant communities. In turn, this directly contributes to reduced sport fish production and wading bird utilization.

3. *Project Description.* East Lake Tohopekaliga is an approximately 11,968-acre lake located in the Kissimmee Chain of Lakes. FWC is pursuing authorization from USACE, Jacksonville District Regulatory Division, to conduct a temporary drawdown of ELT to accomplish demucking and vegetation removal activities for purposes of littoral zone habitat enhancement. FWC proposes to draw down ELT in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet. Four pumps (combined capacity of 400 cfs) are proposed to be used to drain ELT; pumps are required because gravity-fed conveyance becomes inefficient as the lower ELT stage approaches that of Lake Tohopekaliga. The proposed drawdown would begin in October-November 2018, work conducted in February-May 2019, with the refill initiated in June 2019. Other proposed activities include:

a. Modification of the Lake Tohopekaliga and ELT regulation schedules as established by the USACE Water Control Plan, to allow a temporary deviation in water levels in both lakes.

b. Installation of sheet piling and a flood control pump in the canal between ELT and Fells Cove, and in the canal between ELT and Lake Runnymede. These constructed elements may be necessary to maintain normal lake stages upstream of the canals.

c. Approximately 115 acres of littoral zone will be mechanically scraped along the east shore and consolidated into two 1-2 acre in-lake spoil islands. Woody

vegetation within the scrape zone would be piled and burned.

d. Vegetation on the west shore would be sprayed with herbicide and subsequently burned.

4. *Issues.* Preliminary environmental and public interest factors have been identified and would be addressed in the EIS. Additional issues may be identified during the scoping process through commenting cooperating agencies and the public. USACE has preliminarily identified potential issues to include:

a. Potential impacts to threatened and endangered species, particularly the Everglades snail kite (*Rostrhamus sociabilis plumbeus*).

b. Required alteration of the Water Control Plan. The Master Water Control Manual for Kissimmee River-Lake Istokpoga Basin (USACE, 1994), which contains the relevant Water Control Plan, specifies coordination with USACE South Atlantic Division for review and approval of planned deviation requests.

c. Potential impacts to navigation, both commercial and recreational.

d. Potential aesthetic impacts to landowners with a viewshed of proposed disposal islands.

e. Potential impacts on public health and safety.

f. Potential impacts on waterborne recreation activities.

g. Potential impacts to cultural resources.

h. Potential economic impact on local businesses.

i. Potential air quality during burning of woody debris.

j. Potential water quality impacts during ELT drawdown, muck removal and creation of islands.

k. Potential concern regarding downstream discharges resulting from the ELT Drawdown.

l. Cumulative impacts of past, present and foreseeable future projects affecting ELT.

5. *Alternatives.* The Draft EIS will analyze reasonable alternatives to meet the project purpose and need. These alternatives will be further developed during the scoping process and an appropriate range of alternatives, including the no federal action alternative, will be considered in the EIS. Other preliminary alternatives to be considered include: Effectuating ELT drawdown with pumps; ELT drawdown without pumps; disposing of spoil material by truck-hauling off-site; and disposing of spoil material using in-lake disposal islands.

6. *Scoping Process.* USACE is furnishing this notice to advise other Federal and State agencies, affected

federally recognized Tribes, and the public of the proposed project. This notice announces the initiation of a 30-day scoping period which requests the public's involvement in the scoping and evaluation process of the Draft EIS. A public scoping meeting (see **DATES**) will be held to receive public comment and address public concerns concerning the scope of issues and level of analysis to be considered in preparation of the Draft EIS. Participation in the public meeting by federal, state and local agencies and other interested organizations and persons is encouraged. A detailed description of the study area will be developed following the scoping meeting, at which time USACE will determine the final study area for the EIS.

7. *Public Involvement.* The USACE invites Federal agencies, American Indian Tribal Nations, state and local governments, and other interested private organizations and parties to attend the public scoping meeting and to provide comments in order to ensure that all significant issues are identified and the full range of issues related to the permit request are addressed.

8. *Coordination.* The proposed action is being coordinated with a number of Federal, state, regional, and local agencies including but not limited to the following: U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Department of Environmental Protection, federally recognized Native American Indian Tribes, Florida State Historic Preservation Officer, Osceola County, the City of St. Cloud, and other agencies as identified in scoping, public involvement, and agency coordination.

9. *Agency Role.* The USACE will be the lead agency for the EIS. The USACE expects to receive input and critical information from federal, state and local agencies (see Coordination), either as commenting or cooperating agencies.

10. *Draft EIS Preparation.* The Draft EIS is expected to be published and circulated in late spring 2018. A Notice of Availability will be issued, which will open the public comment period. Comments will be accepted during the Draft EIS public comment period, which will last approximately 30 days.

Dated: October 24, 2017.

**Donald W. Kinard,**

*Chief, Regulatory Division.*

[FR Doc. 2017-23977 Filed 11-2-17; 8:45 am]

**BILLING CODE 3720-58-P**

## **DELAWARE RIVER BASIN COMMISSION**

### **Notice of Public Hearing and Business Meeting November 15 and December 13, 2017**

Notice is hereby given that the Delaware River Basin Commission will hold a public hearing on Wednesday, November 15, 2017. A business meeting will be held the following month on Wednesday, December 13, 2017. The hearing and meeting are open to the public and will be held at the Washington Crossing Historic Park Visitor Center, 1112 River Road, Washington Crossing, Pennsylvania.

*Public Hearing.* The public hearing on November 15, 2017 will begin at 1:30 p.m. Hearing items subject to the Commission's review will include draft dockets for withdrawals, discharges, and other water-related projects, as well as a resolution authorizing the Executive Director to enter into an agreement with the University of Maryland for the analysis of ambient water samples from the Delaware Estuary for primary productivity and associated nutrient parameters.

The list of projects scheduled for hearing, including project descriptions, and the text of the proposed resolution will be posted on the Commission's Web site, [www.drbc.net](http://www.drbc.net), in a long form of this notice at least ten days before the hearing date.

Written comments on matters scheduled for hearing on November 15 will be accepted through 5:00 p.m. on November 20. Time permitting, an opportunity for Open Public Comment will be provided upon the conclusion of Commission business at the December 13 Business Meeting; in accordance with recent format changes, this opportunity will not be offered upon completion of the Public Hearing.

The public is advised to check the Commission's Web site periodically prior to the hearing date, as items scheduled for hearing may be postponed if additional time is deemed necessary to complete the Commission's review, and items may be added up to ten days prior to the hearing date. In reviewing docket descriptions, the public is also asked to be aware that project details commonly change in the course of the Commission's review, which is ongoing.

*Public Meeting.* The public business meeting on December 13, 2017 will begin at 10:30 a.m. and will include: Adoption of the Minutes of the Commission's September 13, 2017 Business Meeting, announcements of upcoming meetings and events, a report on hydrologic conditions, reports by the

Executive Director and the Commission's General Counsel, and consideration of any items for which a hearing has been completed or is not required. The latter are expected to include a resolution authorizing the Executive Director to execute an agreement for the preparation of an actuarial evaluation of the Commission's "Other Post-Employment Benefit" ("OPEB") obligations, in accordance with Government Accounting Standards Board Statement No. 75 ("GASB 75").

After all scheduled business has been completed and as time allows, the Business Meeting will also include up to one hour of Open Public Comment.

There will be no opportunity for additional public comment for the record at the December 13 Business Meeting on items for which a hearing was completed on November 15 or a previous date. Commission consideration on December 13 of items for which the public hearing is closed may result in approval of the item (by docket or resolution) as proposed, approval with changes, denial, or deferral. When the Commissioners defer an action, they may announce an additional period for written comment on the item, with or without an additional hearing date, or they may take additional time to consider the input they have already received without requesting further public input. Any deferred items will be considered for action at a public meeting of the Commission on a future date.

*Advance Sign-Up for Oral Comment.* Individuals who wish to comment on the record during the public hearing on November 15 or to address the Commissioners informally during the Open Public Comment portion of the meeting on December 13 as time allows, are asked to sign-up in advance through EventBrite, the online registration process recently introduced by the Commission. Links to EventBrite for the Public Hearing and the Business Meeting are available at [drbc.net](http://drbc.net). For assistance, please contact Ms. Paula Schmitt of the Commission staff, at [paula.schmitt@drbc.nj.gov](mailto:paula.schmitt@drbc.nj.gov).

*Addresses for Written Comment.* Written comment on items scheduled for hearing may be made through SmartComment, the Web-based comment system recently introduced by the Commission, a link to which is posted at [drbc.net](http://drbc.net). Although use of SmartComment is strongly preferred, comments may also be delivered by hand at the public hearing; or by hand, U.S. Mail or private carrier to Commission Secretary, P.O. Box 7360, 25 Cosey Road, West Trenton, NJ 08628.

**Appendix C: Site Visit Topics of Discussion**

**East Lake Tohopekaliga  
Site Visit Notes  
November 1, 2017**

**Biological Assessment/Biological Opinion**

- Project would not proceed if snail kite nesting was observed during start of drawdown period (late October to November)
- Towards the end of actual drawdown if nesting were observed; the project could proceed

**Sheet Piling Weir between East Lake Toho and Fells Cove**

- A decision was made not to include this activity as part of the proposed action
- Not implementing this action would save over \$250K that could be used elsewhere on the project
- If sheet piling were to be installed would cost approximately \$350 per linear foot with only 50 feet constructed per day
- Estimated to take 1 week to construct weir
- Fells Cove is not considered a problem if weir is not constructed because of limited muck deposits and only isolated vegetation mats are anticipated to float to the top of lake during refilling

**Areas Proposed for Spray and Burn – Vegetation Management**

- Limited amount of accumulated organic matter has accumulated in these areas as they were previously scrapped during the last drawdown (Note: need to identify when this action was implemented for environmental impact statement (EIS) as part of the background in Chapter 1)
- Only the eastern portion of East Lake Toho was not scrapped during the previous drawdown

**Disposal Areas (North and South)**

- Two disposal sites on the east side of the lake are proposed to accommodate spoils material generated during the scrapping of the littoral zone in designated area on east side of the lake
- Disposal areas to be located as far as possible off shore – up to 3-foot water depth
- Material from the southern end of the scrap zone would be disposed on the south disposal site and material from the northern half of the scrap zone would be disposed on the north disposal site
- Each site would be approximately two acres in size
- Future vegetation disposal would be placed on top of the existing sites; the footprint of the disposal site would not be expanded
- Each disposal site would be minimally managed and allowed to evolve naturally unless complaints are received from landowners; in which case special accommodation might be made such as maintaining vegetation at waist height or planting of cypress trees on the near shore side of the spoils island
- The two disposal locations already have significant organic debris accumulation

**Eastern Lake Shore Proposed Scrap Area**

- Equipment staging would be on land near the southeast corner of the lake
- The berm with significant accumulated organic matter and woody vegetation would be removed
- Woody vegetation would be piled and burned

**Sheet Piling Weir between East Lake Toho and Lake Runnymede**

- Absolutely necessary to construct at this location as Lake Runnymede has thick muck layer that would be impacted during lake refilling process (e.g., thick floating mats)
- Access canal is rather narrow; the weir would not be too long
- Weir should be placed near Rummel Road

**City of St Cloud Marina/Boat Ramp**

- For the marina and boat ramp to remain active during the drawdown period, the City of St Cloud would be required to dredge the access channel
- If at least one boat access is not provided during the drawdown period this could be a game changer. On similar projects, FWC has traditionally provided at least one point of access.

**Attendees:**

Jeff Collins (USACE), Rachel Gray (USACE), Terry Torrens (Osceola County), Stephanie Holtkamp (City of St Cloud), Mahmoud Madkour (FWC), Don Fox (FWC), Tim Coughlin (FWC), Beacham Furse (FWC), Tyler Beck (FWC), Marla Hamilton (USFWS), Tom St Clair (Louis Beger, SFEC Team), Andy Gottlieb (SFEC), Chris McVoy (SFEC), Michael Adler (SFEC), and David Niemi (SFEC).

**Appendix D: Agency Coordination Meeting Agenda**

## Agenda

### Agency Consultation Meeting

#### East Lake Toho Drawdown and Habitat Enhancement EIS

December 5, 2017

- Welcome & introductions
- Project purpose & need
- Project description
- Tentative alternatives
  - Effectuating ELT drawdown with pumps
  - ELT drawdown without pumps
  - Disposing of spoil material by truck-hauling off-site; and
  - Disposing of spoil material using in-lake disposal islands
- Input on alternatives
- Issues/concerns to be addressed in the EIS
- Environmental resources to be addressed in EIS
- EIS schedule
- Opportunities for Agency review/input during EIS preparation
  - Scoping
  - Preliminary Draft EIS
  - Preliminary draft Final EIS
- Cooperating Agencies/Role
- Scoping Summary Report
- Admin Record

**Appendix E: Agency Coordination Meeting Summary**

**East Lake Toho Water Drawdown and Habitat Enhancement  
Environmental Impact Statement  
Agency Coordination Meeting**  
Osceola Heritage Park  
1875 Silver Spur Lane  
Kissimmee, Florida  
December 5, 2017

**Participants:**

U.S. Army Corps of Engineers

Jeff Collins, Stephanie Raulerson and Andy Loschiavo

Florida Fish and Wildlife Conservation Commission

Mahmoud Madkour, Tim Coughlin, Beacham Furse and Donald Fox

South Florida Water Management District

Zach Welch and Bill Graf

U.S. Environmental Protection Agency

Jamie Higgins

U.S. Fish and Wildlife Service

Marla Hamilton

Florida Department of Environmental Protection

Jeff Prather and Nicole Mae

Osceola County

Rick Baird and Jeremy Buchanon

South Florida Engineering and Consulting Team

Tom Conboy, Andy Gottlieb, Michael Adler, Chris McVoy, Tom St Clair (Louis Berger),  
Sue Byrd and Terry Clark (Staff Connections)

**Project Overview Discussion**

- Managed drawdowns would temporarily stabilize water levels in East Lake Toho at 53feet NGVD
  - Four 100 cubic feet per second (cfs) pumps to be used for pumping (400cfs total capacity) to facilitate the drawdown
- South Florida Water Management District (SFWMD) modeling suggests that 400 cfs pump capacity is sufficient to achieve drawdown objectives
- Currently water levels do not fluctuate enough
  - Historically wet season highs pushed sediment, vegetation and detritus up into the floodplain of East Lake Toho
  - Historically lower water levels helped to consolidate and oxidize organic sediments and muck

- Revitalization of Kissimmee Chain of Lakes Project is scheduled for completion in 2020 and could affect East Lake Toho project schedule
- Extremely wet or dry years would likely cause delay of Project
- Temporary modification/deviation of Water Control Schedule is needed for the Project
- Herbicides specific to invasive plants in project area will be used
- Contaminant analysis, organic content and nutrient analysis concerns; FWC has soil scientists and assumes standard analysis would be completed
- MIKE and MIKESHE modeling will be used for Project effects analysis
- Eight snail kite nests were identified on Lake Toho during 2017 season
- University of Florida (UF) monitored Lake Toho Project for nutrient leaching post construction
- A monitoring plan was suggested to be implemented prior to the Project start along with post-project monitoring, e.g., 2 years after construction
- Chisholm Park would be closed during drawdown and dredging of access canal might be undertaken by the City of St Cloud, but not as part of proposed action
- Spray and or burn would not be close to the safe development line and would target dense plant areas (cattail and exotics) within the currently delineated polygons
- Florida Fish and Wildlife Conservation Commission (FWC) is aware that growth of invasive plants could increase during the drawdown
- Fells Cove (up-stream) is not within Project scrape or vegetation treatment area
- Spoil islands - little available land to place spoil material within 5 miles of East Lake Toho; therefore, islands are more feasible and economical (when hauling costs are considered)
- The spoil islands (2) would be 1-2 acres each; max of 15 feet in height
  - Expected need is for 100,000 cubic feet of wet material storage
  - Relatively rapid 2-3 foot drop in island elevations expected due to dewatering and settling
  - 12-24 months to obtain final height
  - Island height would be limited to approximately 14 to 15 feet so that vegetation can grow
- Monitoring and needed maintenance of islands would be performed quarterly by FWC
- Planting of cypress is proposed to improve vista from the shoreline
- Proposed suggestion to mix sand with muck to stabilize spoil islands
  - Additional costs
  - Sand is already present in muck (suggested need for analysis of soil organic content along with other soil parameters, nutrient levels)

### **Alternative Considerations**

- Modify alternatives to indicate Fells Cove will no longer require sheet piling as part of the project description
- Could Chisholm Park be used as an upland disposal site—City of St. Cloud
- Suggest using only one island and Chisholm Park
- Drawdown only or drawdown with targeted scrape and muck removal

**Project Schedule**

- Project schedule
  - Draft EIS is scheduled to be delivered June 2018
  - Final EIS is expected August 2018
  - ROD is expected November 2018

**Biological Opinion**

- Biological Opinion will take 135-days from submission to conclusion per Marla Hamilton (U.S. Fish and Wildlife Service [FWS])

**Project Benefits**

- Possible that new plant communities may provide nesting habitat for Snail Kites (although both FWS and FWC representatives indicate that the majority of nests in 2017 were in cattail not bulrush; this needs to be factored into EIS effects analysis)
- Spoil Islands - provide future disposal area for vegetation harvesting without lake drawdown (however, long-term aesthetic disadvantage for some shoreline residents and boaters)
- Nutrients would be consolidated into spoil islands and be less available than in current tussock or floating muck island distribution
- Little nutrient leaching expected after island settles (12-24 months)
- Past observations indicate the spoil islands grow vegetation rapidly
- One boat ramp will be available during Project implementation
- Opportunity for landowners to install docks and make other improvements (vegetation maintenance) during drawdown per Osceola County and FWC
- Fish camp may make improvements during drawdown period per Osceola County representative (SFEC team to verify)

**Project Concerns/Issues**

- Concern for potential drawdown of retention ponds within East Lake Toho's cone of influence for area north of lake
  - Determine if land owners would be affected
  - Determine number of land owners that might be affected
  - SFEC can conduct additional analysis if tasked (i.e. MVLIR model analysis or other)
- Boggy Creek air boats may not be available during drawdown period – need to document economic impact
- Need for soil sampling to determine contaminants and nutrient levels
- Muck clumps liberated from sediments during East Lake Toho refill
- Island stabilization and soil loss
- Water quality - potential leaching of nutrients from spoil islands
- Fish camp - need an economic analysis
- Exotic vegetation response
- Cottages affected during Project implementation might lose revenue
- Gravity feed vs pump
  - Gravity feed would stop when lake levels become equal

- Data needs (muck volume estimate, most current vegetation mapping)
- Harm to some species, particularly invertebrate communities and amphibian fauna from muck scraping
- Smoke, ash and health concerns from burn would be monitored by Florida Forest Service
- South-end East Lake Toho marina will be open during drawdown (City will try to keep boat ramp useable during Project implementation)
- Relationship to LORS- If water is being discharged from Lake Okeechobee to either of the estuaries, the project drawdown should be postponed. Although likely minimal total water will be discharged relative to LO volumes, the perception that this action could add 400 cfs additional flow to the estuaries is problematic. Further model evaluation can be conducted to better understand volumes contributed by the proposed project action.

### **Actions**

- Request for temporary deviation of WCP (USACE to SFWMD)– Stephanie Raulerson
- Sewer vs septic issues – Osceola County contact provided by Rick Baird – Tom Conboy
- Endangered, threatened and species of concern (federal and state) list for Biological Assessment (which is needed for BO) – Marla Hamilton
- Identify existing data and data gaps, and develop recommended draft monitoring plan – Andy Gottlieb
- WCP modification; how long will it take and will it meet October 2019 schedule – Andy Loschiavo
- Contact fish camp to determine if improvements would be initiated during drawdown period – Tom St Clair
- Need to determine cooperating agencies – Jeff Collins

**Appendix F: Attendees at Public Scoping Meeting**

### East Lake Toho EIS Scoping Meeting December 5, 2017 Attendees

First Name	Last Name	Phone	Email
Roland	Cruse	407-607-9058	crusester@gmail.com
John	Matura	407-451-5037	jpmatura@yahoo.com
Tom	Conboy	561-421-6997	tconboy@sfec.us
Mahmoud	Madkour	850-251-0629	Mahmoud.madkour@myfwc.com
Stephanie	Holtkamp	407-957-7246	sholtkamp@stcloud.org
Nicole	Martin	407-897-2948	Nicole.Martin@dep.state.fl.us
Jeff	Prather	407-897-2908	Jeff.Prather@dep.state.fl.us
Michael	Adler	561-236-2262	Madler@sfec.us
Donald	Fox	863-261-0855	Donald.fox@myfwc.com
Zach	Welch	561-682-2824	zwelch@sfwmd.gov
Tom	St. Clair	904-303-0919	ststclair@louisberger.com
Sue	Byrd	386-965-5228	sbyrd@sfec.us
Tim	Coughlin	407-908-5296	Tim.coughlin@myfwc.com
Andy	Gottlieb	561-635-4374	adgottlieb@sfec.us
Terry	Clark	561-346-6392	terry@staffconnections.com
Rick	Baird	407-742-8653	Rick.baird@osceola.org
Jeremy	Buchanon	407-742-8652	Jeremy.buchanon@osceola.org
Jamie	Higgins	404-562-9681	Higgins.jamie@epa.gov
Christopher	McVoy	561-398-6115	cmcvoy@sfec.us
Bill	Graf	352-516-5436	Wgraf.sfwmd.gov
Beacham	Furse	863-824-4164	Beacham.furse@myfwc.com
Richard	Beam	904-806-2379	BeamRcb@gmail.com
Kevin	McDaniel	321-624-9470	kevinmcdaniel@myfwc.com
Travis	Schmiff	407-460-5105	susierterc@comcast.net
Mark	Gregg	407-718-2561	Greggmark76@msn.com
Joann	Bukovey	407-375-8784	bukovey@aol.com
Caleb	Calhoun	407-908-3008	caleb@floridacoach.com
Jolene	Sheire	451-908-1840	jsheire@gmail.com
Dwight	Loeding	407-234-0574	Dwight@creativeprintingfl.com

Jeff	Prather	407-897-2908	Jeff.prather@dep.state.fl.us
Steve	Rockwood	772-532-5172	Steve.rockwood@myfwc.com
Ed	Harris	321-246-0573	Ed.harris@myfwc.com
Sevket	Acar	303-359-7696	Sevket.acar@outlook.com
Linette	Matheny	407-288-9359	Linette.matheny@stcloud.org
Ray	Winch	407-421-5518	raywinch@me.com
Valera	Senden	407-973-1765	Valera20@mac.com
Dan	Senden	813-927-3415	Daniel_senden@reyrey.com
Pam and Andy	Skinner	706-499-4868	Ps16@winstream.net
Mona and Larry	Beasley	321-271-1805	Beazbay3@aol.com
Paul	Crumpler	407-764-3431	
Edna	Lucey	407-908-9501	Elucey5859@embarqmail.com
David	Lucey	407-908-9500	Dlucey5859@embarqmail.com
Sandy	Huff	407-619-4475	Shuff3@comcast.net
John	Williams	407-319-2065	johnwilliams
Bill	Chesarek	407-593-2820	billchesarek@hotmail.com
Michael	Schmidt	407-460-0178	Mschmidt1050@comcast.net
Ann	Schneider	407-433-4622	Amschneider7@comcast.net
David	Bukovey	407-375-8686	Bukovey1@aol.com
Daniel	Warner	407-468-4251	dwarner@nobts.edu
Valerie	Andersen	386-852-2539	
Rick	Baird	407-742-8653	Rick.baird@osceola.org
John	McLeroy	321-287-3650	thecaptian@captian
Nancy	Licata	407-920-7100	tacsma@aol.com
Chris	Licata	407-765-2819	hdrkclc@bellsouth.net
Dwight	Brewer	407-201-8838	Usna78@gmail.com
Brian	Kepner	407-591-2969	kepner@osceola.k12.st.us
Marty	Mann	321-624-6090	Marty.mann@myfwc.com

**Appendix G: Public Scoping Meeting Agenda**

## Scoping Meeting Agenda

## East Lake Toho Drawdown and Habitat Enhancement EIS

December 5, 2017

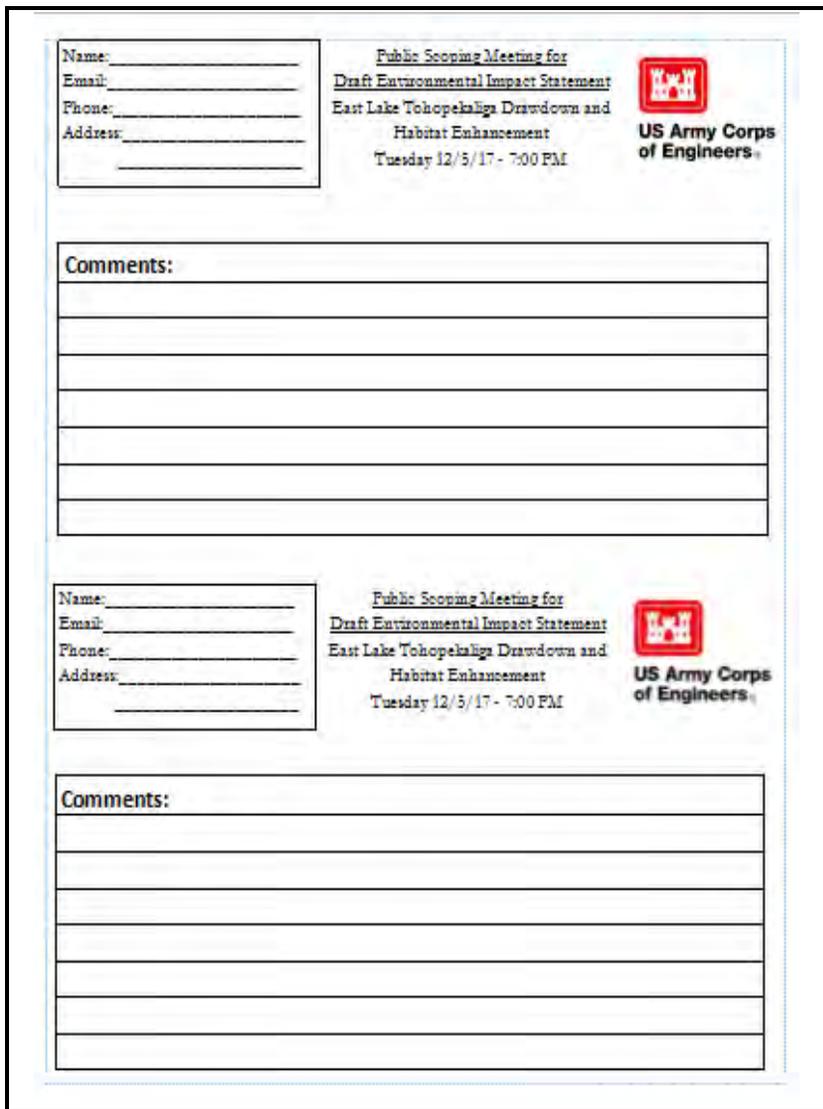
7:00 pm to 9:00 pm

- 6:30 – 7:00 pm: Sign-in/welcome & informal open house
- 7:00 – 7:30 pm: Open house session with four technical stations
  - Station 1: East Lake Toho drawdown project overview
  - Station 2: East Lake Toho EIS process
  - Station 3: Landowner permitting
- 7:30-8:00 pm: Formal presentation
- 8:00-8:30 pm: Receipt of formal public comments
- 8:30-9:00 pm: Continuation of open house session

## Providing Public Comment

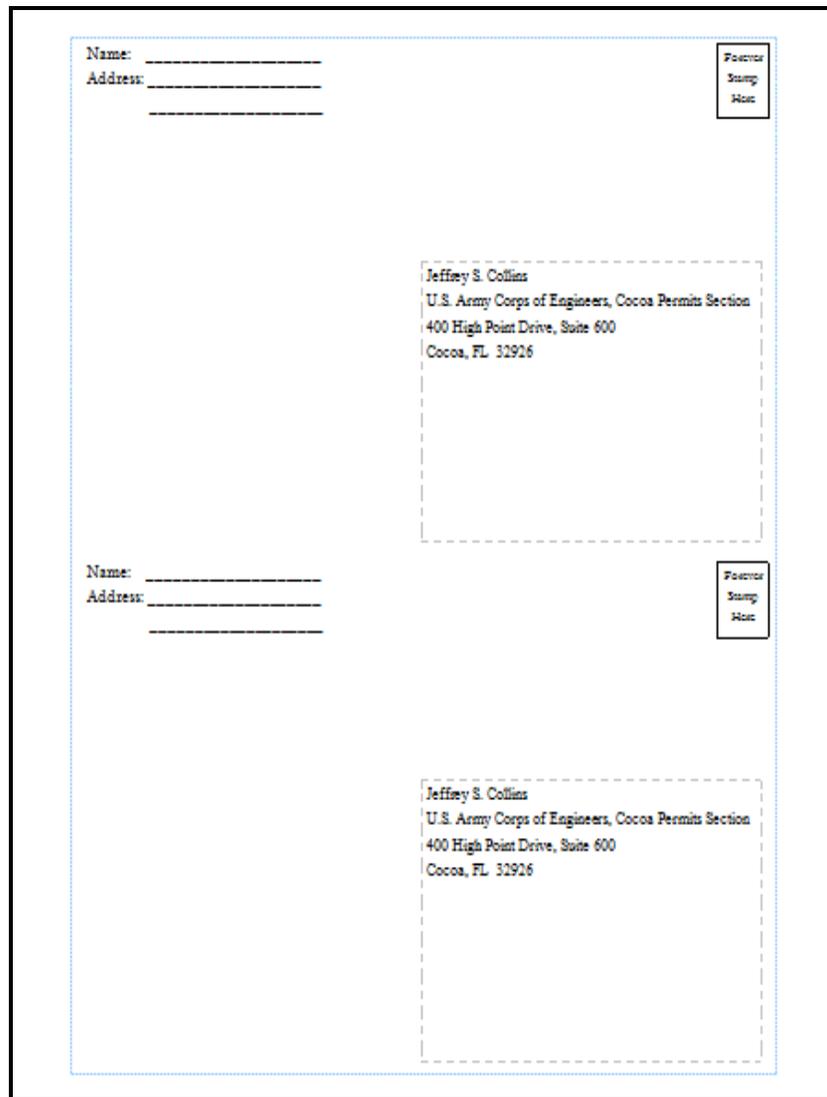
- Complete comment form and hand in tonight
- Send written comment to USACE at the address below:  
Jeffrey S. Collins  
U.S. Army Corps of Engineers, Cocoa Permits Section  
400 High Point Drive, Suite 600  
Cocoa, FL 32926
- Comments may also be submitted by email to:  
[jeffrey.s.collins@usace.army.mil](mailto:jeffrey.s.collins@usace.army.mil); (comments should include *East Lake Tohopekaliga Drawdown Comments* in the subject line)
- Provide verbal comments for recording tonight

**Appendix H: Comment Card**



The front of the comment card is divided into two identical sections. Each section features a contact information box on the left with fields for Name, Email, Phone, and Address. To the right of this box is the event title: "Public Scoping Meeting for Draft Environmental Impact Statement East Lake Tohopekaliga Drawdown and Habitat Enhancement Tuesday 12/5/17 - 7:00 PM". Below the title is the US Army Corps of Engineers logo and name. A large "Comments:" section with seven horizontal lines is positioned below the contact information.

Figure I-1: Front of Comment Card



The back of the comment card features two identical sections. Each section has a contact information box on the left with fields for Name and Address. To the right is a dashed-line box containing the address: "Jeffrey S. Collins, U.S. Army Corps of Engineers, Cocos Permits Section, 400 High Point Drive, Suite 600, Cocoa, FL 32926". A small box in the top right corner of each section contains the text "Forward Stamp Here".

Figure I-2: Back of Comment Car

**Appendix I: Comment Summary Table**

Individual commenters were assigned a unique Comment Number. Different topics within each comment were given an alphabetical identifier. Comment Numbers and alphabetical identifiers do not reflect importance nor have any significance other than serving as a reference for agency review and analysis.

The designation “ACM” refers to concerns and issues raised during an Agency Coordination Meeting. Otherwise, traditional acronyms are used to identify organizations in the table below.

<b>Comment Number</b>	<b>Name and Organization</b>	<b>Comment</b>	<b>Topic(s) Within Scope</b>	<b>Topic(s) Out of Scope</b>
1a	Scott Davis Homeowner	It does not make sense to partially scrape the lake shore areas only to have to repeat the process later for those areas not included in the proposal.	<ul style="list-style-type: none"> <li>• Soil erosion</li> <li>• Accumulation of organic muck</li> <li>• Effects on local homeowners</li> </ul>	Scraping of entire lake’s littoral zone not planned in current project
1b	Scott Davis Homeowner	Lake shore behind Oakbank Court properties needs scraping.	<ul style="list-style-type: none"> <li>• Effects on local homeowners</li> </ul>	Not planned in current project
1c	Scott Davis Homeowner	Dense vegetation behind Oakbank Court includes vines, which overtake other vegetation.	<ul style="list-style-type: none"> <li>• Effects on local homeowners</li> </ul>	Not planned in current project
1d	Scott Davis Homeowner	Consider burning the vegetation behind Oakbank Court properties as is planned for the western and northern lake shores.	<ul style="list-style-type: none"> <li>• Effects on local homeowners</li> </ul>	Not planned in current project
1e	Scott Davis Homeowner	Many water fowl and wading birds will benefit from clearing of vegetation behind Oakbank Court.	<ul style="list-style-type: none"> <li>• Migratory birds</li> </ul>	Not planned in current project
1f	Scott Davis Homeowner	Spoil islands may not benefit East Lake Toho or aquatic life.	<ul style="list-style-type: none"> <li>• Disposition of spoil</li> </ul>	None
1g	Scott Davis Homeowner	Spoil islands may negatively affect property values.	<ul style="list-style-type: none"> <li>• Effects on local landowners</li> </ul>	
1h	Scott Davis Homeowner	Previously dredged areas have filled in again, reducing the ability for navigation.	<ul style="list-style-type: none"> <li>• Navigation</li> <li>• Effects on local landowners</li> </ul>	
1i	Scott Davis Homeowner	Rotting vegetation may affect air quality.	<ul style="list-style-type: none"> <li>• Air quality</li> <li>• Effects on local landowners</li> </ul>	
1j	Scott Davis Homeowner	Clearing of vegetative overgrowth behind Oakbank Courts will allow residents to enjoy viewing of water fowl and wading birds.	<ul style="list-style-type: none"> <li>• Migratory birds</li> <li>• Effects on local landowners</li> </ul>	

<b>Comment Number</b>	<b>Name and Organization</b>	<b>Comment</b>	<b>Topic(s) Within Scope</b>	<b>Topic(s) Out of Scope</b>
1k	Scott Davis Homeowner	Spoil islands may affect sight lines.	<ul style="list-style-type: none"> <li>• Visual intrusion</li> <li>• Effects on local landowners</li> </ul>	
2a	EPA, Jamie Higgins NEPA Program Office	Adverse effects to water quality, especially total suspended solids (TSS), total phosphorous (TP) and total nitrogen (TN).	<ul style="list-style-type: none"> <li>• Water quality</li> </ul>	
2b	EPA, Jamie Higgins NEPA Program Office	East Lake Toho is impaired for mercury and nutrients.	<ul style="list-style-type: none"> <li>• Water quality</li> </ul>	
2c	EPA, Jamie Higgins NEPA Program Office	There is an approved total maximum daily load (TMDL) for mercury, but none for nutrients.	<ul style="list-style-type: none"> <li>• Water quality</li> </ul>	
2d	EPA, Jamie Higgins NEPA Program Office	A study* of a previous drawdown and habitat enhancement project is under review; would like to discuss results with FWC and USACE later.	<ul style="list-style-type: none"> <li>• Water quality</li> <li>• Monitoring</li> </ul>	Future meeting among EPA, USACE and FWC
2e	EPA, Jamie Higgins NEPA Program Office	Consider water quality monitoring program like that described in the study* mentioned in 2d.	<ul style="list-style-type: none"> <li>• Water quality</li> <li>• Monitoring</li> </ul>	
2f	EPA, Jamie Higgins NEPA Program Office	Work closely with recreational users such as fishermen, boaters, personal water craft users, canoers and kayakers to avoid effects on recreation.	<ul style="list-style-type: none"> <li>• Recreation</li> <li>• Outreach</li> </ul>	
2g	EPA, Jamie Higgins NEPA Program Office	USACE and FWC: Solicit user group input regarding temporary effects associated with construction.	<ul style="list-style-type: none"> <li>• Outreach</li> </ul>	
2h	EPA, Jamie Higgins NEPA Program Office	USACE: Solicit user group input regarding long-term effects associated with muck removal and island creation.	<ul style="list-style-type: none"> <li>• Outreach</li> </ul>	
2i	EPA, Jamie Higgins	USACE: Evaluate and document potential adverse	<ul style="list-style-type: none"> <li>• Socioeconomic and community</li> </ul>	

<b>Comment Number</b>	<b>Name and Organization</b>	<b>Comment</b>	<b>Topic(s) Within Scope</b>	<b>Topic(s) Out of Scope</b>
	NEPA Program Office	and positive effects associated with temporary economic effects of various alternatives.		
2j	EPA, Jamie Higgins NEPA Program Office	USACE: Evaluate and document potential adverse and positive effects associated with long-term economic effects of various alternatives.	• Socioeconomic and community	
2k	EPA, Jamie Higgins NEPA Program Office	USACE and FWC: Continue community and business outreach to local officials and residents to ensure education on effects of herbicide application and controlled burn activities.	• Outreach	
2l	EPA, Jamie Higgins NEPA Program Office	USACE and FWC: Continue to analyze best approach to balancing invasive species eradication and avoidance of potential negative effects of herbicide application and controlled burns.	• NEPA Process	
2m	EPA, Jamie Higgins NEPA Program Office	USACE: Consider proposed project's effects on low income, minority populations as described in Executive Order 12898.	• NEPA Process	None
2n	EPA, Jamie Higgins NEPA Program Office	USACE: Disclose any effects on low income, minority communities in the NEPA document.	• NEPA Process	None
3a	SHPO 2009	Identified archaeological sites have been identified near the project.	• Cultural Resources	None
3b	SHPO 2009	A "general vicinity" site mound, 8OS16, is located within Project Area C.	• Cultural Resources	None
3c	SHPO 2009	An archaeological consultant should identify sensitive areas of East Lake Toho and disposal sites.	• Cultural Resources	
3d	SHPO 2009	An archaeological consultant should be on site periodically to monitor project activities.	• Cultural Resources	

<b>Comment Number</b>	<b>Name and Organization</b>	<b>Comment</b>	<b>Topic(s) Within Scope</b>	<b>Topic(s) Out of Scope</b>
3e	SHPO 2009	An archaeological consultant should develop a short training session for heavy equipment operators and agency staff; training should cover what may be found during demucking activities and steps to be taken should artifacts be found.	• Cultural Resources	
3f	SHPO 2009	An archaeological consultant should be the contact person should residents or the media have questions regarding project cultural aspects.	• Cultural Resources	Not planned in current project
3g	SHPO	Include development and execution of a plan for the identification and protection of cultural resources.	• Cultural Resources	None
4a	STOF-THPO	Continue to consult STOF on this project.	• Cultural Resources	None
4b	STOF-THPO	Drawdown and subsequent muck removal may disturb unknown archaeological resources located within the East Lake Toho.	• Cultural Resources	None
4c	STOF-THPO	Canoes or burials may be present within East Lake Toho.	• Cultural Resources	None
4d	STOF-THPO	Several mound sites around East Lake Toho shore contain human remains.	• Cultural Resources	None
4e	STOF-THPO	Conduct a Cultural Resources Assessment Survey that consists of underwater surveying techniques such as magnetometry and side-scan sonar.	• Cultural Resources	Not planned in current project
5a	Counsel for Plaza Lakes, LLC	Removal of vegetative barrier adjacent to Plaza Lakes property (immediately north of Kissimmee Bay Country Club) will be beneficial visually, and for passive entertainment and fishing.	• Vegetation	Not planned in current project
5b	Counsel for Plaza Lakes, LLC	Request area from the entrance to Boggy Creek south and west be cleaned up.	• Vegetation	Not planned in current project

<b>Comment Number</b>	<b>Name and Organization</b>	<b>Comment</b>	<b>Topic(s) Within Scope</b>	<b>Topic(s) Out of Scope</b>
5c	Counsel for Plaza Lakes, LLC	Property owner may be willing to receive spoil from the project, and has received the same in past enhancement activities.	<ul style="list-style-type: none"> <li>• Vegetation</li> </ul>	Not planned in current project
6a	Valerie Anderson, Homeowner	If the goal is to remove organic matter in East Lake Toho mimicking historical level fluctuations, the mud that is scraped off the berm should not be redeposited within the lake.	<ul style="list-style-type: none"> <li>• Water Management</li> </ul>	
6b	Valerie Anderson, Homeowner	As spoil islands will be reseeded, they will provide minimal wildlife habit and almost certainly will harbor invasive species. (Comment split into two under sections 4.3 and 4.5)	<ul style="list-style-type: none"> <li>• Vegetation</li> <li>• Fish &amp; Wildlife</li> </ul>	
6c	Valerie Anderson, Homeowner	If the spoil island alternative is chosen, please plant appropriate native vegetation on and around the islands (tupelo, cypress).	<ul style="list-style-type: none"> <li>• Vegetation</li> </ul>	
6d	Valerie Anderson, Homeowner	FWC and USACE should consider the ecosystem function and water quality/storm water treatment function of the wetlands behind the berm	<ul style="list-style-type: none"> <li>• Water quality</li> <li>• Fish &amp; Wildlife</li> </ul>	
7a	Richard Beam, Homeowner	Lake Runnymede needs to be lowered at the same time as East Lake Toho, so residents can clean that area. [Richard Beam, Homeowner]	<ul style="list-style-type: none"> <li>• Water Management</li> </ul>	Not planned in current project
7b	Richard Beam, Homeowner	Can you dredge the canal from Runnymede to East Lake Toho? You cannot get through with a boat now. It will be worse if you dam it for months.	<ul style="list-style-type: none"> <li>• Navigation</li> </ul>	Not planned in current project
8a	ACM	Concern for potential drawdown of retention ponds within East Lake Toho's cone of influence for area north of lake:	<ul style="list-style-type: none"> <li>• Water Management</li> </ul>	Not planned in current project (modeling analyses)

<b>Comment Number</b>	<b>Name and Organization</b>	<b>Comment</b>	<b>Topic(s) Within Scope</b>	<b>Topic(s) Out of Scope</b>
		<ul style="list-style-type: none"> <li>• Determine if landowners will be affected;</li> <li>• Determine number of landowners that may be affected;</li> <li>• SFEC can conduct additional analyses if tasked (i.e., MVLR model analysis or other).</li> </ul>		
8b	ACM	Boggy Creek air boats may not be available during drawdown period – need to document economic impact.	• Socioeconomics	
8c	ACM	Need for soil sampling to determine contaminants and nutrient levels.	• Soils and Geology	
8d	ACM	Potential for muck clumps to be liberated from sediments during refill of East Lake Toho.	• Soils and Geology	
8e	ACM	Address island stabilization and soil loss.	• Soils and Geology	
8f	ACM	Water quality – potential leaching of nutrients from spoil islands	• Water Quality	
8g	ACM	Fish camp – need an economic analysis	• Socioeconomics	
8h	ACM	Exotic vegetation response monitoring.	• Vegetation	
8i	ACM	Cottages affected during project implementation may lose revenue.	• Socioeconomics	
8j	ACM	Gravity feed versus pumping of water – gravity feed will stop when the levels of Lake Tohopekaliga and East Lake Toho become equal.	• Water Management	
8k	ACM	Data needs – including muck volume estimate and most current vegetation mapping.		
8l	ACM	Potential harm to some species, particularly invertebrate communities and amphibian fauna from muck scraping.		
8m	ACM	Smoke, ash and health concerns from burn will be		

Comment Number	Name and Organization	Comment	Topic(s) Within Scope	Topic(s) Out of Scope
		monitored by Florida Forest Service.		

\* Reference for the study mentioned in Comments 2d and 2e:  
 Hoyer, Mark V., et. al “Evaluation of Lake Tohopekaliga Habitat Enhancement Project”, University of Florida, Institute of Food and Agricultural Sciences, December 2006

**Appendix J: EPA Acceptance Letter**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

November 17, 2017

Jeffrey S. Collins  
Department of the Army  
U.S. Army Corps of Engineers, Jacksonville District  
Cocoa Permits Section  
4000 High Point Drive, Suite 600  
Cocoa, Florida 32926

Re: U.S. Army Corps of Engineers (USACE) Cooperating Agency Request for  
the East Lake Tohopekaliga Environmental Impact Statement

Dear Mr. Collins:

The U.S. Environmental Protection Agency has received your letter dated November 16, 2017, offering the EPA an opportunity to become a "cooperating agency" to the USACE in the development of the Environmental Impact Statement (EIS) for the permit application pursuant to Section 404 of the Clean Water Act (CWA) for the proposed East Lake Tohopekaliga (ELT) Drawdown and Habitat Enhancement. The Florida Fish and Wildlife Conservation Commission (FWCC) is the permit applicant. The EIS will assess the potential effects of the proposed ELT and a range of reasonable project alternatives on waters of the United States.

The ELT EIS is intended to satisfy the requirements of the National Environmental Policy Act (NEPA) as well as the USACE's implementing regulations at 33 Code of Federal Regulations (CFR) Parts 320-332. The EPA understands that the USACE's responsibilities as the lead Federal agency for this EIS are defined in 40 CFR 1501.5, while the EPA's responsibilities as a cooperating agency are outlined in 40 CFR 1501.6.

The EPA supports the USACE's decision in preparing the EIS for this permit application and the USACE's goal of bringing together state and Federal resource agencies to develop a comprehensive EIS that fully analyzes the direct, indirect and cumulative impacts of the proposed project. The EPA, therefore, accepts your offer to become a cooperating agency.

We plan to fully participate in interagency teleconferences and meetings at important milestones. It should be noted that our status as a cooperating agency has no effect on our authorities under Section 102(2)(C) of NEPA, Section 309 of the Clean Air Act and the CWA. Similarly, our role as a cooperating agency does not imply that EPA will necessarily concur with all aspects of the EIS.

We appreciate the opportunity of working with the USACE as a cooperating agency on this project. Please contact Jamie Higgins, as our primary agency representative for this project at (404) 562-9681.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris A. Militscher". The signature is fluid and cursive, with a long horizontal stroke at the end.

Christopher A. Militscher, Chief  
NEPA Program Office  
Resource Conservation and Restoration Division

**Appendix B**  
**Biological Assessment**

**U.S. Fish and Wildlife  
Formal Consultation Letter**



REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
**CORPS OF ENGINEERS, JACKSONVILLE DISTRICT**  
**P. O. BOX 4970**  
**JACKSONVILLE, FLORIDA 32232-0019**

January 17, 2019

CESAJ-RD-NC  
SAJ-2015-02343 (SP-JSC)

Roxanna Hinzman, Field Supervisor  
South Florida Ecological Services Office  
US Fish and Wildlife Service  
1339 20TH Street  
Vero Beach, Florida 32960-3559

Dear Ms. Hinzman:

The Florida Fish and Wildlife Conservation Commission (FWC) has applied for a Department of the Army permit to conduct both a drawdown of, and littoral zone habitat enhancement activities on, East Lake Tohopekaliga. The proposed project area is located on East Lake Tohopekaliga, just north of the City of St. Cloud, Osceola County, Florida. The application has been assigned the file number SAJ-2015-02343.

The U.S. Army Corps of Engineers (Corps) previously determined the project requires an Environmental Impact Statement (EIS) and is working to complete a Draft EIS by February 2019. The Corps completed the attached Biological Assessment (BA), including an evaluation of impacts the work may have on Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*), and hereby requests initiation of formal consultation pursuant to Section 7 of the Endangered Species Act. In accordance with guidance provided in the Endangered Species Consultation Handbook, the Corps requests that you initiate consultation upon receipt of this request or provide a response within 30 days of receipt of this request stating what information is necessary to meet the requirements of 50 CFR §402.14(c). Upon your initiation of formal consultation, please provide this office with an expected completion date so that we may inform the applicant of the associated timeframes. The following information is provided in accordance with 50 CFR §402.14(c):

**Description of the Activity:**

**a. Area Affected:** The project action area includes all of East Lake Tohopekaliga (up to the landward extent of the littoral zone wetlands), Boggy Creek (below Boggy Creek road), Fells Cove and Lake Ajay (up to the S-62 structure), Lake Runnymede, and Lake Tohopekaliga. Limited effects outside of East Lake Tohopekaliga are also expected. A small area in Chisholm Park would be used for project staging.

FWC proposes to temporarily drawdown East Lake Tohopekaliga in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet during the

October 2019 – March 2020 timeframe, with the refill beginning in June 2020. The lake drawdown would temporarily increase the area of the littoral zone which dries under the current regulation schedule by 875 acres. Proposed activities include scraping of undesired organic sediments (105 acres) for consolidation into two spoil islands (up to four acres of fill) for long-term storage, and vegetation management, including herbicide application and prescribed burning. Approximately 200 acres of dense cattail is proposed to be sprayed and burned. A more detailed description is provided in the BA.

**b. Listed Species Affected/Determinations:** The Corps has determined proposed actions “may affect” Everglade Snail Kite; actions “may affect but are not likely to adversely affect” (MANLAA) wood stork (*Mycteria Americana*), Audubon's crested caracara (*Polyborus plancus audubonii*), Eastern indigo snake (*Drymarchon corais couperi*), and Eastern Black Rail (*Laterallus jamaicensis jamaicensis*). There is no designated critical habitat within the action area. To address responsibilities under Section 7(a)2 of the Endangered Species Act, and while it’s not generally required for programmatic determinations for wood stork and eastern indigo snake, we respectfully request your concurrence with the MANLAA determinations.

Common Name	Latin Name	Status	Designated Critical Habitat	Effect Determination
Kite, Everglade Snail	<i>Rostrhamus sociabilis plumbeus</i>	E	Yes – but not in action area	May Affect
Woodstork	<i>Mycteria americana</i>	E		MANLAA
Caracara, Audubon's Crested	<i>Polyborus plancus audubonii</i>	T		MANLAA
Snake, Eastern Indigo	<i>Drymarchon corais couperi</i>	T		MANLAA
Eastern black rail	<i>Laterallus jamaicensis jamaicensis</i>	C		MANLAA

**c. Analysis:** Please see the attached BA for the analysis of impacts to federally listed species. Additional information is included below for two species:

**Wood Stork**

Based on the U.S. Fish and Wildlife Service (USFWS) *Effect Determination Key for the Wood Stork in South Peninsular Florida* (dated May 2010), the Corps determined the proposed action MANLAA wood stork. Technically, the key requires USFWS concurrence for projects with greater than 50 acres of wetland impacts. Most affected habitats within the action area are not highly accessible to wood storks due to vegetation density and water depths. The Corps would assert the 105 acre scrape area, and 200 acre burn area, are not suitable foraging habitats in their current condition. These actions are temporary impacts and only the four acre fill area is permanent but there is a substantial overall improvement in suitable foraging habitat.

### **Eastern Black Rail**

Eastern black rail was not included in the BA and the assessment is provided below:

One of four subspecies of black rail, the eastern black rail is broadly distributed but poorly documented due to its secretive habitats. Habitat can be tidally or non-tidally influenced, and the species utilizes salt and freshwater marshes in portions of the United States, Central America, and South America. Their current range includes Florida and it is thought that the northern U.S. Atlantic coast population migrates and winters on the southern Atlantic coast (i.e., Florida) and some may even reside year-round. While approximately 90 percent of documented breeding-season occurrence records occurred at coastal locations, individuals may have the potential to occur in interior wetland habitats (shallow herbaceous wetlands such as wet prairie; may include wetlands dominated by cattail); using the ecotone between emergent wetlands and upland grasslands. Individuals may appear more frequently in wet prairies, wet meadows, or hay fields during migration than during the breeding and wintering seasons. The species is known to breed in Florida during the May-September period.

During the 2000-2018 timeframe, there was a single November 19, 2015 black rail occurrence on East Lake Tohopekaliga (Chisholm Park), as noted on eBird. However, the qualifications of the observer are unknown. Most of the occurrence data for central Florida are clustered at Three-Lakes Wildlife Management Area, the St. Johns River and Canaveral National Seashore.

The primary threats to eastern black rail are: (1) Habitat fragmentation and conversion, resulting in the loss of wetland habitats across the range; (2) sea level rise and tidal flooding; (3) incompatible land management practices (i.e., fire management, grazing, and haying/mowing); and (4) stochastic events (e.g., extreme flooding, hurricanes). Human disturbance, such as birders using playback calls of black rail vocalizations, is also a concern for the species.

Given the extent of development around East Lake Tohopekaliga, it is uncertain whether eastern black rail actually occur in its shallow littoral zone areas. Additionally, stochastic events such as recent hurricanes and human disturbance, including noise, the introduction of domesticated/feral cats and the tendency for predators (e.g., raccoon, possum) to remain in urban areas, could already have extirpated the species from the action area. The proposed action includes activities occurring waterward (~100 feet) from the lake edge, so not all shallow water habitat/ecotone would be affected. Consistent with the proposed Section 4(d) restrictions, all proposed activities (except the refill) would occur outside of the nesting, brooding, or post-breeding flightless molt period. Best management practices, including limiting burn areas to ensure suitable dense cover habitat remains for the eastern black rail, and the preclusion of ring/ perimeter fires, would occur in part, due to occupied dwellings and docks located along the burn area. Shoreline habitat would remain unburned in these areas.

Given the low probability of occurrence of the eastern black rail; performance of habitat enhancement activities during the non-nesting season; the preservation of current near-shore shallow water habitat and adjacent uplands during implementation of the proposed action; and the preservation of larger areas where no work is proposed (e.g., Boggy Creek, Fells Cove and the southern shoreline), the Corps determined the proposed action MANLAA Eastern Black Rail.

## References

*Endangered and Threatened Wildlife and Plants; 12-Month Petition Finding and Threatened Species Status for Eastern Black Rail With a Section 4(d) Rule.* Federal Register 83 FR 50610 (proposed October 9, 2018).

Horn, E. 2015. eBird Checklist: <https://ebird.org/view/checklist/S25916735>. *eBird: An online database of bird distribution and abundance* [web application]. eBird, Ithaca, New York. Available: <http://www.ebird.org>. (Accessed: December 27, 2018).

Kale, H.W. and Maehr, D.S.. 1990. *Florida's Birds: A Handbook and Reference*. Sarasota: Pineapple Press.

**d. Relevant Reports and other information:** Attachments include the following:

(1) East Lake Tohopekaliga Drawdown and Habitat Enhancement Final Biological Assessment (December 2018).

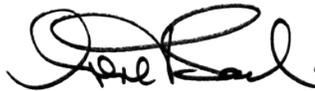
(2) Notice of Intent to Prepare a Draft Environmental Impact Statement for the Drawdown and Habitat Enhancement of East Lake Tohopekaliga in Osceola County, Florida (November 3, 2017).

(3) East Lake Tohopekaliga Drawdown and Habitat Enhancement Public Scoping Meeting for Draft Environmental Impact Statement (December 5, 2017).

(4) USFWS Biological Opinion Log No. 4-1-99-F-306. Lakes Tohopekaliga, Kissimmee, Hatchineha, Cypress and Tiger Extreme Drawdown and Habitat Enhancement Projects (July 3, 2002).

If you have any questions regarding this letter, please contact Jeffrey Collins at 400 High Point Drive, Suite 600, Cocoa, Florida 32926; email at Jeffrey.s.collins@usace.army.mil; or by telephone at 321-504-3771, extension 13.

Sincerely,

A handwritten signature in black ink, appearing to read 'Irene Sadowski', with a stylized flourish at the end.

Irene Sadowski  
Chief, Cocoa Permits Section

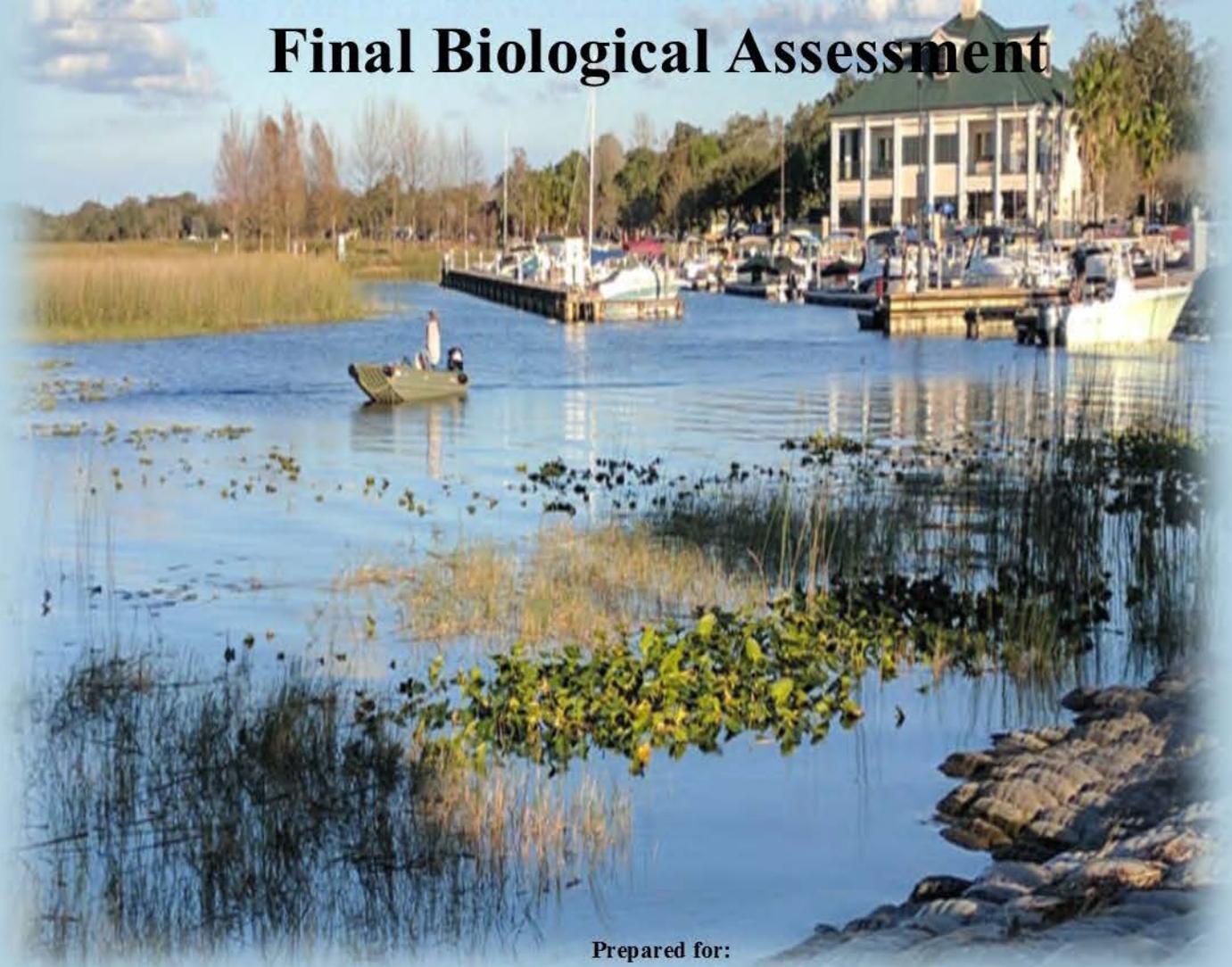
Enclosure(s)

cc:

Mr. Tom Conboy, SFEC (via email w/o enclosures: [tconboy@sfec.us](mailto:tconboy@sfec.us))

Mr. Tom St. Clair, Louis Berger (via email w/o enclosures: [gtstclair@louisberger.com](mailto:gtstclair@louisberger.com))

# **East Lake Tohopekaliga Drawdown and Habitat Enhancement Final Biological Assessment**



Prepared for:  
**United States Army Corps of Engineer  
Jacksonville Division  
Cocoa Permit Section  
Cocoa, Florida**



Prepared by:  
**South Florida Engineering and Consulting, LLC  
West Palm Beach, Florida**

**December 2018**

Cover Photo by SFEC 2018.

**Table of Contents**

**TABLE OF CONTENTS ..... II**

**LIST OF TABLES..... III**

**LIST OF FIGURES ..... IV**

**ACRONYMS ..... V**

**1 PURPOSE OF THE BIOLOGICAL ASSESSMENT ..... 1-1**

**2 PROJECT DESCRIPTION..... 2-1**

2.1 Project Goals ..... 2-3

2.2 Existing Conditions Baseline and Proposed Action..... 2-3

2.3 Authority ..... 2-5

2.4 Standard Protective Measures and Impact Avoidance and Minimization Methods 2-6

2.4.1 Species Specific Avoidance and Minimization Protective Measures..... 2-7

2.4.1.3 Everglade Snail Kite..... 2-8

2.4.1.4 Wood Stork ..... 2-9

**3 ACTION AREA DESCRIPTION..... 3-1**

3.1 Physical and Biological Attributes of the Proposed Action Area ..... 3-1

3.2 Identify Protected Resources that may be Present ..... 3-6

3.3 Current Population Status and Habitat Conditions within the Action Area for Each Species that may be Present..... 3-9

3.3.1 American Alligator ..... 3-9

3.3.2 Audubon’s Crested Caracara ..... 3-9

3.3.3 Everglade Snail Kite ..... 3-12

3.3.4 Wood Stork ..... 3-16

3.3.5 Striped Newt ..... 3-19

3.4 Critical Habitat ..... 3-21

**4 HOW THE ACTION MAY AFFECT EACH PROTECTED RESOURCE..... 4-1**

4.1 Audubon’s Crested Caracara..... 4-1

4.2 Eastern Indigo Snake..... 4-1

4.3 Everglade Snail Kite..... 4-1

4.3.1 Nesting ..... 4-1

4.3.2 Habitat..... 4-2

4.3.3 Foraging ..... 4-2

4.4 Wood Stork ..... 4-3

**5 SECTION 7 FINDING FOR PROTECTED RESOURCES..... 5-1**

5.1 Eastern Indigo Snake..... 5-3

5.2 Everglade Snail Kite..... 5-4

Table of Contents

5.3	Wood Stork .....	5-4
<b>6</b>	<b>RELEVANT REPORTS AND/OR DOCUMENTS .....</b>	<b>6-1</b>
<b>7</b>	<b>CUMULATIVE EFFECTS ANALYSIS .....</b>	<b>7-1</b>
<b>8</b>	<b>CONTACTS .....</b>	<b>8-1</b>
<b>9</b>	<b>LIST OF PREPARERS .....</b>	<b>9-1</b>
<b>10</b>	<b>LITERATURE CITED.....</b>	<b>10-1</b>
	<b>APPENDIX A CONSULTATION AREA MAPS .....</b>	<b>A-1</b>
	<b>APPENDIX B GUIDANCE DOCUMENTS AND REPORTS .....</b>	<b>B-1</b>

**List of Tables**

Table 2-1	Spatial Coordinates of Proposed Project Components (centroids).....	2-2
Table 2-2	BMPs for Sediment Manipulation .....	2-7
Table 3-1	Vegetation Type Acreage within Proposed Scrape Polygon on the East Side of East Lake Toho .....	3-4
Table 3-2	Threatened and Endangered Species within Osceola County.....	3-8
Table 3-3	Mid-winter Snail Kite Survey 1985-1994.....	3-14
Table 3-4	Preliminary Snail Kites Nesting Data in Florida from 2011.....	3-15
Table 3-5	Wood Stork Nesting in Florida.....	3-17
Table 5-1	Species Effects Determination Table.....	5-2

**List of Figures**

Figure 2-1 East Lake Toho Location and Flow Path as Part of Kissimmee Chain of Lakes .  
..... 2-1

Figure 2-2 East Lake Toho Proposed Drawdown and Habitat Enhancement Project  
Elements..... 2-2

Figure 2-3 Proposed Drawdown Schedule for East Lake Toho Habitat Enhancement  
Project ..... 2-4

Figure 3-1 Vegetation within the Northeastern Proposed Scrape Area..... 3-2

Figure 3-2 Vegetation within the Southeastern Proposed Scrape Areas ..... 3-3

Figure 3-3 Vegetation Map with Proposed Spray and Burn Area on the Northern side of  
East Lake Toho ..... 3-5

Figure 3-4 Vegetation Map with Proposed Spray and Burn Polygon on the Western Side of  
East Lake Toho ..... 3-6

Figure 3-5 Crested Caracara Observations near East Lake Toho..... 3-11

Figure 3-6 Snail Kite Nest Locations in East Lake Toho 2013 to 2017..... 3-15

Figure 3-7 Wood Stork Nesting Colony and Core Foraging Area Map..... 3-18

Figure 3-8 Proximity of Potential Striped Newt Breeding Ponds to Surface Waters Subject  
to the East Lake Toho Drawdown ..... 3-20

Figure 7-1 Location of Current and Expected Future Development Adjacent to East Lake  
Toho ..... 7-2

## Acronyms

### ***B***

BA Biological Assessment  
BMP Best Management Practice

### ***C***

CEQ Council on Environmental Quality  
CFA Core Foraging Area  
C.F.R. Code of Federal Regulation  
cfs cubic feet per second  
CWA Clean Water Act

### ***D***

DRI Developments of Regional Impact

### ***E***

EIS Environmental Impact Statement  
East Lake Toho East Lake Tohopekaliga  
ER Engineering Regulation  
ESA Endangered Species Act

### ***F***

F.S. Florida Statute  
FWC Florida Fish and Wildlife Conservation Commission

### ***M***

MANLAA May Affect Not Likely to Adversely Affect  
MSRP Multi-Species Recovery Plan

### ***N***

NEPA National Environmental Policy Act  
NGVD National Geodetic Vertical Datum  
NLAA Not Likely to Adversely Affect

### ***P***

Project East Lake Tohopekaliga Drawdown and Habitat Enhancement Project

### ***S***

SFEC South Florida Engineering and Consulting, LLC  
SFH Suitable Foraging Habitat  
SFWMD South Florida Water Management District  
SWQS Surface Water Quality Standard

### ***U***

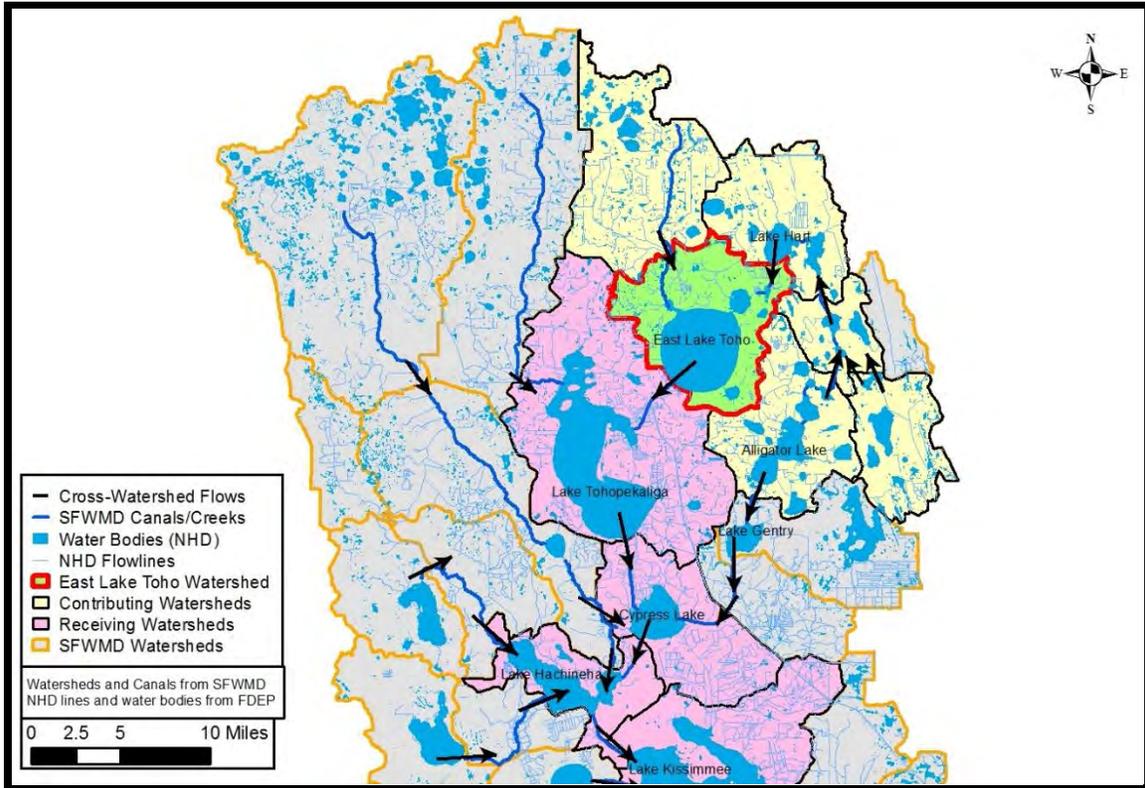
USACE U.S. Army Corps of Engineers  
USFWS U.S. Fish and Wildlife Service

## **1 PURPOSE OF THE BIOLOGICAL ASSESSMENT**

The purpose of this technical memorandum is to present the findings of the Endangered Species Biological Assessment (BA) for the proposed Drawdown and Habitat Enhancement of East Lake Tohopekaliga Project (Project) and to meet the requirements of Section 7 of the Endangered Species Act (ESA) of 1973, as amended. Section 7(a)(2) of the ESA states that each federal agency shall consult with the Secretary of the Department of the Interior/Commerce to ensure the actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species.

## 2 PROJECT DESCRIPTION

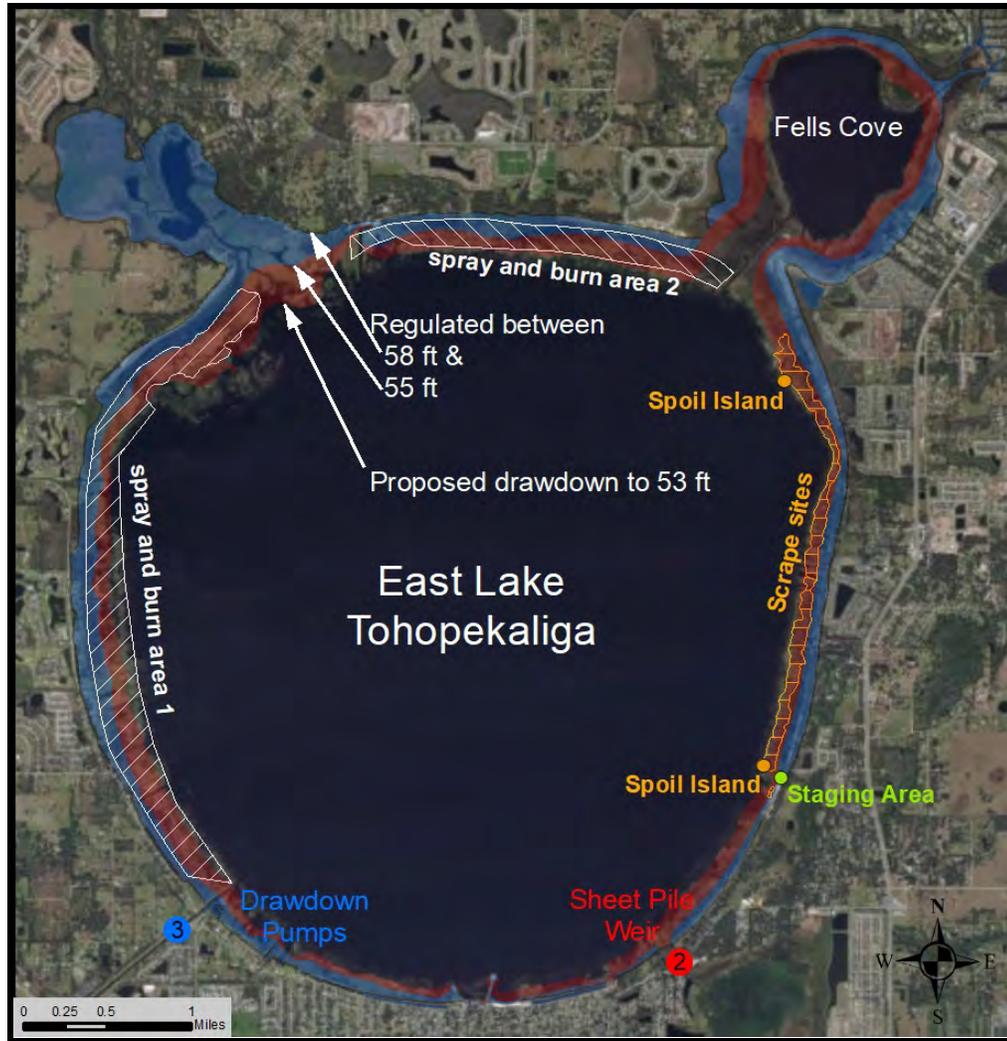
East Lake Tohopekaliga (East Lake Toho) is an approximately 11,970-acre lake located in the Kissimmee Chain of Lakes in Osceola County, Florida (Figure 2-1).



Source: SFEC 2018

**FIGURE 2-1 EAST LAKE TOHO LOCATION AND FLOW PATH AS PART OF KISSIMMEE CHAIN OF LAKES**

The Florida Fish and Wildlife Conservation Commission (FWC) is pursuing authorization from the U.S. Army Corps of Engineers (USACE), Jacksonville District Regulatory Division, pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbor Act of 1899 to conduct a temporary water level drawdown of East Lake Toho to accomplish organic sediment and vegetation removal and construction of two spoil islands for the purpose of littoral zone habitat enhancement (Figure 2-2). The spatial coordinates of the project components are noted in Table 2-1.



Source: SFEC 2018

**FIGURE 2-2 EAST LAKE TOHO PROPOSED DRAWDOWN AND HABITAT ENHANCEMENT PROJECT ELEMENTS**

**TABLE 2-1 SPATIAL COORDINATES OF PROPOSED PROJECT COMPONENTS (CENTROIDS)**

Description	Latitude	Longitude
East Lake Toho	28.2937	-81.2835
Southeast Scrape Polygon	28.2888	-81.251
Northeast Scrape Polygon	28.3064	-81.2471
East Scrape Center (N&S combined)	28.296	-81.2495
North Spray/burn Polygon	28.3254	-81.2755
West Spray/burn Polygon	28.2904	-81.318
N Spoil Island	28.3131	-81.2562
S Spoil Island	28.2798	-81.254

## 2.1 PROJECT GOALS

The goal of the Project is aquatic habitat improvement, including providing long-term benefits to habitat for ESA species. Major contributors to deteriorating aquatic habitat in East Lake Toho are anthropogenic stabilization of lake water levels and pollution from watershed development. Negative environmental changes include an increase in density and biomass of nuisance and exotic aquatic plants, a shift toward invasive species, and accumulation of organic sediments. Dense bands of organic material have formed within the littoral zone (on the east side of the lake), and combined with aquatic plants such as pickerelweed (*Pontederia cordata*) and cattail (*Typha spp.*), and tussocks, form a barrier that limit fish utilization of shallow spawning areas. The barrier also impacts foraging access by the endangered Everglade snail kite (*Rostrhamus sociabilis plumbeus*) (here after referred to snail kite) and the threatened wood stork. Furthermore, a decline in coverage of desirable aquatic vegetation negatively impacts the diversity and abundance of forage organisms that depend on these plant communities. This contributes to reduced sport fish production and further, may limit wading bird feeding and nesting. Project goals of aquatic habitat improvement are also intended for improving habitat for the endangered snail kite.

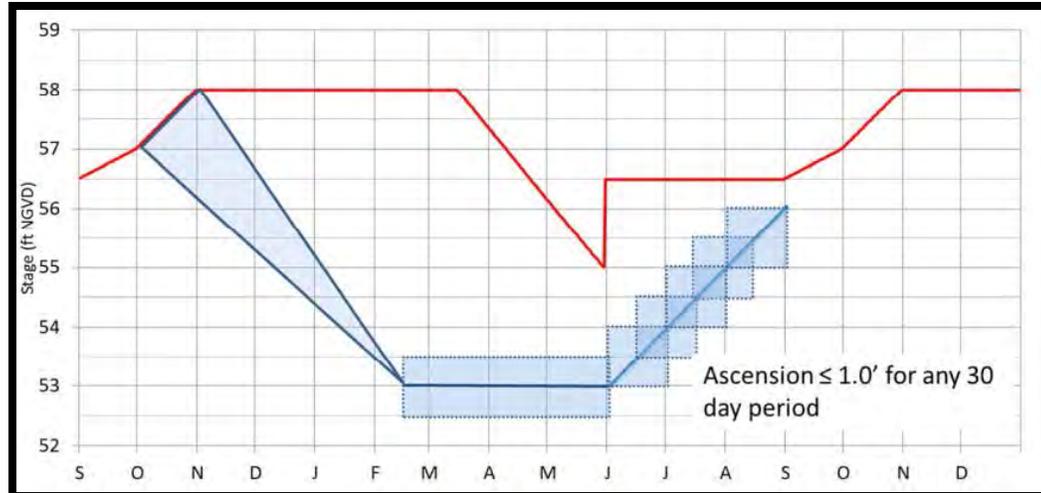
## 2.2 EXISTING CONDITIONS BASELINE AND PROPOSED ACTION

### Existing Conditions Baseline

As per National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) guidance, the No-Action Alternative remains a reasonable and feasible alternative throughout this evaluation. The No-Action Alternative represents "no change" from current conditions and a continuation of the present course of planned and funded actions. Although the No-Action Alternative does not meet the purpose and need for the Project, it was retained for detailed analysis to evaluate potential benefits and impacts associated with the Proposed Action in comparison to taking no action.

### Proposed Action: Drawdown and Habitat Enhancement of East Lake Toho

FWC proposes to temporarily drawdown East Lake Toho in Osceola County from 57.0 National Geodetic Vertical Datum (NGVD) feet to 53.0 NGVD feet (Figure 2-3).



Source: SFWMD 2017

Note: Red= existing regulation schedule, Blue= proposed temporary deviation

**FIGURE 2-3 PROPOSED DRAWDOWN SCHEDULE FOR EAST LAKE TOHO HABITAT ENHANCEMENT PROJECT**

Four pumps (combined capacity of 400 cubic feet per second [cfs]) are proposed to lower East Lake Toho water levels (Figure 2-2, reference area 3); pumps are required because gravity-fed conveyance becomes inefficient as the lower East Lake Toho stage approaches that of Lake Tohopekaliga (SFWMD 2017). Additionally, a sheet-pile weir would be installed between East Lake Toho and Lake Runnymede (Figure 2-2, reference area 2) to maintain higher water levels in Lake Runnymede. The proposed drawdown would begin in October 2019 or November 2019, earthwork would be conducted from February to May 2020, and East Lake Toho refill would be initiated in June 2020 (Figure 2-3). The lake drawdown would temporarily increase the area of the littoral zone which dries beyond the current regulation schedule by 875 acres (Figure 2-2, maroon shading). East Lake Toho would remain below the current regulation schedule for 7 to 8 months. The drawdown would also affect water stages in Fells Cove and Lake Ajay to the north. This activity would expose an additional 249 acres (Figure 2-2, maroon shading) beyond the area exposed under the existing schedule (Figure 2-2, blue shading). Other proposed activities include scraping of the undesired organic sediments for consolidation into two spoil islands for long-term storage. Additional management activities planned for the low water period from February to May 2020 would include vegetation management, herbicide application and prescribed burning. Approximately 200 acres of dense cattail is proposed to be sprayed and burned (Figure 2-2, reference areas 1 and 2).

Aquatic plants and associated organic sediments would be scraped and removed with mechanized land-clearing equipment (e.g., bull-dozer, excavators, and off-road dump trucks) under dewatered conditions (Figure 2-2, orange polygon, scrape sites) from approximately 105 acres on the east shore of East Lake Toho. All work would be performed within areas identified by the FWC project manager specifically for the purpose of aquatic habitat enhancement. Work would be restricted to removal of plant and associated organic sediments. In accordance with Florida Statute (F.S.) §403.813 (1)(r), the management action would remove no more than

3 feet of organic detrital material or down to the natural mineral substrate (sand), whichever is less. Removal of mineralized soils would be minimized as much as feasible. After the plant and associated organic sediments are pushed into wind-rows to facilitate drying, the material would be used to create the two in-lake spoil islands. Approximately 4 acres of wetland and open water habitat would be permanently impacted by the creation of the two spoil islands. Woody vegetation would be burned. To avoid secondary environmental damage to adjacent wetlands and prevent violations of state water quality standards, best management practices (BMPs) would be employed throughout the Project, including the use of turbidity controls where necessary (Permit No: SAJ-2015-00644 [SP-SLR], drawing 47/52) (USACE 2016).

The proposed Project would leave isolated pockets of natural habitat in place along the eastern shore within the area proposed to be scraped. This would leave approximately 25 percent (approximately 6 acres) of the island habitat along with some neighboring habitat within the proposed scrape area. Weedy and invasive plants near conserved islands would be removed. The natural habitat that would be retained is in moderate condition. The plant diversity on the islands varies but generally the islands provide important ecosystem structure and function. A field trip was conducted in September 2018 to finalize the tentative locations of the habitat areas to be preserved (Appendix B). Criteria used to select islands include:

- Within proposed scrape polygon leave 7 islands and some adjacent vegetation
- Natural areas in good condition would be preserved and distributed more or less equally spaced across the entire proposed scrape area
- Selected habitat areas would contain larger trees and have higher diversity

Additional benefits provided by retaining natural areas would include:

- Protection of habitat for species that utilize natural areas within the existing littoral zone including wading birds, migratory birds, amphibians and reptiles
- Decreases the amount of material that would be transported
- Decreases in the footprint and/or height of created spoil islands
- Limits the potential to release nutrients that are already concentrated/isolated in natural features
- Providing foraging habitat for wading birds
- Providing roosting habitat for snail kite
- Availability of woody material
- Maintenance of habitat for American alligators (*Alligator mississippiensis*) and other reptiles and amphibians (i.e. sirens and amphiuma)

### 2.3 AUTHORITY

- Section 404 of the CWA (33 U.S.C. § 1344), Section 10 of the Rivers and Harbors Act of 1899 (33 USC § 403) and Section 14 of the Rivers and Harbors Act of 1899 (33 USC 408). The proposed actions may constitute an alteration to the federally authorized civil works project and require internal USACE coordination and approval pursuant to 33 USC 408 (EC 1165-2-216). Additional authority is provided in 33 Code of Federal Regulation (C.F.R.) § 222.5, Water Control Management (Engineering Regulation [ER] 1110-2-240). This regulation requires the USACE to develop operations and maintenance criteria for water control plans. This regulation states that

- the Chief of Engineers or his designated representative may authorize or direct deviation from the established water control plan when conditions warrant such deviation.
- FWC-vegetation management and habitat enhancement under F.S. 369.22 Florida Aquatic Plant Management Act and Chapter 403.813(1)(r), situations in which environmental resource permits are not required are described. One of these exceptions is when the activity of the lake restoration project largely involves removal of aquatic plants and its associated sediment. In such cases, requirements of an environmental resource permit are excepted if an aquatic plant management permit (F.S. 369.20 and F.S. 369.25) is secured for the activity (Chapter 403.813(1)(r) (FS 2011a). These activities must be performed in a manner consistent with surface water quality standards (SWQS)<sup>1</sup>.

#### **2.4 STANDARD PROTECTIVE MEASURES AND IMPACT AVOIDANCE AND MINIMIZATION METHODS**

Contractors would be required to commit to avoiding, minimizing or mitigating for adverse effects during construction activities by including these commitments in the contract specifications: turbidity controls would be utilized to ensure SWQS are met during all construction activities, ensuring that erosion control provisions would be implemented. These measures would be used to stabilize spoil islands, and ensure all conditions required by U.S. Fish and Wildlife Service (USFWS) as part of the ESA coordination would be included. Selected contractors would be required to include a spill prevention plan. BMPs, as outlined in Chapters 1 and 2 by (Chang, et al. n.d.), would be followed as needed. Table 2-2 below provides examples of possible BMPs for both sediment manipulation activities under dewatered conditions, as well as sediment erosion control (relevant to the two proposed spoil islands).

---

<sup>1</sup> <http://www.flsenate.gov/laws/statutes/2011/403.813>. Accessed 2018.

**TABLE 2-2 BMPs FOR SEDIMENT MANIPULATION**

<b>BMPs for Dewatering</b>
Sediment traps
Confined disposal facilities
Dewatering/gravity filter bags
Silt fence barriers
<b>BMPs for Activities in Dewatered Conditions</b>
Equipment selection
Natural vegetative barriers
Silt fence barriers
<b>BMPs for Activities in Inundated Conditions</b>
Equipment selection
Dredging operational controls
Floating turbidity barriers
<b>BMPs for Sediment Erosion Control</b>
Seeding
Silt fence barriers
Filter berm barriers
Rolled erosion control products
Sod

Source: Chang, et al. n.d.

**2.4.1 Species Specific Avoidance and Minimization Protective Measures**

The following section describes species specific avoidance and minimization measures that would be observed during project implementation. Conservation zones are described for Audubon’s crested caracara (*Polyborus plancus audubonii*) (here after referenced as crested caracara).

**2.4.1.1 Audubon’s Crested Caracara**

East Lake Toho is within the consultation area for the crested caracara (Appendix A), yet there are no known nests in or adjacent to the project area. However, because crested caracara were previously sighted in the region, FWC would minimize all disturbance in upland and pastures/grasslands adjacent to the project area to protect potential habitat (specifically on the western side of East Lake Toho where crested caracara have been historically observed). Generally, wetland maintenance activities are compatible with crested caracara survival (Morrison 1996, 2001; MSRP 1999), however care should be taken to keep herbicide toxic to wildlife from entering wetlands and waterways (USFWS 2004b). Throughout the earthwork and construction phases of the Project, BMPs would be followed to protect water quality and important habitat resources.

Currently, upland disposal of spoil material is not expected. If upland disposal is pursued, nest surveys would be conducted according to recommended protocols and conservations measures would be implemented. If nests are identified, conservation measures within each of the

USFWS designated management zones would be observed. The primary zone is designated as 985 feet from the nest tree and is largely implemented to protect reproduction. The secondary zone encompasses an area extending outward from the end of the primary zone 984 feet from the nest to 4,920 feet. This secondary zone is used by crested caracaras for the collection of nest material, roosting, and feeding. Conservation measures for this zone are directed at maintaining the foraging capacity of the area (USFWS 2004b).

#### **2.4.1.2 Eastern Indigo Snake**

East Lake Toho is within the consultation area of the eastern indigo snake (*Drymarchon corais couperi*). Although the majority of the proposed project elements would occur within the littoral zone of the lake, staging for the Project would occur adjacent to the lake in Chisholm Park (Figure 2-2, staging area). Chisholm Park is a mix of both undeveloped lands (including conservation lands) and areas developed for recreation. The undeveloped lands include a mix of oak habitat and areas with pine. Most of the area adjacent to East Lake Toho has been cleared and is primarily sandy substrate. The cleared areas adjacent to the lake would be used for staging.

Given that staging would occur outside of East Lake Toho, relevant protective measures would be followed. The USFWS South Florida Field Office developed a set of protective measures to minimize potential adverse effects to the eastern indigo snake resulting from land development projects. These measures include the creation and distribution of educational materials regarding eastern indigo snake identification, biology and habitat requirements, the standardization of gopher tortoise (*Gopherus polyphemus*) burrow survey techniques, and the establishment of snake release protocols. Note that only those authorized by USFWS may handle the eastern indigo snake. If a live indigo snake is seen on the project site, clearing activities would cease and sufficient time would be provided to allow the indigo snake to move away from the site without interference (USFWS 2013, Appendix B).

#### **2.4.1.3 Everglade Snail Kite**

Snail kites are active in and surrounding East Lake Toho. Standard protective measures, avoidance and minimization methods would be implemented to protect snail kites. The timing of the Project (work window) is such that water level manipulation would occur prior to the peak nesting period (February to June) (Sykes 1987). As recommended by USFWS, water would be lowered beyond the extent of (most) herbaceous vegetation prior to February 1 to discourage nesting of snail kites in areas where nests would likely collapse (MSRP 1999) or be susceptible to predation (Olbert 2013). A band of bulrush (*Scirpus sp.*) would remain inundated on the outer edge of the littoral zone. Water level ascension in June would be conducted sufficiently slowly (less than 1 foot per month) to promote vegetation stability and survival of snail kites (Figure 2-3). In addition to the timing of the Project, snail kite nesting surveys would be conducted prior to the onset of drawdown. If nests are identified, the Project would be postponed until a viable alternative time is identified.

Given that snail kites nest throughout the Kissimmee Chain of Lakes and extensively on Lake Okeechobee, regional climactic conditions would be considered (Bennetts and Darby 2001;

Bennetts and Kitchens 1997a). The Project would not be implemented if extreme wet or extreme dry conditions exist throughout the Kissimmee Chain of Lakes and into critical nesting areas to the south. Extreme conditions would be defined as the lower or upper quartile of long-term average stage and rainfall (SFWMD 2017).

As part of the conservation measures, the proposed Project would retain approximately 6 acres of the island (as well as adjacent native) habitat distributed within the proposed eastern scrape area (112 acres) thereby providing available woody vegetation interspersed with open foraging habitat; woody vegetation provides roosting habitat (MSRP 1999). In addition to standard protective measures, surveys, and minimization and avoidance methods, BMPs would be followed throughout the Project.

#### **2.4.1.4 Wood Stork**

East Lake Toho is within the core foraging area (CFA) of wood stork (*Mycteria Americana*) colonies (Appendix A, Figure A-1), yet wood storks are not frequently observed foraging on the lake. As noted above, BMPs would be followed throughout the Project. Once water levels are restored and for the next few seasons, project implementation should enhance wood stork foraging habitat. Increasing the hydroperiod in the scraped areas would slightly increase biomass of available fish (foraging calculations; Wood Stork 2012) and create additional open water habitat for foraging which would mitigate potential short-term impacts during project implementation.

Given the distance to the nearest colonies (e.g., more than 4 miles) disturbance to the primary and secondary zones would be avoided. The primary zone is identified as up to 1500 feet from the colony boundary; this area is critical for nesting. The secondary zone is identified as a distance up to 2500 feet from the outer edge of the colony and is designated as a buffer to the primary zone (USFWS 1990).

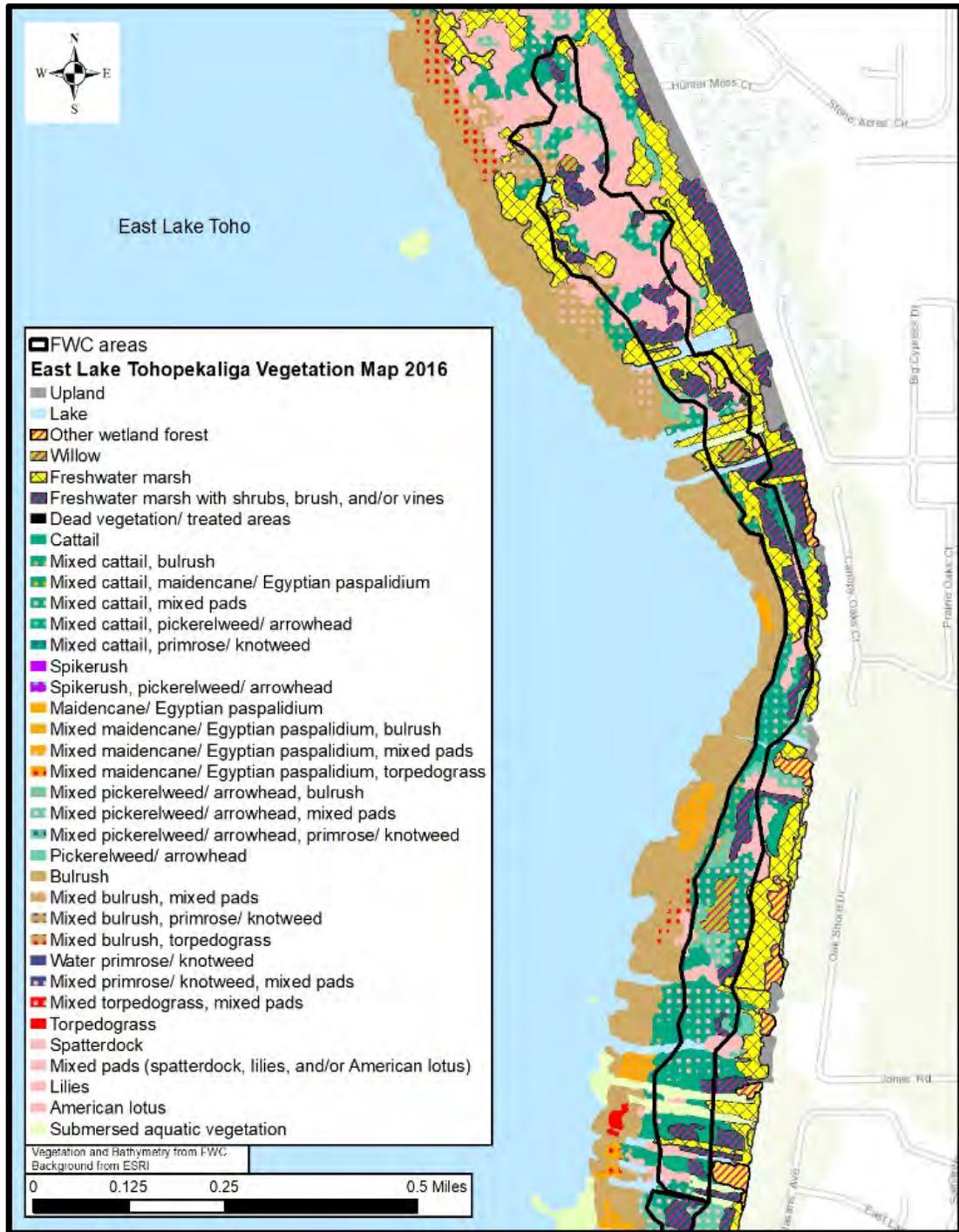
### 3 ACTION AREA DESCRIPTION

The project action area is defined as all areas that may be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. The action area encompasses the geographic extent of environmental changes (i.e., the physical, chemical and biotic effects) that would result directly and indirectly from the action. The action area is typically larger than the area directly affected by the project action.

The project action area includes all of East Lake Toho (up to the landward extent of the littoral zone wetlands), Boggy Creek (below Boggy Creek road), Fells Cove and Lake Ajay (up to the S-62 structure), Lake Runnymede, and Lake Toho. Limited effects outside of East Lake Toho are also expected. A small area in Chisholm Park would be used for project staging. Additionally, the lake drawdown itself may affect groundwater stages adjacent to affected water bodies (East Lake Toho, Fells Cove and Lake Ajay), and to a lesser extent adjacent to Lake Tohopekaliga. Most of the land adjacent to East Lake Toho has been developed for housing and hence groundwater impacts to threatened and endangered species are expected to be limited. Hydrologic effects are associated with drawing down East Lake Toho earlier in the year and to a lower stage than under the current regulation schedule. This would temporarily increase the volume and nutrient load of water moving downstream into Lake Tohopekaliga and the Kissimmee Chain of Lakes.

#### 3.1 PHYSICAL AND BIOLOGICAL ATTRIBUTES OF THE PROPOSED ACTION AREA

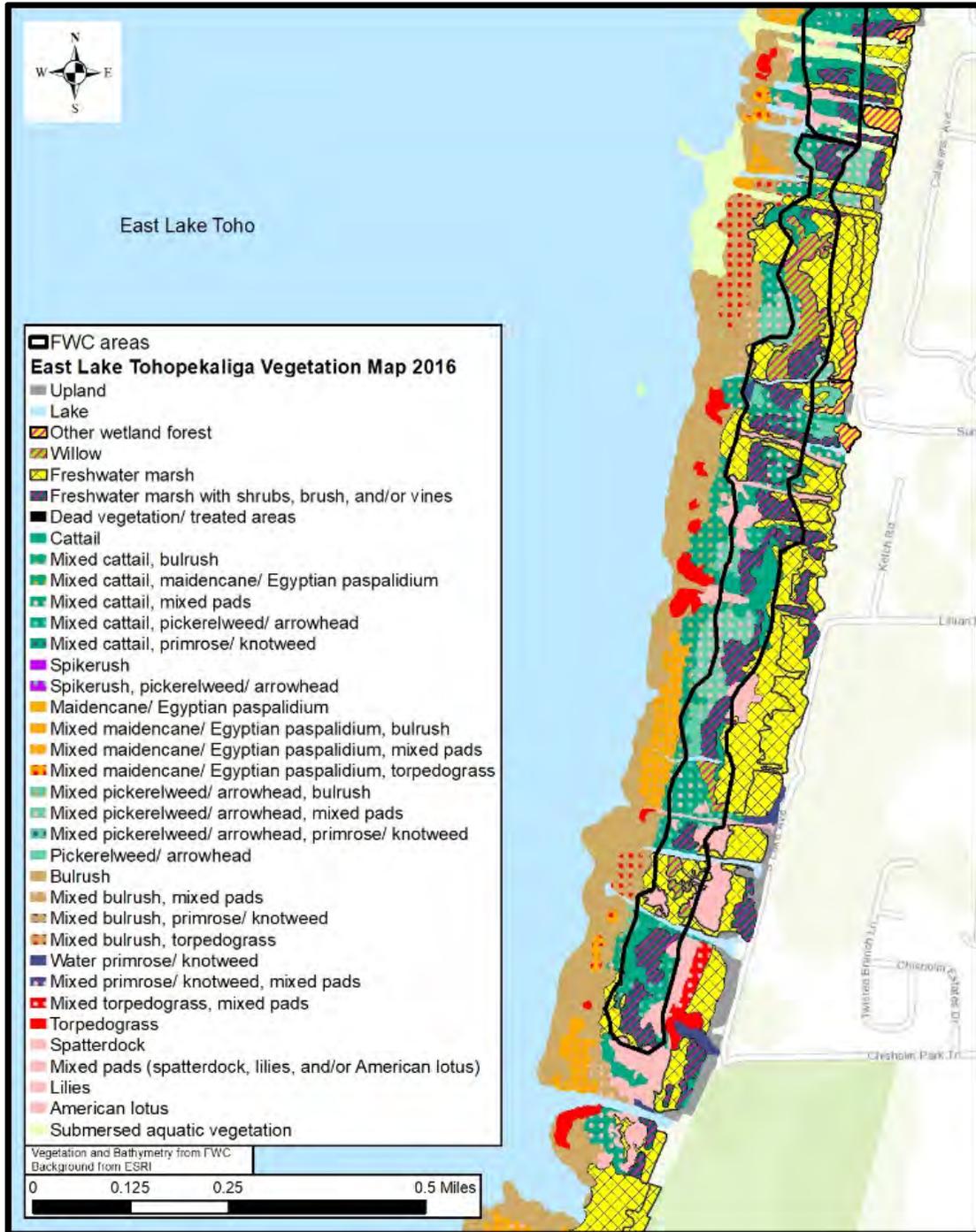
The proposed action is focused on three primary locations (Figure 2-2), all portions of the littoral zone of East Lake Toho: an eastern area proposed for scraping to remove all vegetation and organic sediments, and two areas to the north and to the west proposed for spraying and burning. The proposed eastern scrape area includes approximately 105 acres of littoral zone. Figure 3-1 and Figure 3-2 denote the habitat/vegetation types existing in the proposed action area; while Table 3-1 describes the habitat types and related acreage within the proposed scrape area. The northern and western spray and burn areas are focused on weedy species (predominantly cattail) and exotic species Figure 2-2. The spray and burn polygon to the north is approximately 219 acres and to the west is approximately 436 acres. Approximately 200 acres of dense cattail would be targeted for treatment within these two action areas. Exotics would be treated as necessary. The remainder of the two polygons are composed of the American white water lilies (*Nymphaea odorata*), spatterdock or yellow pond lilies (*Nuphar luteum*), bulrush, and mixed freshwater marsh and would not be sprayed) (Figure 3-3 and Figure 3-4).



Source: SFEC 2018

Note: Black polygons denote areas in the northeast

**FIGURE 3-1 VEGETATION WITHIN THE NORTHEASTERN PROPOSED SCRAPE AREA**



Source: SFEC 2018

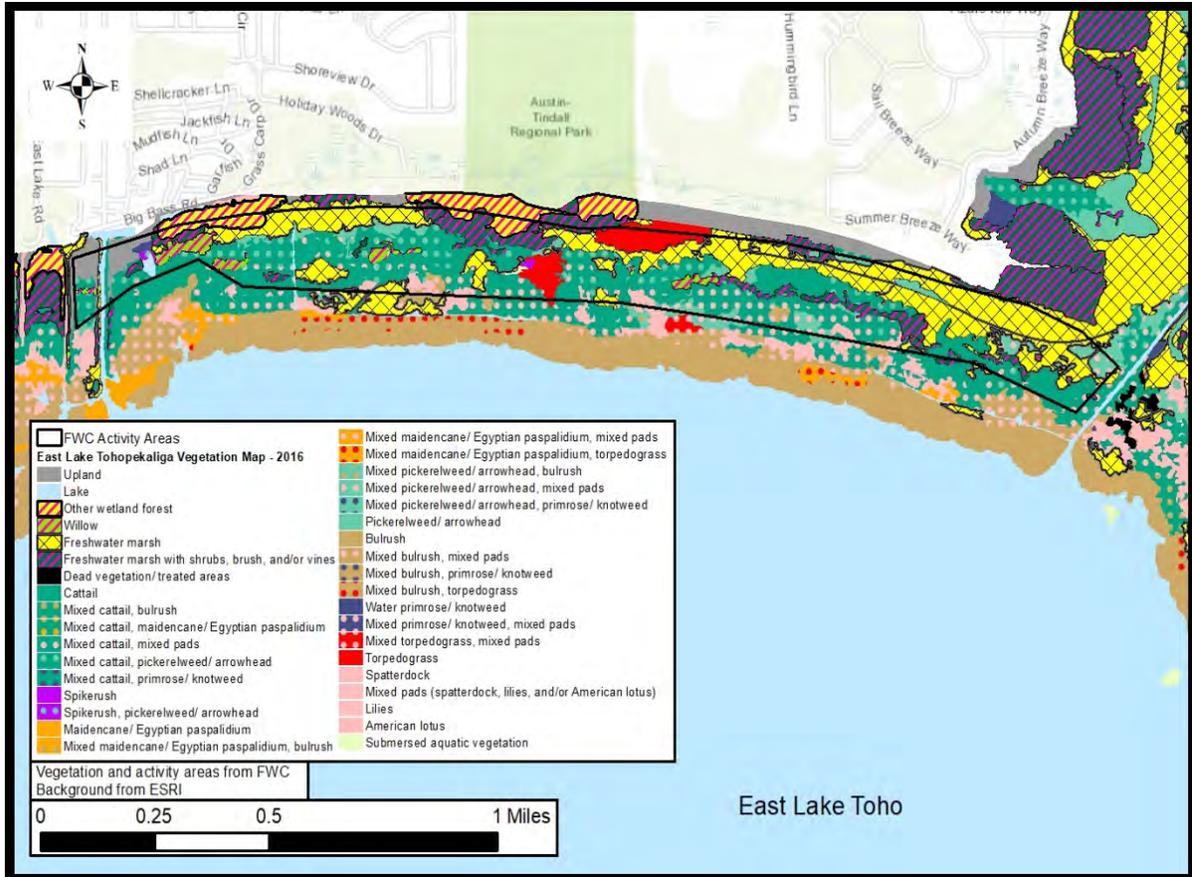
Note: Black polygons denote the areas in the southeast

**FIGURE 3-2 VEGETATION WITHIN THE SOUTHEASTERN PROPOSED SCRAPE AREAS**

**TABLE 3-1 VEGETATION TYPE ACREAGE WITHIN PROPOSED SCRAPE POLYGON  
ON THE EAST SIDE OF EAST LAKE TOHO**

<b>Vegetation Type</b>	<b>Acres Sums</b>
Freshwater marsh with shrubs, brush, and or vines	20.9
Freshwater marsh	20.3
Waterlilies	18.5
Mixed cattail, mixed pads	11.1
Cattail	9.2
Mixed cattail, pickerelweed/arrowhead	7.6
Willow	6.8
Mixed pickerelweed/arrowhead, mixed waterlilies	5.3
Lake/open water	2.4
Mixed cattail, bulrush	2.1
Submerged aquatic vegetation	1.9
Pickerelweed/arrowhead	1.7
Spatardock	1.7
Mixed pickerelweed/arrowhead, bulrush	1.3
Mixed bulrush, mixed waterlilies	1.3
Water primrose/knotweed	.03
Bulrush	0.3
<b>Total</b>	<b>112.6</b>

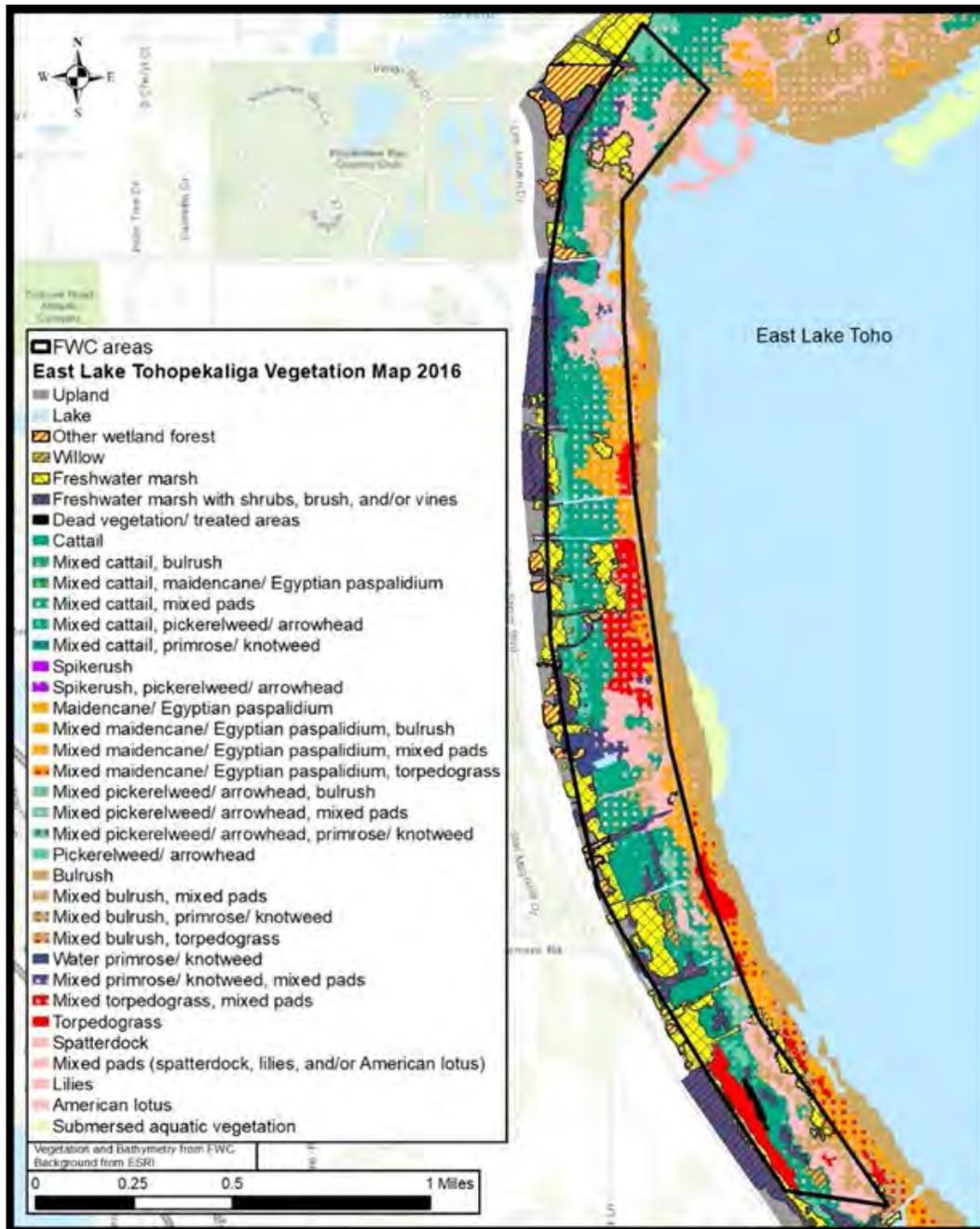
Source: URS 2016



Source: SFEC 2018

Note: Area is shown in black polygon on the northern side of East Lake Toho

**FIGURE 3-3 VEGETATION MAP WITH PROPOSED SPRAY AND BURN AREA ON THE NORTHERN SIDE OF EAST LAKE TOHO**



Source: URS 2016

Note: Dense cattail (in green) is targeted for treatment.

Proposed spray and burn polygon in black

**FIGURE 3-4 VEGETATION MAP WITH PROPOSED SPRAY AND BURN POLYGON ON THE WESTERN SIDE OF EAST LAKE TOHO**

### 3.2 IDENTIFY PROTECTED RESOURCES THAT MAY BE PRESENT

The USFWS’s website (<http://ecos.fws.gov/ipac/>) was used to generate the list of possible threatened and endangered species that could be found in the project area as well as in the

larger region of Osceola County, Florida. USFWS guidance documents suggest that it is better to err on the side of inclusiveness. For instance, although direct impacts are not expected for the scrub jay (*Aphelocoma coerulescen*) and gopher tortoise because they are not found in the project area, they are included in Table 3-2 for the administrative record. Table 3-2 indicates the list of species, their status, as well as probability of occurrence (low, medium, or high) in the proposed project action area. In addition to the 24 listed species within Osceola County (USFWS 2018a), the striped newt (*Notophthalmus perstriatus*) which is a candidate species in neighboring Orange County, Florida is also included.

Of the 24 listed species noted in Table 3-2, only five species (American alligator, crested caracara, eastern indigo snake, snail kite, and the wood stork) have greater than a low probability of occurrence in the proposed project action area. The current population status and habitat conditions (within the proposed project action area) for these species are described below. Population status and habitat conditions are also described for the striped newt.

**TABLE 3-2 THREATENED AND ENDANGERED SPECIES WITHIN OSCEOLA COUNTY**

Group	Common Name	Scientific Name	Status	Occurrence Potential
Birds	Whooping crane	<i>Grus americana</i>	Experimental Population, non-essential	Low
Birds	Everglade snail kite	<i>Rostrhamus sociabilis plumbeus</i>	Endangered	High
Birds	Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered	Low
Birds	Wood stork	<i>Mycteria americana</i>	Threatened	Moderate
Birds	Audubon’s crested caracara	<i>Ployborus plancus</i>	Threatened	Moderate*
Birds	Florida grasshopper sparrow	<i>Ammodramus savannarum floridanus</i>	Endangered	Low
Birds	Florida scrub-jay	<i>Aphelocoma coerulescens</i>	Threatened	Low
Mammals	Florida panther	<i>Puma(=Felis) concolor coryi</i>	Endangered	Low
Mammals	Puma (*mountain loin)	<i>Puma(=Felis) concolor (all subsp. except coryi)</i>	Similarity of appearance (Threatened)	Low
Reptiles	American alligator	<i>Alligator mississippiensis</i>	Similarity of appearance (Threatened)	High**
Reptiles	Eastern indigo snake	<i>Drymarchon corais couperi</i>	Threatened	Low to Moderate*
Reptiles	Bluetail mole skink	<i>Eumeces egregius lividus</i>	Threatened	Low
Reptiles	Sand skink	<i>Neoseps reynoldsi</i>	Threatened	Low
Reptiles	Gopher tortoise	<i>Gopherus Polyphemus</i>	Candidate	Low*
Flowering Plants	Papery whitlow-wort	<i>Paronychia chartacea</i>	Threatened	Low
Flowering Plants	Lewton’s polygala	<i>Polygala lewtonii</i>	Endangered	Low
Flowering Plants	Sandlace	<i>Polygonella myriophylla</i>	Endangered	Low
Flowering Plants	Florida bonamia	<i>Bonamia grandiflora</i>	Threatened	Low
Flowering Plants	Pygmy fringe-tree	<i>Chionanthus pygmaeus</i>	Endangered	Low
Flowering Plants	Pigeon wings	<i>Clitoria fragrans</i>	Threatened	Low
Flowering Plants	Scrub buckwheat	<i>Eriogonum longifloium var. gnaphalifolium</i>	Threatened	Low
Flowering Plants	Britton’s beargrass	<i>Nolina brittoniana</i>	Endangered	Low
Flowering Plants	Wide-leaf warea	<i>Warea amplexifolia</i>	Endangered	Low
Flowering Plants	Scrub lupine	<i>Lupinus aridorum</i>	Endangered	Low

\*Under the currently proposed alternative no effect to these species is expected. If upland disposal is pursued adjacent to the lake (Hilliard Island location), further evaluation should be conducted.  
 \*\*The American alligator is listed as threatened due to its similarity of appearance to the American crocodile; this is only true in areas within the range of the American crocodile. Given Osceola County is outside of the range of the American crocodile, no effect is expected.

### **3.3 CURRENT POPULATION STATUS AND HABITAT CONDITIONS WITHIN THE ACTION AREA FOR EACH SPECIES THAT MAY BE PRESENT**

#### **3.3.1 American Alligator**

The American alligator is classified as threatened due to similarity of appearance (to the endangered American crocodile) by the USFWS. This is only true within the range of the American crocodile. The proposed project area is well outside of the range of the endangered American crocodile which is found to the south of Osceola County, Florida (Collier, Miami-Dade, and Monroe counties); therefore, an effects determination is not necessary.

##### **3.3.1.1 Species Use of Action Area**

Alligators are common on both East Lake Toho and Lake Tohopekaliga. The East Lake Toho littoral zone is a mix of emergent, submerged and floating plants. The littoral zone on the east shore contains significant cover of tussocks and islands. The American alligator has a high potential of occurrence in proposed project area; however, organic sediment removal and vegetation management would only occur in parts of East Lake Toho. Additionally, in the proposed scrape area, seven islands would be conserved as habitat. During the design and permitting phase of the proposed Project, a wildlife survey would be conducted to determine if American alligators are using any of the areas proposed for construction. If so, all efforts to avoid impacts to the American alligator would be considered.

##### **3.3.1.2 Population**

Though once listed as endangered, the American alligator population has rebounded and is fairly widespread. The American alligator inhabits most permanent fresh water bodies throughout the state of Florida, including marshes, swamps, lakes (East Lake Toho and Lake Tohopekaliga), and rivers. In 2017, there were approximately 110 alligators on East Lake Toho with 38 adults (6 feet or larger) (personal communication Tim Coughlin and Arnold Brunell, FWC, November 2018).

#### **3.3.2 Audubon's Crested Caracara**

Project implementation is not expected to adversely impact areas utilized by the crested caracara which generally utilize pasture, dry and wet prairie, and frequently use cabbage palms for nesting. All crested caracara guidance would be followed should proposed project area plans change and the upland disposal of vegetation and organic matter is implemented.

##### **3.3.2.1 Species Use of Action Area**

The crested caracara has been observed on the west and south sides of East Lake Toho resulting in the likely territorial overlap with the proposed project area (Figure 3-5). Crested caracara have not been observed in Chisholm Park (proposed upland staging area). East Lake Toho is an unlikely nesting habitat for the crested caracaras, but they are known to forage in wetlands, and may use the littoral zone of East Lake Toho, which is subject to this action. The action of

drawing down water would expose sediments in the littoral zone, and some areas would be sprayed, burned or scraped. Tall and thick vegetation targeted by the action, is not a good foraging habitat for crested caracaras. The crested caracaras are attracted to newly plowed and newly burned fields. They have been observed following behind plows and in front of flames to capture fleeing small prey; they also forage in burned areas on animals killed by the fires. The proposed Project would likely improve the foraging habitat for the crested caracaras in the littoral zone treatment areas.

### 3.3.2.2 Population

*“Audubon’s crested caracaras in Florida were formerly documented to inhabit native prairies in Florida’s central region. The species has been reported from the Kissimmee, Caloosahatchee, and upper St. Johns river basins, and the Kissimmee prairie (Bryant 1859, Scott 1892, Phelps 1912, Bailey 1925, Nicholson 1929, Howell 1932, Bent 1938, Sprunt 1954). Few historic nesting records are available and with notable changes in land use patterns throughout central Florida in recent years, the status of this population has become a subject of concern. The crested caracara’s range in Florida is now considerably smaller than historically reported (Stevenson and Anderson 1994, Layne 1996). The size of this population is unknown but is probably at least 500 (Layne 1996) or greater (J. Morrison, unpublished data). Populations comprised of 500 or fewer individuals may be more susceptible to extinction due to stochastic demographic or environmental events (Shaffer 1981)” (USFWS 2004b).*



Source: SFEC 2018

Note: Caracara observations (USFWS 2004b)

**FIGURE 3-5 CRESTED CARACARA OBSERVATIONS NEAR EAST LAKE TOHO**

### 3.3.3 Everglade Snail Kite

#### 3.3.3.1 Species Use of Action Area

Littoral habitat includes herbaceous wetlands and waterlilies (predominantly *Nymphaea* and *Nuphar*) neighboring the East Lake Toho shoreline. Kites may forage in this area of the littoral zone where vegetation is less dense. The middle of the littoral zone is comprised of tussocks and islands. Tussocks are commonly formed by aquatic plants (*Pontederia*) and lily pad roots and often have shrubs (wax myrtle [*Myrica Morella cerifera*] and willow [*Salix caroliniana*]) associated. The islands are frequently covered in ferns, herbs, shrubs and trees (including wax myrtle, willow, maple [*Acer rubrum*], and sometimes bay [*Persea borbonia*]). Kites may use woody plants on these islands for roosting. Cattail, water lilies, and bulrush are generally located on the outer edge of the littoral zone. This is the area where most of the snail kite nesting occurred in 2017 (USFWS 2018a). Both native (*Pomacea paludosa*) and exotic apple snails found on East Lake Toho provide food for snail kites.

#### 3.3.3.2 Population

The current (system-wide) distribution of the snail kite in Florida is limited to central and southern portions of the state including the Kissimmee Chain of Lakes. The snail kite nests and forages in the littoral zone of East Lake Toho. Seven nests were identified in the littoral zone of East Lake Toho in 2017 and five nests were observed in 2018 (personal communication with Tyler Beck, FWC 2018). Figure 3-6 provides the location of nests for the 5 year period 2013-2017.

Historically, snail kites were found at Lake Pierce, Lake Tohopekaliga, Cypress Lake, Lake Hatchineha, Lake Marion, Lake Kissimmee, Tiger Lake, Lake Arbuckle, Lake Istokpoga and Lake Okeechobee. Lake Okeechobee and surrounding wetlands are also major nesting and foraging habitats. Table 3-3 notes the number of snail kites observed during the mid-winter surveys of 1984 to 1995.

After 1995, snail kites suffered a significant decline in number. For the 12-year period leading up to the 2011 kite survey, snail kites decreased in numbers from approximately 3400 individuals to 700 individuals (Audubon 2011). Extreme low water levels (as experienced in 2001, 2007, 2008, and 2011) generally result in adverse effects to snail kites within the critical habitat in the Water Conservation Areas and Lake Okeechobee. During drought years, both Lake Toho and East Lake Toho became important nesting areas. For instance, in 2011, approximately 70 percent of all successful nesting (system-wide) occurred on Lake Tohopekaliga and East Lake Toho. Table 3-4 displays the preliminary nesting data for 2011 (Audubon 2011).

In addition to drought, extreme wet events and major storm events may result in nest failure. After Hurricane Irma (2017), all 44 active nests on Lake Okeechobee were lost due to the storm's high winds and high rainfall.

Although the snail kite has experienced extreme fluctuations in population numbers, more recent data indicates significant spatial variation in population trends. Snail kites in the northern portion of the range (from Lake Okeechobee through the Kissimmee Chain of Lakes) decreased in numbers from 2001 to 2002 and then increased in numbers in 2007 to 2008 and again from 2011 to 2013. Estimated snail kite abundance in the north increased approximately four fold from 2007 to 2013 (217 to 870 snail kites, respectively). Whereas snail kite populations in the south (predominantly the Everglades Water Conservation Areas) declined significantly throughout the study period from 1998 to 2013 (with 2601 to 291, respectively). Using predictive models, Reichert et al. (2016) noted that system-wide snail kite abundance declined from 2000-2002 and again from 2006 to 2008, but similar to the northern region, the range wide population increased from 2010 to 2013. The predicted system-wide estimate in 2013 was approximately 1160 (+/- 180) individuals (Reichert et al 2016). The system-wide population continued to grow the following year to approximately 1700 individuals.<sup>2</sup>

### 3.3.3.3 Summary

The snail kite, listed in 1967, is threatened by freshwater marsh destruction, periodic dewatering by water diversions, low population numbers, range-wide drought and hurricanes. Based on extrapolation of estimates and growth rates, the species' 1969 population was estimated at 971 birds. The population grew to 3,577 in 1999, fell to 662 in 2009 and then grew relatively steadily to 1,700 in 2014.<sup>3</sup>

---

<sup>2</sup> [https://www.esasuccess.org/2016/alphabet\\_a-m.shtml#a23](https://www.esasuccess.org/2016/alphabet_a-m.shtml#a23). Accessed 2018.

<sup>3</sup> [https://www.esasuccess.org/2016/alphabet\\_a-m.shtml#a23](https://www.esasuccess.org/2016/alphabet_a-m.shtml#a23). Accessed 2018.

**TABLE 3-3 MID-WINTER SNAIL KITE SURVEY 1985-1994**

<b>Location</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>10-Yr Mean</b>
St. Johns Marsh	8	6	7	30	38	68	81	81	10	27	36
Lake Kissimmee	38	28	42	33	73	61	49	38	38	46	45
Lake Tohopekaliga	17	13	1	1	19	118	2	19	2	7	20
East Lake Toho	0	0	0	0	18	30	5	9	24	21	11
Lake Okeechobee	108	71	94	175	122	83	146	216	113	129	126
WCA2A	1	1	0	4	11	20	14	42	1	0	9
WCA2B	16	58	4	48	0	0	10	2	32	142	31
WCA3A	170	353	117	166	166	13	7	113	345	470	192
WCA3B	24	13	11	9	0	1	2	2	10	11	8
Big Cypress NP	0	0	0	0	0	0	0	32	28	43	10
Everglades NP	1	1	6	10	3	1	3	67	16	29	14
The Pocket	7	9	19	9	3	0	20	11	89	1	43
Other sites	10	10	24	13	11	27	17	113	139	70	43
<b>Total for Year</b>	<b>400</b>	<b>563</b>	<b>325</b>	<b>498</b>	<b>464</b>	<b>422</b>	<b>356</b>	<b>745</b>	<b>847</b>	<b>996</b>	<b>562</b>

Source: (MSRP 1999)

Note: WCA Water Conservation Area  
 NP National Park



**FIGURE 3-6 SNAIL KITE NEST LOCATIONS IN EAST LAKE TOHO 2013 TO 2017**

**TABLE 3-4 PRELIMINARY SNAIL KITES NESTING DATA IN FLORIDA FROM 2011**

Location	# of nests initiated	# of successful nests	% successful
WCA2A	34	11	32
Lake Okeechobee	44	17	39
Lake Toho	98	38	39
East Lake Toho	67	35	52
Statewide total	294	110	37

Source: Audubon 2011

### **3.3.4 Wood Stork**

#### **3.3.4.1 Species Use of Action Area**

Although foraging habitat is available in the East Lake Toho area, wood storks are not commonly observed foraging on the lake. Most of the littoral zone has high vegetation cover and therefore, likely limited access to fish. Some areas of open water are available for foraging but most are found in deeper water locations than those utilized by wood storks. The proposed project implementation would temporarily open more area to foraging by removing some of the vegetation cover (within zones that are foraged by wood storks). The nearest wood stork colonies observed from 2008 to 2017 are approximately 6 miles from East Lake Toho (northwest and northeast) and approximately 4.5 miles from Fells Cove (Figure 3-7).

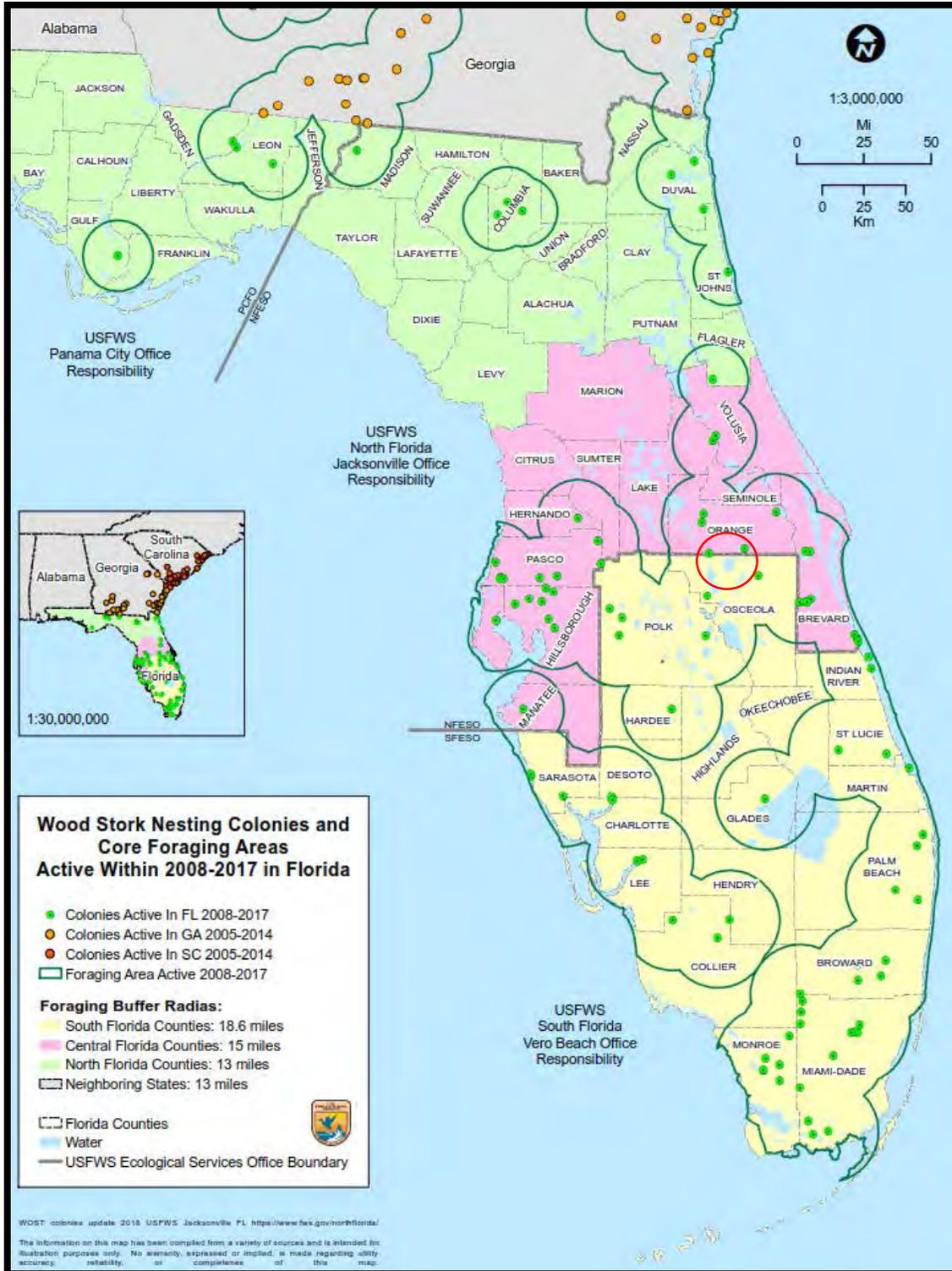
#### **3.3.4.2 Population**

*During the 29-year period since listing under the Act (1984 to 2013), 20 synoptic surveys of nesting colonies of the wood stork in the U.S. population's breeding range (Florida, Georgia, South Carolina, and North Carolina) were completed. Fourteen of those resulted in counts exceeding 6,000 pairs. Ten of those higher counts occurred since 2002 (2002, 2003, 2004, 2006, 2008, 2009, 2010, 2011, 2012, and 2013; Table 1; USFWS 2013). Three counts of more than 10,000 pairs have occurred during the past 8 years, and the count of 12,720 pairs in 2009 is the highest on record since the early 1960s. This population estimate along with a conservative estimate of 4,000 pre-breeding age birds suggest 30,000 storks were inhabiting the United States in 2009 (Bryan and Borkhataria 2010, p. 2). Nest counts were 8,149 in 2010, 9,579 in 2011, 8,452 in 2012, and 11,046 in 2013 (F.R. 2014, 79 FR 37077).*

**TABLE 3-5 WOOD STORK NESTING IN FLORIDA**

<b>3-Year Averages</b>	<b>Everglades <sup>1</sup></b>	<b>South Florida Total</b>	<b>Florida Total</b>	<b>U.S. Total <sup>3</sup></b>
1999-2001	1,538			
2000-2002	1,868			
2001-2003	1,596	3,179	4,838	7,417
2002-2004	1,191	2,889	5,332	8,349
2003-2005	742	2,109	4,278	7,588
2004-2006	800	2,814	4,749	8,410
2005-2007	633	2,516	3,691	7,086
2006-2008	552	2,374	3,536	7,268
2007-2009	1,468	3,393	4,273	7,748
2008-2010	1,736	3,700	5,031	8,993
2009-2011	2,263	4,628	6,183	10,147
2010-2012	1,182	3,022	4,553	8,724
2011-2013	1,686	3,671	5,593	9,692
<sup>1</sup> Comprehensive Everglades Restoration Program Goal: 3-year average of 1,500-2,500); Recovery Goal: 5-year average of 2,500.				

Source: Frederick 2013, p. 36, Table 21



**FIGURE 3-7 WOOD STORK NESTING COLONY AND CORE FORAGING AREA MAP**

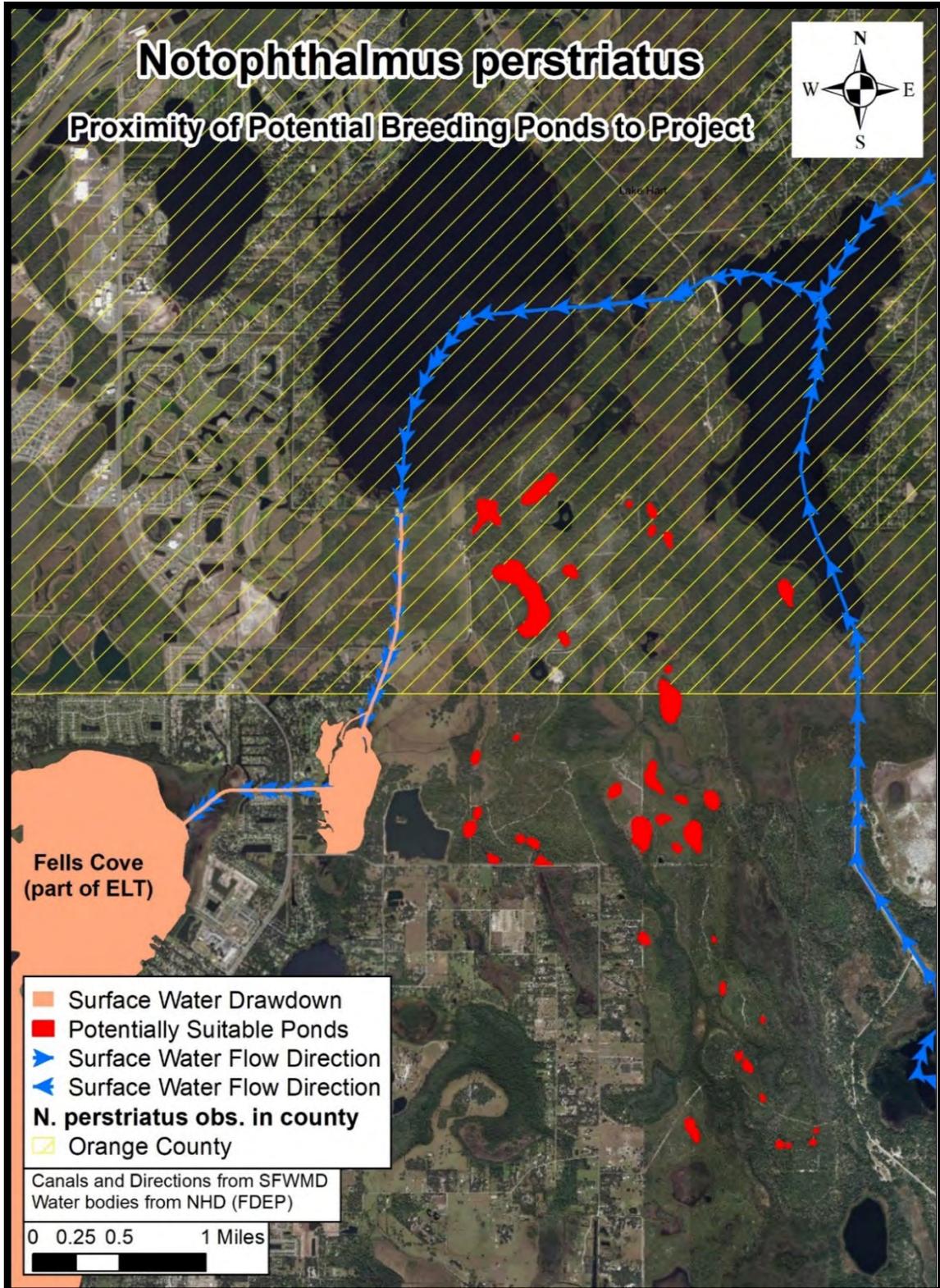
### 3.3.5 Striped Newt

#### 3.3.5.1 Species Use of Action Area

East Lake Toho is not within an area known to be inhabited or known to have been inhabited by striped newts. However, East Lake Toho is near the border of Orange County, in which striped newts have been observed. Suitable habitat exists near the project area and has not been surveyed for striped newts. Because of the possibility of their proximity, striped newts are considered in this BA. East Lake Toho is not a suitable habitat for striped newts, which breed in small fish-free ponds, while the (non-paedomorph) adults inhabit high pine, scrub, and flatwoods ecosystems. No work related to the proposed Project is expected in any habitat potentially inhabited by striped newts. The only potential for impact would involve influence on ephemeral breeding ponds used by the striped newts, resulting from lowering of the regional water table; they leave the ponds in response to pond drying. Striped newts forage more effectively in water and return to ponds usually in the fall, during heavy rains which would likely fill the ponds. If the rains are delayed, the striped newts would delay their return into winter or spring when or if the rains arrive. Adults collected entering ponds are usually thin and in poor body condition. Therefore, shortening pond hydroperiods, especially during their winter breeding season would negatively impact their survival and ability to reproduce. The closest ponds potentially used by striped newts are approximately 0.5 mile from surface waters subject to the drawdown, which is anticipated to be far enough away to eliminate any influence (Figure 3-8).

#### 3.3.5.2 Population

*“Conservation. Although striped newts are not protected by Federal statutes, the U.S. Fish and Wildlife Service is concerned about their biological status and considers the species as Under Review. Striped newts are listed as Rare in Georgia because of the small number of known localities within the state (Jensen, 1999b). The Florida Natural Areas Inventory considers striped newts as Imperiled in Florida, and the Florida Committee on Rare and Endangered Plants and Animals lists the species as Rare. Although Cox and Kautz (2000) discussed the status and biological requirements of the striped newt in Florida, they are not protected in the state and have no legal protected status. Striped newts have declined substantially throughout their range because of direct habitat loss and habitat degradation (e.g., fire suppression, silvicultural practices, pond drainage, and fish introductions; Dodd and LaClaire, 1995; Franz and Smith, 1995; S.A.J., unpublished data). Presently, they persist at about 15 isolated locations throughout their range, and the majority of these locations are on public property.”* Amphibia 2018.



**FIGURE 3-8 PROXIMITY OF POTENTIAL STRIPED NEWT BREEDING PONDS TO SURFACE WATERS SUBJECT TO THE EAST LAKE TOHO DRAWDOWN**

The remaining 20 species listed in Table 3-2 have a low probability of occurrence within the proposed project action area. Most of these species are found within scrub or flatwood habitat. The proposed project action area would occur over water (and in wetland habitat) with staging occurring in adjacent boundaries (predominantly within Chisholm Park located along the southeastern shore of East Lake Toho). Natural areas within upland habitat of Chisholm Park would be avoided for staging. Additionally, because in-lake spoil islands are proposed as an action alternative(s), upland disturbance in habitat adjacent to East Lake Toho is not expected. If upland disposal is included, appropriate protective measures and BMPs would be followed (gopher tortoises and eastern indigo snakes). Although not known to exist, limited suitable habitat may be present adjacent to Boggy Creek on the Hilliard Island property. This is also noted for the crested caracara.

### **3.4 CRITICAL HABITAT**

No critical habitat occurs in the proposed project area. Consultation area and critical area maps are provided in Appendix A.

## **4 HOW THE ACTION MAY AFFECT EACH PROTECTED RESOURCE**

### **4.1 AUDUBON'S CRESTED CARACARA**

Crested caracara nest in upland habitat and utilize pasture, wet and dry prairies, and seasonal wetland habitats to forage. Proposed spray and burn activities within the littoral zone of East Lake Toho and adjacent to potentially suitable nesting habitat would increase access to forage by decreasing vegetation height and density. The currently proposed project alternative does not include upland disposal of material or upland staging in preferred crested caracara habitat. If the scope of the proposed Project were to change to include upland disposal of spoil material, additional evaluation and consultation would be needed.

### **4.2 EASTERN INDIGO SNAKE**

In central and southern Florida, the eastern indigo snake uses a variety of habitat types including pine flatwoods, scrubby flatwoods, floodplains, and edges of freshwater marshes. Eastern indigo snakes have been sighted in Osceola County in uplands adjacent to both East Lake Toho and Lake Tohopekaliga. Given the staging grounds for the Project would include uplands within Chisholm Park, it is possible (yet not likely) that the eastern indigo snake would be encountered. The vast majority of work associated with the Project would occur within the littoral zone; eastern indigo snake is not likely to be affected. Best management practices and USFWS programmatic guidance would be followed.

### **4.3 EVERGLADE SNAIL KITE**

The current distribution of the Everglade snail kite in Florida is limited to central and southern portions of the state (Rodgers et al. 1988, Rumbold and Mihalik 1994, Sykes et al. 1995). In the Kissimmee Chain of Lakes, snail kites are found at Lake Tohopekaliga, East Lake Tohopekaliga, Lake Hatchineha, Lake Kissimmee, Lake Istokpoga (MSRP 1999) and Lake Okeechobee. Previous radio tracking studies indicated that snail kites also use many other smaller wetlands within this overall range (Bennetts and Kitchens 1997a). Recent data also shows that kites are using wetlands associated with the Kissimmee River (USFWS 2018b).

To better understand the effects of drawdown and lake management FWC currently contracts with University of Florida (UF) scientists to track movement of juvenile snail kites on East Lake Toho. FWC also funds research on apple snails (including the response of both the native and invasive apple snail to lake drawdowns and habitat enhancement efforts). This data should help improve future lake management strategies such that impacts to the snail kite are minimized and habitat improvement benefits can be maximized (personal communication with Tim Coughlin and Beacham Furse, FWC, November 2018).

#### **4.3.1 Nesting**

Snail kites have been known to nest in all months of the year with peak nesting occurring (approximately 70 percent) between February and April or approximately 80 days before the start of the rainy season (Sykes 1987). Given that the drawdown phase of the proposed Project

would be completed by early February, water levels would be kept stable during the peak nesting (Figure 3-6). Snail kite nesting may be impacted during January when drawdown would still be occurring; lake refill would begin in June.

Nesting surveys would be conducted prior to the East Lake Toho drawdown and proposed project activity would not begin if nesting is observed. Additional surveys would be conducted during the dry phase of the proposed Project to confirm that no nests are present in the proposed work areas (scrape and spray and burn areas). These surveys would be conducted in addition to the annual snail kite surveys within the Kissimmee Chain of Lakes.

### **4.3.2 Habitat**

Short-term impacts to the entire littoral zone would occur due to East Lake Toho drawdown. The removal of tussocks and dense, weedy vegetation would open additional habitat for snail kiting nesting and foraging. Woody habitat would be available adjacent to open water foraging habitat thereby facilitating roosting. Over a period of 3 to 5 years, littoral vegetation would be favorable for snail kites. Initially, substrate may be lacking for apple snail eggs. This lack of vegetation would also likely limit the use of scraped areas by kites until vegetation return.

### **4.3.3 Foraging**

Snail kites forage nearly exclusively on apple snails, making snail kites survival directly dependent on hydrologic conditions (including water quality) that are favorable to apple snail populations. Native apple snails lay approximately 75 percent of egg clutches from April to June (Darby et al 2008). This is the period of low water level after drawdown; therefore, April and May apple snail egg clusters would hatch prior to increases in water level. Substrate for egg laying would be significantly reduced (Figure 2-2) due to dry conditions (55.0 NGVD feet to 53.0 NGVD feet) and limited to the outermost edge of the littoral zone which is comprised of bulrush and mixed bulrush. Egg clusters are commonly observed on bulrush in the existing landscape. The drawdown is expected to have a significant effect on the abundance and distribution of native apple snail. Darby et al. (1998) noted both a rapid and significant decline in apple snails during the Lake Kissimmee drawdown and for the 2 years following the drawdown. Although the abundance of apple snails declined by approximately 80 percent, the habitat enhanced areas showed increased utilization by apple snails. During the Lake Tohopekaliga drawdown and scraping, Desa (2008) found a significant decrease in native apple snail occupancy after 1 year (decreased from 66 percent to 13 percent). The following year, apple snail occupancy rebounded and was greater than under the pretreatment condition (increased from 66 percent to 80 percent). One uncertainty is the effect on the invasive non-native apple snail. Although utilized by snail kites, the invasive apple snail's larger size often increases handling time and may limit consumption. The abundance of the invasive apple snail (and its ability to reproduce nearly throughout the year) may positively offset some of the negative impacts associated with the expected decline in the population of the native apple snail due to the proposed Project (Cattau et al. 2016).

#### **4.4 WOOD STORK**

Although wood stork colonies exist within 4 miles to 6 miles of the affected areas of East Lake Toho, wood storks are not frequently observed using the lake for foraging. Wood storks prefer shallow open water habitat or areas that concentrate prey. Due to high vegetation cover in shallow areas of the littoral zone, wood storks generally have limited access to prey. In the area of the proposed scrape on the east side of East Lake Toho, tussocks can nearly block access to open water. Currently the outer open water edge of the littoral zone is too deep for foraging. The drawdown and treatment activities of the proposed Project, would temporarily provide improved conditions for wood stork access. Some areas would have slight increases in hydroperiod, thereby potentially increasing the biomass of available forage. In addition to the access and hydroperiod issues, a few small areas with suitable water depth have dense exotic vegetation cover. Treatment of these areas would also improve habitat for wood storks.

## 5 SECTION 7 FINDING FOR PROTECTED RESOURCES

Table 5-1 presents the effects determination for each listed and candidate species with the potential to occur in or surrounding the proposed project action area. These effects determination categories are: No Effect; May Affect, Not Likely to Adversely Affect; and May Affect, Likely to Adversely Affect. These effects determinations were reached based upon the existing information available for each species and its occurrence, as well as conservation, monitoring and mitigation measures to avoid and minimize impacts to listed species.

The following definitions, per the USFWS Florida Field Office Guidance Memorandum (May 2016), were used for the effects determination.

- **No effect** means there would be no impacts, positive or negative, to protected resources. Generally, this means no protected resources would be exposed to the action and its environmental consequences.
- **May affect, but not likely to adversely affect** means that all effects are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without any adverse effects to the protected resources. Insignificant effects relate to the size of the impact and include those effects that are undetectable, not measurable, or cannot be evaluated. Discountable effects are those extremely unlikely to occur.
- **May affect, and is likely to adversely affect** means that protected resources are likely to be exposed to the action or its environmental consequences and would respond in a negative manner to the exposure.

**TABLE 5-1 SPECIES EFFECTS DETERMINATION TABLE**

Group	Common Name	Scientific Name	Status	Effects Determination
Amphibian	Striped newt	<i>Notophthalmus perstriatus</i>	Candidate	No effect
Birds	Whooping crane	<i>Grus americana</i>	Experimental population; non-essential	No effect
Birds	Everglade Snail Kite	<i>Rostrhamus scoiabilis plumbeus</i>	Endangered	Likely to adversely effect
Birds	Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered	No effect
Birds	Wood stork	<i>Mycteria americana</i>	Threatened	MANLAA <sup>4</sup>
Birds	Audubon’s crested caracara	<i>Polyborus plancus audubonil</i>	Threatened	MANLAA
Birds	Florida grasshopper sparrow	<i>Ammodramus savannarum floridanus</i>	Endangered	No effect
Birds	Florida scrub jay	<i>Aphelocoma coerulescens</i>	Threatened	No effect
Mammals	Florida panther	<i>Puma (=Felis) concolor coryi</i>	Endangered	No effect
Mammals	Puma (=mountain lion)	<i>Puma (=Felis) concolor (Except coryi)</i>	Appearance Similarity (Threatened)	No effect
Reptiles	American alligator	<i>Alligator mississippiensis</i>	Appearance Similarity (Threatened)	NA/No effect
Reptiles	Eastern indigo snake	<i>Drymarchon corais couperi</i>	Threatened	MANLAA
Reptiles	Bluetail mole skink	<i>Eumeces egregius lividus</i>	Threatened	No effect
Reptiles	Sand skink	<i>Neoseps reynoldsi</i>	Threatened	No effect
Reptiles	Gopher tortoise	<i>Gopherus Polyphemus</i>	Candidate	No effect
Flowering Plants	Papery whitlew-wort	<i>Paronychia chartacea</i>	Threatened	No effect
Flowering Plants	Lewton’s polygala	<i>Polygala lewtonii</i>	Endangered	No effect
Flowering Plants	Sandlace	<i>Polygonella myriophylla</i>	Endangered	No effect
Flowering Plants	Florida bonamia	<i>Bonamia grandiflora</i>	Threatened	No effect
Flowering Plants	Pygmy fringe-tree	<i>Chionanthus pygmaeus</i>	Endangered	No effect
Flowering Plants	Pigeon wings	<i>Clitoria fragrans</i>	Threatened	No effect
Flowering Plants	Scrub buckwheat	<i>Eriogonum longifloium var.gnaphalifolium</i>	Threatened	No effect
Flowering Plants	Britton’s Beargrass	<i>Nolina brittoniana</i>	Endangered	No effect
Flowering Plants	Wide-leaf warea	<i>Warea amplexifolia</i>	Endangered	No effect
Flowering Plants	Scrub lupine	<i>Lupinus aridorum</i>	Endangered	No effect

<sup>4</sup> May Affect Not Likely to Adversely Affect (MANLAA)

Determinations for the eastern indigo snake, the Everglade snail kite, and the wood stork used programmatic guidance (Appendix B) and are described in further detail below.

**5.1 EASTERN INDIGO SNAKE**

The USACE has determined the proposed project may affect, but is not likely to adversely affect the eastern indigo snake (Programmatic Effect Determination Key, Revised 2017):

- A. Project is not located in open water or salt marsh .....go to B  
 Project is located solely in open water or salt marsh ..... no effect
- B. Permit will be conditioned for use of USFWS’s most current guidance for Standard Protection Measures for the Eastern Indigo Snake (currently 2013) during site preparation and project construction .....go to C  
 Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the USFWS is requested .....may effect
- C. The project will impact less than 25 acres of eastern indigo snake habitat (e.g., sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes .....go to D  
 The project will impact 25 acres or more of eastern indigo snake habitat (e.g., sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes .....may affect
- D. The project has no known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and/or injured during project activities..... NLAA  
 The project has no known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and/or injured
- E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be excavated prior to site manipulation in the vicinity of the burrow. If an eastern indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of particular area, and, if occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work ..... NLAA

USACE has USFWS’ concurrence for the proposed activities through the use of the aforementioned determination key.

## 5.2 EVERGLADE SNAIL KITE

After careful review of the snail kite and apple snail literature, as well as review of the USFWS Multi-species Recovery Plan (MSRP), USACE determined that snail kites would be exposed to the proposed drawdown and habitat enhancement action and its environmental consequences and would respond in a negative manner to the exposure. Although most of the negative impacts would be short-term, similar actions in the past (on both East Lake Toho and Lake Tohopekaliga) have negatively impacted snail kites (MSRP 1999). The proposed East Lake Toho Project would incorporate impact minimization, project timing modifications, surveys and other specific commitments as noted above. These efforts would minimize to the extent possible, impacts to snail kites. Unfortunately, all impacts to snail kites and their primary food source (apple snails) cannot be avoided. Furthermore, uncertainties including weather and other stochastic factors may interact with the proposed Project thereby exposing snail kites to additional negative impacts. Over longer periods of time 3 to 10 years, snail kites are expected to benefit from the proposed project action by opening habitat to improved foraging. Due to expected short-term impacts, the proposed East Lake Toho drawdown and habitat improvement Project may affect, and is likely to adversely affect snail kite populations on East Lake Toho.

## 5.3 WOOD STORK

It was determined that the proposed Project impacts are self-mitigating as described above and therefore, a may affect, not likely to adversely affect determination is warranted.

USACE has determined the proposed Project may affect, but is not likely to adversely affect wood stork. The proposed activity is within the CFA of two rookeries; the Project supports suitable foraging habitat (SFH) for wood stork. USACE completed an evaluation of the Project based upon the USFWS South Florida Ecological Services Field Offices Programmatic Concurrence for use with the Wood Stork (May 2010). Use of the key for wood stork resulted in the following sequential determination:

- A Project is more than 2,500 feet from a colony site
- B Project impacts SFH
- C Project impacts to SFH greater than or equal to 0.5 acres
- D Project impacts to SFH are within the CFA of a colony site
- E The determination is supported by SFH compensation provided within the service area of a mitigation bank which covers the CFA and/or provides an amount of habitat and foraging function equivalent to that of impacted SFH; is not contrary to the Service's Habitat Management Guidelines. For the wood stork in the Southeast Region and in accordance with the CWA Section 404(b)(1) guidelines) not likely to adversely affect.

The USACE has USFWS concurrence for the proposed activities through the use of the aforementioned determination key.

The proposed Project may effect, but is not likely to adversely affect the wood stork.

### **Consultation for Previous Related Actions**

USACE's findings for the proposed East Lake Toho Project are consistent with the results of the Final Lake Tohopekaliga Environmental Impact Statement (EIS) conducted in 2001. In a letter dated June 26, 2001, from USFWS, it was determined that no adverse effect was expected to occur for the crested caracara, bald eagle and wood stork as a result of the proposed drawdown. The USFWS indicated that additional evaluation would be required to determine effects on the Everglade snail kite. The October 5, 2001 letter from USFWS suggested that the USACE request initiation of a formal consultation to address effects that the proposed drawdown may have on the snail kite (Appendix B). Ultimately, the USFWS determined that based upon current status of the snail kite, the environmental baseline for the action area, and the effects of the proposed project components, that the drawdown and habitat enhancement was unlikely to jeopardize the continued existence of the snail kite (USFWS 2002). The USFWS provided a set of terms and conditions (and discretionary conservation recommendations) to address incidental take allowing the USACE to be exempt from section 9 of the ESA (Appendix B).

## **6 RELEVANT REPORTS AND/OR DOCUMENTS**

Refer to Appendix B for relevant reports. No additional species surveys were conducted for this Project.

- Crested caracara data provided by USFWS
- Snail Kite Nesting data provided by USFWS
- Wood stork colony data provided USFWS
- Sediment Report included in East Lake Toho Final EIS appendices

## 7 CUMULATIVE EFFECTS ANALYSIS

The CEQ defines cumulative effects as the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR~1508). Past, present and future actions are characterized below and divided into activities within East Lake Toho, adjacent to the lake, and within the regional watershed. There are many additional projects currently being constructed and planned within Osceola County. Most are not expected to interact with the proposed East Lake Toho Project. An exhaustive list of all projects is beyond the scope of this effects analysis.

### Activities within East Lake Toho

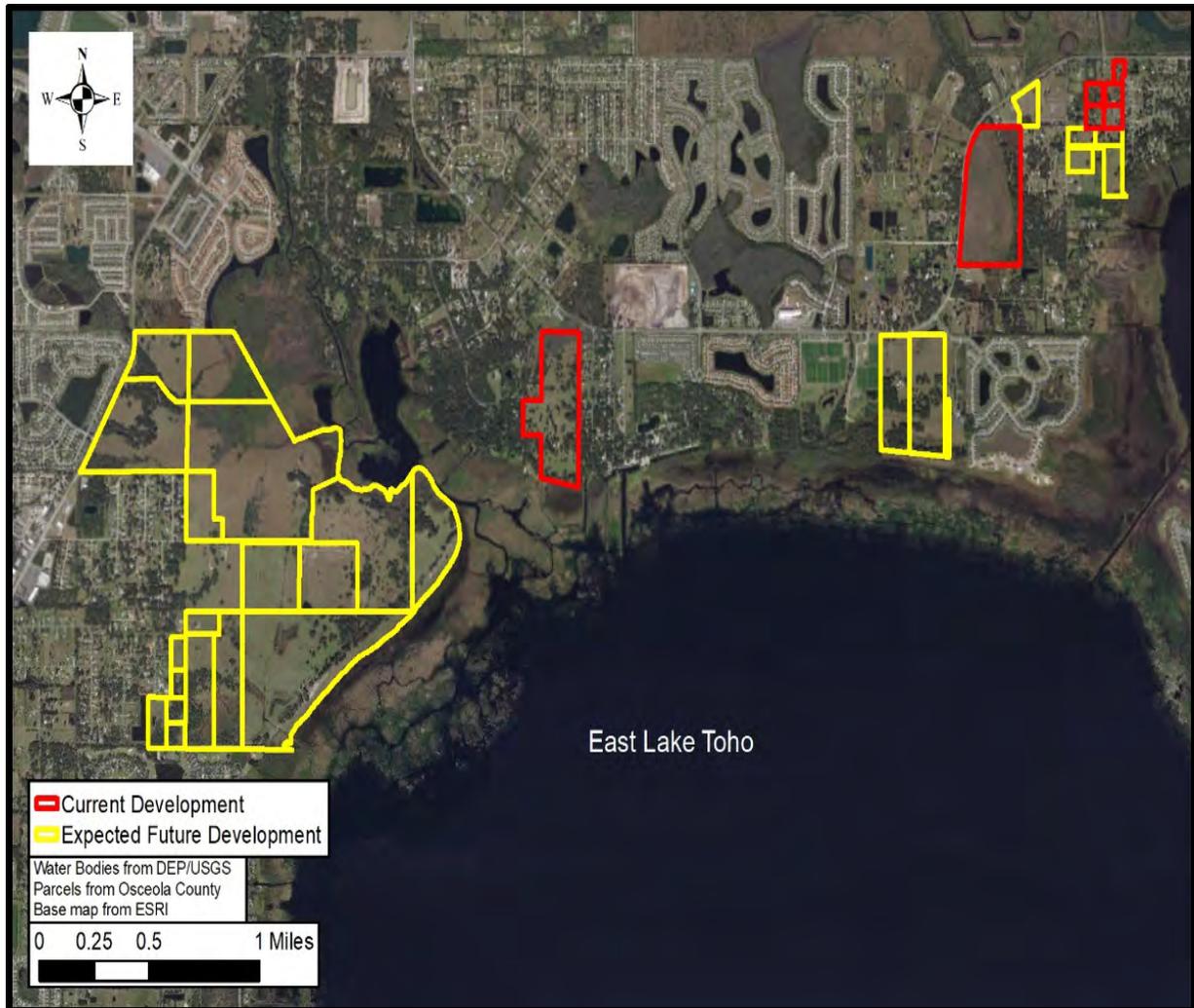
Past, present and future activities that affect the action area include littoral zone clearing by homeowners to provide boat access, construction of docks by homeowners, recreational activities on the water (including airboat use of the littoral zone), ongoing vegetation maintenance on East Lake Toho by local and state agencies. Similar activities also occur within downstream Lake Tohopekaliga. Vegetation maintenance (generally clearing) conducted at the same time as the proposed Project would likely decrease the nutrient uptake that occurs within the littoral zone and may lead to a small, short-term increase in nutrient loading to the lake. Additionally, the use of fertilizer would also increase nutrient loading due to runoff.

### Activities Adjacent to East Lake Toho

In addition to direct impacts to East Lake Toho from the noted activities above, actions adjacent to the lake and within the larger watershed may also contribute to cumulative effects. Recent development activities adjacent to the lake (construction of new homes, roadways, and related water and sewer infrastructure<sup>5</sup>) have likely contributed to the nutrient load received by the lake. Although development adjacent to the East Lake Toho is likely to continue in the future, there are few remaining properties adjacent to the lake and direct impacts are likely to be limited. Currently, a new housing development is being constructed on the north side of the lake adjacent to Boggy Creek (Figure 7-1). Both short term water quality effects and longer term land management effects (additional vegetation management for vista and lake access) can be expected. Given the change in land use and the rate of urban housing construction in the area, it is likely that the three remaining parcels adjacent to the lake would be developed as housing communities. Hilliard Island, in the northwest corner of East Lake Toho is one of the last remaining large parcels adjacent to the lake. However, another large parcel on the north side of the lake off of Boggy Creek Road would likely be developed in the future (Figure 7-1, yellow polygons).

---

<sup>5</sup> It should be noted that conversion from septic to sewer improves water quality at the household level, yet these improvements may be offset by increased development and density.



**FIGURE 7-1 LOCATION OF CURRENT AND EXPECTED FUTURE DEVELOPMENT ADJACENT TO EAST LAKE TOHO**

**Activities within the Regional Watershed**

In addition to regional development that has already occurred within the watershed, several development activities are planned for the future. The two most obvious projects are the Osceola Parkway Extension Project and the East of Lake Tohopekaliga Project.

The Osceola Parkway Extension is a proposed expressway through the Split Oak Forest. The Central Florida Expressway Authority is considering possible routes for extending the Osceola Parkway toll road across the Split Oak Forest Wildlife and Environmental Area, which straddles East Orange and Osceola counties. The roadway would support future planned development by Tavistock Development Corporation and Deseret Ranches. The proposed development by Deseret Ranches is one of the largest planned developments ever to occur in Florida.

Several other roadway projects are planned for the future including the Cross Prairie Parkway and Tohoqua Parkway West road projects. These projects would require the filling and/or conversion of approximately 84.43 acres of waters of the United States (wetlands) to non-jurisdictional features, in Osceola County, Florida.

Overall, it is not expected that the proposed East Lake Toho Project would interact with these longer term projects (adjacent to East Lake Toho or within the regional watershed) impacting threatened and endangered species. The ongoing loss of wetlands and uplands associated with past, present and future planned projects is likely to negatively affect listed species and highlights the need for cumulative effects analysis.

## 8 CONTACTS

1. Informal field meeting with project team and relevant agency staff (November 1, 2017). Participants included:
  - USACE--Jeff Collins and Rachel Gray
  - FWC--Mahmoud Madkour, Don Fox, Tim Coughlin, Beacham Furse and Tyler Beck
  - USFWS--Marla Hamilton
  - Osceola County--Terry Torrens
  - City of St. Cloud--Stephanie Holtkamp
  - South Florida Engineering and Consultants (SFEC) and Consulting Team--Tom St. Clair (Louis Berger), Andy Gottlieb, Chris McVoy, Michael Adler and David Niemi
2. Agency Coordination Meeting was held December 5, 2017, at Heritage Park. This meeting included a review of the proposed project components, project alternatives, NEPA process, communication protocols, the draft EIS outline and critical schedule milestones. Attendees at this meeting (in-person or by phone) were:
  - USACE--Jeff Collins, Stephanie Raulerson and Andy Loschiavo
  - USFWS--Marla Hamilton
  - USEPA--Jamie Higgins
  - Florida EPA --Jeff Prather and Nicole Mae
  - Osceola County--Rick Baird and Jeremy Buchanon
  - City of St. Cloud--Stephanie Holtkamp
  - SFWMD--Zach Welch and Bill Graf
  - FWC--Mahmoud Madkour, Tim Coughlin, Beacham Furse, and Donald Fox and one person from Tallahassee office
  - SFEC and Consulting Team--Tom Conboy, Andy Gottlieb, Michael Adler, Chris McVoy, Tom St. Clair (Louis Berger Group), Sue Byrd, and Terry Clark (Staff Connections)
3. Project public meeting
4. Consultation guidance request, email (to Marla Hamilton) (January 24, 2018 from Andrew Gottlieb)
5. Email received from Marla Hamilton with guidance documents attached (January 24, 2018) (to Jeff Collins, USACE, cc Andrew Gottlieb and Tim Coughlin, FWC)
6. Conference call to discuss project needs and USFWS submission requirements relevant to ESA (Jeff Collins, USACE, Tim Coughlin, FWC, Marla Hamilton, USFWS, Andrew Gottlieb, SFEC, LLC, Michael Adler, SFEC, LLC)
7. Email received from Marla Hamilton with the caracara observation data (February 2, 2008) (to Jeff Collins, Tom Conboy, and Tim Coughlin)

## **9 List of Preparers**

### ***Authors and Reviewers***

Andrew Gottlieb, SFEC  
Michael Adler, SFEC  
Christopher McVoy, SFEC  
Tom St. Clair, Louis Berger

### ***Reviewers***

Jeff Collins, USACE  
Andrew LoSchiavo, USACE  
Melissa Nasuti, USACE  
Beacham Furse, FWC  
Tim Coughlin, FWC  
Tyler Beck, FWC  
Tom St. Clair, Louis Berger  
Sue Byrd, SFEC

## 10 LITERATURE CITED

- Amphibia. 2018. *AmphibiaWeb*. January 17. <http://amphibiaweb.org>.
- Audubon of Florida, 2011 Everglade Snail Kites nesting summary
- Bennetts, R.E., and P. Darby. 2001. The Effects of Artificial Drawdowns on Snail Kites (*Rostrhamus sociabilis*) and Florida Apple Snails (*Pomacea paludosa*), with Special Reference to the Lake Tohopekaliga Habitat Enhancement Project.
- Bennetts, R.E. and K.M. Kitchens. 1997a. *The Demography and Movements of Snail Kites in Florida*. U.S. Geological Survey/Biological Resources Division, Florida Cooperative Fish and Wildlife Research Unit. Technical Report No 56. Gainesville, Florida.
- Bennetts, R.E. and K.M. Kitchens. 1997b. *Population dynamics and conservation of snail kites in Florida: The important of spatial and temporal scale*. Colonial Waterbirds 20:324-329.
- Cattau, Christopher E., et al. 2016. "Counteracting effects of a non-native prey on the demography of a native predator culminate in positive population growth." *Ecological Applications* 26.7 (2016): 1952-1968.
- Chang, et al. n.d. *Best Management Practices for Aquatic Restoration of Lakes, Streams, and Wetlands in Florida*. Orlando, Florida: Stormwater Management Academy, University of Central Florida.
- Darby, P.C., P.L. Valentine-Darby, and H.F. Percival. 1998. *Assessing the Impact of the Lake Kissimmee Restoration on Apple Snails Final Report prepared for Florida Game and Fresh Water Fish Commission Bureau of Non-game Wildlife*. Research Unit, Biological Research Division USGS and Department of Wildlife Ecology and Conservation. Accessed 2018.
- Darby, Philip C., Robert E. Bennetts, and H. Franklin Percival. 2008. "Dry down impacts on apple snail (*Pomacea paludosa*) demography: implications for wetland water management." *Wetlands* 28.1: 204.
- Desa, Melissa A. 2008. *How Aquatic Fauna Responded to Large Scale Management on Lake Tohopekaliga, Florida*. University of Florida.
- Federal Register (F.R.) 2014. 79 FR 37077.  
<https://www.federalregister.gov/documents/2014/06/30/2014-14761/endangered-and-threatened-wildlife-and-plants-reclassification-of-the-us-breeding-population-of-the...>
- Florida Statutes (F.S.) 2011a. 403.813. 2011. *2011 Florida Senate Statutes*.  
<http://www.flsenate.gov/laws/statutes/2011/403.813>. Accessed 2018.

Fish and Wildlife Commission (FWC). 2007. Commission Beneficial Uses of Dredged Sediments from Florida Lakes

Frederick 2013, p. 36, Table 21.

[https://www.fws.gov/northflorida/WoodStorks/Documents/WoodStork\\_Southeast\\_US\\_Nesting\\_1975-2013.pdf](https://www.fws.gov/northflorida/WoodStorks/Documents/WoodStork_Southeast_US_Nesting_1975-2013.pdf). Accessed 2018.

Morrison, J.L. 1996. Crested caracara (*Caracara plancus*) in A. Poole and F. Gill, editors. *The birds of North America*, No. 249. The Academy of Natural Sciences, Philadelphia, Pennsylvania, and the American Ornithologists= Union, Washington, DC.

Morrison, Joan L. 2001. *Recommended Management Practices and Survey Protocols for Audubon's Crested Caracara (Caracara cheriway audubonii) in Florida. Technical Report No 18.*

Multi-species Recovery Plan (MSRP). 1999. *U.S. Fish and Wildlife Service. South Florida Multi-species Recovery Plan.* Atlanta, Georgia.

Olbert, Jean M. 2013. The breeding ecology of endangered snail kites (*Rostrhamus sociabilis plumbeus*) on a primary nesting site in central Florida, USA. Diss. University of Florida.

Reicher, B.E. Kendall, W. L., Fletcher, R. J. Jr., Kitchens, W. M. 2016. Spatio-temporal variation in age structure and abundance of the endangered snail kite: pooling across regions masks a declining and aging population.

Rodgers J.A., et al. 1988. *Status of the snail kite in FL: 1981-1985.* Am. Birds 42:30-35

Rumbold, D. G., and Mihalik, M. B. 1994. *Snail kite use of a drought-related habitat and communal roost in West Palm Beach, Florida: 1987-1991.* Florida Field Naturalist, 22(2), 29-68.

South Florida Engineers and Consultants, LLC. (SFEC). 2018,

South Florida Water Management District (SFWMD). 2017. *Final Draft - East Lake Tohopekaliga Drawdown Analysis.* (South Florida Water Management District; H and H Bureau).

Sykes, Jr. P.W. 1987. *Some Aspects of the Breeking Biology of the Snail Kite in Florida.* Journal of Field Ornithology, 58 (2): 171-189.

Sykes, P. W., Jr., J. A. Rodgers, Jr., and R. E. Bennetts. 1995. Snail kite (*Rostrhamus sociabilis*) in A. Poole and F. Gill, eds. *The birds of North America*, Number 171, The Academy of Natural Sciences, Philadelphia, and the American Ornithologists Union; Washington, D.C.

URS Corporation. (URS). 2016. *Vegetation Map.*

- U.S. Army Corps of Engineers (USACE). 2016. Permit Number: SAJ-2015-00644 (SP-SLR). Jacksonville District, Florida.
- U.S. Fish and Wildlife Service (USFWS). 1990. *Habitat management guidelines for the wood stork in the southeast region*. Prepared by John C. Ogden for the Southeast Region U.S. Fish and Wildlife Service; Atlanta, Georgia.
- U.S. Fish and Wildlife Service (USFWS). 2002. Lake Tohopekaliga, Kissimmee, Hatchineha, Cypress and Tiger Extreme Drawdown and Habitat enhancement projects, Osceola County July 3, 2002. Biological Opinion. South Florida Ecological Services Office; Vero Beach, Florida.
- U.S. Fish and Wildlife Service (USFWS). 2004a. *FWS Eagle Technical Assistance*. Accessed 2018. <https://www.fws.gov/southeast/our-services/eagle-technical-assistance/#>.
- U.S. Fish and Wildlife Service (USFWS). 2004b. Species Conservation Guidelines South Florida, Audubon's Crested Caracara, South Florida Ecological Services Office, DRAFT, April 20, 2004.
- U.S. Fish and Wildlife Service (USFWS). 2013. Standard Protection Measures for the Eastern Indigo Snake. August 12, 2013
- U.S. Fish and Wildlife Service (USFWS). 2016. Florida Field Office Guidance Memorandum. May 2016.
- U.S. Fish and Wildlife Service. (USFWS). 2018a. <http://ecos.fws.gov/ipac/>. Accessed August 2018.
- U.S. Fish and Wildlife Service (USFWS). 2018b. Everglades\_Snail\_kite\_nesting\_1996\_thru\_2018.
- Wood Stork Foraging Habitat Assessment Methodology (Wood Stork). 2012. [https://www.fws.gov/verobeach/BirdsPDFs/20120712\\_WOST%20Forage%20Assessment%20Methodology\\_Appendix.pdf](https://www.fws.gov/verobeach/BirdsPDFs/20120712_WOST%20Forage%20Assessment%20Methodology_Appendix.pdf). July 12, 2012.

**Appendix A**  
**Consultation Area Maps**

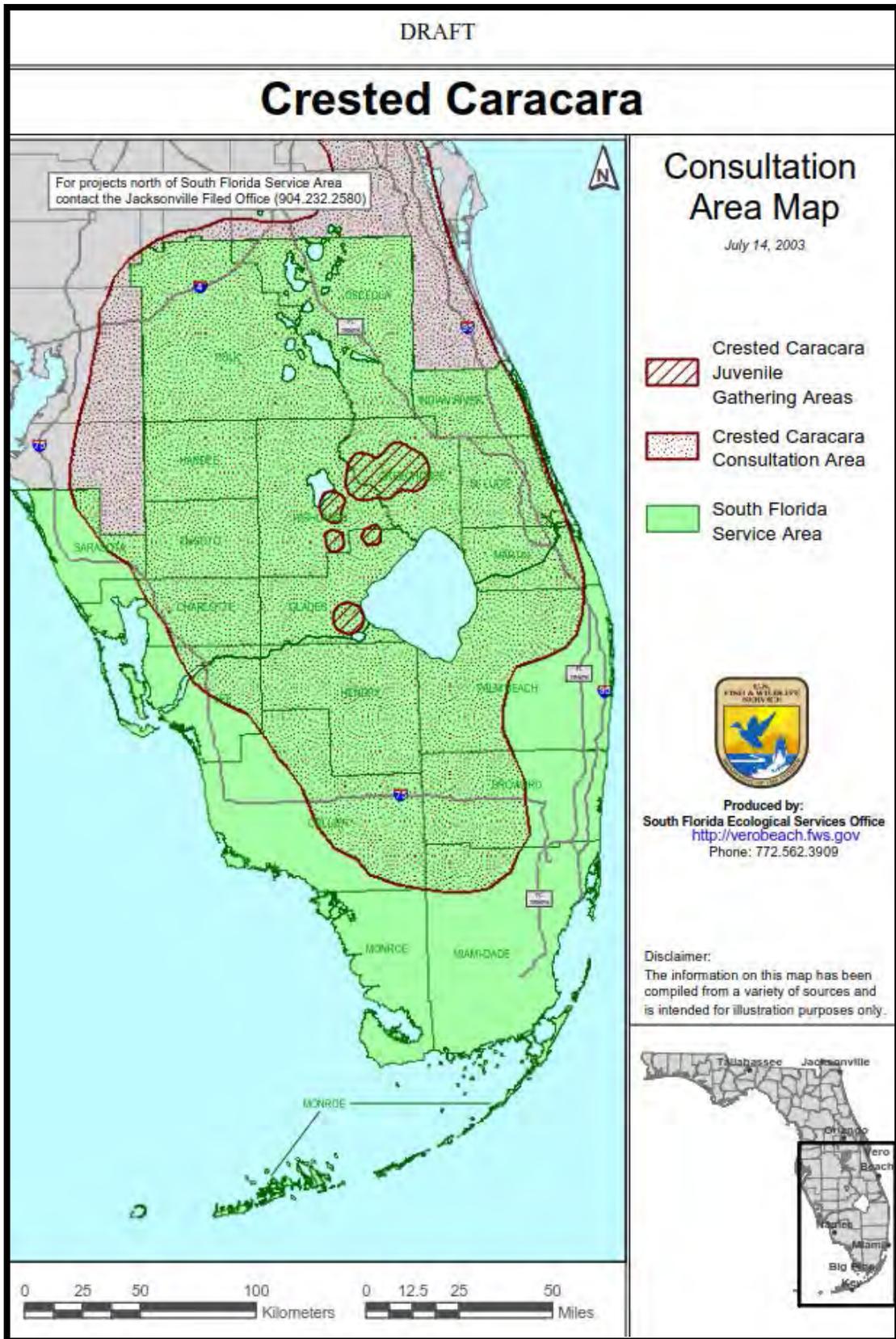
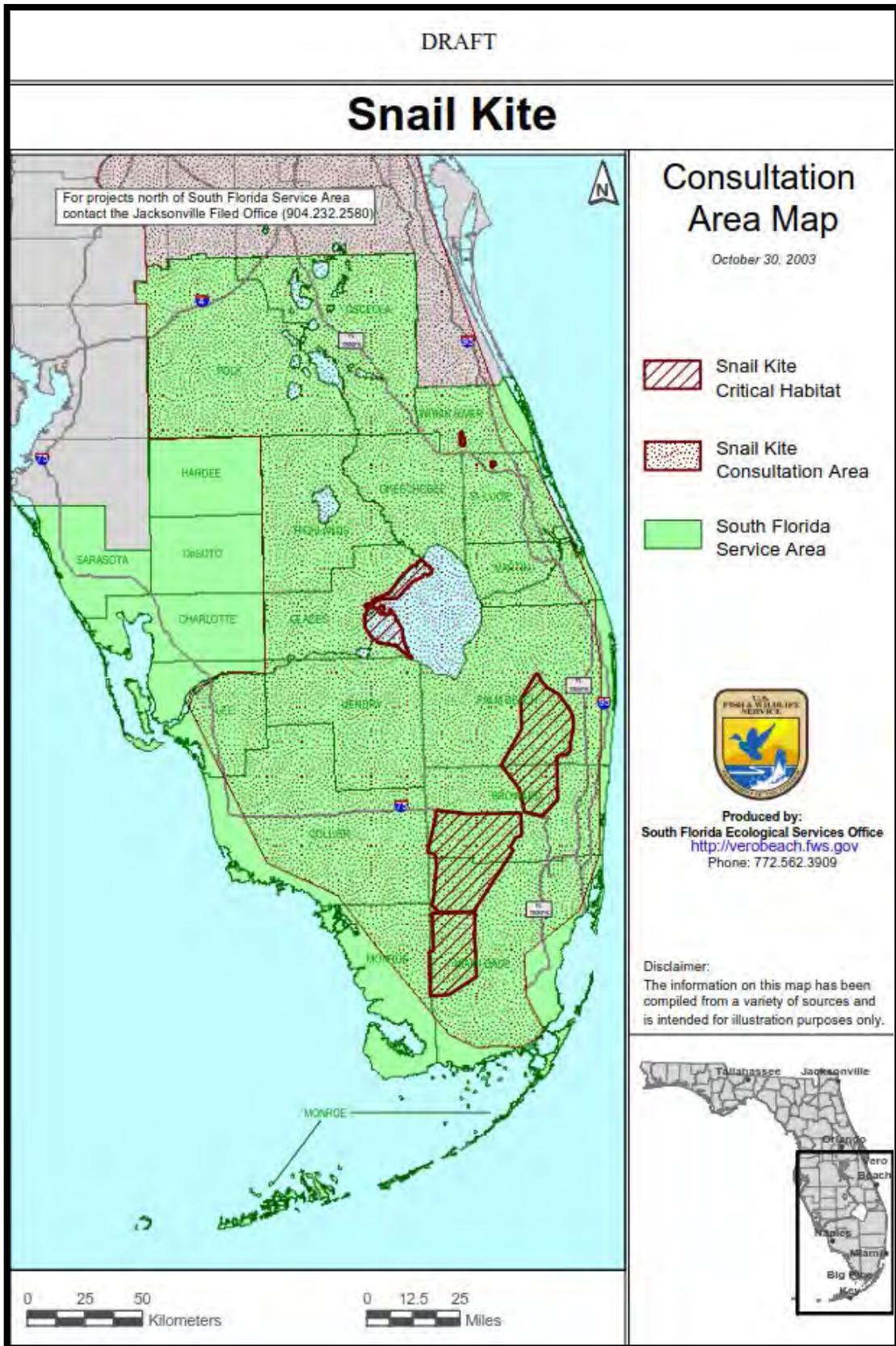


Figure A-1 Audubon's Crested Caracara Consultation Area Map



**Figure A-2 Everglade Snail Kite Consultation and Critical Areas Map**

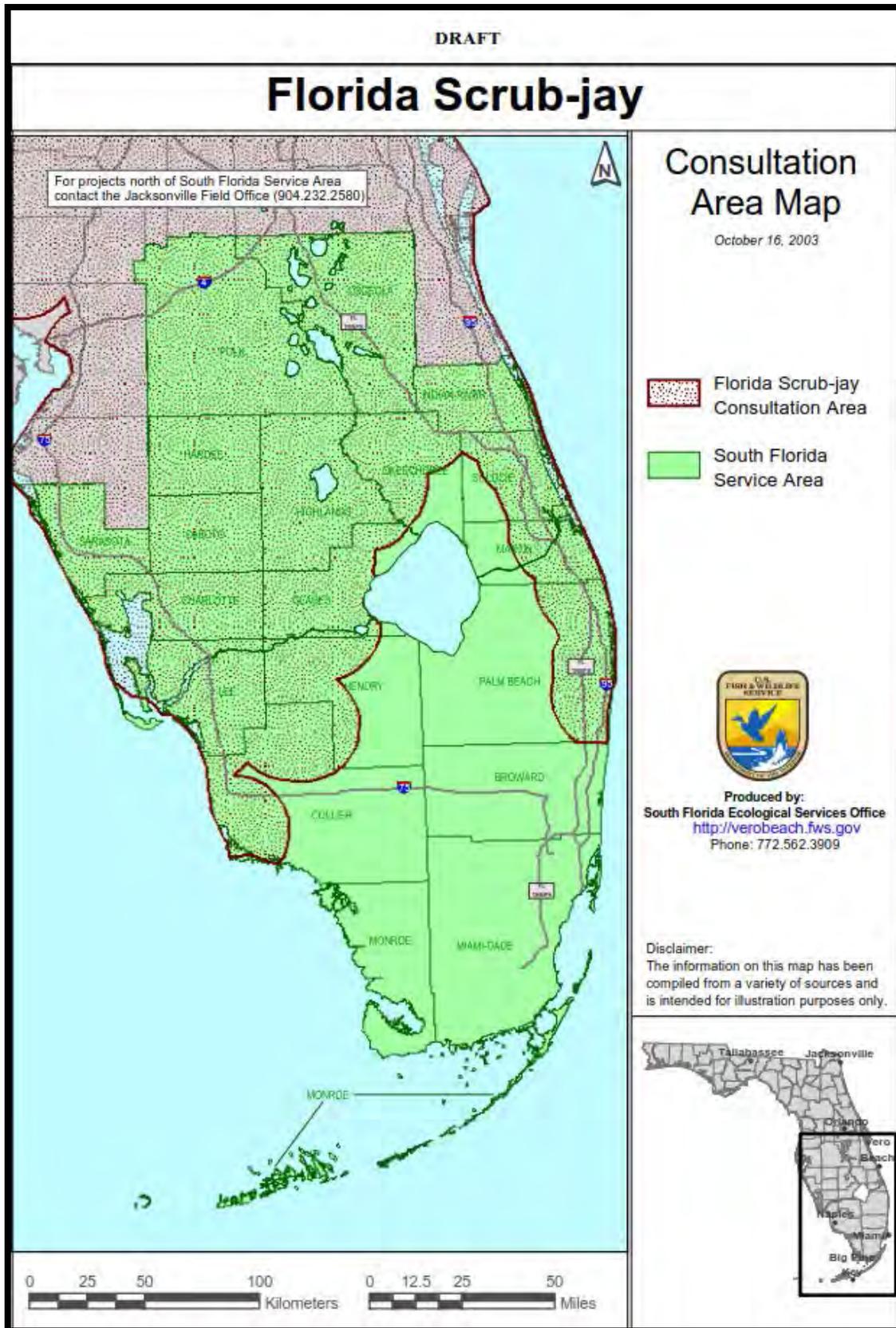


Figure A-3 Florida Scrub Jay Consultation Area





**Appendix B**  
**Guidance Documents and Reports**

Listed below are the guidance documents and reports consulted for this Project:

- Wood Stork Programmatic Key (South Florida Office), Habitat Management Guidelines and Foraging Analysis Guidelines
- USWFS Snail Kite Multispecies Recovery Plan Chapter
- Standard Protective Measures for the Eastern Indigo Snake
- Bennetts and Darby 2001 White Paper; The Effects of Artificial Drawdowns on Snail Kites (*Rostrhamus sociabilis*) and Florida Apple Snails (*Pomacea paludosa*), with Special Reference to the Lake Tohopekaliga Habitat Enhancement Project
- South Florida Water Management District H&H. 2017. Final Draft-East Lake Tohopekaliga Drawdown Analysis
- Jacksonville, South Atlantic Division, U.S. Army Corps of Engineers. Permit No: SAJ-2015-00644 (SP-SLR)
- 2018 Draft Final Sediment Report provided as an appendix in the East Lake Tohopekaliga Drawdown and Habitat Enhancement Environmental Impact Statement

**Wood Stork Programmatic Key  
South Florida Office  
Habitat Management Guidelines and Foraging Analysis Guidelines**



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960

May 18, 2010

Donnie Kinard  
Chief, Regulatory Division  
Jacksonville District Corps of Engineers  
Post Office Box 4970  
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2007-FA-1494  
Service Consultation Code: 41420-2007-I-0964  
Subject: South Florida Programmatic  
Concurrence  
Species: Wood Stork

Dear Mr. Kinard:

This letter addresses minor errors identified in our January 25, 2010, wood stork key and as such, supplants the previous key. The key criteria and wood stork biomass foraging assessment methodology have not been affected by these minor revisions.

The Fish and Wildlife Service's (Service) South Florida Ecological Services Office (SFESO) and the U.S. Army Corps of Engineers Jacksonville District (Corps) have been working together to streamline the consultation process for federally listed species associated with the Corps' wetland permitting program. The Service provided letters to the Corps dated March 23, 2007, and October 18, 2007, in response to a request for a multi-county programmatic concurrence with a criteria-based determination of "may affect, not likely to adversely affect" (NLAA) for the threatened eastern indigo snake (*Drymarchon corais couperi*) and the endangered wood stork (*Mycteria americana*) for projects involving freshwater wetland impacts within specified Florida counties. In our letters, we provided effect determination keys for these two federally listed species, with specific criteria for the Service to concur with a determination of NLAA.

The Service has revisited these keys recently and believes new information provides cause to revise these keys. Specifically, the new information relates to foraging efficiencies and prey base assessments for the wood stork and permitting requirements for the eastern indigo snake. This letter addresses the wood stork key and is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). The eastern indigo snake key will be provided in a separate letter.

Wood stork

## Habitat

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically construct their nests in medium to tall



trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991, 1996; Rodgers et al. 1996). Successful colonies are those that have limited human disturbance and low exposure to land-based predators. Nesting colonies protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

Successful nesting generally involves combinations of average or above-average rainfall during the summer rainy season and an absence of unusually rainy or cold weather during the winter-spring breeding season (Kahl 1964; Rodgers et al. 1987). This pattern produces widespread and prolonged flooding of summer marshes, which maximize production of freshwater fishes, followed by steady drying that concentrate fish during the season when storks nest (Kahl 1964). Successful nesting colonies are those that have a large number of foraging sites. To maintain a wide range of foraging sites, a variety of wetland types should be present, with both short and long hydroperiods. The Service (1999) describes a short hydroperiod as a 1 to 5-month wet/dry cycle, and a long hydroperiod as greater than 5 months. During the wet season, wood storks generally feed in the shallow water of the short-hydroperiod wetlands and in coastal habitats during low tide. During the dry season, foraging shifts to longer hydroperiod interior wetlands as they progressively dry-down (though usually retaining some surface water throughout the dry season).

Wood storks occur in a wide variety of wetland habitats. Typical foraging sites for the wood stork include freshwater marshes and stock ponds, shallow, seasonally flooded roadside and agricultural ditches, narrow tidal creeks and shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Through tactolocation, or grope feeding, wood storks in south Florida feed almost exclusively on fish between 2 and 25 centimeters [cm] (1 and 10 inches) in length (Ogden et al. 1976). Good foraging conditions are characterized by water that is relatively calm, uncluttered by dense thickets of aquatic vegetation, and having a water depth between 5 and 38 cm (5 and 15 inches) deep, although wood storks may forage in other wetlands. Ideally, preferred foraging wetlands would include a mosaic of emergent and shallow open-water areas. The emergent component provides nursery habitat for small fish, frogs, and other aquatic prey and the shallow, open-water areas provide sites for concentration of the prey during seasonal dry-down of the wetland.

### Conservation Measures

The Service routinely concurs with the Corps' "may affect, not likely to adversely affect" determination for individual project effects to the wood stork when project effects are insignificant due to scope or location, or if assurances are given that wetland impacts have been avoided, minimized, and adequately compensated such that there is no net loss in foraging potential. We utilize our *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Service 1990) (Enclosure 1) (HMG) in project evaluation. The HMG is currently under review and once final will replace the enclosed HMG. There is no designated critical habitat for the wood stork.

The SFESO recognizes a 29.9 kilometer [km] (18.6-mile) core foraging area (CFA) around all known wood stork colonies in south Florida. Enclosure 2 (to be updated as necessary) provides locations of colonies and their CFAs in south Florida that have been documented as active within the last 10 years. The Service believes loss of suitable wetlands within these CFAs may reduce foraging opportunities for the wood stork. To minimize adverse effects to the wood stork, we recommend compensation be provided for impacts to foraging habitat. The compensation should consider wetland type, location, function, and value (hydrology, vegetation, prey utilization) to ensure that wetland functions lost due to the project are adequately offset. Wetlands offered as compensation should be of the same hydroperiod and located within the CFAs of the affected wood stork colonies. The Service may accept, under special circumstances, wetland compensation located outside the CFAs of the affected wood stork nesting colonies. On occasion, wetland credits purchased from a “Service Approved” mitigation bank located outside the CFAs could be acceptable to the Service, depending on location of impacted wetlands relative to the permitted service area of the bank, and whether or not the bank has wetlands having the same hydroperiod as the impacted wetland.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing the Wood Stork Effect Determination Key below. If the use of this key results in a Corps determination of “no effect” for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination<sup>1</sup>. This Key is subject to revisitation as the Corps and Service deem necessary.

The Key is as follows:

- A. Project within 0.76 km (0.47 mile)<sup>2</sup> of an active colony site<sup>3</sup> ..... “*may affect*”<sup>4</sup>
  - Project impacts Suitable Foraging Habitat (SFH)<sup>5</sup> at a location greater than 0.76 km (0.47 mile) from a colony site..... “*go to B*”

---

<sup>1</sup> With an outcome of “no effect” or “NLAA” as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

<sup>2</sup> Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

<sup>3</sup> An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

<sup>4</sup> Consultation may be concluded informally or formally depending on project impacts.

<sup>5</sup> Suitable foraging habitat (SFH) includes wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

Project does not affect SFH..... “no effect”.

B. Project impact to SFH is less than 0.20 hectare (one-half acre)<sup>6</sup>.....NLAA<sup>1</sup>”

Project impact to SFH is greater in scope than 0.20 hectare (one-half acre).....go to C

C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site .....go to D

Project impacts to SFH within the CFA of a colony site .....go to E

D. Project impacts to SFH have been avoided and minimized to the extent practicable; compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines; and habitat compensation replaces the foraging value matching the hydroperiod<sup>7</sup> of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance<sup>8</sup>..... NLAA<sup>1</sup>”

Project not as above..... “may affect<sup>4</sup>”

E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod<sup>7</sup> of the wetlands affected, and provides foraging value similar

<sup>6</sup> On an individual basis, SFH impacts to wetlands less than 0.20 hectare (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Wood storks are a wide ranging species, and individually, habitat change from impacts to SFH less than one-half acre are not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

<sup>7</sup> Several researchers (Flemming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) than long hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these short hydroperiod wetlands within CFAs are avoided, minimized, and compensated for by enhancement/restoration of short hydroperiod wetlands.

<sup>8</sup> For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Enclosure 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance<sup>8</sup> ..... "NLAA<sup>1</sup>"

Project does not satisfy these elements ..... "may affect<sup>4</sup>"

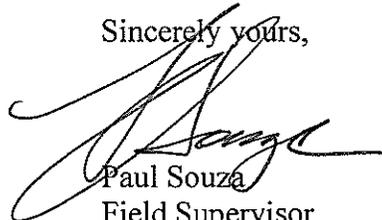
This Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

Monitoring and Reporting Effects

For the Service to monitor cumulative effects, it is important for the Corps to monitor the number of permits and provide information to the Service regarding the number of permits issued where the effect determination was: "may affect, not likely to adversely affect." We request that the Corps send us an annual summary consisting of: project dates, Corps identification numbers, project acreages, project wetland acreages, and project locations in latitude and longitude in decimal degrees.

Thank you for your cooperation and effort in protecting federally listed species. If you have any questions, please contact Allen Webb at extension 246.

Sincerely yours,



Paul Souza  
Field Supervisor  
South Florida Ecological Services Office

Enclosures

- cc: w/enclosures (electronic only)
- Corps, Jacksonville, Florida (Stu Santos)
- EPA, West Palm Beach, Florida (Richard Harvey)
- FWC, Vero Beach, Florida (Joe Walsh)
- Service, Jacksonville, Florida (Billy Brooks)

**LITERATURE CITED**

- Ceilley, D.W. and S.A. Bortone. 2000. A survey of freshwater fishes in the hydric flatwoods of flint pen strand, Lee County, Florida. Proceedings of the 27th Annual Conference on Ecosystems Restoration and Creation, 70-91. Hillsborough Community College; Hillsborough County, Florida.
- Flemming, D.M., W.F. Wolff, and D.L. DeAngelis. 1994. Importance of landscape heterogeneity to wood storks. Florida Everglades Management 18: 743-757.
- Kahl, M.P., Jr. 1964. Food ecology of the wood stork (*Mycteria americana*) in Florida. Ecological Monographs 34:97-117.
- Ogden, J.C. 1991. Nesting by wood storks in natural, altered, and artificial wetlands in central and northern Florida. Colonial Waterbirds 14:39-45.
- Ogden, J.C., J.A. Kushlan, and J.T. Tilmant. 1976. Prey selectivity by the wood stork. Condor 78(3):324-330.
- Ogden, J.C. 1996. Wood Stork in J.A. Rodgers, H. Kale II, and H.T. Smith, eds. Rare and endangered biota of Florida. University Press of Florida; Gainesville, Florida.
- Rodgers, J.A. Jr., A.S. Wenner, and S.T. Schwikert. 1987. Population dynamics of wood storks in northern and central Florida, USA. Colonial Waterbirds 10:151-156.
- Rodgers, J.A., Jr., S.T. Schwikert, and A. Shapiro-Wenner. 1996. Nesting habitat of wood storks in north and central Florida, USA. Colonial Waterbirds 19:1-21.
- U.S. Fish and Wildlife Service. 1990. Habitat management guidelines for the wood stork in the southeast region. Prepared by John C. Ogden for the Southeast Region U.S. Fish and Wildlife Service; Atlanta, Georgia.
- U.S. Fish and Wildlife Service. 1999. South Florida multi-species recovery plan. Fish and Wildlife Service; Atlanta, Georgia. Available from: <http://verobeach.fws.gov/Programs/Recovery/vbms5.html>.

**USWFS Snail Kite Multispecies Recovery Plan Chapter**

---

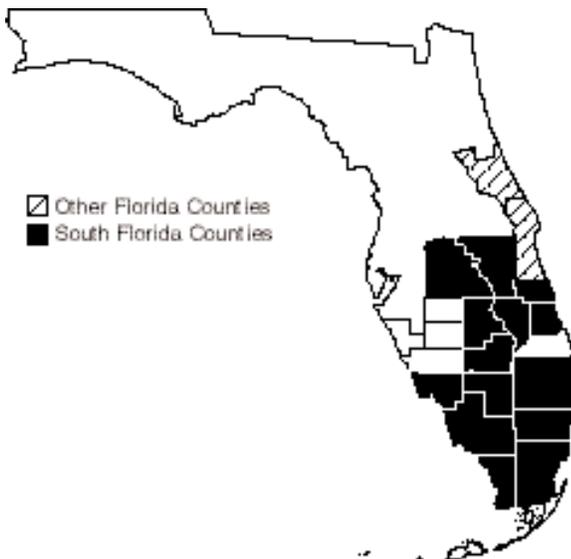
# Everglade Snail Kite

*Rostrhamus sociabilis plumbeus*

---

<b>Federal Status:</b>	<b>Endangered (March 11, 1967)</b>
<b>Critical Habitat:</b>	<b>Designated (August 1977)</b>
<b>Florida Status:</b>	<b>Endangered</b>
<b>Recovery Plan Status:</b>	<b>Revision (May 18, 1999)</b>
<b>Geographic Coverage:</b>	<b>Rangewide</b>

**Figure 1. Florida distribution of the Everglade snail kite.**



The Everglade snail kite (*Rostrhamus sociabilis*) is a wide-ranging New World raptor species found primarily in lowland freshwater marshes in tropical and subtropical America from Florida, Cuba, and Mexico south to Argentina and Peru. The subspecies from Florida and Cuba (*Rostrhamus sociabilis plumbeus*) was first listed as endangered pursuant to the Endangered Species Conservation Act in 1967. The common name used in the original listing was Everglade snail kite and this remains unchanged in the official FWS Code of Federal Regulations, even though the official name for the species is now simply snail kite (AOU 1983).

The Florida population of snail kites is considered to be a single population with considerable distributional shifts. The combination of a range restricted to the watersheds of the Everglades, lakes Okeechobee and Kissimmee, and the upper St. Johns River, with a highly specific diet composed almost entirely of apple snails (*Pomacea paludosa*), makes the snail kite's survival directly dependent on the hydrology and water quality of these watersheds. Each of these watersheds has experienced, and continues to experience, pervasive degradation due to urban development and agricultural activities.

This account represents a revision of the existing recovery plan for the Everglade snail kite (FWS 1986).

---

## Description

The snail kite is a medium-sized raptor, with a total body length for adult birds of 36 to 39.5 cm and a wingspan of 109 to 116 cm (Sykes *et al.* 1995). In both sexes, the tail is square-tipped with a distinctive white base, and the wings are broad, and paddle-shaped. Adults of both sexes have red eyes, while juveniles have brown eyes (Brown and Amadon 1978, Clark and Wheeler 1987). The slender, decurved bill is an adaptation for extracting the kite's primary prey, the apple snail; the bill is a distinguishing

character for field identification in both adults and juveniles.

Sexual dimorphism is exhibited in this species, with adult males uniformly slate gray and adult females brown with cream streaking in the face, throat, and breast. Most adult females have a cream superciliary line and cream chin and throat (Sykes *et al.* 1995). Females are slightly larger than males. Immature snail kites are similar to adult females but are more cinnamon-colored with tawny or buff-colored streaking rather than cream streaking. The legs and cere of females and juveniles are yellow to orange; those of adult males are orange, turning more reddish during breeding (Sykes *et al.* 1995).

In the field, the snail kite could be confused with the northern harrier (*Circus cyaneus*), a similarly sized hawk with a white rump. The northern harrier has a longer and narrower tail, with longer and narrower wings held in a dihedral. The snail kite's flight is slower and characterized by more wing flapping, with the head tilting down to look for snails; the northern harrier has a gliding, tilting flight. At a closer distance, the long, curved beak of the snail kite allows it to be easily distinguished from the northern harrier (Sykes *et al.* 1995).

---

## Taxonomy

Three subspecies of the snail kite are currently recognized (Amadon 1975), but a larger sample size of body measurements is needed to confirm if the separation into three subspecies is valid (Sykes *et al.* 1995). These subspecies are: *Rostrhamus s. plumbeus*, from peninsular Florida, Cuba, and northwestern Honduras; *R. s. major*, from Mexico, Guatemala, and the northern half of Belize; and *R. s. sociabilis*, from southern Nicaragua, through Panama and into South America as far south as northern Argentina. The *plumbeus* subspecies in Florida has a larger body size than that of *R. s. sociabilis*, with a beak of similar size. However, the validity of these subspecies remains a subject of debate; Beissinger (1988) is among those who question the validity of these designations.

The closest related species is the slender-billed kite (*R. hamatus*) from eastern Panama and South America (Ridgely and Gwynne 1989). The slender-billed kite, like the snail kite, feeds on snails of the genus *Pomacea*, but inhabits swamps or wet forests (Beissinger *et al.* 1988, Ridgely and Gwynne 1989).

---

## Distribution

As noted above, the subspecies *R. s. plumbeus* occurs in Florida, Cuba (including Isla de la Juventud) and northwestern Honduras. There is no evidence of movement of birds between Cuba and Florida, but this possibility has not been ruled out (Sykes 1979, Beissinger *et al.* 1983).

In Florida, the original range of the snail kite was larger than at present. Historically, snail kites were known to nest in Crescent Lake and Lake Panasoffkee in north-central Florida and as far west as the Wakulla River (Howell 1932, Sykes 1984). Information on changes in distribution and abundance is in the Status and Trends section of this account.

**Everglade snail kite.**  
*Original photograph by  
Betty Wargo.*



The current distribution of the Everglade snail kite in Florida (Figure 1) is limited to central and southern portions of the State. Six large freshwater systems are located within the current range of the snail kite: Upper St. Johns drainage, Kissimmee Valley, Lake Okeechobee, Loxahatchee Slough, the Everglades, and the Big Cypress basin (Beissinger and Takekawa 1983, Sykes 1984, Rodgers *et al.* 1988, Bennetts and Kitchens 1992, Rumbold and Mihalik 1994, Sykes *et al.* 1995). Habitats in the Upper St. Johns drainage include the East Orlando Wilderness Park, the Blue Cypress Water Management Area, the St. Johns Reservoir, and the Cloud Lake, Strazzulla, and Indrio impoundments. In the Kissimmee Chain of Lakes, snail kites are found at Lake Pierce, Lake Tohopekaliga, East Lake Tohopekaliga, Cypress Lake, Lake Hatchineha, Lake Marion, Lake Marian, Lake Kissimmee, Tiger Lake, Lake Arbuckle, and Lake Istokpoga. Lake Okeechobee and surrounding wetlands are major nesting and foraging habitats, particularly the large marsh in the southwestern portion of the lake and the area southwest of the inflow of the Kissimmee River. In the

Loxahatchee Slough region of Palm Beach County, snail kites are found at the West Palm Beach Water Catchment Area, the Pal-Mar Water Conservation District, and borrow lakes on property belonging to the Solid Waste Authority of Palm Beach County and the City of West Palm Beach. Wetlands in the Everglades region supporting the snail kite are the Arthur R. Marshall Loxahatchee NWR (including WCA 1, WCA 2, WCA 3), Shark River Slough and Taylor Slough in Everglades National Park, and the C-111 basin west of U.S. Highway 1. In the Big Cypress basin, snail kites use the Lostman's and Okaloacoochee sloughs, Hinson Marsh, and the East Loop and Corn Dance units of Big Cypress National Preserve. The Savannas State Preserve, in St. Lucie County, the Hancock impoundment in Hendry County, and Lehigh Acres in Lee County are among the smaller more isolated wetlands used by snail kites (Sykes *et al.* 1995). Although the above list generally describes the current range of the species, radio tracking of snail kites has revealed that the network of habitats used by the species includes many other smaller widely dispersed wetlands within this overall range (R. Bennetts, University of Florida, personal communication 1996, Bennetts and Kitchens 1997a).

---

### Habitat

Snail kite habitat consists of freshwater marshes and the shallow vegetated edges of lakes (natural and man-made) where apple snails can be found. These habitats occur in humid, tropical ecoregions (Bailey 1978) of peninsular Florida and are characterized as palustrine-emergent, long-hydroperiod wetlands (Cowardin *et al.* 1979) often on an organic peat substrate overlying oolitic limestone or sand or directly on limestone or marl (Davis 1946).

Suitable foraging habitat for the snail kite is typically a combination of low profile (< 3 m) marsh with an interdigitated matrix of shallow (0.2-1.3 m deep) open water, which is relatively clear and calm. The marsh vegetation is dominated by spike rush (*Eleocharis cellulosa*), maidencane (*Panicum hemitomon*), sawgrass (*Cladium jamaicense*), and/or cattails (*Typha* spp.). The shallow open-water areas are with or without sparse vegetation, such as white water lily (*Nymphaea odorata*), arrowhead (*Sagittaria lancifolia*), pickerel weed (*Pontederia lanceolata*), and floating heart (*Nymphoides aquatica*). Giant bulrush (*Scirpus validus*) often grows at the deep-water edge of marshes in the lakes. Low trees and shrubs also are often interspersed with the marsh and open water. These often include willow (*Salix caroliniana*), dahoon holly (*Ilex cassine*), pond apple (*Annona glabra*), bald cypress (*Taxodium distichum*), pond cypress (*T. ascendens*), wax myrtle (*Myrica cerifera*), buttonbush (*Cephalanthus occidentalis*), and *Melaleuca quinquenervia*, an invasive exotic species.

Snail kites require foraging areas that are relatively clear and open in order to visually search for apple snails. Therefore, dense growth of herbaceous or woody vegetation is not conducive to efficient foraging. The interspersed emergent vegetation enables apple snails to climb near the surface to feed, breathe, and lay eggs. Nearly continuous flooding of wetlands for > 1 year is needed to support apple snail populations that in turn sustain foraging by the snail kite (Sykes 1979, Beissinger 1988). Cultural eutrophication of water

bodies in Florida is occurring through disposal of domestic sewage and runoff of nutrient-laden water from agricultural lands. This degradation of water quality promotes dense growth of exotic and invasive native plants, particularly, cattail, water lettuce (*Pistia stratiotes*), water hyacinth (*Eichhornia crassipes*), and hydrilla (*Hydrilla verticillata*). Dense growth of these plants reduces the ability of snail kites to locate apple snails.

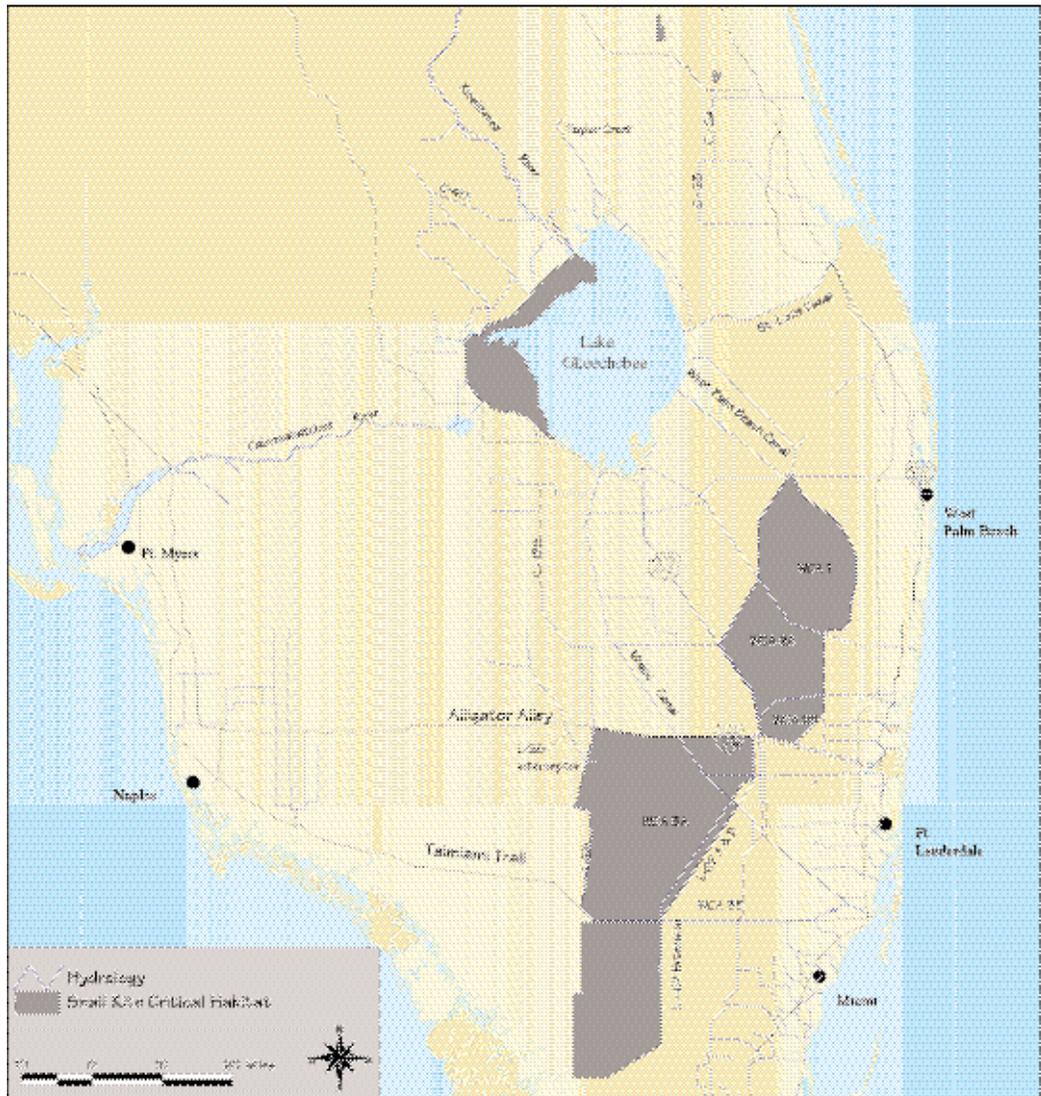
Nesting almost always occurs over water, which deters predation (Sykes 1987b). Nesting substrates include small trees (usually < 10 m in height), including willow, bald cypress, pond cypress, *Melaleuca*, sweetbay (*Magnolia virginiana*), swamp bay (*Persea borbonia*), pond apple and dahoon holly. Shrubs used for nesting include wax myrtle, cocoplum (*Chrysobalanus icaco*), buttonbush, *Sesbania*, elderberry (*Sambucus simpsonii*), and Brazilian pepper (*Schinus terebinthifolius*). Nesting also can occur in herbaceous vegetation, such as sawgrass, cattail, bulrush, and reed (*Phragmites australis*) (Sykes *et al.* 1995). Nests are more frequently placed in herbaceous vegetation around Lake Kissimmee and Lake Okeechobee during periods of low water when dry conditions beneath the willow stands (which tend to grow to the landward side of the cattails, bulrushes and reeds) prevent snail kites from nesting in woody vegetation. Nests constructed in herbaceous vegetation on the waterward side of the lakes' littoral zone are more vulnerable to collapse due to the weight of the nests, wind, waves, and boat wakes, and are more exposed to disturbance by humans (Chandler and Anderson 1974; Sykes and Chandler 1974; Sykes 1987b; Beissinger 1986, 1988; Snyder *et al.* 1989a). It is important to note that suitable nesting substrate must be close to suitable foraging habitat, so extensive areas of contiguous woody vegetation are generally unsuitable for nesting.

Roosting sites are also almost always located over water. In Florida, 91.6 percent are located in willows, 5.6 percent in *Melaleuca*, and 2.8 percent in pond cypress. Roost sites are in the taller vegetation among low-profile marshes. Snail kites tend to roost around small openings in willow stands at a height of 1.8 to 6.1 m, in stand sizes of 0.02 to 5 ha. Roosting in *Melaleuca* or pond cypress is in stands with tree heights of 4 to 12 m (Sykes 1985a).

### **Critical Habitat**

Critical habitat was designated for the snail kite in 1977 and, since then, has not been revised. Critical habitat (Figure 2) includes the Arthur R. Marshall Loxahatchee NWR, WCA 2, portions of WCA 3, portions of Everglades NP, western portions of Lake Okeechobee, the Strazzulla and Cloud Lake reservoirs in St. Lucie County, and portions of the St. Johns Marsh in Indian River County. A complete description of the critical habitat is available in 50 CFR 17.95. Although snail kites have nested in several lakes (particularly East Lake Tohopekaliga, Lake Tohopekaliga, and Lake Kissimmee) in the headwaters of the Kissimmee River since the early 1980s, at the time of designation of critical habitat, potential habitat around these lakes was used only sporadically by snail kites, and was not included in the critical habitat.

Figure 2. Snail kite critical habitat.



**Behavior**

Non-breeding snail kites use communal roosts throughout the year in association with other birds, particularly anhingas (*Anhinga anhinga*), herons, and vultures. The snail kite can nest solitarily, but more often in uneven clusters, and often hunts in close proximity without defending a foraging territory. However, defense of feeding territories, outside of the breeding season, occurs more often than previously thought; typically, however, these birds display no territorial behavior and feeding areas overlap (Stieglitz and Thompson 1967; Sykes 1979, 1985a, 1987a, b, c; Beissinger 1983, 1984, 1988).

**Courtship**

Pair bonds are formed by a series of behaviors with each nesting. Males often begin construction of the nest prior to attracting a mate. Materials are gathered

with feet or bill and are carried in the bill one piece at a time to the nest site. The nest is a bulky loosely woven structure of dry sticks and other dry plant material. Thirty-two species of plants are known to be used in construction, with sticks from willow and wax myrtle the most common material (Sykes 1987b). Snail kites often use green nest material, especially the upper lining that forms a cup for holding the eggs; this functions to insulate the otherwise porous structure of dry sticks. Males display either in the air or at perch near the chosen nest site. Aerial displays often include carrying a stick in the bill and vocalizing; these displays may include skydance or undulating flight, deep wing beats, pendulum, mutual soaring, tumbling, and grappling. The male may feed the female a snail or bring her a stick. In Florida, most pair bonds form from late November to early June. Once a pair bond is established, the female may spend time at or near the nest site and may assist the male in completing the nest (Beissinger 1987a, 1988; Sykes 1987c).

### Reproduction

Copulation can occur from early stages of nest construction, through egg-laying, and during early incubation if the clutch is not complete. Egg laying begins soon after completion of the nest or is delayed a week or more. An average 2-day interval between laying each egg results in the laying of a three-egg clutch in about 6 days. The clutch size is 1 to 5 eggs, with a mode of three (Sykes 1987c, Beissinger 1988, Snyder *et al.* 1989a). Incubation may begin after the first egg is laid, but generally after the second egg (Sykes 1987c). In Florida, the incubation period lasts 24 to 30 days (Sykes 1987c). Incubation is shared by both sexes, but the sharing of incubation time between sexes varies among nests (Beissinger 1987b).

Hatching success is variable from year to year and between areas. In nests where at least one egg hatched, hatching success averaged 2.3 chicks/nest. The most successful months for hatching are February (19 percent), March (31 percent), and April (23 percent) (Sykes 1987c).

The breeding season varies widely from year to year in relation to rainfall and water levels. Ninety-eight percent of the nesting attempts are initiated from December through July, while 89 percent are initiated from January through June (Sykes 1987c, Beissinger 1988, Snyder *et al.* 1989a). Snail kites often renest following failed attempts as well as after successful attempts (Beissinger 1986, Snyder *et al.* 1989a), but the actual number of clutches per breeding season is not well documented (Sykes *et al.* 1995).

### Foraging

The snail kite feeds almost exclusively on apple snails (*Pomacea paludosa*) in Florida. The snail kite uses two visual foraging methods: course-hunting, while flying 1.5 to 10 m above the water surface, or still-hunting from a perch. While course-hunting, the flight is characterized by slow wing beats, alternating with gliding; the flight path is usually into the wind, with the head oriented downward to search for prey. Snails are captured with the feet at or below the surface, to a maximum reach of approximately 16 cm below the surface. Snail kites do not plunge into the water to capture snails and never use the bill to capture prey. Individuals may concentrate hunting in a particular foraging site, returning to the

same area as long as foraging conditions are favorable (Cary 1985). Capture rates are higher in summer than in winter (Cary 1985), with no captures observed at a temperature less than 10°C. Snail kites frequently transfer snails from the feet to the bill while in flight to a perch. Feeding perches include living and dead woody-stemmed plants, blades of sawgrass and cattails, and fence posts.

The snail kite is known to feed on the introduced snail *Pomacea bridgesi* (Takekawa and Beissinger 1983). On rare occasions, snail kites in Florida prey on small turtles (Sykes and Kale 1974, Beissinger 1988, Bennetts *et al.* 1988). Snail kites have also been observed feeding upon crayfish (*Procambarus* spp.) and a speckled perch (*Pomoxis nigromaculatus*) (Bennetts *et al.* 1994).

### Migration

Snail kites in Florida are not migratory. They are restricted to South and central Florida. Snail kites are nomadic in response to water depths, hydroperiod, food availability, and other habitat changes (Sykes 1978, 1983a; Beissinger and Takekawa 1983; Bennetts *et al.* 1994). Radio-tracking and sighting of marked individuals have revealed that nonbreeding individuals disperse widely on a frequent basis (Sykes 1979, 1983a; Beissinger 1988; Snyder *et al.* 1989b; Bennetts and Kitchens 1992; Bennetts *et al.* 1994). Shifts in distribution can be short-term, seasonal, or long-term, and can take place between areas from year to year (Rodgers *et al.* 1988), between areas within a given nesting season (Beissinger 1986), within areas in a given nesting season, and within or between areas for several days to a few weeks (Sykes (1983a) noted that during colder winters, snail kites will shift their distribution more to the southern part of their range. As noted above, there is no evidence of movement between Florida and Cuba, but the possibility has not been ruled out (Sykes 1979, Beissinger *et al.* 1983).

### Rearing

The mating system of snail kites is characterized by sequential polygamy (ambisexual mate desertion). Desertion occurs in years with abundant food supply, but not during drought years. The deserted mate continues to tend the nest until independence of the chicks, which is for another 3 to 5 weeks (Beissinger 1984, 1986, 1987b; Beissinger and Snyder 1987). Young are fed through the nestling period and after fledging until they are 9 to 11 weeks old (Beissinger and Snyder 1987, Beissinger 1988). Chicks assume food begging postures and vocalizations when the tending adult approaches the nest with a snail. As the chicks mature, the food progresses from pieces of torn snail fed bill to bill, whole snails removed from the shell and with operculum removed, to completely intact snails (Beissinger 1988). When food is scarce, larger siblings may dominate the food supply brought to the nest. While rearing young, the adults forage no more than six km from the nest (Beissinger and Snyder 1987), and generally less than a few hundred meters

---

### Relationship to Other Species

Snail kites and limpkins (*Aramus guarauna*) both feed on apple snails; habitat partitioning occurs between the two species where they feed in the same areas.

Limpkins feed tactually in dense emergent or floating vegetation as well as in open patches (Snyder and Snyder 1969), while snail kites feed visually in open water with a range of water depths.

When nesting, snail kites drive off turkey vultures (*Cathartes aura*) within 20 to 30 m of the nest. Aggressive behavior by snail kites near nests has been observed directed against other birds, including black-crowned night herons (*Nycticorax nycticorax*), ospreys (*Pandion haliaetus*), red-shouldered hawks (*Buteo lineatus*), limpkins, and boat-tailed grackles (*Quiscalus major*) (Sykes 1987b). Red-shouldered hawks, fish crows (*Corvus ossifagus*), and boat-tailed grackles are known to drive snail kites from a perch (Sykes *et al.* 1995).

Snail kite eggs are taken by fish crows, boat-tailed grackles, rat snakes (*Elaphe obsoleta*), and raccoons (*Procyon lotor*) (Chandler and Anderson 1974; Beissinger 1986, 1988; Sykes 1987c; Snyder *et al.* 1989a). Nestlings are lost to rat snakes and cottonmouths (Beissinger 1986, 1988; Sykes 1987c; Bennetts and Caton 1988), despite the fact that snail kites select nest sites in flooded wetlands, which tends to make the nests less vulnerable to predation.

The ranges of the endangered wood stork (*Mycteria americana*) and Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*) overlap the range of the snail kite. While hydrological conditions most favorable to one species may not be most favorable for another, all of these animals survived the hydrologic variability characteristic of the natural system. The reduced heterogeneity and extent of the present system make these species more vulnerable to natural and man-caused threats. Management actions may be required on a temporary basis to protect a particular species from a high risk of extinction, but long-term management goals should not be driven by protection of a single species, because such actions may threaten the sustainability of the entire ecosystem.

---

## Status and Trends

When the snail kite was listed as endangered in 1967 (32 FR 4001), the species was considered to be at an extremely low population level. In 1965, only 10 birds were found, eight in WCA2A and two at Lake Okeechobee. A survey in 1967 found 21 birds in WCA2A (Stieglitz and Thompson 1967). On this basis, the snail kite was included in the first group of species to be listed under the Endangered Species Conservation Act, the predecessor to the current Endangered Species Act. The publication *Threatened Wildlife of the United States* (Bureau of Sport Fisheries and Wildlife 1973) cited the following as the status of the snail kite:

Jeopardized because of the very small population and increasingly limited amount of fresh marsh with sufficient water to ensure an adequate supply of snails on which it depends for food.

Historic records of snail kite nesting include areas as far north as Crescent Lake and Lake Panasoffke in north-central Florida and as far west as the Wakulla River (Howell 1932, Sykes 1984). Several authors (Nicholson 1926, Howell, 1932, Bent 1937) indicated that the snail kite was numerous in central and South Florida marshes during the early 1900s, with groups of up to 100 birds. Sprunt (1945) estimated the population to be 50 to 100 individuals. The snail kite apparently plummeted to its lowest population between 1950 and 1965. By 1954, Sprunt estimated the population at no more than 50 to 75 birds

(Sprunt 1954). Stieglitz and Thompson (1967) reported eight birds in 1963 at the Loxahatchee NWR, 17 on the refuge and two at Lake Okeechobee in 1964, eight in WCA2A and two at Lake Okeechobee in 1965, and 21 in WCA2A in 1966. Limited resources were available at that time for researchers to reach potential snail kite habitats, and the resulting low level of survey effort may have biased these low snail kite population estimates. However, there is no doubt that the snail kite was severely endangered at that time and that its range had been dramatically reduced.

Sykes (1983b) mentioned two reports, by other observers, of lone snail kites at Lake Kissimmee in 1973 and 1980. Sykes (1984) reported the range of the snail kite in Florida, as of 1980, included the following areas: southwestern Lake Okeechobee (Glades County), portions of WCAs 1, 2B, and 3A (Dade, Broward, and Palm Beach counties), the Lake Park Reservoir (Palm Beach County), the northern portion of Everglades National Park just south of Tamiami Trail (Miami-Dade County) the Savannas (St. Lucie County), and the headwaters of the St Johns River (Indian River and St. Lucie counties). Sykes (1984) did not mention the two isolated reports at Lake Kissimmee. Beissinger and Takekawa (1983) report that 3 to 25 snail kites were observed on Lake Kissimmee and 6 to 32 were sighted on Lake Tohopekaliga in 1981-1982, and classified these among a number of "drought related habitats." The first reported nesting of snail kites occurred on these two lakes during that period. Rodgers (1994) has continued to find significant nesting and foraging by snail kites in the Kissimmee Chain of Lakes into the mid-1990s, which he characterized as a reoccupying of a portion of the species' historic range.

Prior to 1969 the snail kite population was monitored only through sporadic and haphazard counts (reviewed by Sykes 1984). From 1969 to 1994, an annual quasi-systematic mid-winter snail kite count was conducted by a succession of principal investigators. Counts since 1969 have ranged from 65 in 1972 to 996 in 1994. Bennetts *et al.* (1993, 1994) caution that the 1993 and 1994 counts were performed with the advantage of having numerous birds radio-tracked. This certainly influenced the total count, because radio-instrumented birds could be easily located and often led researchers to roosts that had not been previously surveyed. Bennetts and Kitchens (1997a) and Bennetts *et al.* (1999a) have analyzed these counts and have analyzed the sources of variation in these counts, including observer effects, differences in level of effort, and sampling error. This analysis provides a convincing argument that these data could provide a crude indication of trends, provided that all influences of detection rates had been adequately taken into account. The sources of variation should be recognized prior to using these data in subsequent interpretations, especially in attempting to determine population viability and the risk of extinction. Table 1 presents the annual count data for the period 1985 to 1994.

While acknowledging the problems associated with making year-to-year comparisons in the count data, some general conclusions are apparent. Lake Okeechobee apparently retains some suitable snail kite habitat throughout both wet and dry years. In contrast, kite use of WCA3A fluctuates greatly, with low use during drought years, such as 1991, and high use in wet years, such as

Table 1. Mid-winter Everglade snail kite survey, 1985-1994.

Location	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	10-yr. Mean
St. Johns Marsh	8	6	7	30	38	68	81	81	10	27	36
L. Kissimmee	38	28	42	33	73	61	49	38	38	46	45
L. Tohopekaliga	17	13	1	1	19	118	2	19	2	7	20
East L. Tohopekaliga	0	0	0	0	18	30	5	9	24	21	11
L. Okeechobee	108	71	94	175	122	83	146	216	113	129	126
WCA2A	1	1	0	4	11	20	14	42	1	0	9
WCA2B	16	58	4	48	0	0	10	2	32	142	31
WCA3A	170	353	117	166	166	13	7	113	345	470	192
WCA3B	24	13	11	9	0	1	2	2	10	11	8
Big Cypress NP	0	0	0	0	0	0	0	32	28	43	10
Everglades NP	1	1	6	10	3	1	3	67	16	29	14
The Pocket	7	9	19	9	3	0	20	11	89	1	43
Other sites	10	10	24	13	11	27	17	113	139	70	43
Total for Year	400	563	325	498	464	422	356	745	847	996	562

1994. However, we caution against using these figures as absolute values for shifts in habitat use or measures of changes in total population. Although sharp declines have occurred in the counts since 1969 (for example, 1981, 1985, 1987), it is unknown to what extent this reflects actual changes in population. Rodgers *et al.* (1988) point out that it is unknown whether decreases in snail kite numbers in the annual count are due to mortality, dispersal (into areas not counted), decreased productivity, or a combination of these factors. Despite these problems in interpreting the annual counts, the data since 1969 have indicated a generally increasing trend (Sykes 1979, Rodgers *et al.* 1988, Bennetts *et al.* 1994). The degree of this apparent increase in the snail kite's population needs to be confirmed with alternative methods of estimating population size.

Bennetts and Kitchens (1997a) found that radio telemetry is an effective, but costly, method for estimating survival of snail kites. They suggest that mark-resighting is an effective and statistically reliable method for determining survival and population size. The FWS endorses the proposal to replace the annual snail kite counts with the mark-resighting methodology. This will require a continued commitment to support this work to ensure that a sufficient number of birds are marked. As the number of marked birds increases over several continuous years of marking, the number of resightings should increase, and this will allow a population estimate with a reasonable level of precision.

It is difficult to identify any long-term trend in reproductive success, because of the considerable variability in nest success among years, locations, and local nest environments (Sykes 1979, 1987c; Beissinger 1986; Bennetts *et al.* 1988; Snyder *et al.* 1989a), but several of these researchers have attributed the variability to water levels. As noted above, part of this effect, particularly in the lakes, is attributed to differences in nest site selection (more herbaceous substrates in low-water years versus a higher proportion of woody substrates in high-water years). The basis of comparison is between high-water years versus low-water years, rather than within-year differences between water depth at nest sites. Drought may affect nesting success by depressing apple snail populations (Kushlan 1975, Beissinger and Takekawa 1983) and through increased access by terrestrial predators (Beissinger, 1986).

Collapse of nests constructed in herbaceous vegetation is also cited as a cause of increased nest failure during low-water years. This is because the water table is usually below the ground surface at willow heads and other stands of woody vegetation during drought, causing snail kites to nest in herbaceous vegetation, where the nests are more vulnerable to collapse. This effect is more prevalent in the lakes than in the Everglades. Weather causes great variability in nesting success; wind storms cause toppling of nests, particularly on Lake Okeechobee and Lake Kissimmee due to the long wind fetch across these large lakes. Cold weather can cause nest failure, either through decreased availability of apple snails or mortality of young due to exposure. Abandonment of nests before egg-laying is common, particularly during drought or following passage of a cold front. The overall fledging success to a nestling age of 6 weeks in the 1980 to 1993 period was 0.83 fledgling/nest or 0.29 fledgling/egg (n = 776 nests) (Sykes *et al.* 1995). Although considerable variability (due to natural and man-caused variation in water levels) should be expected in future years of monitoring, this may serve as a baseline to compare the relative productivity of the snail kite population.

The snail kite has apparently experienced population fluctuations associated with hydrologic influences, both man-induced and natural (Sykes 1983a, Beissinger and Takekawa 1983, Beissinger 1986), but the amount of fluctuation is debated. The abundance of its prey, apple snails, is closely linked to water regime (Kushlan 1975; Sykes 1979, 1983a). Drainage of Florida's interior wetlands has reduced the extent and quality of habitat for both the snail and the kite (Sykes 1983b). The kite nests over water, and nests become accessible to predators in the event of unseasonal drying (Beissinger 1986, Sykes 1987c). In dry years, the kite depends on water bodies which normally are suboptimal for feeding, such as canals, impoundments, or small marsh areas, remote from regularly used sites (Beissinger and Takekawa 1983, Bennetts *et al.* 1988, Takekawa and Beissinger 1989). These secondary or refuge habitats are vital to the continued survival of this species in Florida.

The principal threat to the snail kite is the loss or degradation of wetlands in central and South Florida. Nearly half of the Everglades has been drained for agriculture and urban development (Davis and Ogden 1994). The Everglades Agricultural Area alone eliminated 8,029 km<sup>2</sup> of the original Everglades, and the urban areas in Miami-Dade, Broward and Palm Beach counties have also

reduced the extent of habitat. North of Everglades National Park, which has preserved only about one-fifth of the original extent of the Everglades, the remaining marsh has been dissected into shallow impoundments. The Corps of Engineers' Central and Southern Florida Project encompasses 46,600 km<sup>2</sup> from Orlando to Florida Bay and includes about 1,600 km each of canals and levees, 150 water control structures, and 16 major pump stations. This system has disrupted the volume, timing, direction, and velocity of freshwater flow.

The natural sheet flow pattern under which the Everglades evolved since about 5,000 years ago has not existed for about 75 years (Parker *et al.* 1955, Leach *et al.* 1972, Klein *et al.* 1974). The loss of fresh water to seepage, flood control releases to tidal waters, and extraction for irrigation and urban water supply has led to saltwater intrusion in some portions of the former Everglades. Although the major drainage works completed conversion of wetlands to agriculture in the Everglades Agricultural Area by about 1963, loss of wetlands continues to the present at a slower, but significant, rate. In the entire State of Florida between the mid-1970s to the mid-1980s, 105,222 ha of wetlands (including marine and estuarine offshore habitats) were lost (Hefner *et al.* 1994); we do not have an estimate for the loss of freshwater wetlands specifically in central and South Florida in those years.

Degradation of water quality, particularly runoff of phosphorous from agricultural and urban sources, is another threat to the snail kite. The Everglades was historically an oligotrophic system, but major portions have become eutrophic. The concentration of total phosphorus in Lake Okeechobee almost doubled from 49 µg/L in 1973 to 98 µg/L in 1984 (Janus *et al.* 1990). Most of this increase has been attributed to non-point source runoff from agricultural lands north of the lake, in the Kissimmee River, Taylor Slough and Nubbin Slough drainages (Federico *et al.* 1981). Eutrophication also is a concern in the Kissimmee chain of lakes. Nutrient enrichment leads to growth of dense stands of herbaceous emergent vegetation, floating vegetation (primarily water hyacinth and water lettuce) and woody vegetation, which inhibits the ability of snail kites to find food (See also Habitat section above).

Regulation of water stages in lakes and the WCAs is particularly important to maintain the balance of vegetative communities required to sustain snail kites. This is discussed in the Management section of this account.

Shooting of snail kites has been cited in the early literature as a threat (Sprunt 1945; Stieglitz and Thompson 1967; Sykes 1978, 1979). Although waterfowl hunting, particularly on Lake Okeechobee, may lead to shooting of snail kites, there are no recent documented cases (J. Rodgers, GFC, personal communication 1995).

Contaminant analyses have been conducted on snail kites and apple snails, and all contaminant residues (DDT, DDD, DDE, dieldrin, PCBs, mercury, lead, and arsenic) have been found at low levels (Stickel *et al.* 1969, 1970, 1984; Lamont and Reichel 1970; Wiemeyer *et al.* 1980; Patee *et al.* 1981; Sykes 1985b; Sykes *et al.* 1995; Eisemann *et al.* 1997).

Demographic concerns appear to outweigh immediate genetic threats for the snail kite in Florida. Rodgers and Stangel (1996) performed electrophoresis on samples from 150 snail kite nestlings at four wetland sites: Lake

Kissimmee, Lake Okeechobee, WCA2B, and WCA3A. They found short genetic distances among snail kites at the four wetlands, suggesting little differentiation within Florida. Despite the historic reduction in the snail kite population to low levels, heterozygosity in the snail kites at these locations varied from 4.1 percent to 5.2 percent, which is within typical values for birds. If the snail kite population were to decline in the future, this study provides a baseline to determine if heterozygosity has been reduced. However, there is no immediate concern about reaching a genetic bottleneck.

---

## Management

Water management actions in the Everglades and in the lakes are the most important human-controlled factors in survival and recovery of the snail kite. A balanced approach to water level management is required to maintain favorable habitat conditions for the snail kite. Nearly continuous flooding of wetlands for > 1 year is needed to sustain apple snail populations (Sykes 1979, Beissinger 1988). Prolonged drying of wetlands, especially in an impounded area with little variation in water depth, can cause the local depletion of apple snails. Snyder *et al.* (1989a) attributed poor reproductive success of snail kites in WCA3A in years following drought to a lag time between re-flooding and recovery of apple snails to levels that allow higher nesting success.

When low-water stages occur during the nesting season on Lake Okeechobee and the Kissimmee Chain of Lakes, snail kites frequently nest in the waterward edge of herbaceous vegetation, where nests are more vulnerable to collapse due to the inability of the vegetation to support the nest and the greater exposure to wind, waves, and boat wakes. The location of the nests closer to open water during periods of low water also exposes snail kites to a potentially greater level of human disturbance. A water stage of 4.42-4.57 m on Lake Okeechobee is recommended near the beginning of the snail kite nesting season during most years (Sykes *et al.* 1995, Rodgers 1996, J. Rodgers, GFC, personal communication 1996). The water stages can be allowed to recede gradually during the February through May period, to allow for successful foraging by wading birds, but should not be allowed to decline rapidly. However, prolonged periods (1 or 2 years) of water stages over 4.57 m are considered adverse to maintaining marshes in the littoral zone of Lake Okeechobee. Extended periods of high-water stages in Lake Okeechobee will drown out vegetation in the littoral zone. The lake is surrounded by a levee; above a water elevation of 4.57 m, water begins to rise against the levee, and there is no opportunity for marsh vegetation to expand to higher ground elevations. Rodgers (GFC, personal communication 1996) has initiated a similar analysis intended to correlate water stages in Lake Kissimmee with successful nesting. However, it should be noted that Lake Kissimmee is not surrounded by a levee, and although extended high-water stages might temporarily disrupt existing vegetation patterns, wetland vegetation could adjust in the longer term by shifting landward to higher ground elevations. In impounded areas, such as the WCAs and the St. Johns marshes, extended periods of high water can drown out willow or other woody vegetation. The availability of woody vegetation often results in higher fledging success through reduced nest collapse, which is more prevalent in non-woody substrates.

Lake Kissimmee and the surrounding lakes have been restricted to narrow water regulation schedules when compared to their natural degree of variability in years prior to regulation. Overly dense concentrations of vegetation begin to grow in the littoral zone, which restricts water flow and leads to the buildup of organic sediment in bands around the lakes' shorelines. This pattern is harmful to the overall productivity of the lakes. Ideally, lake management schedules throughout the Kissimmee Chain of Lakes should be modified to resemble the degree and timing of water level fluctuations in the pre-management period. However, water regulation schedules are now restricted by the proximity of floodable structures to shorelines and by water supply considerations.

Because these societal constraints make it impractical to fluctuate water levels according to historic cycles of flooding and drought, the SFWMD and the GFC have proposed periodic extreme drawdowns, with or without physical removal of organic sediment. Drawdowns were conducted on Lake Tohopekaliga in 1986 and East Lake Tohopekaliga in 1990. Snail kites did not resume nesting after the 1986 drawdown at Lake Tohopekaliga until 1990. The drawdown at East Lake Tohopekaliga caused the abandonment of 10 of 12 nests in 1990 (Rodgers 1994). The reason for the delay in resumption of nesting after the 1986 drawdown at Lake Tohopekaliga is not fully understood. However, snail kites have returned to nest in that lake in recent years, so the impact appears to be temporary. The loss of snail kite nests at East Lake Tohopekaliga in 1990 apparently was caused by the inability to remove the water quickly enough to below the level of the waterward edge of the littoral marsh before snail kites began to nest. Emergency dredging of an outlet canal was required to accelerate the drainage of water beyond the edge of the marsh. Lake Kissimmee was drawn down 1.5 m below its normal regulation schedule in 1977 and again in 1996. No recent snail kite nesting occurred on Lake Kissimmee prior to 1982. In 1996, dredging across a shoal occurred prior to commencement of the drawdown to speed up the drainage. Lake Kissimmee water stages were drained quickly enough before February 1996 such that snail kites did not attempt to nest there; presumably, snail kites dispersed to other suitable areas to nest. Snail kites returned to nest in Lake Kissimmee in 1997 and 1998, following the 1996 drawdown.

With adequate planning, extreme drawdowns can apparently be carried out without adversely affecting the snail kite and can enhance foraging conditions by opening up the dense vegetation. Any restrictions preventing rapid drainage of water need to be removed in advance. To date, the FWS has recommended that drainage should be initiated immediately after the threat of hurricanes has passed (around November 30) and that the water should be lowered beyond the extent of herbaceous vegetation prior to February 1 to discourage nesting of snail kites in areas where nests are likely to collapse. However, recent research by Darby *et al.* (1997) indicates that early drying may be far more detrimental to apple snail populations (and by extension, detrimental to snail kites) than the incidental take of snail kite nests that early drying is intended to avoid. Darby *et al.* (1997) suggest that the adverse impact on apple snails is lessened when drying occurs after the snails have completed their reproductive cycle and the young are of sufficient size to withstand a drying event. Not surprisingly, this point is "normally" reached during late May or June, the time that the natural

system reached its minimum water levels. Further research on apple snail biology and the effects of the timing of drying events on snail kite nesting is needed to provide water managers guidance on the timing of intentional drawdowns that will maximize the long-term benefits on habitat structure while minimizing the short-term adverse impacts on snail kites and apple snails.

Anthropogenic drying of snail kite habitat in one watershed (e.g. St. Johns Marsh) should not coincide with natural drying in another watershed (e.g. Everglades). Although long-range prediction of drought and wet cycles is still not exact, consideration of the periodicity of these cycles should be factored into planning for periodic drying of managed areas. A strong correlation between the *El Niño*-Southern Oscillation (ENSO) cycle and precipitation in Florida was reported by Hanson and Maul (1991). Zhang and Trimble (1996) used three indicators of global climate cycles (sunspot number, geomagnetic activity, and the Southern Oscillation Index) in a neural network computing environment to predict inflows to Lake Okeechobee. Neidrauer *et al.* (1997) suggest that a combination of these indices can be used in water management decisions for Lake Okeechobee, based on a 6-month inflow forecast. These models should be refined and further tested, and as suggested by Zhang and Trimble (1996), the model's forecast horizon should be extended to determine how reliably it can predict longer-term shifts in rainfall patterns. The FWS recommends that this be based not only on inflows to Lake Okeechobee, but also be calibrated against other gages in the C&SF system. Because strong *La Niña* (conditions opposite to *El Niño*) conditions are generally associated with drought in Florida (Zhang and Trimble 1996), these indices may be useful in planning several years into the future to reduce the probability of human-caused drawdowns in one watershed coinciding with drought in another watershed. Human-caused drawdowns might be most adverse to the snail kite at the onset of multiple-year droughts, because it may be difficult to refill lakes or marsh impoundments during the following years, and the snail kite will have reduced opportunity to find suitable habitat.

Reduction of nutrient loading to marshes is needed to slow the growth of dense vegetation which hampers efficient foraging by snail kites. Efforts to reduce nutrient loading are being conducted to benefit the South Florida Ecosystem as a whole, and will have benefits to a number of fish and wildlife species in addition to the snail kite. Best Management Practices (BMPs) have been effective in reducing nutrient input to Lake Okeechobee from the Kissimmee River, Taylor Slough, and Nubbin Slough drainages. BMPs are included in implementation provisions of the Everglades Forever Act of 1994 (Chapter 373.4593 FS), as are the construction of Stormwater Treatment Areas. More effort needs to be directed at identifying and rectifying problems with nutrient inputs to the peripheral habitats so critical to the snail kite during drought.

Control of aquatic weeds has probably improved foraging conditions for the snail kite in a few localized areas by opening up dense growths of water hyacinth, water lettuce, and *Hydrilla*. However, spraying should not occur near snail kite nests located in non-woody species (e.g., cattail, bulrush). The SFWMD, the GFC, and the DEP have cooperated in closing areas to herbicide spraying around snail kite nests, which reduces the risk of nest collapse in Lake

Okeechobee and Lake Kissimmee. However, more research is needed on the long-term effects of the herbicides being used on the aquatic food web in general, and particularly apple snails with respect to snail kites.

Nest baskets have been used effectively to reduce the collapse of nests in herbaceous substrates along the northwestern shoreline of Lake Okeechobee (Sykes and Chandler 1974). Similar nest supports have been used by GFC on Lake Tohopekaliga and East Lake Tohopekaliga. Although use of nest baskets may be a useful management technique in specific areas and instances (for example, to protect nests during a drawdown), their use on a routine basis is now considered to provide limited benefits relative to the intensive effort required (R. Bennetts, University of Florida, personal communication 1996; J. Rodgers, GFC, personal communication 1996).

Because snail kites use habitats with long hydroperiods, fire is not normally considered a management concern. However, fire is a natural component in the ecology of the Everglades and all of South Florida, and it is reasonable to expect that intense fires occurred historically during periods of drought in the snail kite's habitat. Intense fires that burn peat can transform habitats in the Everglades; dense sawgrass marshes having heavy fuel loads can be converted into a spikerush (*Eleocharis*) marsh, which will not carry fire for many years (Craighead 1971, Hoffman *et al.* 1994). Although such a fire would most likely eradicate apple snails from a particular location, its conversion to a spikerush marsh would, following recolonization by apple snails, make the area more suitable for foraging by snail kites. Prescribed burning could be implemented in conjunction with the intentional drawdowns mentioned above and in selected areas during drought.

The challenge for land managers is that intense fires are more difficult to control. Peat fires can smolder for weeks after initial passage of the fire (Craighead 1974, Robertson 1955); it may be difficult to prevent such fires from entering tree islands and hammocks, which may be of concern to managers if these areas are not the intended targets of the burn. Monitoring of vegetation, apple snails, and snail kite foraging in test plots before and after prescribed burns would provide useful information for refining fire management practices. Use of fire as a management tool in lakeshore environments may be more predictable and desirable than in the Everglades, where muck fires are considered to be damaging to tree island habitats and probably contributing to invasion of cattails.

Some authors have emphasized the importance of the availability of suitable habitat during periods of drought, which were thought to be a limiting factor in the population (Beissinger 1986, Sykes 1987b). Drainage of Florida's interior wetlands has reduced the extent and quality of habitat for both the snail and the kite (Sykes 1983b). Also, the kite nests over water, and nests become accessible to predators in the event of unseasonal drying (Beissinger 1986, Sykes 1987c). In dry years, the kite depends on water bodies which often are suboptimal for feeding during periods of normal rainfall, such as canals, impoundments, or small marsh areas, remote from regularly used sites (Beissinger and Takekawa 1983, Bennetts *et al.* 1988, Takekawa and Beissinger 1989). Beissinger and Takekawa (1983) and Takekawa and Beissinger (1989) divided snail kite habitat

into “primary,” secondary” and “drought-related” areas. Bennetts (University of Florida, personal communication 1996) disagrees with characterizing any particular area into those categories; he believes that snail kites spread the risk of fluctuating habitat conditions by their ability to move long distances across the landscape within a “network” of habitats. Bennetts and Kitchens (1997b) hypothesize that the spatial extent and heterogeneity of habitat quality throughout the snail kite’s range buffers the risks that may be posed by droughts, because the spatial extent and duration of drought conditions will vary across the species’ range. Protection of both larger and smaller wetlands in several subregions (St. Johns Marsh, Kissimmee Chain of Lakes, Lake Okeechobee, Loxahatchee Slough, and Everglades/Big Cypress) is required to maintain this spatial heterogeneity and spatial extent. Because the 1992 to 1995 duration of Bennetts’ study did not include a period of drought, continued radio tracking of snail kites during a drought will be necessary to confirm this hypothesis.

Bennetts *et al.* (1988) found that snail kites nesting in WCA3A used wetlands having multi-year hydroperiods ranging from about 84 percent to 99 percent. However, Bennetts and Kitchens (1997a) have emphasized that foraging snail kites use a heterogeneous mosaic of wetlands. Snail kites will forage in shorter hydroperiod portions (wet prairies) within larger areas of longer hydroperiod (predominance of slough or lacustrine communities). Snail kites will also forage in smaller sloughs within areas that are primarily wet prairies. Therefore, in defining the desired future condition of the WCAs following hydropattern restoration, one must recognize the importance of a heterogeneous landscape within wetlands of relatively long (>85 percent) average hydroperiod. One must also acknowledge that these areas will dry out periodically. In evaluating the effects of these drying events on the demography of the snail kite, one must consider the average interval between drying events, their duration, and their spatial extent. Localized drying events are thought to have little adverse effect on the snail kite population, but droughts across the region extending from the St. Johns Marsh and the Kissimmee Chain of Lakes to the southern Everglades are likely to have adverse effects, particularly if the droughts occur in 2 or more consecutive years (Bennetts and Kitchens 1997a, 1997b).

Another factor to be considered in evaluating restoration of the WCAs is water depth. The compartmentalized system of WCAs differs from the natural system in at least two ways. First, increasing water flows in the natural system resulted in spreading of water across the landscape. In the managed system, water is confined within levees; increased water volumes result in water depths greater than those found in the natural system. Second, the levees surrounding the WCAs result in over-drained conditions at the upstream northern ends, and deeper water accumulation at the southern ends of the WCAs. The duration of these deep water conditions behind the levees is artificially prolonged relative to historic conditions (Gunderson and Loftus 1993). The appropriate restoration target for major portions of the WCAs is a heterogeneous wetland having a prolonged hydroperiod over most of the area, but without extended periods of deep water.

Another factor in restoration of the WCAs that will affect the habitat conditions for the snail kite and a variety of Everglades fauna is the effect of hydropattern restoration on growth of cattails. Rehydration of currently drained

portions of the WCAs, such as northern WCA3A, will most likely result in growth of cattails, due to elevated phosphorus levels in the soil. The extent of the affected area and the time period that the cattail stands will persist is currently being debated. This effect must be considered in predicting habitat conditions in the WCAs following hydropattern restoration.

The Everglade snail kite population is now considered more resilient than previously thought to natural climatological fluctuations, but the resilience of kites to human-induced changes is less certain (Bennetts *et al.* 1994). The species is adapted to “boom and bust” cycles, and any consideration of recovery must be based on long-term (at least 5- to 10-year) averages in population levels and/or reproductive success. Radio telemetry indicates that snail kites use a broader network of wetland habitats than was previously recognized. Additional research is needed on survival following periods of drought. Previous opinions regarding the amount of mortality following drought may have been biased by lack of knowledge about the full range of dispersal of the species; mortality may have been overestimated because widely dispersed individuals were living in habitats not regularly searched (Bennetts *et al.* 1999a; Valentine-Darby *et al.* in prep.). Despite the previously mentioned problems in interpreting the annual counts, the general consensus is that the snail kite population has been at least stable since 1969, and has likely increased, on average, within a broad range of fluctuation (Bennetts *et al.* 1999a).

Anticipated restoration projects should benefit the Everglade snail kite. The FWS has predicted that the Kissimmee Headwater Lakes Revitalization Project and the Kissimmee River Restoration will benefit a variety of fish and wildlife, including the snail kite. Restoration of the Everglades should provide opportunities for recovery of the kite, but Bennetts *et al.* (1994) point out:

Undoubtedly, compromise solutions will need to be identified in order to accommodate increasing demands for water, habitat for snail kites, and flow systems that will maintain the unique Everglades environment. Almost any proposed solution to the problems of the Everglades and the kite will meet with opposition from individuals or groups with differing objectives or viewpoints. Current restoration planning in the southern Everglades is no exception. Arguments can easily be made for restoring longer hydroperiods in the historic Shark River Slough. It is likely that the deeper areas of the slough and other pools within the Everglades basin were once used extensively by kites. It can also be argued, however, that the impoundments of the WCAs now serve this role and that substantial reductions in hydroperiod in these impoundments may, at least in the short term, have a negative impact on kites. It is not even clear that substantial reductions in hydroperiod would occur in the specific areas that are used most heavily by kites. What is certain is that whatever plans are adopted, they will not be unopposed.

It is appropriate to cite the fate of the WCAs as an example of likely controversy in Everglades restoration; the Central and Southern Florida Project Comprehensive Review Study (C&SF Restudy) must carefully consider the design of hydropattern restoration in the WCAs.

Another controversial issue not addressed in the above quotation is the management of water stages in Lake Okeechobee with respect to the

downstream portions of the C&SF system. Opinions vary on the degree to which the ecological values of the littoral zone of Lake Okeechobee (which includes a portion of the Everglade snail kite's critical habitat) can be sacrificed to create increased water storage capacity to drive restoration of the Everglades. This and possibly many other pivotal issues must be evaluated through the C&SF Restudy.

A balanced restoration plan for the Everglades must be found that will mimic the hydrologic variation and other habitat characteristics of the natural system. We believe the restoration can be planned and carried out without conflicts among the recovery goals for listed species.

Because of the particular habitat requirements of the snail kite, the loss of spatial extent of the wetlands throughout the species' range, and the possibility of back-to-back catastrophic events, it may not be possible to remove the species entirely from protected status. {We believe the prognosis for recovery of the snail kite from endangered status to threatened by 2020 is good.}. The recovery goal should not be based solely on population estimates, but should also include measures of survivorship and fecundity. Reclassification to threatened could occur with a minimum population size of 650 individuals over a 10-year period, with a multi-year average finite rate of population change ( $\lambda$ , lambda) greater than or equal to 1. The breeding population should be distributed over enough individual "colony" sites and over a broad enough total area to ensure survival through catastrophic events, but until more precise stochastic modeling is available, we do not have a specific recovery criterion of this type. If the species meets these goals for reclassification as threatened, the FWS would then consider requirements for de-listing.

Recent biological studies of the Everglade snail kite indicate the species is highly mobile and adaptable, which might support a more optimistic view of the status and prognosis for the snail kite. However, recent information on the apple snail indicates that the species suffers high post-breeding mortality each year regardless of the hydrological condition, and may suffer poor recruitment of juvenile snails in the year following a drydown (P. Darby, University of Florida, personal communication 1997). Apple snails are stranded by receding water levels, even along a lake shore, where presumably snails could migrate to the remaining pool. Adult snails survived an average of 4 weeks under drydown conditions at the St. Johns Marsh (Darby *et al.* 1996a) and at Lake Kissimmee (Darby *et al.* 1996b, 1997). The vulnerability of apple snails to localized severe population declines must be considered in water management policy and in assessment of threats to the snail kite.

Continued monitoring of the snail kite population will be needed before, during, and after implementation of the many elements presently under consideration that together will result in restoration of the South Florida Ecosystem. Among the factors favoring the selection of the snail kite as a key indicator of success are the following:

- a. The snail kite is an endangered species and is reasonably familiar to a large segment of the public.
- b. In the United States, the snail kite is found only in the central and South Florida Ecosystem, making it a suitable biological symbol for the ecosystem as a whole.

- c. The snail kite is a species adapted to the variable climatic conditions in central and South Florida, and the Everglades in particular. Water management in the restored ecosystem must be flexible enough to ensure survival and recovery of the snail kite through climatological extremes. Successful recovery of the snail kite should be included as one of several indicators of restoration of the dynamic variability of the long hydroperiod wetlands within South Florida.

---

**Literature Cited**

- Amadon, D. 1975. Variation in the Everglades kite. *Auk* 92:380-382.
- American Ornithologists' Union [AOU]. 1983. Check list of North-American birds. Sixth Edition. American Ornithologists' Union; Baltimore, Maryland.
- Bailey, R. G. 1978. Ecoregions of the United States. U.S. Forest Service., Intermountain Region; Ogden, Utah.
- Beissinger, S. R. 1983. Hunting behavior, prey selection, and energetics of snail kite in Guyana: consumer choice by a specialist. *Auk* 100:84-92.
- Beissinger, S. R. 1984. Mate desertion and reproductive effort in the snail kite. Ph.D. dissertation, University of Michigan; Ann Arbor, Michigan.
- Beissinger, S. R. 1986. Demography, environmental uncertainty, and the evolution of mate desertion in the snail kite. *Ecology* 67:1445-1459.
- Beissinger, S. R. 1987a. Anisogamy overcome: female strategies in snail kites. *American Naturalist* 129:486-500.
- Beissinger, S. R. 1987b. Mate desertion and reproductive effort in the snail kite. *Animal Behavior* 35:1504-1519.
- Beissinger, S. R. 1988. Snail kite. Pages 148-165 *in* R. S. Palmer, eds. *Handbook of North American birds*, vol. 4, Yale University Press, New Haven, Connecticut.
- Beissinger, S. R., and N. F. R. Snyder. 1987. Mate desertion in the snail kite. *Animal Behavior* 35:477-487.
- Beissinger, S. R., A. Sprunt IV, and R. Chandler. 1983. Notes on the snail (Everglade) Kite in Cuba. *American Birds* 37:262-265.
- Beissinger, S. R., and J. E. Takekawa. 1983. Habitat use and dispersal by snail kites in Florida during drought conditions. *Florida Field Naturalist* 11:89-106.
- Beissinger, S. R., B. T. Thomas, and S. D. Strahl. 1988. Vocalizations, food habits, and nesting biology of the slender-billed kite with comparisons to the snail kite. *Wilson Bulletin* 100:604-616.
- Bennetts, R.E. 1996. FWS Multi-species Recovery Team. April 22-24, 1996.
- Bennetts, R.E. 1998. Comments on technical/agency draft multi-species recovery plan for South Florida. August 18, 1998.
- Bennetts, R. E., and E. L. Caton. 1988. An observed incident of rat snake predation on snail kite (*Rostrhamus sociabilis*) chicks in Florida. *Florida Field Naturalist* 16:14-16.
- Bennetts, R. E., M. W. Collopy, and S. R. Beissinger. 1988. Nesting ecology of snail kite in WCA 3A. Florida Cooperative Fisheries and Wildlife Research Unit Technical report number 31, University of Florida; Gainesville Florida.
- Bennetts, R. E., M. W. Collopy, and J. A. Rodgers, Jr. 1994. The snail kite in the Florida Everglades: a food specialist in a changing environment. Pages 507-532 *in* J. Ogden and S. Davis, eds. *Everglades: the ecosystem and its restoration*, St. Lucie Press; Delray Beach, Florida.
- Bennetts, R. E., P. Darby, and P. Darby. 1993. 1993 annual snail kite survey. Florida Cooperative Fisheries and Wildlife Research Unit, University of Florida; Gainesville, Florida.
- Bennetts, R.E., V.J. Dreitz, W.M. Kitchens, J.E. Hines, and J.D. Nichols. 1999b. Annual survival of snail kites in Florida: Comparisons between radio telemetry and capture-resighting data. *Auk* (in press).

- Bennetts, R. E., and W. M. Kitchens. 1992. Estimation and environmental correlates of survival and dispersal of snail kites in Florida. First annual report, prepared for the U.S. Fish and Wildlife Service and U.S. National Park Service, Florida Cooperative Fisheries and Wildlife Research Unit, University of Florida; Gainesville, Florida.
- Bennetts, R.E., and W.M. Kitchens. 1997a. The demography and movements of snail kites in Florida. Final report. Florida Cooperative Fish and Wildlife Research Unit, National Biological Service, U.S. Department of the Interior; Gainesville, Florida.
- Bennetts R.E., and W.M. Kitchens. 1997b. Population dynamics and conservation of snail kites in Florida: The importance of spatial and temporal scale. *Colonial Waterbirds* 20:324-329.
- Bennetts, R.E, W.A. Link, J.R. Sauer, and P.W. Sykes, Jr. 1999a. Factors influencing counts in an annual survey of snail kites in Florida. *Auk* (in press).
- Bent, A. C. 1937. Life histories of North American birds of prey. U.S. National Museum Bulletin 167.
- Brown, L. H., and D. Amadon. 1976. Eagles, hawks, and falcons of the world. McGraw-Hill Book Company; New York.
- Bureau of Sport Fisheries and Wildlife. 1973. Threatened wildlife of the United States. Resource publication 114, March 1973. Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior; Washington, D.C.
- Cary, D. M. 1985. Climatological and environmental factors effecting the foraging behavior and ecology of Everglade Kites. Master's thesis, University of Miami; Coral Gables, Florida.
- Chandler, R., and J. M. Anderson. 1974. Notes on Everglade kite reproduction. *American Birds* 28:856- 858.
- Clark, W. S., and B. K. Wheeler. 1987. A field guide to hawks of North America. Houghton Mifflin Company; Boston.
- Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. Biological Service Program, FWS / OBS-79/31. U.S. Fish and Wildlife Service; Washington, D.C.
- Craighead, F.C. 1971. The trees of south Florida, vol. 1: The natural environments and their succession. University of Miami Press; Coral Gables, Florida.
- Craighead, F.C. 1974. Hammocks of south Florida. Pages 53-60 in P.J. Glisson, ed. *Environments of south Florida: Present and past*, Miami Geological Society; Miami, Florida.
- Darby, P.C. Telephone communication, May 1997.
- Darby, P.C., P. Valentine-Darby, and H.F. Percival. 1996a. Assessing the impact of the Lake Kissimmee restoration on apple snails. 1996 annual report. Florida Game and Fresh Water Fish Commission; Tallahassee, Florida.
- Darby, P.C., J.D. Croop, H.F. Percival, and W.M. Kitchens. 1996b. Ecological studies of apple snails (*Pomacea paludosa*). 1995 annual report. South Florida Water Management District; West Palm Beach, Florida; and St. Johns River Water Management District; Palatka, Florida.
- Darby, P.C., P. Valentine-Darby, and H.F. Percival. 1997. Assessing the impact of the Lake Kissimmee restoration on apple snails. 1997 annual report. Florida Game and Fresh Water Fish Commission; Tallahassee, Florida.

- Davis, J. H., Jr. 1946. The peat deposits of Florida. Geological Bulletin number 30, Florida Geological Service; Tallahassee, Florida.
- Davis and Ogden. 1994. Pages 3-8 *in* Davis and Ogden, ed. Everglades: the ecosystem and its restoration. St. Lucie Press; Delray Beach, Florida.
- Eisemann, J.D., W.N. Beyer, R.E. Bennetts, and A. Morton. 1997. Mercury residues in South Florida apple snails (*Pomacea paludosa*). Bulletin of Environmental Contamination and Toxicology 58:739-743.
- Federico, A.C., K.G. Dickson, C.R. Kratzer, and F.E. Davis. 1981. Lake Okeechobee water quality studies and eutrophication assessment. Technical publication 81-2, South Florida Water Management District; West Palm Beach, Florida.
- Gunderson, L.H. and W.F. Loftus. 1993. The Everglades *in* W.H. Martin, S.C. Boyce, and A.C. Echternacht, eds. Biodiversity of the southeastern United States. John Wiley and Sons; New York.
- Hanson, K., and G.A. Maul. 1991. Florida precipitation and the Pacific El Niño, 1859-1989. Florida Scientist 54:160-168.
- Hefner, J.M., B.O. Wilen, T.E. Dahl, and W.E. Frayer. 1994. Southeast wetlands; status and trends, mid-1970s to mid-1980s. U.S. Department of the Interior, Fish and Wildlife Service; Atlanta, Georgia.
- Hoffman, W.G., T. Bancroft, and R.J. Sawicki. 1994. Foraging habitat of wading birds in the WCAs of the southern Everglades. Pages 585-614 *in* S.M. Davis and J.C. Ogden, eds. Everglades: the ecosystem and its restoration. St. Lucie Press; Delray Beach, Florida.
- Howell, A. H. 1932. Florida bird life. Coward-McCann; New York, New York.
- Janus, L.L., D.M. Soballe, and B.L. Jones. 1990. Nutrient budget analyses and phosphorus loading goal for Lake Okeechobee, Florida. Internationale Vereinigung für Theoretische und Angewandte Limnologie Verhandlungen 24:538-546.
- Klein, H., J. T. Armbruster, B. F. McPherson, and H. J. Freiburger. 1974. Water and the south Florida environment. South Florida Environmental Proceedings: Ecological Report Number DI-SFEP-74-75. U.S. Geological Survey; Atlanta, Georgia.
- Kushlan, J. A. 1975. Population changes of the apple snail, *Pomacea paludosa*, in the southern Everglades. Nautilus 89:21-23.
- Lamont, T., and W. Reichel. 1970. Organochlorine pesticide residues in whooping cranes and Everglade kites. Auk 87:158-159.
- Leach, S. D., H. Klein, and E. R. Hampton. 1972. Hydrologic effects of water control and management of southern Florida. Bureau of Geology, Florida Department of Natural Resources; Tallahassee, Florida.
- Neidrauer, C.J., P.J. Trimble, and E.R. Santee. 1997. Simulation of alternative operational schedules for Lake Okeechobee. South Florida Water Management District; West Palm Beach, Florida.
- Nicholson, D. J. 1926. Nesting habitats of the Everglade kite in Florida. Auk 43:62-67.
- Parker, G. G., G. E. Ferguson, S. L. Love, *et al.* 1955. Water resources of southern Florida. Water-supply paper 1255, U.S. Geological Survey; Washington, D.C.
- Ridgely, R. S., and J. A. Gwynne, Jr. 1989. A guide to the birds of Panama. Princeton University Press; Princeton, New Jersey.
- Robertson, W. B., Jr. 1955. An analysis of the breeding-bird populations of tropical Florida in relation to the vegetation. Ph.D. Dissertation, University of Illinois; Urbana, Illinois.

- Rodgers, J.A., Jr. 1994. Effects of water fluctuations on snail kites nesting in the Kissimmee River basin. final report, study number II-H-1-2, 1 July 1991 - 30 June 1994. Florida Game and Fresh Water Fish Commission; Tallahassee, Florida.
- Rodgers, J.A., Jr., and H. T. Smith. 1995. Set-back distances to protect nesting bird colonies from human disturbance in Florida. *Conservation Biology* 9:89-99.
- Rodgers, J. A., Jr. 1996. Endangered Florida snail kite. Pages 42-51 *in* J. A. Rodgers, Jr., ed. Rare and endangered biota of Florida, Second Edition, University Presses of Florida; Gainesville, Florida.
- Rodgers, J.A., Jr. Telephone communication. 1995.
- Rodgers, J.A., Jr. Telephone communication. 1996.
- Rodgers, J. A., Jr., S. T. Schwikert, and A. S. Wenner. 1988. Status of the snail kite in Florida: 1981-1985. *American Birds* 42:30-35.
- Rodgers, J.A., Jr. and P.W. Stangel. 1996. Genetic variation and population structure of the endangered snail kite in south Florida. *Journal of Raptor Research* 30(3):111-117.
- Rumbold, D. G., and M. B. Mihalik. 1994. Snail kite use of a drought-related habitat and communal roost in West Palm Beach, Florida: 1987-1991. *Florida Field Naturalist* 22:29-38.
- Snyder, N. F. R., S. R. Beissinger, and R. Chandler. 1989a. Reproduction and demography of the Florida Everglade (Snail) Kite. *Condor* 91:300-316.
- Snyder, N. F. R., S. R. Beissinger, and M. R. Fuller. 1989b. Solar radio-transmitters on snail kites in Florida. *Journal Field Ornithology* 60:171-177.
- Snyder, N. F. R., and H. A. Snyder. 1969. A comparative study of mollusc predation by limpkins, Everglade kites, and boat-tailed grackles. *Living Bird* 8:177-223.
- Sprunt, A., Jr. 1945. The phantom of the marshes. *Audubon Magazine* 47:15-22.
- Sprunt, A., Jr. 1954. Florida bird life. Coward-McCann, Incorporated and National Audubon Society; New York.
- Stickel, W. H., L. F. Stickel, and F. B. Coon. 1970. DDE and DDD residues correlated with mortality of experimental birds. Pages 287-294 *in* W. P. Deichmann, ed. Inter-American conference on toxicology and occupational medicine, pesticide symposia, University of Miami, School of Medicine; Miami, Florida.
- Stickel, W. H., L. F. Stickel, R. A. Dyrland, and D. L. Hughes. 1984. Aroclor 1254 residues in birds: lethal levels and loss rates. *Archives Environmental Contamination and Toxicology* 13:7-13.
- Stickel, W. H., L. F. Stickel, and J. W. Spann. 1969. Tissue residues of dieldrin in relation to mortality in birds and mammals. Pages 74-204 *in* M. W. Miller and G. G. Berg, eds. Chemical fallout. Charles C. Thomas; Springfield, Illinois.
- Stieglitz, W. O., and R. L. Thompson. 1967. Status and life history of the Everglade kite in the United States. Bureau of Sport Fisheries and Wildlife, Scientific report Wildlife, Number 109.
- Sykes, P. W., Jr. 1978. Endangered Florida Everglade kite. Pages 4-7 *in* H. W. Kale II, ed. Rare and endangered biota of Florida, vol. 2. University Presses of Florida; Gainesville, Florida.
- Sykes, P. W., Jr. 1979. Status of the Everglade Kite in Florida—1968-1978. *Wilson Bulletin* 91:495-511.

- Sykes, P. W., Jr. 1983a. Recent population trends of the Everglade snail kite in Florida and its relationship to water levels. *Journal of Field Ornithology* 54:237-246.
- Sykes, P. W., Jr. 1983b. Snail kite use of the freshwater marshes of south Florida. *Florida Field Naturalist* 11:73-88.
- Sykes, P. W., Jr. 1984. The range of the snail kite and its history in Florida. *Bulletin, Florida State Museum, Biological Sciences* 29:211-264.
- Sykes, P. W., Jr. 1985a. Evening roosts of the snail kite in Florida. *Wilson Bulletin* 97:57-70.
- Sykes, P. W., Jr. 1985b. Pesticide concentrations in snail kite eggs and nestlings in Florida. *Condor* 87:438.
- Sykes, P. W., Jr. 1987a. The feeding habits of the snail kite in Florida, USA. *Colonial Waterbirds* 10:84-92.
- Sykes, P. W., Jr. 1987b. Snail kite nesting ecology in Florida. *Florida Field Naturalist* 15:57-84.
- Sykes, P. W., Jr. 1987c. Some aspects of the breeding biology of the snail kite in Florida. *Journal Field Ornithology* 58:171-189.
- Sykes, P. W., Jr., and R. Chandler. 1974. Use of artificial nest structures by Everglade kites. *Wilson Bulletin* 86:282-284.
- Sykes, P. W., Jr., and H. W. Kale II. 1974. Everglade kites feed on non-snail prey. *Auk* 91:818-820.
- Sykes, P. W., Jr., J. A. Rodgers, Jr., and R. E. Bennetts. 1995. Snail kite (*Rostrhamus sociabilis*) in A. Poole and F. Gill, eds. *The birds of North America*, Number 171, The Academy of Natural Sciences, Philadelphia, and the American Ornithologists Union; Washington, D.C.
- Takekawa, J. E., and S. R. Beissinger. 1983. First evidence of snail kite feeding on the introduced snail, *Pomacea bridgesi*, in Florida. *Florida Field Naturalist* 11:107-108.
- Takekawa, J. E., and S. R. Beissinger. 1989. Cyclic drought, dispersal, and the conservation of the snail kite in Florida: lessons in critical habitat. *Conservation Biology* 3:302-311.
- U.S. Fish and Wildlife Service [FWS]. 1986. Everglades snail kite (*Rostrhamus sociabilis plumbeus*) revised recovery plan. On file at U.S. Fish and Wildlife Service; Atlanta, Georgia.
- Valentine-Darby, P.L., R.E. Bennetts, and W.M. Kitchens. In preparation. Seasonal patterns of habitat use by snail kites in Florida.
- Wiemeyer, S. N., T. G. Lamont, and L. N. Locke. 1980. Residues of environmental pollutants and necropsy data for eastern United States ospreys, 1964-1973. *Estuaries* 3:155-167.
- Zhang, E., and P. Trimble. 1996. Predicting effects of climate fluctuations for water management by applying neural network. *World Resource Review* 8(3):334-348.

---

# Recovery for the Everglade Snail Kite

## *Rostrhamus sociabilis plumbeus*

---

**Recovery Objective:** RECLASSIFY to threatened once recovery criteria are met.

### Recovery Criteria

The objective of this recovery plan is to restore the Everglade snail kite to a stable, secure and self-sustaining status allowing the reclassification of the species from endangered to threatened under the ESA. Due to the limited distribution of the species, its specialized ecological niche, and the irreversible loss of a significant portion of the Kissimmee/Okeechobee/Everglades watershed, the FWS believes it unlikely that the snail kite will ever be elevated above the threatened status. This objective will be achieved when: the 10-year average for the total population size is estimated as greater than or equal to 650, with a coefficient of variation less than 20 percent for the pooled data over the 10-year period; no annual population estimate is less than 500 in the 10-year period; the rate of increase of the population to be estimated annually or biannually, and over the 10-year period, will be greater than or equal to 1.0, sustained as a 3-year running average over 10 years; the feeding range of snail kites will not decrease from its current extent, including as a minimum, the St. Johns Marsh, the Kissimmee Chain of Lakes, Lake Okeechobee, Loxahatchee Slough, Loxahatchee NWR, all of the water conservation areas, Everglades National Park, Big Cypress National Preserve, Fakahatchee Strand, Okaloacoochee Slough, and marshes surrounding the Corkscrew Swamp; and snail kite nestings regularly occurs over the 10-year period in the St. Johns Marsh, Kissimmee Chain of Lakes, Lake Okeechobee, and at least one of the present compartments of the water conservation areas.

The FWS recognizes that the snail kite is a resilient species in a highly changeable environment and that to some degree a “boom and bust” population fluctuation is characteristic of the species. The above criteria for reclassification to threatened are flexible enough to allow substantial declines in population within a given year, while setting goals over a 10-year period. The global climate fluctuations that are correlated with cycles of flood and drought in South Florida occur on a periodicity of 9 to 14 years (Zhang and Trimble). 1996. The use of 650 individuals as a criterion for recovery needs to be supported by improved techniques of Population Viability Analysis (**H3.1**, below). Beissinger (1995) suggested that snail kite populations become viable above a minimum population size of 300 individuals, but this PVA needs to be re-evaluated based on the more precise population estimates anticipated from mark/resight techniques.

---

### Species-level Recovery Actions

- S1. Maintain information on the distribution and status of the Everglade snail kite.** The present distribution of the snail kite and its recent history of distribution are well documented. Distribution must be monitored in the future. Radio-telemetry has provided information on movement of individuals within the species’ range, but would not be continued on a routine basis.

- S1.1. Estimate population size, through mark/resighting of banded individuals.** This method is considered technically superior to counts of snail kites at index locations because it allows estimation of the proportion of kites not observed and is less subject to certain errors, such as those caused by differences in experience among individuals conducting the counts and by year-to-year differences in the level of effort. Annual counts of snail kites at index locations do not provide a reliable estimate of population size, nor do they allow estimation of the coefficient of variation (Bennetts *et al.* 1999a), which is an integral part of the recovery criteria expressed above. An ongoing pilot study by Victoria Dreitz indicates that the mark/resighting techniques used by Bennetts *et al.* (1999b) to estimate survival is promising as a methodology to estimate population size (R. Bennetts, Station Biologique de la Tour du Valat, personal communication 1998). This method requires considerable commitment of resources to annually mark sufficient numbers of snail kites; this level of funding and personnel may be difficult to sustain in the long term.
- S1.2. Continue surveys of nesting effort and success at the principal breeding areas.** Monitoring of breeding should continue at principal breeding sites, such as the St. Johns marsh, Kissimmee Chain of Lakes, Lake Okeechobee, and Water Conservation Areas 2 and 3.
- S1.3. Expand and refine existing information on movements and distribution of the snail kite, particularly changes attributable to drought.** Radio telemetry has provided information on movements of snail kites within South Florida; it is expensive and labor-intensive. It may be logistically impractical to design and implement a radio telemetry study quickly enough to respond to a specific drought event. Additional radio telemetry studies should be initiated only to test specific hypotheses that cannot be tested through other methods.
- S1.4. Organize and maintain a network of biologists to report Everglade snail kite sightings to a clearinghouse.** In the past, information on snail kite sightings was requested from the general public, which led to unreliable reports. However, professional biologists can often provide reliable and useful sighting information, particularly when snail kites are dispersed during droughts.
- S2. Protect and enhance the existing population.** Because of the nomadic nature of snail kites, they integrate habitat conditions over a large geographic area and are dependent on natural and human-caused environmental conditions throughout the South Florida Ecosystem. The majority of management activities to protect and enhance the snail kite population must occur at an ecosystem level (see below). Actions at the level of the individual or groups of individuals included in the 1986 recovery plan are now considered extremely labor-intensive and would have limited benefit to the species. Such activities include installation of artificial perches and installation of artificial nest structures. Limited experimentation with captive propagation has shown it to be difficult, and the snail kite population is now considered more resilient and not currently in need of such emergency measures. Only two species-specific recovery tasks in this category are considered necessary at this time:
- S2.1. Update the critical habitat designation for the Everglade snail kite.** Critical habitat has not been modified since its original designation in 1977 and is in need of revision. Earlier publications correctly pointed out the importance of Lake Okeechobee and the Everglades as snail kite habitat. However, more recent information suggests that although restoration of Lake Okeechobee and the Everglades must be compatible with

snail kite recovery, greater emphasis must be placed on larger wetland systems in the species, range and on smaller peripheral wetlands. Nesting of snail kites in Lake Kissimmee, Lake Tohopekaliga, and East Lake Tohopekaliga since the early 1980s is a significant change that should be considered in revising critical habitat. Although a portion of the St. Johns Marsh south of State Road 60 is included in the current critical habitat, the principal areas being used by snail kites north of that highway need to be included. Other areas outside of the Okeechobee/Everglades basin that should be considered for designation are the Big Cypress National Preserve and marshes surrounding the Corkscrew Swamp.

- S2.2. Use provisions of section 7 of the ESA to protect the Everglade snail kite.** Water management of the COE's C&SF project is critical to the survival and recovery of the snail kite. The SJRWMD and SFWMD are involved with the COE in water management decisions subject to section 7 consultation. The FWS needs to provide conservation recommendations to enhance habitat conditions for the snail kite throughout the C&SF project. Specific guidance should include water regulation of the St. Johns Marsh impoundments, Kissimmee Chain of Lakes, Lake Okeechobee, Loxahatchee NWR, Water Conservation Areas 2 and 3, Everglades National Park and Big Cypress National Preserve.
- S3. Continue or initiate research on the life history of the Everglade snail kite.**
- S3.1. Expand information on survival of juvenile and adult snail kites.** Although snail kites have been banded for decades, intensive banding for estimation of survival has occurred only since 1992. Intensive banding must be continued through long-term meteorological cycles to estimate the effects of drought on snail kite survival. This is a key unknown element in the life history of the species that has significance in assessing opportunities for recovery and probability of extinction relative to natural cycles and water management policy.
- S3.2. Develop and validate a snail kite model that can evaluate both stochastic natural events and human-caused modifications of habitat throughout the species' range.** An individual-based spatially explicit snail kite model is being developed as part of the Across Trophic Level System Simulation (ATLSS). The geographic scope of ATLSS does not include the Kissimmee Chain of Lakes or the St. Johns Marsh. While complete modeling across all trophic levels will not include these northern areas, they should be appended to the boundaries of the model at levels dealing with snail kite dispersal, reproduction, and survival, to model the snail kite population as a whole.
- S3.3. Investigate the genetic variability of the Everglade snail kite.** Analysis by electrophoresis has not indicated the potential for a genetic bottleneck in the snail kite population. Although additional genetic research does not appear to be a high recovery priority, analysis of heterozygosity using DNA analysis would be desirable.
- S4. Monitor trends in Everglade snail kite population and levels of contaminants.**
- S4.1. A mark-resighting effort will provide estimates of both total population size and survival.** Because marking of birds is most often conducted at nesting aggregations, routine monitoring has included counting the total nests and determining nesting success. However, there is general agreement among researchers that changes in the kite population is more sensitive to survival than reproduction. Although researchers should continue to monitor reproduction at the major nesting areas, the emphasis of long-term monitoring should be estimation of total population size and survival.

- S4.2. Conduct periodic monitoring of contaminant levels in apple snails and Everglade snail kites.** The limited sampling of apple snails and Everglade snail kites to date has emphasized the potential risks of methylmercury contamination. Although this limited sampling has not suggested an immediate threat to snail kites from mercury contamination, additional studies should be conducted on a regular basis in the long term (approximately 5 to 10 year intervals). Apple snails can be collected specifically for analysis, whereas analysis of snail kites is generally limited to occasional discovery of dead specimens or analysis of shed feathers. More emphasis must be placed on detection of herbicides in both apple snails and snail kites. Snail kites can ingest apple snails containing herbicides (such as bypyridyls), applied in agricultural fields and transported by runoff into the aquatic food web, or herbicides (such as fluoridone), applied to control aquatic vegetation.
- S5. Increase public awareness about Everglade snail kites.** A snail kite brochure has been distributed via donations from the St. Johns River Water Management District, Palm Beach County Solid Waste Authority, and Florida Power and Light Co. This material should be reviewed, updated, and published as a second edition. The GFC is developing signs to inform ORV users at launching sites along I-75 about responsible ORV use, including protection of the snail kite. Funding is needed to produce and install similar signs informing the public about protection of snail kites at boat launching sites in the Kissimmee Chain of Lakes, St. Johns marsh, and Lake Okeechobee. Information on the biology of the snail kite and the threats it faces should be included in middle school and high school curricula.

---

### Habitat-level Recovery Actions

- H1. Prevent degradation of existing Everglade snail kite habitat.**
- H1.1. Plan and carry out periodic extreme drawdowns of individual lakes on a rotational basis in the Kissimmee Chain of Lakes.** These projects involve extensive cooperation and cost sharing among a number of agencies, often including simultaneous lake management activities, such as muck removal, discing, burning, and aquatic weed control. Water levels must be lowered early enough to avoid initiation of nesting by snail kites and thus prevent incidental take of nests. Cooperation is needed between the water management districts to ensure that no more than one human-caused drawdown occurs simultaneously among the principal habitats for the snail kite.
- H1.2. Control or remove exotic vegetation in wetlands.** The long-term direct and secondary effects on snail kites or apple snails of spraying aquatic weeds are poorly known. Research on these long-term impacts should be initiated. Current control programs are mainly directed at *Melaleuca quinquenervia*, *Schinus terebinthifolius*, and *Hydrilla verticillata*.
- H1.3. Use controlled burns to open up areas of overly dense herbaceous and/or shrubby vegetation in lake littoral zones and marshes.** Burning can be accomplished under natural low water conditions or in conjunction with the extreme drawdowns mentioned above. Although controlled burns with the presence of surface water or saturated soils may be beneficial, it would probably not be practical or advisable to attempt to change plant communities through uncontrollable muck fires in the Everglades.

- H1.4. Ensure that information on wetlands of importance to Everglade snail kite nesting and feeding is considered in review of regulatory permits.** The COE and DEP are preparing GIS data layers that will be routinely available to regulators. Information on snail kite nesting areas and other important habitats needs to be included.
- H1.5. Prevent cultural eutrophication of lakes and marshes.** Addition of nitrogen and phosphorus from agricultural and residential areas is accelerating eutrophication of Florida's lakes and marshes. Long-term degradation of habitat caused by eutrophication leads to buildup of organic muck, overly dense herbaceous and shrubby vegetation, and oxygen depletion. Moderate eutrophication may not harm the snail kite, but in the long term, both the abundance of apple snails and the ability of snail kites to locate snails in dense vegetation is reduced. Reduction of nutrient inputs at the source needs to be addressed by best management practices, including rates of application and stormwater retention on site. Construction and maintenance of wastewater treatment plants must be improved to control discharge of nutrients in lakes and streams.
- H1.6. Evaluate effects of Lake Okeechobee's regulation schedule on Everglade snail kite habitat.** Observations since 1992 suggest a general degradation of nesting habitat in the littoral zone of Lake Okeechobee from the loss of willows in nesting areas (R. Bennetts. Station Biologique de la Tour du Valat, personal communication 1998). Modification of the regulation schedule to increase water storage could cause additional loss of vegetation in the littoral zone, which would be adverse to the ecology of the lake as a whole, including the snail kite. Conversely, extending periods of low water in the lake through a combination of agricultural, urban, and environmental restoration demands would also be detrimental to the snail kite. Evaluation of proposed changes to water regulation in Lake Okeechobee must consider the effect on the snail kite in the context of protection of all the fish and wildlife resources in the lake and elsewhere in the C&SF system. Long-term monitoring of changes in wetland vegetation in relation to water management practices needs to be conducted throughout the C&SF system as indicators of habitat suitability for snail kites, rather than relying on short-term changes in snail kite population, distribution, or reproduction.
- H2. Restore areas to suitable habitat.**
- H2.1. Reverse the expansion of cattails as a dominant plant in portions of the Everglades through reduction in nutrient loading from agricultural and urban sources.** Portions of the Water Conservation Areas and the Holey Land WMA are now relatively unsuitable habitat for the snail kite due to growth of dense monocultures of cattails. The Everglades Construction Project and additional treatment areas (such as portions of the Water Preserve Areas in the C&SF Restudy) need to be implemented. The influence of nutrient levels bound in the soil on the persistence of cattails after water quality improvement needs to be predicted and then determined empirically.
- H2.2. Construct and operate the Modified Water Deliveries to Everglades National Park and C-111 projects.** These projects will restore flow patterns to northeast Shark River Slough and other portions of the southern Everglades, enhancing Everglade snail kite habitat.

- H2.3. Through the C&SF Restudy, investigate, plan, and carry out restoration projects in the Kissimmee/Okeechobee/Everglades watershed.** As a whole, restoration projects proposed through the C&SF project should restore water quantity, water quality, timing, and sheetflow, as opposed to flow through canals. Wherever practical, impoundment of water behind levees should be reduced, provided that this action does not overdrain areas upstream of the presently impounded areas. The establishment of Water Preserve Areas and additional compartments for storage and treatment of water should be reviewed for management opportunities that may support recovery of the Everglade snail kite.
- H3. Conduct research on the biology and life history of the Everglade snail kite.**
- H3.1. Complete and use ATLSS modeling of the snail kite to predict the response of snail kites to changes in hydropattern anticipated for specific water management proposals.** In addition to the need to correctly describe the life history of the snail kite itself, the ATLSS modeling must include linkage to apple snail distribution and abundance, vegetation characteristics in the landscape influencing the snail kite's successful foraging, and linkage of all these factors to hydrology. ATLSS simulations (and/or other Population Viability Analysis models) can also provide estimates of the vulnerability of the snail kite population as a whole to extinction. Such information should be used to refine, if necessary, our use of 650 birds as a recovery criterion.
- H3.2. Continue and expand research on the effects of natural and human-caused hydrologic events on the ecology of the apple snail.** This research will provide needed information for the ATLSS modeling described above, and even before completion of ATLSS, this research can be used in decisions on water management.
- H3.3. Evaluate the effectiveness of long-term climate predictions to reduce the likelihood of coincidence of human-caused drawdowns and drought.** Prediction of long-term climate patterns is still inexact, but climatological monitoring can increasingly predict the probability of *El Niño* events perhaps 1 or two years in advance. Florida's subtropical climate is significantly affected by these global shifts, and this may be useful in adjusting water regulation schedules according to anticipated "wet" or "dry" years. Human-caused drawdowns should be avoided prior to entering a drought, because snail kites will have fewer options for refuge from drought and because refilling of drained lakes or marshes will be prolonged during drought.
- H3.4. Perform a detailed statistical analysis of rainfall records throughout central and South Florida to identify the intensity and spatial and temporal extent of droughts.** This information will provide an estimate of the threat to the snail kite from region-wide drought. It will be used to estimate the probability of extinction over long time scales in response to severe drought under a range of future land use scenarios.
- H3.5. Evaluate the need for secondary treatment in addition to the nutrient removal afforded by macrophytic stormwater treatment areas.** Determine effective methods of treatment to reduce nutrients below levels affecting the ecology of the Everglades.

- H4. Monitor habitat/ecological processes.** Expansion of existing monitoring programs throughout the C&SF system is expected as restoration projects are generated through the C&SF Restudy, with an increased emphasis on adaptive management. The snail kite should be included in monitoring of ecological indicators along with analysis of vegetation patterns and hydrology throughout the system.
- H5. Increase public awareness of ecological relationships, environmental stressors, and restoration activities in the South Florida Ecosystem.** Because the range of the snail kite coincides closely with the C&SF system and because it is endangered, it can serve as a symbolic species for restoration efforts in South Florida. Information on the kite's status, threats, and its ecological relationship with other species should be integrated in public education on restoration activities. Public outreach can include newsletters, newspapers, magazines, the worldwide web, and classroom materials.

**Standard Protective Measures for the Eastern Indigo Snake**

**STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE**  
**U.S. Fish and Wildlife Service**  
**August 12, 2013**

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: [jaxregs@fws.gov](mailto:jaxregs@fws.gov); South Florida Field Office: [verobeach@fws.gov](mailto:verobeach@fws.gov); Panama City Field Office: [panamacity@fws.gov](mailto:panamacity@fws.gov)). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or “approval” from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

### **POSTER INFORMATION**

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11” x 17” or larger paper and laminated, is attached):

**DESCRIPTION:** The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

**SIMILAR SNAKES:** The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

**LIFE HISTORY:** The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

**PROTECTION UNDER FEDERAL AND STATE LAW:** The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. “Taking” of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. “Take” is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

**IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant’s designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

**IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and immediately notify supervisor or the applicant’s designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

**Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:**

**North Florida Field Office – (904) 731-3336**  
**Panama City Field Office – (850) 769-0552**  
**South Florida Field Office – (772) 562-3909**

## **PRE-CONSTRUCTION ACTIVITIES**

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.
2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.
3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

## **DURING CONSTRUCTION ACTIVITIES**

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.
3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

## **POST CONSTRUCTION ACTIVITIES**

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.

**Bennetts and Darby 2001 White Paper  
The Effects of Artificial Drawdowns on Snail Kites (*Rostrhamus sociabilis*)  
and Florida Apple Snails (*Pomacea paludosa*),  
with Special Reference to the Lake Tohopekaliga Habitat Enhancement Project**

**THE EFFECTS OF ARTIFICIAL DRAWDOWNS ON SNAIL KITES (*Rostrhamus sociabilis*) AND FLORIDA APPLE  
SNAILS (*Pomacea paludosa*), WITH SPECIAL REFERENCE TO THE LAKE TOHOPEKALIGA HABITAT  
ENHANCEMENT PROJECT**

*A White Paper*

by

ROBERT E. BENNETTS, PHD  
*U.S.G.S. Florida Caribbean Science Center  
7920 NW 71<sup>st</sup> St., Gainesville, FL 32653*

AND

PHILIP C. DARBY, PHD  
*Dept. of Biology, University of West Florida  
11000 University Parkway  
Pensacola, FL 32514*

## PROBLEM STATEMENT

The Florida Fish and Wildlife Conservation Commission has initiated efforts toward conducting a habitat enhancement project on Lake Tohopekaliga (Toho) that is intended to remove nuisance vegetation and organic material that has built up under a management regime of stabilized water levels relative to a more variable regime that existed historically under more natural conditions. This enhancement will necessitate an extreme drawdown of water levels relative to this stabilized regime, and would be accompanied by mechanical scraping of the substrate to remove organic material. This material would subsequently be deposited on upland sites or in-lake islands. During the permitting and environmental assessment processes, several issues have been raised regarding the effects of this project on the Florida apple snail (*Pomacea paludosa*) and endangered snail kite (*Rostrhamus sociabilis*) which feeds on the apple snail. Because each of us has conducted research on topics relevant to this issue, we have been asked to provide opinions on several occasions regarding the potential impacts of drawdowns (or deviations from regulation schedules) on apple snails and/or snail kites. These are complex issues for which there are often no clear black and white answers. Consequently, there have been several interpretations of the opinions we have expressed. We believe that there would be value in summarizing our respective positions with regards to the potential impacts of this project on apple snails and/or snail kites, so that all parties have the same foundation for their interpretations. As such, the following represents a summary of our current opinions on this topic, based on our respective research. Unless otherwise stated, the following statements represent our collective opinions.

## SPECIFIC ISSUES/QUESTIONS

### *Will the draw down affect apple snails?*

Yes. A drawdown of this magnitude and the subsequent scraping of the substrate would be expected to affect apple snails with near certainty.

### *To what extent would the apple snail population be expected to initially decline at Lake Toho during and following the drawdown?*

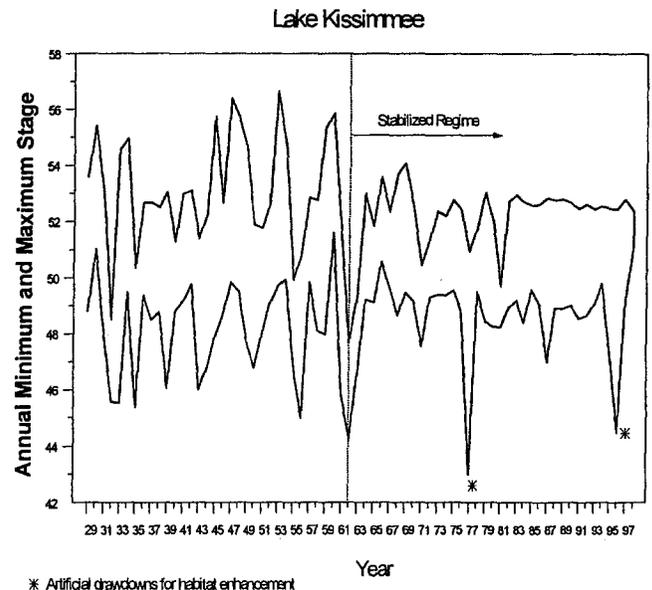
We could never say with certainty. Our best knowledge to date comes from work on Lake Kissimmee (Darby et al. 1998) during a similar management endeavor. At Lake Kissimmee, estimates of the overall abundance of apple snails after the drawdown was 20% of the pre-drawdown during 1996 (the year following the drawdown) and 13% of the pre-drawdown estimate during 1997. We expect similar declines during the drawdown at Lake Toho, and research is being conducted on apple snails during the proposed Lake Toho drawdown to assess the impacts.

### *Isn't the combination of drawdown followed by scraping an extreme stress on the apple snail populations, and are they capable of withstanding such extreme events at periodic intervals?*

Based on the hydrologic records, drying events of the extreme magnitude intended during the "habitat enhancement project" occurred at periodic intervals under more natural conditions, and all evidence is that apple snails are well adapted for coping with such events. However, historically, drying events (i.e., when the water table falls below ground level) occurred more often in the mid to late spring and of course they were not accompanied by scraping of the substrate. The timing of the event is a separate issue (see below). The scraping is intended to reduce organic buildup which was likely reduced through oxidation by

2

G37



Modified from Kitchen et al. (2002).

more frequent drying events under a natural hydrologic regime. The extent to which scraping affects apple snails beyond the effect of the drying itself is not well understood. Darby et al. (1998) found no snails in sites on Lake Kissimmee with extensive build up of organic material, indicating these were unsuitable habitats for snails. In addition, Darby et al. found that scraping these sites resulted in snails moving into these previously uninhabited sites after reflooding; the increase, however, was slight (4 snails per site relative to the 30-60 snails found in other sampling sites prior to the drawdown). Thus, the evidence from Lake Kissimmee suggests that sites with heavy organic buildup targeted for scraping are likely to experience a slight increase in snail abundance after treatment because of improved habitat quality. The effect of scraping on snail populations above and beyond the drying event is also the subject of specific research being conducted on apple snails during the proposed Lake Toho drawdown.

***How long would the population of apple snails be expected to be suppressed?***

Again our best knowledge to date comes from work on Lake Kissimmee (Darby 1998). At Lake Kissimmee, apple snail populations were well below pre-management conditions for at least 2 years following the drawdown (Darby et al. 1998), and 2 of 4 sites were still well below pre-drawdown levels 5 years after reflooding (Darby et al. 2001). Thus, we expect that snail populations will be suppressed for at least 2-3 years, and quite possibly longer at some locations.

***What factors might be expected to influence the extent of impacts to the apple snail population?***

During the Lake Kissimmee drawdown, the substrate had a substantial influence on snail abundance and response, but this is not under the control of the management agencies. However, there are also factors related to the drawdown itself which would likely influence the extent of the impact, including the magnitude, timing, and duration of the drawdown. The magnitude will by necessity be extreme in order to gain access by equipment used to remove the organic material. The timing and duration of the drawdown have direct impacts on survival and recruitment of apple snails. Apple snails can aestivate during a dry down, and survival rates did not fall below 50% until 4 months in dry conditions (Darby 1998). However, the Lake Kissimmee littoral zone was dry approximately 5.5 months, and based on our research likely exceeded the capacity of most snails to survive. Equally, if not more important, is the fact the Lake Kissimmee drawdown (and upcoming Toho drawdown) occurred during peak snail reproduction. Stranded snails discontinue all mating and egg laying behaviors. Several researchers have documented that the majority of apple snail egg cluster production consistently occurs in March, April and May (Darby 1998). Drying events that encompass the snail breeding season (the case for the 1995 Lake Kissimmee and upcoming Toho drawdown) will greatly suppress snail recruitment. This is especially pertinent given that the life span of a snail has been estimated at 12-16 months. If these snails spend the last few months of their life span aestivating (when they would normally be breeding) a substantial proportion of the population would die without ever reproducing. This may substantially prolong the recovery times following these anthropogenic drawdowns compared to what would have been expected under a more natural regime.

Another issue for which there is only weak anecdotal evidence at this point is that sites that are invaded by torpedo grass following the drawdown treatment may be of poor quality for apple snails. One such site at Lake Kissimmee had 2.84 snails/m<sup>2</sup> before the drawdown and was still 0.10 snails/m<sup>2</sup> five years after the drawdown. Research during the Lake Toho drawdown should help to clarify the extent of this problem.

***Will the drawdown likely affect snail kites?***

Probably yes. A drawdown of this magnitude in combination with scraping the substrate will at the very least temporarily reduce the availability of prey for kites. This would be expected to preclude kites from nesting on Lake Toho, and possibly other lakes with low water levels, during the drawdown and likely for at least a year or two after the drawdown.

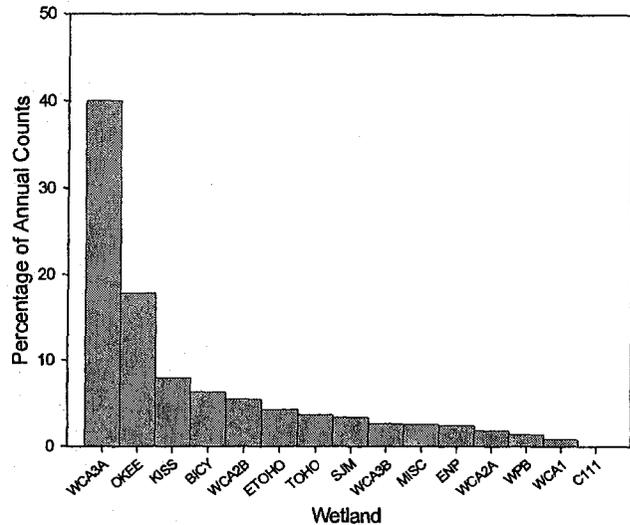
***What would be the likely impacts on snail kites at Lake Toho?***

Because of reduced prey availability, and based on observations from Lake Kissimmee during the 1995-96 drawdown, we would expect that nesting by snail kites on Lake Toho would not occur, or would occur at very low levels for at least 2 years after the drawdown. This does not, however, imply that these kites would not breed. It is

nearly certain that any kites on Lake Toho at the time of the drawdown would disperse to alternative locations, assuming that there was not a region-wide drought (see below). If conditions were suitable at alternative locations, there is no reason to believe that kites would not breed at these sites. Thus, depending on the conditions at sites other than Lake Toho, it is quite likely that the impact of the drawdown would be limited to dispersal, and possibly the failure of any nests that were ongoing at the time of the drawdown.

***Would the potential impacts at Lake Toho likely affect the snail kite population as a whole?***

It depends. If the drying is a local phenomenon, then its influence on the population as a whole is likely to be negligible. However, if the drawdown was conducted concurrently with a system-wide drought, then the influence could be substantial (Bennetts and Kitchens 1997). During droughts, the availability of refugia is probably extremely important for the survival of kites (Takekawa and Beissinger 1987). An indication of the extent to which the system would need to buffer the effects can be seen from the average percentage of use by snail kites in each wetland during the annual surveys from 1969-1994. If only Lake Toho were dry, then there would be a substantial portion of the remainder of the system that could buffer any impacts effects (i.e., serve as refugia for kites to survive and/or breed). If however, conditions at Lake Toho were suppressed at the same time as WCA3A and Lake Okeechobee, then there would be a substantially smaller portion of the system that could buffer the impacts.



***Would the overall habitat for snail kites on Lake Toho be significantly improved in the long term by the drawdown and/or muck removal?***

Probably yes. Most areas of snail kite habitat have been under artificially-stable water management regimes. Periodic drying is necessary to maintain high-quality habitat over longer time scales. However given the prolonged recovery time for apple snails following the enhancement efforts in combination with a potential rotation of such efforts occurring every 8-10 years, it means that there will be a balance between benefits and recovery time. Thus, every effort should be made to minimize the recovery time for apple snails through timing and duration of the drawdowns.

***If an area is already experiencing a drying event, whether natural or artificial, is there any problem with amplifying the effects by deviating from existing schedules (e.g., lowering the stage even further or prolonging the duration of the drying event) for other purposes (e.g., water supply) since "the damage is already done" (e.g., proposed schedule deviations in WCAs 1 and 3 during 2001)?***

Artificially increasing the duration of a drying event may substantially prolong the recovery of the apple snail population, thus snail kites. Such a deviation on a major nesting area (e.g., WCA3A) could have a major impact on the survival and/or reproduction depending on the conditions throughout the remainder of the system while the area recovers.

***Would the creation of "in-lake disposal islands" convert portions of the existing littoral zone to upland habitats, thus constituting a loss of foraging habitat for snail kites?***

It is certainly true that the type of "high mound" islands created during the previous lake enhancements on Lakes Toho and Kissimmee would effectively convert those sites to upland habitats. However, a substantial portion of the littoral zone of Lake Toho, including most of the area potentially being converted, is presently unsuitable as foraging habitat for snail kites or apple snails because of dense stands of pickerel weed and/or build up of organic material. Because the total area of conversion would likely be quite small relative to the area of improved habitat quality resulting from enhancement efforts, there would in all probability be a substantial net gain in foraging habitat rather than a loss. This does not imply that in-lake disposal is preferred for snail kite foraging habitat. It is not. There would likely be additional gain (although probably small) in foraging habitat should upland disposal be possible.

There have also been proposals to create "low stature" islands that would be strategically placed to augment existing topographic features (e.g., shoals), and that would be planted with willow. If done correctly (the details of which are beyond the scope of this paper), such islands could actually enhance nesting opportunities for snail kites and other species (e.g., wading birds) that currently use cattail, which is subject to greater risk of nest collapse.

***Would artificial nest supports be a reasonable means of avoiding loss of nests during a draw down?***

No. While it is true that nests in cattail can become weak and more prone to collapse when the marsh is dry, it is also true that the extreme nature of this drawdown will in all probability affect the foraging as well as nesting habitat. Thus, moving nests to artificial structures would likely just prolong nesting activity that was doomed to failure. It is probably better that any nests initiated fail, so that the birds have a greater chance to re-nest at another location.

***Should drying be initiated before the snail kite breeding season (e.g., in December) so that kites will not initiate nests that would likely fail during the dry down?***

This argument has been suggested on several occasions within the context of the Lake Toho restoration and for other projects where drawdowns are necessary. While it is true that initiating the drying before the nesting season may preclude Snail Kites from nesting at that location, it is also true that dry downs that precede the primary egg-laying period of apple snails (Mar-Apr) plus a growth period of approx 1 month and/or are of prolonged duration (> 4 months) may prolong the recovery period required for apple snails. Thus, there is a tradeoff between short-term effects on snail kite nesting and longer-term effects on apple snail recovery and foraging opportunities for snail kites. It is our belief that the loss of the few kite nests due to initiation of drying in spring, would be a minor impact compared to the extended recovery time for apple snails when drying is initiated during winter.

### ***Conclusions and Recommendations***

The stabilized water levels under current management are clearly degrading habitat for apple snails, thus snail kites. Thus, we generally support the habitat enhancement project. However, there are several factors that could minimize the impact to apple snails and snail kites. The first is that the spatial extent of a drying event probably has considerable influence on whether the impacts are local and behavioral (i.e., dispersal) or widespread to the population as a whole and numerical (i.e., decrease survival and/or reproduction). To preclude the latter, we would recommend that under no circumstances should an artificial drawdown be initiated while the effects of a larger-scale drought are present at other major sites within the Florida snail kite habitat network, particularly in WCA3a and Lake Okeechobee.

Secondly, the timing and duration of drying events probably has a considerable effect on the recovery of apple snails after the drawdown. Naturally occurring drying events typically occurred during late spring when water levels tend to be lowest. Thus they tended to occur after the peak reproductive period of apple snails. Drawdowns that are initiated before apple snail reproduction will likely preclude apple snails from reproducing that year. Similarly,

drying events that are of extended duration (i.e., > 4 months) probably exceed the ability for snails to survive. Thus drying events that are of extended duration and initiated early could mean that both reproduction and survival are severely suppressed. We fully recognize that there are constraints on doing the work required to meet the habitat enhancement objectives. However, to the extent possible, drawdowns should be initiated late in the spring after apple snail reproduction has occurred. Similarly, if at all possible, the duration of artificial drying events should be as short as possible, preferable < 4 months.

#### REFERENCES

- Bennetts, R. E. and W. M. Kitchens. 1997. The demography and movements of Snail Kites in Florida. U. S. Geological Survey/Biological Resources Division, Florida Cooperative Fish & Wildlife Research Unit. Technical Report No. 56. Gainesville, Florida.
- Bennetts, R.E. and W.M. Kitchens. 1998. Recovery of the snail kite in Florida: beyond a reductionist paradigm, p. 486-501. *In* K.G. Wadsworth [ed.], Transactions of the Sixty-third North American Wildlife and Natural Resources Conference. Wildl. Manage. Inst.
- Darby, P.C. 1998. Florida apple snail (*Pomacea paludosa* Say) life history in the context of a hydrologically fluctuating environment. Ph.D. Dissertation, University of Florida, Gainesville, FL, USA.
- Darby P.C., P.L. Valentine-Darby and H. F. Percival. 1998. Assessing the Impact of the Lake Kissimmee Restoration on Apple Snails. Final report submitted to the Florida Game and Fresh Water Fish Commission, Bureau of Nongame Wildlife, Tallahassee, FL. 54 pp.
- Darby, P.C., J. DuPree and J. Liddle. 2001. The Effect of Habitat Restoration Activities on Applesnail Abundance in Central Florida Lakes. Progress report submitted to the Florida Game and Fresh Water Fish Commission, Tallahassee, FL. 9 pp.
- Kitchens, W. M., R. E. Bennetts, and D. L. DeAngelis. 2002. Linkages between the snail kite population and wetland dynamics in a highly fragmented South Florida hydroscape. p. 183-203. Pages 183-203 *In* J. W. Porter and K. G. Porter (eds.) The Everglades, Florida Bay, and Coral Reefs of the Florida Keys: an Ecosystem Sourcebook. CRC/St. Lucie Press, Delray Beach, FL, USA.
- Takekawa, J. E. and S. R. Beissinger. 1989. Cyclic drought, dispersal, and conservation of the Snail Kite in Florida: lessons in critical habitat. *Conservation Biology* 3:302-311.

#### BIOGRAPHIES

Dr. Robert Bennetts has been conducting research on snail kites since 1986. Dr. Bennetts earned his PhD. From the University of Florida in 1998. The topic of his dissertation was the demography and movement of snail kites in Florida. Prior to that, he was employed by the University of Florida as a field biologist conducting research on the nesting ecology of snail kites in Water Conservation Area 3A. Dr. Bennetts has conducted research on numerous other topics and was the director of ornithological and long-term research from 1999-2001 for the Station Biologique de la Tour du Valat in southern France. To date he has published approximately 50 papers in peer-reviewed scientific journals, including approximately 20 papers on snail kites. In addition he has authored or co-authored two book chapters on snail kites, and 3 others on apple snails. Dr. Bennetts is presently a research ecologist with the Biological Resources Division of U.S.G.S. at the Florida Caribbean Science Center in Gainesville, Florida.

Dr. Phil Darby has extensive experience studying the ecology of apple snails in relation to water levels. Dr. Darby earned his Ph.D. from the University of Florida ('98) by completing a dissertation devoted to understanding the relationship between hydrology and apple snail population demography. He has over 10 years of experience conducting research in Florida wetlands, including WCA3A, Loxahatchee National Wildlife Refuge, the Kissimmee Chain of Lakes, and the Upper St. Johns Marsh. He has spent five years designing, testing and publishing papers (2 in press, 1 in review) on effective apple snail sampling techniques that are required for estimating snail abundance. He also has several publications (2 published, 1 in review, 2 in preparation) dealing with the impacts of drying events on snails and other aspects of snail ecology. He currently has other applesnail related research projects in central and south Florida (contracted through his current position as Assistant Professor, University of West Florida), and teaches a graduate level class (with lab) in wetlands ecology.

**South Florida Water Management District H&H. 2017  
Final Draft-East Lake Tohopekaliga Drawdown Analysis**

# Final Draft – East Lake Tohopekaliga Drawdown Analysis

H&H Bureau

September 2017

# CONTENTS

Overview and Objectives .....	1
Constraints for Pump Size Analysis .....	3
UK-OPS Model Setup .....	7
Results .....	8
Reference .....	16
Appendix A .....	17

## Overview and Objectives

Lake Tohopekaliga and East Lake Tohopekaliga (Figure 1) in Osceola County, FL, are part of the Kissimmee Chain of Lakes. They are the most populated area of Upper Kissimmee Basin. Boggy Creek is the primary tributary to East Lake Tohopekaliga (East Lake Toho). The lake covers an area of 11,968 acres, the 2nd largest lake in Osceola County after Lake Tohopekaliga (Lake Toho) which spans over 22,700 acres at 55 ft-NGVD29 with a contributing watershed area of 153,040 acres. The two lakes are linked together by Canal 31/St. Cloud Canal that is approximately 3 miles long and controlled by structure S59.

Control structure S59 is a reinforced concrete, gated spillway located on Canal 31 at the outlet of East Lake Tohopekaliga. Operation of the gate is manually controlled in accordance with seasonal operational criteria. The structure maintains optimum upstream water control stages in Canal 31 and in East Lake Tohopekaliga; it passes the design flood (30% of the Standard Project Flood) without exceeding the upstream flood design stage, and restricts downstream flood stages and channel velocities to non-damaging levels; it prevents overtopping of the structure from East Lake Tohopekaliga during the design storm and wind tide; it prevents overtopping of the structure during the Standard Project Flood and hurricane wind tide; it will be overtopped by breaking waves under such conditions; and it passes sufficient discharge during low-flow periods to maintain downstream stages and irrigation demands[1].

In early 2015, members of US Fish and Wildlife Service (FWS), Florida Fish and Wildlife Conservation Commission (FWC), SFWMD and Osceola County met to discuss plausible constraints and targets if a drawdown on East Lake Toho would be pursued in the next few years. Gravity draining East Toho would require lowering water levels in Lake Toho at the same time, possibly expanding on the economic and fish/wildlife impacts, depending on the extent to which it would need to be lowered. Therefore, the partner agencies request SFWMD staff to provide an estimate of the size of pumps that would be required to implement an East Toho drawdown with minimal lowering of Lake Toho levels, approximate dates that pumps would be required under the various scenarios, as well as how low Lake Toho would have to be to meet East Toho drawdown targets by gravity alone (without pumps). Specific targets and constraints listed in the next section were provided by the interagency group and were used to calculate estimates.

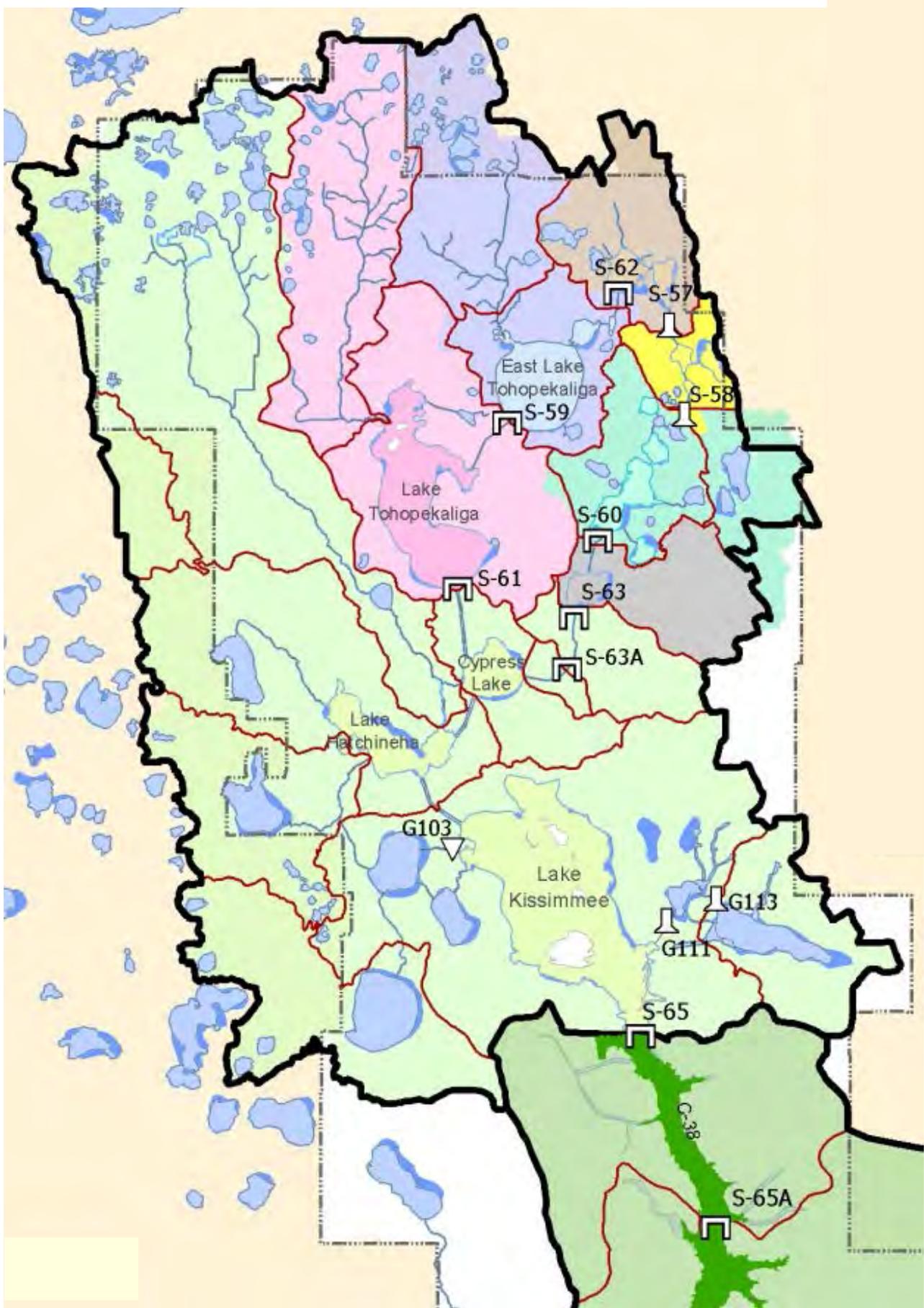


Figure 1. Lakes and Control Structures in the Upper Kissimmee Basin

## Constraints for Pump Size Analysis

1. Climatic conditions under which a draw down would be pursued:
  - Normal to dry conditions. Wet conditions would likely make it implausible or cost prohibitive.
2. Lake stage target on **East Toho**, flexibility, and duration of drawdown event (Figure 2):
  - Target stage is 53.0 ft, to be reached Feb 15th
  - Stage should be maintained as close to 53.0 ft as possible, but can fluctuate  $\pm 0.5$  ft during rain events. For example, stages could be lowered up to 6" lower than 53' in advance of wet forecast.
  - Reversals from rain events that occur between Feb 15th and Jun 1st should not exceed 0.5 ft
  - Stages should return to target elevation of 53.0 ft within one week of reversal.
  - Duration: Maintain 53.0 ft on East Lake until June 1st.
3. Lake stage target on **Lake Toho** (Figure 3):
  - It would be extremely helpful in partner agency planning efforts if SFWMD analyzes several scenarios, if possible, given the impact these targets will have on pump initiation dates, size, and Toho habitats.
  - Partner agencies would like estimates of how Toho January 15th targets of 53.5', 54', and 54.5' would affect pump sizes. If this is too many scenarios for SFWMD to analyze, most probable target would be 54.0'.
  - Whatever elevation is targeted on Jan 15th, stages would be held steady from that point until an approximate max recession rate line is reached. For purposes of this analysis, FWS has suggested using 0.83 ft/mo, or receding from 54.5 on March 1st to the normal seasonal low of 52.5 on May 31st.
4. Target dates for recessions (see Figure 3 for both lakes):
  - Lake Toho: Begin recessions November 1st
  - East Toho: Begin recessions October 1st or Nov 1st, whichever allows for smaller pump sizes. Would starting recessions earlier on East Toho save pump size even though it'd likely affect how soon Toho/ East Toho stages intersect? See Figure 3.
5. Probability of achieving success, or meeting specified targets.
  - Group would like estimates of pump size for 50th, 75th, and 90th percentiles of meeting targets.
6. In order to minimize likelihood of drowning plants that germinate during the drawdown, group recommends ascension guidelines.

- East Toho: Group suggests not exceeding 1.0 ft/mo ascension rate from Jun 1st – Sep 1st. Group suggests this be implemented as a stepped ascension, rather than a constant slope of 0.033 ft/day. In other words, if lake begins rising on June 15th and rises 1.0 ft by Jun 20th, maintain the resulting stage (54.0 ft) until July 15th, or 30 days after date of initial ascension. Then enter new stepped ascension “box”, and the 1 ft criteria would apply for the next 30 days. This is essentially a moving window approach (Figure 1).
- Lake Toho: to better manage ascensions on East Lake, it may be necessary to limit ascensions on Lake Toho to  $\leq 1.0$  ft/mo from Jun 1st – July 1st. Group relies on SFWMD staff to better estimate how Toho levels would have to be managed in order to achieve East Toho ascension targets.

### East Lake Toho and Lake Toho Regulation Schedules

For East Lake Toho, under the existing regulation schedule, the lake maintains 58 ft-NGVD29 from November to Mid-March; then it starts to lower to 55 ft-NGVD29 by the end of May; afterwards it remains at 56.5' from June through August, and gradually rise to the winter pool level of 55 ft-NGVD29 by November 1<sup>st</sup>. Under the proposed regulation schedule, the recession starts Oct 1st or Nov 1st, whichever would be more cost effective under a pumping scenario. Target stage of 53.0 ft-NGVD29 on February 15th, maintained until June 1st, with  $\pm 0.5$  ft flexibility for rain events. Stepped ascension rate, or “moving window” of no more than 1.0 ft rise in any 30 day period (Figure 2).

The *Zone A* regulation schedule of Lake Toho is three feet lower than that of the East Lake Toho schedule. Under the existing regulation schedule, the lake maintains 55 ft-NGVD29 from November to Mid-March; then it starts to lower to 52 ft-NGVD29 by the end of May; afterwards it remains at 53.5 ft-NGVD29 from June through August, and gradually rise to the winter pool level of 52 ft-NGVD29 by November 1<sup>st</sup>. Under the proposed regulation schedule, the recession starts Nov 1<sup>st</sup> and reaches either 53.5', 54', or 54.5' on Jan 15<sup>th</sup>. From there stages would be held (provided adequate inflow) steady until they reach a max recession line of approximately 0.83 ft/mo, or a line drawn from 54.5 f-NGVD29 t on March 1<sup>st</sup> to 52.5 ft-NGVD29 on May 31<sup>st</sup>. FWS and FWC generally request that ascension rates be limited to no greater than 1.0 ft/mo, but no criteria are established for this analysis (Figure 3).

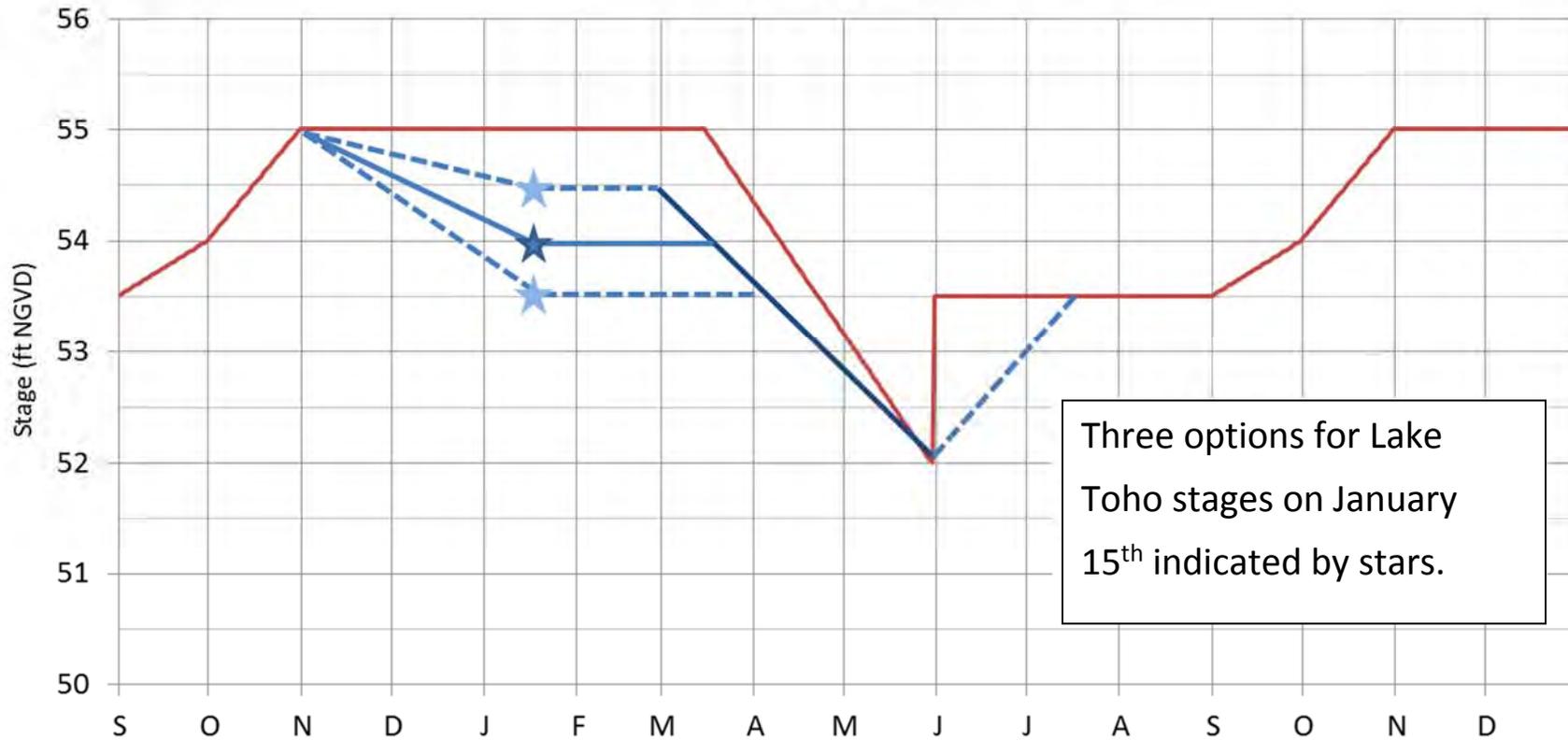
In mid-2015, the members of the FWS, FWC, Osceola County and SFWMD decided to further the study by focusing on the East Lake Toho early drawdown option (recession starting on October 1<sup>st</sup> at 57 ft-NGVD29) with 400 cfs pump capacity and Lake Toho target stage at 54.5 ft-NGVD29.

## EAST TOHO



**Figure 2.** East Lake Toho Existing Regulation Schedule and Target Stages and Constraints. The red line is the current regulation schedule (Zone A), and the blue lines are the modified target stages and constraints.

# LAKE TOHO



Three options for Lake Toho stages on January 15<sup>th</sup> indicated by stars.

**Figure 3.** Lake Toho Existing Regulation Schedule and Target Stages and Constraints. The red line is the current regulation schedule (Zone A), and the blue lines are the modified target stages and constraints.

## UK-OPS Model Setup

The SFWMD's Upper Kissimmee – Operations Screening (UK-OPS) Model was adopted for assessing the Lake Toho drawdown. UK-OPS is a screening tool initially developed by the District's Chief Engineer Calvin Neidrauer for the Upper Kissimmee Basin watershed planning and management. The latest UK-OPS model (Version 2.01) was enhanced with new features to accommodate the needs arising from the East Lake Toho drawdown analysis. Some of the other new UK-OPS Model features include:

- Gravity flow structure capacity calculations depending on upstream and downstream Lake stages;
- Pump options for Lake Toho and East Lake Toho;
- Faster simulation times (usually < 1 minute for simulating all three lakes on most PCs)
- Position analysis improvements;
- Time-series graphics improvements;
- Stage & Discharge percentile plot enhancements; and
- Stage & Discharge Box&Whisker plot switches to toggle between lakes

For the East Lake Drawdown analysis, the UK-OPS was simulated from 1965 to 2013. Pump sizes were estimated as multiples of 100cfs, i.e. 100cfs, 200cfs, 300cfs and 400cfs. For comparison purpose, a no-pump, gravity only East Lake Toho drawdown operation was also considered.

Operation rules for three major water control structures (S59, S61 and S65) in the Kissimmee Chain of Lakes are implemented in the UK-OPS model. The operation rules are simple, consisting of a Zone A regulation schedule that defines desired stage throughout the year. Releases are made to lower stage to the schedule. Each set of operation rules were assessed by performing a 38-year (1965 to 2013) simulation and then comparing the results of each alternative against the performance of the existing operation rules. The UK-OPS simulation was performed as a November 1 Position Analysis (PA), meaning that in each year of the simulation, all lake stages were reset to current November 1 stages. The PA mode demonstrates probable behavior over the year[2].

## Results

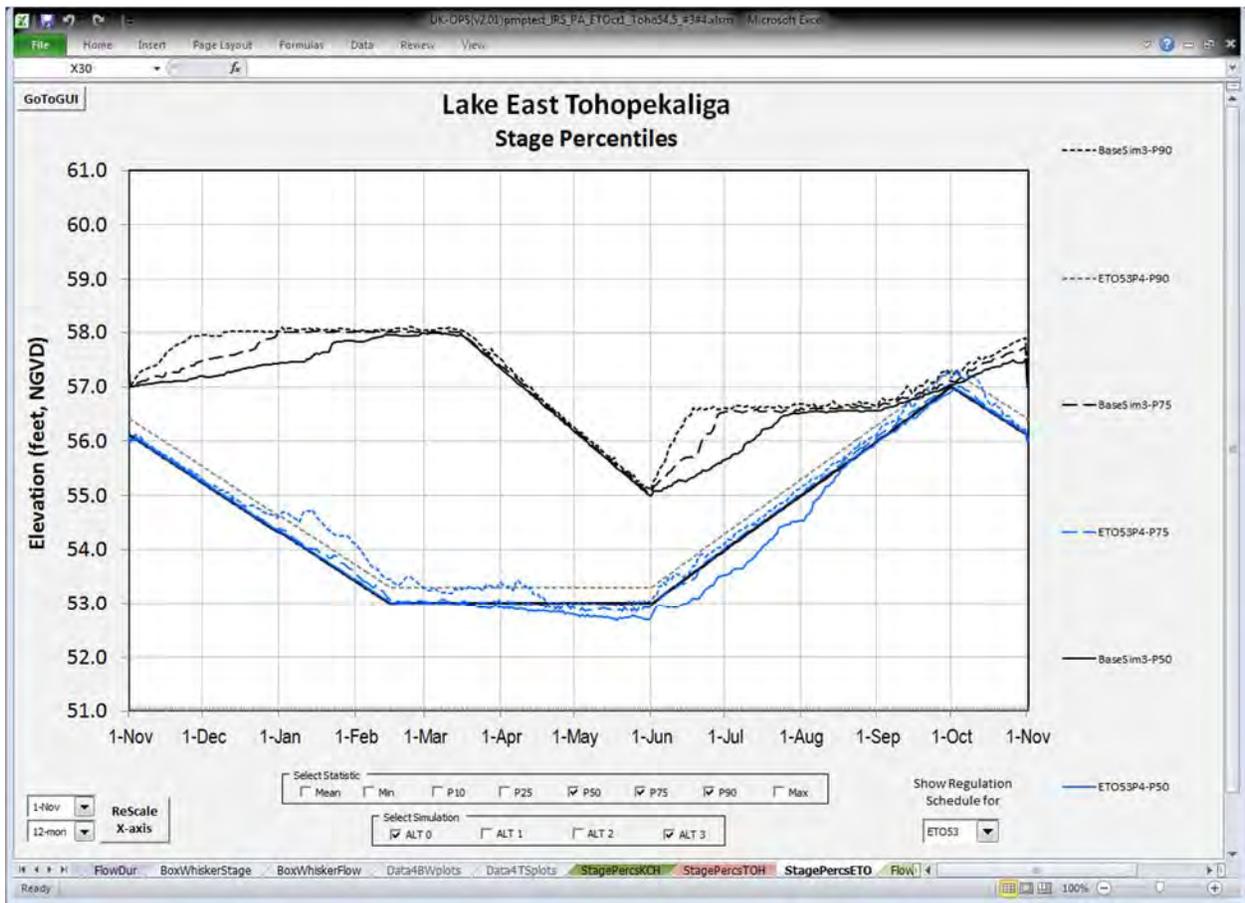
A total of sixteen scenarios were assessed in this project but only three scenarios are discussed in detail in this report: the current condition, East Toho drawdown starting Oct 1 with 400 cfs pump capacity and Toho Target Stage at 54.5 ft-NGVD29, and East Toho drawdown starting Oct 1 with no pump and Toho Target Stage at 54.5 ft-NGVD29. The two alternatives are compared to the existing condition. All model input parameters and results are referenced to vertical datum NGVD29. The other scenarios are included in Appendix A in this report.

For the pump operation scenarios, the pump starts to kick in when the gravity flow through S-59 drops below 20% of the proposed pump capacity, e.g. when the gravity flow drops below 80cfs for the 400cfs pump scenario, the pump starts moving water from East Lake Toho to Lake Toho while the S-59 gates are closed;

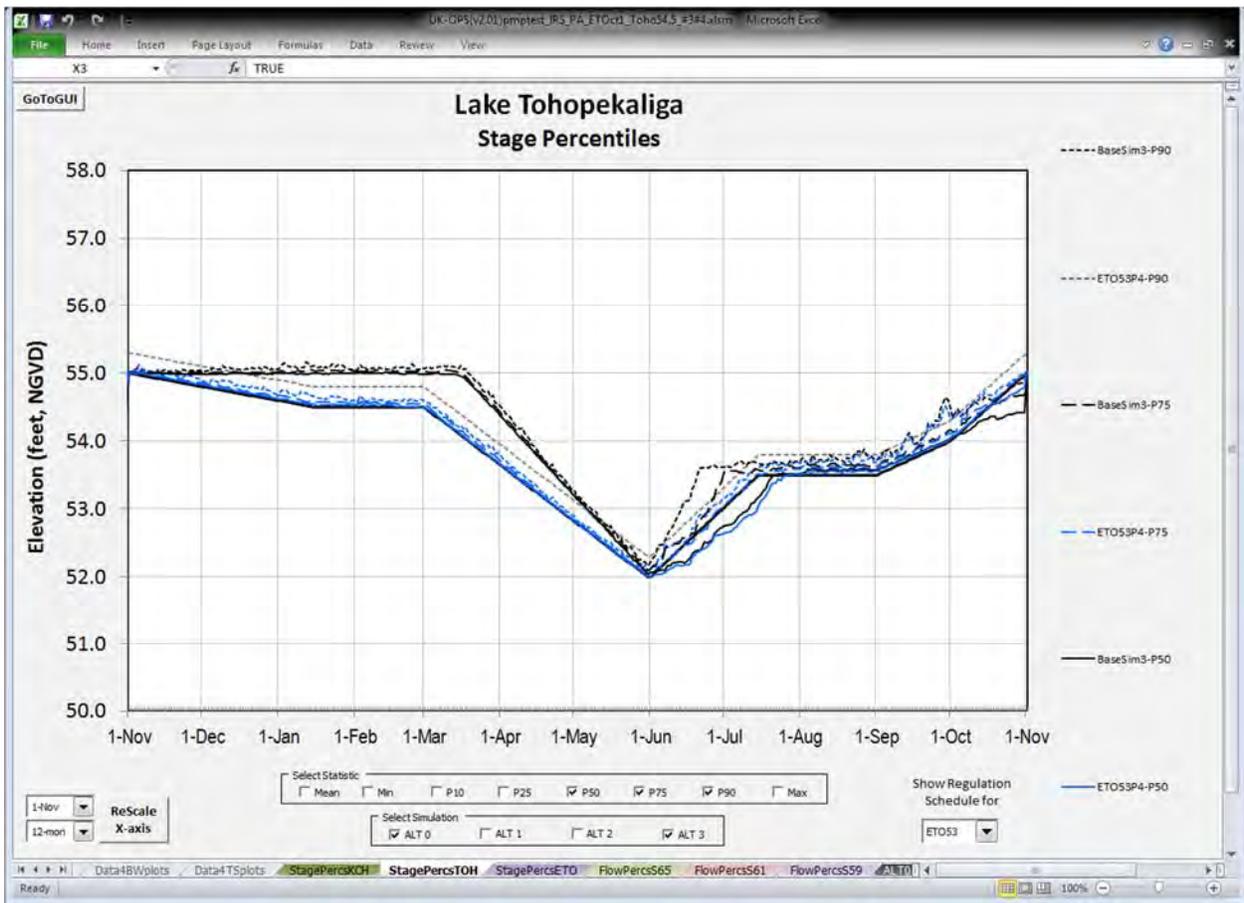
To allow the water flowing through S59 by gravity alone without pumping, the Lake Toho regulation schedule was modified so that the head differential between Lake Toho and East Lake Toho is about 0.2 ft. The revised Lake Toho regulation schedule is shown in Figure 8 as the solid black line overlapped with the Lake Toho Stage Percentile lines.

Figures 4 to 6 display the results of the existing operation vs. drawdown starting on Oct 1<sup>st</sup> with 400 cfs pumpage and Lake Toho target stage at 54.5'. They suggest that with 400 cfs pump capacity at S59, all the goals set by the members of FWS, FWC, SFWMD and Osceola County are met and restrictions are observed. The target stage of 53 ft-NGVD29 in East Lake Toho is achieved on February 15<sup>th</sup> and maintained through May 31<sup>st</sup> during the period. The target stage in Lake Toho (54.5 ft-NGVD29) is reached on January 15<sup>th</sup> and maintained for one and a half months before it starts descending to 52 ft-NGVD29 on June 1<sup>st</sup>. Compared to the existing regulation schedule, the proposed drawdown would create a maximum East Lake Toho stage difference of 5 ft from February 15<sup>th</sup> to March 15<sup>th</sup> and gradually reach a minimum difference of 2 ft on June 1<sup>st</sup>. For the 90 percentile of the S59 flow, the results suggest that the pump would be operated for about 3.5 months with pump operation as early as the end of December.

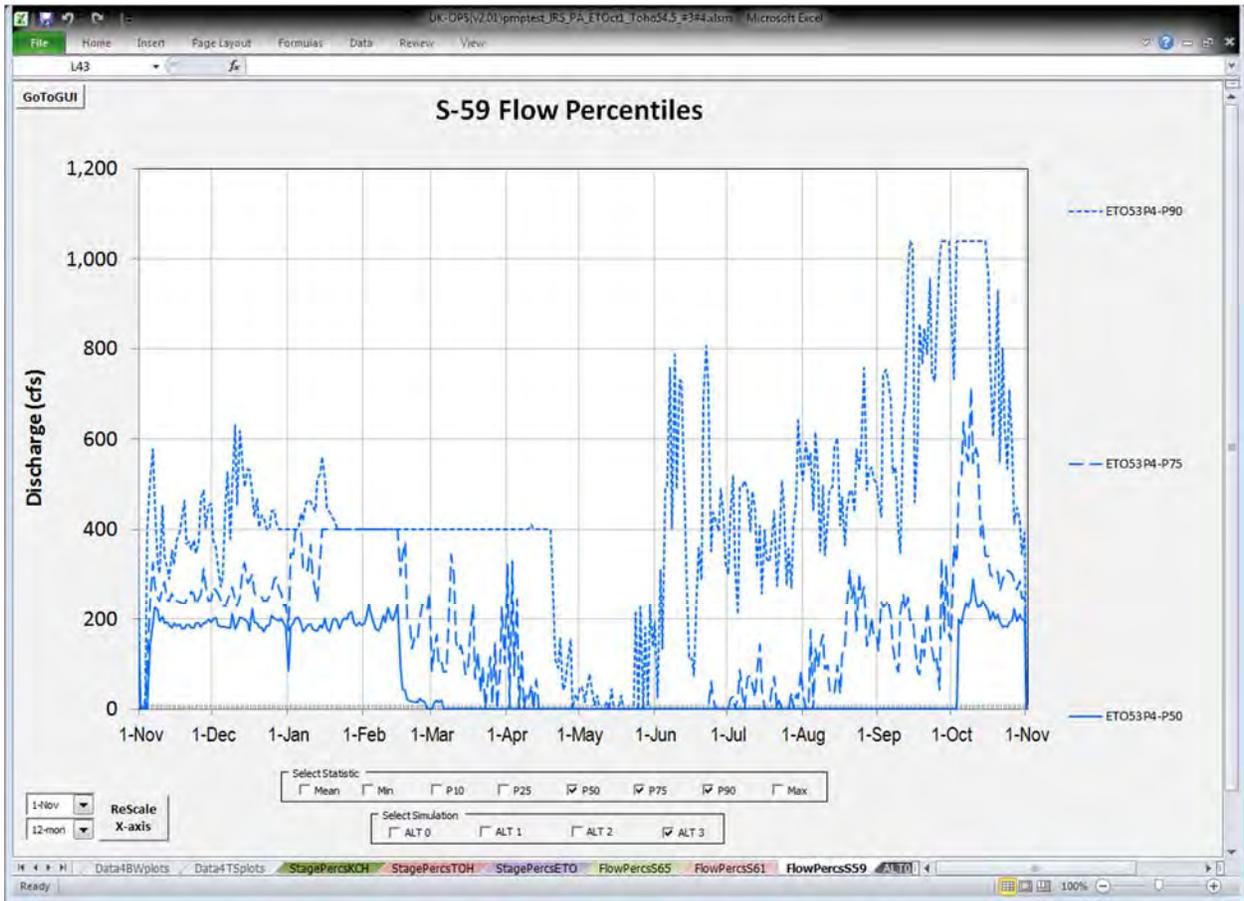
Figures 7 to 9 describe the results of the existing operation vs. drawdown starting on Oct 1<sup>st</sup> with no pump at S59 and Lake Toho target stage at 54.5'. With substantial modification to the existing Lake Toho regulation schedule (Figure 8), all the targets are met and constraints are followed as well. However, in order to attain the same target stages in East Lake Toho, the modification to Lake Toho stages is significant (Figure 10). Compared to the existing regulation schedule stages, the required stages for Lake Toho would have to be up to 2.2 ft lower for a month. When compared with the East Lake Toho drawdown with 400 cfs pump operations, the drawdown without pumps would require Lake Toho stages to be decreased by up to additional 1.7 ft.



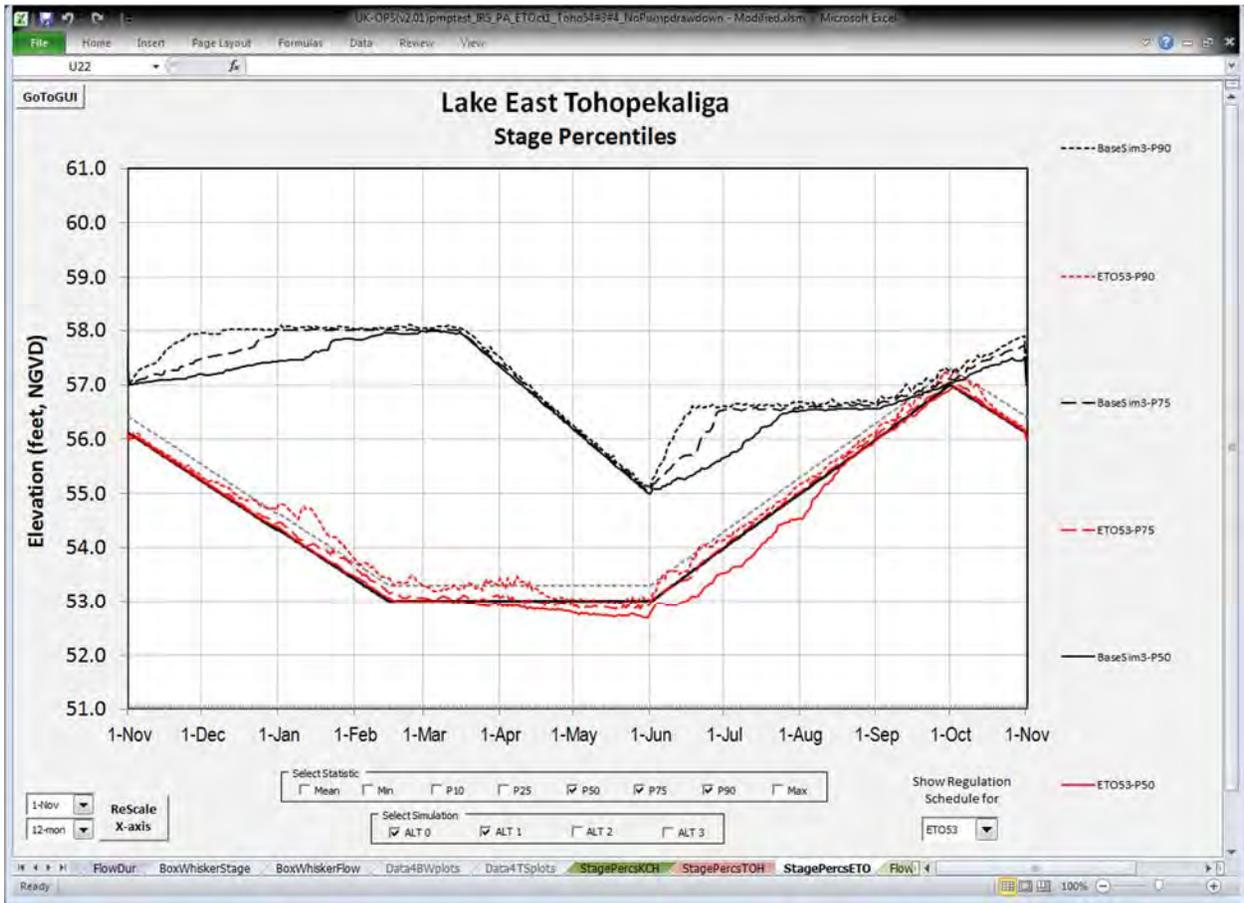
**Figure 4.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 400 cfs Pumpage and Lake Toho Target Stage at 54.5'



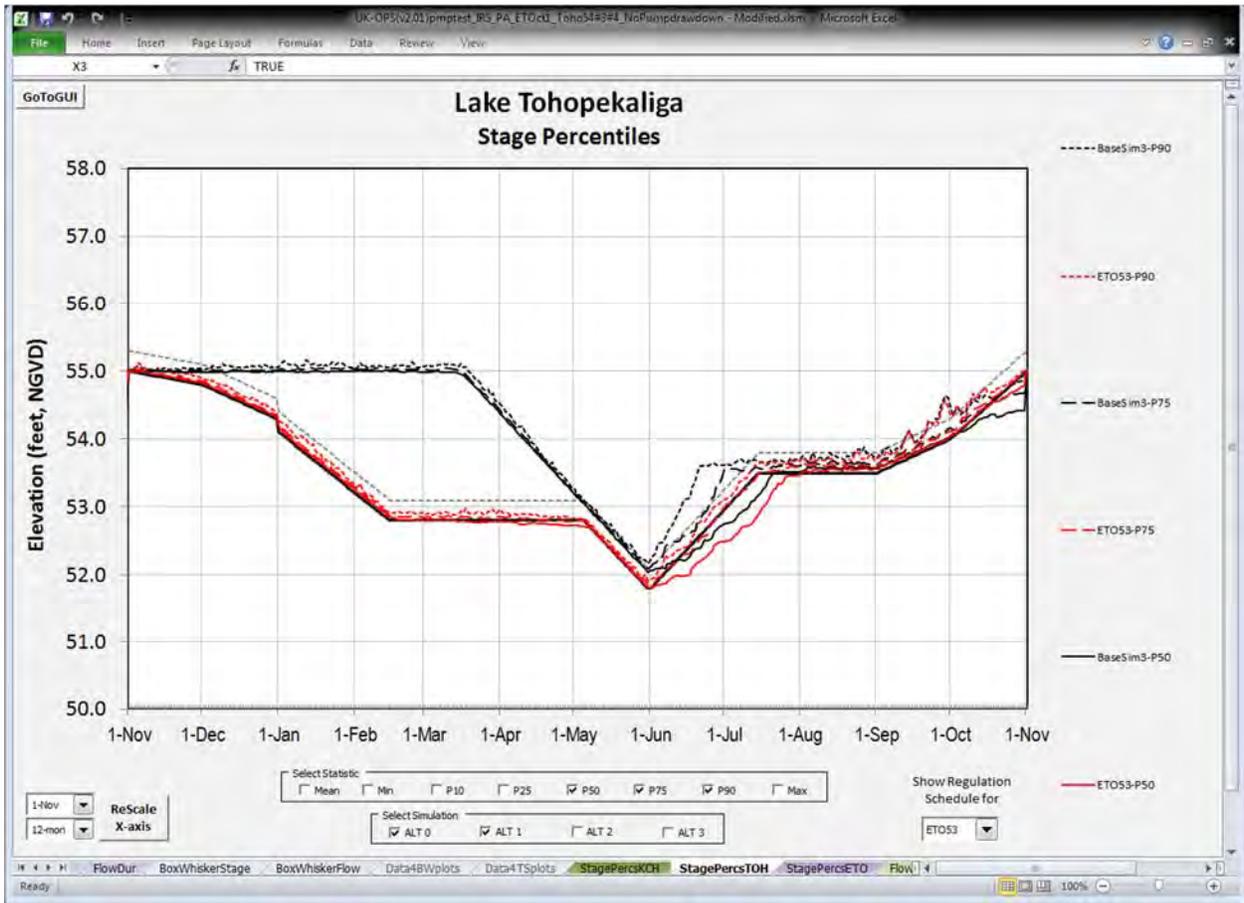
**Figure 5.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 400 cfs Pumpage and Lake Toho Target Stage at 54.5'



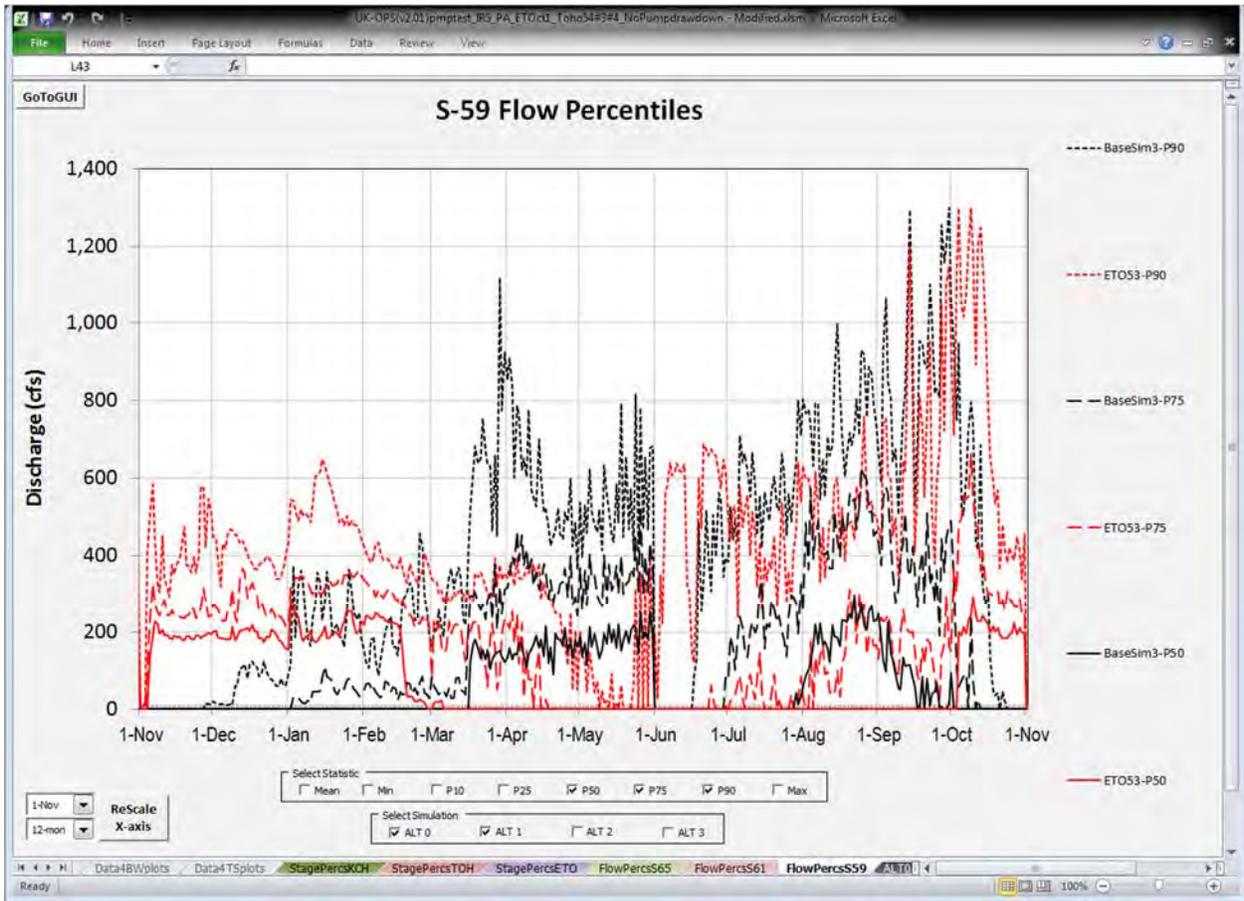
**Figure 6.** S59 Flow Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 400 cfs Pumphage and Lake Toho Target Stage at 54.5'



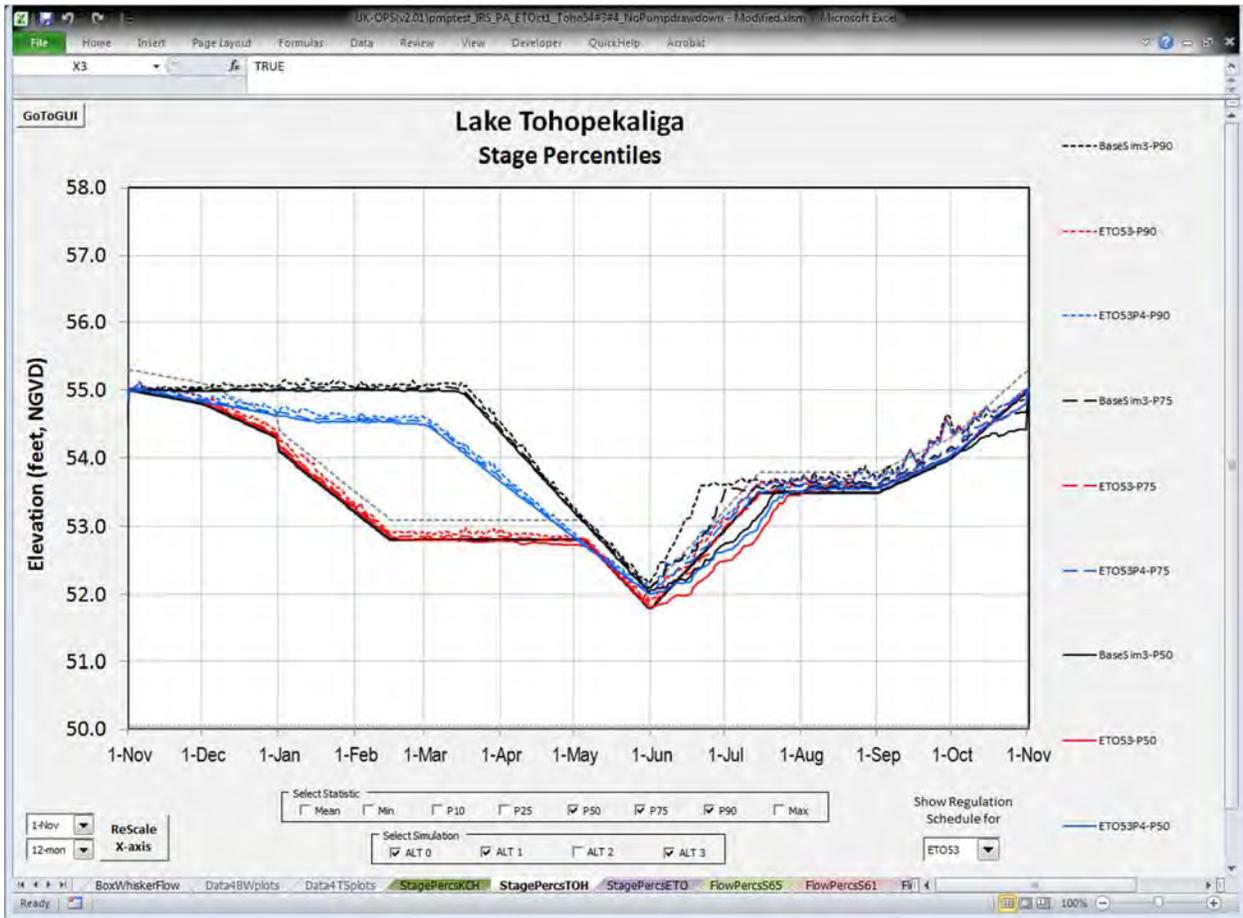
**Figure 7.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



**Figure 8.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



**Figure 9.** S59 Flow Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



**Figure 10.** Lake Toho Stage Percentiles: Existing Condition (Black Lines), Drawdown Start on Oct 1<sup>st</sup> with 400 cfs Pumpage and Lake Toho Target Stage at 54.5' (Blue Lines) and Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59 (Red Lines)

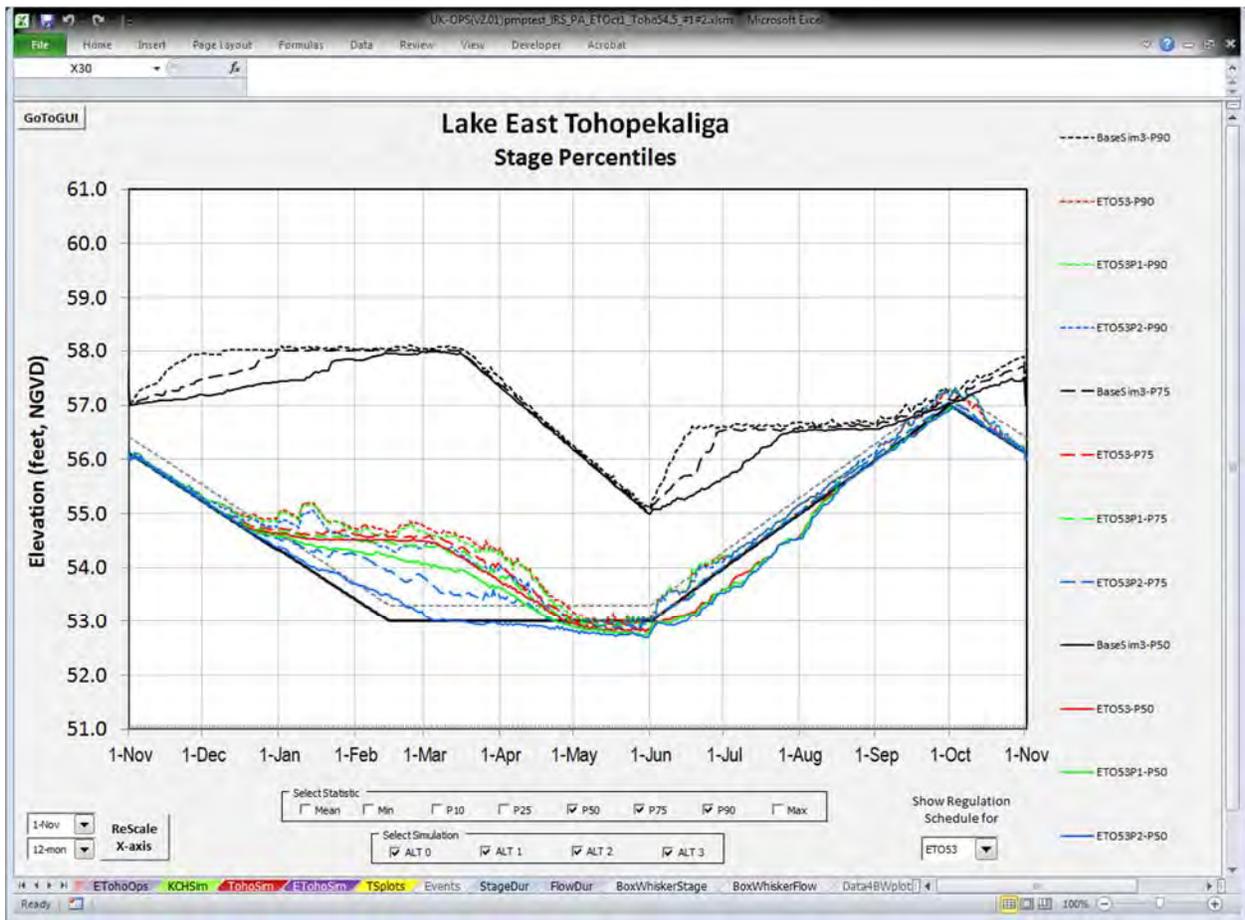
## Reference

1. S59 Structure Information Sheet, SFWMD. Accessed on September 21, 2015 [http://my.sfwmd.gov/portal/page/portal/pg\\_grp\\_sfwmd\\_sis/pg\\_sis\\_structure\\_screen\\_std?p\\_search=&p\\_structure\\_id=974](http://my.sfwmd.gov/portal/page/portal/pg_grp_sfwmd_sis/pg_sis_structure_screen_std?p_search=&p_structure_id=974)
2. Rama Rani, Ken Konyha and Luis Cadavid (April 14, 2006) 2007 South Florida Environmental Report, Appendix 11-1 Assessment of Modifications to Zone B Discharges in Lake Tohopekaliga (Toho) and East Lake Tohopekaliga (E Toho).

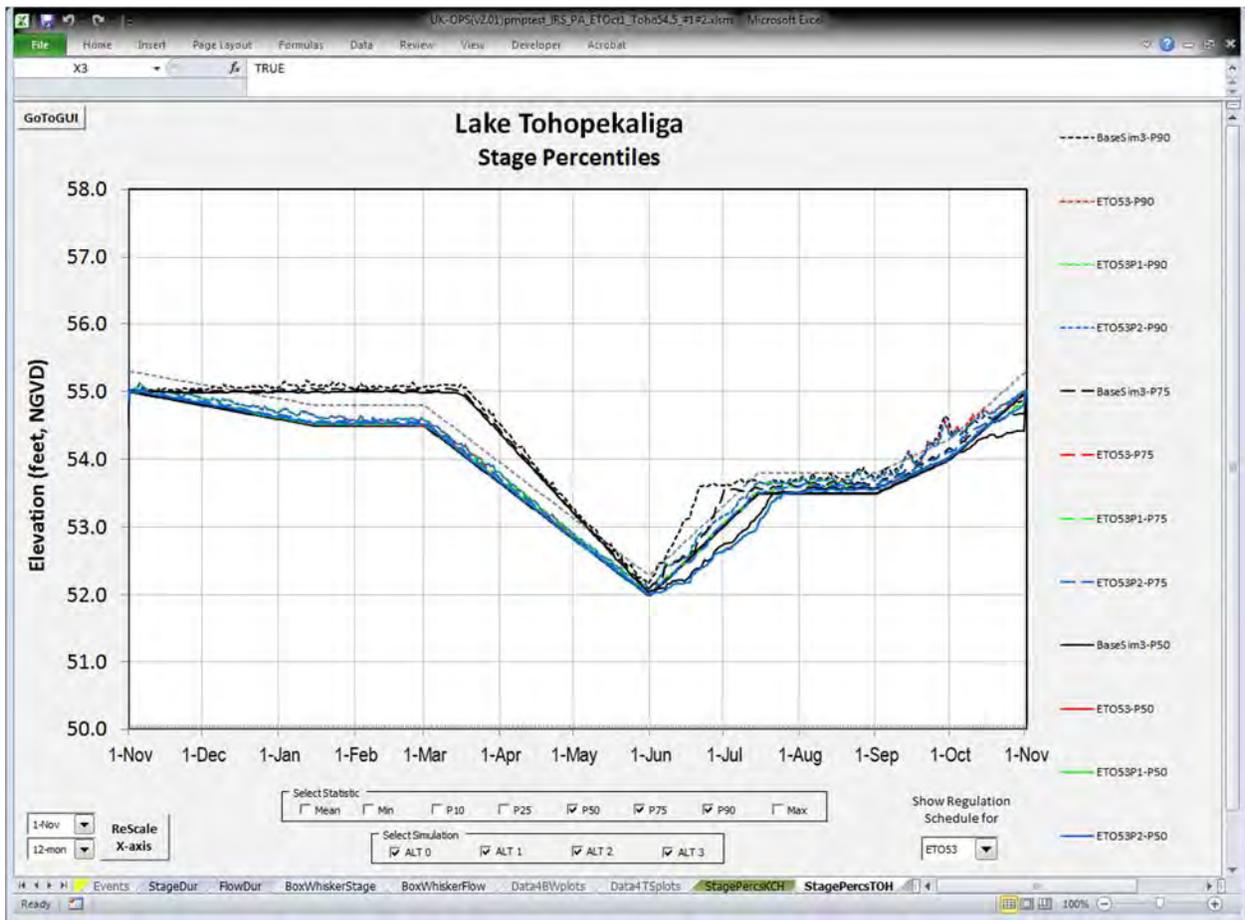
## Appendix A

1. In all figures, the top three black lines are lake stage percentiles (50%, 75% and 90%) under current lake regulation schedules;
2. In all figures, the three red lines are lake stage percentiles (50%, 75% and 90%) with only gravity flow at S-59 (NO pump scenario) under proposed lake regulation schedules;
3. In all figures, the three green lines are lake stage percentiles (50%, 75% and 90%) with either 100cfs or 300cfs pump operations under proposed lake regulation schedules;
4. In all figures, the three blue lines are lake stage percentiles (50%, 75% and 90%) with either 200cfs or 400cfs pump operations under proposed lake regulation schedules;
5. For the pump operation scenarios, the pump starts to kick in when the gravity flow through S-59 drops below 20% of the proposed pump capacity, e.g. when the gravity flow drops below 40cfs for the 200cfs pump scenario, the pump starts moving water from East Lake Toho to Lake Toho while the S-59 gates are closed;
6. The figures include:
  - a. **Figure A-1-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.5'
  - b. **Figure A-1-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.5'
  - c. **Figure A-2-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.5'
  - d. **Figure A-2-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.5'
  - e. **Figure A-3-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - f. **Figure A-3-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - g. **Figure A-4-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - h. **Figure A-4-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - i. **Figure A-5-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - j. **Figure A-5-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - k. **Figure A-6-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - l. **Figure A-6-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'

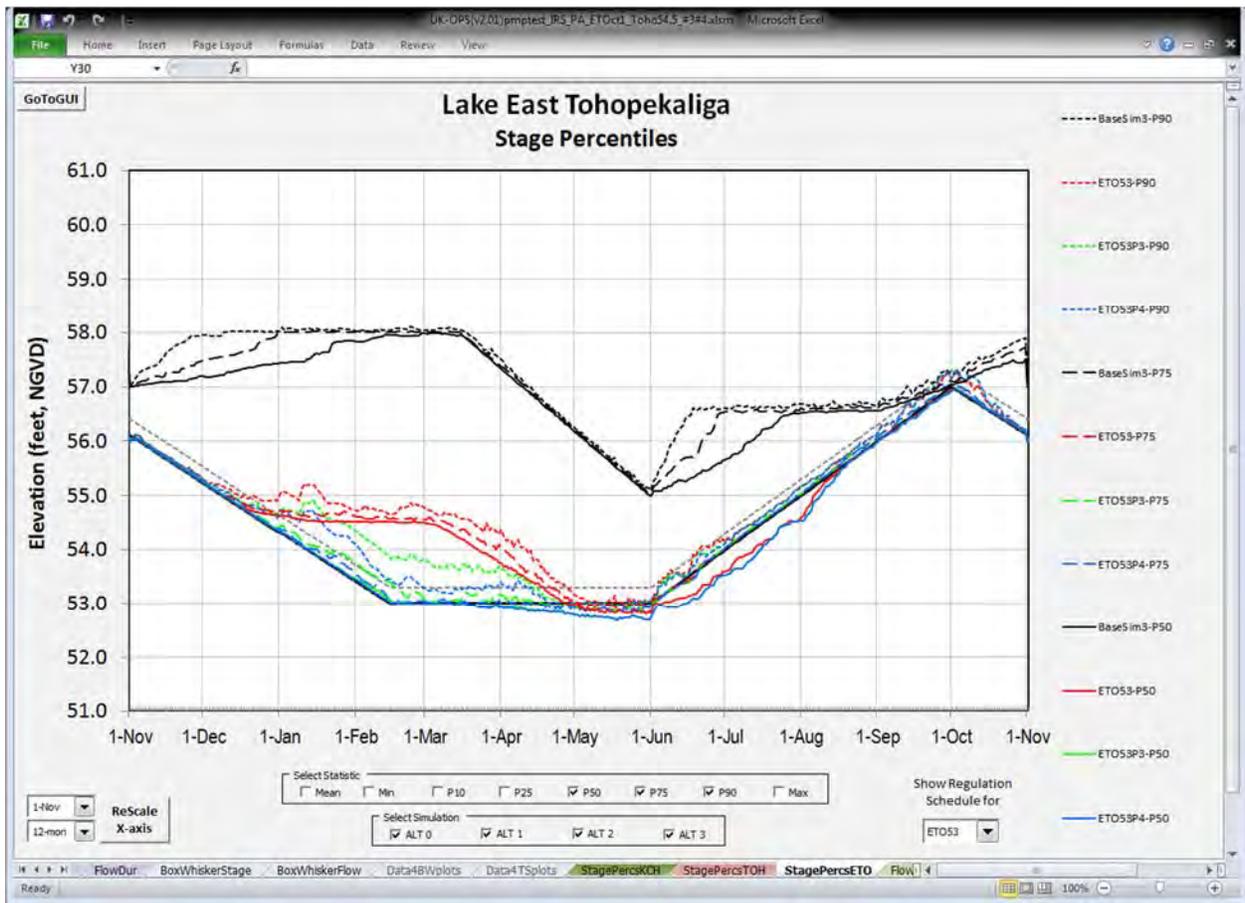
- m. **Figure A-7-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59
- n. **Figure A-7-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



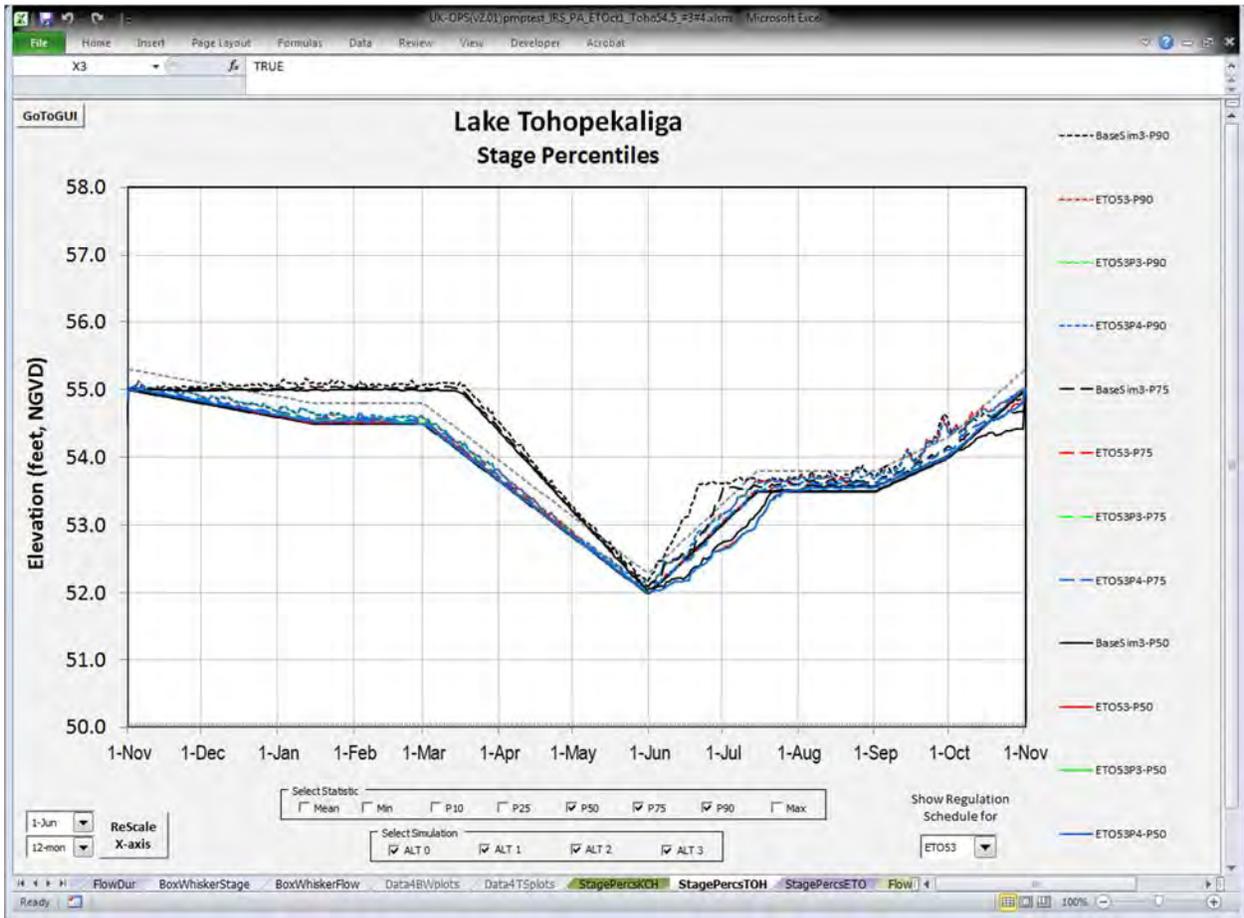
**Figure A-1-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.5'



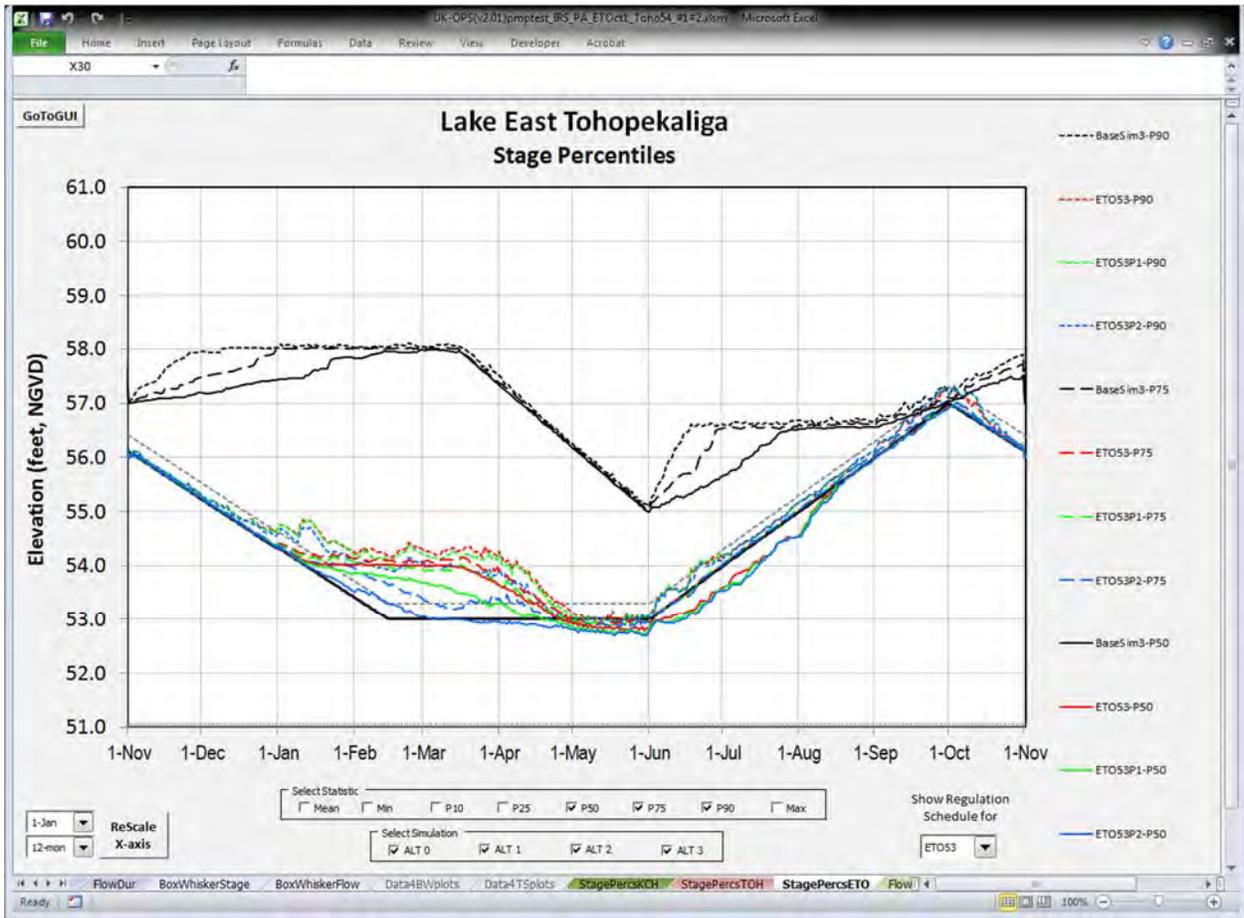
**Figure A-1-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.5’



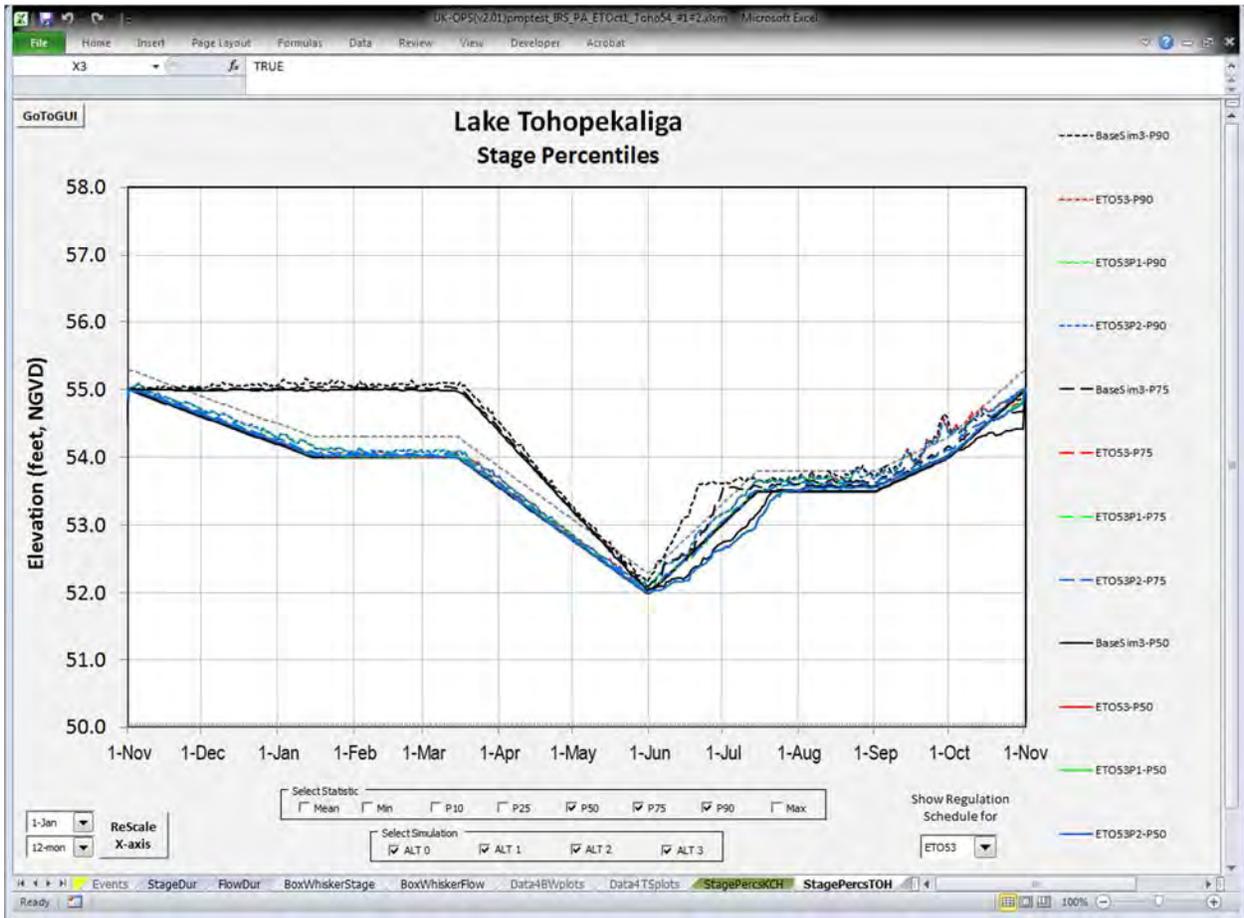
**Figure A-2-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.5'



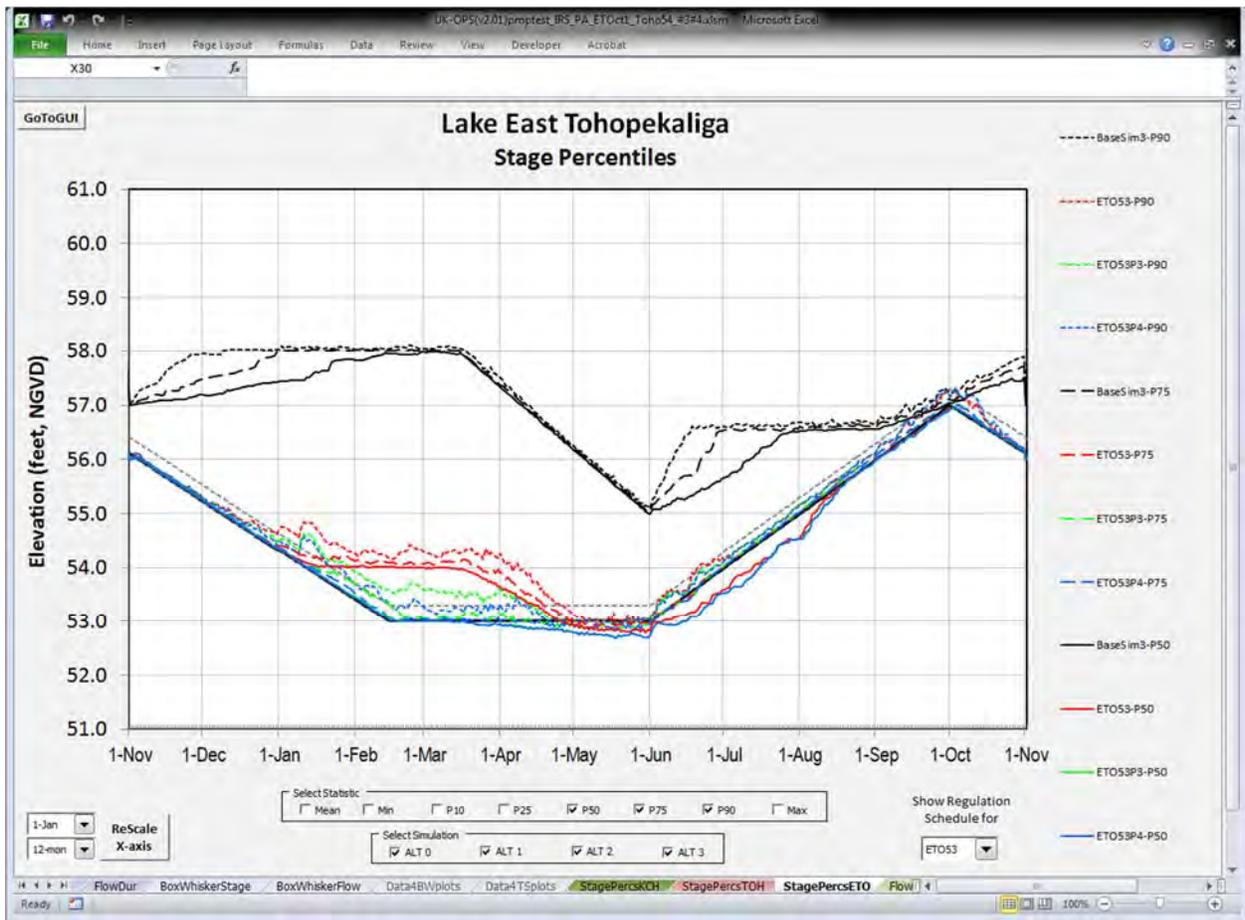
**Figure A-2-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.5'



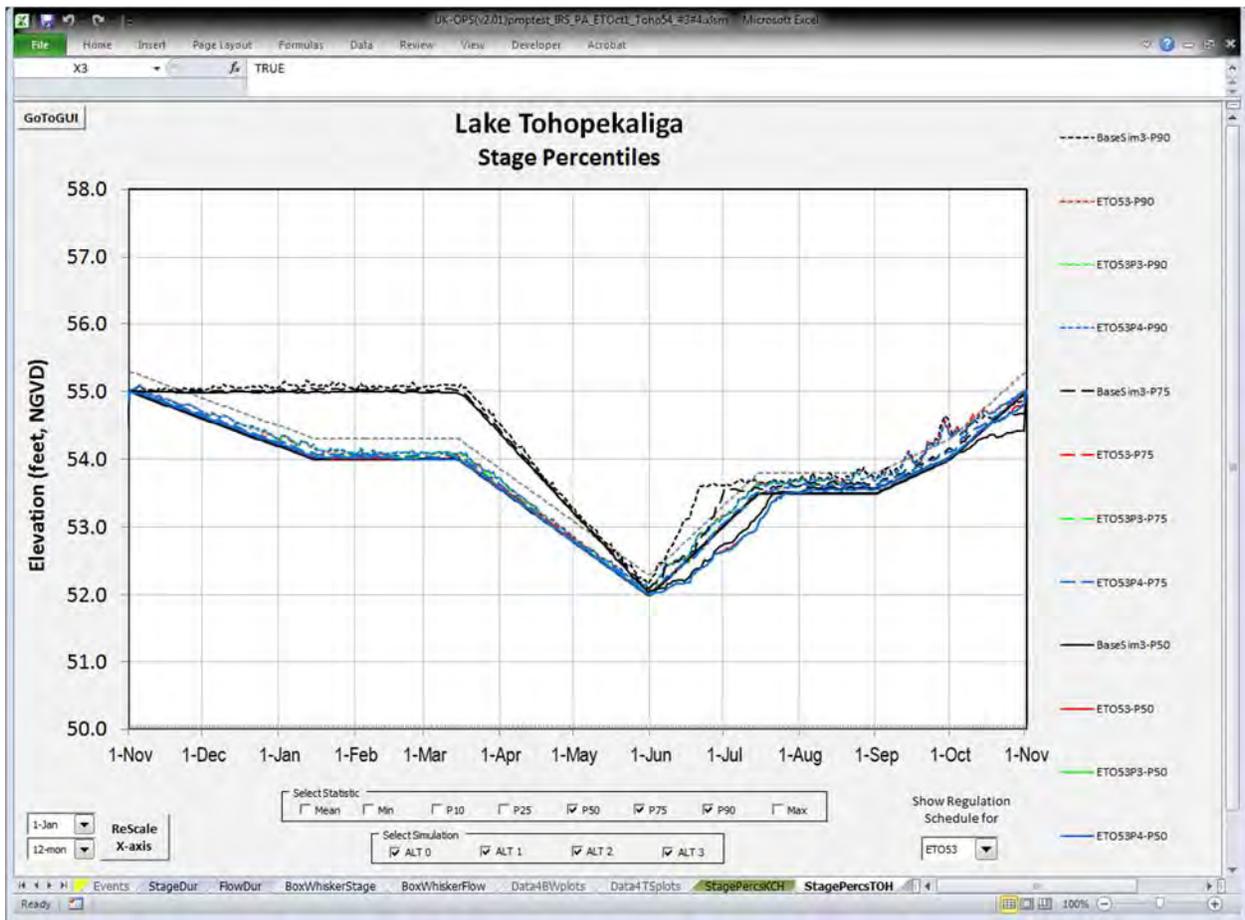
**Figure A-3-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'



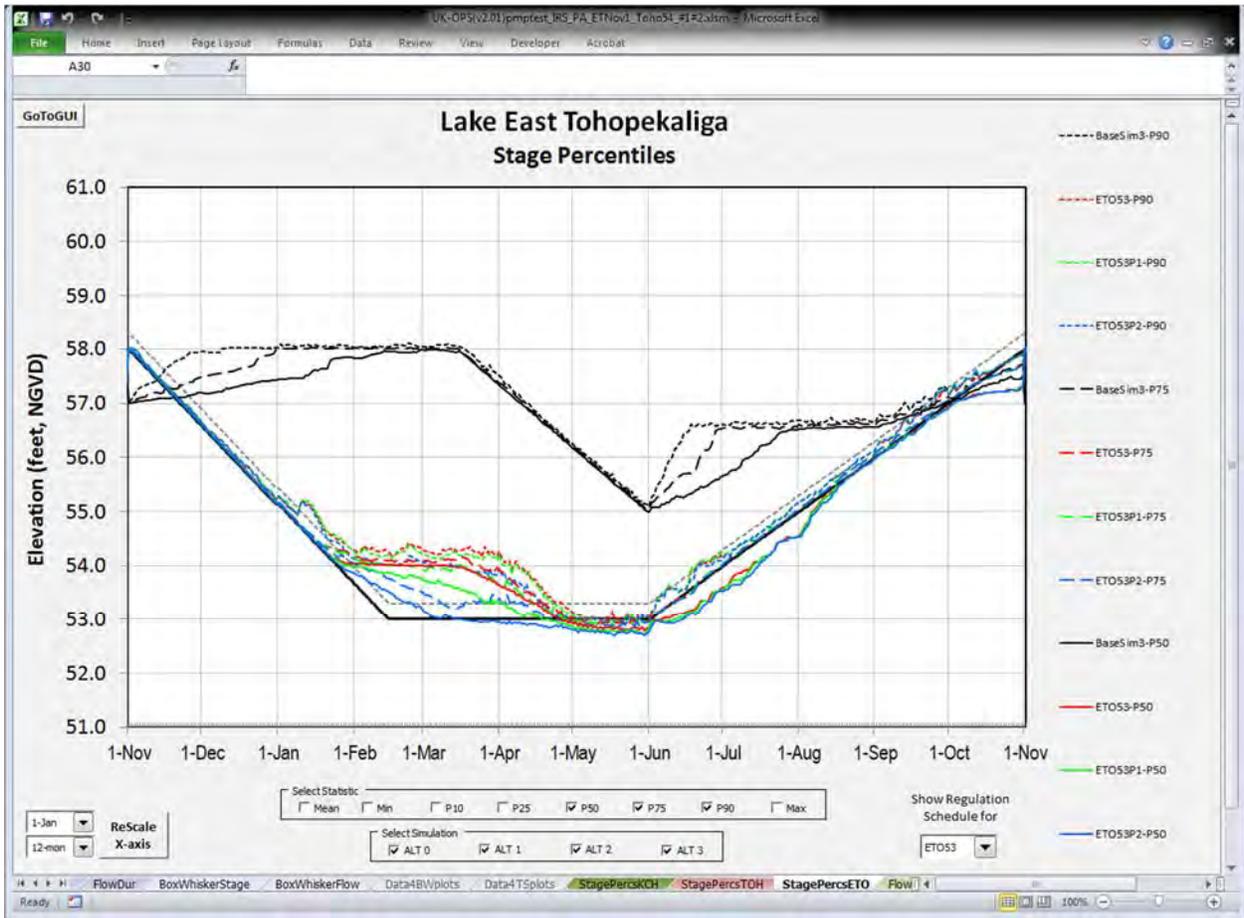
**Figure A-3-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'



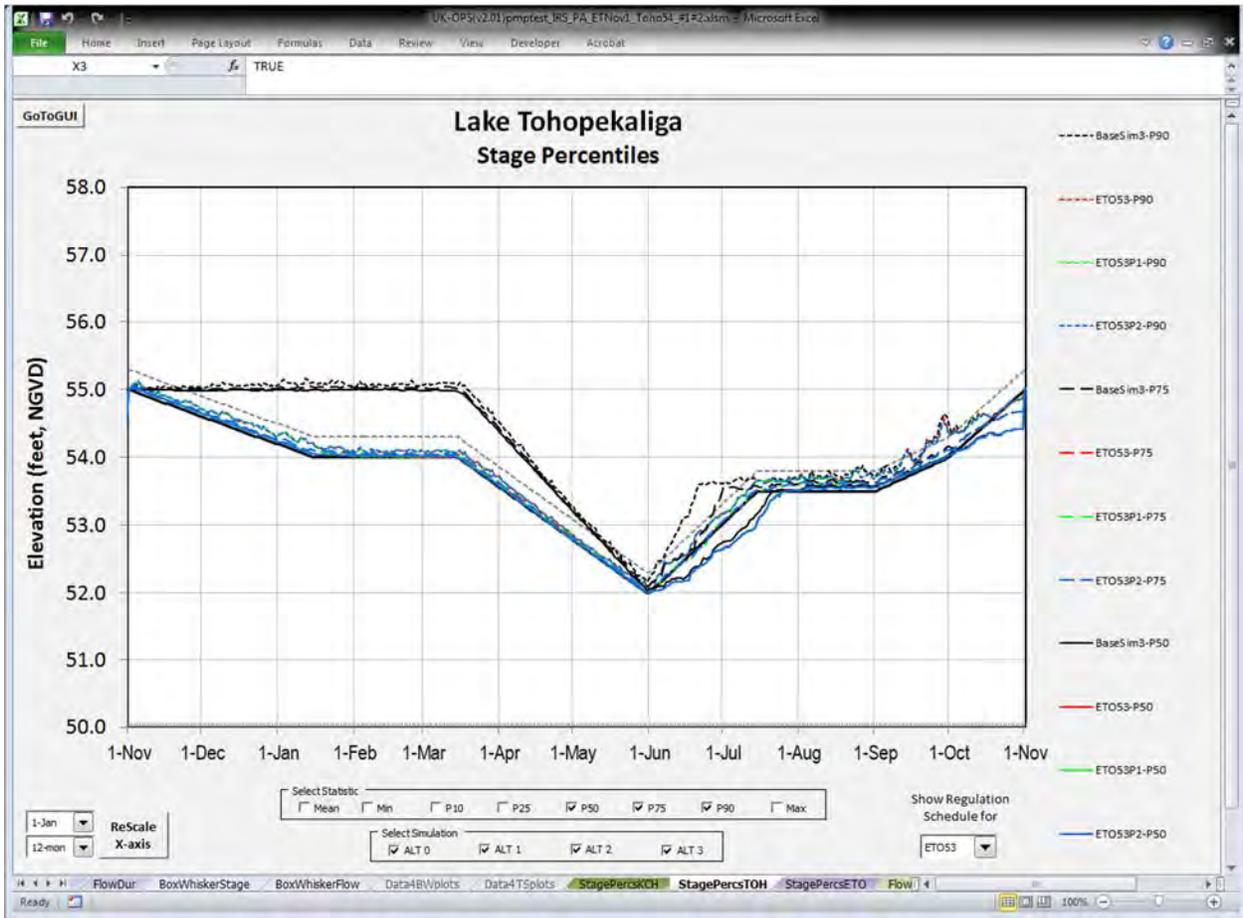
**Figure A-4-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'



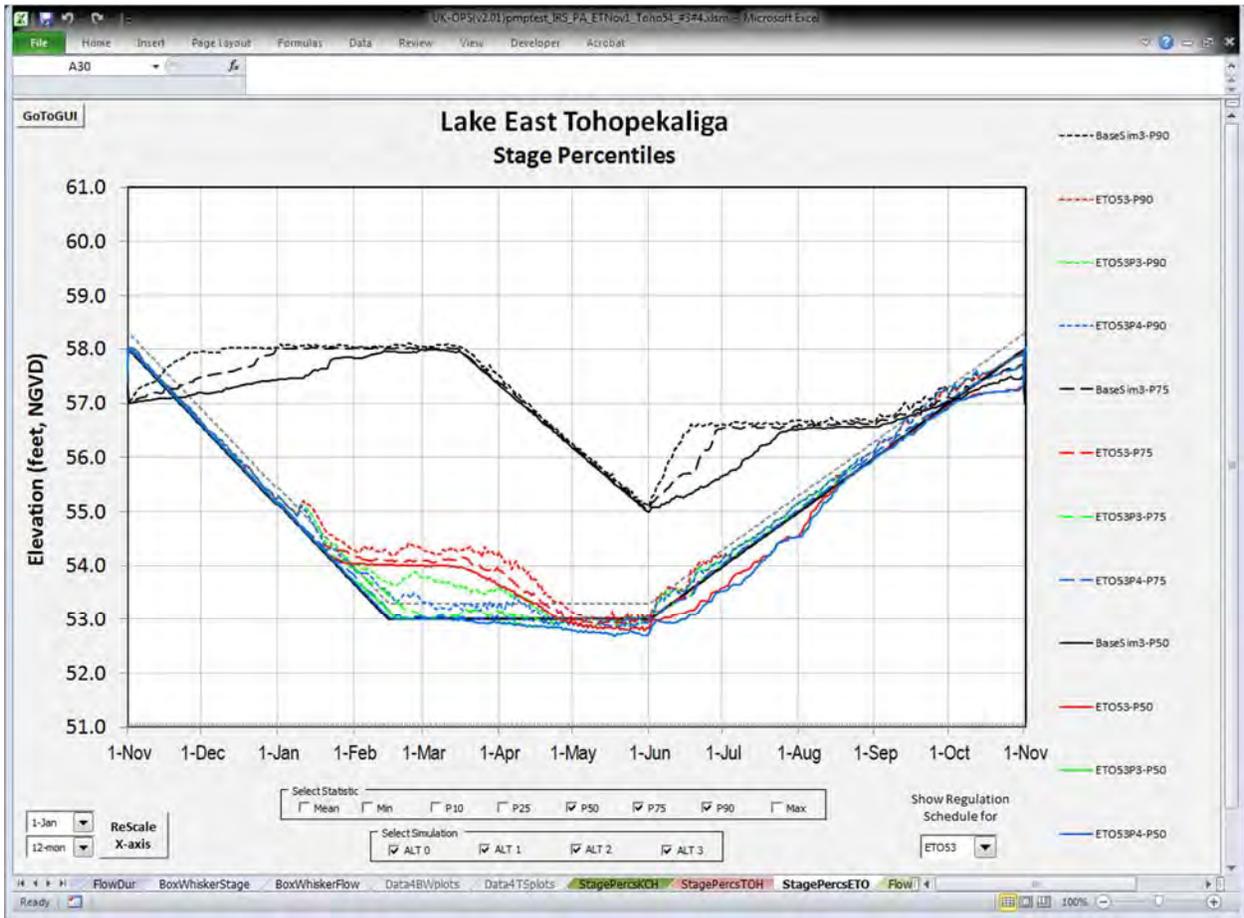
**Figure A-4-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0’



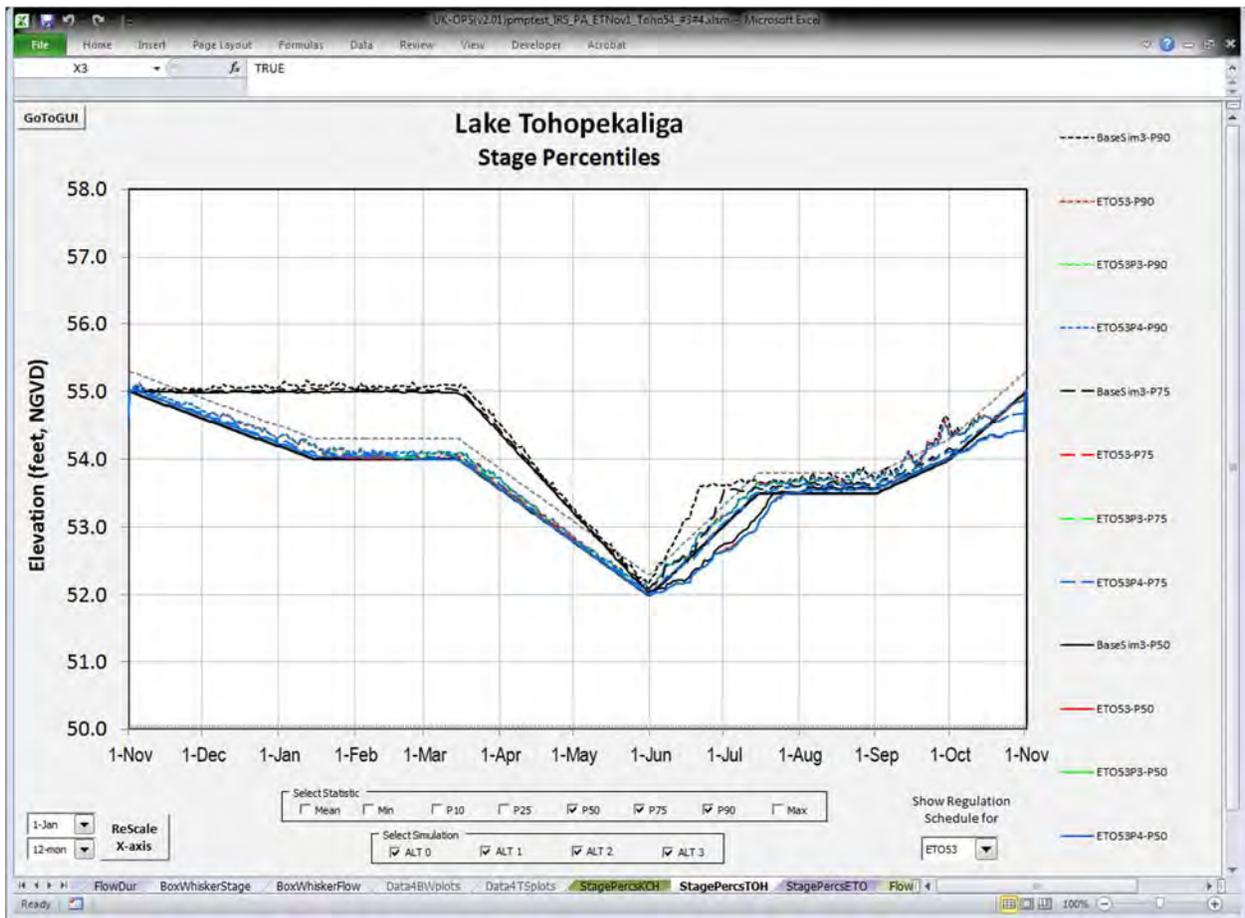
**Figure A-5-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'



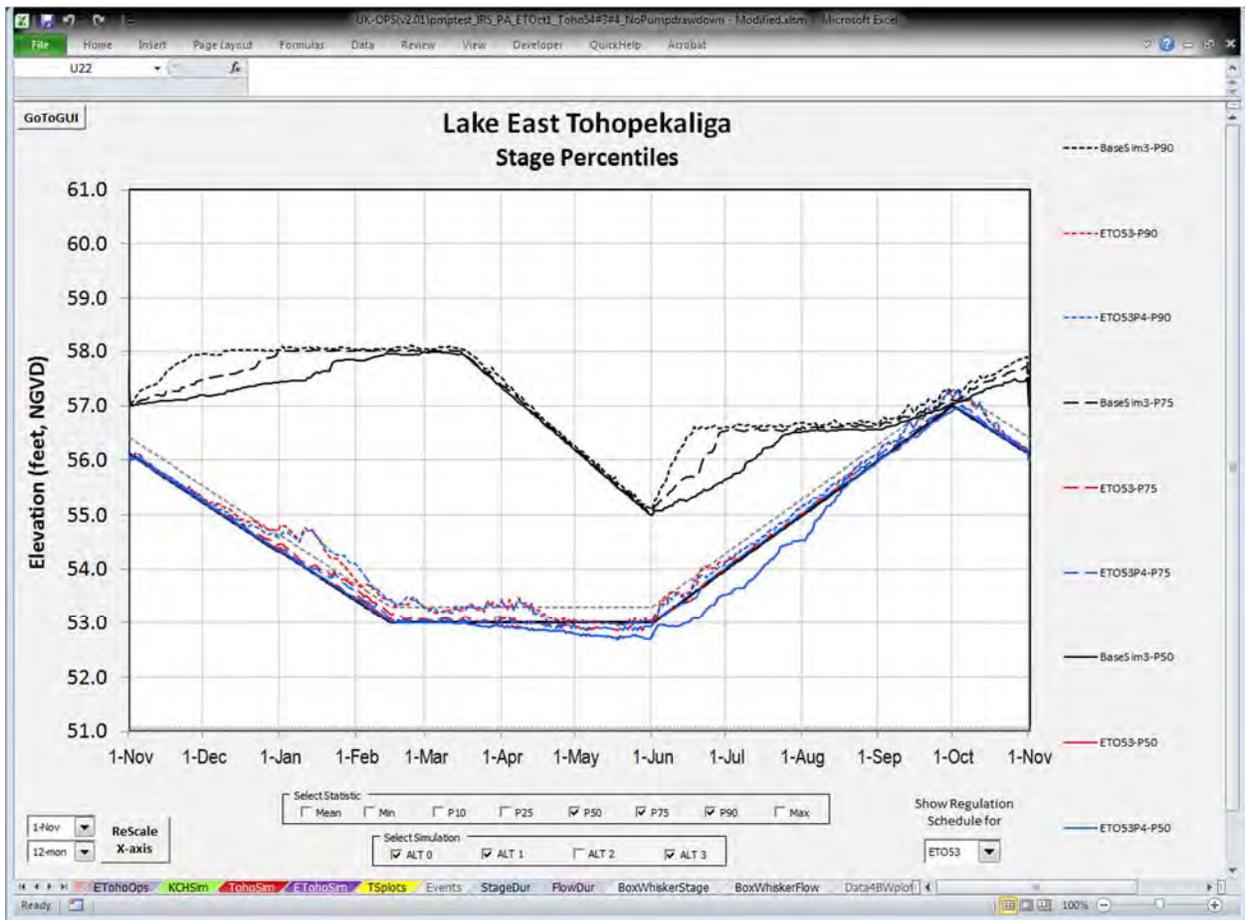
**Figure A-5-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'



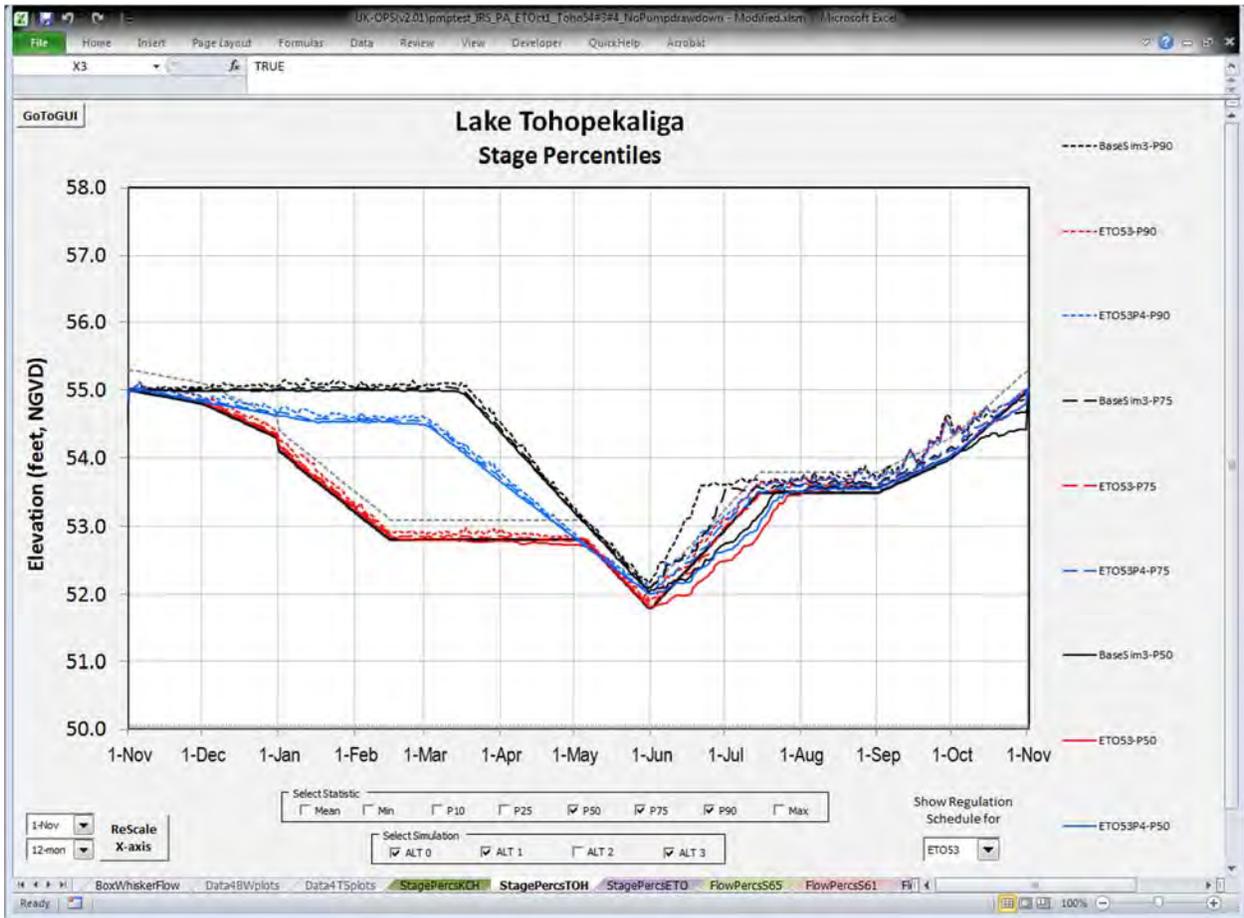
**Figure A-6-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'



**Figure A-6-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'



**Figure A-7-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



**Figure A-7-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59 (Red Lines)

**Jacksonville, South Atlantic Division, U.S. Army Corps of Engineers  
Permit No: SAJ-2015-00644 (SP-SLR)**

# DEPARTMENT OF THE ARMY PERMIT

**Permittee:** Florida Fish & Wildlife Conservation  
Commission Attention: John Beacham Furse  
3991 Southeast 27<sup>th</sup> Court  
Okeechobee, FL 34974

**Permit No:** SAJ-2015-00644 (SP-SLR)

**Issuing Office: U.S. Army Engineer District, Jacksonville**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:** You are hereby authorized to perform routine mechanical aquatic plant maintenance activities related to habitat restoration and navigation maintenance within the subject water bodies. The proposed maintenance techniques include mechanical harvesting of nuisance floating and/or rooted vegetation with upland disposal, vegetation scraping with upland disposal, mechanical excavation of nuisance emergent vegetation with upland disposal, shredding, mowing, disking, and/or tilling of tussocks and aquatic plants.

The work described above is to be completed in accordance with the 50 pages of drawings and attachments affixed at the end of this permit instrument.

**Project Location:**

Waterbody	County	Acres or Linear Miles	Central Coordinates: Latitude/Longitude	Township and Range
Alligator Lake	Osceola	3,392 ac	28° 12.49'N, 81° 12.84'W	T26S / R31E
Black Lake	Sumter	245 ac	28° 54.29'N, 81° 59.27'W	T26S / R31E
Blue Springs	Volusia	NA	28° 56.57'N, 81° 20.56'W	T18S / R30E
Brick Lake	Osceola	616 ac	28° 10.07'N, 81° 11.91'W	T27S / R31E
Coon Lake	Osceola	148 ac	28° 15.98'N, 81° 11.07'W	T25S / R31E
Cypress Lake	Osceola	4,097 ac	28° 04.40'N, 81° 20.00'W	T28S / R30E

PERMIT NUMBER: SAJ-2015-00644 (SP-SLR)

PERMITTEE: Florida Fish and Wildlife Conservation Commission

PAGE 2 of 14

East Lake Tohopekaliga	Osceola	12,546 ac	28° 17.66'N, 81° 17.98'W	T25S / R30E
Fish Lake	Osceola	221 ac	28° 16.17'N, 81° 20.70'W	T25S / R30E
Fox Lake	Brevard	165 ac	28° 35.37'N, 80° 52.28'W	T22S / R34E
Gant Lake	Sumter	150 ac	28° 34.57'N, 82° 05.16'W	T22S / R22E
Guana Lake / Lake Ponte Vedra	St. Johns	1,800 ac	30° 05.71'N, 81° 20.76'W	T5S / R29E
Johns Lake	Orange	2,417 ac	28° 31.93'N, 81° 39.28'W	T22S / R27E
Lake Apopka	Orange	30,671 ac	28° 37.58'N, 81° 38.76'W	T21S / R28E
Lake Ashby	Volusia	1,030 ac	28° 55.79'N, 81° 05.99'W	T18S / R32E
Lake Center	Osceola	410 ac	28° 16.75'N, 81° 11.59'W	T25S / R31E
Lake Deaton	Sumter	778 ac	28° 50.09'N, 81° 59.21'W	T19S / R23E
Lake Eaton	Marion	307 ac	29° 15.52'N, 81° 52.20'W	T14S / R24E
Lake Gentry	Osceola	1,791 ac	28° 08.43'N, 81° 14.92'W	T27S / R31E
Lake Griffin	Lake	16,505 ac	28° 50.74'N, 81° 51.09'W	T19S / R25E
Lake Hatchineha	Osceola	6,665 ac	28° 00.92'N, 81° 25.11'W	T28S / R29E
Lake Hellen Blazes	Brevard	381 ac	28° 01.09'N, 80° 47.69'W	T28S / R35E
Lake Jackson	Osceola	1,020 ac	27° 54.65'N, 81° 10.16'W	T29S / R32E
Lake Jesup	Seminole	10,011 ac	28° 43.26'N, 81° 13.30'W	T20S / R31E
Lake Jumper	Marion	305 ac	29° 13.06'N, 81° 51.21'W	T15S / R24E
Lake Kissimmee	Osceola	34,948 ac	27° 53.71'N, 81° 16.97'W	T29S / R31E
Lake Lizzie	Osceola	792 ac	28° 14.76'N, 81° 11.21'W	T26S / R31E
Lake Macy	Volusia	20 ac	28° 58.36'N, 81° 13.99'W	T17S / R31E
Lake Mann	Orange	244 ac	28° 32.18'N, 81° 25.68'W	T22S / R29E
Lake Marian	Osceola	5,739 ac	27° 52.78'N, 81° 06.74'W	T30S / R32E
Lake Miona	Sumter	418 ac	28° 54.17'N, 82° 00.27'W	T18S / R23E
Lake Okahumpka	Sumter	670 ac	28° 49.49'N, 82° 00.63'W	T19S / R23E
Lake Panasoffkee	Sumter	4,460 ac	28° 48.04'N, 82° 07.43'W	T19S / R22E
Lake Tohopekaliga	Osceola	18,810 ac	28° 10.48'N, 81° 23.59'W	T26S / R29E
Lake Weir	Marion	5,685 ac	29° 00.99'N, 81° 56.78'W	T17S / R24E
Lake Yale	Lake	4,042 ac	28° 54.92'N, 81° 44.89'W	T18S / R26E
Little Lake Kerr	Marion	532 ac	29° 21.68'N, 81° 44.87'W	T13S / R25E
Little Lake Weir	Marion	320 ac	29° 01.11'N, 81° 58.71'W	T17S / R23E
Little Sawgrass Lake	Brevard	74 ac	28° 03.93'N, 80° 47.34'W	T28S / R35E

Marshall Swamp	Marion	3,000 ac	29° 07.19'N, 81° 58.93'W	T16S / R23E
Ocklawaha Prairie	Marion	2,600 ac	29° 06.50'N, 81° 55.87'W	T16S / R24E
Sawgrass Lake	Brevard	407 ac	28° 04.43'N, 80° 46.79'W	T28S / R35E
South Lake	Brevard	1,101 ac	28° 37.15'N, 80° 52.21'W	T21S / R34E
St. Johns River	Indian River, Brevard, Seminole, Osceola, Orange, Lake, Volusia, Putnam, Marion, St. Johns, Clay, Duval	310 miles	29° 58.36'N, 81° 38.99'W (Lower)	T6S / R26E (Lower)
			28° 49.14'N, 81° 10.69'W (Middle)	T192 / R31E (Middle)
			28° 02.55'N, 80° 47.74'W (Upper)	T28S / R35E (Upper)
T.M. Goodwin Waterfowl Management Area	Brevard	6,720 ac	27° 51.54'N, 80° 43.59'W	T30S / R36E
Trout Lake	Osceola	273 ac	28° 15.52'N, 81° 10.21'W	T26S / R31E

**Permit Conditions:**

**General Conditions:**

1. The time limit for completing the work authorized ends on **June 3, 2031**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this

office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and the mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions:**

**1. Reporting Address:** All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address:

a. For Standard mail: U.S. Army Corps of Engineers, Jacksonville District, Attn: Section Chief, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232-0019. The Permittee shall reference this permit number, SAJ-2015-00644 (SP-SLR), on all submittals.

b. For electronic mail: CESAJ-ComplyDocs@usace.army.mil (not to exceed 10 MB). The Permittee shall reference this permit number, SAJ-2015-00644 (SP -SLR), on all submittals.

**2. Commencement Notification:** Within 10 days from the date of initiating each activity authorized by this permit, the Permittee shall provide a written notification of the date of commencement of authorized work to the Corps, along with a proposed project report which would include work types and locations of proposed work.

**3. Post Project Reporting:** No later than September 1 for all years this authorization is valid, the Permittee shall submit a report summarizing the total acreage mechanically treated in each of the subject waterbodies, the total volume of material removed from each water body, the current management goals in the subject waterbodies, and whether the mechanical treatments were successful in achieving the management goals

stated for each waterbody. The Permittee shall also provide the information requested in special condition 4.

**4. Water Quality Certification:** Prior to the initiation of any work pursuant to this authorization, the Permittee shall obtain an exemption under section 403.813(1)(r) F.S. or 373.406(6), F.S for that work. If a conditioned exemption is issued for the work, the Permittee shall comply with the conditions specified in the exemption as special conditions of this permit. This authorization shall not apply to projects that do not qualify for these specific exemptions. Lastly, the Permittee shall provide the file number for each exemption obtained in the post project reporting packet required by special condition 3.

**5. Turbidity Control Measures:** Turbidity controls measures may be required, and the work shall be conducted so as to prevent violations of State Water Quality Standards as established in sections 62-4.242 and 62.4.244 of the Florida Administrative Code, and Chapters 62-302, 62-520, 62-522 and 62-550 of the Florida Administrative Code.

**6. Erosion Control:** Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the work area. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion. The erosion control measures shall remain in place and be maintained until all authorized work has been completed and the site has been stabilized.

**7. Best Management Practices:** The Permittee shall utilize the best management practices for aquatic plant and associated organic material removal adapted from the *Best Management Practices for Aquatic Restoration of Lakes, Streams, and Wetlands in Florida*, University of Central Florida, April 2013, or the most current version, while completing all of the authorized work.

**8. Eastern Indigo Snake Protection Measures:** The Permittee shall comply with U.S. Fish and Wildlife Service's "Standard Protection Measures for the Eastern Indigo Snake" dated August 12, 2013, attached hereto, while undertaking any upland disposal activities associated with the authorized work.

**9. Manatee Conditions:** The Permittee shall comply with the "Standard Manatee Conditions for In-Water Work – 2011".

**10. Wood Stork Protection Measures:**

a. The Permittee shall not conduct any work authorized herein within 2,500 feet of the identified wood stork colony during nesting season (February 15 to August 15) during any year that this permit is valid.

b. The Permittee shall not conduct any work authorized herein within 2,500 feet of any other wood stork nesting that may activate on, or in the vicinity of, the subject waterbodies during nesting season (February 15 to August 15) during any year that this permit is valid.

**11. Everglade Snail Kite Protection Measures:**

a. The Permittee shall adhere to the *Standard Everglades Snail Kite Management Guidelines, February 2006* available at <http://www.fws.gov/verobeach/BirdsPDFs/20060221SnailKiteManagementGuidelines2.pdf> when conducting any of the authorized work.

b. Prior to conducting any authorized work on East Lake Tohopekaliga, Lake Tohopekaliga, Lake Hatchineha, Lake Kissimmee, Lake Jackson (Osceola County), the St. Johns River, and T.M. Goodwin Waterfowl Management Area, the Permittee shall obtain verification from both the United States Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission Everglades snail kite species lead, coordinator, and/or subject matter expert that the particular project is properly designed to avoid adverse impacts to nesting or foraging Everglades snail kites.

c. Prior to conducting any authorized work in any area on the subject waterbodies where Everglades snail kite nesting is documented during any year this authorization is valid, the Permittee shall obtain verification from both the United States Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission Everglades snail kite species lead, coordinator, and/or subject matter expert that the particular project is properly designed to avoid adverse impacts to nesting or foraging Everglades snail kites.

**12. Endangered Species:** No activity shall be authorized under this permit which is likely to adversely affect a federally listed threatened or endangered species, or a species proposed for such designation, or destroy or adversely modify its designated critical habitat. If the Corps determines that a particular project, or regulated work within a subject waterbody, requires additional Section 7 consultation under the Endangered Species Act with the U.S Fish and Wildlife Service regarding any federally listed threatened or endangered species or species proposed for federal listing; and/or, designated critical habitat or proposed designated critical habitat for any federally listed

threatened or endangered species or species proposed for federal listing, then the particular project or work may not proceed pursuant to this authorization. The District Engineer, or his designee, will provide any such decision to the Permittee in writing within 10 days of the date on which the Corps receives the commencement notification. The Permittee shall seek a separate authorization for that particular project or work which would require a unique consultation. In the event that a class of mechanical management projects will reoccur in the subject waterbodies, then the Permittee may request that the Corps reinitiate consultation under SAJ-2015-00644 to address the overall issue.

**13. Cultural resources:** No work authorized herein shall adversely affect impact or disturb properties listed in the National Register of Historic Places (NRHP) or those eligible for inclusion in the NRHP.

**a. Projects involving ground-disturbing work in dry conditions:**

When performing ground-disturbing work conducted under dewatered conditions the Permittee shall adhere to the following guidelines:

- i. Project information shall be submitted to the Florida Division of Historical Resources (DHR), Bureau of Historical Preservation, for compliance review consultation;
- ii. The project shall be supervised by Florida Fish and Wildlife Conservation Commission project managers certified as "Archaeological Monitors" by DHR;
- iii. If required by DHR, a professional archeologist who meets the "Archeology and Historic Preservation: Secretary of Interior's Standards and Guidelines" will be retained to develop a plan for protection of the cultural resources within and around the waterbody;
- iv. The Permittee shall avoid working in culturally- sensitive areas of the waterbody, identified by any plan developed pursuant to subsection iii above, including upland disposal areas, and transportation routes. If the Permittee must perform work in one of the identified areas, the Permittee shall employ a professional archeologist who meets the "Archeology and Historic Preservation: Secretary of Interior's Standards and Guidelines" to supervise that work;
- v. Project personnel, contractors, subcontractors, and heavy equipment operators, for a project involving ground-disturbing activity shall be required to attend an informational "Cultural /Archaeological Resources" training session explaining what might be found

during project activities, including steps that must be taken if cultural resources are found;

vi. If, during mechanical treatment activities, items that may have historic or archeological value are observed, the Permittee shall follow the procedures outlined in special condition 10.c below.

**b. Projects involving work during inundated conditions:** Work conducted under inundated conditions shall be supervised by Florida Fish and Wildlife Conservation Commission project managers certified as "Archaeological Monitors" by DHR. If items that may have historic or archeological value are observed while work is ongoing, the Permittee shall adhere to the procedures provided in special condition 10.c below.

**c. Unanticipated discoveries:**

i. If during the ground disturbing activities and construction work within the permit area, there are archaeological/cultural materials encountered which were not the subject of a previous cultural resources assessment survey (and which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes, evidence of structures or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the Permittee shall immediately stop all work and ground-disturbing activities within a 100-meter diameter of the discovery and notify the Corps within the same business day (8 hours). The Corps shall then notify the Florida State Historic Preservation Officer (SHPO) and the appropriate Tribal Historic Preservation Officer(s) (THPO(s)) to assess the significance of the discovery and devise appropriate actions.

ii. Additional cultural resources assessments may be required of the permit area in the case of unanticipated discoveries as referenced in accordance with the above Special Condition; and if deemed necessary by the SHPO, THPO(s), or Corps, in accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO for finds under his or her jurisdiction, and from the Corps.

iii. In the unlikely event that unmarked human remains are identified on non-federal lands, they will be treated in accordance with Section 872.05 Florida Statutes. All work and ground disturbing activities within a 100-meter diameter of the unmarked human remains shall immediately cease and the Permittee shall immediately notify the medical

examiner, Corps, and State Archeologist within the same business day (8-hours). The Corps shall then notify the appropriate SHPO and THPO(s). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the State Archeologist and from the Corps.

**14. Adverse Wetland Drainage Not Authorized:** The Permittee shall not perform any mechanical vegetation management in the subject waterbodies that would cause adverse drainage effects to the waterbody or any wetlands abutting or adjacent to the subject waterbodies. The District Engineer does not consider mechanical vegetation management that would result in adverse drainage of the waterbody or its abutting or adjacent wetlands to be routine management. The Permittee shall seek separate authorization from the Corps to perform such a project in the subject waterbodies.

**15. New Dredging for Navigation Not Authorized:** The Permittee shall not perform any new navigation dredging or excavation associated with the routine mechanical management of aquatic vegetation in the subject waterbodies. The mechanical removal of vegetation and/or its associated substrate that has the effect of increasing the navigable capacity of the subject waterbodies is not authorized by this permit. However, this special condition is not intended to prohibit the routine mechanical maintenance of vegetation within trails that existed in a navigable condition before the effective date of this permit. It is also important to note that this special condition does not operate to expand Section 10 of the Rivers and Harbors Act jurisdiction to waterbodies subject only to Section 404 of the Clean Water Act Jurisdiction, nor does this special condition prohibit the mechanical removal of floating, non-rooted vegetation that impedes navigation.

**16. New In-Lake Disposal Not Authorized:** The Permittee shall not engage in any in-lake stockpiling of any material associated with, or resulting from the work this permit authorizes. This permit does not authorize any new in-lake disposal of harvested material. However, this special condition is not intended to prohibit the use of any existing in-lake disposal areas that the Corps has previously authorized, or any in-lake disposal sites that may receive a separate Corps authorization after the effective date of this permit.

**17. Hydro-Period Alteration/Modification Not Authorized:** The Permittee shall not engage in any mechanical management of vegetation for the purpose of, or which would have the overall effect of altering the hydro-period that existed in the subject waterbodies prior to the effective date of this permit. The District Engineer does not consider mechanical vegetation management of this scale or effect to be routine

management. The Permittee shall seek separate authorization from the Corps to perform such a project in the subject waterbodies.

**18. Structures and/or Fill Discharge for Waterbody Elevation Control Not**

**Authorized:** This permit does not authorize the Permittee to construct any structures or discharge any fill material into the subject waterbodies, in association with any mechanical vegetation management project, for purposes of creating an ideal water level for the mechanical management activity. The Permittee shall seek separate authorizations for this type of fill or structure when a Department of the Army authorization would be required by Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act.

**19. Discretion of the District Engineer:** The District Engineer reserves the right to determine whether an individual project falls within the scope of this permit and/or whether an individual project satisfies the conditions of this permit. Further, the District Engineer reserves the right to request that the Permittee seek a separate permit for any individual project. The District Engineer, or his designee, will provide any such decision to the Permittee in writing within 10 days of the date on which the Corps receives the commencement notification. The District Engineer also reserves the right to initiate a modification of this permit in the event that the laws, regulations, and/or authorities governing the U.S. Army Corps of Engineers Regulatory Program would so require.

**Further Information:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(**XX**) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)

(**XX**) Section 404 of the Clean Water Act (33 U.S.C. 1344)

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The

PERMIT NUMBER: SAJ-2015-00644 (SP-SLR)  
PERMITTEE: Florida Fish and Wildlife Conservation Commission  
PAGE 12 of 14

referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Beacham Furse  
(PERMITTEE)  
John Beacham Furse  
Florida Fish & Wildlife Conservation Commission

June 3, 2016  
(DATE)

Beacham Furse  
(PERMITTEE NAME-PRINTED)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Alisa Zarbo  
(DISTRICT ENGINEER)  
Jason A. Kirk,  
Colonel, U.S. Army  
District Commander

8 June 2016  
(DATE)

PERMIT NUMBER: SAJ-2015-00644 (SP-SLR)  
PERMITTEE: Florida Fish and Wildlife Conservation Commission  
PAGE 13 of 14

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(TRANSFEREE-SIGNATURE)

\_\_\_\_\_  
(DATE)

\_\_\_\_\_  
(NAME-PRINTED)

\_\_\_\_\_  
(ADDRESS)

\_\_\_\_\_  
(CITY, STATE, AND ZIP CODE)

PERMIT NUMBER: SAJ-2015-00644 (SP-SLR)  
PERMITTEE: Florida Fish and Wildlife Conservation Commission  
PAGE 14 of 14

***Attachments to Department of the Army  
Permit Number SAJ-2015-00644***

1. PERMIT DRAWINGS: 52 pages
2. EASTERN INDIGO SNAKE CONDITIONS
3. MANATEE IN-WATER CONSTRUCTION CONDITIONS

FWC REGION	WATERBODY	COUNTY	Aquatic Plant Removal (inundated conditions)	Aquatic Plant Removal (dewatered conditions)	Shredding (inundated)	Rotovating/Tilling (dewatered)	In-lake Disposal (USACE Permit #)	Estimate of Projects (15 years; acres)	Estimate of Projects (15 years; cubic yards)
NE	Alligator Lake	Osceola	X	X	X	X	1997-13143	375	604,875
NE	Black Lake	Sumter	X		X			30	48,390
NE	Blue Springs	Volusia	X		X			15	24,195
NE	Brick Lake	Osceola	X	X	X	X		225	362,925
NE	Coon Lake	Osceola	X	X	X	X	1997-13143	75	120,375
NE	Cypress Lake	Osceola	X	X	X	X	1998-01359 2001-02471	1,500	2,419,500
NE	East Lake Tohopekaliga	Osceola	X	X	X	X		750	1,209,750
NE	Fish Lake	Osceola	X	X	X	X		75	120,375
NE	Fox Lake	Brevard	X		X			113	181,463
NE	Guana Lake/Lake Ponce Vedra	St. Johns	X	X	X			900	1,451,700
NE	Johns Lake	Orange	X					15	24,195
NE	Lake Apopka	Orange	X	X	X	X		375	604,875
NE	Lake Ashby	Volusia	X		X			15	24,195
NE	Lake Center	Osceola	X	X	X	X	1997-13143	150	241,950
NE	Lake Deaton	Sumter	X		X			35	60,488
NE	Lake Eaton	Marion			X			150	241,950
NE	Lake Gant/Big Gant Lake	Sumter	X		X			113	181,463
NE	Lake Gentry	Osceola	X		X			375	604,875
NE	Lake Griffin	Lake	X	X	X			75	120,375
NE	Lake Hatchineha	Osceola	X	X	X	X		1,500	2,419,500
NE	Lake Helen Blazes	Brevard	X		X			15	24,195
NE	Lake Jackson	Osceola	X	X	X	X	1993-02090	450	725,850
NE	Lake Jessup	Seminole	X		X			1,500	2,419,500
NE	Lake Juniper	Marion	X		X			75	120,375
NE	Lake Kissimmee	Osceola	X	X	X	X	1995-01315	3,000	4,839,000
NE	Lake Lizzie	Osceola	X	X	X	X	1997-13143	375	604,875
NE	Lake Macy	Volusia	X	X	X	X		30	48,390
NE	Lake Mann	Orange	X		X			15	24,195
NE	Lake Marian	Osceola	X	X	X	X		750	1,209,750
NE	Lake Miona	Sumter	X		X			8	12,098
NE	Lake Oklawaha	Sumter	X		X			375	604,875
NE	Lake Panasoffkee	Sumter	X		X			750	1,209,750
NE	Lake Tohopekaliga	Osceola	X	X	X	X	1998-05422	3,000	4,839,000
NE	Lake Weir	Marion	X	X	X	X		150	241,950
NE	Lake Yale	Lake	X		X	X		75	120,375
NE	Little Lake Kerr	Marion	X		X	X		113	181,463
NE	Little Lake Weir	Marion	X	X	X	X		75	120,375
NE	Little Sawgrass Lake	Brevard	X		X			8	12,098
NE	Marshall Swamp	Marion		X	X	X		300	483,900
NE	Ocklawaha Prairie	Marion		X	X	X		300	483,900
NE	Sawgrass Lake	Brevard	X		X			15	24,195
NE	South Lake	Brevard	X		X			225	362,925
NE / NC	St. Johns River *	Indian River, Brevard, Seminole, Osceola, Orange, Lake, Volusia, Putnam, Marion, St. Johns, Clay, Duval	X		X			1,500	2,419,500
NE	Trout Lake	Osceola	X	X	X	X	1997-13143	150	241,950

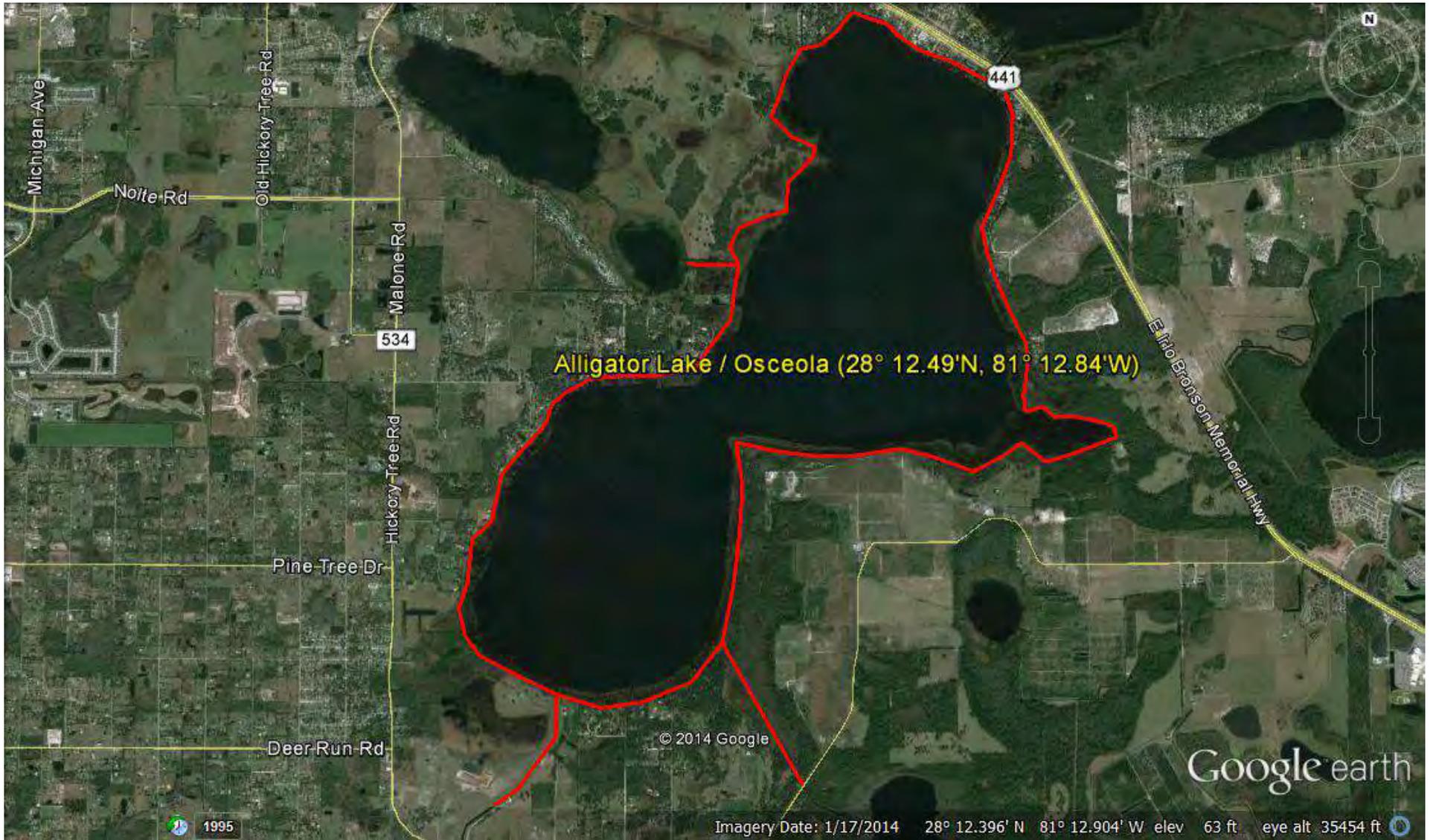
\* Includes all water-bodies making up the St. Johns River not otherwise identified in this list.

20,115 32,445,495

Project Number: SAJ-2015-00644 (SP-SLR)

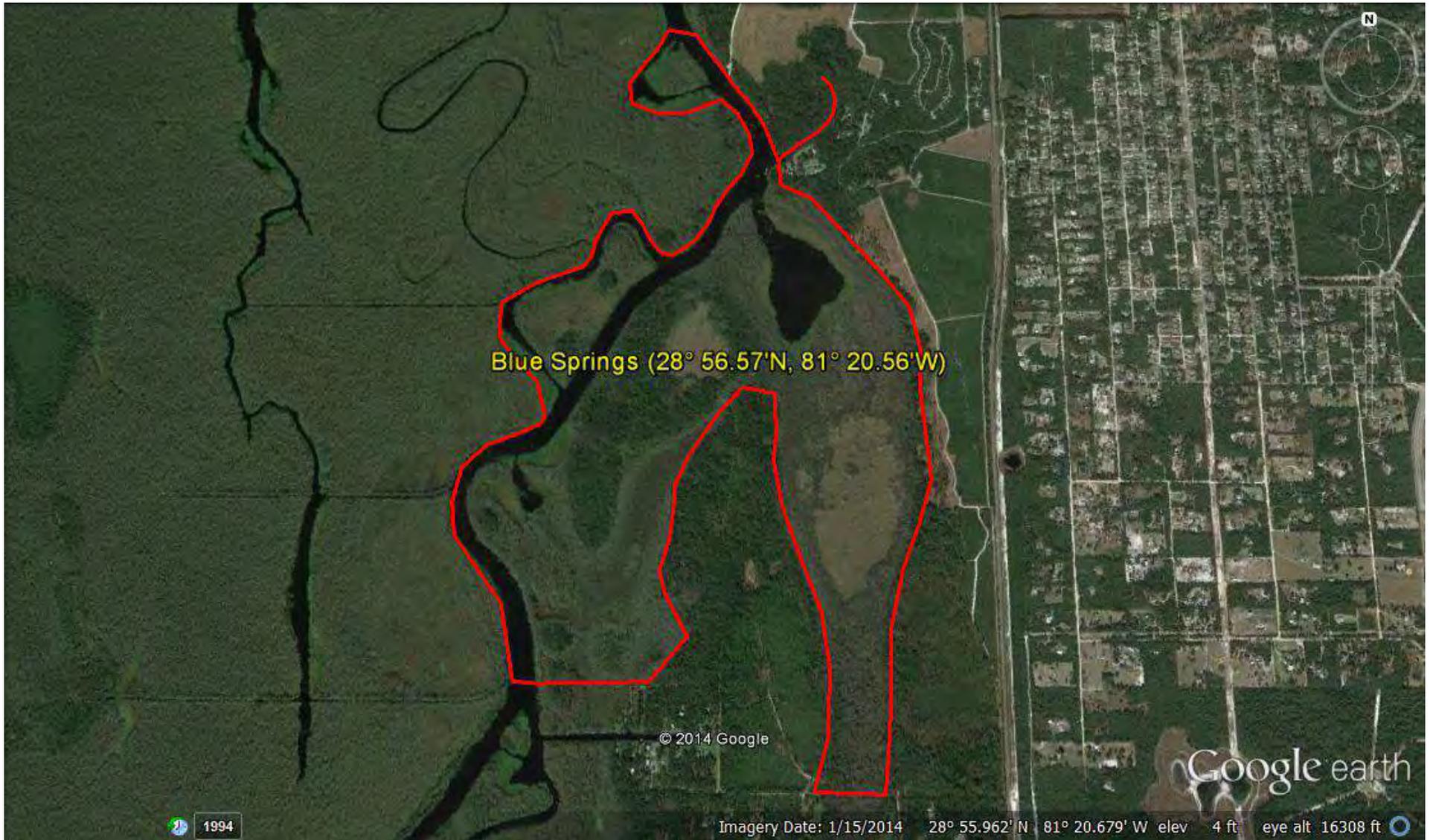
Date: 3 June 2016

Drawing 1 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 2 of 52





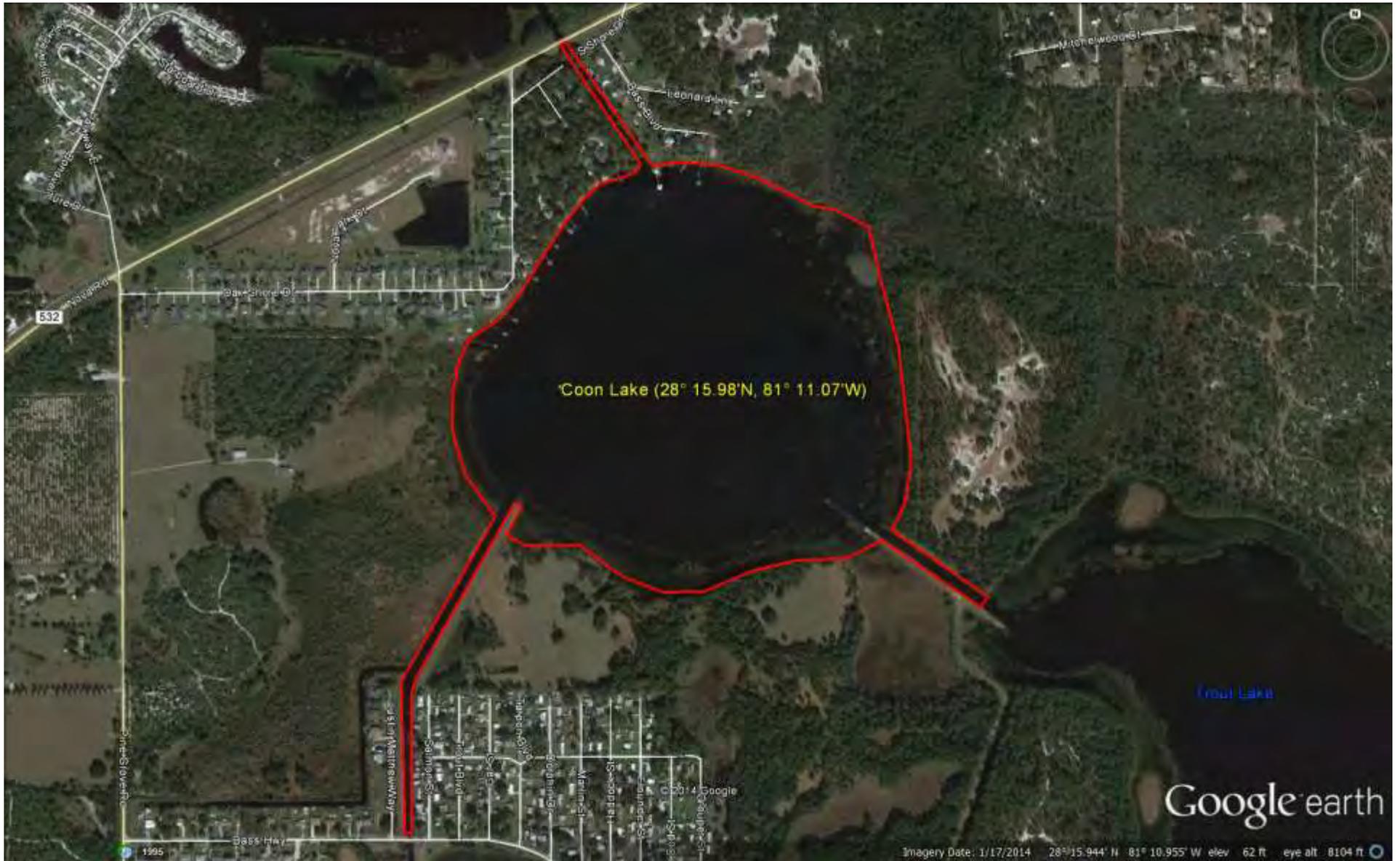
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 4 of 52



Project Number: SAJ-2015-00644 (SP-SLR)

Date: 3 June 2016

Drawing 5 of 52



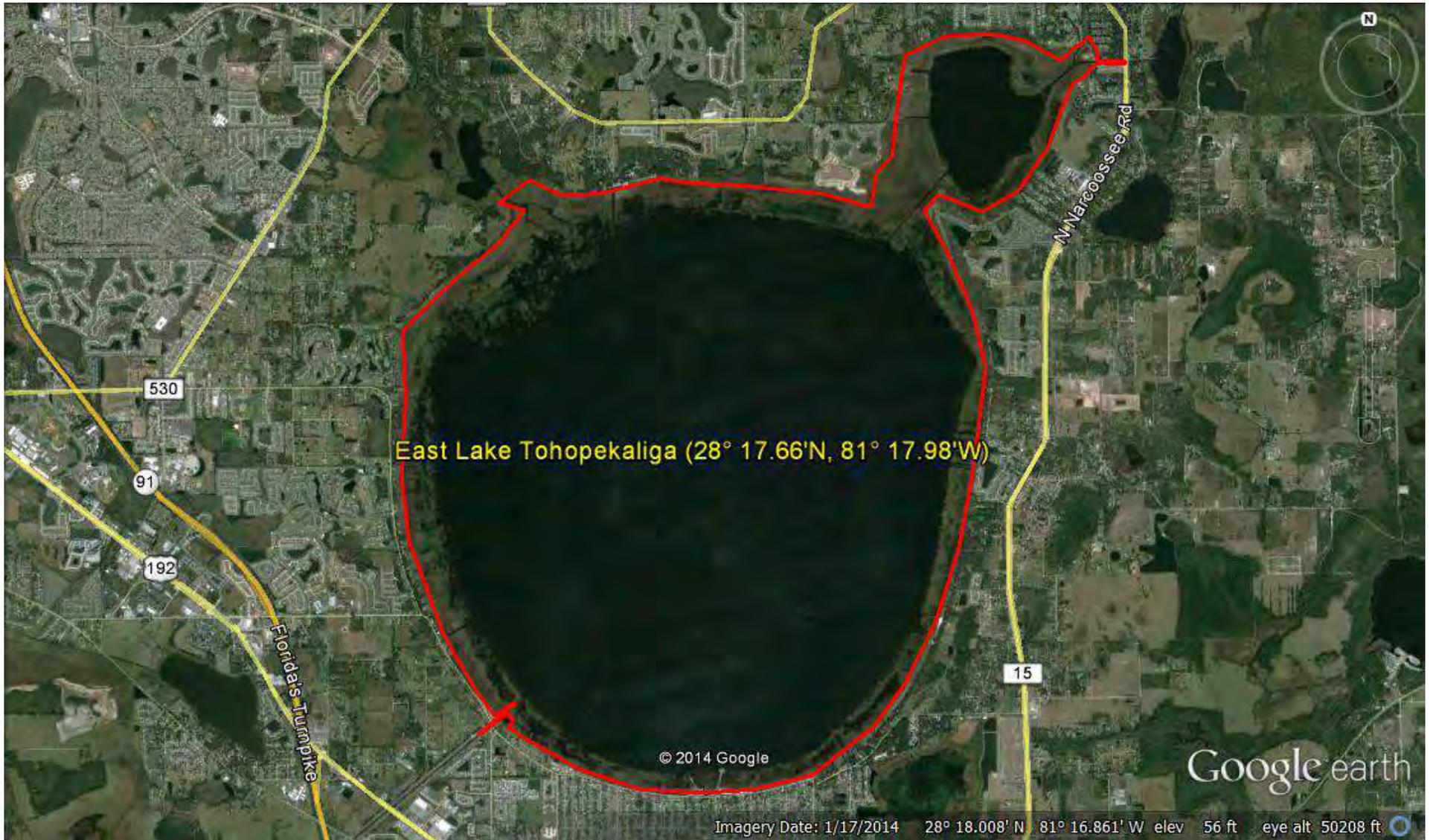
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 6 of 52



Project Number: SAJ-2015-00644 (SP-SLR)

Date: 3 June 2016

Drawing 7 of 52



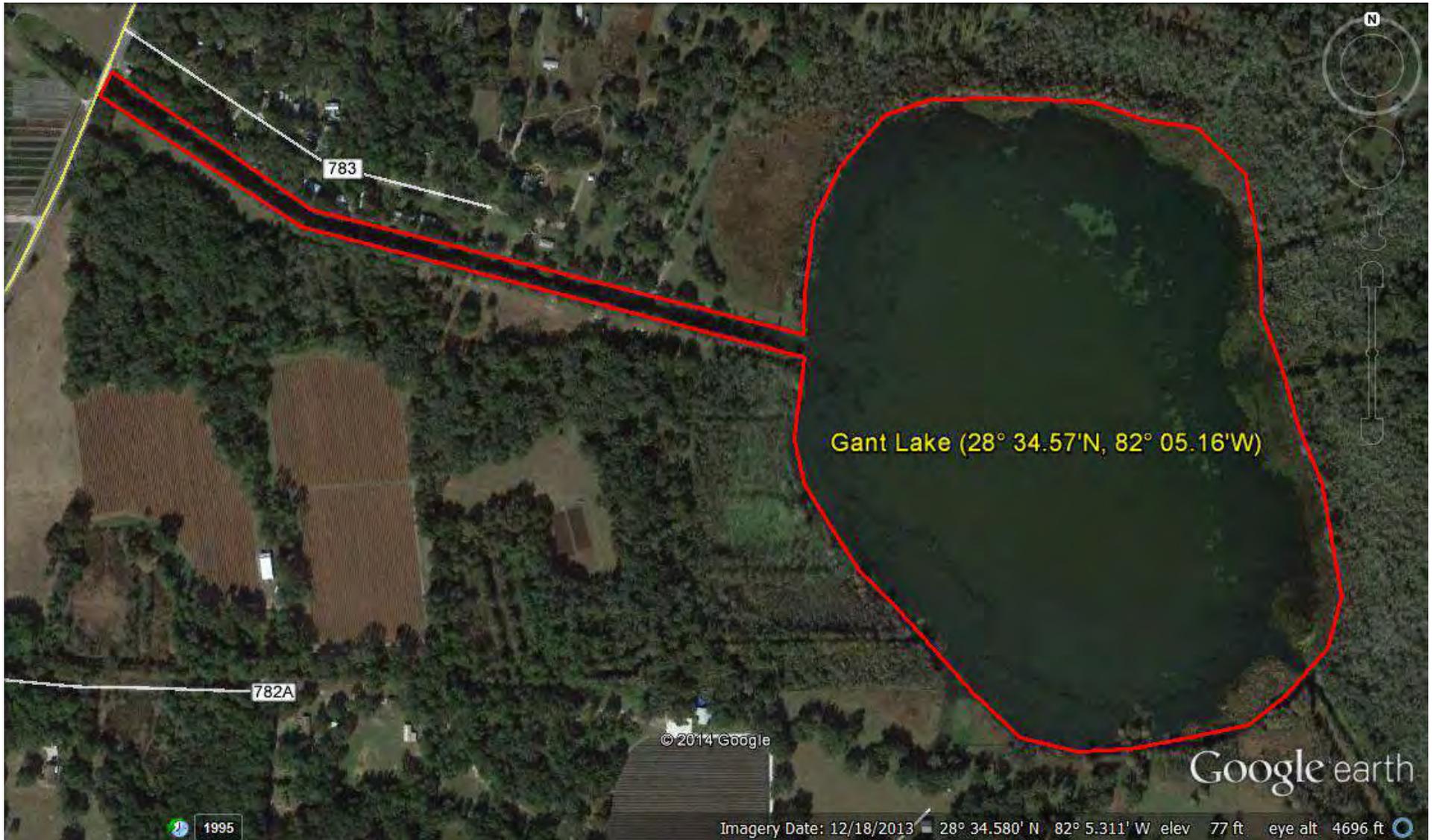
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 8 of 52



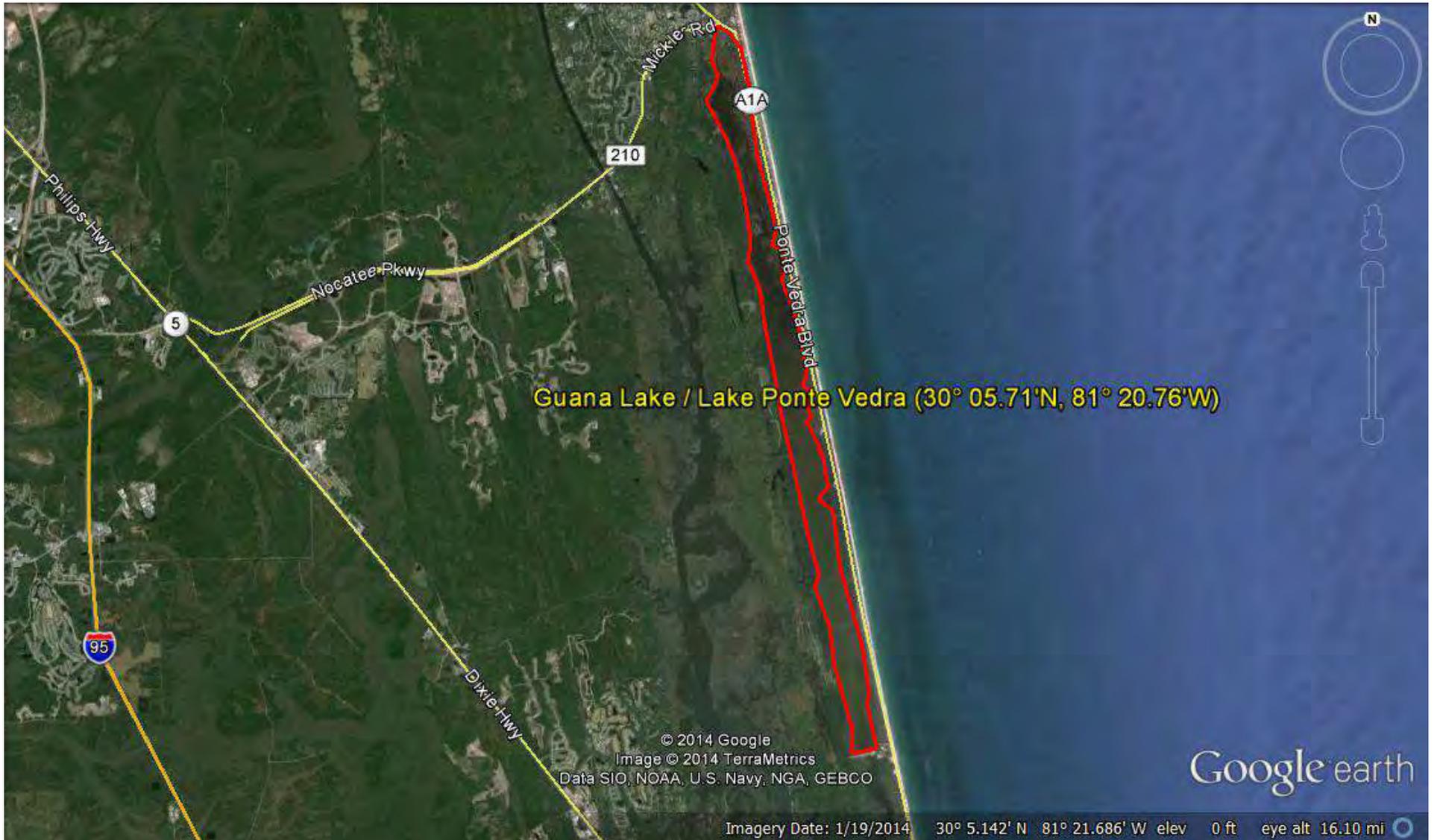
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 9 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 10 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 11 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 12 of 52



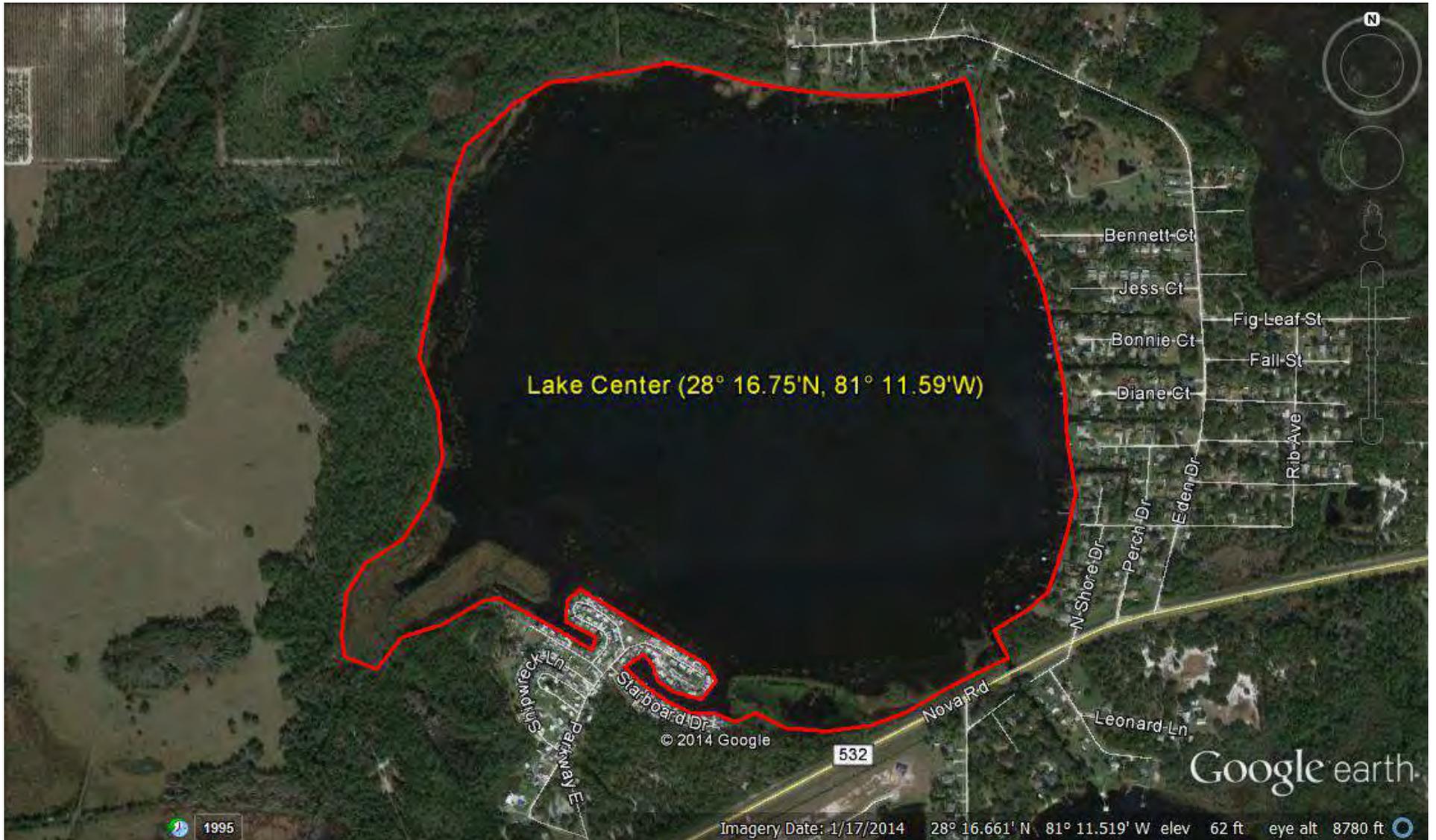
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 13 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 14 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 15 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 16 of 52



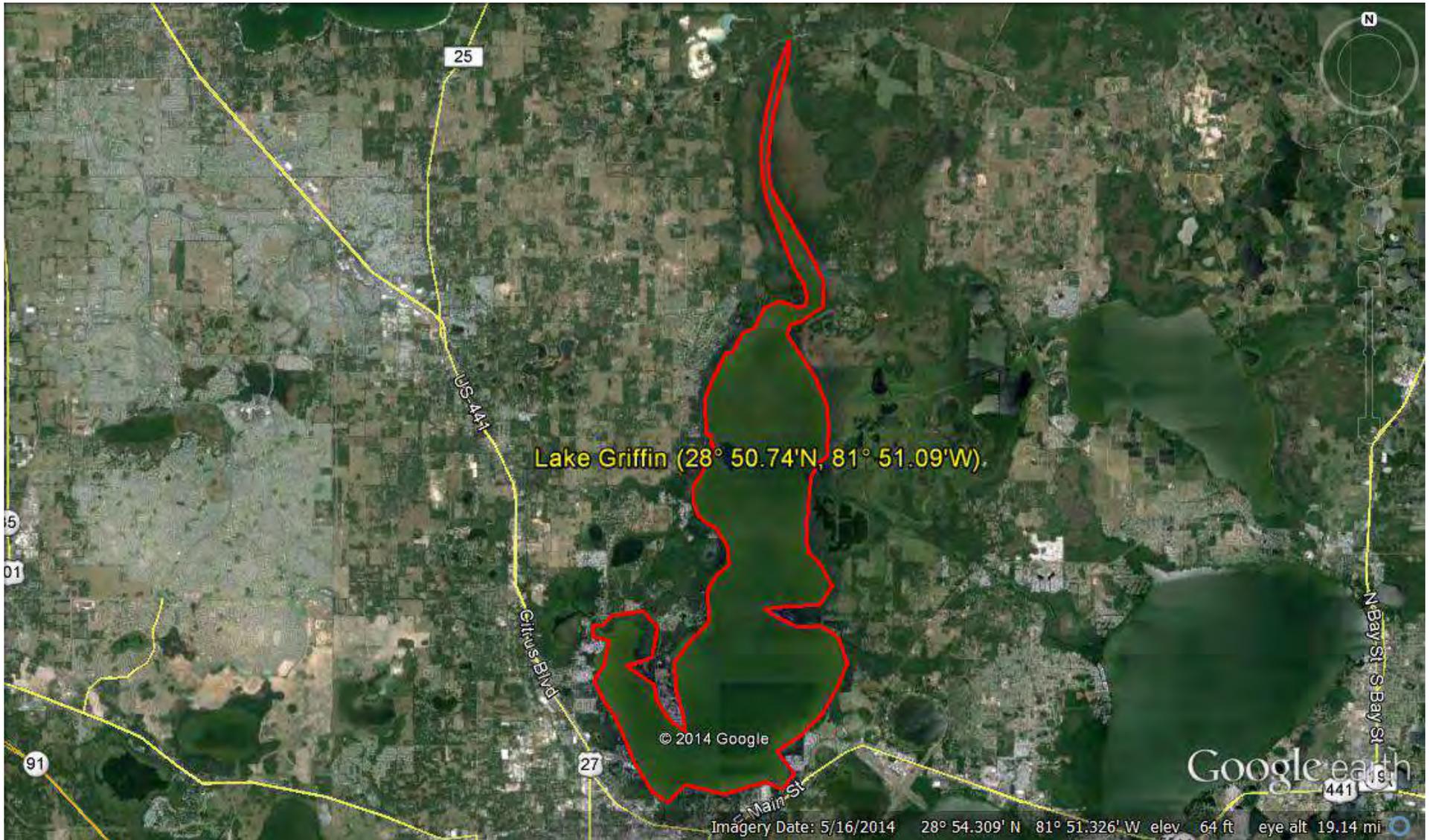
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 17 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 18 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 19 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 20 of 52



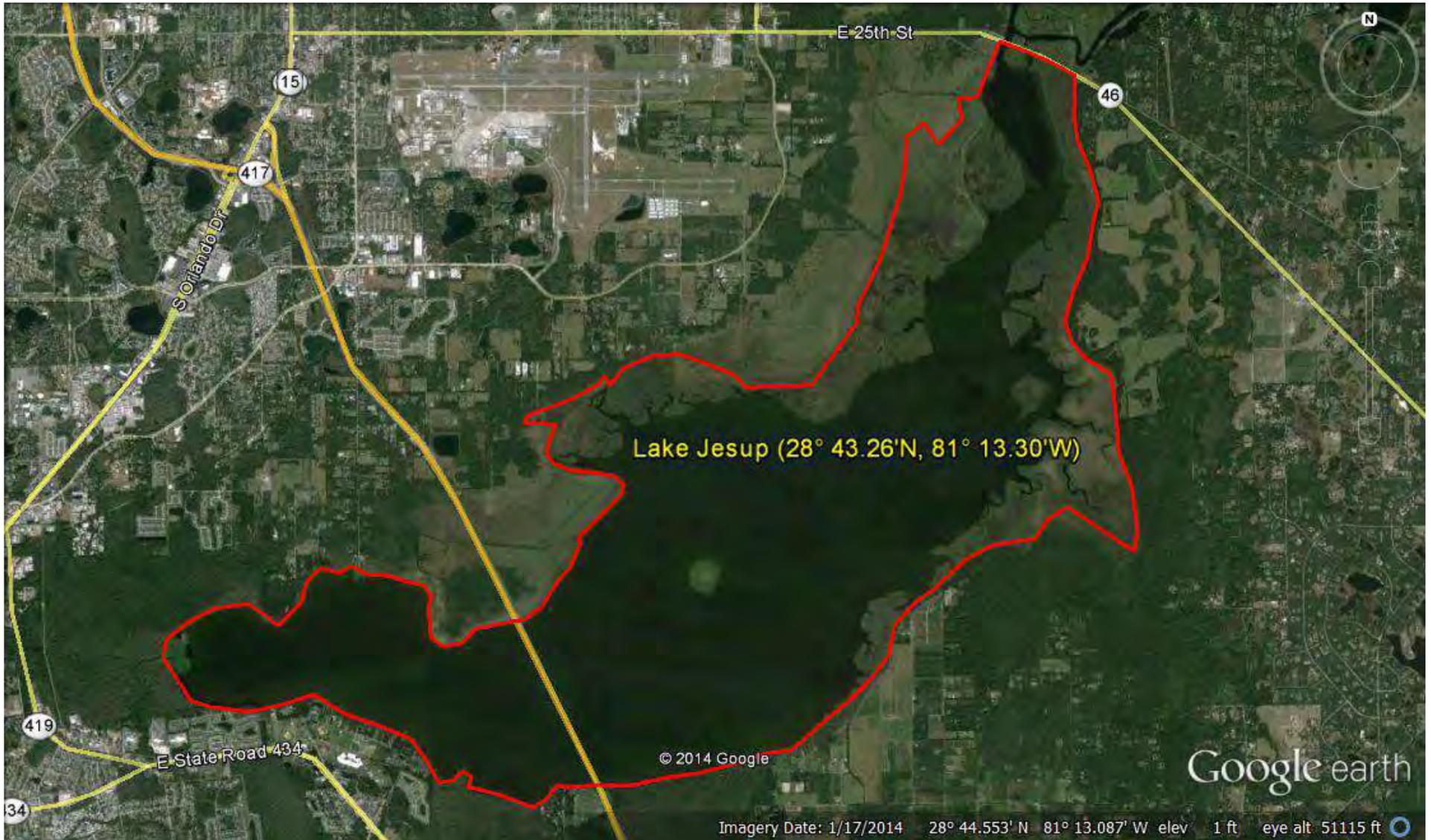
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 21 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 22 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 23 of 52



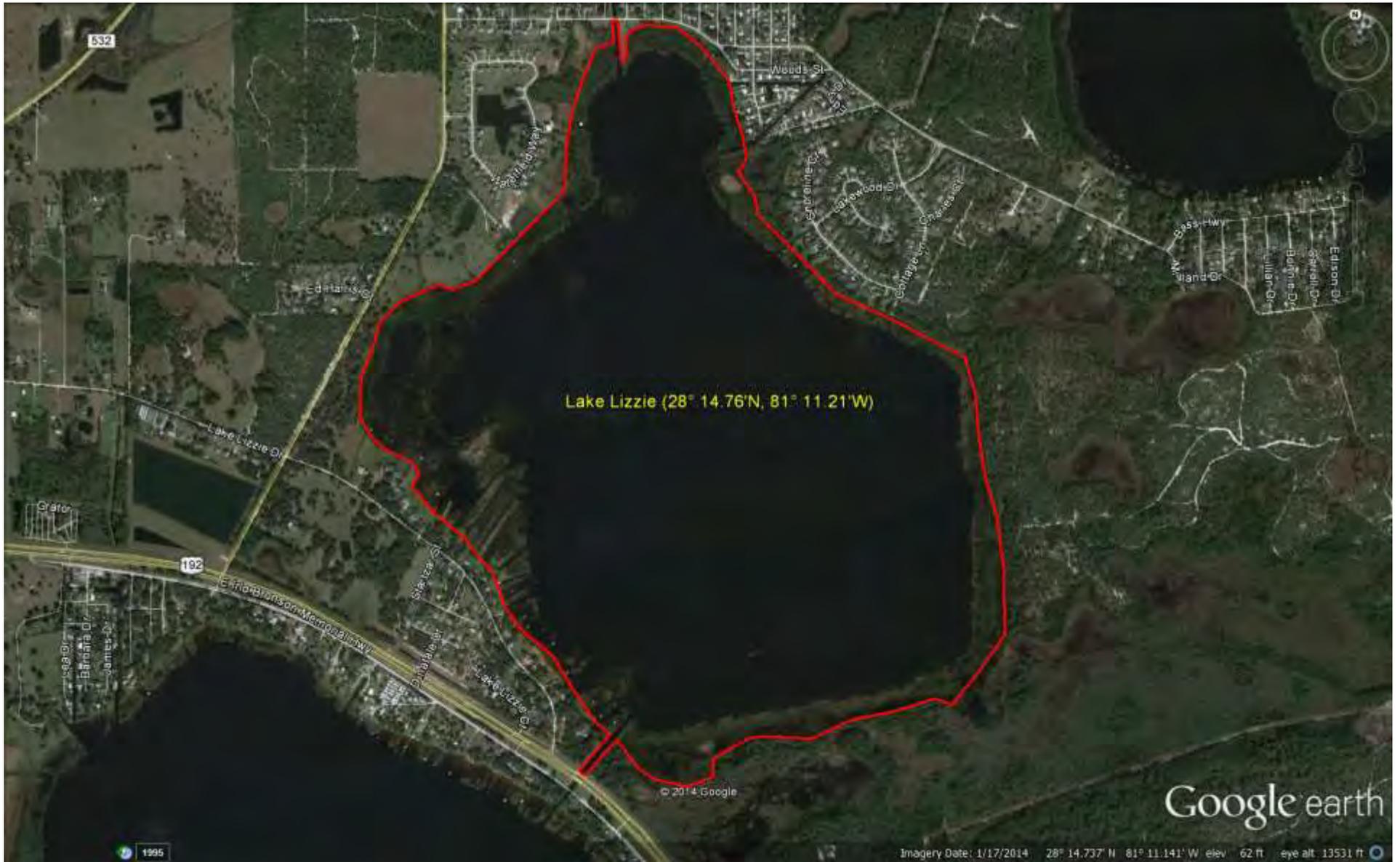
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 24 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 25 of 52



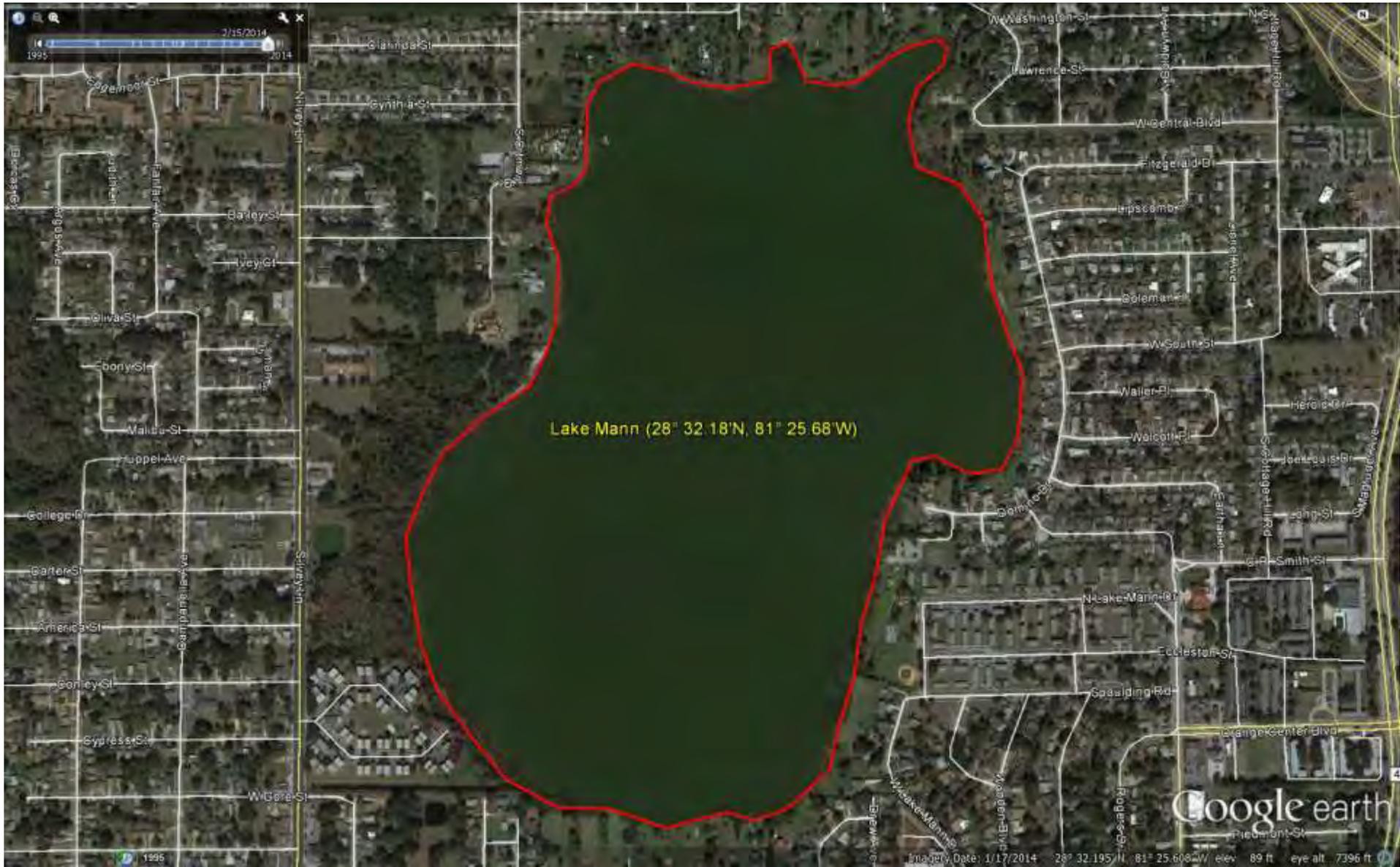
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 26 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 27 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 28 of 52



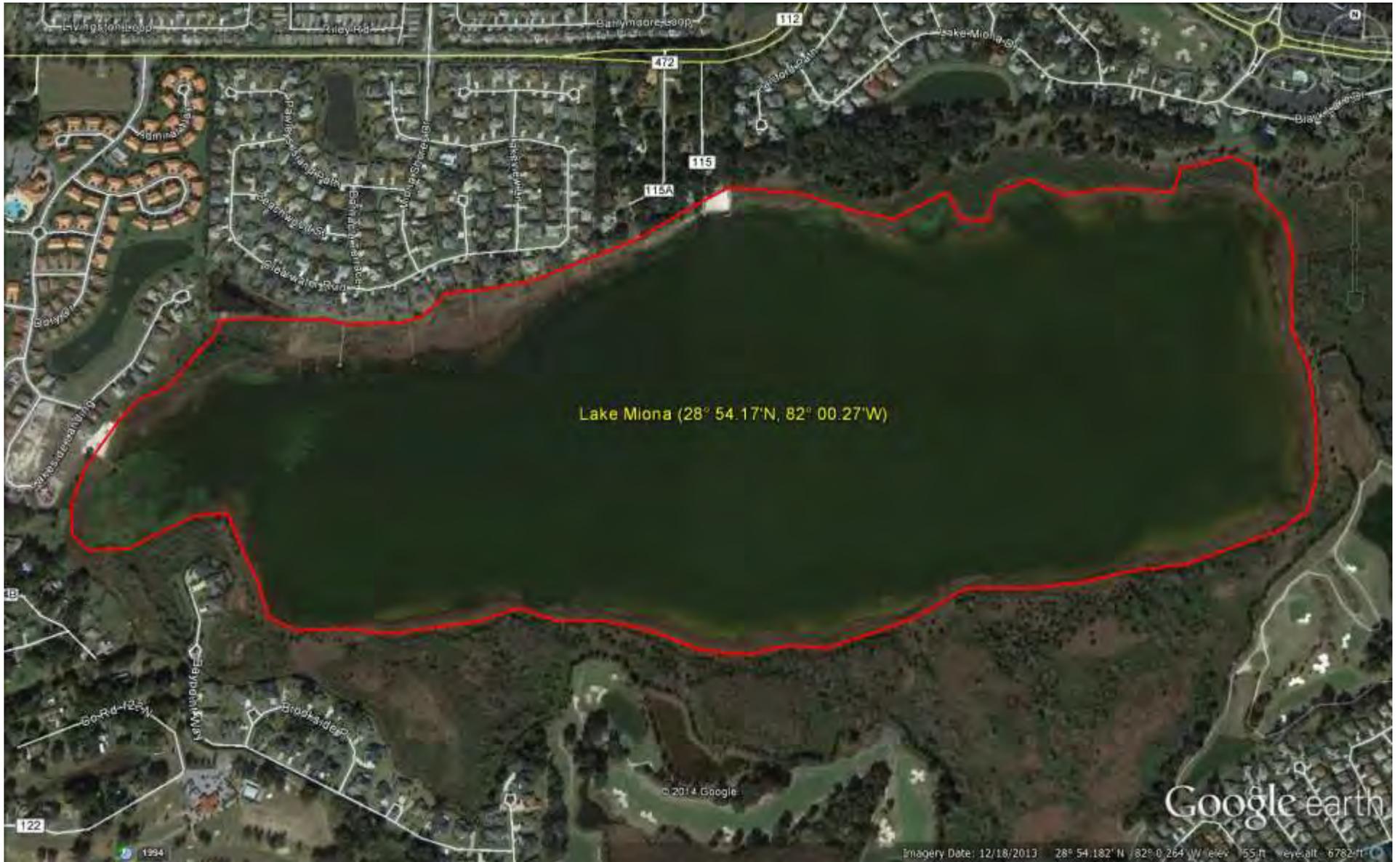
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 29 of 52



Project Number: SAJ-2015-00644 (SP-SLR)

Date: 3 June 2016

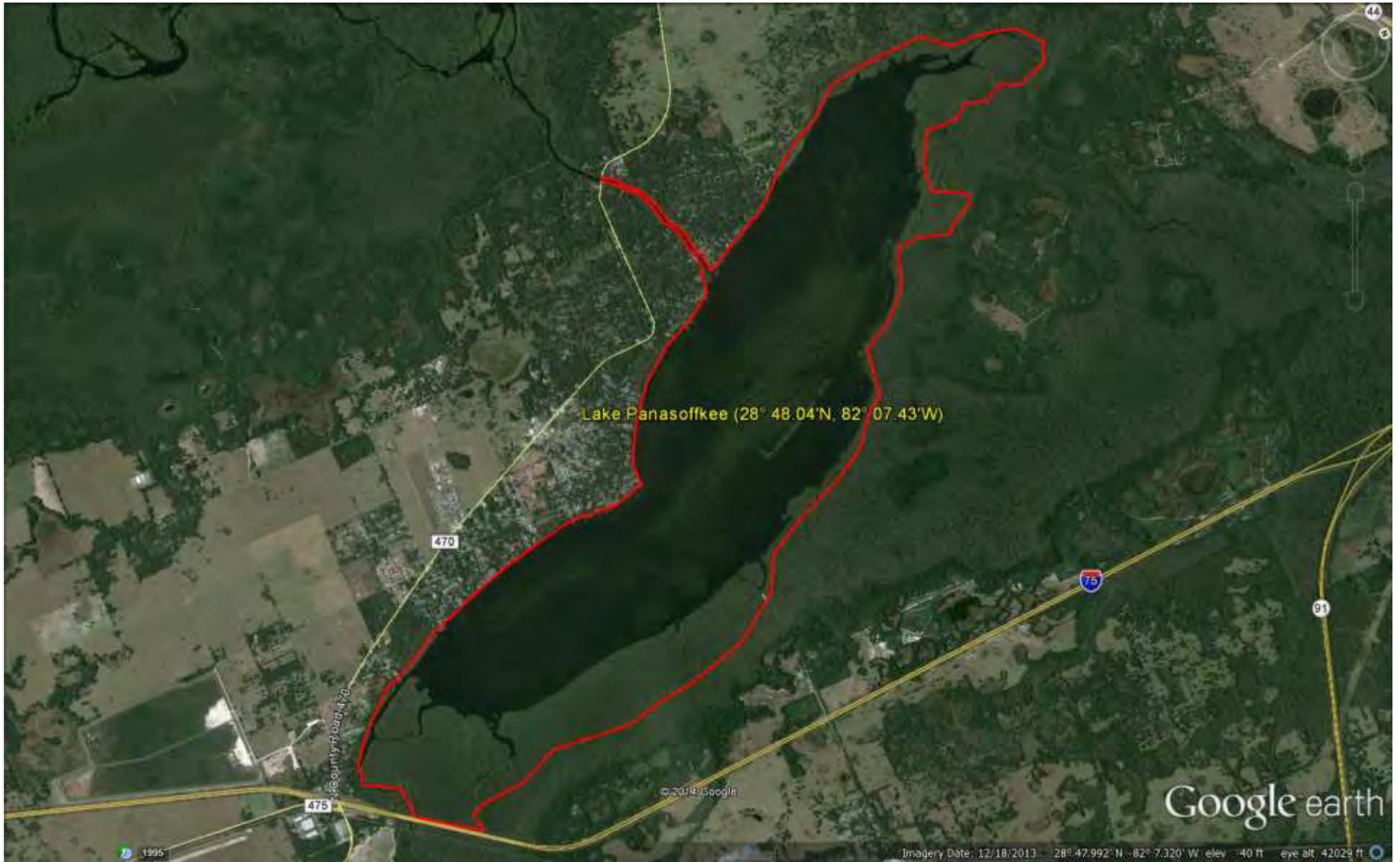
Drawing 30 of 52



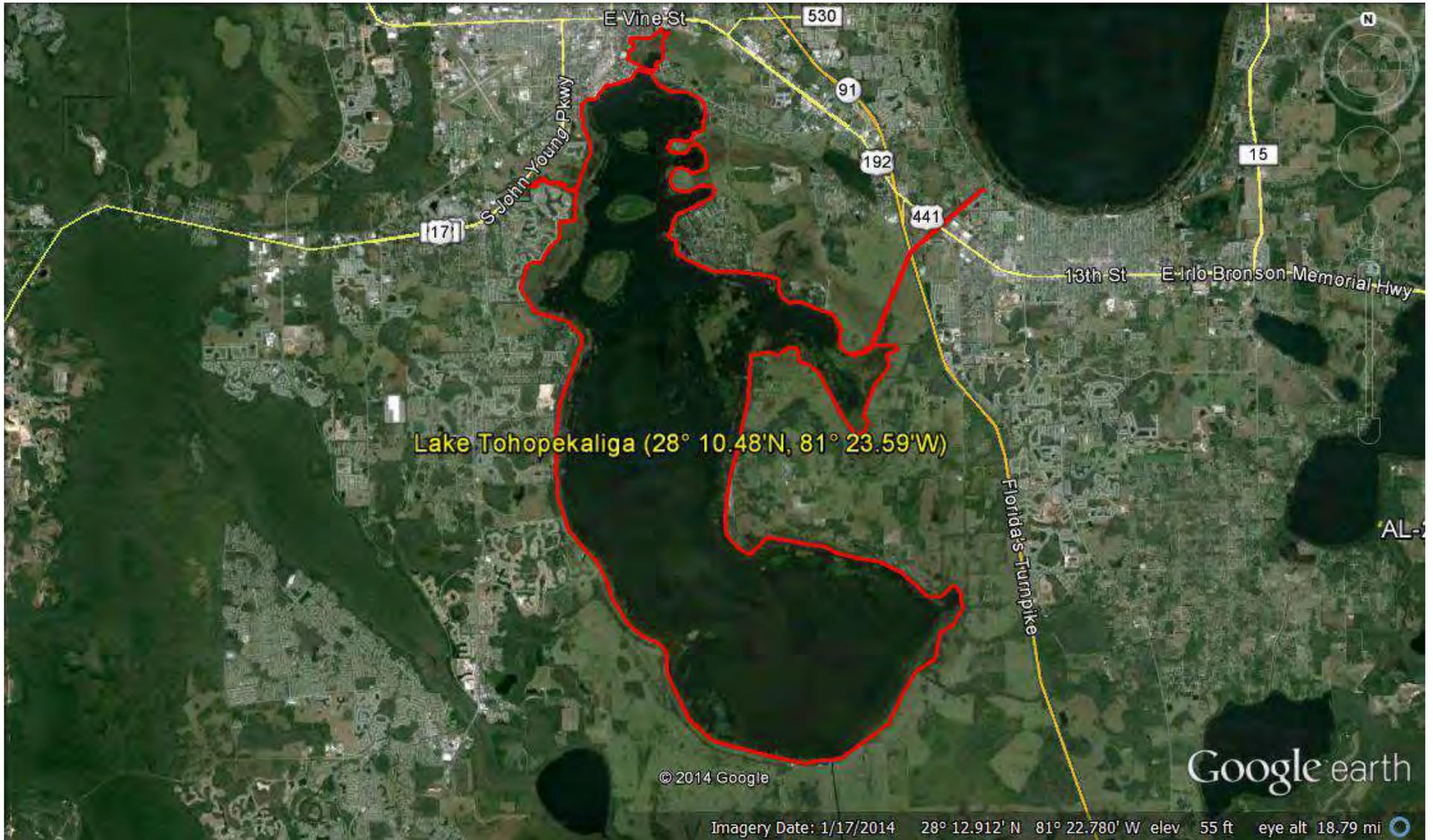
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 31 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 32 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 33 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 34 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 35 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 36 of 52



Project Number: SAJ-2015-00644 (SP-SLR)

Date: 3 June 2016

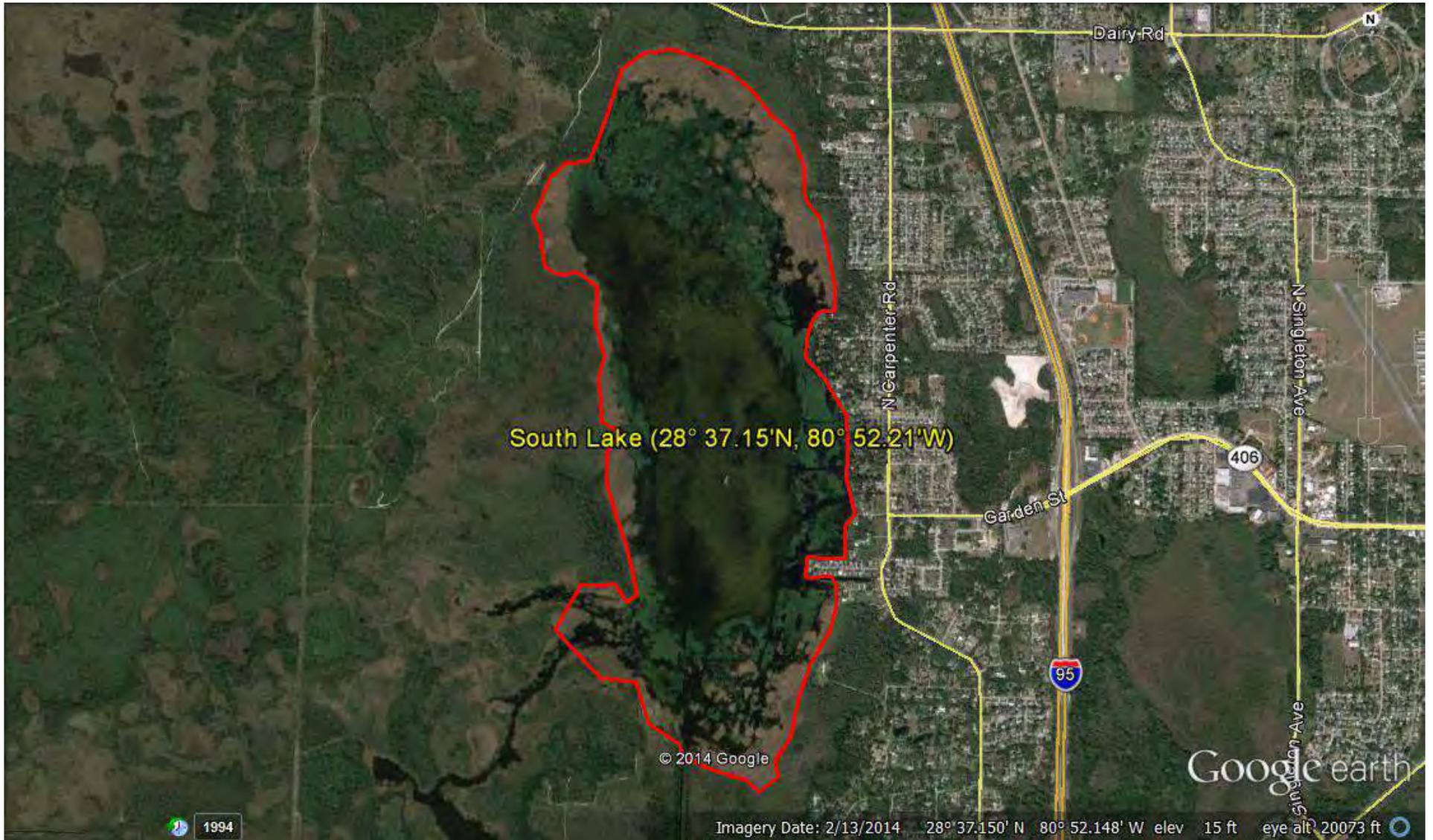
Drawing 37 of 52



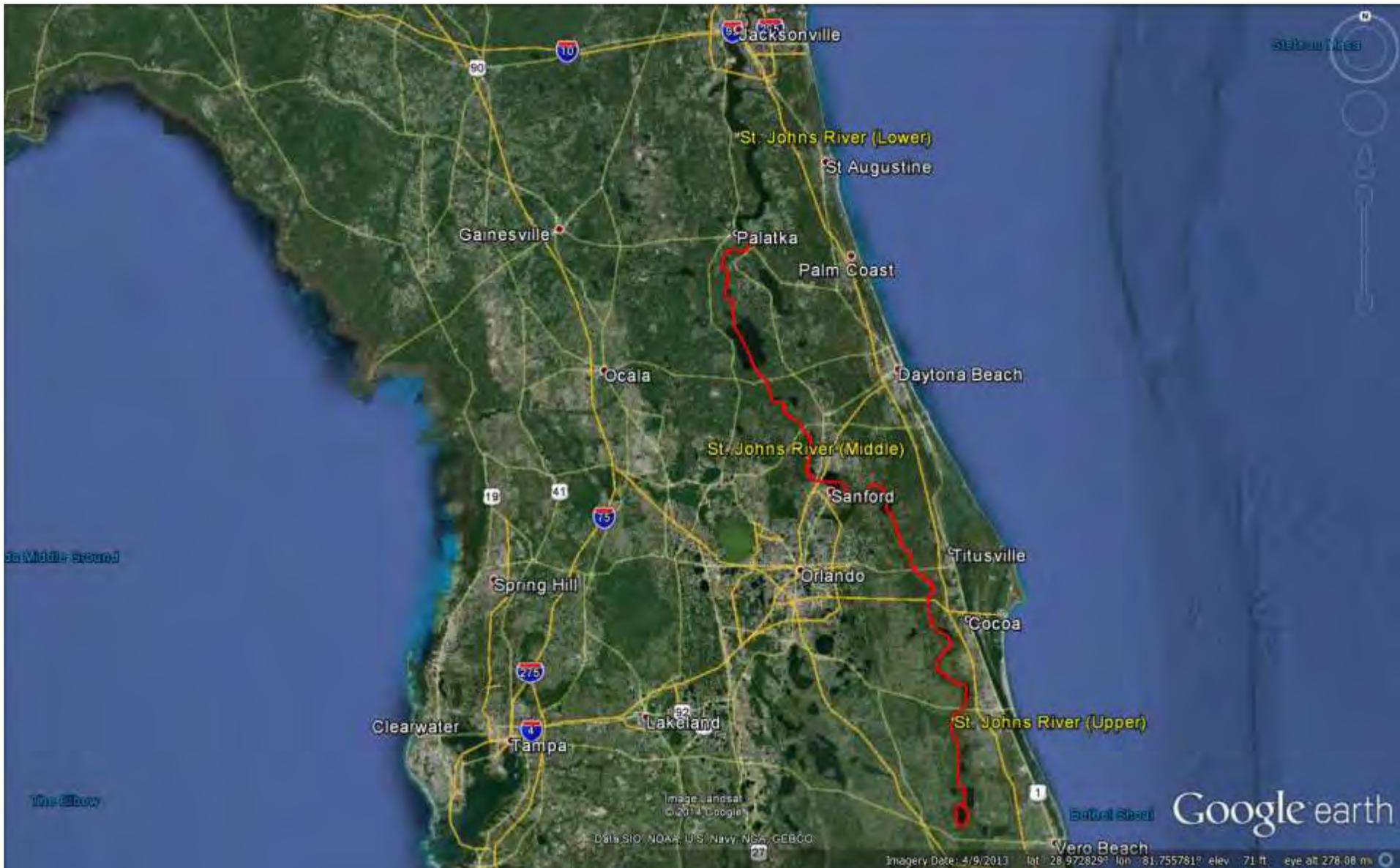
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 38 of 52



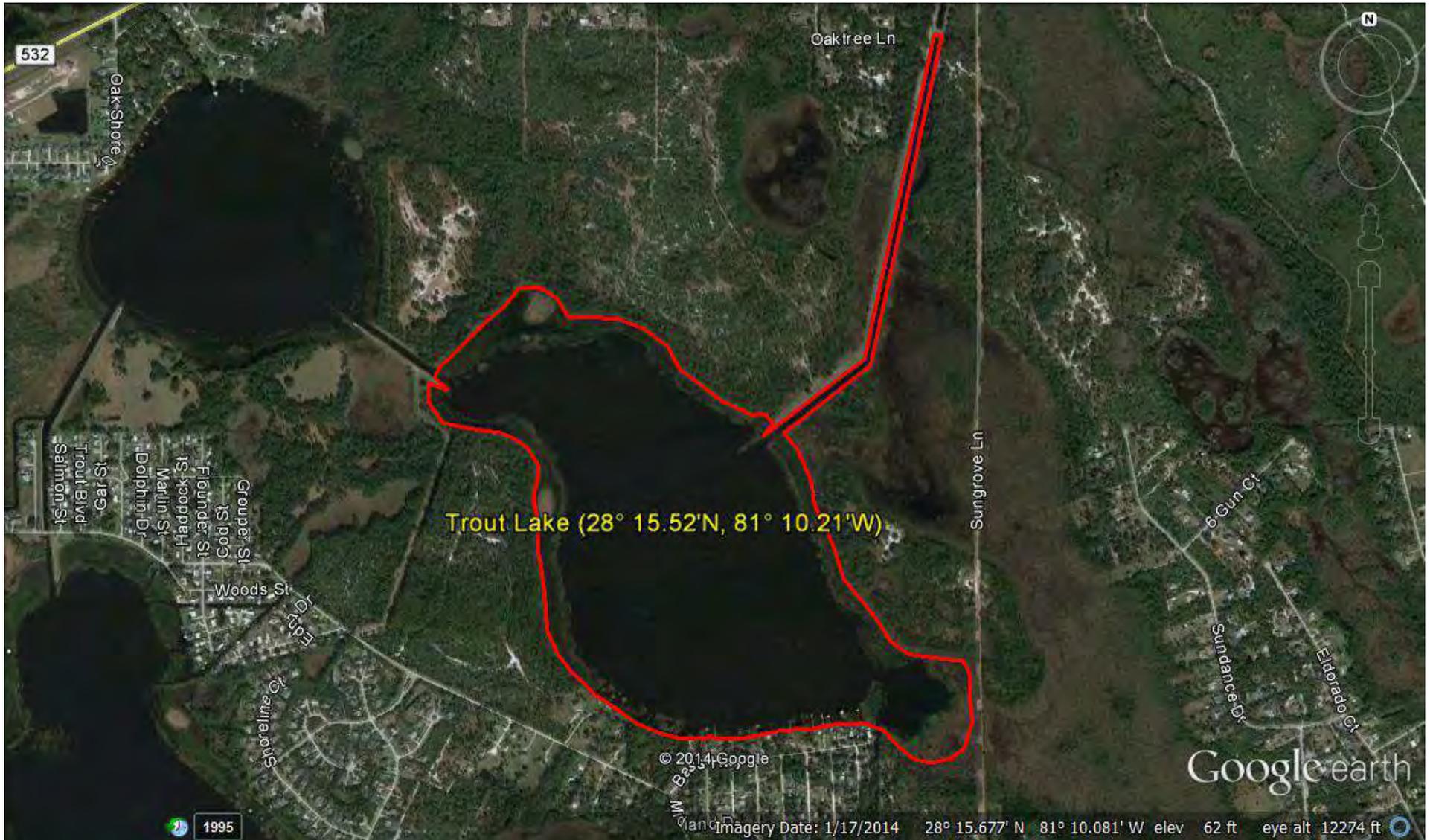
Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 39 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 40 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 41 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 42 of 52



Project Number: SAJ-2015-00644 (SP-SLR)  
Date: 3 June 2016  
Drawing 43 of 52

Management of aquatic and wetland plants is part of the Florida Fish and Wildlife Conservation Commission's (FWC) Aquatic Habitat Restoration and Enhancement (AHRE) Program and the Invasive Plant Management (IPM) Program. The mission and focus of each program is as follows:

FWC's AHRE program are based on an integrated habitat management approach and is broken into three components with the primary goal of the program being restoration, enhancement, and management of Florida's aquatic habitat for the long-term benefit of fish and wildlife and the people who utilize those resources. The three program components include mechanical removal or consolidation of exotic and invasive aquatic plants and associated organic sediments, establishment of native aquatic plant species through natural recolonization or revegetation with desirable native aquatic plant species, and management of future nuisance and invasive plant formation through control of invasive aquatic plants with herbicides and mechanical treatment (aquatic harvesting, shredding, rototilling/disking).

FWC's IPM program mission is to reduce negative impacts from invasive non-indigenous plants like water hyacinth *Eichhornia crassipes*, water lettuce *Pistia stratiotes*, and hydrilla *Hydrilla verticillata* to conserve the multiple uses and functions of public lakes and rivers. Once established, eradicating invasive plants is difficult or impossible and very expensive; therefore, continuous maintenance is critical to keep invasive plants at low levels to sustain attributes like navigation, flood control and recreation while conserving native plant habitat for fish and wildlife on sovereign state lands. A detailed description of the uses of Florida waters, how aquatic plants may impair these uses, aquatic plant control options, management plan development, and research and outreach efforts is presented in the following website:

<http://plants.ifas.ufl.edu/manage/>.

The primary difference between the two programs is AHRE's mission focuses on habitat restoration and enhancement and concentrates management efforts on nuisance plant communities (defined as "native plants that quickly shift diverse floral systems toward monocultures, are difficult to reduce in abundance, have minimal values for wetland wildlife, or out-compete plants with greater habitat value for fish and aquatic wildlife"), while IPM's primary mission is maintaining navigation, flood control and recreational access and concentrates management efforts on exotic invasive plant communities. AHRE projects are rarely "emergencies" ("situations that will result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if immediate action is not taken"), so project areas and water-bodies on which AHRE staff work is more selective. IPM often must operate under "emergency" and "urgent" ("those which would likely result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if action is not taken expeditiously, before normal

permitting procedures can be completed”) conditions and must often work on water-bodies on which they had not plan to work. AHRE’s primary “mechanical treatment” tools are the removal techniques under inundated or dewatered condition (harvesting and scraping), projects that require disposal options and can be developed and implemented over several months. IPM often uses the non-removal tools (shredding and disking/tilling), projects that can be implemented more quickly.

Lack of adequate fluctuation, reversal of the natural fluctuation cycle, and low water levels during the prime growing season for aquatic plants, and other anthropogenic influences within Florida’s natural water-bodies have encouraged expansion of exotic, invasive, and nuisance plants. Large, monoculture stands of dense cattail *Typha spp.* and pickerelweed *Pontederia cordata* encourage the development and expansion of invasive and nuisance plant communities (e.g., water primrose *Ludwigia spp.*, burhead sedge *Oxycaryum cubense*, water hyacinth, water lettuce) by reducing wind and water movement throughout littoral areas. Lack of water movement and wave energy limits flushing of detritus on which nuisance plants may form. Dense monotypic stands of cattail, pickerelweed and other tussock-forming species not only displace more diverse aquatic vegetation communities, but also increase the deposition of organic detritus on the lake bottom. Although some animals exploit tussock and tussock precursors for nesting, foraging, and protective areas, the associated loss of diverse native littoral plant communities and sandy benthic substrates reduces the function of this shallow-water habitat.

Aquatic plant communities targeted for mechanical treatment are primarily shrub (e.g., short, woody/semi-woody vegetation, such as water-primrose, Carolina willow *Salix caroliniana*, and wax myrtle *Myrica cerifera*), floating herbaceous (e.g., torpedo-grass *Panicum repens*, burhead sedge, American cupscale *Sacciolepis striata*, para-grass *Urochloa mutica*, and pickerelweed), and rooted herbaceous (e.g., cattail and knotweed *Polygonum spp.*) communities. Forested aquatic habitat (dominated by tall, woody vegetation, such as cypress *Taxodium spp.* and red maple *Acer rubrum*) are typically not targeted for mechanical treatment, unless they are creating a navigation hazard.

## **Aquatic Plant Management Mechanical Techniques FWC Employs to Control Aquatic Plants and Enhance<sup>1</sup> Florida Water-bodies**

Mechanical treatment refers to the use of machinery designed to cut, shear, shred, crush, press, lift, convey, transport, and remove aquatic plants and associated organic material from water-bodies. Mechanical treatment techniques range from small cutting boats to 90-foot long harvesters, and from shredders that slurry plants to track hoes and draglines stationed on shorelines or mounted on barges that lift plants and debris out of the water.

Throughout the 20th century, plant managers developed a variety of machines to shear, shred, crush, press, pull, convey, and remove aquatic weeds from water-bodies. Like all plant management techniques, mechanical treatment tools can be costly to combat invasive aquatic plant infestations in Florida's lakes, rivers and wetlands. Plant managers carefully select the most appropriate mechanical control by evaluating factors such as plant species in question, disposal options, management objectives and uses of the water-body, funding, and the physical characteristics of the water-body. No single machine is universally effective.

While mechanical control is one of the oldest forms of invasive aquatic plant management, it remains suitable for many of Florida's waterways. Mechanical treatment tools are used in small areas around bridges and flood control structures where immediate control is needed, or in marinas, swimming areas, fast-flowing water (such as springs), and boating trails, or where chemical, biological, and physical (non-mechanical) means of control are not practical. Mechanical treatment plays an integral role in Florida's floating island / tussock management.

Mechanical control methods have evolved to accommodate greater access and effectiveness. Basic descriptions of current mechanical control technology are described below or can be found at:

<http://plants.ifas.ufl.edu/manage/control-methods/mechanical-control>.

A detailed discussion of management considerations, including environmental impacts and permit requirements related to each of these methods, can be found at:

<http://plants.ifas.ufl.edu/manage/developing-management-plans/mechanical-control-considerations>

<http://plants.ifas.ufl.edu/manage/why-manage-plants/tussocks-and-floating-islands>

---

<sup>1</sup> "The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area."  
(2012 Nationwide Permits, Conditions, District Engineer's Decision, Further Information, and Definitions [with corrections]); [http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2012/NWP2012\\_corrections\\_21-sep-2012.pdf](http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2012/NWP2012_corrections_21-sep-2012.pdf))

### **Aquatic Plant Removal under Inundated Conditions**

Harvesters are watercraft that can lift tussock and floating island material, including some associated sediments and small trees, out of the water via a conveyor belt that extends below the water surface to a storage area on the harvesting machine. Propulsion is by paddlewheels mounted either on the side or back of the harvester. Harvesters cut the material using vertical and horizontal oscillating cutting bars, similar to cutting brownies in a pan. Harvested material is then transferred to a transport barge or hauled within the harvester to a shoreline site for removal to an off-lake upland disposal site or, if upland disposal is not feasible, an existing in-lake upland disposal island created during previously-permitted enhancement projects. Shore conveyors are used to off-load the vegetation into dump trucks and the spoil is removed to a designated off-lake upland disposal site. Harvesters have operated in Florida since the 1930s and have evolved into highly specialized machines that range in width from 4 to 12 feet and in carrying capacity from 1-20 tons. Depending on harvester size, machines can operate in water depths as shallow as 2 feet and remove floating islands with attached organic material as thick as 2.5 feet. High capacity harvesters can remove up to about an acre of dense tussocks and floating islands each day.

Excavators and draglines are used primarily when floating islands are accessible from shorelines or rights-of-way leading to flood control structures, such as when floating islands drift onto boat ramps, public beaches or against bridges or dams. Excavators and draglines consist of a boom, bucket, and cab on a rotating platform, all of which sits upon an undercarriage with tracks or wheels. Tracked excavators are sometimes called “trackhoes”. Excavators operate using a hydraulic system, while draglines are operated using a system of wire ropes. Excavators tend to be smaller and more mobile; draglines have a much longer reach, but are used most often from a single shoreline-based location. Excavators and draglines use buckets ranging in capacity from 1 – 3 cubic yards to grab and remove tussock and floating island material.

Recently, excavators have become more common in barge-mounted form for lake use to aid in removing dense problematic floating islands that harvesters and shredders would struggle with. Before 2004, floating islands away from shore access were generally small enough to be controlled with shredders, harvesters, or both. Since 2004, the size and number of tussocks and floating islands have increased significantly, pressuring harvesters and shredders capabilities, sometimes requiring the use of excavators and barges. Depending on thickness of material being removed and distance to the off-load site, this equipment can remove an acre or more a day.



### **Mechanical Shredding of Aquatic Plants (Inundated Conditions)**

Shredders are machines with rotating blades that shred and grind suspended organic sediment material, herbaceous and woody plants, as well as trees up to 12 inches in diameter. Shredders are used to manage tussocks or floating islands which have too much associated sediment for a harvester to effectively remove, dense floating plants in areas where disposal is not available or herbicide treatment is not feasible (need more immediate clearing of vegetation), or in some emergency situations (e.g., when the tussocks or floating islands are lodged against a water control structure or bridge). Shredder units operating in Florida waterways function with two bow-mounted counter-rotating blades that are thrust into the floating island or tussock. Shredders need at least two or more feet of water depth to be successfully operated. During shredding activities, whenever practical, a strip of emergent vegetation, tussock, or floating island is temporarily left around the outer edge to act as a sediment curtain, reducing impacts to water quality outside the treatment area. After shredding, the material is allowed to disperse and decompose naturally, resulting to less detrital deposition on the bottom in the long run because the tussock or floating island is not allowed to grow, adding additional biomass. When feasible, much of the shredded material may also be harvested and removed to an in-lake disposal or upland removal site. Depending on vegetation, sediment density, and composition, shredders can dismantle up to 10 acres of tussocks or floating islands each day.



### **Aquatic Plant Removal under Dewatered Conditions**

Aquatic plants and associated organic sediments can be removed with mechanized land-clearing equipment (e.g., bull-dozers, excavators, and off-road dump trucks) under dewatered conditions (naturally during drought conditions or artificially by pump-down or water release through water control structures). All work is performed within areas identified by the FWC Project Manager specifically for the purpose of aquatic habitat enhancement. Work consists entirely of aquatic plant and associated organic sediment removal. In accordance with Fla. Stat. §403.813 (1)(r), the management action removes no more than 3 feet of organic detrital material or to the natural mineral substrate, whichever is less. Removal of mineralized soils is minimized as much as feasible. After the plant and associated organic sediments are pushed into wind-rows to facilitate drying, the material is deposited in either existing in-lake upland disposal islands created during previously-permitted enhancement projects or off-lake upland disposal sites (whenever feasible) in a manner that will prevent reintroduction to waters of the State. To avoid secondary environmental damage to adjacent wetlands and prevent violations of state water quality standards, best management practices are employed throughout the project, including the use of turbidity controls as necessary.



**Non-Removal Aquatic Plant Management (Rotovating/Rototilling/Discing/Mowing)**

Rotovators use motorized rotating tines or blades to churn into the lake bottom in a similar fashion to rototilling a garden. A disc harrow consists of several iron or steel concave discs arranged into two or four sections. The discs do not turn, but simply slice through the soil. An off-set disc has discs in each alternating section facing at 90° directions to both slice and turn-over the sediment. Both pieces of equipment must be pulled behind a tractor or other piece of equipment. The intent of rotovating and discing is to turn-over and mix the organic sediment, creating a healthier aerobic environment where previously anaerobic. In Florida, rotovating and discing are used solely in dewatered conditions to enhance the long term health and quality of the water-body and bottom. Rotovators and discs can till up to ten (10) acre each day. Though rotovation disrupts the bottom sediments, releasing bound nutrients and potentially toxic residues, it does so in smaller concentrations in dewatered conditions, so any nutrients and toxic residues are not allowed to continue building up to dangerous levels that could severely impact the ecosystem and human health.

These projects typically consist of a vegetation mowing phase and organic sediment rotovating and/or discing phase under dewatered conditions within a lake's littoral zone. Mowing equipment is used to cut and/or mulch vegetation to a height no greater than six (6) inches from the lake bottom. Discing equipment is used to break up the remaining plant material and root masses. Rotovating equipment is used to incorporate the plant material and the underlying organic sediment down to mineralized soils (sand). To prevent violations of state water quality standards due to erosion and sedimentation, best management practices are employed throughout the project, including maintenance of sufficient riparian areas and the use of erosion control as necessary. The goal of these projects is to manage habitat for fish and wildlife by encouraging colonization and expansion of native herbaceous aquatic plant species, impeding littoral succession (reducing and discouraging establishment of dense herbaceous monocultures and invasive semi-woody and woody vegetation), and preventing floating island formation when water levels return to normal. Discing and rotovation also increases aeration and drying of the organic sediment, promoting breakdown of organic material. Mowing, rotovating, and discing are well-established techniques for moist-soil management covered under Nationwide Permit #30 ("Moist Soil Management for Wildlife").



**2018 Draft Final Sediment Report  
East Lake Tohopekaliga Drawdown and Habitat Enhancement**

**This report is provided in the East Lake Tohopekaliga  
Environmental Impact Statement**

# **Biological Opinion**



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960

June 21, 2019

Andrew D. Kelly, Colonel  
District Commander  
U.S. Army Corps of Engineers  
400 High Pointe Drive, Suite 600  
Cocoa, Florida 32926

Service Consultation Code: 04EF2000-2019-F-0489  
Corps Application Number: SAJ-2015-02343  
Date Received: January 28, 2019  
Project: East Lake Tohopekaliga  
Drawdown and Habitat  
Enhancement  
Applicant: Florida Fish and Wildlife  
Conservation Commission  
County: Osceola

Dear Colonel Kelly:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed East Lake Tohopekaliga (Toho) Drawdown and Habitat Enhancement project (Project) located in Osceola County, Florida and its effects on the Everglade snail kite (*Rostrhamus sociabilis plumbeus*; snail kite), wood stork (*Mycteria americana*), Audubon's crested caracara (*Polyborus plancus audobonii*; caracara), and the eastern indigo snake (*Drymarchon corais couperi*; indigo snake) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). This biological opinion is based on information provided in the December 2018 jointly developed biological assessment and other sources of information and was completed pursuant to the November 16, 2016 Service policy on *Streamlined Consultation Guidance for Restoration/Recovery Projects* and associated documents.

## BIOLOGICAL OPINION

### I. Description of the Proposed Action

The Florida Fish and Wildlife Conservation Commission (FWC) is pursuing authorization from the U.S. Army Corps of Engineers (Corps), Jacksonville District Regulatory Division, pursuant

to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbor Act of 1899 to conduct a temporary water level drawdown of East Lake Toho to accomplish organic sediment and vegetation removal and construction of two spoil islands for the purpose of littoral zone habitat enhancement.

The goal of the Project is aquatic habitat improvement, including providing long-term benefits to habitat for species listed under the Act. Major contributors to deteriorating aquatic habitat in East Lake Toho are anthropogenic stabilization of lake water levels and pollution from watershed development. Negative environmental changes include an increase in density and biomass of nuisance and exotic aquatic plants, a shift toward invasive species, and accumulation of organic sediments. Dense bands of organic material have formed within the littoral zone (on the east side of the lake), and combined with aquatic plants such as pickerelweed (*Pontederia cordata*) and cattail (*Typha* spp.), and tussocks, form a barrier that limit fish utilization of shallow spawning areas. The barrier also impacts foraging access by the endangered snail kite and the threatened wood stork. Furthermore, a decline in coverage of desirable aquatic vegetation negatively impacts the diversity and abundance of forage organisms that depend on these plant communities. This contributes to reduced sport fish production and further, may limit wading bird feeding and nesting. Project goals of aquatic habitat improvement are also intended for improving habitat for the snail kite.

FWC proposes to temporarily drawdown East Lake Toho in Osceola County from 57.0 feet National Geodetic Vertical Datum (NGVD) to 53.0 feet NGVD. Four pumps (combined capacity of 400 cubic feet per second [cfs]) are proposed to lower East Lake Toho water levels. The pumps are required because gravity-fed conveyance becomes inefficient as the lower East Lake Toho stage approaches that of Lake Tohopekaliga (District 2017). Additionally, a sheet-pile weir will be installed between East Lake Toho and Lake Runnymede to maintain higher water levels in Lake Runnymede. The proposed drawdown will begin in October 2019 or November 2019; earthwork will be conducted from February to May 2020; and East Lake Toho refill will be initiated in June 2020. The lake drawdown will temporarily increase the area of the littoral zone which dries beyond the current regulation schedule by 875 acres. East Lake Toho will remain below the current regulation schedule for 7 to 8 months. The drawdown will also affect water stages in Fells Cove and Lake Ajay to the north. This activity will expose an additional 249 acres beyond the area exposed under the existing schedule. Other proposed activities include scraping of the undesired organic sediments for consolidation into two spoil islands for long-term storage. Additional management activities planned for the low water period from February to May 2020 will include vegetation management, herbicide application and prescribed burning. Approximately 200 acres of dense cattail is proposed to be sprayed and burned.

Aquatic plants and associated organic sediments will be scraped and removed with mechanized land-clearing equipment (e.g., bull-dozers, excavators, and off-road dump trucks) under dewatered conditions from approximately 105 acres on the east shore of East Lake Toho. All work will be performed within areas identified by the FWC project manager specifically for the

purpose of aquatic habitat enhancement. Work will be restricted to removal of plant and associated organic sediments. In accordance with Florida Statute (F.S.) §403.813 (1)(r), the management action will remove no more than 3 feet of organic detrital material or down to the natural mineral substrate (sand), whichever is less. Removal of mineralized soils will be minimized as much as feasible. After the plant and associated organic sediments are pushed into wind-rows to facilitate drying, the material will be used to create the two in-lake spoil islands. Approximately 8 acres of wetland and open water habitat will be permanently impacted by the creation of the two spoil islands. Woody vegetation will be burned. To avoid secondary environmental damage to adjacent wetlands and prevent violations of state water quality standards, best management practices (BMPs) will be employed throughout the Project, including the use of turbidity controls where necessary (Permit No: SAJ-2015-00644 [SP-SLR], drawing 47/52) (Corps 2016).

The proposed Project will leave isolated pockets of natural habitat in place along the eastern shore within the area proposed to be scraped. This will leave approximately 25 percent (approximately 6 acres) of the island habitat along with some neighboring habitat within the proposed scrape area. Weedy and invasive plants near conserved islands will be removed. The natural habitat that will be retained is in moderate condition. The plant diversity on the islands varies but generally the islands provide important ecosystem structure and function.

Criteria used to select islands include:

- Within proposed scrape polygon leave 7 islands and some adjacent vegetation
- Natural areas in good condition will be preserved and distributed more or less equally spaced across the entire proposed scrape area
- Selected habitat areas will contain larger trees and have higher diversity

Additional benefits provided by retaining natural areas will include:

- Protection of habitat for species that utilize natural areas within the existing littoral zone including wading birds, migratory birds, amphibians and reptiles
- Decreases the amount of material that will be transported
- Decreases in the footprint and/or height of created spoil islands
- Limits the potential to release nutrients that are already concentrated/isolated in natural features
- Providing foraging habitat for wading birds
- Providing roosting habitat for snail kite
- Availability of woody material
- Maintenance of habitat for American alligators (*Alligator mississippiensis*) and other reptiles and amphibians (i.e. sirens and amphiuma)

### **Conservation Measures**

The following minimization and conservation measures were developed through coordination among state and federal agencies involved in the Project, including the Service, Corps, FWC, and the South Florida Water Management District (District):

1. Contractors will be required to commit to avoiding, minimizing, or mitigating for adverse effects during construction activities by ensuring turbidity controls are utilized to meet State Water Quality Standards (SWQS) during all construction activities.
2. Contractors will be required to implement a spill prevention plan.
3. Contractors will implement the BMPs listed in Table 2-2 of the Corps' biological assessment (Corps 2018), which includes BMPs for dewatering; activities in dewatered conditions; activities in inundated conditions; and for sediment control, as needed.
4. FWC will minimize all disturbance in upland and pastures/grasslands adjacent to the Project area to protect potential caracara habitat.
5. If upland disposal is pursued as part of the project, caracara nest surveys will be conducted according to the most recent Service protocol. If caracara nests are detected, conservation measures will be implemented within the designated management zones as recommended by the Service.
6. The *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013) will be implemented for all activities conducted in upland habitat adjacent to East Lake Toho (ex. Chisholm Park staging area).
7. Most of the water level manipulation in East Lake Toho will occur prior to the peak snail kite nesting season (February to June).
8. Water will be lowered in East Lake Toho beyond the extent of most herbaceous vegetation prior to February 15 to discourage nesting of snail kites.
9. Water level ascension in June will be conducted sufficiently slowly (less than one foot per month) to promote vegetation stability and snail kite survival.
10. Snail kite nesting surveys will be conducted prior to the onset of drawdown. If nests are identified, close coordination with the Service will be required to determine the most appropriate course of action.
11. The Project will not be implemented if extreme wet or extreme dry conditions exist throughout the Kissimmee Chain of Lakes and into critical snail kite nesting areas to the south. Extreme conditions are defined as the lower or upper quartile of long-term average stage and rainfall (District 2017).
12. The Project will retain approximately 6 acres of the island habitat, as well as adjacent native habitat, distributed within the proposed eastern scrape area to provide available woody vegetation for snail kite roosting.

## **II. Status of the Species or Critical Habitat**

### **A. Relevant Life History**

#### Snail kite

Snail kites are dietary specialists, a relatively rare foraging strategy among raptors. The Florida apple snail (*Pomacea paludosa*) is the snail kite's principal prey in Florida and makes up the great majority of the snail kites' diet (Sykes 1987a; Kitchens et al. 2002). Throughout the range of all subspecies of snail kites, *Pomacea* spp. snails consistently

compose the primary prey of snail kites (Sykes 1987a; Beissinger 1990). Several species of non-native apple snails have become established recently within the snail kite's range in Florida and have been used to varying degrees by snail kites. Whether exotic apple snails are a threat to snail kites is not yet known (Sustainable Ecosystems Institute 2007a, 2007b). The close tie between the snail kite and the Florida apple snail require consideration of both species when developing management strategies and addressing potential impacts.

Snail kites and their primary prey are both wetland-dependent species and rely on wetland habitats for all aspects of their life history. The primary wetland habitat types upon which snail kites rely consist of freshwater marshes and the shallow-vegetated littoral zones along the edges of lakes (natural and man-made) where apple snails occur in relatively high abundance and can be found and captured by snail kites.

While snail kites are capable of foraging successfully under a variety of habitat conditions, the preferred foraging habitat is typically a combination of relatively short-stature, sparse graminoid marsh vegetation less than 6.5 ft in height. The apple snail generally requires emergent aquatic plants to provide substrate that allows them to reach the water surface to breathe. However, for snail kites to feed, the emergent vegetation must be sparse enough that they are capable of locating and capturing snails (Kitchens et al. 2002). Marshes and lake littoral zones composed of interconnected areas of open water 0.6 to 4.3 ft deep that are relatively clear and calm with patches of herbaceous emergent wetland plants or sparse continuous growth of herbaceous wetland plants generally provide the appropriate balance of emergent vegetation and open water (Sykes et al. 1995; Kitchens et al. 2002). Marsh species that commonly occur within favorable snail kite foraging habitat include spike rush (*Eleocharis cellulosa*), maidencane (*Panicum hemitomon*), sawgrass, bulrush (*Scirpus* spp.), and/or cattails. Shallow open-water areas may also contain sparse cover of species such as white water lily (*Nymphaea odorata*), arrowhead (*Sagittaria lancifolia*), pickerelweed (*Pontederia lanceolata*), and floating heart (*Nymphoides aquatica*). Periphyton growth on the submerged substrate provides food source for apple snails, and submerged aquatic plants, such as bladderworts (*Utricularia* spp.) and eelgrass (*Vallisneria* spp), may contribute to favorable conditions for apple snails while not preventing snail kites from detecting snails (Sykes et al. 1995). Foraging habitat conditions that differ substantially from those described here will result in either reduced apple snail density or reduced ability of snail kites to locate and capture snails. Vegetation cover that is either too dense or too sparse can result in reduction in the quality of the area as foraging habitat.

Using field data from 1995 to 2004, Darby et al. (2006) estimated that native apple snail densities less than 0.14 individuals per square-meter are unable to support snail kite foraging in WCA-3. Darby et al. (2008) also reported that adult snails can survive dry downs lasting up to 12 weeks, although smaller snails survive at lower rates (i.e., less than 50 percent alive after 8 dry weeks). Snail recruitment may be truncated if dry downs occur during the peak breeding season when young snails can become stranded (Darby et al. 2008). Darby et al. (2009) recommended a range of water depths between 4 and 20 inches during the peak

native apple snail breeding period between April and June in the Everglades. Bernatis (2017) reported that egg masses of both native and invasive apple snail species were observed on emergent vegetation at depths up to 1.75 m in East Lake Toho.

The snail kite breeding season in Florida varies from year-to-year and is affected by rainfall and water levels (Sykes et al. 1995; Fletcher et al. 2016b). Ninety-eight percent of the nesting attempts are initiated from December through July, while 89 percent are initiated from January through June (Sykes 1987c; Beissinger 1988; Snyder et al. 1989), with the peak in nest initiation occurring from February to April (Sykes 1987c). Snail kites often re-nest following failed attempts early in the season as well as after successful attempts (Beissinger 1986; Snyder et al. 1989), but the actual number of clutches per breeding season is not well documented (Sykes et al. 1995). In every year since 2010, snail kites have nested past July 1st in at least one location in Florida, and since 2012, active snail kite nests have been found into late August (2015), late September (2012, 2013, and 2014), and late October (2016). It is not clear if this is typical, or a new response to environmental conditions, abundance of exotic apple snails, or other factors. These “late season” events do tend to be concentrated in one or two water bodies during the years they occur (i.e., 2012 – Lake Toho; 2013 – STA 1E and STA 5; 2014 – STA 5; 2015 – Mary A Mitigation Bank; and 2016 – Lake Okeechobee).

Nesting almost always occurs over water, which may deter predation (Sykes 1987b). An important feature for snail kite nesting habitat is the proximity of suitable nesting sites to favorable foraging areas. Thus, extensive stands of contiguous woody vegetation are generally unsuitable for nesting, whereas suitable nest sites consist of single trees or shrubs or small clumps of trees and shrubs within or adjacent to an extensive area of suitable foraging habitat. Trees usually less than 32 ft tall are used for nesting and include willow (*Salix* spp.), bald cypress (*Taxodium distichum*), pond cypress (*Taxodium ascendens*), *Melaleuca quinquenervia*, sweetbay (*Magnolia virginiana*), swamp bay (*Persea borbonia*), pond apple (*Annona glabra*), and dahoon holly (*Ilex cassine*). Shrubs used for nesting include wax myrtle (*Myrica cerifera*), cocoplum (*Chrysobalanus icaco*), buttonbush (*Cephalanthus occidentalis*), *Sesbania* sp, elderberry (*Sambucus simpsonii*), and Brazilian pepper (*Schinus terebinthifolius*). Nesting also can occur in herbaceous vegetation, such as sawgrass, cattail, bulrush, and reed (*Phragmites australis*) (Sykes et al. 1995). Nests are more often observed in herbaceous vegetation around Lake Kissimmee and Lake Okeechobee during periods of low water, when dry conditions beneath the willow stands (which tend to grow to the landward side of the cattails, bulrushes, and reeds) prevent snail kites from nesting in woody vegetation. Nests constructed in herbaceous vegetation on the lake-ward side of the lakes’ littoral zone are more vulnerable to collapse due to the weight of the nests, wind, waves, and boat wakes and are more exposed to disturbance by humans (Chandler and Anderson 1974; Sykes and Chandler 1974; Sykes 1987b; Beissinger 1986, 1988; Snyder et al. 1989).

### Wood stork

The wood stork is the only stork that breeds in the United States and is found primarily in the southeast region. Wood storks begin breeding at 3 to 4-years of age, but the average first age of breeding is unknown. Wood storks historically began laying eggs in early October in south Florida and into late June in north Florida (Rodgers 1990). However more recently in south Florida, wood storks have begun laying eggs in late January early February (pers. comm. Mark Cook). The wood storks in the northern distribution of their range (Georgia, South Carolina, North Carolina) begin pair formation in early March or April. A single clutch of two to five eggs (average three) are laid per breeding season, but a second clutch may be laid if a nest failure occurs early in the breeding season (Coulter et al. 1999).

During the nesting period, wood storks are dependent on consistent foraging opportunities in wetlands within about 18.6 miles of the nest site with the greatest energy demands occurring during the middle of the nestling period, when nestlings are 23 to 45 days old (Kahl 1964). The average wood stork family requires 443 pounds of fish, crustaceans, and other prey during the breeding season with 50 percent of the nestlings' food requirement occurring during the middle third of the nestling period (Kahl 1964). It is estimated that approximately 110 pounds are needed to meet the foraging needs of the adults and nestling in the first third of the nesting cycle. Receding water levels are necessary in south Florida to concentrate suitable densities of forage fish (Kahl 1964; Kushlan et al. 1975).

Wood storks forage in a wide variety of wetland types. Wetland habitat types used include freshwater marshes, ponds, hardwood and cypress swamps, narrow tidal creeks or shallow tidal pools, and artificial wetlands such as stock ponds, shallow and seasonally flooded roadside or agricultural ditches, and managed impoundments (Coulter and Bryan 1993; Coulter et al. 1999). Optimal foraging habitat consists of shallow-water wetlands (2 to 16 in [5 to 40 cm] in depth) that are sparsely vegetated (Ogden et al. 1978; Browder 1984; Coulter 1987; Coulter and Bryan 1993).

Hydrological patterns of wetland habitats in south Florida affect their suitability for wood stork foraging. The annual hydrological pattern of wetland systems consists of water levels rising and peaking during the wet season (June to November) when the majority of the yearly total precipitation occurs, and gradually receding during the dry season (December to May). Shallow water levels within wetlands concentrate prey items (i.e., fish) as they dry out and this is of particular importance during the wood stork nesting season (Kahl 1964). Therefore, a wetland site in south Florida may only provide suitable foraging conditions during part of the year when the water level has receded sufficiently to allow access and concentrate prey items. Consequently, during the nesting season there is a general progression in the suitability of wetlands for foraging based on their hydroperiods, with short hydroperiod wetlands used early in the season, mid-range hydroperiod wetlands used during the middle of the nesting season, and long hydroperiod wetlands used during the latter part of the nesting season (Kahl 1964; Gawlik 2002). Generally, wood storks use wet

prairie ponds early in the dry season then shift to slough ponds later in the dry season, thus following water levels as they recede into the ground (Browder 1984).

Wood stork nesting habitat consists of a variety of wooded habitat types. These include mangroves as low as 3 feet in height, cypress as tall as 100 feet, and various other live and dead shrubs or trees located in standing water (swamps) or on islands surrounded by relatively broad expanses of open water (Palmer 1962; Rodgers et al. 1987; Ogden 1991; Coulter et al. 1999). Wood storks generally occupy the large-diameter trees at a colony site, because they nest often in conjunction with other wading bird species (Rodgers et al. 1996). The same colony site will be used for many years as long as the colony is undisturbed and sufficient feeding habitat remains in surrounding wetlands. However, not all wood storks nesting in a colony will return to the same site in subsequent years (Kushlan and Frohring 1986). Natural wetland nesting sites may be abandoned if surface water is removed from beneath the trees during the nesting season (Rodgers et al. 1996). In response to this type of change to nest site hydrology, wood storks may abandon a site and establish a breeding colony in managed or impounded wetlands (Ogden 1991). Wood storks that abandon a colony early in the nesting season due to unsuitable hydrological conditions may re-nest in other nearby areas (Borkhataria et al. 2004; Crozier and Cook 2004).

#### Caracara

The caracara is a resident, non-migratory species that occurs in Florida as well as the southwestern United States and Central America. Florida's population of caracara is found in the prairie area of the south-central region of the State, from Polk and Osceola Counties southward to Collier and Broward Counties. The caracara is most abundant in a five-county area that includes Glades, DeSoto, Highlands, Okeechobee, and Osceola Counties (Service 1999).

Adult caracaras establish territories, which average approximately 3,000 acres (ac) [1,200 hectares (ha)], where they are typically found year round (Morrison and Humphrey 2001). This average territory size equates roughly to a territory within a radius of 1.9 miles from the nest site (Morrison 2001). Territory size ranges from about 1,000 acres to about 5,000 acres, likely dependent upon the quality of the habitat.

Caracaras are one of the first of Florida's raptors to begin nesting. Although breeding activity can occur from September through June, the primary breeding season is considered to be November through April. Nest initiation and egg-laying peak from December through February. Caracaras construct new nests each nesting season, often in the same tree as the previous year. Both males and females participate in nest building. Nests are well concealed and most often found in the tops of cabbage palms (Morrison and Humphrey 2001), although nests have been found in live oaks (*Quercus virginiana*), cypress (*Taxodium distichum*) (first record, Morrison et al. 1997), Australian pine (*Casuarina spp.*), saw palmetto (*Serenoa repens*), and black gum (*Nyssa sylvatica*). Caracaras usually construct their nests 4 to 18 meters above the ground, and the nest structure primarily consists of

stems from herbaceous and woody shrubs, vines, grasses or other plant materials woven together and trampled to form a depression (Bent 1938; Sprunt 1954; Humphrey and Morrison 1997; Smith and Scholer 2013).

The caracara prefers habitats that contain largely short-stature vegetation with a low density of trees that can be used for nesting. Historically, caracaras inhabited native dry or wet prairies containing scattered cabbage palms, their preferred nesting tree. Scattered saw palmetto, low-growing oaks (*Quercus minima*, *Q. pumila*), and cypress also occur within these native communities. Over the last century, many of the native prairie vegetation communities in central and south Florida have been converted for cattle ranching, and have been replaced by improved and unimproved pasture dominated by non-native, sod-forming grasses. Caracaras occur within these pastures, presumably because the vegetation structure of this habitat type is similar to that of native prairies. In addition, the scattered cabbage palms that are often present within improved pastures provide nesting sites for caracaras. Morrison and Humphrey (2001) hypothesize that habitats with short-stature vegetation may be preferred by the caracara, due to its tendency to walk on the ground while foraging. The height and relatively simple structure of the vegetation may directly facilitate foraging by caracaras because it is easier to walk through and provides less cover for predators. Consequently, caracaras likely benefit from management actions, such as regular mowing, burning, and high-density grazing in agricultural lands and prescribed burning in native habitat types that maintain vegetation in a low stature and structurally simple condition (Morrison and Humphrey 2001).

#### Indigo snake

Although the indigo snake is a diurnal (active during the day) species (Stevenson et al. 2008) it is not amenable to standard population survey and mark/recapture methods like most snake species (Steen 2010), and a robust, inexpensive survey technique has not been found (Enge 1997, Smith and Dyer 2003, Stevenson et al. 2003, Alessandrini 2005, Ford and Ford 2005, Bolt and Weiss 2006, Mason et al. 2007, Stevenson et al. 2009, Hyslop et al. 2009b, Stevenson et al. 2010, Rothermel 2017). However, even though the indigo snake is difficult to consistently locate in the field we have learned important life history characteristics from numerous studies.

The current distribution of the indigo snake has a reduced geographic area compared to its historic range. Enge et al. (2013) described current extant populations (records post year 2000) to occur in much of its historical range in Georgia and Florida but records are lacking or scarce in portions of that range. Indigo snakes are extirpated or are very rare in the Florida Panhandle and Southwest Georgia. Naturally occurring populations are probably no longer extant in Alabama and Mississippi based on lack of recent records (Enge et al. 2013). The majority of recent records for the indigo snake are from southeastern Georgia and peninsular Florida. The indigo snake may persist in the panhandle of Florida, but only in low numbers.

Indigo snakes breed during the autumn and winter months, October through February. Males are often aggressive during this time competing for mates. Few nest sites have been observed but they have been found in open-canopied sandy habitats associated with gopher tortoise burrows (Stevenson et al. 2008, Newberry et al. 2009). Hyslop (2009a) found females using upland sandhills in early spring, after males had mostly dispersed to lowland habitats, specifically using a higher proportion of abandoned gopher tortoise burrows during what was assumed to be just prior to nesting.

In more southern parts of their range in Peninsular Florida, indigo snakes become more habitat generalists and move among the available habitat types but maintain a strong affinity to upland habitats (Bauder et al. 2016, Bauder et al. 2018). Unlike in northern regions, male indigo snakes take longer, more frequent movements and have larger home ranges during the winter breeding season, although both male and female home ranges tend to be smaller overall than those in the north (Bauder et al. 2016). A comparison of Peninsular Florida mean annual home range size with mean annual home range size in Southeast Georgia, using data from Hyslop et al. (2014), is described in Bauder et al. (2016): male home range of 369 ac (149 ha) in Peninsular Florida versus 1,260 ac (510 ha) in Southeast Georgia; female home range of 121 ac (49 ha) in Peninsular Florida versus 252 ac (102 ha) in Southeast Georgia.

Throughout Peninsular Florida, the indigo snake may be found in almost all terrestrial habitats except in areas with high-density urban development (Moler 1992, Enge et al. 2013). From the latitude of around Gainesville, Florida, south, they are less tied to longleaf pine sandhills and become more habitat generalists, although they still require below-ground shelter sites and commonly use gopher tortoise burrows and sandy xeric habitats when these are available (Layne and Steiner 1996, Enge et al. 2013, Bauder et al. 2016). Indigo snakes can be common in some hydric hammocks (Moler 1985, Bauder et al. 2018). On the sandy central ridge (i.e., Lake Wales Ridge) of south Florida, indigo snakes may use gopher tortoise burrows more (62 percent) than other underground shelter (Layne and Steiner 1996). In extreme southern Florida, they are typically found in pine flatwoods, pine rocklands, tropical hardwood hammocks, and in most other undeveloped areas (Kuntz 1977, Enge et al. 2013). Below-ground shelter sites used in these areas include burrows of armadillos, hispid cotton rats (*Sigmodon hispidus*), and land crabs; burrows of unknown origin; natural ground holes; hollows at the base of trees or shrubs; ground litter; trash piles; and crevices of rock-lined ditch walls (Layne and Steiner 1996).

## **B. Status of the Species**

### Snail kite

Since 1997, population estimates and estimates of demographic parameters for the snail kite have been generated exclusively employing mark-recapture methods that incorporate detection probabilities. From 1997 through 1999, the snail kite population was estimated to be approximately 3,000 birds (Dreitz et al. 2002). From 1999 through 2002, the population

estimates declined each year until they reached a low level of approximately 1,400 birds in 2002 and 2003, then increased slightly to about 1,700 birds in 2004 and 2005 (Martin et al. 2006a). The snail kite population exhibited steep declines in both 2007 and 2008, with estimates of 1,204 birds and 685 birds, respectively, but rebounded slightly starting in 2010. The 2012 population estimate was 1,218 birds (Cattau et al. 2012). The 2013 population estimate was similar at 1,198 birds (Fletcher et al. 2014). In 2014, the population was significantly higher (1,754 birds [95% CI = 1605-1897]) primarily due to stable fledging rates in Lake Okeechobee and an increase in fledging in the Everglades and Stormwater Treatment Areas (STAs) south of Lake Okeechobee (Figure 5; Fletcher et al. 2017). In 2015, the population estimate was 2,127 (95% CI = 2,000-2,338), a significant increase from the 2014 estimate (Fletcher et al. 2016a). For 2016, Fletcher et al (2017) reported that the population remained “essentially unchanged (when accounting for uncertainty)” (i.e., 2,056 kites [95% CI = 1,930-2,189]). The population estimate following the 2017 nesting season was 2,585 kites (95% CI = 2,619-2,979; Fletcher et al. 2018).

#### Wood stork

Since listing, annual nest counts have increased significantly in south Florida from 1,245 pairs in 1984 to 2,799 pairs in 2014. Annual nest counts in the vicinity of 2,712 pairs in north and central Florida have not significantly changed during this same time period. From 1991 to 2014 statewide surveys in Florida suggest that the nesting population is increasing and, while colonies are declining in size, the overall number of colonies is also increasing (Frederick and Meyer 2008). Florida’s nest counts have also shown an increase from 5,647 to 7,216 pairs since listing. As a result of increased nesting populations throughout their range, the wood stork was reclassified under the Endangered Species Act from an endangered species to a threatened species in 2014. Historically, colonies in the south were associated with extensive wetland systems and predictable patterns of prey availability. Ogden et al. (1987) suggested the population shift was the result of deteriorating feeding conditions in south Florida and better nesting success rates in central-north Florida that compound population growth in that area. Further evidence of a general northern breeding range expansion occurred in 2005 when wood storks were first documented nesting successfully in North Carolina. Wood storks have continued to nest in North Carolina, and the number of nesting pairs has increased from 32 in 2005 to 284 in 2014.

#### Caracara

Monitoring the caracara population, determining territory occupancy, and nesting effort and success, is very difficult, because most caracara breeding territories occur on private lands in Florida that are not accessible to researchers (Humphrey and Morrison 1997). Consequently, estimates of the caracara population have been based on counts of caracaras along roadsides (Heinzman 1970; Layne 1995). These roadside counts have the potential to be strongly affected by the presence of non-territorial juvenile and sub-adult birds during the period when they are nomadic. Furthermore, the abundance of non-breeding adults further complicates estimating breeding pairs from roadside counts. Because the occurrence and

density of caracaras is not evenly distributed (due to congregations and nomadic individuals) within the region they occupy, roadside surveys are probably unreliable for estimating the overall population.

Morrison and Humphrey (2001) noted the caracara was perceived to be in long-term decline, although adequate data was not available on historic patterns of abundance, or habitat used to accurately assess the status of the species. Heinzman's (1970) 4-year road survey from 1967 to 1970 suggested fewer than 100 individual caracaras at 58 localities remained in Florida. Stevenson (1976) concurred with this estimate in 1974. Layne (1996) monitored caracara distribution and population status in Florida from 1972 to 1991. Observations made by Layne (1996) estimated the adult portion of the population was stable with a minimum of about 300 birds in 150 territories. The immature portion of the population was estimated to be about 100 to 200 individuals, increasing the total statewide population estimate to 400 to 500 birds. However; these population estimates were likely biased because they were based on roadside counts of birds, and roadsides were surveyed more intensively than areas away from roads. Given the challenges associated with accessing all the potential habitat within the caracara's range, conducting a reliable range-wide survey of the population and obtaining an accurate estimate of the caracara's current population size remains difficult.

Evidence from behavior suggests habitat is limited for the caracara, and the species is at or near carrying capacity within the existing habitat (Morrison et al. 2007). Monitoring of caracara breeding areas since the 1990s found that breeding territories tend to remain occupied and that breeding is attempted every year. The fact that territories are not seen regularly coming and going is consistent with the assertion that all possible breeding sites are occupied (Morrison et al. 2007). In addition, Dwyer et al. (2012) tracked individual nonbreeding caracaras in adult plumage for over three years and found these birds never established breeding territories. This information indicates that the tracked caracaras were unable to find suitable breeding sites, again supporting the concept that no suitable breeding habitat is available to the breeding age birds and the existing breeding habitat is at carrying capacity. Furthermore, Dwyer et al. 2010 noted that nonbreeding adults (floaters) made up approximately 40 percent of the nonbreeding population.

#### Indigo snake

The Project area falls within the Peninsular Florida region of the state. The Peninsular Florida region includes central and south Florida counties south of the latitude of Gainesville, Florida where indigo snakes are less dependent on gopher tortoise burrows for overwintering shelter. A total of 1,107 records are reported for this region with 533 recent records (2001-2017) (Enge et al. 2013 and unpublished data). Indigo snakes remain widespread and more commonly observed in central and south Florida, except for parts of the urbanized southeastern coast in Palm Beach and Broward counties. In the peninsula, they are more widely distributed, across different habitat types, than in other parts of their range although they continue to prefer upland habitats (Bauder et al. 2018). Indigo snakes

are also widespread in the Osceola Plain and along the Lake Wales Ridge on large unfragmented habitats (including large ranchlands) (Enge et al. 2013). Given the species' preference for upland habitats, indigo snakes are not commonly found in the wetland complexes of the Everglades region even though they have been found in pinelands, tropical hardwood hammocks, and mangrove forests in extreme south Florida (Duellman and Schwartz 1958, Steiner et al. 1983, Metcalf 2017).

### **C. Environmental Baseline in the Action Area**

#### Snail kite

Littoral habitat includes herbaceous wetlands and waterlilies (predominantly *Nymphaea* and *Nuphar*) neighboring the East Lake Toho shoreline. Snail kites may forage in this area of the littoral zone where vegetation is less dense. The middle of the littoral zone is comprised of tussocks and islands. Tussocks are commonly formed by aquatic plants (*Pontederia*) and lily pad roots and often have shrubs (wax myrtle [*Myrica morella cerifera*] and willow [*Salix caroliniana*]) associated. The islands are frequently covered in ferns, herbs, shrubs and trees (including wax myrtle, willow, maple [*Acer rubrum*], and sometimes bay [*Persea borbonia*]). Snail kites may use woody plants on these islands for roosting. Cattail, water lilies, and bulrush are generally located on the outer edge of the littoral zone. This is the area where most of the snail kite nesting occurred in 2017. Both native (*Pomacea paludosa*) and exotic apple snails found on East Lake Toho provide food for snail kites.

The snail kite nests and forages in the littoral zone of East Lake Toho. From 2013 through 2016, there was an average of 40 snail kite nests per year. During this same time period, there was an average of 22 fledgling snail kites produced per year on the lake. Seven nests were identified in the littoral zone of East Lake Toho in 2017, and five nests were observed in 2018 (personal communication with Tyler Beck, FWC 2018). During drought years, both Lake Toho and East Lake Toho became important nesting areas. For instance, in 2011, approximately 70 percent of all successful nesting (system-wide) occurred on Lake Tohopekaliga and East Lake Toho.

#### Wood stork

Although foraging habitat is available in the East Lake Toho area, wood storks are not commonly observed foraging on the lake. Most of the littoral zone has high vegetation cover and therefore, likely limited access to fish. Some areas of open water are available for foraging, but most are found in deeper water locations than those utilized by wood storks. The implementation of the Project will temporarily open more area to foraging by removing some of the vegetation cover (within zones that are foraged by wood storks). The nearest wood stork colonies observed from 2008 to 2017 are approximately 6 miles from East Lake Toho (Gatorland colony – northwest; Lake Mary Jane colony - northeast) and approximately 4.5 miles from Fells Cove. Both of these colonies were active in 2015.

### Caracara

The caracara has been observed on the west and south sides of East Lake Toho resulting in the likely territorial overlap with the proposed project area. There is one documented observation of a caracara on the eastern shore of East Lake Toho in Chisholm Park where the proposed upland staging area is located; however, this observation occurred in 2001 (Sullivan et al. 2009). East Lake Toho is not likely to contain any suitable nesting habitat for the caracara, but they are known to forage in wetlands, and may use the littoral zone of East Lake Toho, which is subject to the proposed Project.

### Indigo snake

In central and southern Florida, the indigo snake uses a variety of habitat types including pine flatwoods, scrubby flatwoods, floodplains, and edges of freshwater marshes. Indigo snakes have been sighted in Osceola County in uplands adjacent to both East Lake Toho and Lake Tohopekaliga. However, the only area of upland habitat that will be impacted from the Project is the staging area located in Chisholm Park. The closest known locations of indigo snakes are approximately 4.5 miles to the northeast (from 2005) and southeast (from 2006).

## **III. Effects of the Action on Listed Species**

Potential effects of the Project include direct mortality, injury, harm, or harassment of snail kites, wood storks, caracaras, and indigo snakes that are present within the action area when activities are being conducted, and indirect effects that occur as a result of changes in habitat suitability. While the Project could have potential direct adverse effects as a result of scraping of the undesired organic sediments, vegetation management, herbicide application, and prescribed burning, the long-term indirect effects of the action will benefit fish and wildlife resources through improved snail kite nesting and foraging habitat conditions and general improvement to the aquatic habitat of the littoral zone.

### Indigo snake

Given the staging area for the Project would include uplands within Chisholm Park, it is possible that the indigo snake would be encountered. However, the vast majority of work associated with the Project would occur within the littoral zone. In addition, based on known linear distance movements of indigo snakes in south Florida, a buffer of 2.4 miles can be placed around known locations to assist in determining possible effects to the indigo snake (Bauder et al. 2018). Since the closest known location of an indigo snake is greater than 2.4 miles from the Project site, the species is not reasonable certain to occur within the action area.

The Corps has committed to requiring the FWC to implement the *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013). Based on the lack of evidence that indigo snakes occupy the action area and the implementation of conservation measures, the Service concurs with the Corps' determination that the Project "may affect, but is not likely to adversely affect" the indigo snake.

### Caracara

The action of drawing down the lake will expose sediments in the littoral zone, and some areas will be sprayed, burned or scraped. Tall and thick vegetation targeted by the Project is not a good foraging habitat for caracaras. The caracara is attracted to newly plowed and newly burned fields. They have been observed following behind plows and in front of flames to capture fleeing small prey; they also forage in burned areas on animals killed by the fires. The Project will likely improve the foraging habitat, at least temporarily, for the caracara in the littoral zone treatment areas.

The Corps has committed to requiring the FWC to conduct caracara nest surveys if upland disposal is pursued as part of the Project. These surveys will be conducted according to the most recent Service protocol and, if a nest is detected, conservation measures will be implemented within the designated management zones. Based on the lack of suitable habitat in the Project site and the implementation of conservation measures, the Service concurs with the Corps' determination that the Project "may affect, but is not likely to adversely affect" the caracara.

### Wood stork

Wood storks prefer shallow open water habitat or areas that concentrate prey. Due to high vegetation cover in shallow areas of the littoral zone, wood storks generally have limited access to prey. In the area of the proposed scrape on the east side of East Lake Toho, tussocks can nearly block access to open water. Currently the outer open water edge of the littoral zone is too deep for foraging. The drawdown and treatment activities of the proposed Project will temporarily provide improved conditions for wood stork access. Some areas will have a slight increase in hydroperiod, thereby potentially increasing the biomass of available forage. In addition to the access and hydroperiod issues, a few small areas with suitable water depth have dense exotic vegetation cover. Treatment of these areas will also improve habitat for wood storks.

The Corps completed the evaluation of the Project based on the Service's wood stork key and received programmatic concurrence that the Project "may affect, but is not likely to adversely affect" the wood stork.

### Snail kite

The Corps determined that snail kites will be exposed to the proposed drawdown and habitat enhancement action and its environmental consequences and will respond in a negative manner to the exposure. The Project is expected to temporarily affect nesting and foraging snail kites, apple snails, and the habitat required by each. The littoral zone of East Lake Toho will be exposed to desiccation, resulting in approximately 875 acres of the area being unavailable as habitat. Although most of the adverse impacts will be short-term, similar actions in the past (on both East Lake Toho and Lake Tohopekaliga) have negatively impacted snail kites (Service 1999). Uncertainties including weather and other stochastic factors may interact with the proposed Project thereby exposing snail kites to additional negative impacts. In the long-term (greater than 3 years), snail kites are expected to benefit from the proposed Project through the

removal of dense vegetation that will improve foraging opportunities. Due to expected short-term impacts, the Corps has determined the Project “may affect, and is likely to adversely affect” the snail kite.

The dewatering effect resulting from the Project is likely to temporarily reduce the population of native and exotic apple snails in East Lake Toho since the littoral zone of the lake will be dry for an extended period of time. The exotic apple snail has a much higher desiccation tolerance than the native apple snail, possibly up to a year depending on soil moisture, so the effects to the exotic snail may be less apparent. The apple snail is not a very mobile species. When a portion of the littoral zone inhabited by apple snails dries out because of the lowering lake stage, the snails will imbed in the surface layer of detritus, and await the return of the water. After a period of time, the snails will die if the area remains dry for too long. Adverse effects to the snail kite will result from the direct loss of prey (mortality) and lost foraging opportunities resulting from apple snails being inaccessible (imbedding in detritus).

Newly fledged snail kites are fed by parents until approximately 9-11 weeks old (*i.e.*, about 6 weeks post fledging). After this, they are still highly dependent on habitat near their nests, and may stay within their natal area for several months. The highest risk of mortality occurs during the first four months after fledging (Bennetts and Kitchens 1999), and greater losses of inexperienced young occur when conditions are poor (*e.g.*, low water levels) (Sykes 1979, 1987c, Beissinger 1986). In 2019, three snail kite nestlings from the last known active nest on East Lake Toho were banded in the middle of June. If no additional nesting occurs in 2019, the risk of adverse effects to juvenile snail kites fledged from nests on the lake is expected to be insignificant.

Bennetts et al. (1998) examined the intensity and geographic extent of historic droughts relative to the snail kite’s range, and they believed that in less extensive droughts, snail kites would exhibit more of a behavioral response, moving from the more affected habitats to other less severely affected wetlands in their range. Periodic disturbances, such as local and regional droughts, are a natural part of the Florida landscape. The effects of the Project to the snail kite are likely to be similar to those that occur during a local drought, unless exacerbated by extreme hydrologic conditions (*i.e.*, large-scale drought). As defined by the Service, the Project is likely to result in take of the snail kite in the form of harassment by creating “the likelihood of injury to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to breeding, feeding, and sheltering.” In addition, there is a possibility that snail kites may initiate nesting activities during the drawdown if nesting substrate remains available for a period of time. The Project may result in harm to the snail kite if nests fail as a result of dewatering of the littoral zone.

The proposed Project will incorporate impact minimization, project timing modifications, surveys and other specific commitments as described above to minimize the impacts to snail kites. However, it is not possible to avoid or minimize all impacts to snail kites and their primary food source (apple snails). The drawdown will begin in October 2019, and activities

associated with the Project will continue through June 2020 at which time the lake will begin to be refilled. The Service concurs with the Corps determination that the Project “may affect, is likely to adversely affect” the snail kite. We have reached this determination because snail kites may be taken by the Project due to the loss of nesting and foraging opportunities (harassment) and nest failure (harm).

#### **IV. Conclusion**

After reviewing the current status of the snail kite; the environmental baseline for the action area; the effects of the proposed action and cumulative effects; it is the Service’s biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the snail kite and will result in a net conservation benefit to these species.

The Service reached this conclusion because:

- A. The primary purpose of the proposed action is to enhance aquatic habitat that will provide for the conservation of the snail kite;
- B. The proposed action was developed in coordination with the Service for that purpose;
- C. The proposed action gives full consideration to, and is consistent with, the survival and recovery needs of the snail kite and the role of the action area in providing for those needs;
- D. There is a proven track record for successful implementation of the proposed action, and there is a high level of certainty that the proposed action is likely to produce a beneficial impact for the snail kite;
- E. Adverse impacts (including those that conform to incidental take) are likely to be small in magnitude, temporary (meaning not continuous, recurring, or chronic), short-term and geographically local with respect to each local population being addressed;
- F. The amount or extent of incidental take of snail kites is likely to be low, and is not likely to have adverse population-level impacts to the species; and
- G. The project is not likely to cause a permanent net loss of habitat or net loss of habitat function.

#### **V. Incidental Take Statement**

The Service anticipates take of snail kites may occur as a result of the proposed action. This incidental take is expected to be in the form of harm and harassment when the East Lake Toho drawdown occurs during the snail kite nesting season (December – June). The Service anticipates that the actual number of snail kites taken as a result of the proposed action will be difficult to quantify, because most of the take will occur as an indirect result of the loss of prey and the temporary loss of nesting habitat. However, the extent of potential effects to the littoral zone can be used as a surrogate to monitor the level of take. Therefore, the incidental take statement is based on a maximum of 875 acres of littoral zone on East Lake Toho being affected by the proposed action from October of 2019 through June of 2020. In addition, the Service has

determined that one active snail kite nest containing eggs or young may be taken as a result of the proposed action.

### **Reasonable and Prudent Measures and Terms and Conditions**

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat. In order to be exempt from the prohibitions of section 9 of the Act, the Corps must comply with the following nondiscretionary reasonable and prudent measures and terms and conditions and required reporting/monitoring requirements.

The Service believes the following reasonable and prudent measure(s) and terms and conditions are necessary and appropriate to minimize impacts of incidental take of snail kites:

1. The Corps will ensure the FWC implements the Project covered by this consultation in accordance with the measures described in the December 2018 biological assessment including all listed conservation measures and reporting and monitoring requirements.
2. The Corps shall report the direct mortality or injury of any listed species resulting from the implementation of this project. Upon locating a dead, injured, or sick threatened or endangered species, initial notification must be made to the nearest Service Law Enforcement Office: 20501 Independence Blvd., Groveland, Florida 34736, 352-429-1037 as well as the biologist identified below at the South Florida Ecological Service Office, 772-562-3909. Secondary notification should be made to FWC Southwest Region, 3900 Drane Field Road, Lakeland, Florida 338 11-1299 and can be reached at 1-800-282-8002.

### **VI. Reinitiation Notice**

This concludes formal consultation on the action outlined in the Corps' December 2018 biological assessment. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Thank you for your cooperation in the effort to protect fish and wildlife resources. If you have any questions regarding this project, please contact Timothy Breen at (772) 469-4239.

Sincerely yours,



Donald Progulski  
Everglades Program Supervisor  
South Florida Ecological Services Office

cc: electronic only  
Corps, Cocoa, Florida (Irene Sadowski, Jeffrey Collins)  
District, West Palm Beach, Florida (Zach Welch)  
FWC, Kissimmee, Florida (Tim Coughlin)  
FWC, Tallahassee, Florida (FWC-CPS)  
FWC, Tequesta, Florida (Tyler Beck)  
Service, Vero Beach, Florida (Timothy Breen)

## Literature Cited

- Alessandrini, D. 2005. Bait trail testing using captive eastern indigo snakes, *Drymarchon couperi*. Powerpoint presentation provided to U.S. Fish and Wildlife Service, Jackson, Mississippi. 42 pp.
- Bauder, J.M., D.R. Breininger, M.R. Bolt, M.L. Legare, C.L. Jenkins, B.B. Rothermel, K. McGarigal. 2016. Seasonal variation in eastern indigo snake (*Drymarchon couperi*) movement patterns and space use in peninsular Florida at multiple temporal scales. *Herpetologica* 72:214-226.
- Bauder, J.M. 2018. Population viability and connectivity of the federally threatened eastern indigo snake in central peninsular Florida. PhD dissertation. Department of Environmental Conservation Wildlife, Fish, and Conservation Biology. University of Massachusetts Amherst.
- Bauder, J.M., Breininger, D. R., M.R. Bolt, R. Breininger, M.L. Legare, C.L. Jenkins, B.B. Rothermel, K. McGarigal. 2018. Multi-level, multi-scale habitat selection by a wide-ranging, federally threatened snake. *Landscape Ecology*. 33:743-763.
- Beissinger, S. R. 1986. Demography, environmental uncertainty, and the evolution of mate desertion in the Snail Kite. *Ecology* 67:1445-1459.
- Beissinger, S. R. 1988. Snail kite. Pages 148-165 in R. S. Palmer, eds. *Handbook of North American birds*, volume 4, Yale University Press, New Haven, Connecticut.
- Beissinger, S. R. 1990. Alternative foods of a diet specialist, the Snail Kite. *Auk* 107:327-333.
- Bennetts, Robert E., W. Kitchens, and D. DeAngelis. 1998. Recovery of the snail kite in Florida: Beyond a Reductionist Paradigm. *Trans. 63<sup>rd</sup> North American Wildlife and Natural Resources Conference*. pp. 486-501.
- Bennetts, R.E. and W.M. Kitchens. 1999. Within-year survival patterns of snail kites in Florida. *Journal of Field Ornithology* 70(2):268-275.
- Bent, A.C. 1938. Life histories of North American birds of prey, part 2. U.S. National Museum Bulletin 170, Government Printing Office; Washington, D.C.
- Bernatis, J. 2017. East Lake Toho *Pomacea* study, summer 2016 and winter 2016/2017. Presentation to the Snail Kite Coordinating Committee in Vero Beach on March 21. Florida Fish and Wildlife Conservation Commission; Gainesville, Florida.

- Bolt, M.R. and S.K. Weiss. 2006. Using corn snake pheromones as bait for eastern indigo snakes. Unpublished report submitted to U.S. Fish and Wildlife Service, Jackson, Mississippi Field Office. 2 pp.
- Borkhataria, R. R., Frederick, P. C., and Hylton, R. A. 2004. Nesting success and productivity of south Florida wood storks in 2004 No. Report to the U.S. Fish and Wildlife Service). Jacksonville, Florida: Unpublished.
- Browder, J. A. 1984. Wood stork feeding areas in southwest Florida. Florida Field Naturalist, 12, 81-96; 81.
- Cattau, C.E., B.E. Reichert, W.M. Kitchens, R. Fletcher Jr., J. Olbert, K. Pias, E. Robertson, R Wilcox, and C. Zweig. 2012. Snail Kite demography annual report 2012 to the U.S. Army Corps of Engineers. U.S. Geological Survey, Florida Cooperative Fish and Wildlife Research Unit, University of Florida; Gainesville, Florida.
- Chandler, R. and J. M. Anderson. 1974. Notes on Everglade kite reproduction. Am. Birds 28:856.
- Coulter, M. C. (1987). Foraging and breeding ecology of wood storks in east central Georgia. Paper presented at the Third Southeastern Non-Game and Endangered Wildlife Symposium, pp. 21-27.
- Coulter, M. C., & A.L., Bryan., Jr. 1993. Foraging ecology of wood storks (*mycteria americana*) in east-central Georgia: Characteristics of foraging sites. Colonial Waterbirds, 16, 59-70.
- Coulter, M. C., Rodgers, J. A., Ogden, J. C., and Depkin, F. C. 1999. Wood stork (*mycteria americana*). In A. Poole, and F. Gill (Eds.), The birds of North America. Philadelphia, Pennsylvania: The Birds of North America, Incorporated.
- Crozier, G. E., & Cook, M. I. 2004. South Florida wading bird report, volume 10 South Florida Water Management District.
- Darby, P.C., R.E. Bennetts, and L.B. Karunaratne. 2006. Apple snail densities in habitats used by foraging snail kites. Florida Field Naturalist 34(2):37-68.
- Darby, P.C., R.E. Bennetts, and H.F. Percival. 2008. Dry down impacts on apple snail demography: implications for wetland water management. Wetlands 28:204-214.
- Darby, P.C., D.J. Mellow, and P.L. Valentine-Darby. 2009. Interactions between apple snails, habitat structure and hydrology, and availability of snails to foraging snail kites. Final report to the U.S. Fish and Wildlife Service. University of West Florida; Pensacola, Florida.

- Drietz, V. J., J. D. Nichols, J. E. Hines, R.E. Bennetts, W.M. Kitchens, and D.L. Deangelis. 2002. The use of resighting data to estimate the rate of population growth of the snail kite in Florida. *Journal of Applied Statistics* 29: 609-623
- Duellman, W.E., and A. Schwartz. 1958. Amphibians and reptiles of southern Florida. *Bulletin Florida State Museum, Biological Science* 3:181-324.
- Dwyer, J. F. 2010. Ecology of non-breeding and breeding Crested Caracaras (*Caracara cheriway*) in Florida. Ph.D. dissertation, Virginia Tech, Blacksburg, Virginia.
- Dwyer, J.F., Fraser, J.D. and Morrison, J.L. 2012. Within-Year Survival of Nonbreeding Crested Caracaras. *The Condor*: May 2012, Vol. 114, No. 2, pp. 295-301.
- Enge, K.M. 1997. A standardized protocol for drift-fence surveys. Florida Game and Fresh Water Fish Commission Technical Report No. 14. Tallahassee. 69 pp. + vi.
- Enge, K.M., D. J. Stevenson, M.J. Elliott, and J.M. Bauder. 2013. The historical and current distribution of the eastern indigo snake (*Drymarchon couperi*). *Herpetological Conservation and Biology* 8:288–307.
- Fletcher, R. Jr., C.E. Cattau, R. Wilcox, C. Zweig, B. Jeffery, E. Robertson, B.E. Reichert, and W.M. Kitchens. 2014. Snail kite demography annual progress report 2013. Prepared for the U.S. Army Corps of Engineers, Environmental Branch, Jacksonville, Florida. U.S. Geological Survey, Florida Cooperative Fish and Wildlife Research Unit, Department of Wildlife Ecology and Conservation, University of Florida; Gainesville, Florida.
- Fletcher, R., E. Robertson, C. Poli, B. Jeffery, B. Reichert, and C. Cattau. 2016a. Snail kite demography, 2015 annual report. Prepared for the U.S. Army Corps of Engineers, Environmental Branch, Jacksonville, Florida. U.S. Geological Survey, Florida Cooperative Fish and Wildlife Research Unit, Department of Wildlife Ecology and Conservation, University of Florida; Gainesville, Florida. May 2016.
- Fletcher, R., E. Robertson, B. Reichert, C. Cattau, R. Wilcox, C. Zweig, B. Jeffery, J. Olbert, K. Pias, and W. Kitchens. 2016b. Snail kite demography 5-year report. Final Report, 2014. Prepared for the U.S. Army Corps of Engineers, Environmental Branch, Jacksonville, Florida. U.S. Geological Survey, Florida Cooperative Fish and Wildlife Research Unit, Department of Wildlife Ecology and Conservation, University of Florida; Gainesville, Florida. Updated December, 1, 2016.
- Fletcher, R., C. Poli, E. Robertson, B. Jeffery, S. Dudek, and B. Reichert. 2017. Snail kite demography, 2016 annual report. Prepared for the U.S. Army Corps of Engineers, Environmental Branch, Jacksonville, Florida, and the Florida Fish and Wildlife Conservation Commission, Tallahassee Florida. U.S. Geological Survey, Florida

Cooperative Fish and Wildlife Research Unit, Department of Wildlife Ecology and Conservation, University of Florida; Gainesville, Florida. April 2017.

Fletcher, R., E. Robertson, B. Jeffery, C. Poli, and S. Dudek. 2018. Snail kite demography, 2016 annual report. Prepared for the U.S. Army Corps of Engineers, Environmental Branch, Jacksonville, Florida, and the Florida Fish and Wildlife Conservation Commission, Tallahassee Florida. U.S. Geological Survey, Florida Cooperative Fish and Wildlife Research Unit, Department of Wildlife Ecology and Conservation, University of Florida; Gainesville, Florida. April 2018.

Ford, D.F. and N.B. Ford. 2005. Tests of the feasibility of using corn snake trail pheromones as attractants for indigo snakes. Unpublished report to the U.S. Fish and Wildlife Service, Jackson, Mississippi. 9 pp. + table.

Frederick, P. C., & Meyer, K. D. 2008. Longevity and size of wood stork (*Mycteria americana*) colonies in Florida as guides for an effective monitoring strategy in the southeastern United States. *Waterbirds*, 31(sp1), 12-18.

Gawlik, D. E. 2002. The effects of prey availability on the numerical response of wading birds. *Ecological Monographs*, 72(3), 329-346; 329.

Heinzman, G. 1970. The caracara survey: A 4-year report. *Florida Naturalist* 3(4):149.

Humphrey, S.R. and J.L. Morrison. 1997. Habitat associations, reproduction, and foraging ecology of Audubon's crested caracara in south-central Florida. Final Report. Florida Game and Fresh Water Fish Commission Nongame Program Project Number NG91-007, August 8, 1997.

Hyslop, N.L., R.J. Cooper, and J.M. Meyers. 2009a. Seasonal shifts in shelter and microhabitat use of *Drymarchon couperi* (Eastern Indigo Snake) in Georgia. *Copeia* 2009:458-464.

Hyslop, N.L., J. M. Meyers, R. J. Cooper, and D. J. Stevenson. 2009b. Indigo snake capture methods: Effectiveness of two survey techniques for *Drymarchon couperi* in Georgia. *Florida Scientist* 72(2): 93-100.

Hyslop, N.L., J. M. Meyers, R. J. Cooper, and D. J. Stevenson. 2014. Effects of body size and sex of *Drymarchon couperi* (eastern indigo snake) on habitat use, movements, and home range size in Georgia. *Journal of Wildlife Management* 78:101-111.

Kahl, M. P., Jr. 1964. Food ecology of the wood stork (*Mycteria americana*) in Florida. *Ecological Monographs*, 34, 97-117.

Kuntz, G.C. 1977. Endangered species: Florida Indigo. *Florida Naturalist*: 15-19.

- Kushlan, J. A. 1979. Prey choice by tactile foraging wading birds. Proceedings of the Colonial Waterbird Group, 3, 133-142; 133.
- Kushlan, J. A., Ogden, J. C., and Higer, A. L. 1975. Relation of water level and fish availability to wood stork reproduction in the southern Everglades, Florida. U.S. geological survey open file report 75-434. Washington, D.C.: U.S. Government Printing Office.
- Kushlan, J. A., and Frohring, P. C. 1986. The history of the southern Florida wood stork population. Wilson Bulletin, 98(3), 368-386.
- Kitchens, W.M., R.E. Bennetts, and D.L. DeAngelis. 2002. Linkages between the snail kite population and wetland dynamics in a highly fragmented south Florida hydroscape. Pages 183-201 in J.W Porter and K.G. Porter, editors. The Everglades, Florida Bay, and Coral Reefs of the Florida Keys: An Ecosystem Sourcebook. CRC Press, Boca Raton, Florida.
- Layne, J.N. 1995. Audubon's crested caracara in Florida. Pages 82-83 in E.T. LaRoe, G.S. Farris, C.E. Puckett, P.D. Doran, and M.J. Mac, eds. Our living resources: A report to the nation on the distribution, abundance, and health of United States plants, animals, and ecosystems. U.S. Department of the Interior, National Biological Service; Washington, D.C.
- Layne, J.N., and T.M. Steiner. 1996. Eastern indigo snake (*Drymarchon corais couperi*): summary of research conducted on Archbold Biological Station. Report prepared under Order 43910-6-0134 to the U.S. Fish and Wildlife Service; Jackson, Mississippi.
- Mason, R.T., R. Cressman, A. Cole, and R. Parker. 2007. Efficacy of using corn snake skin lipids as an attractant for kingsnakes, a surrogate ophiophagous model for indigo snakes. Unpublished report to U.S. Fish and Wildlife Service, Jackson, Mississippi. 15 pp. + figures.
- Metcalf, M. F. 2017. Spatial Ecology of the threatened eastern indigo snake (*Drymarchon couperi*) in a subtropical coastal landscape in the southern extent of its range. Master's Thesis. Florida Gulf Coast University.
- Moler, P.E. 1985. Distribution of the eastern indigo snake, *Drymarchon corais couperi*, in Florida. Herpetological Review 16(2):37-38.
- Moler, P.E. 1992. Eastern indigo snake. Pgs. 181-186 in P.E. Moler, ed. Rare and endangered biota of Florida, volume III, Amphibians and Reptiles. University Press of Florida, Gainesville, Florida.
- Morrison, J.L. 1997. Reproductive ecology and habitat associations of Florida's crested caracara (*Caracara plancus audubonii*). Ph.D. dissertation. University of Florida; Gainesville, Florida.

- Morrison, J.L. 2001. Recommended management practices and survey protocols for Audubon's crested caracaras (*Caracara cheriway audubonii*) in Florida. Technical Report Number 18. Florida Fish and Wildlife Conservation Commission; Tallahassee, Florida.
- Morrison, J.L. and S.R. Humphrey. 2001. Conservation value of private lands for crested caracara in Florida. *Conservation Biology* 15(3): 675-684.
- Morrison, J.L., J.F. Dwyer, and J.D. Fraser. 2007. Letter to the U.S. Fish and Wildlife Service dated November 8, 2007. Evidence for habitat limitation for crested caracaras in Florida. Dept. Biology, Trinity College, Hartford, CT 06106. Dept. Biology, Trinity College, Hartford, Connecticut 06106.
- Newberry, S. L., Jensen, J. B. and Stevenson, D. J. 2009. Nesting habitat and egg depredation: *Drymarchon couperi* (Eastern Indigo Snake). *Herpetological Review* 40: 97.
- Ogden, J., Kushlan, J. A., and Tilmant, J. T. 1978. The food habits and nesting success of wood storks in Everglades National Park 1974. Washington, D.C.: U.S. Department of the Interior, National Park Service.
- Ogden, J. C., D.A., M., Jr, Bancroft, G. T., and Patty, B. W. 1987. Breeding populations of the wood stork in the southeastern United States. *Condor*, 89, 752-759.
- Ogden, J. C. 1991. Nesting by wood storks in natural, altered, and artificial wetlands in central and northern Florida. *Colonial Waterbirds*, 14(1), 39-45.
- Palmer, R. S. 1962. Handbook of North American Birds, volume 1, loons through flamingos. New Haven, Connecticut: Yale University Press.
- Rodgers, J., J.A. 1990. Breeding chronology and clutch information for the wood stork from museum collections. *Journal of Field Ornithology*, 61(1), 47-53
- Rodgers, J. A., Wenner, A. S., and Schwikert, S. T. 1987. Population dynamics of wood storks in north and central Florida, USA. *Colonial Waterbirds*, 10(2), 151-156; 151.
- Rodgers Jr, J. A., Schwikert, S. T., and Shapiro-Wenner, A. 1996. Nesting habitat of wood storks in north and central Florida, USA. *Colonial Waterbirds*, 19(1), 1-21.
- Rothermel, B.B. 2017. Annual Report to the U.S. Fish and Wildlife Service for the Recovery Permit #TE206894-0 and TE206894-1. 26pp.

- Smith, R.B. and K.J. Dyer. 2003. Preliminary testing and comparison of herpetological survey techniques for eastern indigo snakes (*Drymarchon couperi*). Unpublished report submitted to U.S. Fish and Wildlife Service, Jackson, MS. 15 pp. + figures.
- Steen, D. 2010. Snakes in the grass: Secretive natural histories defy both conventional and progressive statistics. *Herpetological Conservation and Biology* 5(2):183-188).
- Steiner, T.M., O.L. Bass, Jr., and J.A. Kushlan. 1983. Status of the eastern indigo snake in southern Florida National Parks and vicinity. South Florida Research Center Report SFRC-83/01, Everglades National Park; Homestead, Florida.
- Stevenson, H.M. 1976. *Vertebrates in Florida*. University Presses of Florida. Gainesville, Florida.
- Stevenson, D.J., K.J. Dyer, and B.A. Willis-Stevenson. 2003. Survey and monitoring of the eastern indigo snake in Georgia. *Southeastern Naturalist* 2:393-408.
- Stevenson, D.J., R.A. Moulis, and N. L. Hyslop. 2008. Eastern indigo snake (*Drymarchon couperi*). Pages 339-341 in J.B. Jensen, C.D. Camp, W. Gibbons, and M.J. Elliott, eds. *Amphibians and reptiles of Georgia*. University of Georgia Press, Athens, Georgia.
- Stevenson, D.J., K.M. Enge, N.L. L. D. Carlile, K.J. Dyer, T.M. Norton, N.L. Hyslop, and R.A. Kiltie. 2009. An eastern indigo snake (*Drymarchon couperi*) mark-recapture study in southeastern Georgia. *Herpetological Conservation and Biology* 4:30-42.
- Stevenson, D.J., K.R. Ravenscroft, R.T. Zappalorti, D.D. Ravenscroft, S.W. Weigley, and C.L. Jenkins. 2010b. Using a wildlife detector dog for locating eastern indigo snakes (*Drymarchon couperi*). *Herpetological Review* 41:437-442.
- Sullivan, B.L., C.L. Wood, M.J. Iliff, R.E. Bonney, D. Fink, and S. Kelling. 2009. eBird: a citizen-based bird observation network in the biological sciences. *Biological Conservation* 142: 2282-2292.
- Sustainable Ecosystems Institute (SEI). 2007a. Everglades multi-species avian ecology and restoration review - final report. Portland, Oregon.
- Sustainable Ecosystems Institute (SEI). 2007b. Everglades multi-species avian ecology and restoration review - summary of findings and recommendations. Portland, Oregon.
- Snyder, N. F. R., S. R. Beissinger, and R. Chandler. 1989. Reproduction and demography of the Florida Everglade (Snail) Kite. *Condor* 91:300-316.

- Smith, J.A. and M.N. Scholer. 2013. Nest components of crested caracaras (*Caracara cheriway*) breeding in Florida. *Florida Field Naturalist* 41(2): 42-48.
- South Florida Water Management District (District). 2017. Final Draft - East Lake Tohopekaliga Drawdown Analysis. (South Florida Water Management District; H and H Bureau).
- Sprunt, A., Jr. 1954. *Florida Bird Life*. Coward-McCann, Incorporated and National Audubon Society; New York, New York.
- Sullivan, B.L., C.L. Wood, M.J. Iliff, R.E. Bonney, D. Fink, and S. Kelling. 2009. eBird: a citizen-based bird observation network in the biological sciences. *Biological Conservation* 142: 2282-2292.
- Sykes Jr., P.W. 1979. Status of the Everglade kite in Florida; 1968-1978. *Wilson Bulletin* 91:495-511.
- Sykes, Jr., P. W. 1987a. The feeding habits of the snail kite in Florida, USA. *Colonial Waterbirds* 10:84-92.
- Sykes, Jr., P. W. 1987b. Snail Kite nesting ecology in Florida. *Florida Field Naturalist*. 15:57-84.
- Sykes, Jr., P. W. 1987c. Some aspects of the breeding biology of the snail kite in Florida. *Journal of Field Ornithology*. 58:171-189.
- Sykes, Jr., P. W. and R. Chandler. 1974. Use of artificial nest structures by Everglade Kites. *Wilson Bulletin*. 86:282-284.
- Sykes, P. W., Jr., J. A. Rodgers, Jr., and R. E. Bennetts. 1995. Snail kite (*Rostrhamus sociabilis*) in A. Poole and F. Gill, eds. *The birds of North America*. Number 171, The Academy of Natural Sciences, Philadelphia, and the American Ornithologists Union, Washington, D.C.
- U.S. Army Corps of Engineers (Corps). 2016. Permit Number: SAJ-2015-00644 (SP-SLR). Jacksonville District, Florida.
- U.S. Army Corps of Engineers (Corps). 2018. East Lake Tohopekaliga Drawdown and Habitat Enhancement Final Biological Assessment. Jacksonville District, Florida.
- U.S. Fish and Wildlife Service (Service). 1999. South Florida Multi-Species Recovery Plan. Southeast Region; Atlanta, Georgia.
- U.S. Fish and Wildlife Service (Service). 2013. Standard Protection Measures for the Eastern Indigo Snake. August 12, 2013.

# **Appendix C**

## **Pump Analysis**

# Final Draft – East Lake Tohopekaliga Drawdown Analysis

H&H Bureau

September 2017

# CONTENTS

Overview and Objectives .....	1
Constraints for Pump Size Analysis .....	3
UK-OPS Model Setup .....	7
Results .....	8
Reference .....	16
Appendix A .....	17

## Overview and Objectives

Lake Tohopekaliga and East Lake Tohopekaliga (Figure 1) in Osceola County, FL, are part of the Kissimmee Chain of Lakes. They are the most populated area of Upper Kissimmee Basin. Boggy Creek is the primary tributary to East Lake Tohopekaliga (East Lake Toho). The lake covers an area of 11,968 acres, the 2nd largest lake in Osceola County after Lake Tohopekaliga (Lake Toho) which spans over 22,700 acres at 55 ft-NGVD29 with a contributing watershed area of 153,040 acres. The two lakes are linked together by Canal 31/St. Cloud Canal that is approximately 3 miles long and controlled by structure S59.

Control structure S59 is a reinforced concrete, gated spillway located on Canal 31 at the outlet of East Lake Tohopekaliga. Operation of the gate is manually controlled in accordance with seasonal operational criteria. The structure maintains optimum upstream water control stages in Canal 31 and in East Lake Tohopekaliga; it passes the design flood (30% of the Standard Project Flood) without exceeding the upstream flood design stage, and restricts downstream flood stages and channel velocities to non-damaging levels; it prevents overtopping of the structure from East Lake Tohopekaliga during the design storm and wind tide; it prevents overtopping of the structure during the Standard Project Flood and hurricane wind tide; it will be overtopped by breaking waves under such conditions; and it passes sufficient discharge during low-flow periods to maintain downstream stages and irrigation demands[1].

In early 2015, members of US Fish and Wildlife Service (FWS), Florida Fish and Wildlife Conservation Commission (FWC), SFWMD and Osceola County met to discuss plausible constraints and targets if a drawdown on East Lake Toho would be pursued in the next few years. Gravity draining East Toho would require lowering water levels in Lake Toho at the same time, possibly expanding on the economic and fish/wildlife impacts, depending on the extent to which it would need to be lowered. Therefore, the partner agencies request SFWMD staff to provide an estimate of the size of pumps that would be required to implement an East Toho drawdown with minimal lowering of Lake Toho levels, approximate dates that pumps would be required under the various scenarios, as well as how low Lake Toho would have to be to meet East Toho drawdown targets by gravity alone (without pumps). Specific targets and constraints listed in the next section were provided by the interagency group and were used to calculate estimates.

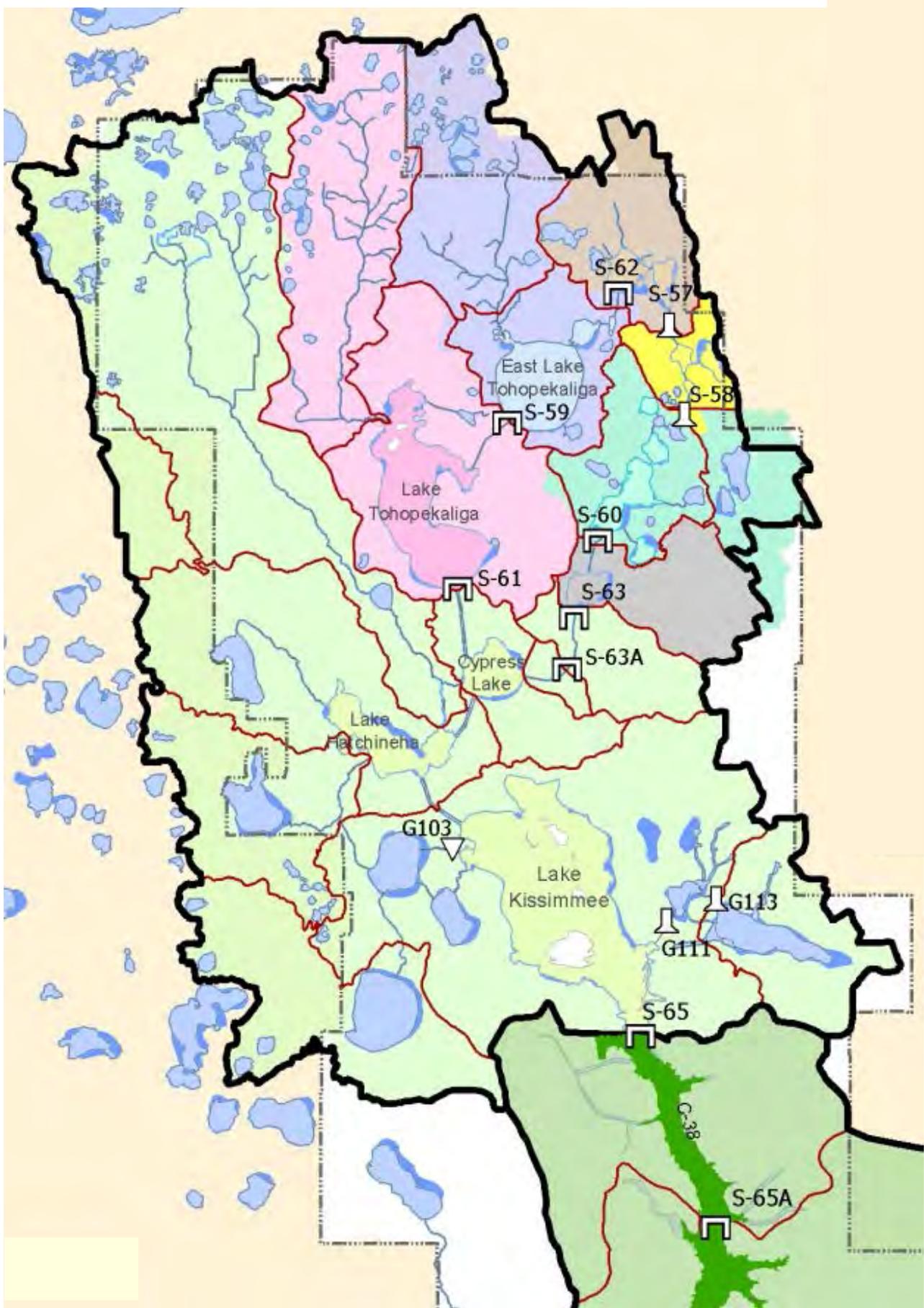


Figure 1. Lakes and Control Structures in the Upper Kissimmee Basin

## Constraints for Pump Size Analysis

1. Climatic conditions under which a draw down would be pursued:
  - Normal to dry conditions. Wet conditions would likely make it implausible or cost prohibitive.
2. Lake stage target on **East Toho**, flexibility, and duration of drawdown event (Figure 2):
  - Target stage is 53.0 ft, to be reached Feb 15th
  - Stage should be maintained as close to 53.0 ft as possible, but can fluctuate  $\pm 0.5$  ft during rain events. For example, stages could be lowered up to 6" lower than 53' in advance of wet forecast.
  - Reversals from rain events that occur between Feb 15th and Jun 1st should not exceed 0.5 ft
  - Stages should return to target elevation of 53.0 ft within one week of reversal.
  - Duration: Maintain 53.0 ft on East Lake until June 1st.
3. Lake stage target on **Lake Toho** (Figure 3):
  - It would be extremely helpful in partner agency planning efforts if SFWMD analyzes several scenarios, if possible, given the impact these targets will have on pump initiation dates, size, and Toho habitats.
  - Partner agencies would like estimates of how Toho January 15th targets of 53.5', 54', and 54.5' would affect pump sizes. If this is too many scenarios for SFWMD to analyze, most probable target would be 54.0'.
  - Whatever elevation is targeted on Jan 15th, stages would be held steady from that point until an approximate max recession rate line is reached. For purposes of this analysis, FWS has suggested using 0.83 ft/mo, or receding from 54.5 on March 1st to the normal seasonal low of 52.5 on May 31st.
4. Target dates for recessions (see Figure 3 for both lakes):
  - Lake Toho: Begin recessions November 1st
  - East Toho: Begin recessions October 1st or Nov 1st, whichever allows for smaller pump sizes. Would starting recessions earlier on East Toho save pump size even though it'd likely affect how soon Toho/ East Toho stages intersect? See Figure 3.
5. Probability of achieving success, or meeting specified targets.
  - Group would like estimates of pump size for 50th, 75th, and 90th percentiles of meeting targets.
6. In order to minimize likelihood of drowning plants that germinate during the drawdown, group recommends ascension guidelines.

- East Toho: Group suggests not exceeding 1.0 ft/mo ascension rate from Jun 1st – Sep 1st. Group suggests this be implemented as a stepped ascension, rather than a constant slope of 0.033 ft/day. In other words, if lake begins rising on June 15th and rises 1.0 ft by Jun 20th, maintain the resulting stage (54.0 ft) until July 15th, or 30 days after date of initial ascension. Then enter new stepped ascension “box”, and the 1 ft criteria would apply for the next 30 days. This is essentially a moving window approach (Figure 1).
- Lake Toho: to better manage ascensions on East Lake, it may be necessary to limit ascensions on Lake Toho to  $\leq 1.0$  ft/mo from Jun 1st – July 1st. Group relies on SFWMD staff to better estimate how Toho levels would have to be managed in order to achieve East Toho ascension targets.

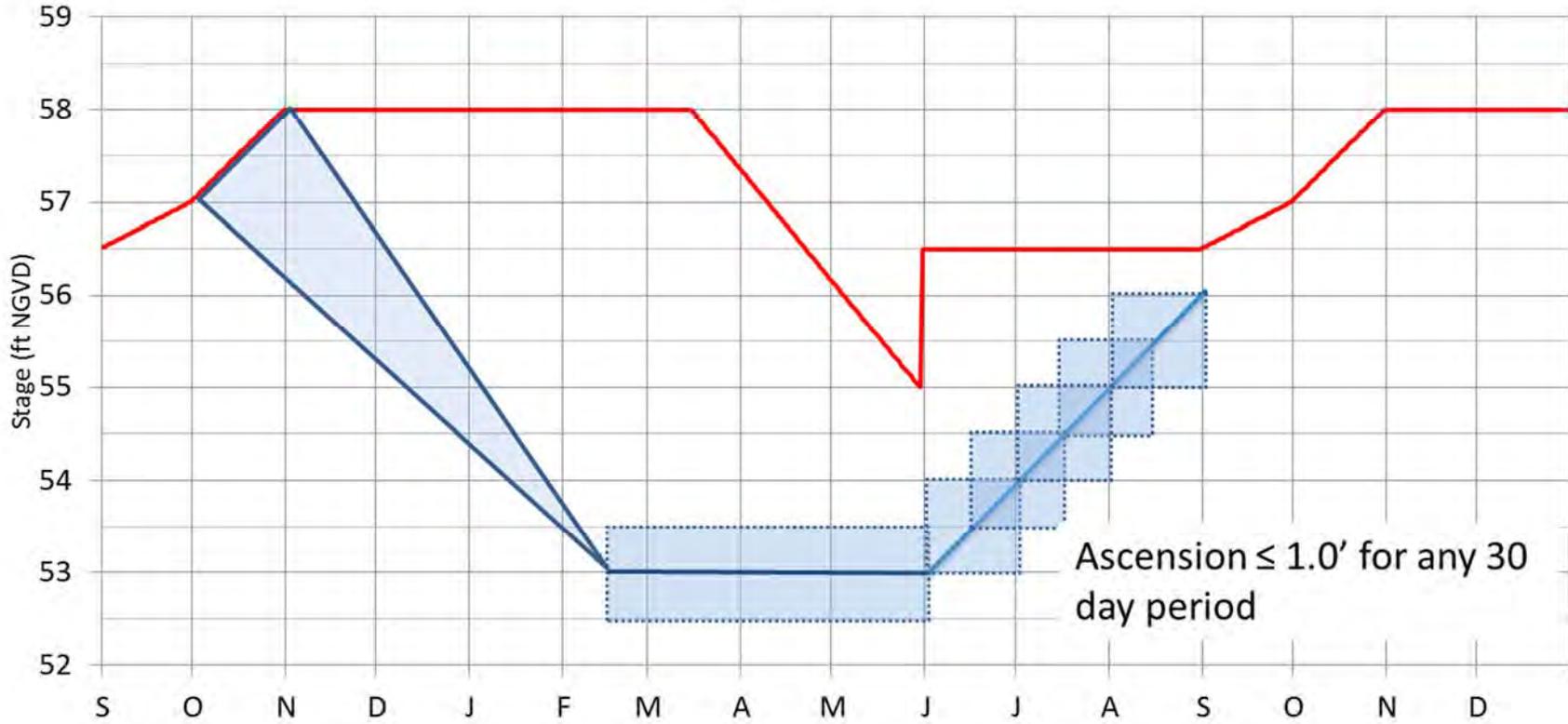
### East Lake Toho and Lake Toho Regulation Schedules

For East Lake Toho, under the existing regulation schedule, the lake maintains 58 ft-NGVD29 from November to Mid-March; then it starts to lower to 55 ft-NGVD29 by the end of May; afterwards it remains at 56.5' from June through August, and gradually rise to the winter pool level of 55 ft-NGVD29 by November 1<sup>st</sup>. Under the proposed regulation schedule, the recession starts Oct 1st or Nov 1st, whichever would be more cost effective under a pumping scenario. Target stage of 53.0 ft-NGVD29 on February 15th, maintained until June 1st, with  $\pm 0.5$  ft flexibility for rain events. Stepped ascension rate, or “moving window” of no more than 1.0 ft rise in any 30 day period (Figure 2).

The *Zone A* regulation schedule of Lake Toho is three feet lower than that of the East Lake Toho schedule. Under the existing regulation schedule, the lake maintains 55 ft-NGVD29 from November to Mid-March; then it starts to lower to 52 ft-NGVD29 by the end of May; afterwards it remains at 53.5 ft-NGVD29 from June through August, and gradually rise to the winter pool level of 52 ft-NGVe29 by November 1<sup>st</sup>. Under the proposed regulation schedule, the recession starts Nov 1<sup>st</sup> and reaches either 53.5', 54', or 54.5' on Jan 15<sup>th</sup>. From there stages would be held (provided adequate inflow) steady until they reach a max recession line of approximately 0.83 ft/mo, or a line drawn from 54.5 f-NGVD29 t on March 1<sup>st</sup> to 52.5 ft-NGVD29 on May 31<sup>st</sup>. FWS and FWC generally request that ascension rates be limited to no greater than 1.0 ft/mo, but no criteria are established for this analysis (Figure 3).

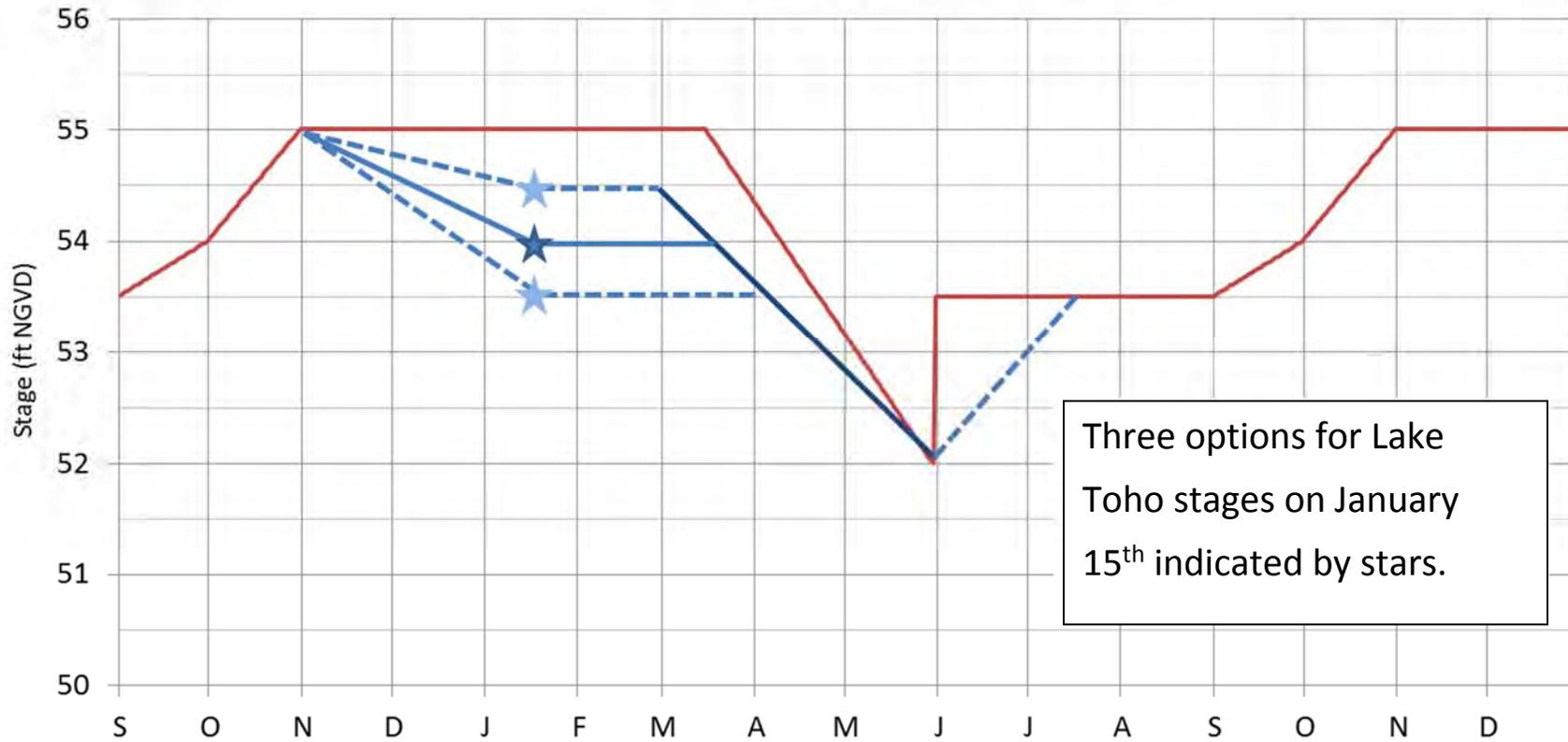
In mid-2015, the members of the FWS, FWC, Osceola County and SFWMD decided to further the study by focusing on the East Lake Toho early drawdown option (recession starting on October 1<sup>st</sup> at 57 ft-NGVD29) with 400 cfs pump capacity and Lake Toho target stage at 54.5 ft-NGVD29.

## EAST TOHO



**Figure 2.** East Lake Toho Existing Regulation Schedule and Target Stages and Constraints. The red line is the current regulation schedule (Zone A), and the blue lines are the modified target stages and constraints.

# LAKE TOHO



Three options for Lake Toho stages on January 15<sup>th</sup> indicated by stars.

**Figure 3.** Lake Toho Existing Regulation Schedule and Target Stages and Constraints. The red line is the current regulation schedule (Zone A), and the blue lines are the modified target stages and constraints.

## UK-OPS Model Setup

The SFWMD's Upper Kissimmee – Operations Screening (UK-OPS) Model was adopted for assessing the Lake Toho drawdown. UK-OPS is a screening tool initially developed by the District's Chief Engineer Calvin Neidrauer for the Upper Kissimmee Basin watershed planning and management. The latest UK-OPS model (Version 2.01) was enhanced with new features to accommodate the needs arising from the East Lake Toho drawdown analysis. Some of the other new UK-OPS Model features include:

- Gravity flow structure capacity calculations depending on upstream and downstream Lake stages;
- Pump options for Lake Toho and East Lake Toho;
- Faster simulation times (usually < 1 minute for simulating all three lakes on most PCs)
- Position analysis improvements;
- Time-series graphics improvements;
- Stage & Discharge percentile plot enhancements; and
- Stage & Discharge Box&Whisker plot switches to toggle between lakes

For the East Lake Drawdown analysis, the UK-OPS was simulated from 1965 to 2013. Pump sizes were estimated as multiples of 100cfs, i.e. 100cfs, 200cfs, 300cfs and 400cfs. For comparison purpose, a no-pump, gravity only East Lake Toho drawdown operation was also considered.

Operation rules for three major water control structures (S59, S61 and S65) in the Kissimmee Chain of Lakes are implemented in the UK-OPS model. The operation rules are simple, consisting of a Zone A regulation schedule that defines desired stage throughout the year. Releases are made to lower stage to the schedule. Each set of operation rules were assessed by performing a 38-year (1965 to 2013) simulation and then comparing the results of each alternative against the performance of the existing operation rules. The UK-OPS simulation was performed as a November 1 Position Analysis (PA), meaning that in each year of the simulation, all lake stages were reset to current November 1 stages. The PA mode demonstrates probable behavior over the year[2].

## Results

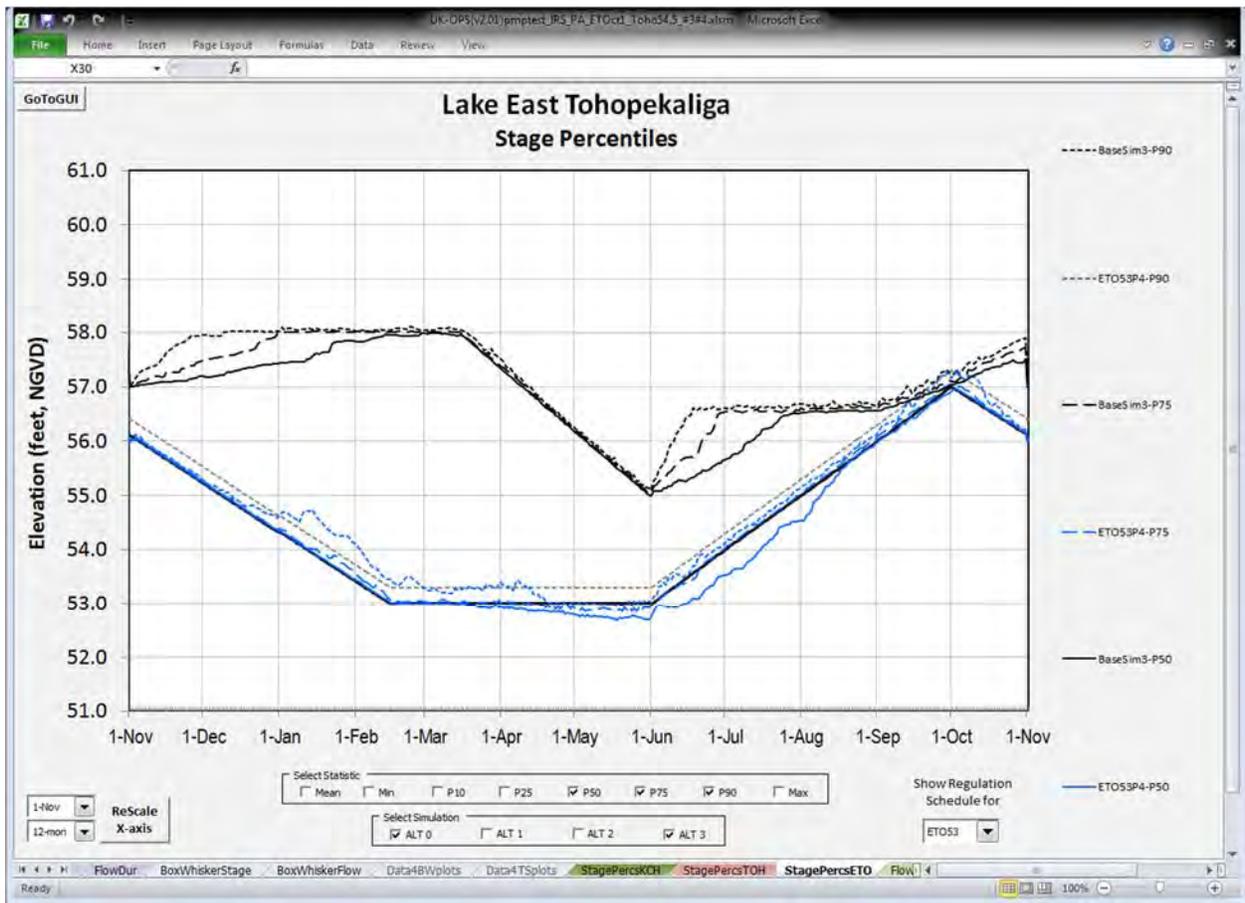
A total of sixteen scenarios were assessed in this project but only three scenarios are discussed in detail in this report: the current condition, East Toho drawdown starting Oct 1 with 400 cfs pump capacity and Toho Target Stage at 54.5 ft-NGVD29, and East Toho drawdown starting Oct 1 with no pump and Toho Target Stage at 54.5 ft-NGVD29. The two alternatives are compared to the existing condition. All model input parameters and results are referenced to vertical datum NGVD29. The other scenarios are included in Appendix A in this report.

For the pump operation scenarios, the pump starts to kick in when the gravity flow through S-59 drops below 20% of the proposed pump capacity, e.g. when the gravity flow drops below 80cfs for the 400cfs pump scenario, the pump starts moving water from East Lake Toho to Lake Toho while the S-59 gates are closed;

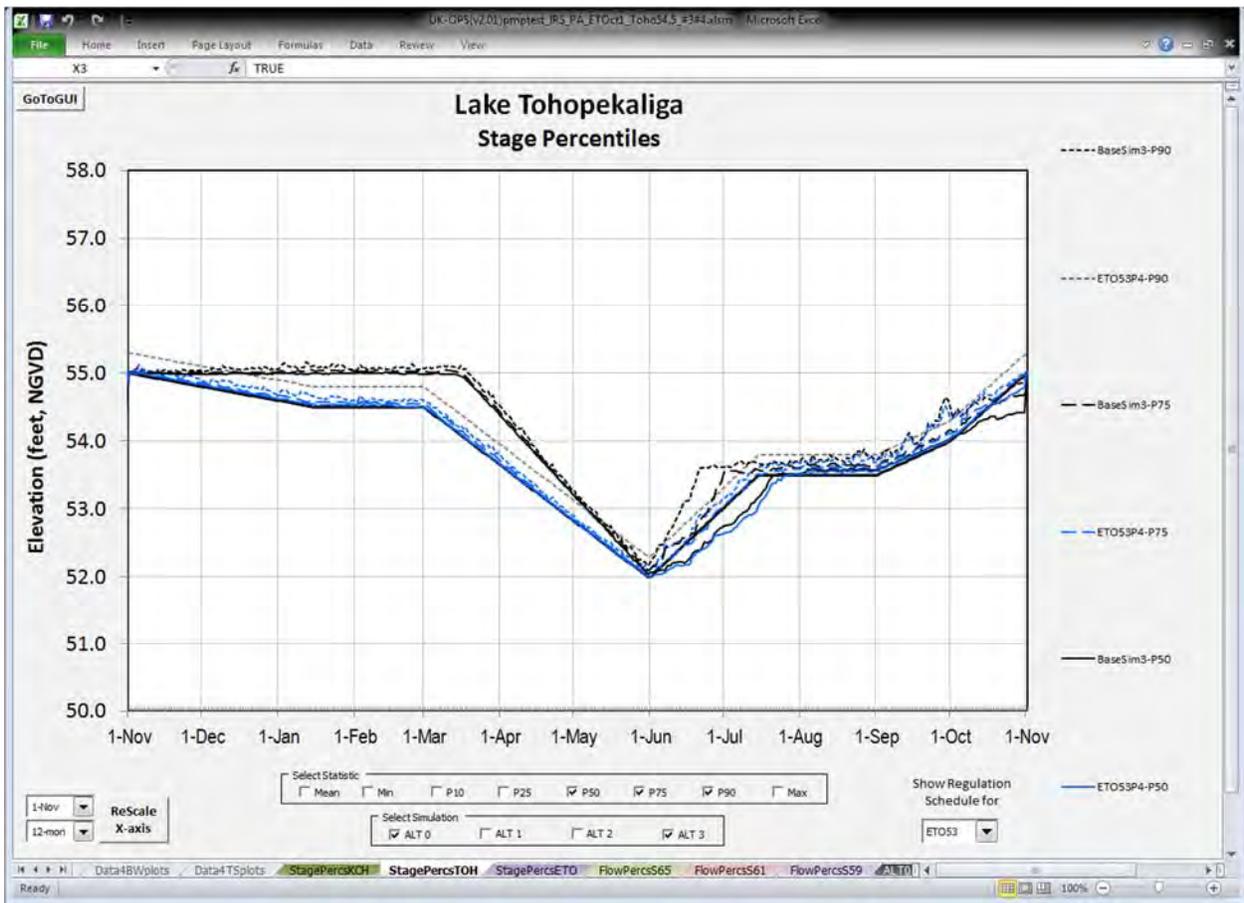
To allow the water flowing through S59 by gravity alone without pumping, the Lake Toho regulation schedule was modified so that the head differential between Lake Toho and East Lake Toho is about 0.2 ft. The revised Lake Toho regulation schedule is shown in Figure 8 as the solid black line overlapped with the Lake Toho Stage Percentile lines.

Figures 4 to 6 display the results of the existing operation vs. drawdown starting on Oct 1<sup>st</sup> with 400 cfs pumpage and Lake Toho target stage at 54.5'. They suggest that with 400 cfs pump capacity at S59, all the goals set by the members of FWS, FWC, SFWMD and Osceola County are met and restrictions are observed. The target stage of 53 ft-NGVD29 in East Lake Toho is achieved on February 15<sup>th</sup> and maintained through May 31<sup>st</sup> during the period. The target stage in Lake Toho (54.5 ft-NGVD29) is reached on January 15<sup>th</sup> and maintained for one and a half months before it starts descending to 52 ft-NGVD29 on June 1<sup>st</sup>. Compared to the existing regulation schedule, the proposed drawdown would create a maximum East Lake Toho stage difference of 5 ft from February 15<sup>th</sup> to March 15<sup>th</sup> and gradually reach a minimum difference of 2 ft on June 1<sup>st</sup>. For the 90 percentile of the S59 flow, the results suggest that the pump would be operated for about 3.5 months with pump operation as early as the end of December.

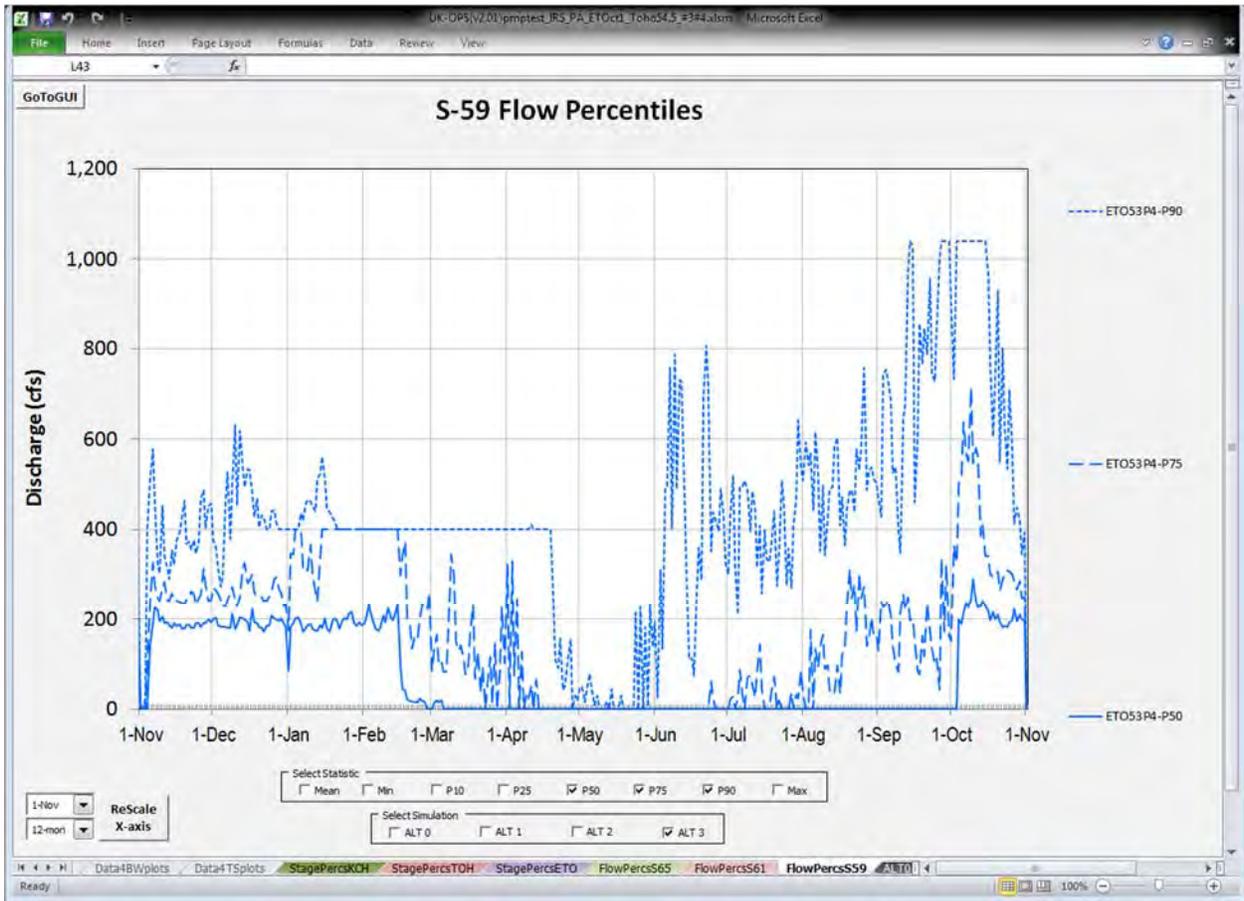
Figures 7 to 9 describe the results of the existing operation vs. drawdown starting on Oct 1<sup>st</sup> with no pump at S59 and Lake Toho target stage at 54.5'. With substantial modification to the existing Lake Toho regulation schedule (Figure 8), all the targets are met and constraints are followed as well. However, in order to attain the same target stages in East Lake Toho, the modification to Lake Toho stages is significant (Figure 10). Compared to the existing regulation schedule stages, the required stages for Lake Toho would have to be up to 2.2 ft lower for a month. When compared with the East Lake Toho drawdown with 400 cfs pump operations, the drawdown without pumps would require Lake Toho stages to be decreased by up to additional 1.7 ft.



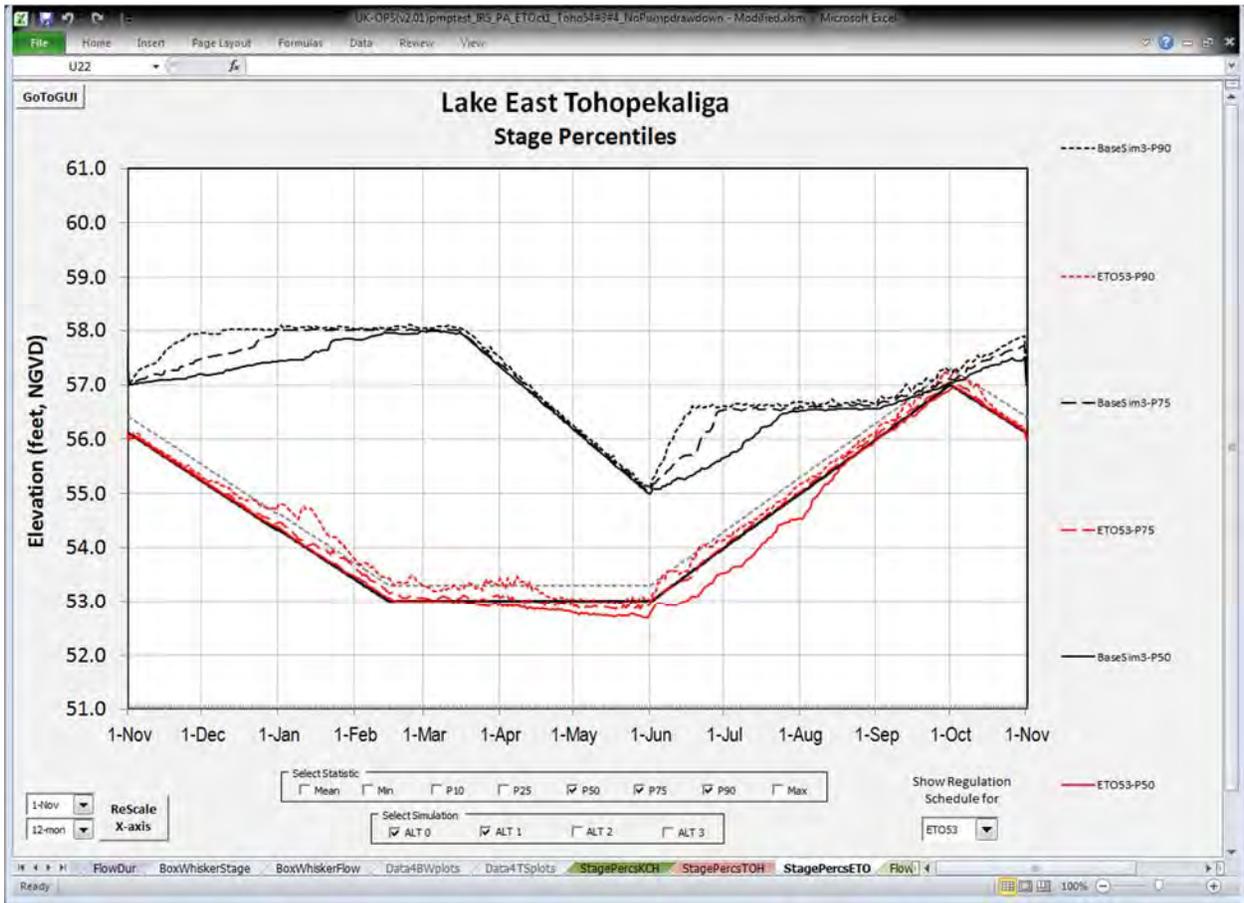
**Figure 4.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 400 cfs Pumpage and Lake Toho Target Stage at 54.5'



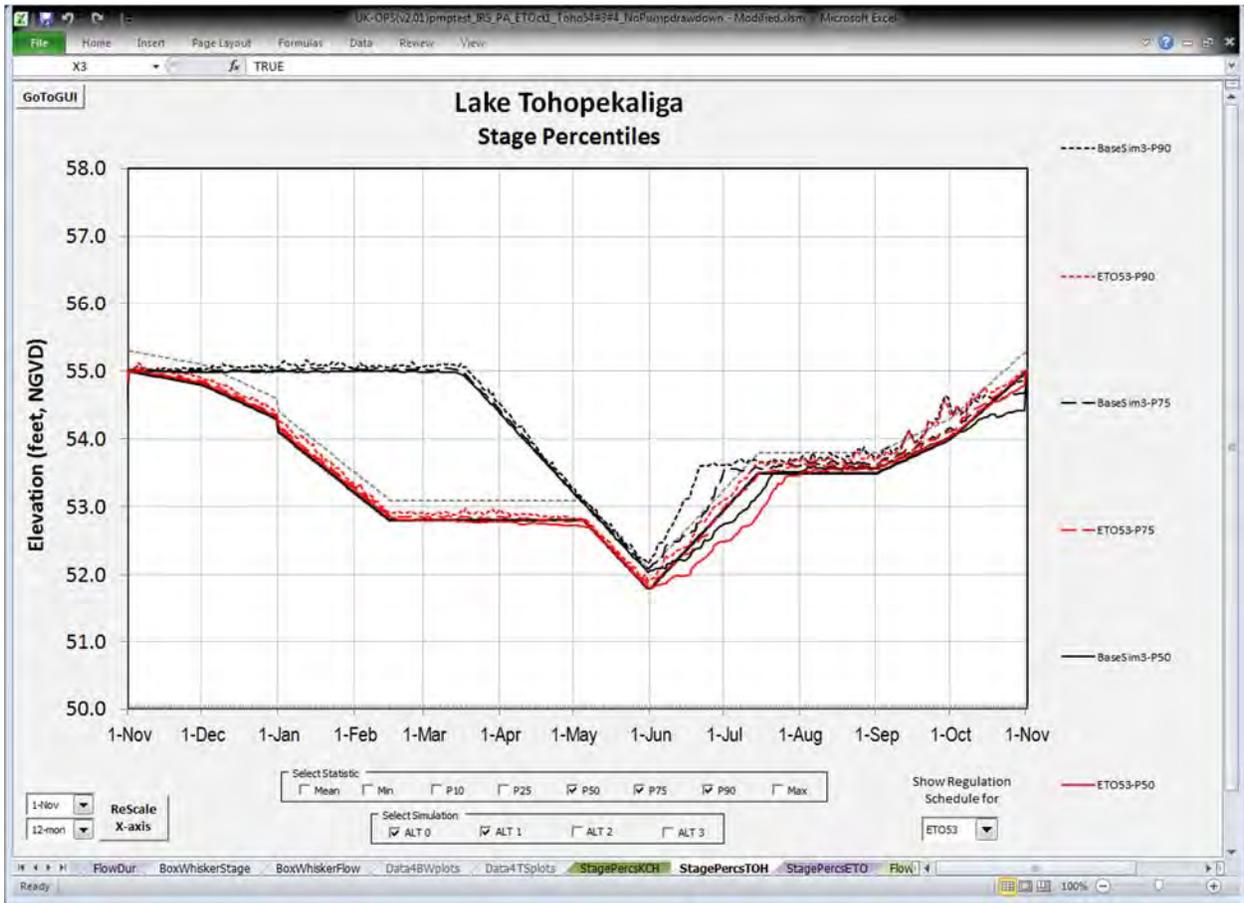
**Figure 5.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 400 cfs Pumpage and Lake Toho Target Stage at 54.5'



**Figure 6.** S59 Flow Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 400 cfs Pumpage and Lake Toho Target Stage at 54.5'



**Figure 7.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



**Figure 8.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59

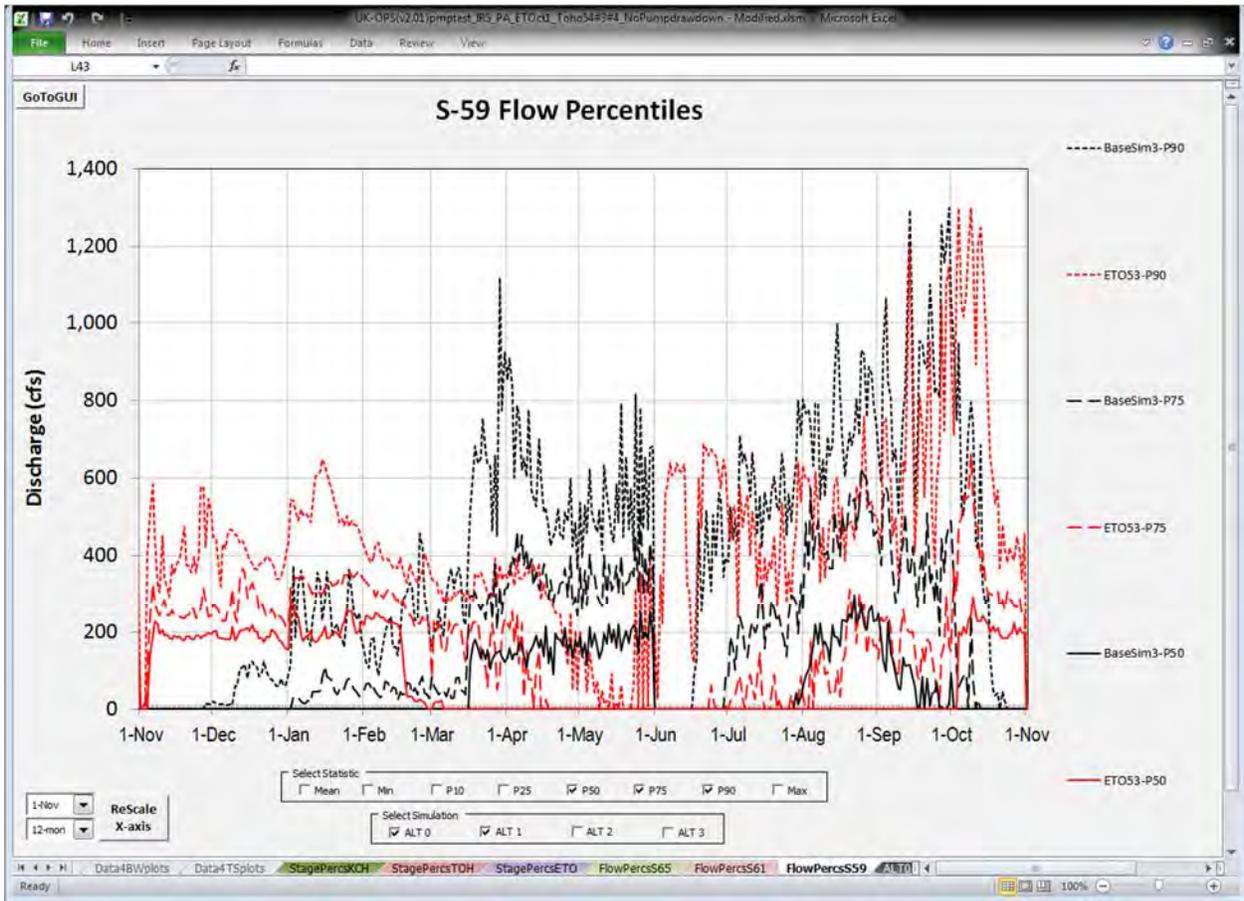
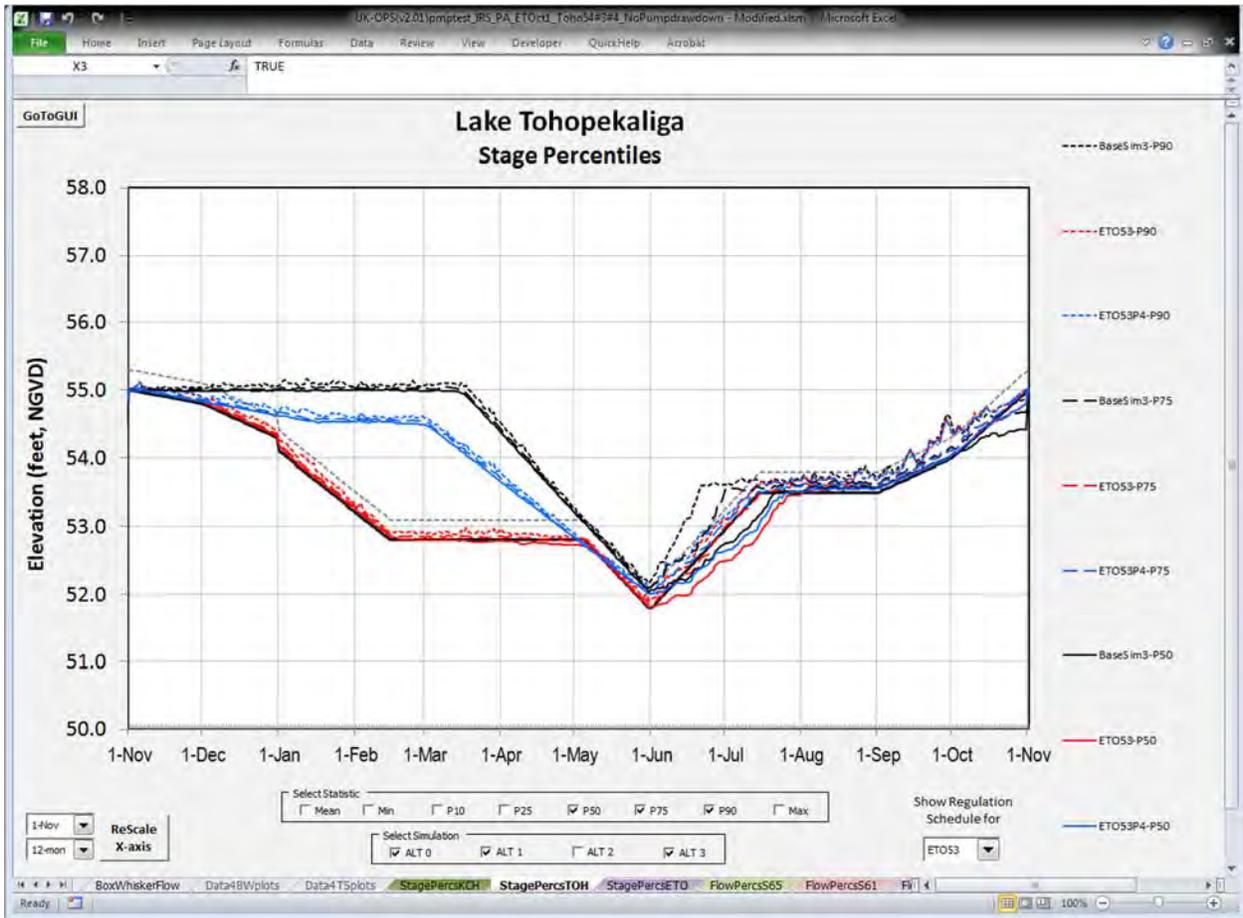


Figure 9. S59 Flow Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



**Figure 10.** Lake Toho Stage Percentiles: Existing Condition (Black Lines), Drawdown Start on Oct 1<sup>st</sup> with 400 cfs Pumpage and Lake Toho Target Stage at 54.5' (Blue Lines) and Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59 (Red Lines)

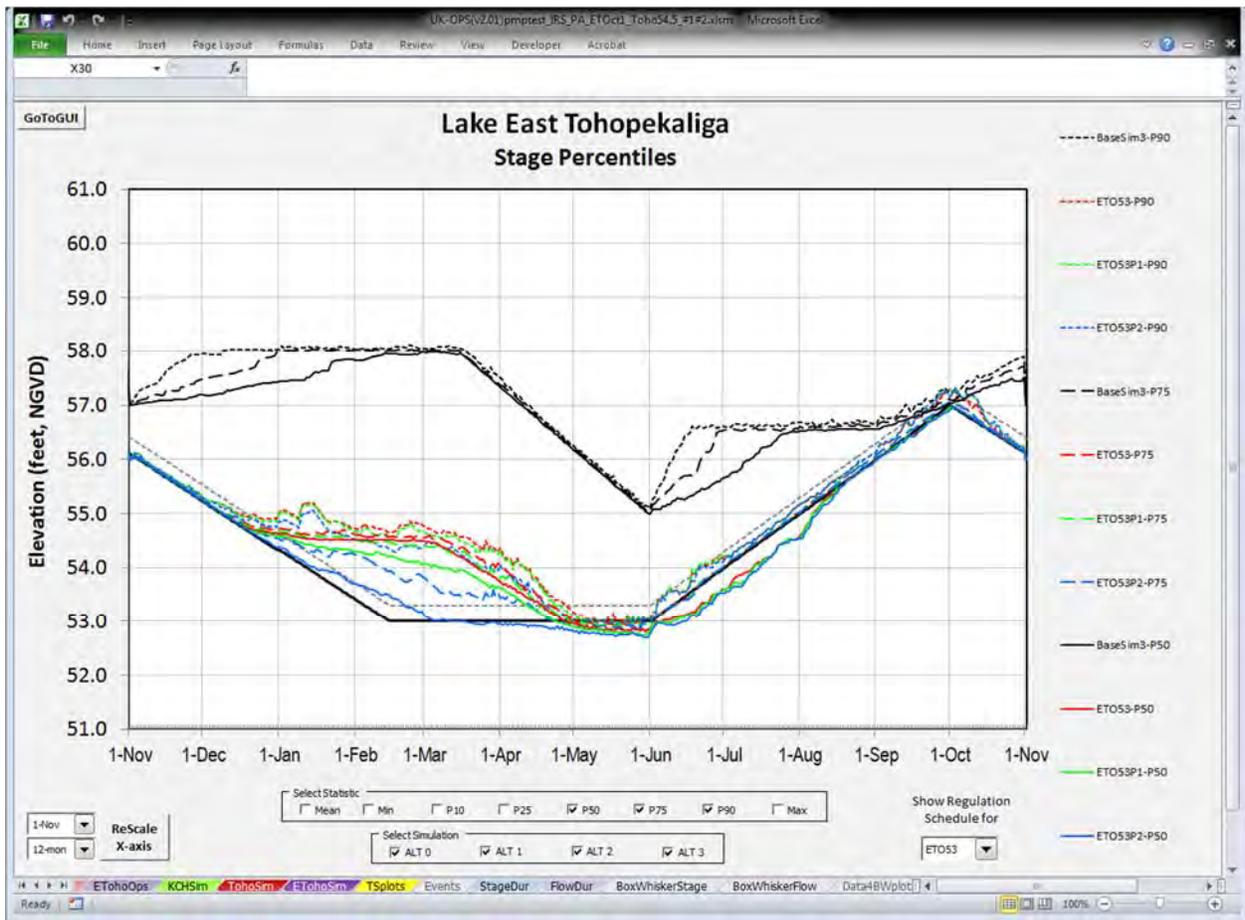
## Reference

1. S59 Structure Information Sheet, SFWMD. Accessed on September 21, 2015 [http://my.sfwmd.gov/portal/page/portal/pg\\_grp\\_sfwmd\\_sis/pg\\_sis\\_structure\\_screen\\_std?p\\_search=&p\\_structure\\_id=974](http://my.sfwmd.gov/portal/page/portal/pg_grp_sfwmd_sis/pg_sis_structure_screen_std?p_search=&p_structure_id=974)
2. Rama Rani, Ken Konyha and Luis Cadavid (April 14, 2006) 2007 South Florida Environmental Report, Appendix 11-1 Assessment of Modifications to Zone B Discharges in Lake Tohopekaliga (Toho) and East Lake Tohopekaliga (E Toho).

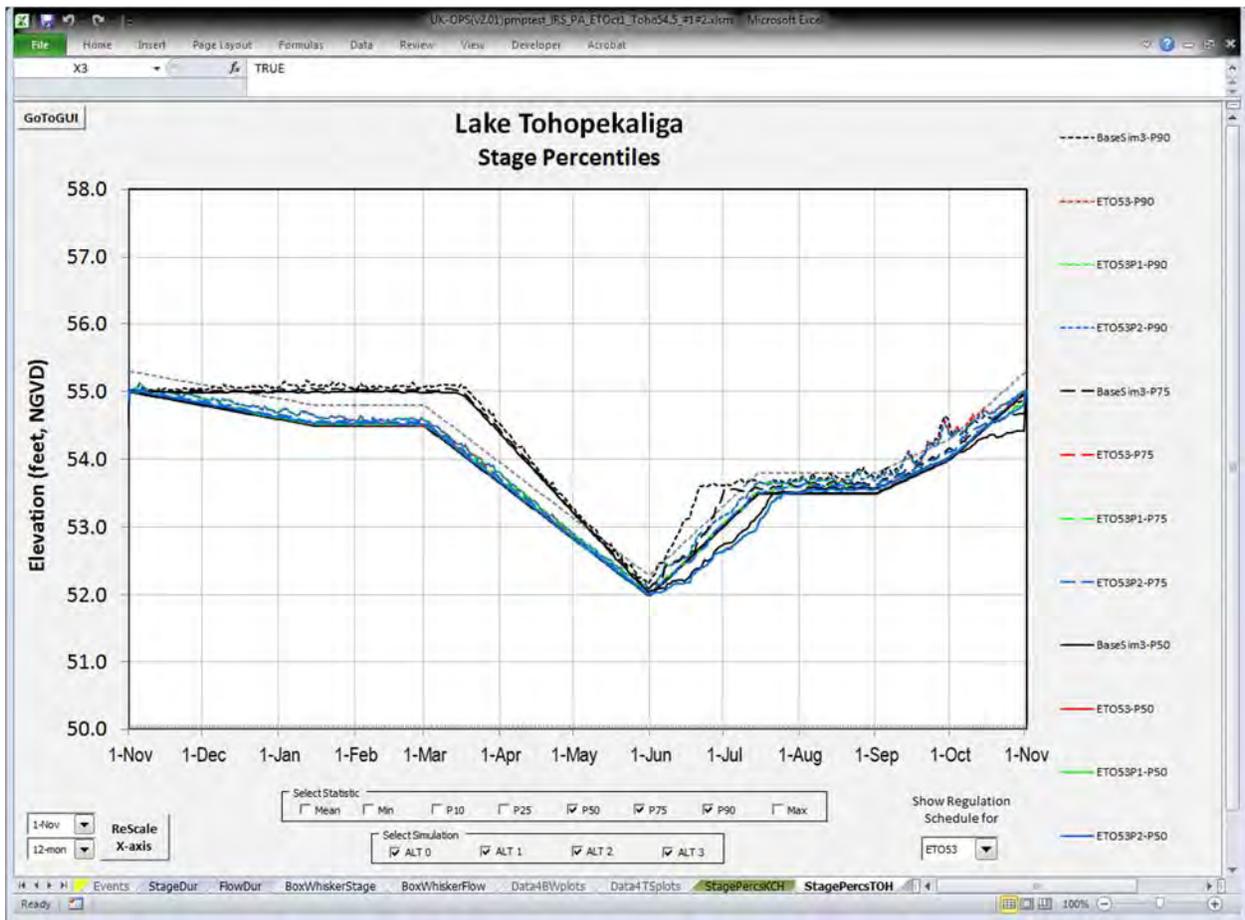
## Appendix A

1. In all figures, the top three black lines are lake stage percentiles (50%, 75% and 90%) under current lake regulation schedules;
2. In all figures, the three red lines are lake stage percentiles (50%, 75% and 90%) with only gravity flow at S-59 (NO pump scenario) under proposed lake regulation schedules;
3. In all figures, the three green lines are lake stage percentiles (50%, 75% and 90%) with either 100cfs or 300cfs pump operations under proposed lake regulation schedules;
4. In all figures, the three blue lines are lake stage percentiles (50%, 75% and 90%) with either 200cfs or 400cfs pump operations under proposed lake regulation schedules;
5. For the pump operation scenarios, the pump starts to kick in when the gravity flow through S-59 drops below 20% of the proposed pump capacity, e.g. when the gravity flow drops below 40cfs for the 200cfs pump scenario, the pump starts moving water from East Lake Toho to Lake Toho while the S-59 gates are closed;
6. The figures include:
  - a. **Figure A-1-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.5'
  - b. **Figure A-1-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.5'
  - c. **Figure A-2-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.5'
  - d. **Figure A-2-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.5'
  - e. **Figure A-3-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - f. **Figure A-3-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - g. **Figure A-4-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - h. **Figure A-4-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - i. **Figure A-5-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - j. **Figure A-5-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - k. **Figure A-6-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'
  - l. **Figure A-6-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'

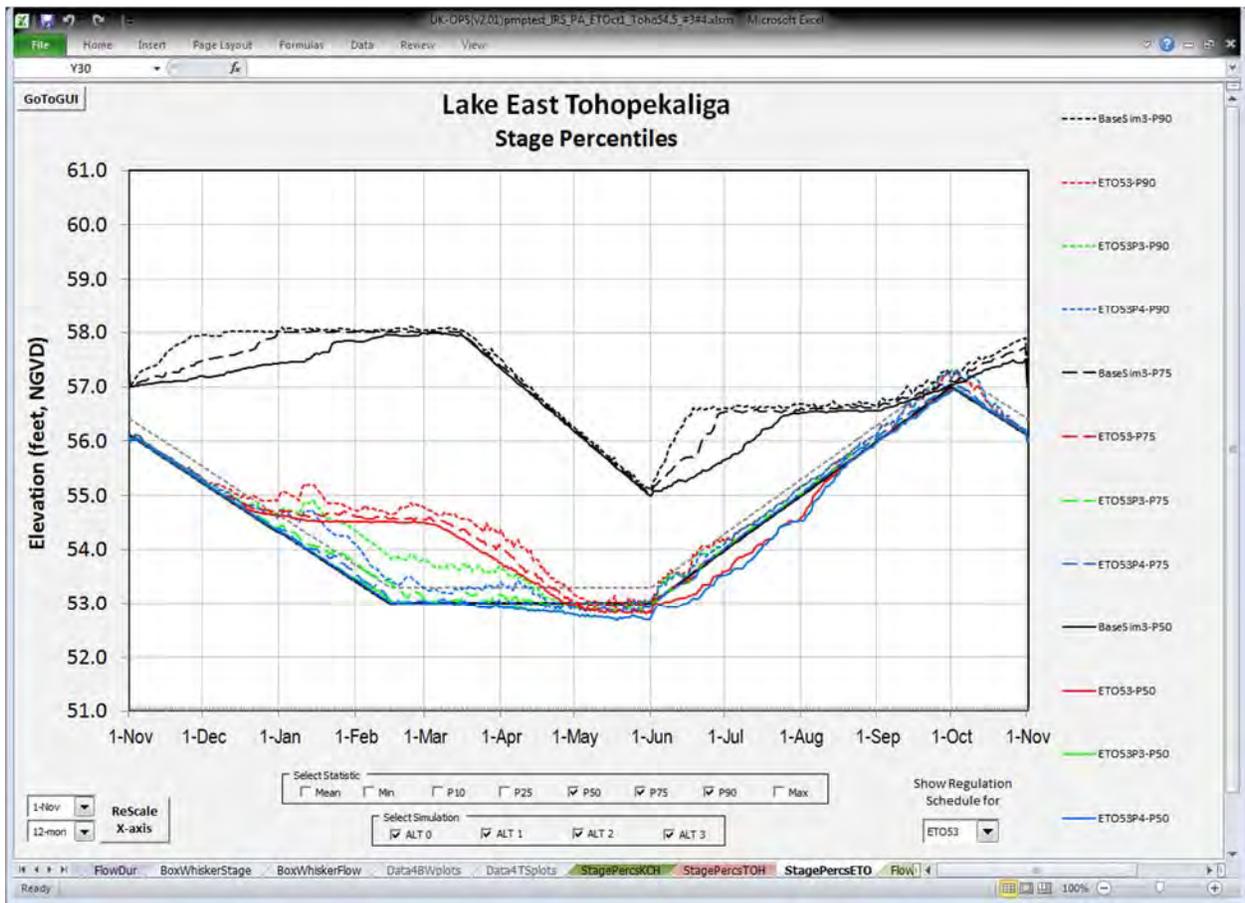
- m. **Figure A-7-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59
- n. **Figure A-7-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



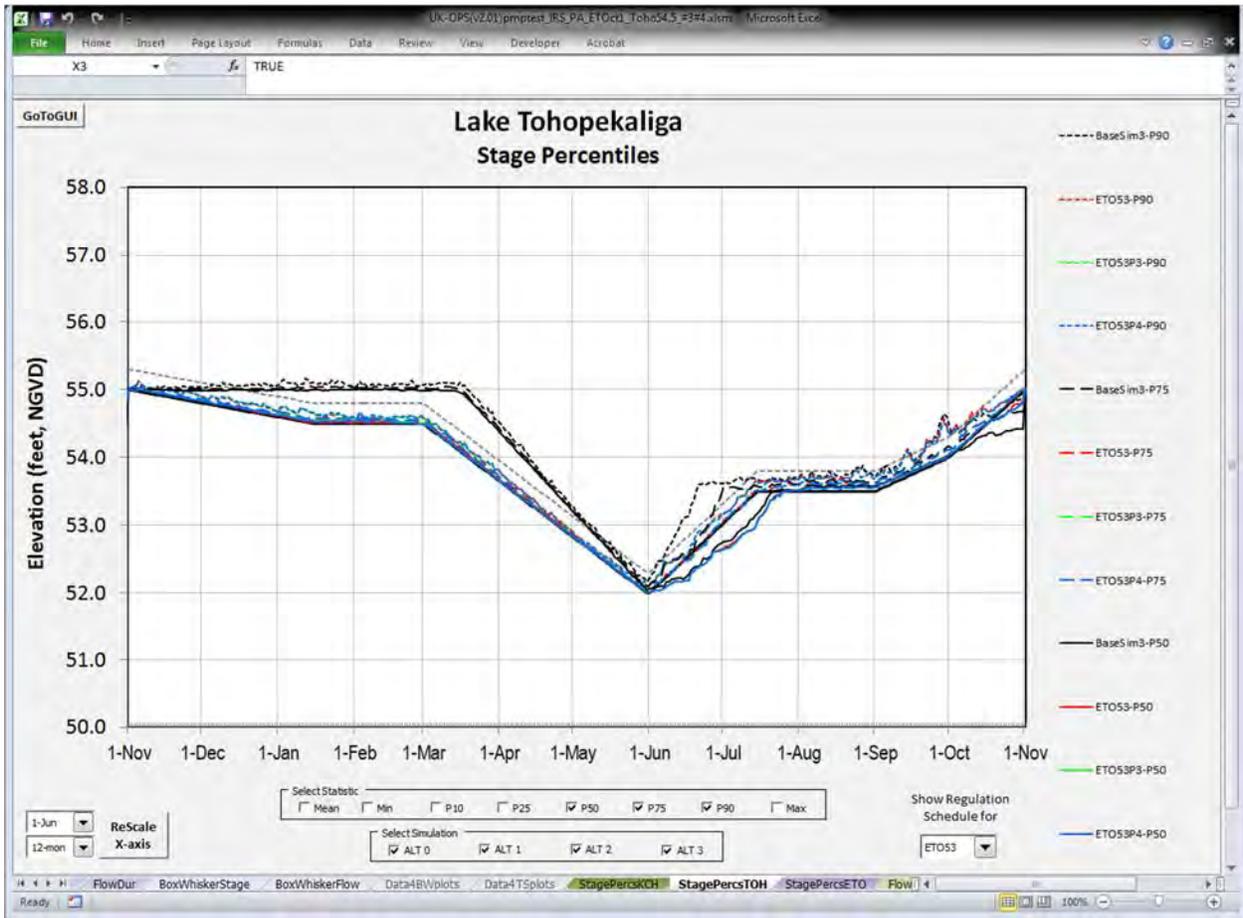
**Figure A-1-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.5'



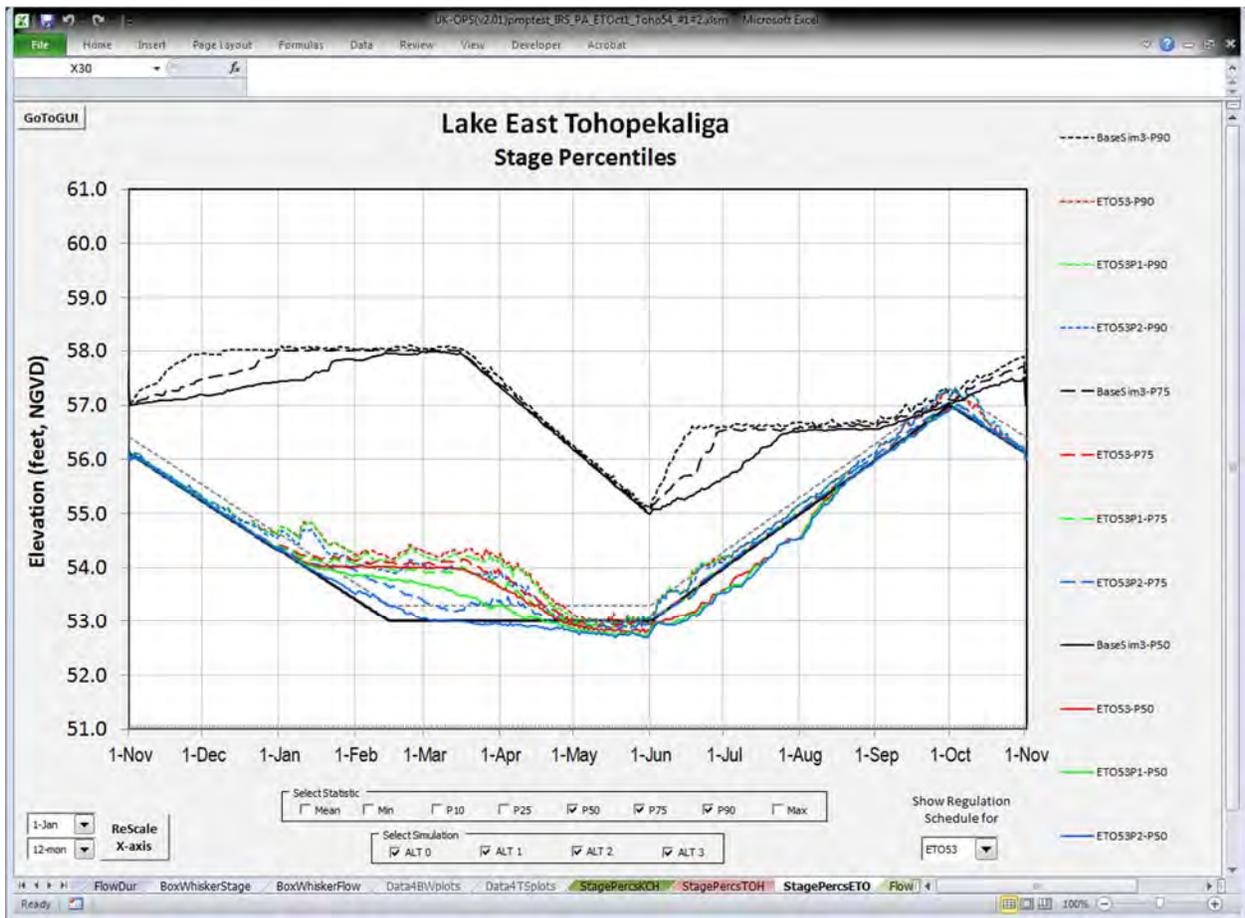
**Figure A-1-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.5’



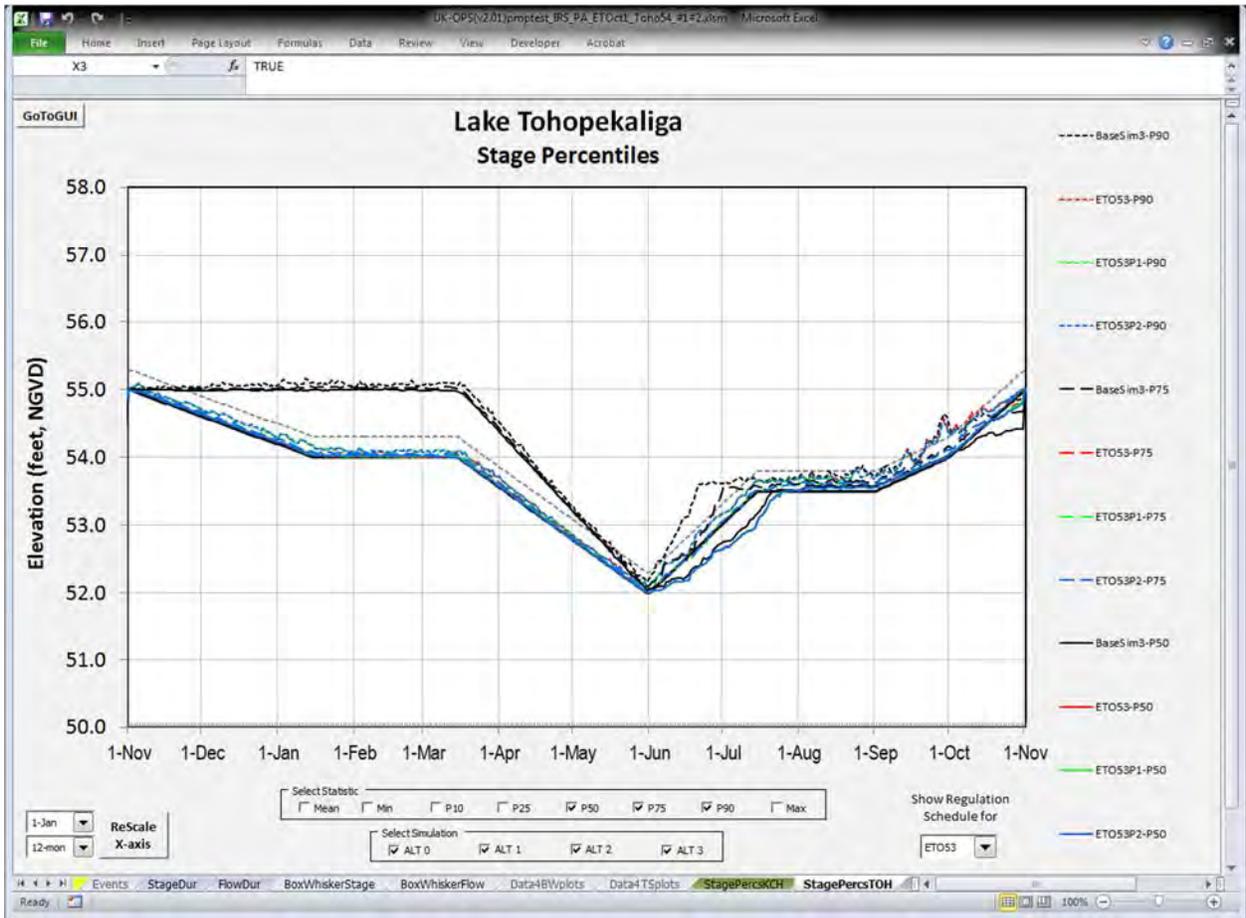
**Figure A-2-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.5'



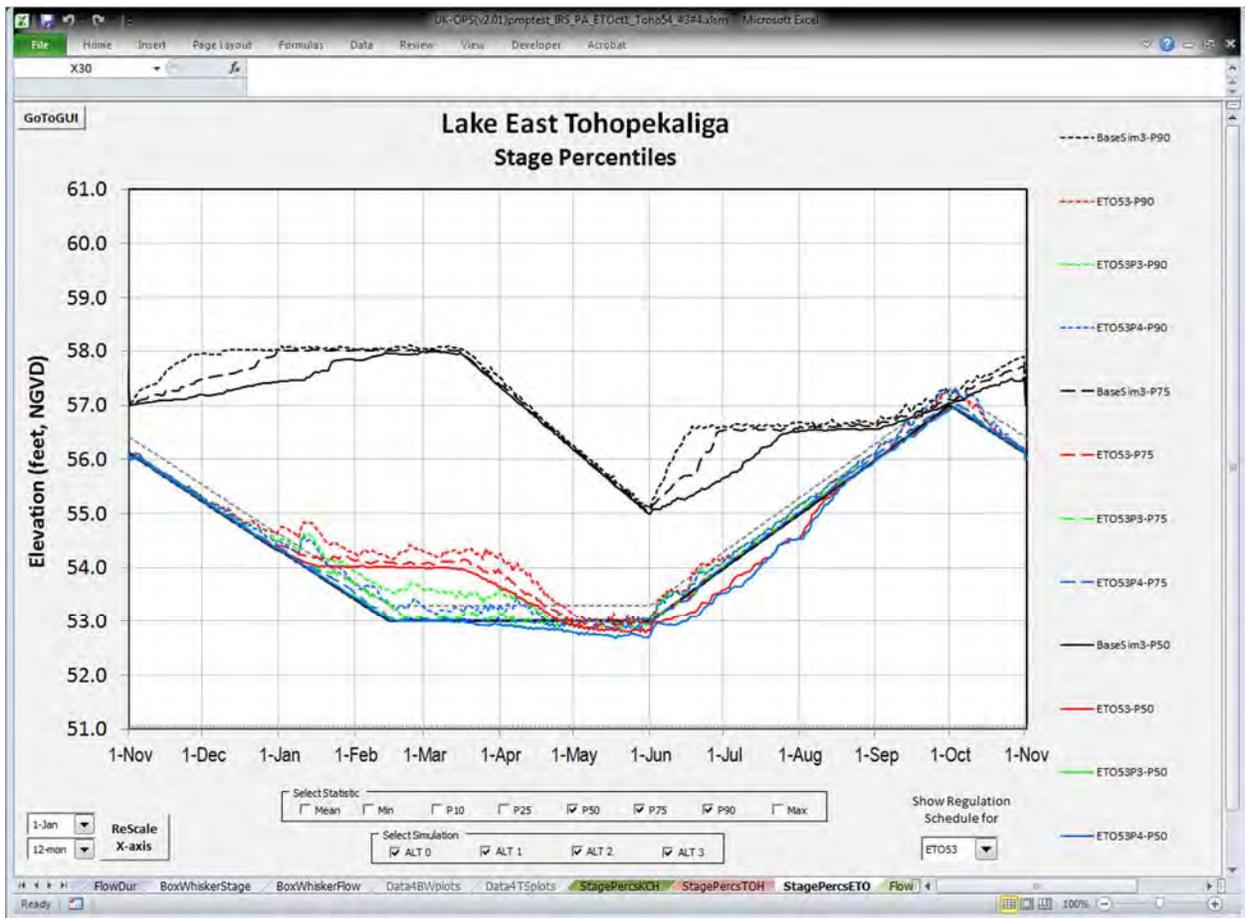
**Figure A-2-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.5'



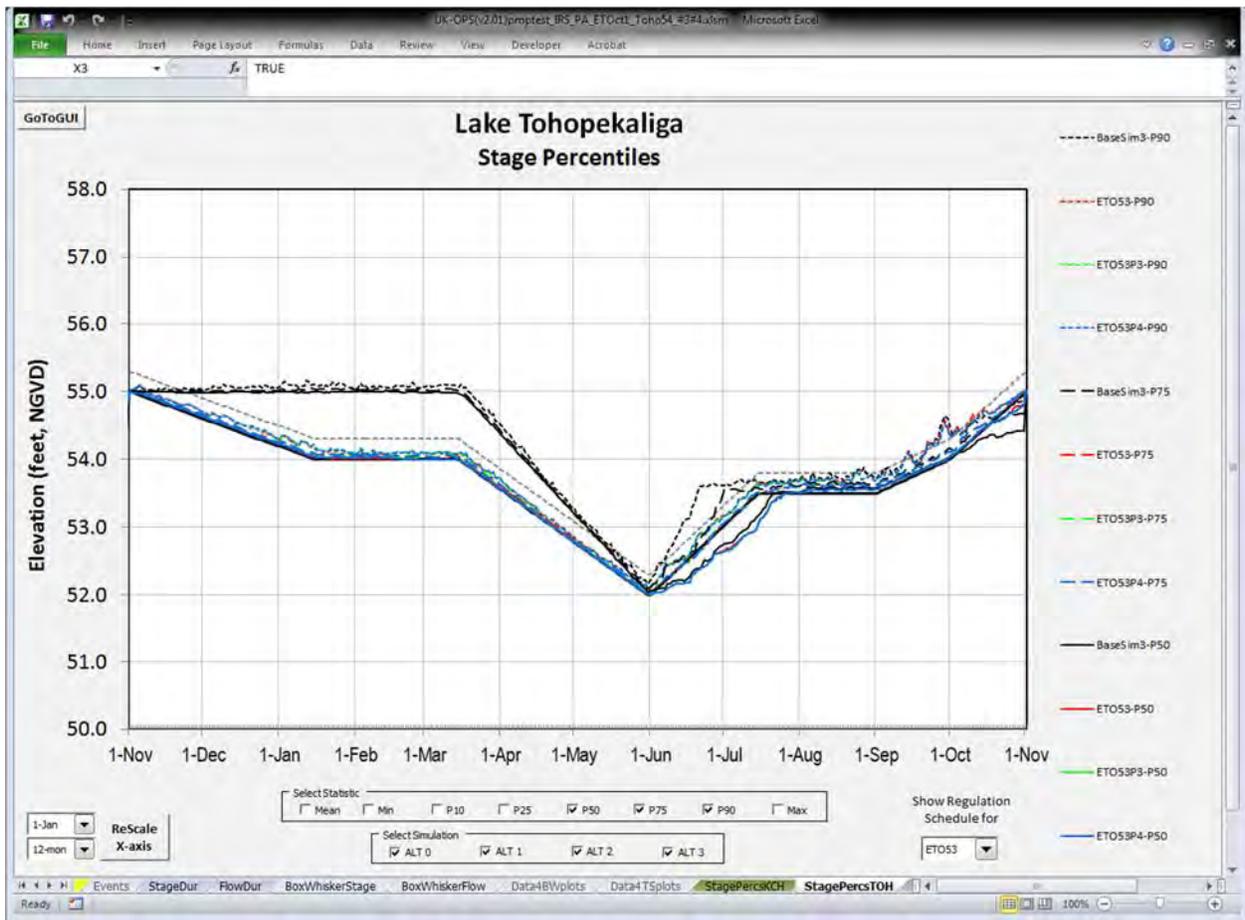
**Figure A-3-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'



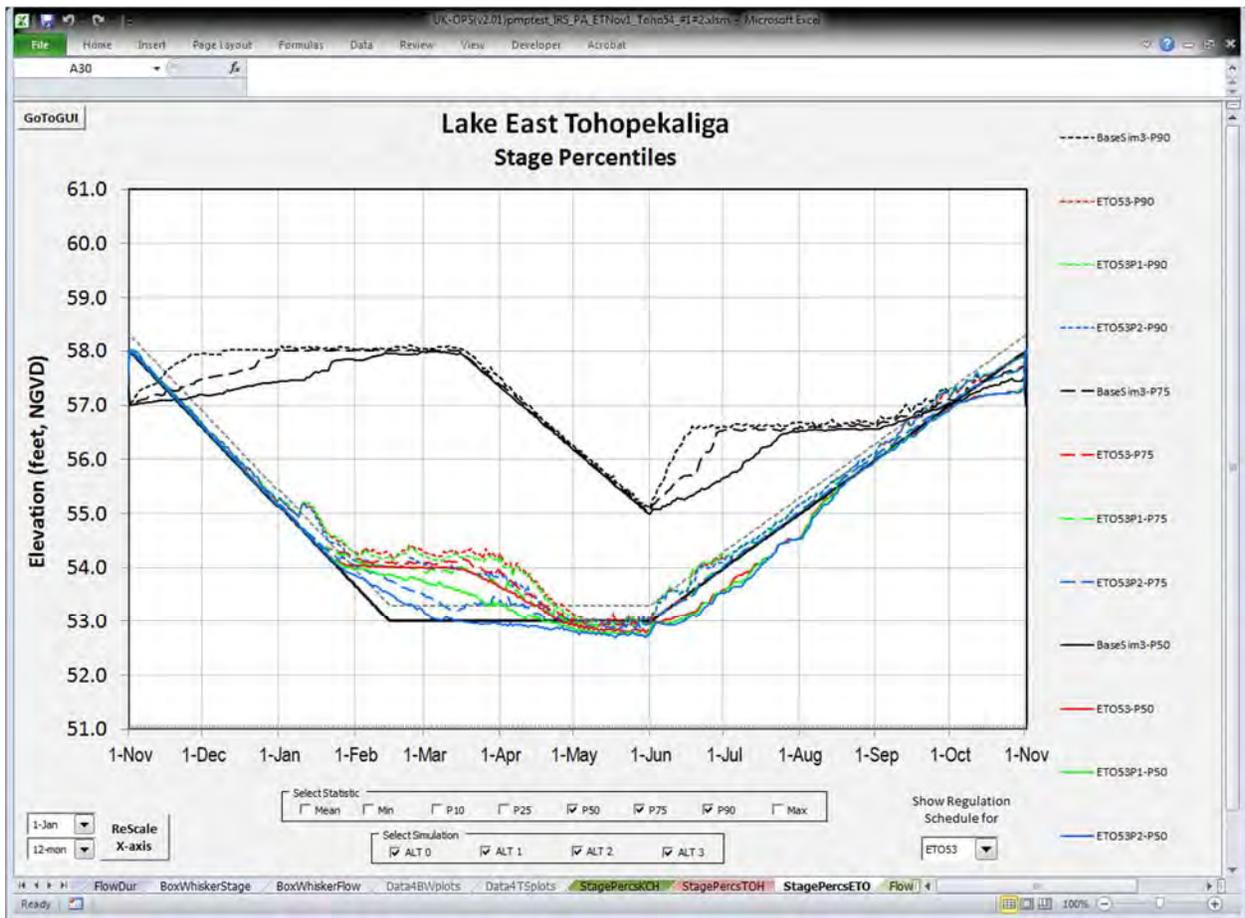
**Figure A-3-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'



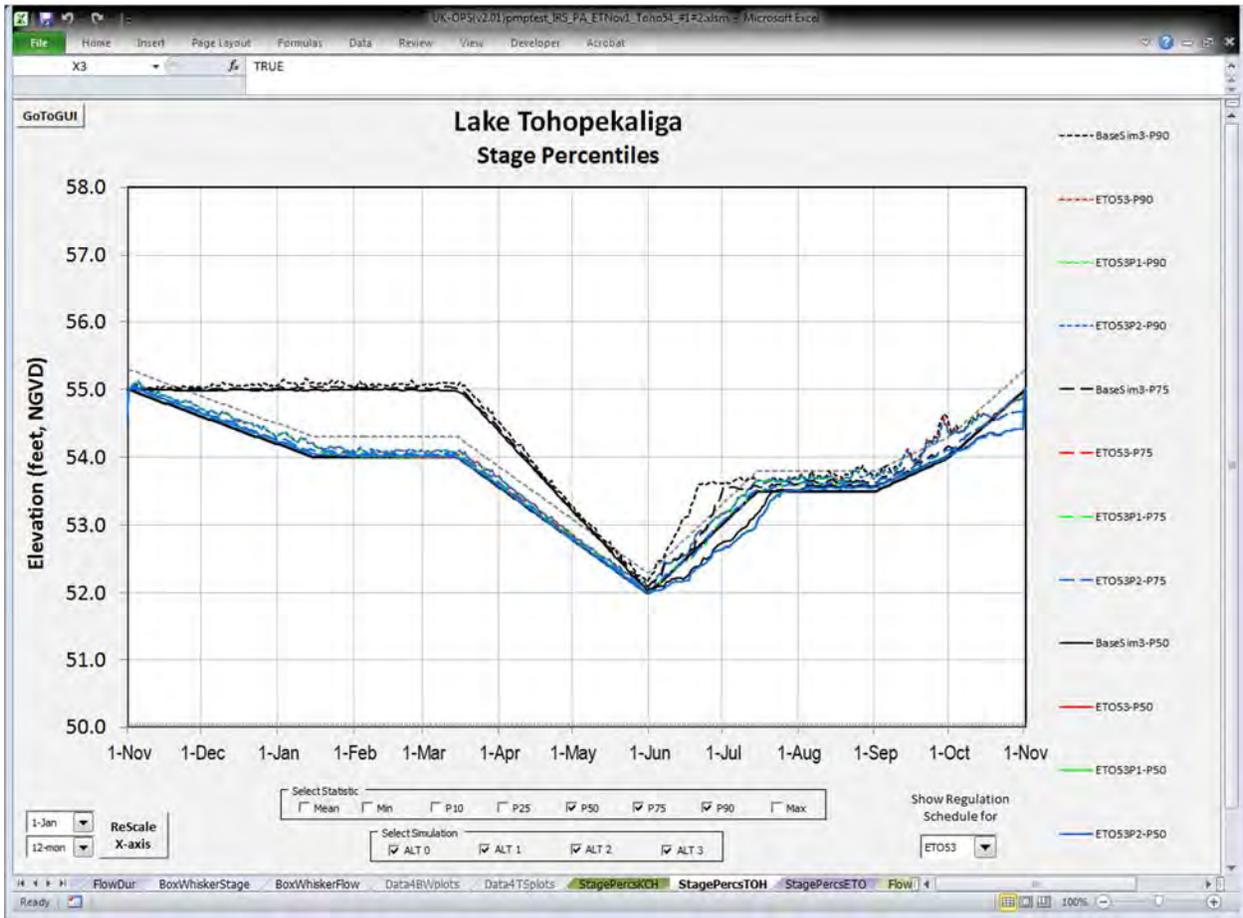
**Figure A-4-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'



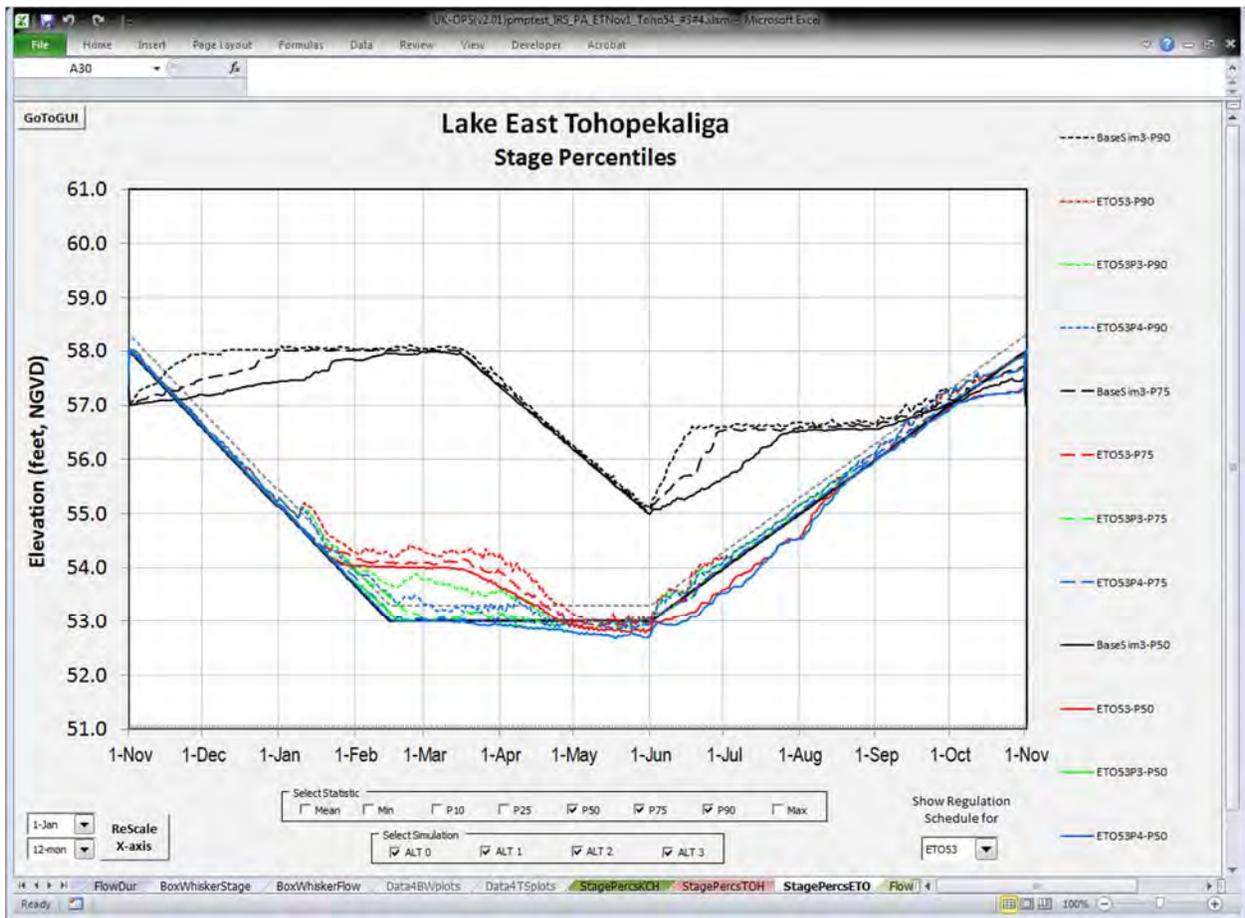
**Figure A-4-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'



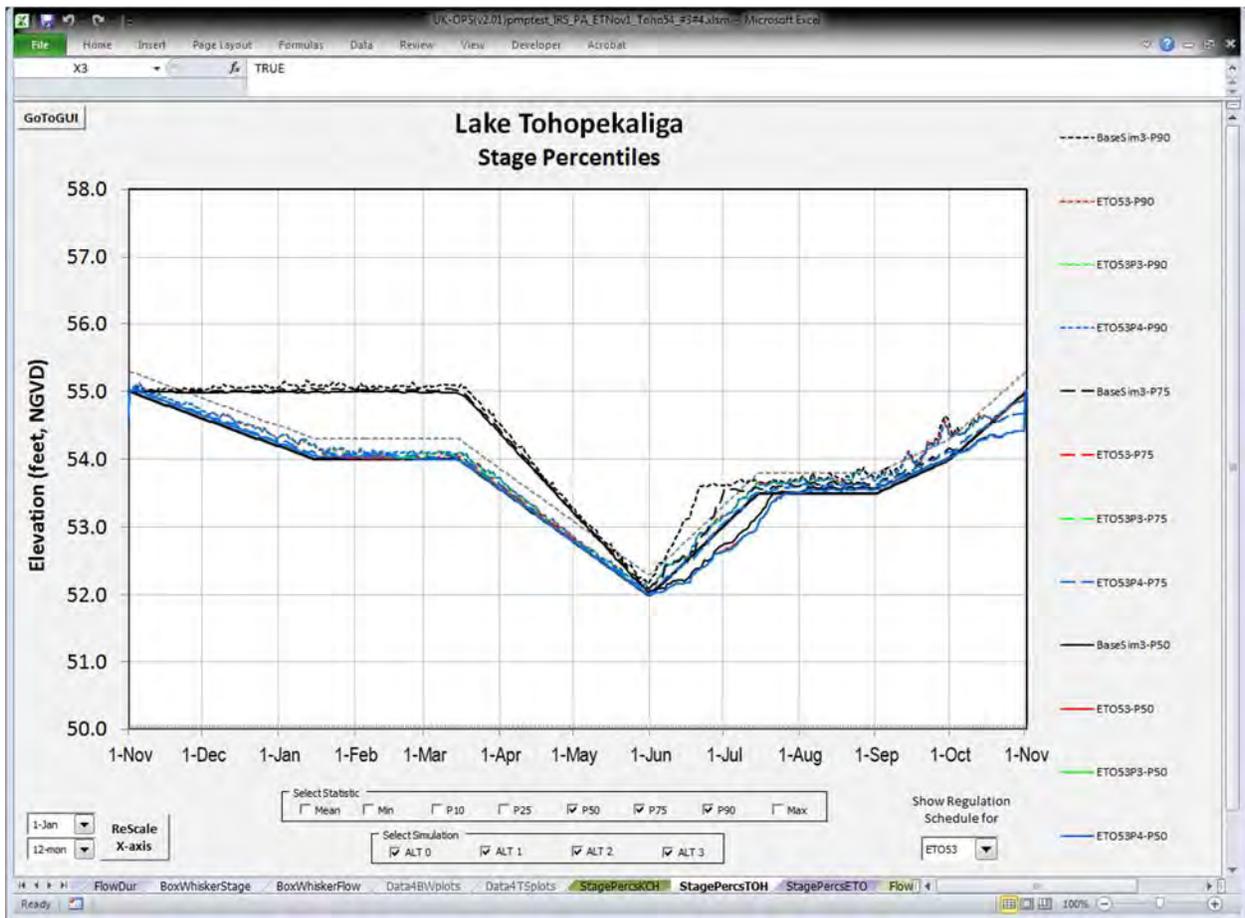
**Figure A-5-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'



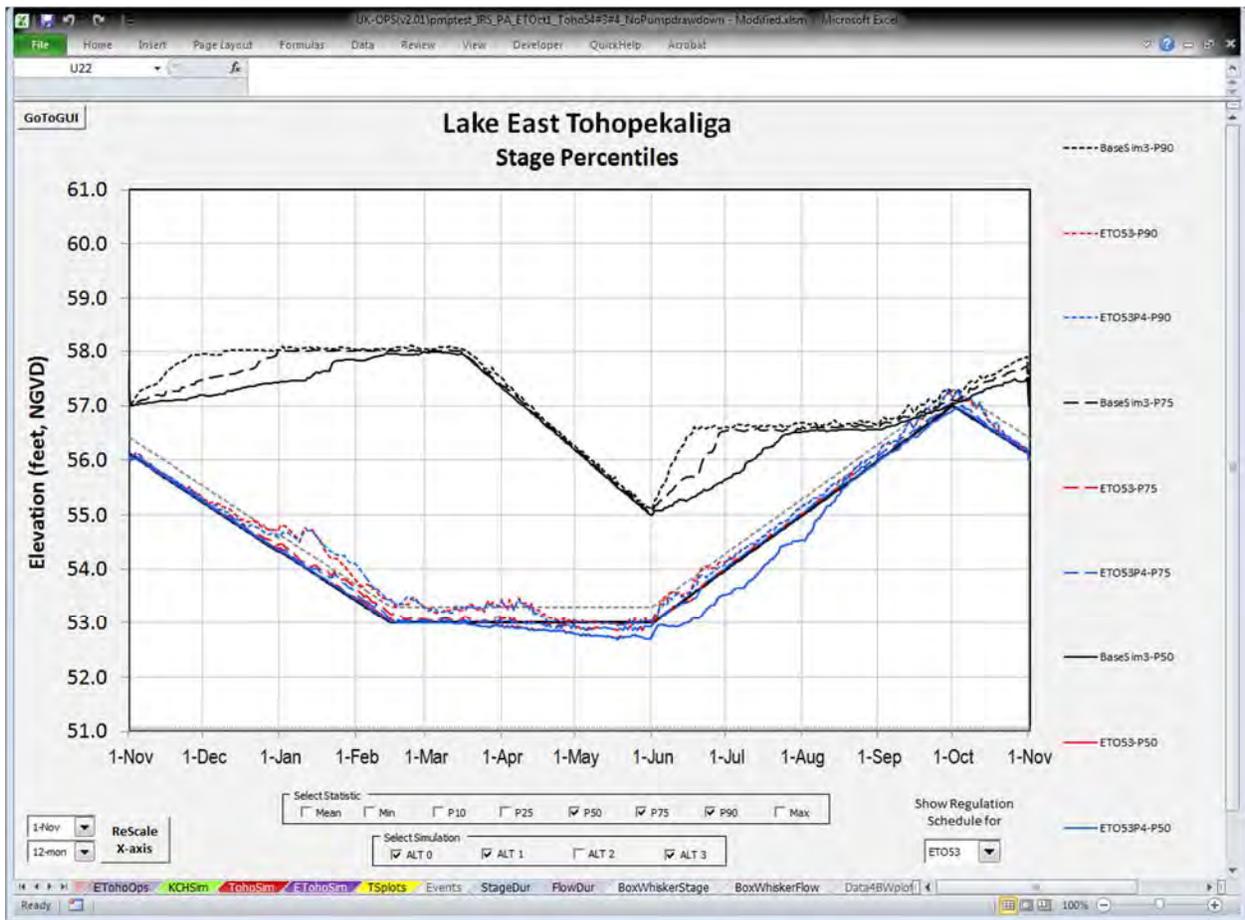
**Figure A-5-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 100/200 cfs Pumpage and Lake Toho Target Stage at 54.0'



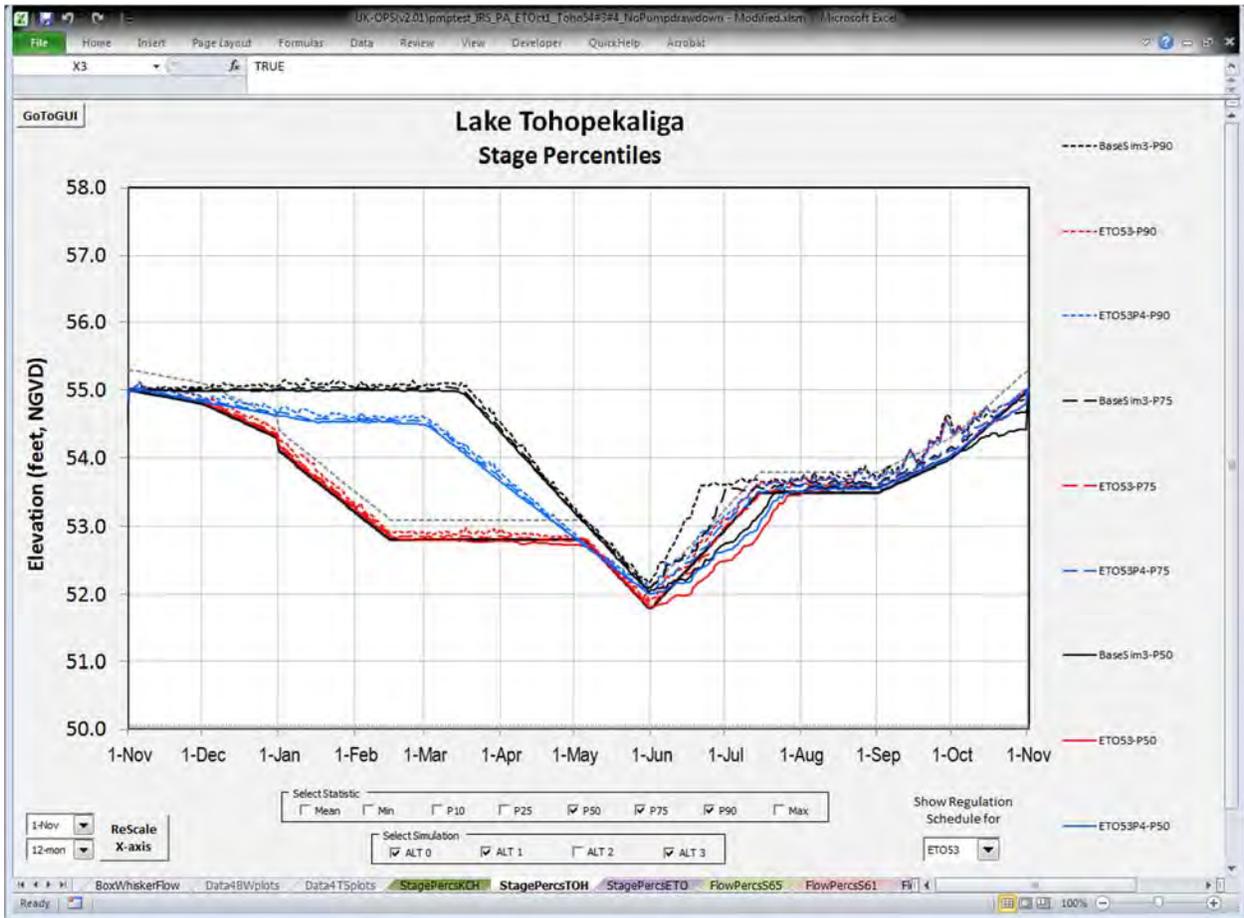
**Figure A-6-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0'



**Figure A-6-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Nov 1<sup>st</sup> with 300/400 cfs Pumpage and Lake Toho Target Stage at 54.0’



**Figure A-7-1.** East Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59



**Figure A-7-2.** Lake Toho Stage Percentiles: Existing vs Drawdown Start on Oct 1<sup>st</sup> with No Pump at S59 (Red Lines)