

**SUMMARY OF FINDINGS  
AND DEVELOPMENT ORDER  
RECOMMENDATIONS FROM  
THE LAKE TOHOPEKALIGA  
ENVIRONMENTAL  
WORKING GROUP**

*Presented to:*

**The East Central Florida  
Regional Planning Council  
631 North Wymore Road  
Suite 100  
Maitland, Florida 32751**

**AUGUST 2006**



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*Compiled by:*

**Glatting Jackson Kercher Anglin Lopez Rinehart, Inc  
33 East Pine Street  
Orlando, FL**

**August 2006**

## *I. Introduction*

The Lake Tohopekaliga (Toho) Environmental Working Group (Working Group) was established to provide a comprehensive, unified review of environmental issues associated with five Developments of Regional Impact on the east shore of Lake Toho. The Working Group met six times between November 2005 and May 2006 to provide this review for the developers and consultants of these developments. The purpose of the Working Group was to:

- Provide the opportunity for permitting agencies to work with DRI applicants while projects are still in the planning phase and there is greater flexibility in project design and more opportunity for achieving a higher level of environmental protection and stewardship.
- Provide the DRI applicants an early opportunity to consider ideas for addressing the concerns of permitting agencies.
- Coordinate DRI reviews and federal and state environmental permitting program reviews to achieve a consistent approach to dealing with environmental impacts particularly cumulative impacts.
- Explore and pursue joint planning and permitting of the five (5) DRIs.

The Working Group identified six issues that were important to the comprehensive review of potential environmental impacts from the developments. These included:

- 1) Wetland impacts (particularly along the shore of Lake Toho)
- 2) Water Quality
- 3) Water Quantity
- 4) Smoke Management
- 5) Wildlife Conservation
- 6) Transportation

At the January, 2006 meeting, the Working Group defined the data necessary to conduct the review of these six issues. The extensive set of GIS files, aerial photography, conceptual plans, water quality parameters, etc. compiled for the study are depicted in **Figures 1 – 6** in **Appendix 1**.

During the February and March, 2006 meetings, the Working Group identified goals, objectives and actions for each of these six issues. The meeting notes, and goals, objectives and actions from these meetings were summarized in subsequent meetings, and used as the focal points for future discussions.

A preliminary report was compiled from these goals, objectives and actions, and reviewed with the Working Group during the April 21, 2006 meeting. At that meeting, seven Priority Conservation Actions were determined to represent the objectives of the Working Group. These Actions are provided in **Table 1** in **Appendix 1**. The Working Group asked for more details from the applicants and the May meeting was scheduled for an all-day work session to receive these details from the applicants. At this meeting, more details were presented by the applicants,

and the Working Group participated in sessions that led to the draft recommendations included in this report. Since detailed master plans were not available, many of the Priority Conservation Actions were not addressed in a detailed fashion at this final meeting of the Working Group. Because of the importance of a detailed, Habitat Conservation and Management Plan to guide the methods for implementing conservation measures over time, this Plan should be approved by the relevant agencies of the Working Group before construction begins. The components of the plan were derived from Working Group action items, and they are included In Section 1A below.

Recommendations for other Development Order (DO) conditions that are included below relate to the Priority Conservation Actions developed by the Working Group. Finally, the Working Group identified measures that require sustained effort from regulatory entities over the time. Recommendations are provided that identify the responsibilities of these government entities toward the objectives for resource protection in the basin over time.

## *II. Recommended Fundamental DO conditions*

**1. Protect wildlife habitat** – objectives from the Working Group: 1) Sustain connections of native wildlife habitat for multiple species to regional systems, 2) Specify how viable bald eagle nesting habitat will be sustained long-term, 3) Define how to prohibit/control boat traffic (including jet skis and airboats) in snail kite habitat, 4) Design roads that allow wildlife movement

### *A. Habitat Conservation and Management Plan:*

- 1) The developers must create detailed habitat conservation and management plans for listed species including bald eagle, gopher tortoise (and commensals), eastern indigo snake, wood stork, sandhill crane, snail kite, and Sherman's fox squirrel. These plans must be approved by the FFWCC and the SFWMD; with review and input by the USFWS, ACOE and the ECFRPC prior to initiating construction. The Plans shall include:
  - a. The location of linkages of native wildlife habitat for multiple species connected to regional systems,
  - b. The approach to wetland conservation and enhancement with consideration of off-site wetland systems, and hydrology,
  - c. The approach to upland habitat protection, including existing and future eagle nest sites,
  - d. Methods for assuring that long-term management will be funded,
  - e. Success criteria for wetland conservation, water quality enhancement, water quantity management, and wildlife management,
  - f. Monitoring strategies to evaluate progress toward success criteria,
  - g. Language for a conservation easement to protect the resources within the boundaries of protected areas,
  - h. Goals and objectives for continued environmental education, including materials for Homeowner Association documents, and
  - i. A maintenance plan that addresses elimination of nuisance, exotic plants.

B. Bald eagle protection:

- 1) The developers must designate no development zones (except for stormwater ponds and lakes) within at least a 660 foot-radius zone around active and viable eagle nest trees, unless tolerance of existing infrastructure warrants a lesser radius zone,
- 2) The developers must develop an eagle management plan that can be implemented by qualified professionals and effectively communicated to homeowners associations, CDD's and other long term managers,
- 3) The developers must retain viable bald eagle nesting habitat through the retention of stands of mature (greater than 12" dbh) pine and cypress trees on-site, to the maximum extent practicable as determined by the Osceola County Planning Department. Canopy protection areas should include eagle protection zones, wetland mitigation areas, the Lake Toho Protection Area (as defined in the Section of this report entitled *Protect the Shore of Lake Toho*), common areas, and in commercial lots where they can be maintained in perpetuity,
- 4) The developers must develop a plan for restoring longleaf pines for future bald eagle nests, including a timetable for their planting,
- 5) The developers must develop specifications for contractors to enable them to minimize loss of trees due to construction disturbance,
- 6) The developers must monitor active bald eagle nests and preserved trees to assure protection during the construct process, and
- 7) The developers must assure that control elevations of stormwater ponds around eagle nests will not adversely affect mature pine and cypress trees that have been retained in the development.

C. Snail kite protection:

- 1) The developers must create deed restrictions that prohibit jets skis and airboats from being docked or launched from the projects in order to minimize disturbance around and within snail kite nesting habitat, and
- 2) The developers must provide signage and educational materials for residents that use Lake Toho in order to discourage encroachment in snail kite nesting habitat.

D. Other issues:

- 1) The developers must establish to on-site conservation of gopher tortoise (and commensals) populations unless on-site conservation is not recommended by the FFWCC, or not permissible due to FFWCC rule changes. For each DRI, gopher tortoise conservation will be located in no more than 3 preserves established to protect the estimated tortoise population on-site in perpetuity,
- 2) The developers must provide adequate on-site nesting and foraging habitat on the projects in which Florida sandhill cranes are known to occur, and
- 3) The developers must provide restrictions that prohibit free-ranging pets.

E. Road design:

- 1) The developers must create provisions for wildlife connectivity across or under roadways. This must include eco-passages that address movement of likely-occurring wildlife, reduced speed limits, signage illustrating the presence of wildlife, and consideration of reduced lighting. On-site linkages must be integrated with the regional transportation network, and

planned under the assumption that the future redesign of existing (off-site) roads will allow wildlife movement.

- 2) The developers must contribute a proportionate share of the costs of significant and adversely impacted roads that require off-site eco-passages.

**2. Protect/restore wetland systems** - objectives from the Working Group: 1) Identify wetlands proposed for impact and restoration, 2) Conserve wetland systems, and 3) Create a strategy for long-term management

- 1) The developers must specify wetlands that will be impacted and how preserved wetlands will be connected across the site,
- 2) The developers must provide at least a 50 foot average, 25 foot minimum, upland buffer for wetlands of regional significance,
- 3) The developers must integrate preserved wetlands with stormwater management systems to provide maximum connectivity, and maintain or improve wetland hydroperiods as a result of the connectivity,
- 4) The developers must demonstrate why wetlands cannot be mitigated on-site, and prioritize mitigation of impacts: a) on-site, b) in-basin, c) within a mitigation bank that includes the Toho basin, and
- 5) The developers must complete ACOE and SFWMD preliminary wetland delineations as a part of conceptual ERP and/or ACOE permits, and incorporate these determinations in the Habitat Conservation and Management Plan. The final determinations, and the Habitat Conservation and Management Plan should be updated with wetland determinations from the ERP construction permit.

**3. Protect the shore of Lake Toho** - objectives from the Working Group: 1) Identify specific measures to protect the shore of Lake Toho, including no-development zones, 2) Protect lakefront canopy, and 3) Define what uses will be allowed in these areas

- 1) The developers must designate a Lake Toho Protection Area that includes a 250 foot minimum, 500 foot average, buffer along the Lake Toho lakeshore (elevation 55'), and exclude any structures except boat lifts, common access points, and appropriate passive recreation facilities. No lakefront lots are allowed in this zone,
- 2) The developers must specify that below elevation 56.5 (for lands over which the developer holds title), native vegetation will be managed to mimic historic conditions, including the removal of Category I exotic plants,
- 3) The developers must provide public open space along Lake Toho (no lakefront lots),
- 4) The developers must place a Conservation Easement dedicated to the SFWMD, Osceola County, or other appropriate entity, over the Lake Toho Protection Area (for lands over which the developer holds title), and
- 5) The developers must relocate lake access points that are under their control to avoid snail kite nesting areas.

**4. Enhance water quality and control water quantity** - objectives from the Working Group: 1) Create a comprehensive water quality enhancement plan to improve water quality in Lake Toho, 2) Reduce phosphorus, nitrogen and other pollutants by 25 – 50% (or more) from existing levels,

3) Determine the approach to stormwater management including consideration of settling basins, inline storage, treatment trains, and large stormwater management lakes, 3) Reduce the rate and volume of stormwater discharge

- 1) The developers must anticipate new SFWMD rules in the Okeechobee basin as well as the implementation of TMDL standards for the Lake Toho basin, and provide for these rules and standards in the stormwater design. Until new stormwater regulations are developed, existing stormwater management requirements for treatment and attenuation volumes will be exceeded by 30%,
- 2) The developers must address pesticide and nutrient control at the source, including the identification of ways to substantially reduce the need for chemicals,
- 3) The developers must establish baseline conditions, and monitor water quality until 5 years after the project, or as directed by the SFWMD or FDEP,
- 4) The developers must implement water conserving, green design principles for landscapes and buildings to include xeriscaping and water reuse; and consideration of rain gardens, green roofs, cisterns, pervious pavement, etc., and
- 5) The developers must consider volumetric assessments to assure that stormwater discharges to Lake Toho and downstream receiving water bodies are not increased.

**5. Identify long-term funding sources** - objectives from the Working Group: 1) Define how long-term conservation and management will be funded.

- 1) The developers must define and implement a plan for the long-term funding of conservation measures on-site. These measures would include establishing baseline conditions for water quality and wetland function; wetland conservation, restoration and enhancement; wildlife habitat restoration and management; long-term monitoring, and contingency planning. (Management funds must be secure, and not vulnerable to a future vote of residents that may not prioritize management of conservation lands.)

**6. Assess impacts of external roads** - objectives from the Working Group: 1) Create a Master Plan that maximizes internal capture of vehicle miles and establishes a network of multi-modal transportation facilities, 2) For those DRIs that elicit the need for external road improvements, initiate discussions of corridor design with transportation agencies for future improvements.

- 1) The developers must implement a network of multi-modal transportation strategies; connected local streets; cycling facilities; walkable community design; and the linkage of all the DRI properties with a transit, bicycle, and pedestrian system that would connect to downtown Kissimmee and St. Cloud,
- 2) The developers must direct future growth to identified urban areas, compatible with the existing and proposed regional transportation network,
- 3) The developers must maximize internal capture of vehicle miles, and
- 4) The developers will work with Osceola County to initiate ecologically-sensitive design of the proposed Southport Connector road.

**7. Facilitate future smoke management** - objectives from the Working Group: 1) Identify critical smoke dispersal areas (CSDAs), and keep incompatible uses out, 2) Create a draft of

Codes, Covenants and Restrictions (CCRs) highlighting issues related to smoke management, 3) Develop the protocol for informing individuals that they will be exposed to smoke.

- 1) The developers must keep incompatible uses (schools, roads, hospitals, nursing homes, etc.) out of CSDAs; if unavoidable, sensitive land uses will be clustered rather than spread across the CSDA, to reduce management problems associated with these uses,
- 2) The developers must create a draft of Codes, Covenants and Restrictions (CCRs) to support recommendations on smoke management, and make these restrictions available at the time of review of the contract for sale,
- 3) Contracts for sale of lands in areas likely to be affected by smoke will specify that smoke from prescribed fire is anticipated to occur, and shall include a specific waiver of rights to challenge, object, sue, or otherwise interfere with the conduct of prescribed burning,
- 4) The developers must develop the protocol for informing individuals that purchase property, and/or live and work within smoke sensitive planning zones that they will be exposed to smoke, and
- 5) The developers must define measures to educate the public about the use of fire; and their role in the fire management program including consideration of road placement and design, signage, "firewise" landscaping, natural buffer and open space management and emergency access points.

#### **8. Other issues**

- 1) The developers shall initiate a program for residential and commercial properties to restrict fertilizer use on established lawns, landscaped areas, golf course fairways and roughs, and CDD or HOA common properties. This program should be developed in accordance with the Florida Yards and Neighborhoods program, and the model landscaping ordinance developed cooperatively by FDEP and others ( see <http://www.dep.state.fl.us/water/nonpoint/pubs.htm>),
- 2) The developers must establish a plan to implement energy efficiency standards and low impact development practices,
- 3) To minimize dependence on irrigation and promote retention of native wildlife habitat, native, drought tolerant, low maintenance vegetation shall be utilized in site development,
- 4) The developers must consider the use of "Conservation subdivision" designs, shrinking individual lot sizes and lawn areas and the use of smaller lots on common preserved open spaces,
- 5) Clubhouses and community centers built by the developers of the project shall be LEED certified,
- 6) "Dark skies" measures to reduce light pollution shall be implemented (so long as it is not inconsistent with the Osceola County Land Development Code), and
- 7) The developer shall provide non-vehicular public access for fishing, and passive use of public areas around Lake Toho.

### *III. Developer incentives for this program*

During the meetings of the Working Group, there was consensus that there should be incentives for those developments that embraced the idea of "exceeding the regulatory minimum", and implemented actions consistent with the objectives of the Working group. These incentives included the following:

- 1) Comprehensive conservation measures for protected species that sustained the value of habitat would be sufficient to meet the goals of the Working Group, even if protected species moved to different locations across the DRI,
- 2) For projects that develop an acceptable conservation approach that meets the objectives of the Working Group, there will be no requirement for a NOPC review if bald eagles move their nests to alternative sites so long as suitable conservation has been established for existing nest sites. These changes can be documented in the DRI Annual Report,
- 3) For projects that develop an acceptable conservation approach that meets the objectives of the Working Group, there will be no requirement for a NOPC review if the project adds greater densities in appropriate receiving areas through the transfer of development rights. This change can be documented in the DRI Annual Report, and
- 4) Regulatory agencies will cooperate with developers to provide expedited review of projects that are consistent with Working Group recommendations.

#### *IV. Long-term Resource Protection: The role of Government Entities*

Objectives from the Working Group: 1) Establish an efficient process to approve actions consistent with the goals and objectives of the Lake Toho Environmental Working Group, 2) Assure long-term adherence to these objectives, 3) Natural resource agencies should consider the recommendations of the Working Group when implementing policies that could effect the resources in the Lake Toho region.

Future natural resource agency actions involve regulatory review and oversight, land acquisition, funding assistance, transportation, and resource management. To meet the stated goals, resource agencies should implement the following:

##### **1. Organization**

- 1) Osceola County will convene an Environmental Review Committee including local, regional, state and federal representatives to evaluate the implementation of the goals of the Lake Toho Environmental Working Group.

##### **2. Regulatory Review and Oversight**

- 1) Natural resource agencies should implement a consistent approach for the regulatory review of other projects in the vicinity – assure the continuation of critical offsite connections, and seek support and participation from relevant off-site landowners,
- 2) The SFWMD should work with individual DRIs on creative strategies to meet stormwater quality and quantity goals for the project and the region,
- 3) Natural resource agencies should actively seek cooperation/collaboration with adjacent landowners to address the Priority Conservation Actions of the Working Group,
- 4) Osceola County should sustain, or implement land use provisions that limit growth south of the Green Island DRI to link natural areas, and conserve permanent open space, and
- 5) Regulatory agencies should cooperate with developers to provide expedited review of projects that are consistent with Working Group recommendations, and substantially exceed regulatory criteria.

### **3. Land Acquisition**

- 1) Osceola County, the SFWMD, and FDEP should work together to acquire sites suitable for regional stormwater storage and/or treatment areas,
- 2) Agencies responsible for road design and construction should target strategic offsite transportation improvements to acquire dual purpose ponds (roadway and online storage), and
- 3) Osceola County should prioritize conservation land acquisition, including the purchase of development rights, south of the Green Island DRI to protect state-wide landscape-scale linkages from the Kissimmee River (and south), to the St Johns River (and north).

### **4. Funding Assistance**

- 1) Local resource agencies should work with state and federal partners to seek funding for stormwater management and conservation land acquisition efforts in the Lake Toho region.

### **5. Transportation**

- 1) Osceola County should create a plan view alignment of the proposed Southern Connector and expediently submit this plan to the ACOE so that a modicum of resource agency review occurs concurrent with the review of ACOE permit applications for interconnected DRIs,
- 2) Osceola County should initiate a process with private developers, the ECFRPC, FDOT, The Florida Turnpike Authority, SFWMD, ACOE, FDEP and the Orlando Orange County Expressway Authority to create a plan that will assure comprehensive review and state-of-the-art ecological design for the Southport Connector,
- 3) Osceola County should work with the entity responsible for design and construction of the Southern Connector to create a low visibility warning system, including both advisory and control strategies, consistent with the objective to facilitate smoke management over the long- term, and
- 4) Agencies responsible for the design and construction of roads adjacent to, or though, the DRI projects should create eco-passages consistent with the location of wildlife corridors on the DRI.

### **6. Resource Management**

- 1) Natural resource management agencies should implement management actions consistent with the goals of the Working Group,
- 2) The FFWCC and Osceola County should create educational signage informing watercraft users on Lake Toho of no wake, and minimum disturbance zones near snail kite nesting habitat,
- 3) The FFWCC should develop a long-term plan for future restoration activities of Lake Toho, including an assessment of the effects of stockpiling muck, and
- 4) Public entities that construct buildings on the DRI sites should seek LEED certification for new buildings.

# APPENDIX 1

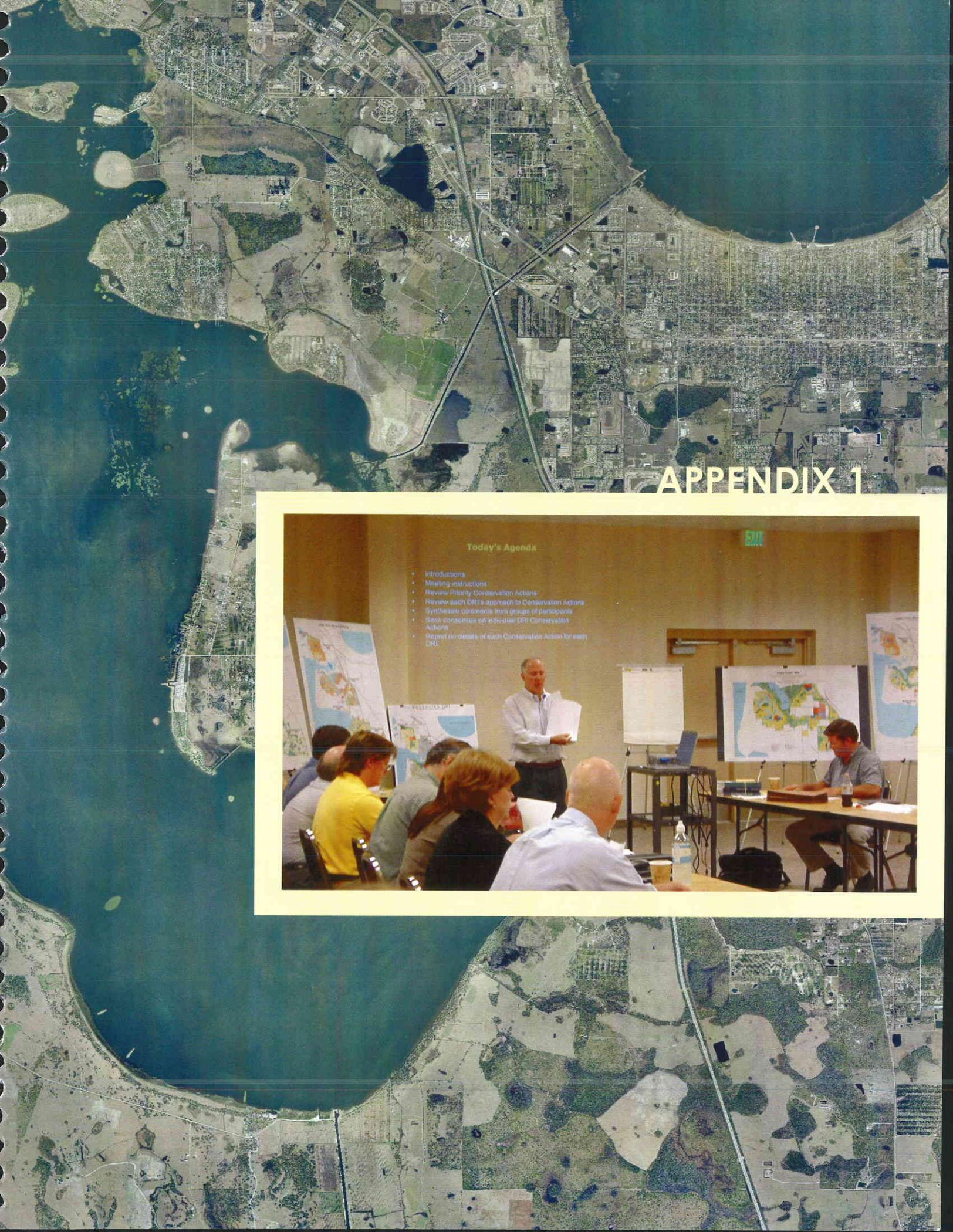
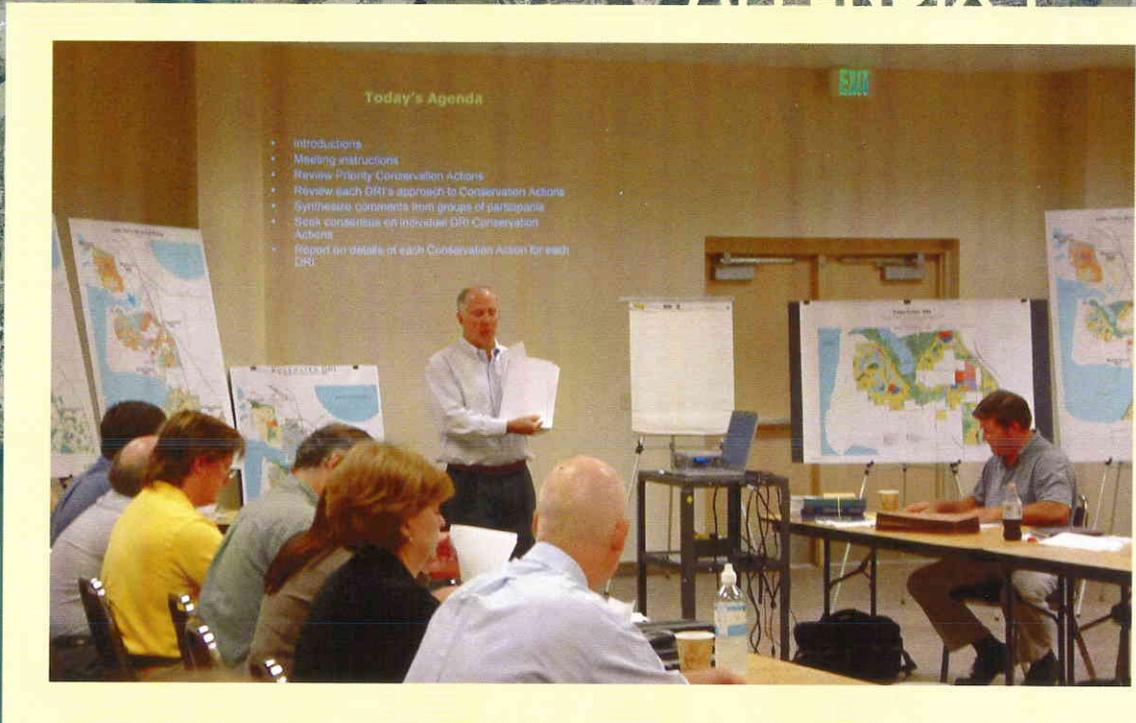




Figure 1 - 2005 Aerial with the Lake Toho Study Area Boundary

Lake Toho Environmental Working Group



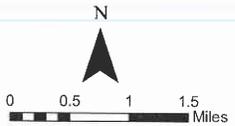
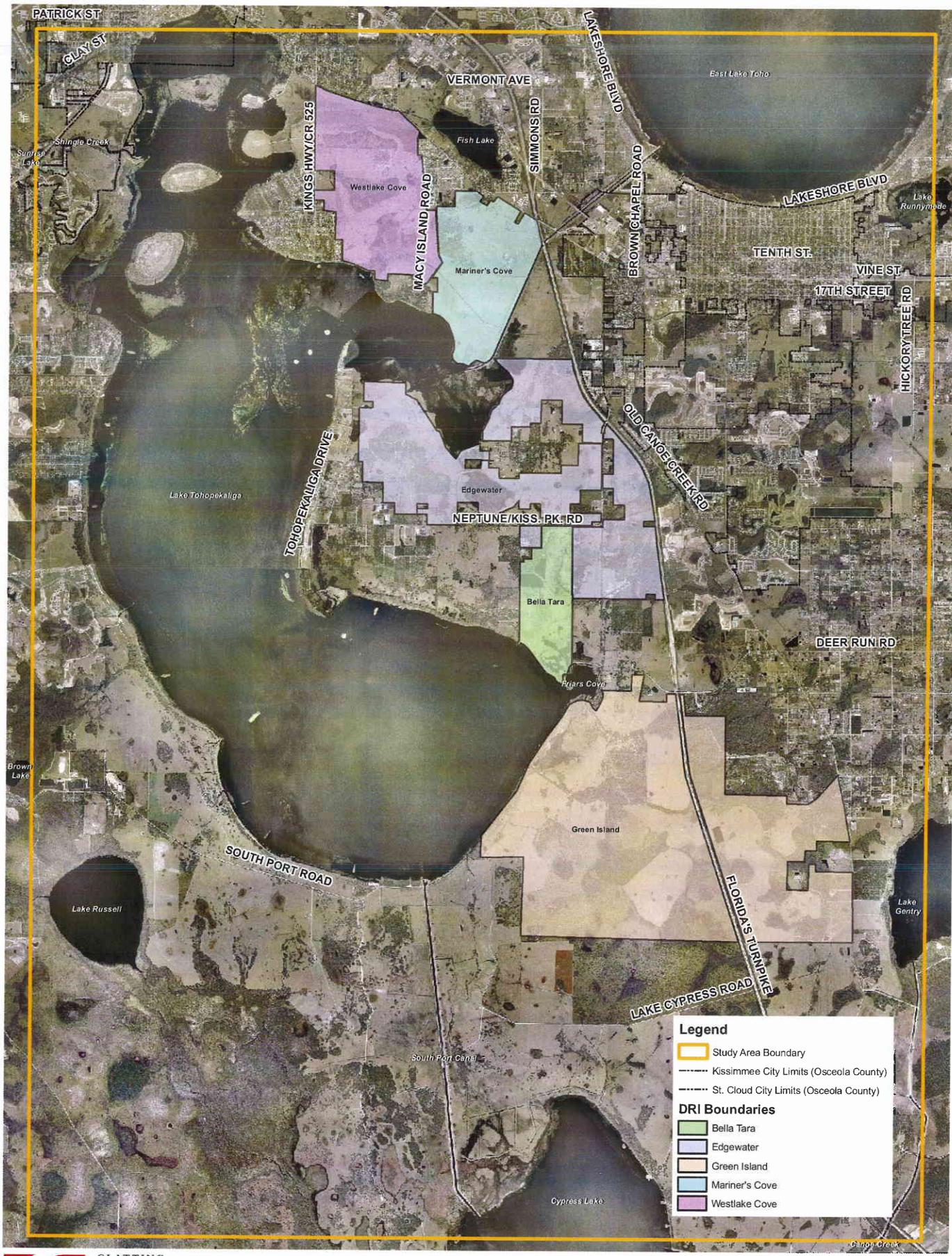


Figure 3 - Boundaries of the Five DRI's Reviewed  
 Lake Toho Environmental Working Group

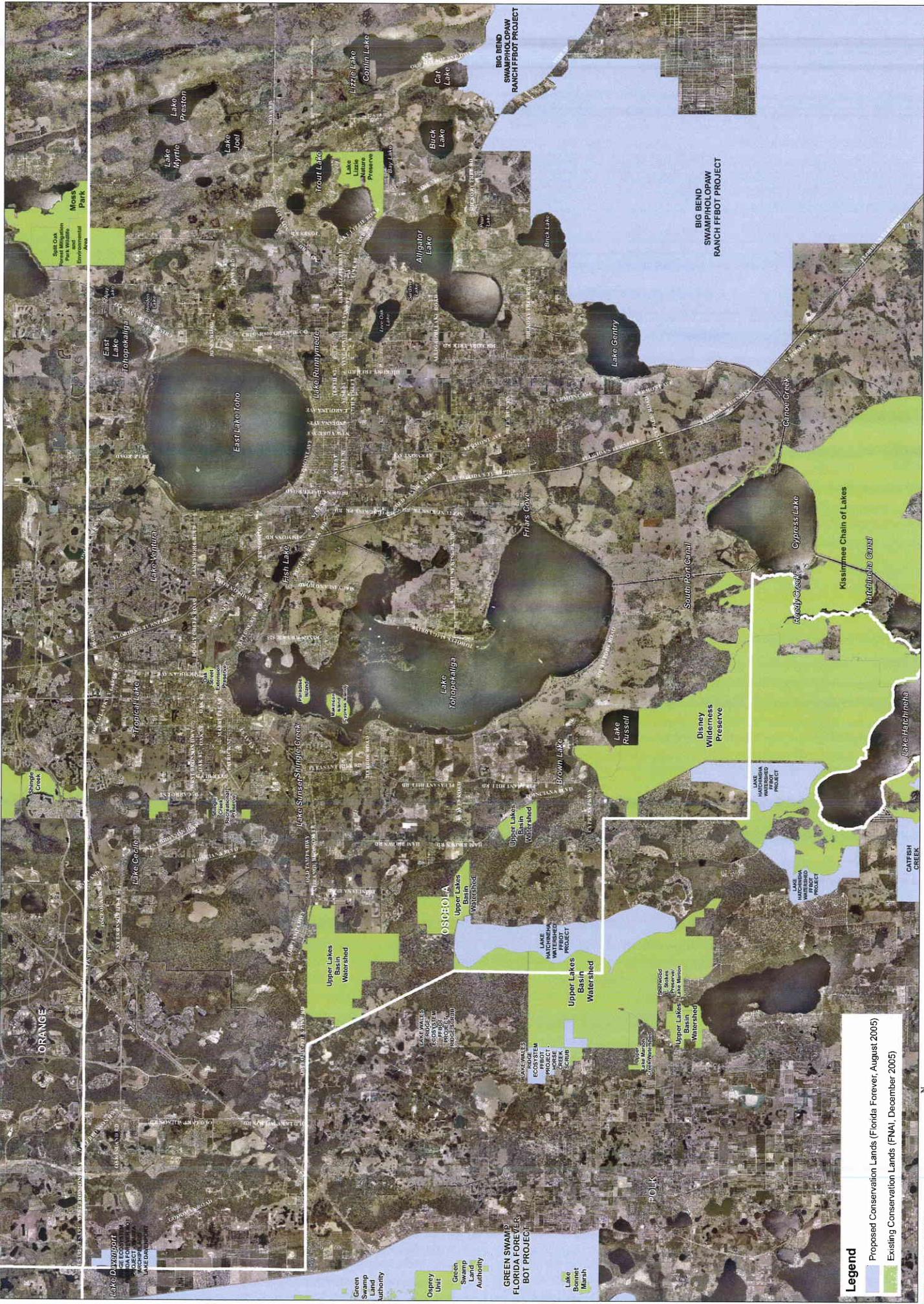


Figure 4 - Proposed and Existing Conservation Lands in the Vicinity of Lake Toho  
 Lake Toho Environmental Working Group

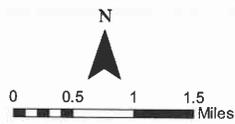


Figure 5 - Wetlands and Hydric Soils within the Lake Toho Study Area

Lake Toho Environmental Working Group

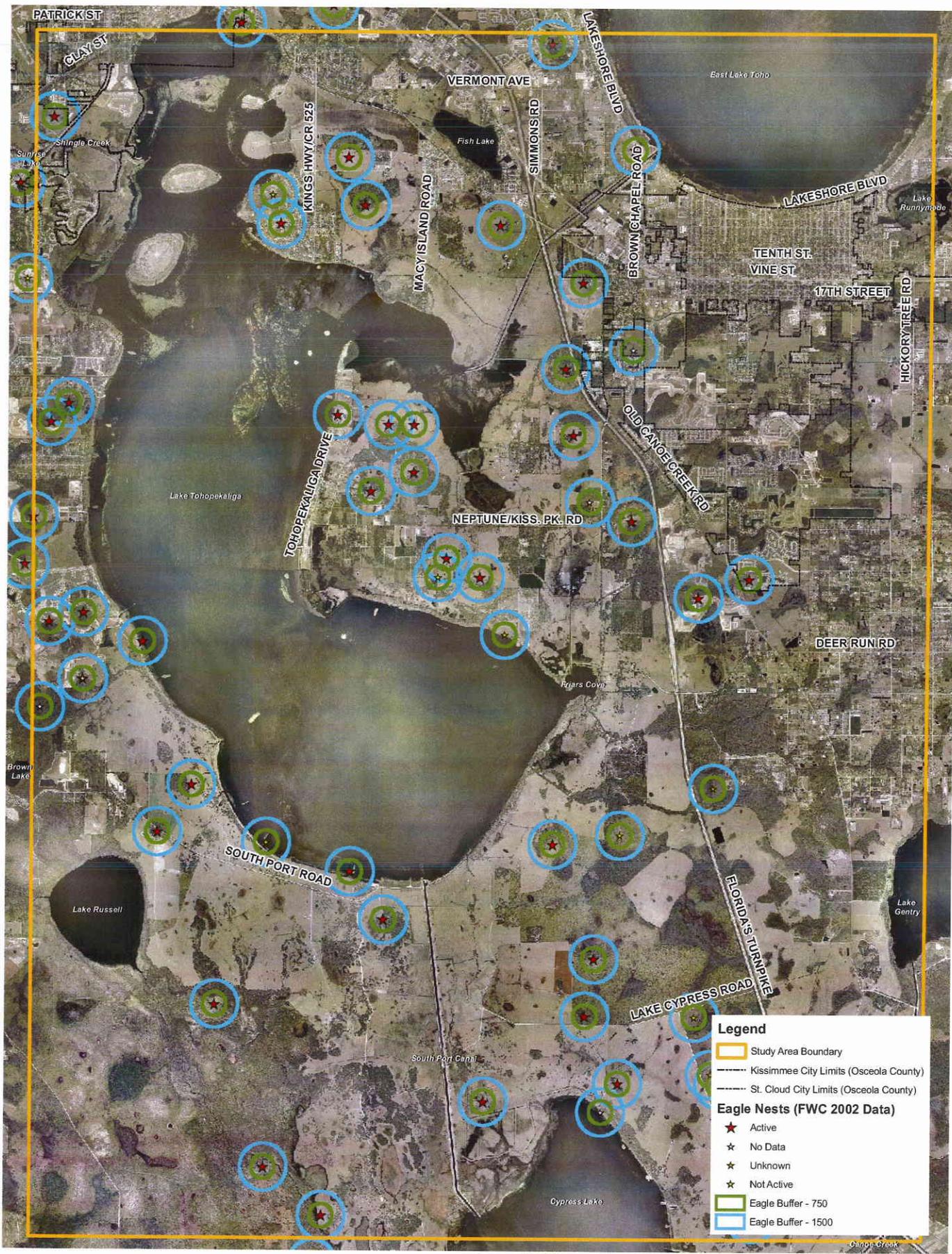


Figure 6 - Eagle Nests within the Lake Toho Study Area  
Lake Toho Environmental Working Group

## Priority Conservation Actions from the Lake Toho Environmental Working Group

1) Protect wildlife habitat

Identify and define how connections of native wildlife habitat for multiple species will be preserved and connected with regional systems. Specify how viable bald eagle nesting habitat will be sustained through retaining mature longleaf pines stands and replanting pines for future bald eagle nests. Design roads that allow wildlife movement, and integrate on and off-site wildlife linkages into the regional transportation network. Define how to prohibit/control boat traffic (including jet skis and airboats) in snail kite habitat.

2) Protect/restore wetland systems

Prepare a plan for the conservation of wetland systems, including the identification of wetlands proposed for impact and restoration, and the strategy for long-term management.

3) Enhance water quality

Create a comprehensive water quality enhancement plan to improve water quality in the Lake Toho region and reduce phosphorus, nitrogen and other pollutants by 25 – 50% from existing levels. Determine the approach to stormwater management. Use volumetric assessments to assure that the hydrology of Lake Toho and downstream receiving water bodies is not increased.

4) Protect the shore of Lake Toho

Identify specific measures to protect the shore of Lake Toho, including the locations of no-development zones. Define what uses will be allowed in these areas.

5) Identify long-term funding sources

Define how long-term conservation and management will be funded.

6) Assess impacts of external roads

Create a Master Plan that maximizes internal capture of vehicle miles and establishes a network of multi-modal transportation facilities. For those DRIs that elicit the need for external road improvements, including the Southport Connector, should immediately initiate discussions of corridor design with transportation agencies for future improvements.

7) Facilitate future smoke management

Identify critical smoke dispersal areas (CSDAs); keep incompatible uses (schools, roads, hospitals, nursing homes, etc.) out of them; if unavoidable, cluster sensitive land uses rather than spread them across the CSDA.