

***Principles for Forest and Wildlife Management of  
Conservation Units within the  
Bay-Walton Ecosystem Management Agreement  
RGP - SAJ 114***



2016 Revision by:

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## Purpose

To provide an outline for forest and wildlife management within the Conservation Units (CUs) of the West Bay Ecosystem Management Agreement (EMA), Regional General Permit and Ecosystem Management Agreement (RGP/EMA) areas. This document provides the framework that will guide the development of future land management plans for CUs.

## Methodology

Using the *Revised Land and Resource Management Plan for National Forests in Florida* and the *Cecil Field Timber Management Plan* as a framework, the guidelines will prescribe forest and wildlife management strategies that enhance conservation, habitat restoration, and ecological functions within the CUs.

## History

The primary land management goal for most of the RGP/EMA area historically has been the production of forest products. Intensive silvicultural management of slash pine (*Pinus elliottii*) and sand pine (*P. clausa*) plantations has occurred on the CUs for the past 30 to 40 years. Silvicultural practices implemented on the area include clear-cutting, roller chopping, site-preparation burning, bedding, planting, and fertilization. Most stands within the RGP/EMA area have been through one or more rotations of planted pine. While forest management practices have degraded the natural habitats of many uplands and wetlands, some wetlands within the CUs have experienced little or no silvicultural impacts. The CUs are located within an area that has been enrolled in the Florida Forest Service Wildlife and Florida Wildlife Commission Best Management Practices program.

## Prescribed Management

The primary forest management objective for this area is to prescribe management activities that will restore and enhance the vegetative communities and function of historic ecosystems. Restoration forestry practices will replace historical intensive silvicultural practices within the CUs. Harvest operations, controlled burning and other restoration prescriptions will be used to convert the existing even-aged pine monoculture to a mosaic of even and uneven-aged management regimes. Proposed objectives, suggested management prescriptions and benefits are summarized below.

### I. Forest Management

- A. **Objective-** To implement harvest, planting, and management operations that restores and maintains the vegetative species composition, stem density, basal area, understory, hydrology, wildlife species diversity, and ecological functions of historically naturally occurring ecosystems.
- B. **Goals-** All forest management operations will adhere to the latest edition of *Silviculture Best Management Practices* (BMPs) and the *Florida Forestry Wildlife Best Management*

*Practices* outlined by the Florida Forest Service (FFS), harvests will be conducted by Florida Master Loggers (FML), and forest management will adhere to guidelines set forth by the Sustainable Forest Initiative Program (SFI). Five forest community types impacted by silviculture occur within RGP-EMA conservation areas: xeric planted uplands, mesic planted uplands, hydric planted flatwoods, upland hardwoods, and wetland hardwoods.

Thinning operations along ecotone are not economically feasible until stands reach a merchantable age. Therefore, harvest prescriptions will not be implemented until stands attain minimum volume specifications. Harvest activities in all wet pine flatwoods and other jurisdictional wetlands will adhere to FFS silviculture BMPs. Silvicultural activities deemed detrimental to ecosystem function (herbicide application, fertilization, bedding, roller-chopping, row planting) will be excluded except where appropriate to meet restoration objectives. Clear-cutting will be used as a tool for converting stands of slash pine to uneven aged stands, restoring longleaf in the landscape, and for the salvage of storm, fire, disease, or insect damaged timber. Limited use of herbicides also will be used to complement prescribed burning to create uneven-aged slash pine stands.

**C. Prescription-** Five forest community types impacted by silviculture occur within RGP-EMA conservation areas: xeric planted uplands, mesic planted uplands, hydric planted flatwoods, upland hardwoods, and wetland hardwoods. Prescriptive goals are listed for each community type.

**(1) Xeric Planted Uplands Goal-** Open canopy with appropriate canopy species, longleaf pine, herbaceous ground cover, low density mid-story. The long-term goal is restoration of uneven-aged longleaf pine forests.

- a) Contains FLUCFCS habitat types Upland Coniferous Forest (4100), Coniferous Plantations (4410), and Forest Regeneration Areas (4430)
- b) Conforms to FNAI community types Sandhill, Scrub, and Scrubby Pine Flatwoods (FNAI 2010).
- c) Remove existing stands of sand pine and off site slash pine plantations through clear-cutting following SFI standards. Stands will be candidates for conversion to longleaf once they become merchantable. Existing individual longleaf trees will be left where they are found.
- d) Prepare and maintain sites by control burning, mechanical and or chemical means to accomplish successful longleaf stand establishment and restoration or enhancement of herbaceous ground cover.
- e) Plant longleaf seedlings to ensure capture of site (competition) and provide sufficient needle drop for future control burns.
- f) Periodic burning to promote ecological functions.
- g) Once stands are established, uneven aged management will occur. Thinning operations will typically occur every 10-15 years on a continual basis with the introduction of patch clear-cutting during these operations to facilitate uneven aged management (natural regeneration).
- h) Bedding will not be used.

**(2) Mesic Planted Uplands Goal-** Uneven age, open canopy, longleaf pine or a mix of

slash and longleaf pine, more diverse herbaceous groundcover than current condition, low density mid-story. The long-term goal is restoration of uneven-aged longleaf pine and or mixed longleaf/slash pine forests.

- a) Contains FLUCFCS habitat types Pine Flatwoods (4110), Coniferous Plantations (4410),
- b) Conforms to FNAI community type Mesic Pine Flatwoods (FNAI 2010).
- c) Existing slash pine plantations will be managed to a 30 year rotation. Stands will be clear-cut following SFI standards. Existing individual longleaf trees will not be harvested.
- d) Prepare and maintain sites by control burning, mechanical (no bedding) and or chemical means to accomplish successful reestablishment of slash and longleaf pine. Planting densities will ensure adequate stocking for tree selection processes and long-term tree density goals.
- e) Once stands are established, pine canopies will be managed to promote herbaceous ground cover through thinning operations.
- f) Periodic burning to promote ecological functions.
- g) Bedding will not be used.

**(3) Hydric Planted Flatwoods Goal-** Open canopy with appropriate canopy species, low density slash pine, more diverse ground cover, low density mid-story.

- a) Contains FLDOT FLUCCS habitat types Hydric Pine Flatwoods, (6250), Freshwater Marsh (6410), and Wet Prairies (6430).
- b) Conforms to FNAI community types Hydric Pine Flatwoods, Seepage Slopes, and Wet Prairies (FNAI 2010).
- c) Clear-cut and/or thin existing slash pine plantations and convert to savannas, wet prairies, and hydric pine flatwoods.
- d) Any existing longleaf pine individuals will not be harvested.
- e) Periodic burning will promote restored ecological function.
- f) Periodic harvesting of natural regeneration will be utilized, when economically feasible, to promote uneven-aged stand composition and maintain ecosystem integrity.
- g) Bedding will not be used.

**(4) Upland Hardwood Goal-** Retain current core conditions and enhance wetland/upland ecotones.

- a) Contains FLDOT FLUCCS habitat types Upland Hardwood Forests (4200), Xeric Oak (4210), Hardwood-Conifer Mixed (4340), and Upland Scrub, Pine and hardwoods (4360).
- b) Conforms to FNAI community types Scrub, Scrubby Flatwoods, and Sandhill (FNAI 2010).
- c) If ecologically appropriate, control burns conducted in adjoining areas will be allowed to burn into these stands. Suitable mechanical methods may be used when necessary to promote initial ecotone restoration and maintain restored desirable conditions.
- d) Limited use of herbicides targeting undesirable shrub species is permissible. Herbicides will be prohibited in wetlands identified as potentially supporting

federal/state-listed fauna. FNAI GIS point data will be employed to determine restricted areas.

e) Bedding will not be used.

**(5) Wetland Hardwood Goal-** Retain current conditions except allow for more clearly defined edges.

a) Contains FLDOT FLUCCS habitat types Wetland Hardwood Forests (6110), Gum Swamps (6130), Mixed Wetland Hardwoods (6170), and Cypress (6210).

b) Conforms to FNAI community types Basin Swamps, Blackwater Stream, and Seepage Stream (FNAI 2010).

c) If ecologically appropriate, control burns conducted in adjoining areas will be allowed to burn into these stands. Implement mechanical control measures to promote initial ecotone restoration and maintain if necessary.

d) Limited use of herbicides targeting undesirable shrub species is permissible. Herbicides will be prohibited in wetlands identified as potentially supporting federal/state-listed fauna. FNAI GIS point data will be employed to determine restricted areas.

e) Salvage harvests are only permissible following severe storm events, disease/insect events, or wildfires.

f) Bedding will not be used.

#### **D. Benefits**

(1) Reduction in stand density will promote the restoration and establishment of a naturally occurring under-story vegetative community and restoration of natural hydrology.

(2) Harvest, planting, and prescribed burning operations will promote and maintain longleaf pine restoration within CUs.

(3) Thinning will reduce tree density and promote canopy development, restoration and establishment of a naturally occurring under-story vegetative community and increase the aesthetics and natural beauty of the CUs.

(4) Thinning operations also will reduce mid-story fuel levels and improve conditions for the use of prescribed fire.

(5) Prescribed fire return intervals of 2-5 years within CUs will maintain desirable herbaceous vegetation at fuel loads that reduce the threat of catastrophic wildfires to surrounding areas.

## **II. Groundcover Management**

**A. Objective-** To establish a groundcover management regime that restores and maintains the ecological functions of naturally occurring upland and wetland communities in the CUs, through prescribed fire, mechanical, and chemical means.

**B. Prescription-** Establish fire-lines that minimize impacts to the landscape and maximize inclusion of fire into formerly fire-suppressed areas.

(1) Implement dormant-season fire in all fire-dependent upland and wetland ecosystems to reduce fuel loads.

- (2) Implement growing season fires in CUs whenever practical after fuel reduction is accomplished.
- (3) A return interval of 2-4 years for growing-season burns is the desired condition of restored CUs. Dormant-season burns will be utilized when growing-season burns are impractical (due either to location or weather conditions), or when return intervals exceed established growing-season schedules.
- (4) Use site-preparation fire, where practical before reestablishing longleaf pine.
- (5) Mechanical and/or chemical prescriptions may be used where fire prescriptions are not feasible.
- (6) Herbicide prescriptions will target woody species to conserve herbaceous species present in restoration CUs.

### **C. *Benefits***

- (1) Groundcover treatments in wetlands will reduce woody vegetation and restore and maintain the natural under-story and ground cover plant communities.
- (2) Dormant-season prescriptions will reduce fuel loads, the risk of catastrophic fire, and prepare sites for implementation of growing-season fire.
- (3) Growing-season prescriptions will mimic natural fire regimes, which will enhance and maintain fire-dependent ecosystems, under-story plant communities, and restored ground cover.
- (4) Growing-season fire will improve habitat for many species of wildlife and rare plants.
- (5) Groundcover treatments will promote successful natural regeneration of longleaf pine, prepare sites for restoration planting, and control noxious vegetation.
- (6) Groundcover treatments will promote and enhance the aesthetic value and outdoor recreational opportunities in CUs.

## **III. Wildlife Management**

**A. *Objective***- To enhance species diversity and population levels.

### **B. *Prescription***

- (1) Where appropriate, determine the presence, location, and population status of threatened, endangered, and other protected species.
  - (a) GIS location data obtained from FNAI for Florida protected species and species of concern will be used to map potential presence within conservation units.
- (2) When deemed necessary, monitor and evaluate responses of protected species to habitat management activities.
- (3) Where appropriate, identify and implement habitat and population management measures that improve the recovery and status of protected species.
- (4) Promote and develop inter-agency partnerships that will enhance the management of protected species in the CUs, when appropriate.
- (5) Identify, promote and establish protocol for public recreational consumptive and non-consumptive uses of wildlife species in the CUs.
- (6) Promote and establish educational and public outreach opportunities related to wildlife species in the CUs.

**C. Benefits**

- (1) Species monitoring will help ensure permit compliance, increase public outreach opportunities, and assist in evaluating management efforts.
- (2) Species-specific management prescriptions and development of partnerships will promote population growth and recovery of protected species, and improve communication and relationships with regulators.
- (3) Promotion of recreational opportunities will encourage public participation and improve attitudes about and acceptance of land management objectives.
- (4) Restoration efforts will create and maintain diverse and healthy biotic communities that will serve as keystone ecosystems for evaluating future management decisions.
- (5) Restoration efforts will enhance CU suitability and value as wildlife corridors within the RGP - SAJ 86 areas and adjacent natural areas.

**IV. Exotic Vegetation Management**

**A. Objective-** Promote control and eradication of exotic and nuisance plant and animal species.

**B. Prescription**

- (1) Monitor vegetation and wildlife in the CUs to identify the occurrence, location and severity of exotic plant and animal infestations.
- (2) Develop and implement an exotic plant control and eradication plan.
- (3) Implement herbicide, fire, and other management prescriptions to meet eradication objectives.
- (4) Implement lethal and non-lethal measures to control exotic animals.
  - a) Monitor infestation sites and evaluate the success of control measures to determine ecological lift.

**C. Benefits**

- (1) Control of exotic plants will improve habitat quality and reduce competition with native species.
- (2) Control of exotic wildlife species will reduce habitat degradation and competition with native wildlife species.

**V. Standards Cited in Document**

1. Silviculture Best Management Practices, Florida Division of Forestry, Florida Department of Agriculture, DACS-P-01284 (provides guidelines for Timber harvesting, access, crossings, site prep and planting.
2. Florida Master Logger Program, sponsored by the Florida Forestry Association and the Florida Sustainable Forestry Initiative State Implementation Committee (professional loggers must complete a three day class in safety, timber harvesting, and environmental regulations. Must complete six hours of continuing education yearly to maintain their certification.)
3. Florida Natural Areas Inventory (FNAI). 2010, Guide to the Natural Communities of

Florida: 2010 Edition. Florida Natural Areas Inventory, Tallahassee, FL.

4. Florida Exotic Pest Plant Council (FLEPPC). 2013. List of Invasive Plant Species. Fort Lauderdale, FL.
5. Sustainable Forestry Initiative (SFI), Inc. (Independent, charitable organization that is dedicated to promoting sustainable forest management. Principals include measures to protect water quality, biodiversity, wildlife habitat, species at risk and forests with Exceptional Conservation Value. Reviewed and updated every 5 years.)
6. Florida Forestry Wildlife Best Management Practices for State Imperiled Species, Florida Forest Service, Florida Department of Agriculture, FDACS-01869 Rev. 8/4/14.

**Department of the Army  
Regional General Permit (RGP) SAJ-114  
and  
Florida Department of Environmental Protection  
Bay-Walton Ecosystem Management Agreement  
(EMA)**

**Checklist for Activities Requiring Conservation Unit Project Approval within Type I  
and Type II Conservation Units**

This checklist is to be completed in addition to the Individual Project Approval (IPA) Checklist for projects located within Conservation Units associated with RGP SAJ-114 and the EMA. This checklist applies to the activities listed in Special Conditions 12.d (4), (6), (8), (10), and 12.e. Check the appropriate boxes to determine whether the proposed project complies with Conservation Unit allowable uses. In order for the proposed project to qualify for Conservation Unit Project Approval under RGP SAJ-114 and under the EMA, all applicable responses must be marked "Yes."

	Yes	No	N/A	<b>Questions 1 through 16 are applicable to projects proposed within Type I or Type II Conservation Units for activities listed in Special Conditions 12.d (4), (6), (8), and (10):</b>
<b>1.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a passive recreational facility, is the proposed project identical to or of similar nature to one of the following: Hiking and biking trails, boardwalks, gathering shelters, restrooms, camping platforms, and horseback trails and hitching areas?
<b>2.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project a passive recreational facility, is the proposed passive recreational facility located in uplands with the exception of minimized trails and boardwalks crossing wetlands?
<b>3.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the proposed project limited to and consistent with the preservation objectives for Conservation Units under RGP SAJ-114, and is it anticipated to result in no more than minimal adverse impacts to the Conservation Unit?
<b>4.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a <i>Conservation Burial Ground</i> , has the proposed project been certified by the Green Burial Council as a <i>Conservation Burial Ground</i> and would the project aid in the restoration, acquisition and/or stewardship of the Conservation Unit?

<b>5.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a linear utility or infrastructure facility, does the project consist of one or more of the following linear utility or infrastructure facility types: Electric transmission and/or distribution lines; water transmission and/or distribution lines; sewer transmission, collection, and/or distribution lines; natural gas transmission and/or distribution lines; data and/or telecommunications transmission and/or distribution lines (phone, cable, fiber optics, internet); or stormwater conveyances, but not stormwater ponds?
<b>6.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed linear utility or infrastructure project includes facilities ancillary to the linear utility or infrastructure facility types listed in Question 5, are the ancillary facilities part of or do they support the linear utility and infrastructure facility?
<b>7.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed linear utility or infrastructure facility project includes work in wetlands, is the project co-located with road crossings where practicable?
<b>8.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed linear utility or infrastructure facility project includes work in wetlands, will the project be installed by directional bore methodology where practicable?
<b>9.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed linear utility or infrastructure facility project includes work in wetlands, does the project meet the linear infrastructure criteria found in Special Condition 5.c. of the RGP?
<b>10.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a Nature Center, has a Leadership in Energy and Environmental Designed (LEED) certification of silver or higher been obtained and demonstrated?
<b>11.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a Nature Center with a single access road, does the access road comply with the criteria found in Special Conditions 5.c. and 12.e(1) of the RGP?
<b>12.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Has the Land Disturbance acreage associated with the project been defined and calculated in accordance with the criteria in Special Conditions 12.c. and 12.g. and has the proposed Land Disturbance acreage been demonstrated not to exceed the cumulative Conservation Unit Land Disturbance cap of 98.5 acres?

13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Has Land Disturbance acreage associated with the project proposed within altered wetlands been offset by an equal acreage amount consisting of preserved altered wetlands outside of the Conservation Unit but located within the same sub-watershed?
14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Has Land Disturbance acreage associated with the project proposed within altered wetlands met the applicable provisions in Special Condition 5?
15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Has Land Disturbance acreage associated with the project proposed within uplands been offset by an equal acreage amount consisting of preserved upland buffers outside of the Conservation Unit but located within the same sub-watershed?
16.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Has Land Disturbance acreage associated with the project proposed within high quality wetlands been demonstrated to meet the provisions of Special Condition 5.c.?
	Yes	No	N/A	<b>Questions 17 through 24 are applicable to projects proposed within Type II Conservation Units for activities listed in Special Condition 12.e:</b>
17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a road or bridge wetland crossing, has the crossing been designed to not reduce or impair hydrologic conveyance?
18.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a road or bridge wetland crossing, has bridging been utilized where practicable utilizing the following criteria for determining practicability: The degree of water flow within the wetland; the length of the wetland crossing; the topography of the wetland and associated upland; and the degree to which a roadway would adversely affect the movement of wildlife expected to use the wetland?
19.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a road or bridge wetland crossing, has the crossing been designed to minimize wetland and upland impacts and does it meet the criteria found in Special Condition 5.c. of the RGP?

<b>20.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a recreational facility, does it consist of one of the following: Boat ramps, fishing piers, parks, picnic areas and pavilions, playgrounds/tot lots, and nature facilities but not include any sports or ball fields such as baseball fields, soccer fields, tennis courts, basketball courts, or golf courses?
<b>21.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a recreational facility with an associated parking facility, will pervious surface be utilized for the parking facility or has the use of pervious surface been adequately demonstrated as impracticable?
<b>22.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a recreational facility, is it located in uplands with the exception of minimized boat ramps, fishing piers, and access roads that cross wetlands?
<b>23.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a recreational facility, does the project utilize existing access roads to the maximum extent practicable?
<b>24.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the proposed project is a recreational facility and no existing access roads have been found to be practicable for use, does the proposed access road comply with Special Condition 5.c. and Special Condition 12.e(1) of the RGP?
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# **TYPE I CONSERVATION UNIT EASEMENT**

## **DEED OF CONSERVATION EASEMENT**

THIS DEED OF CONSERVATION EASEMENT is given this \_\_\_\_ day of \_\_\_\_\_ 20\_\_, by THE ST. JOE COMPANY/ST. JOE TIMBERLAND COMPANY OF DELAWARE, L.L.C., having an address at 133 South Watersound Parkway, Watersound, Florida 32413 (Grantor) to the STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION whose address is Department of Environmental Protection, Division of State Lands, 3900 Commonwealth Boulevard, Mail Station 130, Tallahassee, Florida 32399-3000 (Grantee). As used herein, the term Grantor shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the Property (as hereinafter defined) and the term Grantee shall include any successor or assignee of Grantee.

### **WITNESSETH**

WHEREAS, the Grantor is the sole owner in fee simple of certain lands situated in Bay County and Walton County, Florida, more specifically described in Exhibit A attached hereto and incorporated herein (Property);

WHEREAS, the Department and Grantor executed an Ecosystem Management Agreement, dated \_\_\_\_\_, (Agreement), which authorizes certain activities that affect waters in or of the State of Florida;

WHEREAS, the Agreement and individual project approvals issued pursuant to the Agreement ("Approval") requires the set aside of certain areas called Type I Conservation Units, as defined in the Agreement, and requires that the Grantor exclude from development wetlands and uplands within such Type I Conservation Units;

WHEREAS, the Property is a part of a Type I Conservation Unit;

WHEREAS, Grantor grants this conservation easement as a condition of the Approval to offset or prevent secondary and cumulative adverse impacts to water quality and natural resources, such as fish, wildlife, and wetland or other surface water functions, and to provide a net ecosystem benefit as provided in the Agreement;

WHEREAS, the U.S. Army Corps of Engineers (the "Corps") General Permit No. SAJ-114 (RGP) authorizes certain activities in the waters of the United States and requires this conservation easement over the lands identified in Exhibit A as a condition for such activities; and

WHEREAS The Corps is not authorized to hold conservation easements and the Grantee has agreed to hold the easement on behalf of the Corps as well as on its own behalf; and

WHEREAS, this conservation easement is subject to and governed by the Agreement and the RGP and provisions within both the Agreement and RGP affect this conservation easement and owners of property subject to this conservation easement are advised to refer to the Agreement and RGP, which documents are available as public records.

NOW THEREFORE, in consideration of the above and the mutual covenants, terms, conditions and restrictions contained herein, together with other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, Grantor hereby voluntarily grants and conveys a perpetual conservation easement as defined in Section 704.06 Florida Statutes, for and in favor of the Grantee upon the Property which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature and character of this conservation easement shall be as follows:

1. Purpose. The purpose of this conservation easement is to retain land or water areas in their natural vegetative, hydrologic, scenic, agricultural or wooded condition so as to preserve their environmental value and to retain such areas as suitable habitat for fish, plants or wildlife, while allowing certain passive recreational activities and facilities. Those wetland or upland areas included in the Type I Conservation Units which are to be enhanced or restored pursuant to the Approval shall be retained and maintained in the enhanced or restored conditions required by the Approval.

2. Rights of Grantee. To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. The right to take action to preserve and protect the environmental value of the Property;

b. The right to prevent any activity on or use of the Property that is inconsistent with the purpose of this conservation easement, and to require the restoration of areas or features of the Property that may be damaged by any activity inconsistent with the purpose of this conservation easement;

c. The right to enter upon and inspect the Property in a reasonable manner and at reasonable times, including the right to use vehicles and all necessary equipment to determine if Grantor or its successors and assigns are complying with the purpose of this conservation easement; and

d. The right to enforce this conservation easement by injunction or proceed at law or in equity to enforce the provisions of this conservation easement and the covenants set forth herein, to prevent the occurrence of any of the prohibited activities hereinafter set forth, and the right to require Grantor to restore such areas or features of the Property that may be damaged by any inconsistent activity or use.

3. Prohibited Activities. Any activity which violates the purpose of this conservation easement is prohibited, including the following:

- a. Construction or placing of buildings, roads, signs, billboards, docks or other similar structures on or above the ground, except in accordance with Section 4 below;
- b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;
- c. Removal or destruction of trees, shrubs, or other vegetation, except for timbering done in accordance with the Principles for Forest and Wildlife Management of Conservation Units within the Bay-Walton EMA ("Forest and Wildlife Plan") which is part of the Agreement and for the purpose of enhancing or restoring wetlands or uplands in a mitigation area in accordance with applicable permits;
- d. Planting or seeding of plants that are outside their natural range or zone of dispersal and has or is able to form self-sustaining, expanding, and free-living populations in a natural community on the Property with which it has not previously associated;
- e. Exploration for or extraction of oil or gas, and excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance;
- f. Surface use except for purposes that allow the land or water area to remain in its natural condition;
- g. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;
- h. Acts or uses detrimental to such aforementioned retention of land or water areas;
- i. Acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance; and.
- j. The application of fertilizers, herbicides and pesticides is prohibited, except in buffers as authorized in accordance with Section 4(l).
- k. No wells shall be installed within the Property.

4. Authorized activities. Any activity which is consistent with the purpose of this conservation easement is authorized, including the following:

- a. Wetland and upland habitat enhancement and restoration.
- b. Forest management, which shall be conducted through sustainable forestry, uneven age management regimes and best management practices, in accordance with, and as

defined in the Principles for Forest and Wildlife Management of Conservation Units within the Bay-Walton Ecosystem Management Agreement and RGP-SAJ-114 (“Forest and Wildlife Management Plan”) which is part of the Agreement. No timbering of cypress or wetland hardwoods or clear cutting is permitted except as allowed in the Forest and Wildlife Management Plan.

- c. Hunting, fishing, and birding.
- d. Passive recreational facilities and activities such as hiking and biking trails, boardwalks, gathering shelters, restrooms, camping platforms, horseback trails and hitching areas and other facilities of a similar nature. These facilities shall result in no more than minimal impacts. Trails and boardwalks may cross wetlands, but must be minimized to the maximum extent practicable. All other facilities may only be located in uplands.
- e. Wetland mitigation as required by any future permit.
- f. Green Burial Council certified *Conservation Burial Grounds*. This level of certification employs burial/scattering programs that aid in the restoration, acquisition and/or stewardship of natural areas.
- g. Reinstitution of fire regime, including necessary firebreaks, which mimics natural conditions.
- h. Linear utilities and infrastructure facilities, which shall be defined as (i) electric transmission, collection and/or distribution lines, (ii) water transmission, collection and/or distribution lines, (iii) sewer transmission, collection and/or distribution lines, (iv) natural gas transmission, collection and/or distribution lines, (v) data and/or telecommunications transmission, collection and/or distribution lines (phone, cable, fiber optics, internet), and (vi) stormwater conveyances, but not stormwater ponds. In addition, ancillary facilities that are part of and support the linear utilities and infrastructure facilities described above shall be allowed. All linear utilities and infrastructure facilities shall, when practical, be co-located with road crossings and be installed by direct bore methods. The linear infrastructure shall be subject to the criteria and wetland impact limitations as set forth in special condition 5.c of the RGP and paragraph 3 of Article VII. of the Agreement.
- i. Activities needed to maintain, in current condition, existing access, roads and ditches within and through the Property. These allowable maintenance activities do not include activities to relocate such access, roads and ditches.
- j. Nature Centers, including single access roads. A Leadership in Energy and Environmental Design (LEED) certification of silver or higher must be obtained for any enclosed structures. Nature Centers may only be located in uplands. Access roads to serve nature centers must comply with special conditions 5.c and 12.e(i) of the RGP and paragraph 12 of Article V and paragraph 3 of Article VII of the Agreement.

k. Within buffers that are required to be preserved by the Approval and that are part of the Property, construction of boardwalks for dock access and on-grade trails will be permitted. Also, application of fertilizers, herbicides and pesticides is authorized to the extent fertilizers, herbicides and pesticides are used to control exotic plant vegetation within the buffers.

5. Land Disturbance. Activities which result in any manmade change of the land surface, including removing vegetative cover that exposes the underlying soil, excavating, filling, grading, grubbing, discing, blading, contouring, ripping, root raking and includes areas covered by impervious surfaces such as roofs, concrete and asphalt, but excluding pervious hiking and biking trails, pervious horseback riding trails and boardwalks ("Land Disturbance") are prohibited, except to the extent Land Disturbance occurs as a result of activities which are allowed in this Section. The Agreement and RGP place restrictions on the amount of Land Disturbance which can occur within the total area of Conservation Units and require certain mitigation for any Land Disturbance or impacts to converted wetlands within the Conservation Units.

6. Written Approval Required. Written approval from the Corps and DEP shall be required for any uses, activities or facilities sought to be constructed on the Property as allowed by this conservation easement ("Conservation Unit Project Approval"). Written authorization for allowable projects within the Property is required prior to initiation of construction. Conservation Unit Project Approval shall be conducted consistent with special condition 18 of the RGP and Article V of the Agreement. In applying for Conservation Unit Project Approval an applicant will be required to include an avoidance and minimization impact analysis with respect to the proposed uses, activities and facilities and review by the Corps and DEP will include a review of the total scale of facility to insure that the proposed use, activity or facility is limited and consistent with the preservation objectives of the Conservation Units.

7. Reserved Rights. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and which are not inconsistent with the purpose of this conservation easement or any Department rule, criteria, or Agreement.

8. Public Access. No right of access by the general public to any portion of the Property is conveyed by this conservation easement.

9. Responsibilities of Parties. Grantor, its successors or assigns, shall take responsibility for any costs or liabilities related to the ownership, operation, upkeep or maintenance of the Property. In addition, the Grantee, its successors or assigns, shall have no responsibility for any costs or liabilities related to the ownership, operation, upkeep or maintenance of the Property.

10. Taxes. Grantor, its successors or assigns, shall pay, before delinquency, any and all taxes, assessments, fees, and charges of whatever description levied on or assessed by competent authority on the Property, and shall furnish Grantee with satisfactory evidence of payment upon request.

11. Liability. Grantee shall not assume any liability for any injury or damage to the person or property of Grantor or third parties which may occur on the Property, except to the extent Grantee or its employees or agents is found legally responsible therefore. Neither Grantor, its

successors or assigns, nor any person or entity claiming by or through Grantor its successors or assigns, shall hold Grantee liable for any damage or injury to person or personal property which may occur on the Property, except to the extent Grantee or its employees or agents is found legally responsible therefore. Furthermore, the Grantor, its successors or assigns shall indemnify and hold harmless Grantee from all liability, and injury or damage to the person or property of third parties which may occur on the Property, except to the extent Grantee or its employees or agents is found legally responsible therefore. Grantee may not bring any action against Grantor for any injury to or change in the property resulting from natural causes beyond Grantor's control including, without limitation, fire, flood, storm and earth movement, or from any necessary action taken by Grantor under emergency conditions to prevent, abate or mitigate significant injury to the property or to persons resulting from such causes.

12. Hazardous Waste. Grantor covenants and represents that to the best of its knowledge, no hazardous substance or toxic waste exists nor has been generated, treated, stored, used, disposed of, or deposited in or on the Property, and that there are not now any underground storage tanks located on the Property.

13. Enforcement Discretion. Enforcement of the terms, provisions and restrictions of this conservation easement shall be at the discretion of Grantee, and any forbearance on the part of Grantee to exercise its rights hereunder in the event of any breach by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights.

14. Enforcement Costs. If the Grantee prevails in an enforcement action, it shall be entitled to recover the cost of restoring the land to the natural vegetative and hydrologic condition existing at the time of execution of the conservation easement or to the vegetative and hydrologic condition required by the RGP and the Approval.

15. Assignment of Rights. Grantee will hold this conservation easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this conservation easement except to another organization qualified to hold such interests under applicable state laws. The Corps reserves the right to approve successor grantees for the purpose of meeting the continuing compensatory mitigation requirements of its permit, permits or individual project approvals.

16. Recording in Land Records. Grantor shall record this conservation easement and any amendments hereto in a timely fashion in the Official Records of Bay County or Walton County, Florida, as applicable. Grantor shall pay all recording costs and taxes necessary to record this conservation easement in the public records.

17. Successors. The covenants, terms, conditions and restrictions of this conservation easement shall be binding upon, and inure to the benefit of the parties hereto and their respective personal representatives, heirs, successors and assigns and shall continue as a servitude running in perpetuity with the Property.

18. Notices. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

19. Severability. If any provision of this conservation easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this conservation easement shall not be affected thereby, as long as the purpose of the conservation easement is preserved.

20. Alteration or Revocation. This conservation easement may be amended, altered, released or revoked only by Agreement modification as necessary and written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records of Bay County or Walton County, Florida, as applicable.

21. Controlling Law. The interpretation and performance of this conservation easement shall be governed by the laws of the State of Florida.

22. Rights of the Corps. The Corps, as a third party beneficiary, shall have all the rights of Grantee under this easement. The Corps shall approve any modification, alteration, release, or revocation of the conservation easement, and shall review and approve as necessary any additional structures or activities on the property that require approval by the Grantee. The Grantor shall provide the Corps (District Engineer) at least 60 days advance notice in writing before any action is taken to modify, alter, release or revoke this Conservation Easement.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purpose imposed with this conservation easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of the Property in fee simple; that the Property is free and clear of all encumbrances that are inconsistent with the terms and conditions of this conservation easement; that all mortgages have been joined or subordinated; that Grantor has good right and lawful authority to convey this conservation easement; and that Grantor hereby fully warrants and defends the title to this conservation easement against the lawful claims of all persons whatsoever.

IN WITNESS WHEREOF, the Grantor has executed this Conservation easement on the day and year first above written.

Signed, sealed and delivered  
in our presence as witnesses:

\_\_\_\_\_  
Print Name:

\_\_\_\_\_  
By: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Print Name:

STATE OF FLORIDA

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_, by \_\_\_\_\_ as \_\_\_\_\_  
of the (corporation's name) \_\_\_\_\_ He/She is personally  
known to me or has produced \_\_\_\_\_ as identification.

(SEAL)

\_\_\_\_\_  
Notary Public Signature

\_\_\_\_\_  
Printed/Typed Name of Notary

Commission No. \_\_\_\_\_

Commission Expires: \_\_\_\_\_

## **TYPE II CONSERVATION UNIT EASEMENT**

### **DEED OF CONSERVATION EASEMENT**

THIS DEED OF CONSERVATION EASEMENT is given this \_\_\_\_day of \_\_\_\_\_ 20\_\_\_\_, by THE ST. JOE COMPANY/ST. JOE TIMBERLAND COMPANY OF DELAWARE, L.L.C., having an address at 133 South Watersound Parkway, Watersound, Florida 32413 (Grantor) to the STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION whose address is Department of Environmental Protection, Division of State Lands, 3900 Commonwealth Boulevard, Mail Station 130, Tallahassee, Florida 32399-3000 (Grantee). As used herein, the term Grantor shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the Property (as hereinafter defined) and the term Grantee shall include any successor or assignee of Grantee.

### **WITNESSETH**

WHEREAS, the Grantor is the sole owner in fee simple of certain lands situated in Bay County and Walton County, Florida, more specifically described in Exhibit A attached hereto and incorporated herein (Property);

WHEREAS, the Department and Grantor executed an Ecosystem Management Agreement, dated \_\_\_\_\_, (Agreement), which authorizes certain activities that affect waters in or of the State of Florida;

WHEREAS, the Agreement and individual project approvals issued pursuant to the Agreement ("Approval") requires the set aside of certain areas called Type II Conservation Units, as defined in the Agreement, and requires that the Grantor exclude from development wetlands and uplands within such Type II Conservation Units;

WHEREAS, the Property is a part of a Type II Conservation Unit;

WHEREAS, Grantor grants this conservation easement as a condition of the Approval to offset or prevent secondary and cumulative adverse impacts to water quality and natural resources, such as fish, wildlife, and wetland or other surface water functions, and to provide a net ecosystem benefit as provided in the Agreement;

WHEREAS, the U.S. Army Corps of Engineers (Corps) General Permit No. SAJ-114 (RGP) authorizes certain activities in the waters of the United States and requires this conservation easement over the lands identified in Exhibit A as a condition for such activities; and

WHEREAS The Corps is not authorized to hold conservation easements and the Grantee has agreed to hold the easement on behalf of the Corps as well as on its own behalf; and

WHEREAS, this conservation easement is subject to and governed by the Agreement and the RGP and provisions within both the Agreement and RGP affect this conservation easement and owners of property subject to this conservation easement are advised to refer to the Agreement and RGP, which documents are available as public records.

NOW THEREFORE, in consideration of the above and the mutual covenants, terms, conditions and restrictions contained herein, together with other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, Grantor hereby voluntarily grants and conveys a perpetual conservation easement as defined in Section 704.06 Florida Statutes, for and in favor of the Grantee upon the Property which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature and character of this conservation easement shall be as follows:

1. Purpose. The purpose of this conservation easement is to retain land or water areas in their natural vegetative, hydrologic, scenic, agricultural or wooded condition so as to preserve their environmental value and to retain such areas as suitable habitat for fish, plants or wildlife while generally allowing certain limited areas to be used for recreational purposes consistent with the West Bay Preservation Area land use category as defined in the West Bay Sector Plan. Those wetland or upland areas included in the Type II Conservation Units which are to be enhanced or restored pursuant to the Approval shall be retained and maintained in the enhanced or restored conditions required by the Approval.

2. Rights of Grantee. To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. The right to take action to preserve and protect the environmental value of the Property;

b. The right to prevent any activity on or use of the Property that is inconsistent with the purpose of this conservation easement, and to require the restoration of areas or features of the Property that may be damaged by any activity inconsistent with the purpose of this conservation easement;

c. The right to enter upon and inspect the Property in a reasonable manner and at reasonable times, including the right to use vehicles and all necessary equipment to determine if Grantor or its successors and assigns are complying with the purpose of this conservation easement; and

d. The right to enforce this conservation easement by injunction or proceed at law or in equity to enforce the provisions of this conservation easement and the covenants set forth herein, to prevent the occurrence of any of the prohibited activities hereinafter set forth, and the

right to require Grantor to restore such areas or features of the Property that may be damaged by any inconsistent activity or use.

3. Prohibited Activities. Any activity which violates the purpose of this conservation easement is prohibited, including the following:

a. Construction or placing of buildings, roads, signs, billboards, or other similar structures on or above the ground, except in accordance with Section 4 below;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for timbering done in accordance with the Principles for Forest and Wildlife Management of Conservation Units within the Bay-Walton EMA ("Forest and Wildlife Plan") which is part of the Agreement and for the purpose of enhancing or restoring wetlands or uplands in a mitigation area in accordance with applicable permits;

d. Planting or seeding of plants that are outside their natural range or zone of dispersal and has or is able to form self-sustaining, expanding, and free-living populations in a natural community on the Property with which it has not previously associated;

e. Exploration for or extraction of oil or gas, and excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance;

f. Surface use except for purposes that allow the land or water area to remain in its natural condition;

g. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

h. Acts or uses detrimental to such aforementioned retention of land or water areas;

i. Acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance; and

j. The application of fertilizers, herbicides and pesticides is prohibited, except in buffers as authorized in accordance with Section 4(n).

k. No wells shall be installed within the Property.

4. Authorized activities. Any activity which is consistent with the purpose of this conservation easement is authorized, including the following:

a. Wetland and upland habitat enhancement and restoration.

b. Forest management, which shall be conducted through sustainable forestry, uneven age management regimes and best management practices, in accordance with, and defined in the Principles for Forest and Wildlife Management of Conservation Units within the Bay-Walton Ecosystem Management Agreement and RGP SAJ-114 (“Forest and Wildlife Management Plan”) which is part of the Agreement. No timbering of cypress or wetland hardwoods or clear cutting is permitted except as allowed in the Forest and Wildlife Management Plan.

c. Hunting, fishing, and birding.

d. Passive recreational facilities and activities such as hiking and biking trails, boardwalks, gathering shelters, restrooms, camping platforms, horseback trails and hitching areas and other facilities of a similar nature. These facilities shall result in no more than minimal impacts. Trails and boardwalks may cross wetlands, but must be minimized to the maximum extent practicable. All other facilities may only be located in uplands.

e. Wetland mitigation as required by any future permit.

f. Green Burial Council certified *Conservation Burial Grounds*. This level of certification employs burial/scattering programs that aid in the restoration, acquisition and/or stewardship of natural areas.

g. Reinstitution of fire regime, including necessary firebreaks, which mimics natural conditions.

h. Linear utilities and infrastructure facilities, which shall be defined as (i) electric transmission, collection and/or distribution lines, (ii) water transmission, collection and/or distribution lines, (iii) sewer transmission, collection and/or distribution lines, (iv) natural gas transmission, collection and/or distribution lines, (v) data and/or telecommunications transmission, collection and/or distribution lines (phone, cable, fiber optics, internet), and (vi) stormwater conveyances, but not stormwater ponds. In addition, ancillary facilities that are part of and support the linear utilities and infrastructure facilities described above shall be allowed. All linear utilities and infrastructure facilities shall, when practical, be co-located with road crossings and be installed by direct bore methods. The linear infrastructure shall be subject to the criteria and wetland impact limitations as set forth in special condition 5.c of the RGP and paragraph 3 of Article VII of the Agreement.

i. Activities needed to maintain, in current condition, existing access, roads and ditches within and through the Property. These allowable maintenance activities do not include activities to relocate such access.

j. Nature Centers, including single access roads. A Leadership in Energy and Environmental Design (LEED) certification of silver or higher must be obtained for any enclosed structures. Nature Centers may only be located in uplands. Access roads to serve nature centers must comply with special conditions 5.c and 12.e.(i) of the RGP and paragraph 12 of Article V and paragraph 3 of Article VII of the Agreement.

k. Road and bridge crossings to support associated development. All crossings in wetlands shall be designed so that the hydrologic conveyance is not reduced or impaired. Bridging is required wherever practicable. The following factors shall be considered when determining if bridging of the wetlands is practicable: 1) the degree of water flow within the wetland, 2) the length of the wetland crossing, 3) the topography of the wetland and associated upland, and 4) the degree to which a roadway would adversely affect the movement of wildlife expected to use the wetland. Road and bridge crossings shall be designed and constructed to minimize wetland and upland impacts and must comply with special condition 5.c of the RGP and paragraph 3 of Article VII of the Agreement.

l. Certain recreational facilities to include boat ramps, fishing piers, parks, picnic areas and pavilions, playgrounds/tot lots, nature facilities, but excluding any sports or ball fields, including baseball fields, soccer fields, tennis courts, basketball courts and golf courses. In addition, parking facilities are allowed, but shall be constructed with pervious surfaces, unless it is impracticable to use pervious surfaces, in which event impervious surfaces may be used. Boat Ramps, fishing piers and access roads may cross wetlands, but must be minimized to the maximum extent practicable. All other facilities may only be located in uplands. Access roads to serve active recreational uses and activities must use existing roads to the maximum extent practicable and otherwise must comply with special conditions 5.c and 12.e.(i) of the RGP and paragraph 12 of Article V and paragraph 3 of Article VII of the Agreement.

n. Within buffers that are required to be preserved by the Approval and that are part of the Property, construction of boardwalks for dock access and on-grade trails will be permitted. Also, application of fertilizers, herbicides and pesticides is authorized to the extent fertilizers, herbicides and pesticides are used to control exotic plant vegetation within the buffers.

5. Land Disturbance. Activities which result in any manmade change of the land surface, including removing vegetative cover that exposes the underlying soil, excavating, filling, grading, grubbing, disking, blading, contouring, ripping, root raking and includes areas covered by impervious surfaces such as roofs, concrete and asphalt, but excluding pervious hiking and biking trails, pervious horseback riding trails and boardwalks ("Land Disturbance") are prohibited, except to the extent Land Disturbance occurs as a result of activities which are allowed in this Section. The Agreement and RGP place restrictions on the amount of Land Disturbance which can occur within the total area of Conservation Units and require certain mitigation for any Land Disturbance or impacts to converted wetlands within the Conservation Units.

6. Written Approval Required. Written approval from the Corps and DEP shall be required for any uses, activities or facilities sought to be constructed on the Property as allowed by this conservation easement ("Conservation Unit Project Approval"). Written authorization for allowable projects within the Property is required prior to initiation of construction. Conservation Unit Project Approval shall be conducted consistent with special condition 18 of the RGP and Article V of the Agreement. In applying for Conservation Unit Project Approval an applicant will be required to include an avoidance and minimization impact analysis with respect to the proposed uses, activities and facilities and review by the Corps and DEP will

include a review of the total scale of facility to insure that the proposed use, activity or facility is limited and consistent with the preservation objectives of the Conservation Units.

7. Reserved Rights. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and which are not inconsistent with the purpose of this conservation easement.

8. Public Access. No right of access by the general public to any portion of the Property is conveyed by this conservation easement.

9. Responsibilities of Parties. Grantor, its successors or assigns, shall take responsibility for any costs or liabilities related to the ownership, operation, upkeep or maintenance of the Property. In addition, the Grantee, its successors or assigns, shall have no responsibility for any costs or liabilities related to the ownership, operation, upkeep or maintenance of the Property.

10. Taxes. Grantor, its successors or assigns, shall pay before delinquency any and all taxes, assessments, fees, and charges of whatever description levied on or assessed by competent authority on the Property, and shall furnish Grantee with satisfactory evidence of payment upon request

11. Liability. Grantee shall not assume any liability for any injury or damage to the person or property of Grantor or third parties which may occur on the Property, except to the extent Grantee or its employees or agents is found legally responsible therefore. Neither Grantor, its successors or assigns, nor any person or entity claiming by or through Grantor its successors or assigns, shall hold Grantee liable for any damage or injury to person or personal property which may occur on the Property, except to the extent Grantee or its employees or agents is found legally responsible therefore. Furthermore, the Grantor, its successors or assigns shall indemnify and hold harmless Grantee from all liability, and injury or damage to the person or property of third parties which may occur on the Property, except to the extent Grantee or its employees or agents is found legally responsible therefore. Grantee may not bring any action against Grantor for any injury to or change in the property resulting from natural causes beyond Grantor's control including, without limitation, fire, flood, storm and earth movement, or from any necessary action taken by Grantor under emergency conditions to prevent, abate or mitigate significant injury to the property or to persons resulting from such causes.

12. Hazardous Waste. Grantor covenants and represents that to the best of its knowledge, no hazardous substance or toxic waste exists nor has been generated, treated, stored, used, disposed of, or deposited in or on the Property, and that there are not now any underground storage tanks located on the Property.

13. Enforcement Discretion. Enforcement of the terms, provisions and restrictions of this conservation easement shall be at the discretion of Grantee, and any forbearance on the part of Grantee to exercise its rights hereunder in the event of any breach by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights.

14. Enforcement Costs. If the Grantee prevails in an enforcement action, it shall be entitled to recover the cost of restoring the land to the natural vegetative and hydrologic condition existing at the time of execution of the conservation easement or to the vegetative and hydrologic condition required by the RGP and the Approval.

15. Assignment of Rights. Grantee will hold this conservation easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this conservation easement except to another organization qualified to hold such interests under applicable state laws. The Corps reserves the right to approve successor grantees for the purpose of meeting the continuing compensatory mitigation requirements of its permit, permits or individual project approvals.

16. Recording in Land Records. Grantor shall record this conservation easement and any amendments hereto in a timely fashion in the Official Records of Bay County or Walton County, Florida as applicable. Grantor shall pay all recording costs and taxes necessary to record this conservation easement in the public records.

17. Successors. The covenants, terms, conditions and restrictions of this conservation easement shall be binding upon, and inure to the benefit of the parties hereto and their respective personal representatives, heirs, successors and assigns and shall continue as a servitude running in perpetuity with the Property.

18. Notices. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

19. Severability. If any provision of this conservation easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this conservation easement shall not be affected thereby, as long as the purpose of the conservation easement is preserved.

20. Alteration or Revocation. This conservation easement may be amended, altered, released or revoked only by Agreement modification as necessary and written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records of Bay County or Walton County, Florida, as applicable.

21. Controlling Law. The interpretation and performance of this conservation easement shall be governed by the laws of the State of Florida.

22. Rights of the Corps. The Corps, as a third party beneficiary, shall have all the rights of Grantee under this easement. The Corps shall approve any modification, alteration, release, or revocation of the conservation easement, and shall review and approve as necessary any additional structures or activities on the property that require approval by the Grantee. The Grantor shall provide the Corps (District Engineer) at least 60 days advance notice in writing before any action is taken to modify, alter, release or revoke this Conservation Easement.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purpose imposed with this conservation easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of the Property in fee simple; that the Property is free and clear of all encumbrances that are inconsistent with the terms and conditions of this conservation easement; that all mortgages have been joined or subordinated; that Grantor has good right and lawful authority to convey this conservation easement; and that Grantor hereby fully warrants and defends the title to this conservation easement against the lawful claims of all persons whatsoever.

IN WITNESS WHEREOF, the Grantor has executed this Conservation easement on the day and year first above written.

Signed, sealed and delivered  
in our presence as witnesses:

\_\_\_\_\_  
Print Name:

\_\_\_\_\_  
By: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_  
Print Name:

STATE OF FLORIDA  
COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_ as \_\_\_\_\_ of the (corporation's name) \_\_\_\_\_ He/She is personally known to me or has produced \_\_\_\_\_ as identification.

(SEAL)

\_\_\_\_\_  
Notary Public Signature

\_\_\_\_\_  
Printed/Typed Name of Notary

Commission No. \_\_\_\_\_

Commission Expires: \_\_\_\_\_

## **MITIGATION EASEMENT**

### **DEED OF CONSERVATION EASEMENT**

THIS DEED OF CONSERVATION EASEMENT is given this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by THE ST. JOE COMPANY/ST. JOE TIMBERLAND COMPANY OF DELAWARE, L.L.C., having an address at 133 South Watersound Parkway, Watersound, Florida 32413 (Grantor) to the STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, whose address is Department of Environmental Protection, Division of State Lands, 3900 Commonwealth Boulevard, Mail Station 130, Tallahassee, Florida 32399-3000 (Grantee). As used herein, the term Grantor shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the Property (as hereinafter defined) and the term Grantee shall include any successor or assignee of Grantee.

### **WITNESSETH**

WHEREAS, the Grantor is the sole owner in fee simple of certain lands situated in Bay County and Walton County, Florida, more specifically described in Exhibit A attached hereto and incorporated herein (Property);

WHEREAS, the Department and Grantor have executed an Ecosystem Management Agreement, dated \_\_\_\_\_, (Agreement), which authorizes certain activities which affect waters in or of the State of Florida;

WHEREAS, the Agreement and individual project approvals issued pursuant to the Agreement ("Approval") requires that the Grantor preserve, enhance, or restore wetlands or uplands within specified mitigation areas;

WHEREAS, Grantor grants this conservation easement as a condition of the Approval to offset or prevent adverse impacts to water quality and natural resources, such as fish, wildlife, and wetland or other surface water functions;

WHEREAS, the U.S. Army Corps of Engineers (the "Corps") General Permit No. SAJ-114 (RGP) (Corps Permit) authorizes certain activities in the waters of the United States and requires this conservation easement over the lands identified in Exhibit A as part of the mitigation for such activities; and

WHEREAS, the Corps is not authorized to hold conservation easements and the Grantee has agreed to hold the easement on behalf of the Corps as well as on its own behalf; and

WHEREAS, this conservation easement is subject to and governed by the Agreement and the RGP and provisions within both the Agreement and RGP affect this conservation easement and owners of property subject to this conservation easement are advised to refer to the Agreement and RGP, which documents are available as public records.

NOW THEREFORE, in consideration of the above and the mutual covenants, terms, conditions and restrictions contained herein, together with other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, Grantor hereby voluntarily grants and conveys a perpetual conservation easement, as defined in Section 704.06, Florida Statutes, for and in favor of the Grantee upon the Property which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature and character of this conservation easement shall be as follows:

1. Purpose. The purpose of this conservation easement is to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition so as to preserve their environmental value and to retain such areas as suitable habitat for fish, plants or wildlife. Those wetland or upland areas included in the conservation easement which are to be enhanced or restored pursuant to the Approval shall be retained and maintained in the enhanced or restored conditions required by the Approval.

2. Rights of Grantee. To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. The right to take action to restore, preserve and protect the environmental value of the Property;

b. The right to prevent any activity on or use of the Property that is inconsistent with purpose of this conservation easement, and to require the restoration of areas or features of the Property that may be damaged by any activity inconsistent with the purpose of this conservation easement.

c. The right to enter upon and inspect the Property in a reasonable manner and at reasonable times, including the right to use vehicles and all necessary equipment to determine if Grantor is complying with the purposes of this conservation easement; and

d. The right to enforce this conservation easement by injunction or proceed at law or in equity to enforce the provisions of this conservation easement and the covenants set forth herein, to prevent the occurrence of any of the prohibited activities hereinafter set forth, and the right to require Grantor to restore such areas or features of the Property that may be damaged by any inconsistent activity or use.

3. Prohibited Uses. Any activity which violates the purpose of this conservation easement is prohibited, including the following:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, docks, or other structures on or above the ground, except in accordance with Section 4;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for timbering done in accordance with the Principles for Forest and Wildlife Management Plan which is part of the Agreement and for the purpose of enhancing or restoring wetlands or uplands in the mitigation area in accordance with applicable permits;

d. Planting or seeding of plants that are outside its natural range or zone of dispersal and has or is able to form self-sustaining, expanding, and free-living populations in a natural community with which it has not previously associated;

e. Exploration for or extraction of oil or gas, and excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance;

f. Surface use except for purposes that allow the land or water area to remain in its natural condition;

g. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

h. Acts or uses detrimental to retention of land and water areas as existing or restored;

i. Acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance; and

j. The application of fertilizers, herbicides and pesticides is prohibited, except in buffers as authorized in accordance with Section 4(i).

k. No wells shall be installed within the Property.

4. Authorized activities. Any activity which is consistent with the purpose of this conservation easement is authorized, including the following:

a. Fire fighting or fire suppression activities;

b. Machine clearing of fire lines/fire breaks as part of controlled burn activities, fire fighting, or fire suppression. Grantor shall obtain and comply with a prescribed fire authorization from the local and state regulatory agencies having jurisdiction over controlled or prescribed burning.

c. Installation of fences for land management or habitat protection purposes;

d. Removal or extermination of nuisance or exotic plant species;

- e. Hunting, fishing or birding;
  - f. Installation of signs for land management, facilitating passive recreation or habitat protection purposes;
  - g. Maintenance of unpaved nature trails;
  - h. Installation of interpretive signs for nature trails; and
  - i. Within buffers that are required to be preserved by the Approval and that are part of the Property, construction of boardwalks for dock access and on-grade trails will be permitted. Also, application of fertilizers, herbicides and pesticides is authorized to the extent fertilizers, herbicides and pesticides are used to control exotic plant vegetation within the buffers.
5. Reserved Rights. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and which are not inconsistent with purpose of this conservation easement or any Department rule, criteria, and Agreement.
6. Public Access. No right of access by the general public to any portion of the Property is conveyed by this conservation easement.
7. Responsibilities of Parties. Grantor, its successors or assigns, shall take responsibility for any costs or liabilities related to the ownership, operation, upkeep or maintenance of the Property. In addition Grantee its successors or assigns, shall have no responsibility for any costs or liabilities related to the ownership, operation, upkeep or maintenance of the Property.
8. Taxes. Grantor, its successors or assigns, shall pay, before delinquency, any and all taxes, assessments, fees, and charges of whatever description levied or assessed by competent authority on the Property, and shall furnish Grantee with satisfactory evidence of payment upon request
9. Liability. Grantee shall not assume any liability for any injury or damage to the person or property of Grantor or third parties which may occur on the Property, except to the extent Grantee, or its employees or agents, are found legally responsible therefor. Neither Grantor, its successors or assigns, nor any person or entity claiming by or through Grantor its successors or assigns, shall hold Grantee liable for any damage or injury to person or personal property which may occur on the Property, except to the extent Grantee or its employees or agents are found legally responsible therefor. Furthermore, Grantor shall indemnify and hold harmless Grantee for all liability, and injury or damage to the person or property of third parties which may occur on the Property, except to the extent Grantee or its employees or agents are legally responsible therefor. Grantee may not bring any action against Grantor for any injury to or change in the property resulting from natural causes beyond Grantor's control including, without limitation, fire, flood, storm and earth movement, or from any necessary action taken by Grantor under emergency conditions to prevent, abate or mitigate significant injury to the property or to persons resulting from such causes.

10. Hazardous Waste. Grantor covenants and represents that to the best of its knowledge no hazardous substance or toxic waste exists nor has been generated, treated, stored, used, disposed of, or deposited in or on the Property, and that there are not now any underground storage tanks located on the Property.

11. Enforcement Discretion. Enforcement of the terms, provisions and restrictions of this conservation easement shall be at the discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights.

12. Enforcement Costs. If the Grantee prevails in an enforcement action, it shall be entitled to recover the cost of restoring the land to the natural vegetative and hydrologic condition existing at the time of execution of the conservation easement or to the vegetative and hydrologic condition required by the aforementioned Approval.

13. Assignment of Rights. Grantee will hold this conservation easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this conservation easement except to another organization qualified to hold such interests under applicable state laws. The Corps reserves the right to approve successor grantees for the purpose of meeting the continuing compensatory mitigation requirements of its permit, permits or individual project approvals.

14. Recording in Land Records. Grantor shall record this conservation easement and any amendments hereto in a timely fashion in the Official Records of Bay County or Walton County, Florida, as applicable. Grantor shall pay all recording costs and taxes necessary to record this conservation easement in the public records.

15. Successors. The covenants, terms, conditions and restrictions of this conservation easement shall be binding upon, and inure to the benefit of the parties hereto and their respective personal representatives, heirs, successors and assigns and shall continue as a servitude running in perpetuity with the Property.

16. Notices. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

17. Severability. If any provision of this conservation easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this conservation easement shall not be affected thereby, as long as the purpose of the conservation easement is preserved.

18. Alteration or Revocation. This conservation easement may be amended, altered, released or revoked only by Agreement modification as necessary and written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records of Bay County or Walton County, Florida, as applicable.

19. Controlling Law. The interpretation and performance of this conservation easement shall be governed by the laws of the State of Florida.

20. Rights of the Corps. The Corps, as a third party beneficiary, shall have all the rights of Grantee under this easement. The Corps shall approve any modification, alteration, release, or revocation of the conservation easement, and shall review and approve as necessary any additional structures or activities on the property that require approval by the Grantee. The Grantor shall provide the Corps (District Engineer) at least 60 days advance notice in writing before any action is taken to modify, alter, release or revoke this Conservation Easement.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purpose imposed with this conservation easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of the Property in fee simple; that the Property is free and clear of all encumbrances that are inconsistent with the terms and conditions of this conservation easement; that all mortgages have been joined or subordinated; that Grantor has good right and lawful authority to convey this conservation easement; and that Grantor hereby fully warrants and defends the title to this conservation easement against the lawful claims of all persons whatsoever.

IN WITNESS WHEREOF, the Grantor has executed this Conservation Easement on the day and year first above written.

Signed, sealed and delivered  
in our presence as witnesses:

\_\_\_\_\_  
Print Name:

\_\_\_\_\_  
By: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
As: \_\_\_\_\_

\_\_\_\_\_  
Print Name:

STATE OF FLORIDA  
COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by \_\_\_\_\_ as \_\_\_\_\_ of the (corporation's name) \_\_\_\_\_ He/She is personally known to me or has produced \_\_\_\_\_ as identification.

(SEAL)

\_\_\_\_\_  
Notary Public Signature

\_\_\_\_\_  
Printed/Typed Name of Notary

Commission No. \_\_\_\_\_

Commission Expires: \_\_\_\_\_

**FINAL VERSION**

**Biological Assessment**

**Proposed Regional General Permit (SAJ-114) and  
Ecosystem Management Agreement for Bay-Walton  
Sector Plan**

**Bay County and Walton County, Florida**

**April 2016**

**Prepared by:  
Icarus Ecological Services, Inc.**

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## Acronyms

BA	Biological Assessment
BWSA	Bay-Walton Sector Area
BWSP	Bay-Walton Sector Plan
EO	Element Occurrence
ESA	Endangered Species Act
FDEP	Florida Department of Environmental Protection
FNAI	Florida Natural Areas Inventory
FFWCC	Florida Fish and Wildlife Conservation Commission
FWS	Reticulated Flatwoods Salamander, <i>Ambystoma bishopi</i>
GIS	Geographic Information Systems
NMFS	National Marine Fisheries Service
NWI	USFWS National Wetlands Inventory
RCW	Red-cockaded Woodpecker
RGP	Regional General Permit
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

## 1.0 INTRODUCTION

The purpose of this Biological Assessment (BA) is to review an area of approximately 41,585 acres located in Bay and Walton Counties associated with the potential issuance of a Regional General Permit SAJ 114 (RGP) by the U.S. Army Corps of Engineers (USACE), to determine if and how the issuance of the RGP will affect any Federally listed species and other protected species that may occur within the Action Area. See **Figure 1 – Proposed Action Area and Project Area Location Map**. This BA has been prepared in accordance with the legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)) and applicable regulations and is meant to assist in the determination of whether formal consultation with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the Endangered Species Act of 1973 is required.

### 1.1 Definitions

The following terms will be used throughout this document:

“Action Area”	All the areas that are to be affected directly or indirectly by the Federal Agency Action, and in this circumstance consists of the Project Area and the adjacent, downstream water bodies including West Bay and Choctawhatchee Bay.
“Applicant”	The St. Joe Company and others who would use the SAJ 114 permit.
“Conservation Units”	Areas of high quality habitat and landscape function within the Project Area, which will be preserved with development severely restricted so as to enhance, conserve and restore habitat and ecosystem functions.
“Listed Species”	Federally listed threatened or endangered species.
“Project Area”	The approximate 41,585-acre area which is subject to the proposed RGP, but <i>not</i> including adjacent downstream water bodies including West Bay and Choctawhatchee Bay.
“Proposed Action”	The proposed issuance of the RGP.

### 1.2 Objectives

The objectives of this BA are to:

- Document all federally listed species, other listed species and USFWS-designated critical habitat that occur within the Action Area.
- Identify the Proposed Action activities that have the potential to impact, either beneficially or adversely, the documented listed species, satisfying Section 7(a) (2).
- Determine and quantify, to the extent possible, what effects the activities would likely have on the listed species.
- Assess conservation measures and strategies appropriate and necessary for the avoidance and minimization of impacts.

### 1.3 Federally Listed and Other Protected Species Considered in this Document

The list of federally listed and other protected species that were reviewed as part of this BA are those that are known or suspected to occur in Bay or Walton Counties. The below list of protected species that were considered to have potential to occur within the Action Area was provided by USFWS in September 2015. Any species that are Candidates for Listing under the Endangered Species Act will be given due consideration at the time of listing.

<u>Type</u>	<u>Name, Scientific Name, Federal Status</u>
Amphibian	• Reticulated Flatwoods Salamander, <i>Ambystoma bishopi</i> , Endangered
Bird	• Piping Plover, <i>Charadrius melodus</i> , Threatened
Bird	• Red Knot, <i>Calidris canutus rufa</i> , Threatened
Bird	• Wood Stork, <i>Mycteria americana</i> , Threatened
Bird	• Red-cockaded Woodpecker, <i>Picoides borealis</i> , Endangered
Clam	• Choctaw Bean <i>Villosa choctawensis</i> , Endangered
Clam	• Fuzzy Pigtoe <i>Pleurobema strodeanum</i> , Threatened
Clam	• Gulf Moccasinshell <i>Medionidus penicillatus</i> , Endangered
Clam	• Oval Pigtoe <i>Pleurobema pyriforme</i> , Endangered
Clam	• Southern Kidneyshell <i>Ptychobranhus jonesi</i> , Endangered
Clam	• Southern Sandshell <i>Hamiota australis</i> , Threatened
Clam	• Tapered Pigtoe <i>Fusconaia burkei</i> , Threatened
Fish	• Atlantic Sturgeon (Gulf ssp) <i>Acipenser oxyrinchus desotoi</i> , Threatened
Mammal	• West Indian Manatee <i>Trichechus manatus</i> , Endangered
Mammal	• Gray Bat <i>Myotis grisescens</i> , Endangered
Reptile	• Eastern Indigo Snake <i>Drymarchon couperi</i> , Threatened
Reptile	• Gopher Tortoise <i>Gopherus polyphemus</i> , Candidate
Reptile	• Green Sea Turtle <i>Chelonia mydas</i> , Endangered
Reptile	• Hawksbill Sea Turtle <i>Eretmochelys imbricata</i> , Endangered
Reptile	• Kemp's Ridley Sea Turtle <i>Lepidochelys kempii</i> , Endangered
Reptile	• Leatherback Sea Turtle <i>Dermochelys coriacea</i> , Endangered

Several databases were reviewed for indications of listed species occurrences and associated suitable habitat. Other sources utilized included the USFWS website (<http://endangered.fws.gov/>); USFWS IPaC USF database, WS Recovery Plans and Habitat Management Guidelines; 2014 infrared aerial photography; historical aerial photography (1952); and additional data sets including:

- FNAI element occurrences (EO)
- USFWS National Wetlands Inventory (NWI) wetlands, including estuarine systems
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soils

- NRCS ecological communities, based on soil types (NRCS 1989)
- The St. Joe Company Proprietary Timberstand Data
- USFWS Critical Habitat Portal

#### **1.4 Critical Habitat**

There is USFWS designated critical habitat within the Choctawhatchee River floodplain adjacent north of the Project Area, within the Action Area. See **Figure 1 – Proposed Action Area and Project Area Location Map**. The Choctawhatchee River floodplain is considered critical habitat for Gulf Surgeon (*Acipenser oxyrinchus*) and five species of mussel (Choctaw Beach, Fuzzy Pigtoe, Southern Kidneyshell, Southern Sandshell and Tapered Pigtoe).

#### **1.5 Consultation to Date**

Summary of BA / BO discussion includes:

June 26, 2015 – Interagency meeting including USFWS and FFWCC introducing the entire project.

July 22, 2015 – Harold Mitchell (USFWS) and The St Joe Company Agree to work towards a BA for any potential listed species impacts. Minimization and avoidance and conservation measures will be exhausted prior to any take considerations. Potential species to consider are Gulf Sturgeon, Mussels and Flatwoods Salamander.

July 27, 2015 – Harold Mitchell (USFWS) and Amy Douglas (Icarus) meet to review conditions needed for determining potential Flatwoods Salamander Habitat. Conditions determined: less than 2-ac, seasonal flooding, Cypress/ Myrtle Holly with a BA of <35-40, no dense shrub layer, herbaceous edges to ponds, and upland perimeter.

August 26, 2015 – Onsite meeting with interagency team reviewed four onsite locations for wetland location, quality, and habitat types.

September 15, 2015 - Harold Mitchell (USFWS) and Amy Douglas (Icarus) meet to review aerial photography and GIS data of potential FWS habitat sites, meeting the previously set criteria. Thirteen (13) ponds are then slated for review in December -January.

September 23, 2015 – Interagency team discussion to define the BA project boundary as the boundary of the RGP, Proposed Action and Project Area.

October 28, 2015 – Discussion with USFWS and FFWCC to determine focus species at interagency meeting. The focus species are selected based on the SAJ-105 assessment which is adjacent and has similar habitat. FFWCC will coordinate with Icarus and The St Joe Company to ensure that all species of concern are considered in the review process.

December 16, 2015 – Interagency meeting determination to use SAJ – 105 for the BA reference for this Proposed Action and Project Area. Onsite review of the potential locations for FWS habitat will occur in December - January with sampling in January – February.

January 12, 2016 – Initial FWS habitat review included 12 of 13 ponds in the Project Area, 7 of those will be sampled in February 2016.

February 16 and 24, 2016 – Harold Mitchell (USFWS), Kelly Mandello and Amy Douglas (Icarus), conducted dip netting surveys on 6 potential FWS ponds. One of the ponds slated for review did not require sampling (location 10) due to not meeting set parameters. No FWS larvae or adults were identified onsite.

February 24, 2016 – Draft BA presented and reviewed at the interagency meeting with USFWS, FFWCC, USACE, FDEP, The St Joe Company and Icarus representatives in attendance.

February 26, 2016 – Second Draft submitted to USACE with FWS sampling data included. The ACOE did not receive the draft due to files size and a third draft is slated.

March 30, 2016 – Onsite review by Harold Mitchell, USFWS, and Amy Douglas, Icarus, of two additional potential FWS ponds within the Devil's Swamp Mitigation Bank. They conducted dip net sampling using the same methodology as previous sampling efforts. No FWS larvae or adults were identified, however the habitat does have potential with continued management. Further discussion of development parameters also occurred during the interagency meeting.

April 7, 2016 – Third Draft of BA submitted to ACOE via ftp.

## **2.0 PROPOSED ACTION**

### ***2.1 Purpose of the Proposed Action***

The Proposed Action is in response to an innovative land use overlay, known as the Bay – Walton Sector Plan. The Project Area is within the Bay-Walton Sector Plan. **(See Figure 2 – Bay Walton Sector Plan).**

The State of Florida and the Department of Economic Opportunity encourages long-range, large scale planning efforts. In April 2014, The St. Company made application to Bay County and Walton County for approval of a 50-year Long Term Master Plan, the Bay-Walton Sector Plan, for approximately 110,500 acres of its holdings. The application was reviewed by Department of Economic Opportunity (DEO), FDEP, FDOT, WFRPC, FDAC, NFWFMD, FFWCC, FDOE, Bay County and Walton County. The Bay-Walton Sector Plan (BWSP) was found to be in compliance with State Statues, approved and adopted by Bay County and Walton County in June 2015.

The Bay-Walton Sector Plan modified the original West Bay Sector Plan (WBSP) which was approved and adopted by Bay County in 2003. The original West Bay Sector Plan included 75,000 acres in Bay County surrounding the Northwest Florida Beaches International Airport which was also the purpose for SAJ-105. The Bay – Walton Sector Plan added approximately 46,191 acres located to the west of Hwy 98 to Walton County and north of the Intra-Coastal waterway to the original West Bay Sector

Plan boundary. Of the 46,191 acres, approximately 32,907 acres are located in Bay County and approximately 13,284 acres are located in Walton County.

It is important to note that a Long Term Conservation land use was adopted for the Bay-Walton Sector Plan; this land use includes over 53,000 acres of the 110,500 acres. **(See Figure 2 - Bay-Walton Sector Plan)** Additionally, SAJ-105 covers over 43,900 acres and SAJ – 86 covers 37,300 acres the majority of which is included with in the 110,500 acres of the Bay-Walton Sector Plan **(See Figure 3 - Bay-Walton Sector Plan with Regional General Permits)**. The Bay-Walton Sector Plan will utilize an overall land use framework and planning principles to ensure cohesive and fully integrated planning for the entire 110,500 acres. The integration of the Bay-Walton Sector Plan's land use framework and planning principles with the environmental framework and watershed planning principles of the Regional General Permits and Ecosystem Management Agreements provides all stakeholders with beneficial assurances.

The Proposed Action, RGP SAJ – 114 and a third EMA, are being cooperatively developed by an interagency team of senior staff representatives from USACE, FDEP, USFWS, FFWCC, EPA, NOAA, NMFS and The St. Joe Company to develop a watershed and landscape scale plan, with consideration for existing and anticipated development pressures within the Project Area. This effort is similar to that which was done for RGP SAJ-86 and RGP SAJ-105. The goal is to build on the Bay-Walton Sector Plan to further reduce impacts to the environment, in particular the aquatic environment, by managing growth on a landscape scale and by protecting areas of regional ecological and cultural significance within the Project Area. The proposed RGP would not only function as an area-wide conservation plan, but would also provide improved predictability and efficiency of the federal wetland permitting program within the Project Area.

This Biological Assessment is for this Proposed Action, a third RGP (SAJ-114) and EMA area. The Project Site is the RGP (SAJ-114) boundary which includes The St Joe Company, non-St Joe, and State owned lands. **See Figure 1 – Proposed Action Area and Project Area Location Map.** Of the approximately 41,500 acres within the Project Area approx. 8,400 acres are in non-St Joe private ownership and 4,800 ac are in State ownership. Therefore 68 % of the Project Area is owned by The St Joe Company.

In accordance with the goal of watershed-level planning, thirteen (13) conservation units were identified within the area of the proposed RGP **(See Figure 1-Proposed Action Area and Project Area Location Map)**. These thirteen (13) conservation units total 9,850 acres of uplands and wetlands flowing toward Choctawhatchee Bay via the Choctawhatchee River, and West Bay via the ICW. The conservation units would be preserved with development severely restricted, and could be managed to enhance conservation, habitat restoration, and ecological functions. All lands within the conservation units, whether uplands or wetlands, would be protected.

#### Stormwater Management/Sediment and Erosion Control Measures

The Proposed Action, RGP (SAJ-114) will require that all surface water management systems and sediment erosion control measures for all projects authorized by the RGP comply with Chapter 62-330 F.A.C. and Applicant's Handbooks, Volumes 1 and 2. In addition to these state regulatory requirements, the RGP will also require that all projects be developed to meet Outstanding Florida

Water standards as set forth in Chapter 62-302.700 F.A.C. and will require heightened sediment and erosion control measures as outlined in a plan specific to the RGP. These measures will exceed applicable regulations and will provide greater assurances for protection for water quality, which will benefit species within the Project Area and Action Area.

## ***2.2 Location of the Proposed Action***

The proposed 41,584 acre proposed Action Area is located in Bay County and Walton County, north of the ICW and south of Choctawhatchee River, extending from State Road 79 to Choctawhatchee Bay. The Section, Township Range of the Project Area are: T1S R16W S19, 30, 31; T1S R17W S13-17, 19-36; T2S R16W S6-7, 18; T2S R16W S1, 14-16, 18-36; T2S R17W S1-18; T2S R19W S24-26, 36; and T3S R18W S1-6, 11-13 (See **Figure 3 – Proposed Action Area and Project Location Map**).

## ***2.3 Description of the Proposed Action***

The Proposed Action is the issuance of a Department of the Army Corps of Engineers Regional General Permit (RGP) pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344). Approval of the RGP would allow discharge of dredge and fill material into non-tidal waters of the United States for the construction of residential, commercial, recreational and institutional projects within the Project Area, including building foundations, building pads, and attendant features that are necessary for the use and maintenance of the structures. Attendant features may include, but would not be limited to, roads, parking lots, garages, yards utility lines, and stormwater management facilities. Residential developments would include multiple and single unit developments. Examples of commercial developments include retail stores, light industrial facilities (which means business activity such as commercial distribution, assembly or manufacturing processes with no primary use of raw materials), manufacturing facilities, research facilities, warehouses, distribution facilities, restaurants, business parks, and shopping centers. Examples of recreational facilities include playgrounds, playing fields, golf courses, hiking trails, bike paths, horse paths, stables, nature centers and campgrounds. Examples of institutional developments include schools, fire stations government office buildings, judicial buildings, public works buildings, libraries, hospitals, and places of worship.

The proposed RGP is limited to non-navigable and non-tidal waters, including wetlands. For projects authorized under the RGP, the only impacts that would be authorized within wetlands designated as high quality wetlands, would be for necessary, minimized road crossings, boardwalks and paths, linear infrastructure (which includes stormwater conveyances, but not stormwater ponds), utility corridors and any other linear access facilities necessary to support the associated development. An estimation of the existing wetlands and uplands within the Project Area are shown in **Figure 4 – Wetland Estimations and Conservation Units within Proposed Action Area**. No more than 23% of altered wetlands outside of the Conservation Units and within each of the six sub-watersheds (USGS Level VI, 12-digit) would be impacted for residential, commercial, recreational, and institutional projects on a per individual project basis with the remaining 77% of altered wetlands preserved through placement under a conservation easement. Mitigation would include minimization of wetland impacts as described above, preservation of the thirteen conservation units totaling approximately 9,851 acres, and compensatory mitigation through the use of: 1) mitigation banks 2) compensatory mitigation projects within conservation units, or 3) compensatory mitigation projects within the individual project site.

The conservation units will be made subject to conservation easements as the Project Area, RGP SAJ-114, area is developed, or sooner to the extent that conservation units are purchased by governmental entities or non-profit conservation/natural resource management entities, or to the extent they are set aside for wetland or habitat mitigation. These conservation units could be managed to enhance and preserve their ecological functions. Within the conservation units, traditional high yield industrial silviculture activities will be prohibited and will be replaced with activities consistent with an approved forestry management plan. The conservation units also would provide valuable refuges to wildlife through corridors connecting the Project Area to offsite state and federally managed protected lands. Maintenance of the ecological and hydrological integrity of the conservation units would be factored into the design of any surrounding development projects.

## ***2.4 Existing Environment***

The proposed Action Area includes thirteen (13) Conservation Units and the majority is currently undeveloped, primarily used for timber production. Based upon historic aerial photography and ranges of populations, it is presumed that decades ago the Project Area was much more suitable for the support of protected and sensitive species which are described further in this report.

The proposed Action Area includes 6 drainage subwatersheds that ultimately discharge into Choctawhatchee Bay and West Bay. The land cover types include pine plantation, upland coniferous forest, mixed forested wetlands, and mixed hardwood-pine wetlands.

The majority of the Project Area, RGP (SAJ-114), has been managed as high yield frequent rotation pine plantation. Silvicultural practices include logging of historical natural communities, construction of logging roads, bedding and row planting of pines at densities of 600-750 trees per acre. Strands, sloughs and creeks, and depressional wetlands are located throughout the parcel. Historical aerial photography indicates that much of the Project Area consisted of deeper sloughs, larger swamps, hydric and mesic flatwoods, sandhills and upland scrub communities. However, due to extensive silviculture practices, there are only small, non-contiguous areas of non-planted uplands. The wetland communities have also been impacted by intense logging and timber management practices within the edges of deep wetlands and throughout hydric pine flatwoods. These impacts have greatly reduced the potential for federally protected species to occur within the Project Area. The existing wetlands and uplands within the Project Area are shown in **Figure 4 – Wetland Estimations and Conservation Units within Proposed Action Area**.

The Devil's Swamp Mitigation Bank includes 3,001 acres located within the Project Area of which 2,524 acres are subject to ongoing restoration and management activities. There are no active residential or commercial development projects within the Project Area boundary at this time. To the north of the Project Area is the Choctawhatchee River, a pristine area known for numerous listed species. The conservation units associated with the project will increase the preservation within the Choctawhatchee floodplain as they are adjacent to the State owned lands to the north.

## ***2.5 Anticipated Timeline of the Proposed Action***

The Proposed Action, RGP (SAJ-114) would be valid for 5 years from the date of issuance and it may be reissued for 5 year periods until the full build out within the Project Area is reached. Preservation of

lands through the Conservation Units would occur annually based on individual project approvals (IPAs). The first projects within the Project Area are expected to occur in 2017.

### 3.0 SPECIES ACCOUNTS AND HABITAT STATUS

Currently, there are 14 federally listed animal species and eight federally listed plant species which may potentially occur within the Project Area. A complete review of these sensitive species that, according to the U.S. Fish and Wildlife Service's IPaC Trust Report, could potentially occur in the project area, is outlined herein.

#### 3.1 Listed Animal Species with a "No Effect" Determination

The following list includes those aquatic species that may occur inside the project boundaries, within those coastal and aquatic habitats where no direct impacts are proposed. A "No Effect" determination is made for these species, as no work is proposed within waterways. No direct impacts to aquatic species are anticipated as a result of the project. Secondary and cumulative effects are also not expected to affect these populations due to and lack of industrial development within the Project boundaries.

##### Clams

- Choctaw Bean *Villosa choctawensis*, Endangered
- Fuzzy Pigtoe *Pleurobema strodeanum*, Threatened
- Gulf Moccasinshell *Medionidus penicillatus*, Endangered
- Oval Pigtoe *Pleurobema pyriforme*, Endangered
- Southern Kidneyshell *Ptychobranhus jonesi*, Endangered
- Southern Sandshell *Hamiota australis*, Threatened
- Tapered Pigtoe *Fusconaia burkei*, Threatened

##### Fishes

- Atlantic Sturgeon (Gulf Subspecies) *Acipenser oxyrinchus desotoi*, Threatened

##### Mammals

- West Indian Manatee *Trichechus manatus*

##### Reptiles

- Green Sea Turtle *Chelonia mydas*
- Hawksbill Sea Turtle *Eretmochelys imbricata*
- Kemp's Ridley Sea Turtle *Lepidochelys kempii*
- Leatherback Sea Turtle *Dermochelys coriacea*

##### Birds

- Piping Plover, *Charadrius melodus*, Threatened
- Red Knot, *Calidris canutus rufa*, Threatened
- Wood Stork, *Mycteria americana*, Threatened

The following species are unlikely to occur due to habitat requirements not known to exist onsite.

#### Mammals

- Gray Bat *Myotis grisescens*, Endangered

The USFWS range for the gray bat includes the northeast corner of the Project Area. The gray bat inhabits cave formations in limestone karst habitats, feeding over waterways that are surrounded by forested land (Florida Natural Areas Inventory 2001). FNAI reports that the Florida distribution is limited only to Jackson County. No karst caves are known or expected to exist onsite, and so a determination of **“no affect”** has been made for the gray bat.

### 3.2 Listed Animal Species with a **“may affect but not likely to adversely affect”** determination

The following species have the potential to utilize habitats within the Project Area, and/or there is evidence these species have potentially occupied wooded lands in the vicinity of the Project Area. Persistent silvicultural activities, including site preparation, row and furrowing, clear cutting, soil compaction and fire suppression have greatly reduced the potentially suitable habitat for these species within the Project Area. Densely planted pine plantations and fire suppression also result in heavily shaded understories which reduce herbaceous understory forage species. As such, a determination of **“may affect but not likely to adversely affect”** has been made for the species listed below.

#### Birds

- Red-cockaded Woodpecker, *Picoides borealis*, Endangered

The red-cockaded woodpecker typically inhabits mature, old growth stands of pines, with an open, fire- maintained understory layer. Nest and roosting cavities are excavated in old, living pine trees, (primarily longleaf) with a typical tree age of between 63-130 years (USFWS RWC).

The vegetative communities within the Project Area are primarily silvicultural slash or sand pines, and therefore potential old-growth cavity trees, as well as foraging habitat, are largely unavailable. Typical pine plantation understory is inadequate for the forage use by red-cockaded woodpeckers, and individuals are known to vacate active cavity trees when understory conditions become unsuitably high (USFWS RCW). Some large pines are sporadically present within the project boundary, but the understory habitat ranges from fair to poor for RCW utilization. Silvicultural harvest of mature pines, high planting density, and fire suppression has impacted the potential habitat to support red-cockaded woodpeckers and as such, a determination of **“may affect but not likely to adversely affect”** has been made for this species.

#### Reptiles

- Eastern Indigo Snake *Drymarchon couperi*

The indigo snake inhabits a range of habitats, from sandhill ecosystems and flatwoods, to swamps, wet fields and prairies. Upland occurrences are often in association with commensal gopher tortoise burrows, which are used for forage and refuge. The project is expected to have minimal effects on eastern indigo snakes, and a determination of **“may affect but not likely to adversely affect”** has been assigned, as if they are present, indigo snakes are likely to move easily to adjacent lands, avoiding any direct impacts.

- Gopher Tortoise *Gopherus polyphemus*

Gopher tortoises typically occur in areas of well drained, sandy soils, with pine or mixed pine/turkey oak canopy and open understory with a grass, herbaceous and non-woody forb groundcover and adequate sunlight penetration for nesting areas (USFWS GT). Sandhills, sand pine scrub, pine flatwoods and mixed hardwood pine forests are other preferred habitat types for gopher tortoises. Gopher tortoises typically are not associated with densely planted stands due to canopy shading of the understory layer which reduces the grassy groundcover necessary for forage, but is sometimes found in marginal habitats such as roadsides, ditches, powerline rights-of-way, and open pastures. One gopher tortoise observation has been recorded by FNAI, in the southern central portion of the site, within Devil's Swamp. The project should have minimal effects on gopher tortoise, and it is determined that the proposed actions will have **“may affect but not likely to adversely affect”** the gopher tortoise.

#### Amphibians

- Reticulated Flatwoods Salamander, *Ambystoma bishopi*, Endangered

Flatwoods salamanders breed in small, ephemeral ponds where their larvae develop until metamorphosis, when they turn into terrestrial adults. Mature salamanders migrate from the ephemeral ponds to adjacent uplands, where they live underground for most of the year. Larval ponds are typically grassy, digressional wetlands that lack predatory fish, which are found adjacent (within 1500 feet) of an upland, moderately moist pine flatwoods/savannah.

Silvicultural activities, including dredging, ditching and hydrologic alterations have degraded the target flatwoods salamander habitat within the Project Area. Subsoil mechanical preparation (disking, roller chopping, bedding, etc.) is also unsuitable for the underground adult amphibians.

#### Reticulated Flatwoods Salamander (*Ambystoma bishopi*)

##### Species Description

The flatwoods salamander is a slender, small-headed mole salamander that is seldom greater than 5 inches in length. Adult dorsal color ranges from black to chocolate-black with highly variable, fine, light gray lines forming a net-like or cross-banded pattern across the back. Undersurface is plain gray to black with a few creamy or pearly gray blotches or spots. Flatwoods salamander larvae are long and slender, broad-headed and bushy-gilled, with white bellies and striped sides.

Flatwoods salamanders are known to occur in isolated populations across the lower southeastern Coastal Plain, with the majority of the remaining known populations located in Florida. In 2007 the species was split into two separate species, the reticulated flatwoods salamander (*A. bishopi*) and the frosted flatwoods salamander (*A. cingulatum*). *A. bishopi* occurs west of the Apalachicola River; *A. cingulatum* is east of this same river. Habitat needs for both species are similar.

Adult and sub-adult flatwoods salamanders live in underground burrows. Adult flatwoods salamanders move above ground to their breeding sites during rainy weather associated with cold fronts during October thru December. Typical breeding sites are isolated pond cypress (*Taxodium ascendens*), swamp tupelo (*Nyssa sylvatica* var. *biflora*) or slash pine (*Pinus elliotti*) dominated depressions that dry

completely during the summer. They are generally shallow, relatively small and have a marsh-like appearance with sedges often growing throughout. Wiregrass (*Aristida stricta*), panic grasses (*Panicum spp.*) and other herbaceous species are normally concentrated in the shallow water edge or ecotone. After breeding, adult salamanders leave the pond. The larvae remain in the pond until March or April and leave before the pond dries up.

### Population in Action Area

The Action Area is privately owned and has been intensively managed for silviculture for many years. Almost all uplands were converted to pine plantations with site preparation that included clear cutting, roller chopping, herbicide application and bedding.

The USFWS reports 4,453 acres of critical habitat for the reticulated flatwoods salamander within its known range. There is one documented occurrence of flatwoods salamanders in nearby Washington County in Pine Log State Forest and one record in Walton County. The Walton County record is for one individual at one location in Point Washington State Forest, which is located more than 5 miles from the Action Area. The documented occurrence on the Point Washington State Forest is approximately 5 miles from the center of the Action Area.

Any potential historic habitat for the flatwoods salamander has been severely degraded by silviculture. However, an initial screening was conducted and 14 ponds were selected for onsite review. Of the 14 selected for onsite review 8 were considered to have potential habitat and warranted sampling for larvae.

### Methods

Flatwoods salamander habitat was evaluated using a three phase process on office analysis, onsite review, followed by sampling.

**Phase I Evaluation.** The potential breeding site must be underlain by hydric soils as designated in the county's Soil Conservation Service soil survey. It must also have been identified as a wetland according to either the National Wetland Inventory mapping or the Florida Land Use, Cover and Form Classification System. Careful examination of aerial photography and maps provided by St. Joe of the entire Action Area was done to locate small wetlands not captured by soil surveys or wetland mapping. Potential sites were depressional wetlands, seasonally flooded, less than 2 acres, hydrologically isolated from other wetlands. These sites were dominated by pond cypress, swamp tupelo, and/or slash pine, or a shrub swamp dominated by Chapman's St. Johns-wort (*Hypericum chapmanii*) or myrtle-leaved holly (*Ilex myrtifolia*), with herbaceous edges and upland perimeter. Wetlands not meeting the above criteria are not suitable habitat for the flatwoods salamander and were eliminated during the initial screening.

**Phase II Evaluation.** Following the office analysis, a field review was conducted to verify the results of the Phase I evaluation and determine which ponds were of good enough quality to merit sampling for salamander larvae. Each pond was visited and assessed according to the following methodology. Flatwoods salamander habitat consists of three components: (1) breeding pond, (2) graminaceous ecotone, and (3) surrounding pine-dominated terrestrial habitat. Although the limits of the pond and ecotone are readily recognizable, the limits of the surrounding terrestrial habitat are not. If the showed

signs of seasonal flooding, with an open canopy or sufficient open water, an herbaceous vegetation edge and upland perimeter then it was selected for sampling.

***Phase III Evaluation.*** Eight ponds were selected based on the above mentioned criteria and sampled.

### Results

Based on the field surveys, Icarus made the following findings:

- The 8 ponds found to have the appropriate parameters, were dip net sampled. The sampling was conducted on February 16, 24 and March 30, 2016. Sampling of the 8 ponds during the peak times to find larvae and with adequate water conditions, did not reveal any flatwoods salamander larvae.
- No critical habitat has been designated for flatwoods salamanders within the action area.
- There were no previously known flatwoods salamander breeding ponds within the action area nor did the area wide survey locate any breeding ponds. The uplands within the action area are being managed intensively for silviculture. The margins of most ponds have developed a thick titi/myrtle-leaved holly midstory canopy that shades out graminaceous ecotone preferred by flatwoods salamanders or have been clear cut. The vast majority of the ponds visited were in this condition.
- Only ponds 0, 5, 6, 9, 12 and 13 have moderate-high potential but still lack the appropriate edge vegetation, ephemeral hydrology, or adjacent upland habitat structure. Pond 0, 5, 6 are located within the Village Center residential development land use overlay for the Sector, pond 9 is located within the Kelly Pond Conservation Unit. Ponds 13 and 14 are located within Devil's Swamp Mitigation Bank (DSMB).
- Based on the results and the condition of habitat throughout the action area it is expected that any project activity within the SAJ-114 action area will have no effect on reticulated salamanders.

### Discussion

Of the 14 sites initially identified in pre-field analysis by USFWS and Icarus, all sites have now been field-reviewed. On February 16 and 24, six sites were sampled via dip net. On March 30 two additional sites were sampled within DSMB. No flatwoods salamanders were identified at any site. None of the ponds sampled are considered in excellent condition for flatwoods salamanders. Each of the habitats sampled are lacking in some way: either excessive hydroperiod or water depth, lack of herbaceous edge or surrounding upland community or the density of woody vegetation is inappropriate. Some of these factors can be corrected through intensive management, however, management protocol for FWS includes prescribed burning. Prescribed burning is not advisable in the midst of a residential community and cannot occur on long-term basis. Three of the locations are within conservation areas, two within DSMB and one within a Conservation Unit. At present there have been no known occurrences of FWS or critical habitat within the action area. A determination of **“may affect but not likely to adversely affect”** has been made for this species.

### 3.3 Federally Listed Plant Species

#### Cooley's Meadowrue *Thalictrum cooleyi*, Endangered

- Cooley's Meadowrue is a perennial herb, occurring primarily in grass sedge bogs and hydric pine savannahs, but occasionally along fire plow lines, roadside ditches and rights of way. It prefers areas maintained by fire or mowing, and often occurs in conjunction with tulip poplar growing alongside bald cypress or Atlantic white cedar. It is threatened by ecological succession, fire suppression and timber operations. Range is known from North Carolina, Georgia and Florida, and known Florida range is limited to one population in Walton County. *Thalictrum cooleyi* is not expected to occur onsite, which lacks suitable habitat, and the project is expected to have **"No Effect" on the species.**

#### Florida Skullcap *Scutellaria floridana*, Threatened

- Florida skullcap is endemic to the Florida Panhandle, occurring in Bay, Gulf, Franklin and Liberty Counties. The primary habitat for this species is wet longleaf pine flatwoods, wet prairie, grassy seepage bogs and ecotones between mesic flatwoods and grassy wetlands, and disturbed wet savannahs (USFWS FS). The species is abundant in both the Apalachicola National Forest and St Joseph Buffer Preserve, where ecosystems are maintained by regular prescribed fire. According to the USFWS Five Year Review for this species, Florida skullcap was noted in the far eastern portion of Bay County, around Lathrop Bayou. Tree farming is the primary threat to this species, and due to heavy historic silvicultural use, the Project Area is considered unsuitable habitat. No findings were noted in the areas near the Project Area, and as such a decision of **"No Effect"** is assigned to the Florida Skullcap.

#### Gentian Pinkroot *Spigelia gentianoides*, Endangered

- *Spigelia gentianoides* is a perennial herb, found predominantly in well drained upland pine forests with a fire maintained wiregrass groundcover layer. Current range within the state of Florida are limited to Washington and Jackson Counties, as well as a probably extirpated population within Calhoun County, according to the USFWS Five Year Review for gentian pinkroot (USFWS GP). Due to lack of suitable habitat and range restrictions, a decision of **"No Effect"** is assigned to gentian pinkroot.

#### Godfrey's Butterwort *Pinguicula ionantha*, Threatened

- Godfrey's butterwort is found on seepage slopes, bogs, wet pine flatwoods and wet prairies, often in standing water, and responds strongly and positively to fire (FNAI GB). Current Florida range includes Bay, Gulf, Calhoun, Liberty, Franklin and Wakulla Counties. According to the USFWS Five Year Plan for *Pinguicula ionantha*, there is no recorded incidence in Walton or western Bay Counties in the vicinity of the Project Area. A **"No Effect"** determination is made for this species due to the lack of vouchered occurrences in the geographic area, and the minimal, poor habitat available onsite.

#### Harper's Beauty *Harperocallis flava* Endangered

- *Harperocallis flava* is endemic to parts of Bay, Franklin and Liberty Counties. Only one isolated population was reported within Bay County, on the eastern side, according to the USFWS *Harperocallis flava* Five Year Review. This species occupies wet prairies, but has been

observed in pine flatwoods bogs surrounded with titi, wiregrass and slash pine, and in roadside ditches alongside planted pines. While wet pine flatwoods with a limited wiregrass groundcover do occur onsite, these areas are relatively uncommon due to timber operations and fire suppression. A “**No Effect**” determination is made for this species due to the lack of vouchered occurrences in the geographic area, and the minimal, poor habitat available onsite.

Papery Whitlow-wort *Paronychia chartacea*, Threatened

- *Paronychia chartacea* ssp. *minima* L. Anderson is a short lived, annual herb that occurs in the karst region of the Florida panhandle, in Washington and Bay counties (USFWS PW). It favors coarse white sand along the margins of karst lakes and responds positively to fire. A “**No Effect**” determination is made for this species due to the lack of vouchered occurrences in the geographic area, and the lack of karst ponds within the Project Area.

Telephus Spurge *Euphorbia telephioides*, Threatened

- *Euphorbia telephioides* occurs in coastal Bay, Franklin and Gulf counties. Recorded Bay County specimens noted in the *Euphorbia telephioides* Five Year Plan are restricted to coastal ecosystems, as well as within the Breakfast Point Mitigation Bank. The species prefers low sand ridges near the coast, as well as xeric to mesic pine with nutrient poor soils. The plants are uncommon, especially away from the coastal ridge. Extensive areas of Bay County were surveyed for telephus spurge during the permitting of RGP EMA II, and no specimens were found during those events. Regions of Breakfast Point Mitigation Bank, which is located approximately 20 miles southeast of the Project Area, do contain specimens, and those areas are managed to encourage and protect telephus spurge. Given the lack of vouchered specimens in the immediate area, and nonexistence of coastal sand ridges within the Project Area, it is determined that the proposed actions will have “**no effect**” on the population of telephus spurge.

White Birds-in-a-nest *Macbridea alba*, Threatened

- White Birds-in-a-nest is endemic to the Florida Panhandle, namely Gulf, Liberty and Franklin Counties, with several populations in the Lathrop Bayou area on the far east side of Bay County. This species occurs in mesic pine flatwoods, wet savannah, seepage slope and the pine flatwoods/titi ecotone, though it occasionally occurs in longleaf pine and runner oak communities and favors poorly drained, infertile soils (USFWS WB). It is intolerant of timbering activities and fire suppression, but does occur along roadways, and so it is unlikely but possible that the species may occur within the Project Area. As such, it is determined that the proposed actions will have “**may affect but not likely to adversely affect**” the population of white birds-in-a-nest.

## 4.0 VOLUNTARY CONSERVATION MEASURES

### 4.1 Bald Eagle

In order to avoid potential impacts to the bald eagle nests located within the Project Area or Action Area, certain measures will be implemented as dictated within the National Bald Eagle Management Guidelines document produced in 2007 by the USFWS. The currently documented eagle nest locations can be found within the Conservation Units or outside the Project Area.

In general, the nests and alternate nests should be protected from loud or otherwise disruptive activities during the nesting season from October to May. This can be accomplished by implementing distance buffers, maintaining natural areas around nests and avoiding certain activities altogether during the nesting season. The USFWS guidelines specifically dictate the types of buffers recommended for different types of activities generally within 660 feet of the nest tree during nesting season. See **Figure 7 - Eagles Nest Buffer Zones within the Project Area** for a depiction of example buffer zones around the known eagle nest within the Project Area.

Specific conditions as recommended through the guidelines or in consultation with USFWS pertaining to each nest or alternate nest and each proposed activity will be adhered to. The nests are located in relatively close proximity to human activities including roadways, water related activities and hunting and therefore the eagles are presumed to be acclimated to those activities. Construction activities within a 330 to 660' buffer will be limited to the non-breeding season. Timber harvest and management activities will also have restrictions including the avoidance of removal of overstory trees within 330' of the nest tree, avoidance of a timber harvest within 660' of the nest tree during breeding season, restriction on selective thinning and prescribed burning to periods outside the breeding season, and prohibition of the location of log transfer stations within 330' of a nest tree. In addition, disruptive activities such as off road vehicle use and other loud noises will be restricted within 330' of a nest tree during the breeding season.

#### **4.2 Eastern Indigo Snake**

Measures to protect the eastern indigo snake from harm will be implemented within the Project Area. The indigo snake is known to occupy gopher tortoise burrows, a State of Florida protected species. Through protection of gopher tortoise burrows through the State regulations, some habitat and refuge for the indigo snake will also be protected. Through the Conservation Units approximately 9,851 acres of wetlands and uplands will be protected from development, thus providing a large quantity of potentially suitable habitat for the indigo snake. If indigo snakes are found to be present within the Conservation Units, management of the forests could potentially directly or indirectly positively affect the population. Management techniques could include prescribed fire, timber thinning and protection from anthropogenic disturbances.

During construction activities, placards and posters containing information to educate the construction workers of the potential presence of the eastern indigo snake will be placed within the construction area. Instructions will also be given to inform the crews that if indigo snakes are observed in a construction area, all work must stop until the snake leaves the area on its own, to notify the appropriate agency office and to report any live or dead observations of indigo snakes or large snake skins that are found within the area.

#### **4.3 Reticulated Flatwoods Salamander**

Six ponds onsite were considered to have moderate to high potential for being appropriate Flatwoods Salamander habitat. Three of which are located within conservation areas: one in a conservation unit and two in the actively managed Devil's Swamp Mitigation Bank. The proposed development will occur over the next 50 years so no imminent threat to this potential habitat is proposed at this time. During the planning process all reasonable measures will be taken to avoid affecting the viability of the

documented potential ponds. During the Individual Project Approval process, if the proposed project is within 1500 feet of a documented potential pond, then a re-initiation of informal review by USFWS will occur. During this review if it is determined that the project will not affect the hydrology, herbaceous edge of the pond or general viability of the habitat to support FWS, then a determination of “may affect, not likely to adversely affect” will be made. If the project requires impacts to potential FWS habitat then avoidance opportunities will be reviewed and mitigation required, if avoidance cannot be accomplished. The documented potential ponds within the Conservation Unit and Mitigation Bank would be reviewed to determine the mitigation potential.

## 5.0 CONCLUSION AND DETERMINATION OF EFFECT

Based on existing habitat within the Project and Action Areas, the results of on-site surveys for listed species performed for the purpose of preparation of this report, and the results of observations previously recorded within the vicinity of the Project and Action Areas by USFWS, FWC, and FNAI, it has been determined that the Proposed Action will have no effect on eighteen listed or candidate species and may affect but is not likely to adversely affect four listed species (bald eagle is not included). The determinations of effect for reviewed animal species are provided below:

### **"No effect"**

Atlantic Sturgeon (Gulf ssp)  
Choctaw Bean  
Fuzzy Pigtoe  
Gray Bat  
Green Sea Turtle  
Gulf Moccasinshell  
Hawksbill Sea Turtle  
Kemp's Ridley Sea Turtle  
Leatherback Sea Turtle  
Okaloosa Darter  
Oval Pigtoe  
Piping Plover  
Red Knot  
Southern Kidneyshell  
Southern Sandshell  
Tapered Pigtoe  
West Indian Manatee  
Wood Stork

### **"May affect, not likely to adversely affect"**

Eastern Indigo Snake  
Gopher Tortoise  
Red-cockaded Woodpecker  
Reticulated Flatwoods Salamander

### **"May affect, likely to adversely affect"**

None

Effect determinations for listed plants within the Project Area are shown below.

<u>"No effect"</u>	<u>"May affect, not likely to adversely affect"</u>	<u>"May affect, likely to adversely affect"</u>
Cooley's Meadowrue	White Birds-in-a-nest	None
Florida Skullcap		
Gentian Pinkroot		
Godfrey's Butterwort		
Harper's Beauty		
Papery Whitlow-wort		
Telephus Spurge		

The primary benefit of the watershed-level planning that is proposed in the Proposed Action, RGP (SAJ-114) is a conservation framework, which will provide an upfront regional approach to resource protection, while allowing development within suitable areas. This approach will limit or eliminate small project impact, development and mitigation projects that are typically permitted on a case-by-case basis. Through this landscape-level planning, important decisions concerning the protection of natural resources including uplands, waterfront property, important or potential protected species habitat, wetlands and waterbodies can be made prior to when impacts occur. This approach will offer protection to areas that would otherwise not be captured by current natural resource regulations and it will expand the protection to regulated natural resources by providing corridors, protection of entire wetland systems, and will allow greater protection of water quality within the Project Area and Action Area.

The current work on RGP-SAJ 114 builds upon the edifice created by RGP-SAJ 86 and RGP-SAJ 105, increasing the reach and scope of the watershed plans contained within those implementing mechanisms. As such it is recognized that the aspirations of 50 CFR Part 17, *Endangered and Threatened Wildlife and Plants; Notice of Interagency Cooperative Policy for the Ecosystem Approach to the Endangered Species Act*, have been taken into consideration and utilized to the extent practicable. The conservation corridors, units, buffers, measures and refinement of avoidance and minimization, and cumulative impacts through the public-private partnership development of the RGPs, will generate over 83,000 acres of conservation within the West Bay -St. Andrews Bay-Choctawhatchee Bay watersheds. To date, over 11,000 of those acres have been placed under a conservation easement. This cooperative approach will help restore, reconstruct and rehabilitate the structure, distribution, connectivity, and function upon which species of concern, candidate species, proposed species and listed species depend.

The Proposed Action, RGP (SAJ-114), will require that all surface water management systems and sediment erosion control measures for all projects authorized by the RGP comply with Chapter 62-346 F.A.C. and Applicant's Handbooks, Volumes 1 and 2. In addition to these state regulatory requirements, the RGP will also require that all projects be developed to meet Outstanding Florida Water standards as set forth in Chapter 62-302.700 F.A.C. and will require heightened sediment and erosion control measures as outlined in a plan specific to the RGP. These measures will exceed applicable regulations and will provide greater assurances for protection for water quality, which will benefit species within the Project Area and Action Area.

Six of the seven protected plant species that could occur within the Project Area occur within wetlands. These species are sensitive to silvicultural activities and have therefore are not likely to have suitable habitat. Through the Conservation Unit and wetland buffer approach, the possibility for suitable habitat for these species is improved significantly.

The “no action” alternative does not provide a better alternative to the Proposed Action because it does not provide protections for sensitive and non-sensitive areas. Development within the Project Area will eventually occur over time and will cause impacts to wetlands, uplands and protected species. Silvicultural activities would continue to occur until development needs allowed conversion to a higher use. Development of sensitive shoreline habitats, especially uplands, would possibly occur first. The Proposed Action dictates that these highly developable lands would be included within the Conservation Units, thus making them available for utilization by protected species such as the bald eagle or eastern indigo snake.

The Proposed Action is not expected to adversely affect the viability of any species or cause impacts to critical habitat.

## **6.0 CUMULATIVE EFFECTS (State and Private Actions)**

Cumulative effects of the Proposed Action include the effects of future State, tribal, local government, and private actions that are reasonably certain to occur in the vicinity of the Project Area as a result of the Proposed Action. It is likely that development would continue to occur especially within the areas to the south of the Project Area.

The Proposed Action has gone far beyond the usual requirements for development approvals in terms of stormwater management, conservation land set asides, and Conservation Unit improvements resulting from the implementation of the forestry plan, and minimization of impacts. In the normal project by project review, cumulative impacts cannot be fully addressed by a specific mechanism because there is no such mechanism within the scope of a project by project review. Here in the Proposed Action, cumulative impacts are addressed through the mechanisms of impact caps and conservation units. In the typical project by project review, no end state can be conceptualized, no linkages for preservation and wildlife corridors guaranteed, no environmental framework assembled to guide economic development and therefore cumulative impacts cannot be addressed through a specific mechanism.

## **7.0 ESTIMATED INCIDENTAL TAKE**

It is not anticipated that the Proposed Action will result in the incidental take of any protected species.

## **8.0 LITERATURE CITED**

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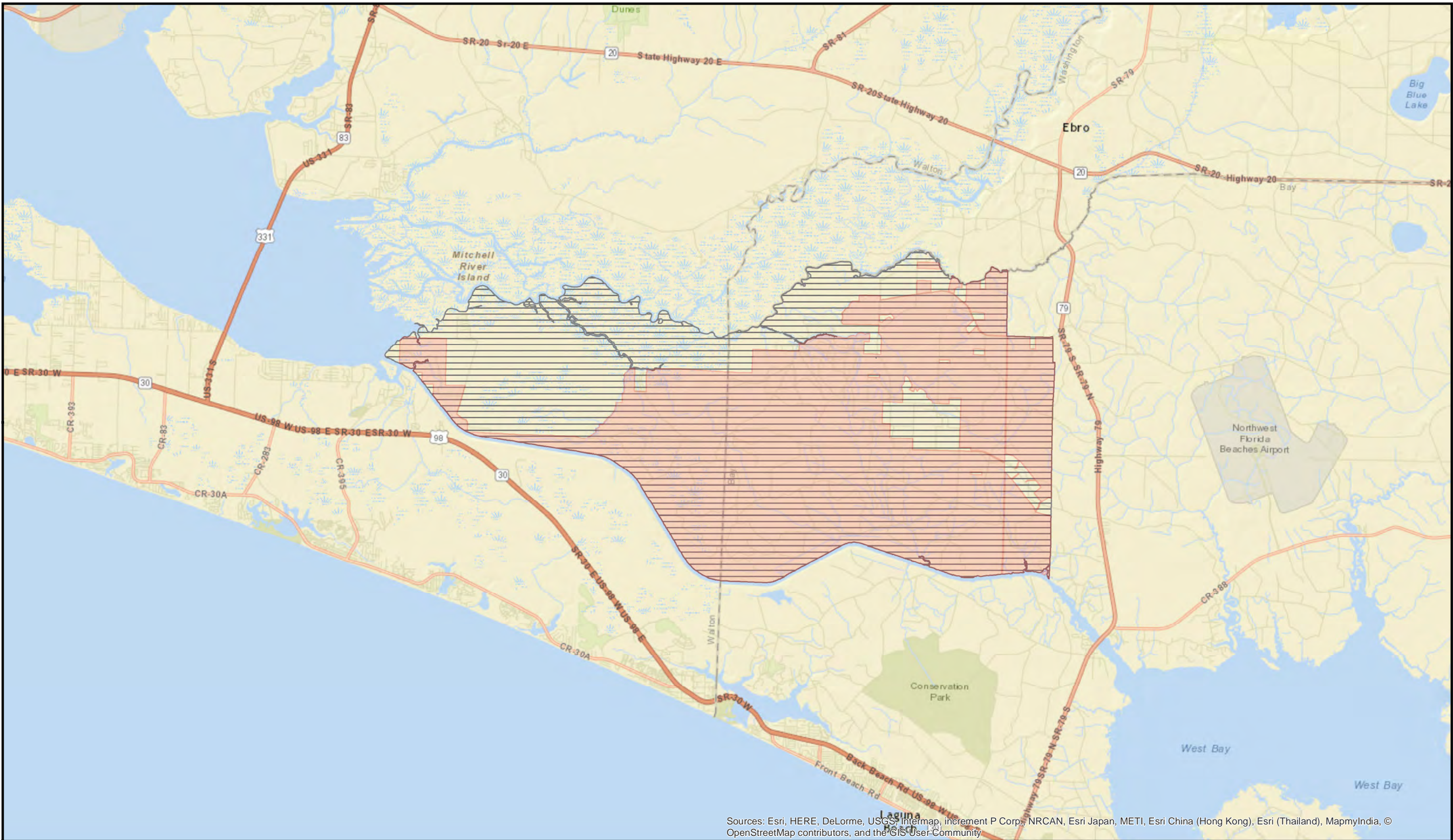
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- April Wilkes, Manager, Regulatory and Public Affairs



**Fig. 1 - Proposed Action Area and Project Location Map**

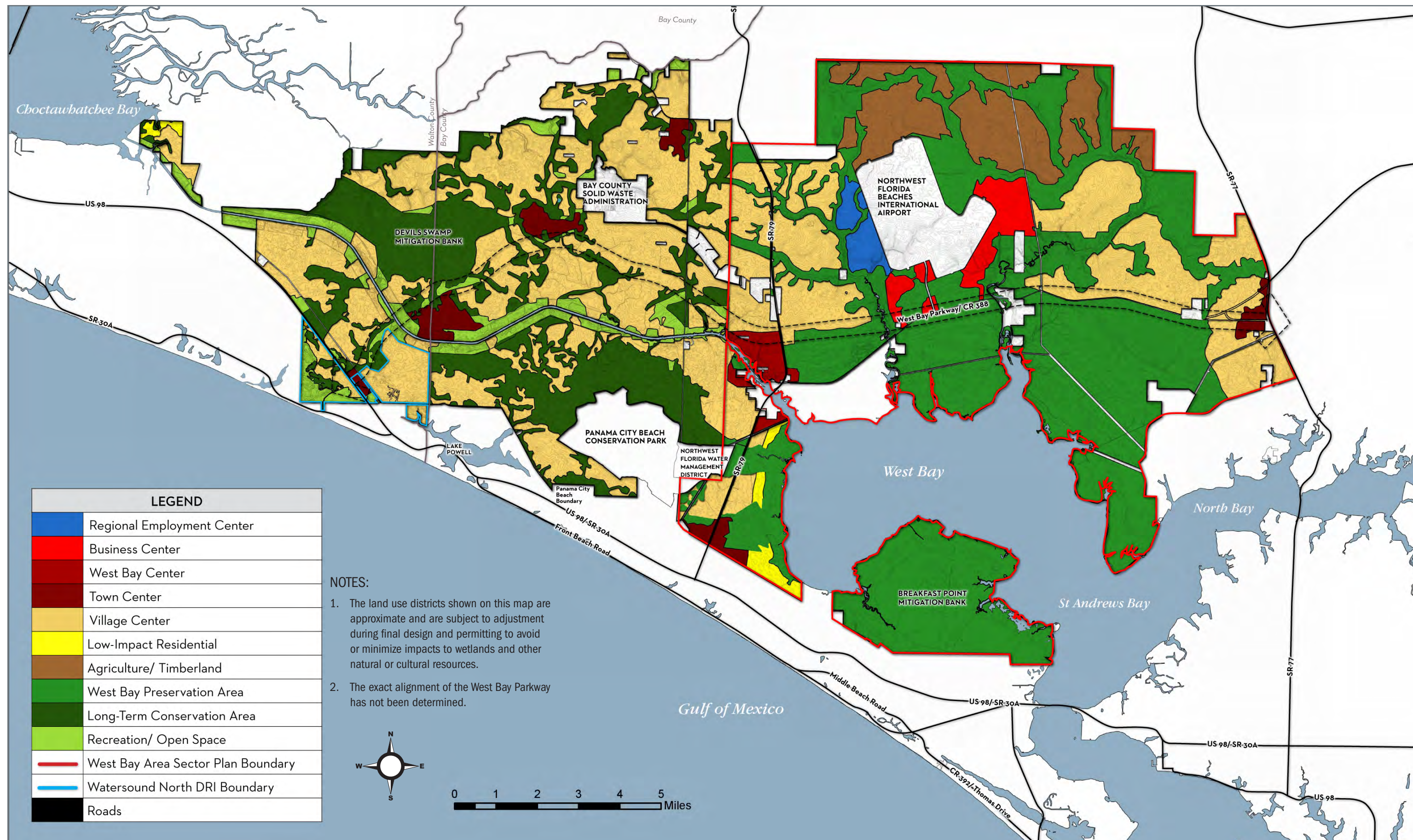


1 0.5 0 1 2 3 Miles

**Legend**

- EMA III Boundary - Project Area
- SAJ 114 Boundary - Action Area

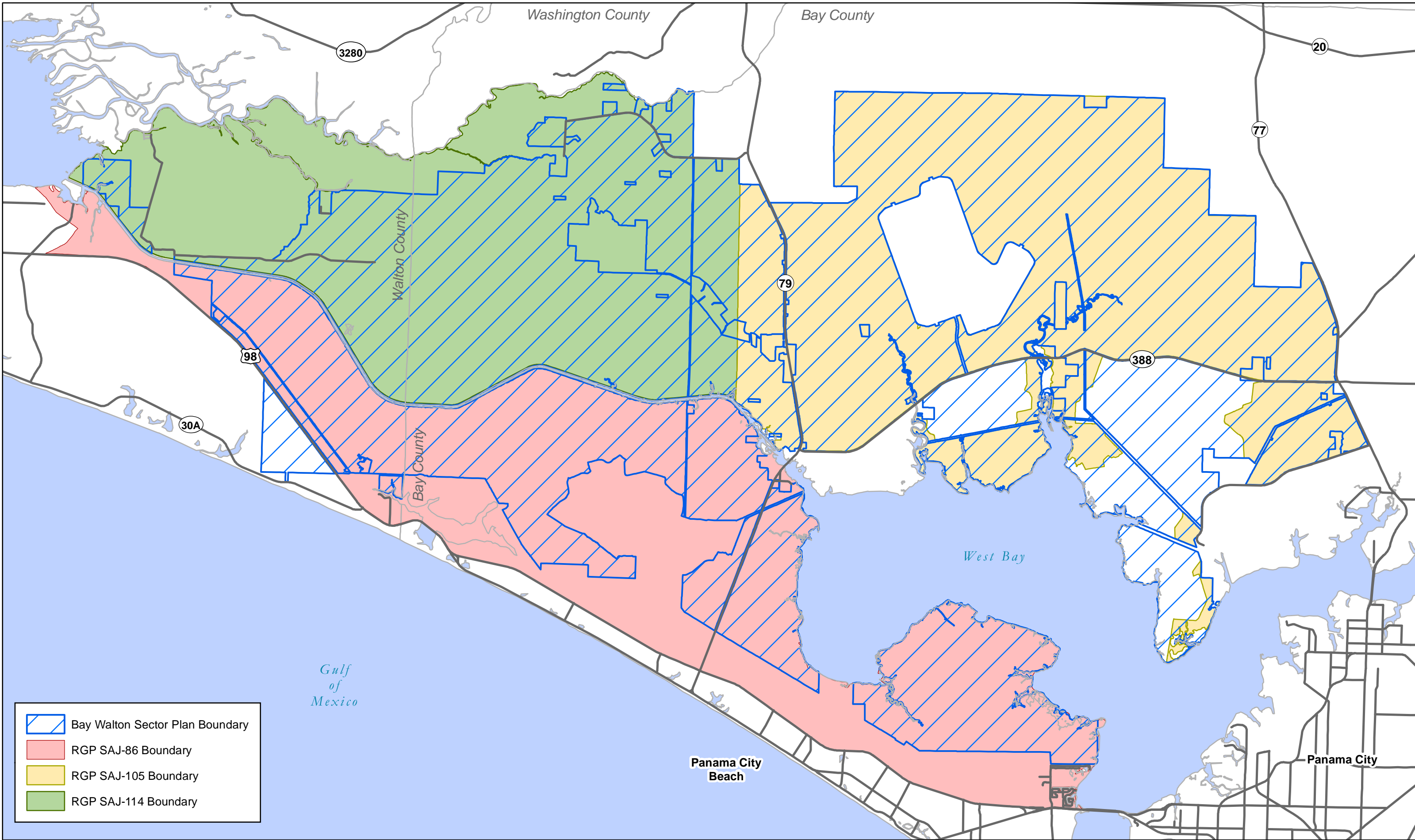




LEGEND	
<span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span>	Regional Employment Center
<span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span>	Business Center
<span style="display:inline-block; width:15px; height:15px; background-color:darkred; border:1px solid black;"></span>	West Bay Center
<span style="display:inline-block; width:15px; height:15px; background-color:brown; border:1px solid black;"></span>	Town Center
<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span>	Village Center
<span style="display:inline-block; width:15px; height:15px; background-color:lightyellow; border:1px solid black;"></span>	Low-Impact Residential
<span style="display:inline-block; width:15px; height:15px; background-color:green; border:1px solid black;"></span>	Agriculture/ Timberland
<span style="display:inline-block; width:15px; height:15px; background-color:darkgreen; border:1px solid black;"></span>	West Bay Preservation Area
<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span>	Long-Term Conservation Area
<span style="display:inline-block; width:15px; height:15px; background-color:verylightgreen; border:1px solid black;"></span>	Recreation/ Open Space
<span style="display:inline-block; width:15px; height:15px; border-top:2px solid red; border-bottom:2px solid red;"></span>	West Bay Area Sector Plan Boundary
<span style="display:inline-block; width:15px; height:15px; border-top:2px solid blue; border-bottom:2px solid blue;"></span>	Watersound North DRI Boundary
<span style="display:inline-block; width:15px; height:15px; background-color:black;"></span>	Roads

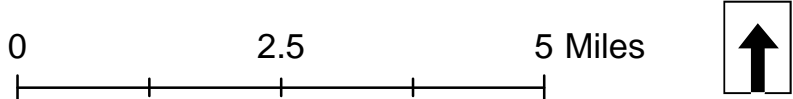
NOTES:

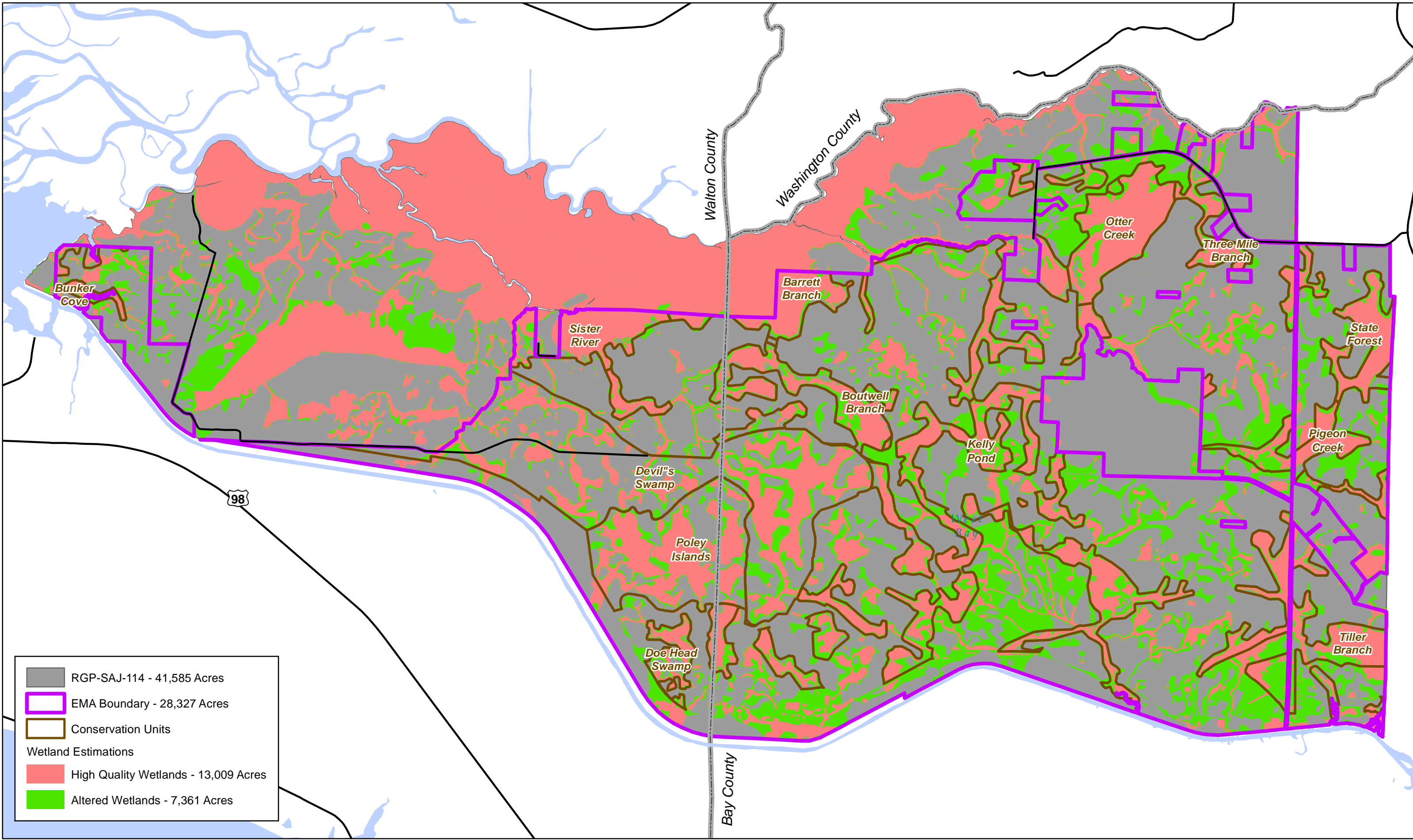
1. The land use districts shown on this map are approximate and are subject to adjustment during final design and permitting to avoid or minimize impacts to wetlands and other natural or cultural resources.
2. The exact alignment of the West Bay Parkway has not been determined.



**Fig. 3 Bay-Walton Sector Plan Boundary**  
**Depicting RGP SAJ-86, RGP SAJ-105 and RGP SAJ-114**

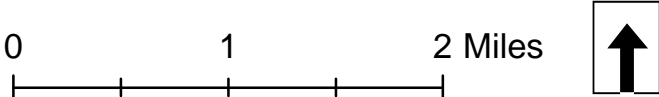
February, 2016

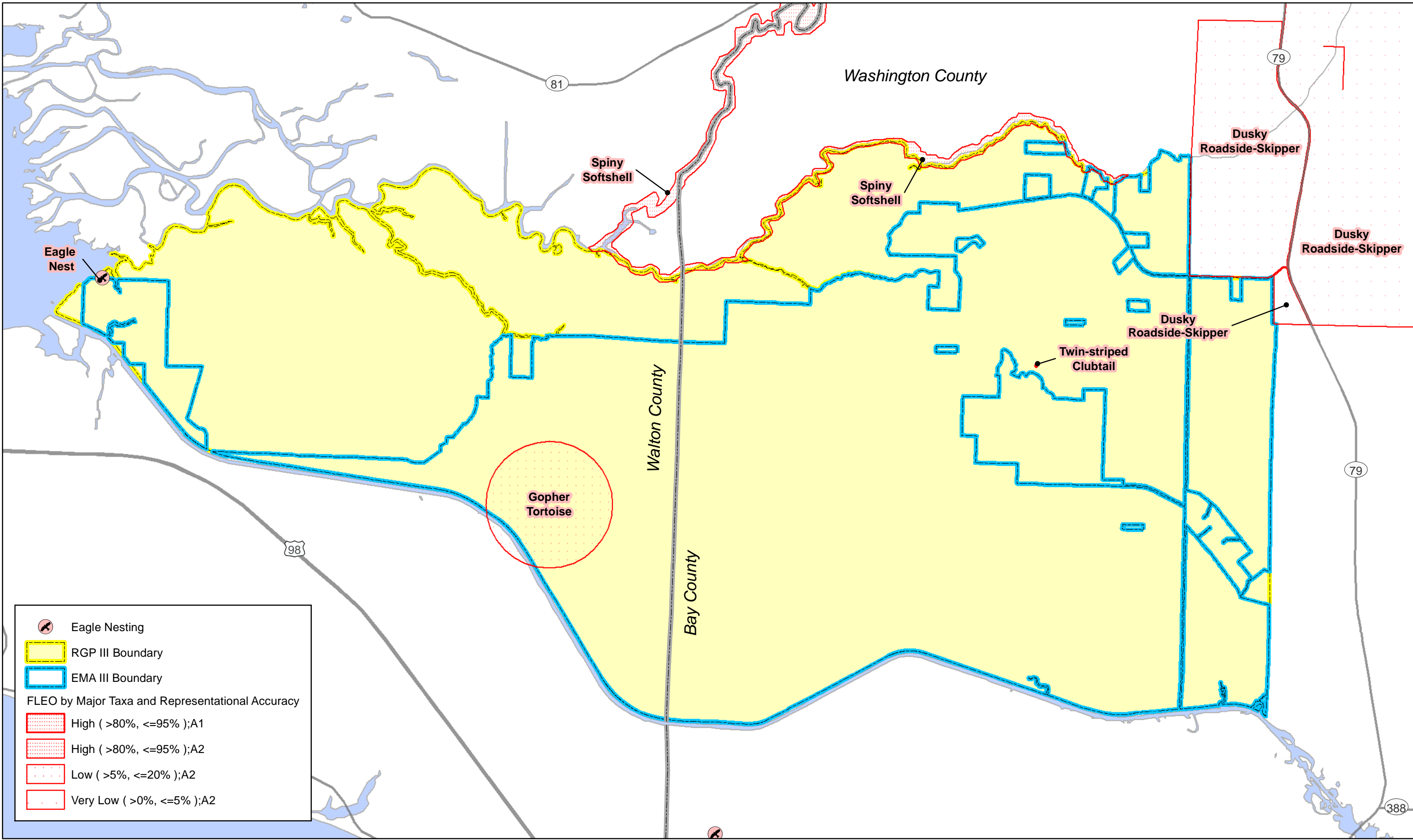




**Fig 4 Wetland Estimation and Conservation Units within the Proposed Action Area**

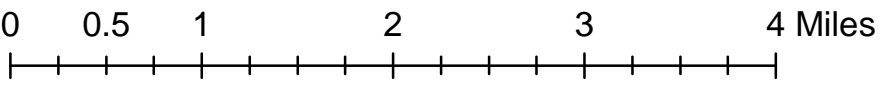
February, 2016

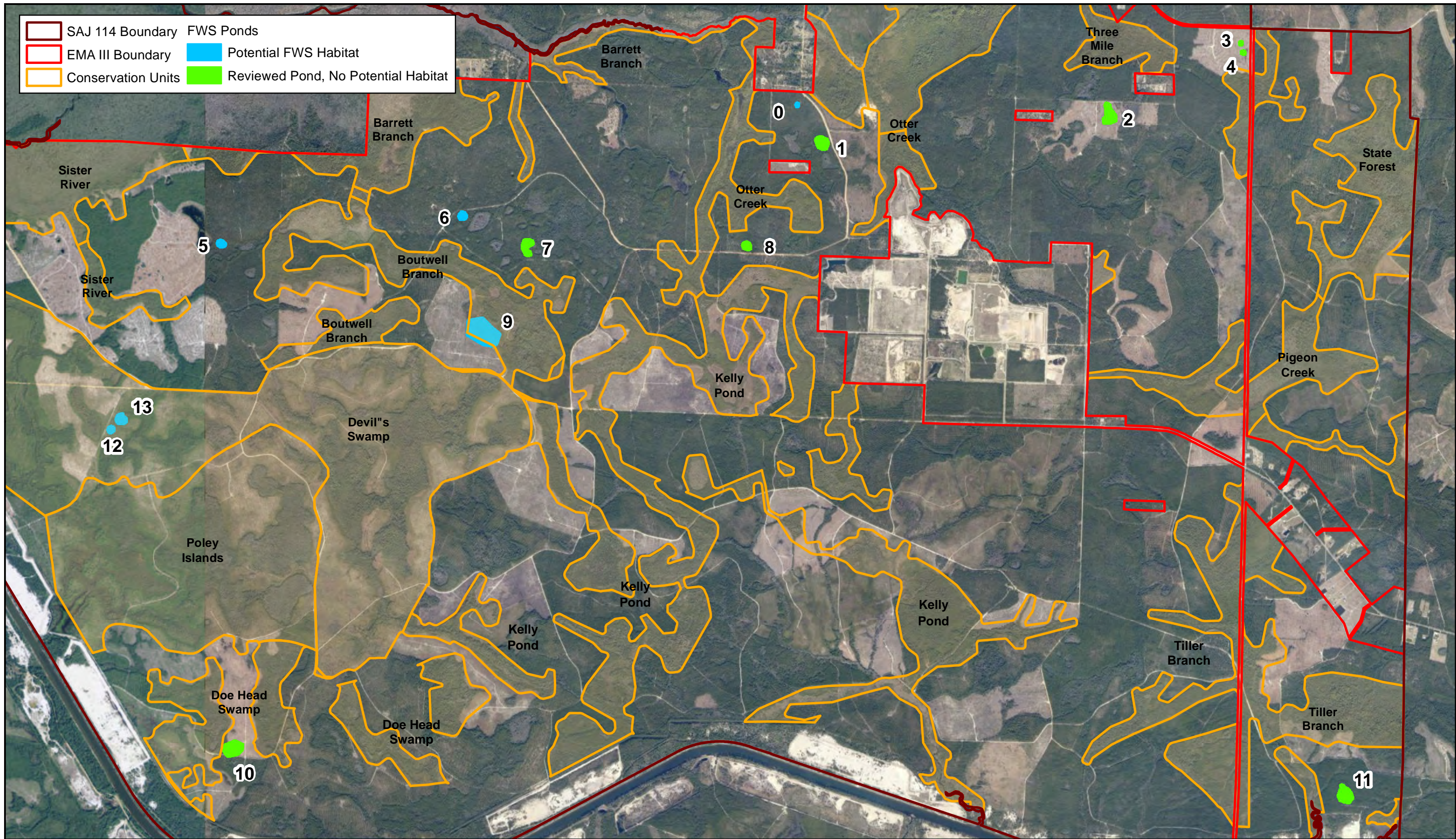




**Fig. 5 - Species Occurrence**

February 2, 2016 - Source: Florida Natural Areas Inventory (FNAI) FLEO, Florida Fish & Wildlife Conservation Commission (Eagle Nest)



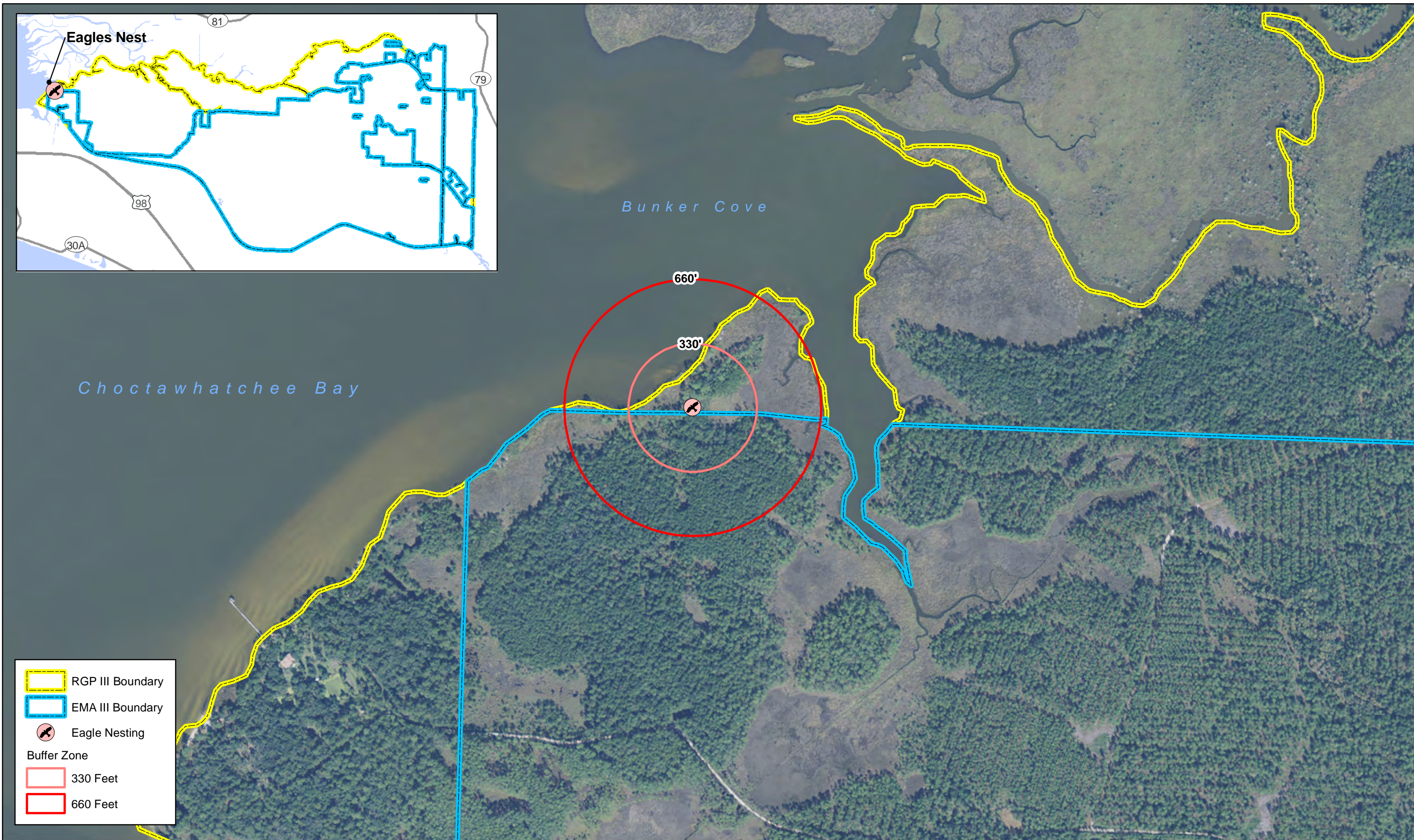


**Fig. 6: SAJ 114 / EMA III  
Potential FWS Ponds - Review Complete**



0 0.5 1 2 Miles





**Fig. 7 - Eagles Nest Buffer Zone**

February 2, 2016 - Source: Florida Fish & Wildlife Conservation Commission (Eagle Nest)

## **EXHIBIT 26**

### **Preliminary Jurisdictional Determination Form**

## ATTACHMENT

### PRELIMINARY JURISDICTIONAL DETERMINATION FORM

#### BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:  
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: County/parish/borough: City:

Center coordinates of site (lat/long in degree decimal format): Lat. °

Pick List, Long. ° **Pick List.**

Universal Transverse Mercator:

Name of nearest waterbody:

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Cowardin Class:

Stream Flow:

Wetlands: acres.

Cowardin Class:

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal:

Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply**

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☐ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .

☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .

☐ U.S. Geological Survey Hydrologic Atlas: .

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☐ U.S. Geological Survey map(s). Cite scale & quad name: .

☐ USDA Natural Resources Conservation Service Soil Survey. Citation:

.

☐ National wetlands inventory map(s). Cite name: .

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

☐ Photographs: ☐ Aerial (Name & Date): .

or ☐ Other (Name & Date): .

☐ Previous determination(s). File no. and date of response letter: .

☐ Other information (please specify): .

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

\_\_\_\_\_  
Signature and date of  
Regulatory Project Manager  
(REQUIRED)

\_\_\_\_\_  
Signature and date of  
person requesting preliminary JD  
(REQUIRED, unless obtaining  
the signature is impracticable)

SAMPLE

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
1					
2					
3					
4					

# **NATIONAL BALD EAGLE MANAGEMENT GUIDELINES**

**U.S. Fish and Wildlife Service**

**May 2007**

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## INTRODUCTION

The bald eagle (*Haliaeetus leucocephalus*) is protected by the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act (MBTA). The MBTA and the Eagle Act protect bald eagles from a variety of harmful actions and impacts. The U.S. Fish and Wildlife Service (Service) developed these National Bald Eagle Management Guidelines to advise landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the Eagle Act may apply to their activities. A variety of human activities can potentially interfere with bald eagles, affecting their ability to forage, nest, roost, breed, or raise young. The Guidelines are intended to help people minimize such impacts to bald eagles, particularly where they may constitute “disturbance,” which is prohibited by the Eagle Act.

The Guidelines are intended to:

- (1) Publicize the provisions of the Eagle Act that continue to protect bald eagles, in order to reduce the possibility that people will violate the law,
- (2) Advise landowners, land managers and the general public of the potential for various human activities to disturb bald eagles, and
- (3) Encourage additional nonbinding land management practices that benefit bald eagles (see Additional Recommendations section).

While the Guidelines include general recommendations for land management practices that will benefit bald eagles, the document is intended primarily as a tool for landowners and planners who seek information and recommendations regarding how to avoid disturbing bald eagles. Many States and some tribal entities have developed state-specific management plans, regulations, and/or guidance for landowners and land managers to protect and enhance bald eagle habitat, and we encourage the continued development and use of these planning tools to benefit bald eagles.

Adherence to the Guidelines herein will benefit individuals, agencies, organizations, and companies by helping them avoid violations of the law. However, the Guidelines themselves are not law. Rather, they are recommendations based on several decades of behavioral observations, science, and conservation measures to avoid or minimize adverse impacts to bald eagles.

The U.S. Fish and Wildlife Service strongly encourages adherence to these guidelines to ensure that bald and golden eagle populations will continue to be sustained. The Service realizes there may be impacts to some birds even if all reasonable measures are taken to avoid such impacts. Although it is not possible to absolve individuals and entities from liability under the Eagle Act or the MBTA, the Service exercises enforcement discretion to focus on those individuals, companies, or agencies that take migratory birds without regard for the consequences of their actions and the law, especially when conservation measures, such as these Guidelines, are available, but have not been implemented. The Service will prioritize its enforcement efforts to focus on those individuals or entities who take bald eagles or their parts, eggs, or nests without implementing appropriate measures recommended by the Guidelines.

The Service intends to pursue the development of regulations that would authorize, under limited circumstances, the use of permits if “take” of an eagle is anticipated but unavoidable. Additionally, if the bald eagle is delisted, the Service intends to provide a regulatory mechanism to honor existing (take) authorizations under the Endangered Species Act (ESA).

During the interim period until the Service completes a rulemaking for permits under the Eagle Act, the Service does not intend to refer for prosecution the incidental “take” of any bald eagle under the MBTA or Eagle Act, if such take is in full compliance with the terms and conditions of an incidental take statement issued to the action agency or applicant under the authority of section 7(b)(4) of the ESA or a permit issued under the authority of section 10(a)(1)(B) of the ESA.

The Guidelines are applicable throughout the United States, including Alaska. The primary purpose of these Guidelines is to provide information that will minimize or prevent violations only of *Federal* laws governing bald eagles. In addition to Federal laws, many states and some smaller jurisdictions and tribes have additional laws and regulations protecting bald eagles. In some cases those laws and regulations may be more protective (restrictive) than these Federal guidelines. If you are planning activities that may affect bald eagles, we therefore recommend that you contact both your nearest U.S. Fish and Wildlife Service Field Office (see the contact information on p.16) and your state wildlife agency for assistance.

## LEGAL PROTECTIONS FOR THE BALD EAGLE

### **The Bald and Golden Eagle Protection Act**

The Eagle Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from “taking” bald eagles, including their parts, nests, or eggs. The Act provides criminal and civil penalties for persons who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” The Act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” “Disturb” means:

"Disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle=s return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

A violation of the Act can result in a criminal fine of \$100,000 (\$200,000 for organizations), imprisonment for one year, or both, for a first offense. Penalties increase substantially for additional offenses, and a second violation of this Act is a felony.

### **The Migratory Bird Treaty Act**

The MBTA (16 U.S.C. 703-712), prohibits the taking of any migratory bird or any part, nest, or egg, except as permitted by regulation. The MBTA was enacted in 1918; a 1972 agreement supplementing one of the bilateral treaties underlying the MBTA had the effect of expanding the scope of the Act to cover bald eagles and other raptors. Implementing regulations define “take” under the MBTA as “pursue, hunt, shoot, wound, kill, trap, capture, possess, or collect.”

Copies of the Eagle Act and the MBTA are available at: <http://permits.fws.gov/ltr/ltr.shtml>.

### **State laws and regulations**

Most states have their own regulations and/or guidelines for bald eagle management. Some states may continue to list the bald eagle as endangered, threatened, or of special concern. If you plan activities that may affect bald eagles, we urge you to familiarize yourself with the regulations and/or guidelines that apply to bald eagles in your state. Your adherence to the Guidelines herein does not ensure that you are in compliance with state laws and regulations because state regulations can be more specific and/or restrictive than these Guidelines.

## **NATURAL HISTORY OF THE BALD EAGLE**

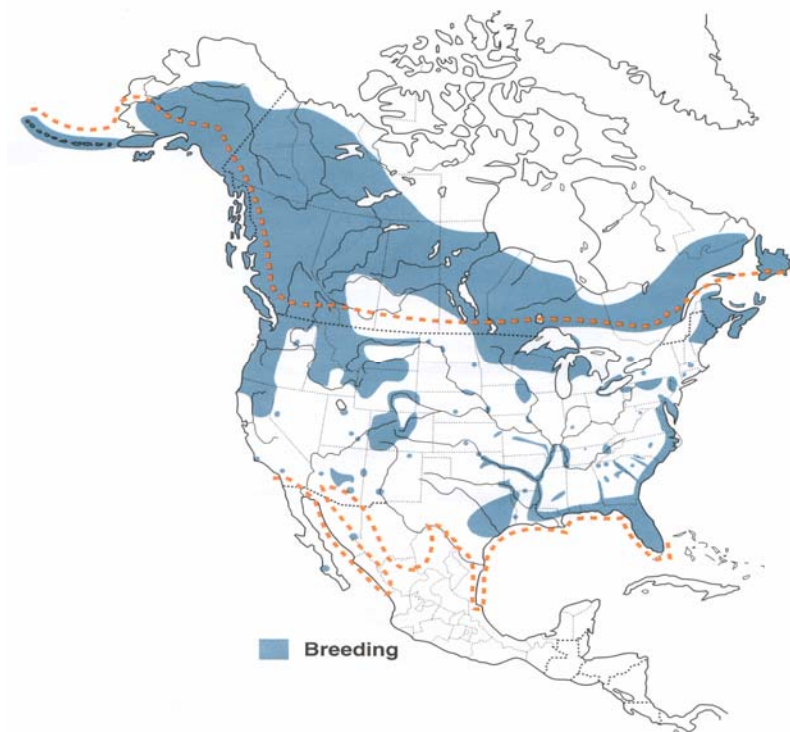
Bald eagles are a North American species that historically occurred throughout the contiguous United States and Alaska. After severely declining in the lower 48 States between the 1870s and the 1970s, bald eagles have rebounded and re-established breeding territories in each of the lower 48 states. The largest North American breeding populations are in Alaska and Canada, but there are also significant bald eagle populations in Florida, the Pacific Northwest, the Greater Yellowstone area, the Great Lakes states, and the Chesapeake Bay region. Bald eagle distribution varies seasonally. Bald eagles that nest in southern latitudes frequently move northward in late spring and early summer, often summering as far north as Canada. Most eagles that breed at northern latitudes migrate southward during winter, or to coastal areas where waters remain unfrozen. Migrants frequently concentrate in large numbers at sites where food is abundant and they often roost together communally. In some cases, concentration areas are used year-round: in summer by southern eagles and in winter by northern eagles.

Juvenile bald eagles have mottled brown and white plumage, gradually acquiring their dark brown body and distinctive white head and tail as they mature. Bald eagles generally attain adult plumage by 5 years of age. Most are capable of breeding at 4 or 5 years of age, but in healthy populations they may not start breeding until much older. Bald eagles may live 15 to 25 years in the wild. Adults weigh 8 to 14 pounds (occasionally reaching 16 pounds in Alaska) and have wingspans of 5 to 8 feet. Those in the northern range are larger than those in the south, and females are larger than males.

**Where do bald eagles nest?**

Breeding bald eagles occupy “territories,” areas they will typically defend against intrusion by other eagles. In addition to the active nest, a territory may include one or more alternate nests (nests built or maintained by the eagles but not used for nesting in a given year). The Eagle Act prohibits removal or destruction of both active and alternate bald eagle nests. Bald eagles exhibit high nest site fidelity and nesting territories are often used year after year. Some territories are known to have been used continually for over half a century.

Bald eagles generally nest near coastlines, rivers, large lakes or streams that support an adequate food supply. They often nest in mature or old-growth trees; snags (dead trees); cliffs; rock promontories; rarely on the ground; and with increasing frequency on human-made structures such as power poles and communication towers. In forested areas, bald eagles often select the tallest trees with limbs strong enough to support a nest that can weigh more than 1,000 pounds. Nest sites typically include at least one perch with a clear view of the water where the eagles usually forage. Shoreline trees or snags located in reservoirs provide the visibility and accessibility needed to locate aquatic prey. Eagle nests are constructed with large sticks, and may be lined with moss, grass, plant stalks, lichens, seaweed, or sod. Nests are usually about 4-6 feet in diameter and 3 feet deep, although larger nests exist.



Copyright *Birds of North America*, 2000

The range of breeding bald eagles in 2000 (shaded areas). This map shows only the larger concentrations of nests; eagles have continued to expand into additional nesting territories in many states. The dotted line represents the bald eagle's wintering range.

**When do bald eagles nest?**

Nesting activity begins several months before egg-laying. Egg-laying dates vary throughout the U.S., ranging from October in Florida, to late April or even early May in the northern United States. Incubation typically lasts 33-35 days, but can be as long as 40 days. Eaglets make their first unsteady flights about 10 to 12 weeks after hatching, and fledge (leave their nests) within a few days after that first flight. However, young birds usually remain in the vicinity of the nest for several weeks after fledging because they are almost completely dependent on their parents for food until they disperse from the nesting territory approximately 6 weeks later.

The bald eagle breeding season tends to be longer in the southern U.S., and re-nesting following an unsuccessful first nesting attempt is more common there as well. The following table shows the timing of bald eagle breeding seasons in different regions of the country. The table represents the range of time within which the majority of nesting activities occur in each region and does not apply to any specific nesting pair. Because the timing of nesting activities may vary within a given region, you should contact the nearest U.S. Fish and Wildlife Service Field Office (see page 16) and/or your state wildlife conservation agency for more specific information on nesting chronology in your area.

## Chronology of typical reproductive activities of bald eagles in the United States.

Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.
SOUTHEASTERN U.S. (FL, GA, SC, NC, AL, MS, LA, TN, KY, AR, eastern 2 of TX)											
Nest Building											
		Egg Laying/Incubation									
			Hatching/Rearing Young								
					Fledging Young						
CHESAPEAKE BAY REGION (NC, VA, MD, DE, southern 2 of NJ, eastern 2 of PA, panhandle of WV)											
		Nest Building									
				Egg Laying/Incubation							
					Hatching/Rearing Young						
								Fledging Young			
NORTHERN U.S. (ME, NH, MA, RI, CT, NY, northern 2 of NJ, western 2 of PA, OH, WV exc. panhandle, IN, IL, MI, WI, MN, IA, MO, ND, SD, NB, KS, CO, UT)											
			Nest Building								
					Egg Laying/Incubation						
						Hatching/Rearing Young					
									Fledging Young		
PACIFIC REGION (WA, OR, CA, ID, MT, WY, NV)											
				Nest Building							
					Egg Laying/Incubation						
						Hatching/Rearing Young					
									Fledging Young		
SOUTHWESTERN U.S. (AZ, NM, OK panhandle, western 2 of TX)											
		Nest Building									
				Egg Laying/Incubation							
					Hatching/Rearing Young						
								Fledging Young			
ALASKA											
					Nest Building						
							Egg Laying/Incubation				
								Hatching/Rearing Young			
Ing Young											Fledg-
Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.

**How many chicks do bald eagles raise?**

The number of eagle eggs laid will vary from 1-3, with 1-2 eggs being the most common. Only one eagle egg is laid per day, although not always on successive days. Hatching of young occurs on different days with the result that chicks in the same nest are sometimes of unequal size. The overall national fledging rate is approximately one chick per nest, annually, which results in a healthy expanding population.

**What do bald eagles eat?**

Bald eagles are opportunistic feeders. Fish comprise much of their diet, but they also eat waterfowl, shorebirds/colonial waterbirds, small mammals, turtles, and carrion. Because they are visual hunters, eagles typically locate their prey from a conspicuous perch, or soaring flight, then swoop down and strike. Wintering bald eagles often congregate in large numbers along streams to feed on spawning salmon or other fish species, and often gather in large numbers in areas below reservoirs, especially hydropower dams, where fish are abundant. Wintering eagles also take birds from rafts of ducks at reservoirs and rivers, and congregate on melting ice shelves to scavenge dead fish from the current or the soft melting ice. Bald eagles will also feed on carcasses along roads, in landfills, and at feedlots.

During the breeding season, adults carry prey to the nest to feed the young. Adults feed their chicks by tearing off pieces of food and holding them to the beaks of the eaglets. After fledging, immature eagles are slow to develop hunting skills, and must learn to locate reliable food sources and master feeding techniques. Young eagles will congregate together, often feeding upon easily acquired food such as carrion and fish found in abundance at the mouths of streams and shallow bays and at landfills.

**The impact of human activity on nesting bald eagles**

During the breeding season, bald eagles are sensitive to a variety of human activities. However, not all bald eagle pairs react to human activities in the same way. Some pairs nest successfully just dozens of yards from human activity, while others abandon nest sites in response to activities much farther away. This variability may be related to a number of factors, including visibility, duration, noise levels, extent of the area affected by the activity, prior experiences with humans, and tolerance of the individual nesting pair. The relative sensitivity of bald eagles during various stages of the breeding season is outlined in the following table.

**Nesting Bald Eagle Sensitivity to Human Activities**

<b>Phase</b>	<b>Activity</b>	<b>Sensitivity to Human Activity</b>	<b>Comments</b>
<b>I</b>	Courtship and Nest Building	Most sensitive period; likely to respond negatively	Most critical time period. Disturbance is manifested in nest abandonment. Bald eagles in newly established territories are more prone to abandon nest sites.
<b>II</b>	Egg laying	Very sensitive period	Human activity of even limited duration may cause nest desertion and abandonment of territory for the breeding season.
<b>III</b>	Incubation and early nestling period (up to 4 weeks)	Very sensitive period	Adults are less likely to abandon the nest near and after hatching. However, flushed adults leave eggs and young unattended; eggs are susceptible to cooling, loss of moisture, overheating, and predation; young are vulnerable to elements.
<b>IV</b>	Nestling period, 4 to 8 weeks	Moderately sensitive period	Likelihood of nest abandonment and vulnerability of the nestlings to elements somewhat decreases. However, nestlings may miss feedings, affecting their survival.
<b>V</b>	Nestlings 8 weeks through fledging	Very sensitive period	Gaining flight capability, nestlings 8 weeks and older may flush from the nest prematurely due to disruption and die.

If agitated by human activities, eagles may inadequately construct or repair their nest, may expend energy defending the nest rather than tending to their young, or may abandon the nest altogether. Activities that cause prolonged absences of adults from their nests can jeopardize eggs or young. Depending on weather conditions, eggs may overheat or cool too much and fail to hatch. Unattended eggs and nestlings are subject to predation. Young nestlings are particularly vulnerable because they rely on their parents to provide warmth or shade, without which they may die as a result of hypothermia or heat stress. If food delivery schedules are interrupted, the young may not develop healthy plumage, which can affect their survival. In addition, adults startled while incubating or brooding young may damage eggs or injure their young as they abruptly leave the nest. Older nestlings no longer require constant attention from the adults, but they may be startled by loud or intrusive human activities and prematurely jump from the nest before they are able to fly or care for themselves. Once fledged, juveniles range up to ¼ mile from the nest site, often to a site with minimal human activity. During this period, until about six weeks after departure from the nest, the juveniles still depend on the adults to feed them.

**The impact of human activity on foraging and roosting bald eagles**

Disruption, destruction, or obstruction of roosting and foraging areas can also negatively affect bald eagles. Disruptive activities in or near eagle foraging areas can interfere with feeding, reducing chances of survival. Interference with feeding can also result in reduced productivity (number of young successfully fledged). Migrating and wintering bald eagles often congregate at specific sites for purposes of feeding and sheltering. Bald eagles rely on established roost sites because of their proximity to sufficient food sources. Roost sites are usually in mature trees where the eagles are somewhat sheltered from the wind and weather. Human activities near or within communal roost sites may prevent eagles

from feeding or taking shelter, especially if there are not other undisturbed and productive feeding and roosting sites available. Activities that permanently alter communal roost sites and important foraging areas can altogether eliminate the elements that are essential for feeding and sheltering eagles.

Where a human activity agitates or bothers roosting or foraging bald eagles to the degree that causes injury or substantially interferes with breeding, feeding, or sheltering behavior and causes, or is likely to cause, a loss of productivity or nest abandonment, the conduct of the activity constitutes a violation of the Eagle Act's prohibition against disturbing eagles. The circumstances that might result in such an outcome are difficult to predict without detailed site-specific information. If your activities may disturb roosting or foraging bald eagles, you should contact your local Fish and Wildlife Service Field Office (see page 16) for advice and recommendations for how to avoid such disturbance.

### **RECOMMENDATIONS FOR AVOIDING DISTURBANCE AT NEST SITES**

In developing these Guidelines, we relied on existing state and regional bald eagle guidelines, scientific literature on bald eagle disturbance, and recommendations of state and Federal biologists who monitor the impacts of human activity on eagles. Despite these resources, uncertainties remain regarding the effects of many activities on eagles and how eagles in different situations may or may not respond to certain human activities. The Service recognizes this uncertainty and views the collection of better biological data on the response of eagles to disturbance as a high priority. To the extent that resources allow, the Service will continue to collect data on responses of bald eagles to human activities conducted according to the recommendations within these Guidelines to ensure that adequate protection from disturbance is being afforded, and to identify circumstances where the Guidelines might be modified. These data will be used to make future adjustments to the Guidelines.

To avoid disturbing nesting bald eagles, we recommend (1) keeping a distance between the activity and the nest (distance buffers), (2) maintaining preferably forested (or natural) areas between the activity and around nest trees (landscape buffers), and (3) avoiding certain activities during the breeding season. The buffer areas serve to minimize visual and auditory impacts associated with human activities near nest sites. Ideally, buffers would be large enough to protect existing nest trees and provide for alternative or replacement nest trees.

The size and shape of effective buffers vary depending on the topography and other ecological characteristics surrounding the nest site. In open areas where there are little or no forested or topographical buffers, such as in many western states, distance alone must serve as the buffer. Consequently, in open areas, the distance between the activity and the nest may need to be larger than the distances recommended under Categories A and B of these guidelines (pg. 12) if no landscape buffers are present. The height of the nest above the ground may also ameliorate effects of human activities; eagles at higher nests may be less prone to disturbance.

In addition to the physical features of the landscape and nest site, the appropriate size for the distance buffer may vary according to the historical tolerances of eagles to human activities in particular localities, and may also depend on the location of the nest in relation

to feeding and roosting areas used by the eagles. Increased competition for nest sites may lead bald eagles to nest closer to human activity (and other eagles).

Seasonal restrictions can prevent the potential impacts of many shorter-term, obtrusive activities that do not entail landscape alterations (e.g. fireworks, outdoor concerts). In proximity to the nest, these kinds of activities should be conducted only outside the breeding season. For activities that entail both short-term, obtrusive characteristics and more permanent impacts (e.g., building construction), we recommend a combination of both approaches: retaining a landscape buffer *and* observing seasonal restrictions.

For assistance in determining the appropriate size and configuration of buffers or the timing of activities in the vicinity of a bald eagle nest, we encourage you to contact the nearest U.S. Fish and Wildlife Service Field Office (see page 16).

### **Existing Uses**

Eagles are unlikely to be disturbed by routine use of roads, homes, and other facilities where such use pre-dates the eagles' successful nesting activity in a given area. Therefore, in most cases *ongoing* existing uses may proceed with the same intensity with little risk of disturbing bald eagles. However, some *intermittent, occasional, or irregular* uses that pre-date eagle nesting in an area may disturb bald eagles. For example: a pair of eagles may begin nesting in an area and subsequently be disturbed by activities associated with an annual outdoor flea market, even though the flea market has been held annually at the same location. In such situations, human activity should be adjusted or relocated to minimize potential impacts on the nesting pair.

## **ACTIVITY-SPECIFIC GUIDELINES**

The following section provides the Service's management recommendations for avoiding bald eagle disturbance as a result of new or intermittent activities proposed in the vicinity of bald eagle nests. Activities are separated into 8 categories (A – H) based on the nature and magnitude of impacts to bald eagles that usually result from the type of activity. Activities with similar or comparable impacts are grouped together.

In most cases, impacts will vary based on the visibility of the activity from the eagle nest and the degree to which similar activities are already occurring in proximity to the nest site. Visibility is a factor because, in general, eagles are more prone to disturbance when an activity occurs in full view. For this reason, we recommend that people locate activities farther from the nest structure in areas with open vistas, in contrast to areas where the view is shielded by rolling topography, trees, or other screening factors. The recommendations also take into account the existence of similar activities in the area because the continued presence of nesting bald eagles in the vicinity of the existing activities indicates that the eagles in that area can tolerate a greater degree of human activity than we can generally expect from eagles in areas that experience fewer human impacts. To illustrate how these factors affect the likelihood of disturbing eagles, we have incorporated the recommendations for some activities into a table (categories A and B).

First, determine which category your activity falls into (between categories A – H). If the activity you plan to undertake is not specifically addressed in these guidelines, follow the recommendations for the most similar activity represented.

If your activity is under A or B, our recommendations are in table form. The vertical axis shows the degree of visibility of the activity from the nest. The horizontal axis (header row) represents the degree to which similar activities are ongoing in the vicinity of the nest. Locate the row that best describes how visible your activity will be from the eagle nest. Then, choose the column that best describes the degree to which similar activities are ongoing in the vicinity of the eagle nest. The box where the column and row come together contains our management recommendations for how far you should locate your activity from the nest to avoid disturbing the eagles. The numerical distances shown in the tables are the closest the activity should be conducted relative to the nest. In some cases we have included additional recommendations (other than recommended *distance* from the nest) you should follow to help ensure that your activity will not disturb the eagles.

### **Alternate nests**

For activities that entail permanent landscape alterations that may result in bald eagle disturbance, these recommendations apply to both active and alternate bald eagle nests. Disturbance becomes an issue with regard to alternate nests if eagles return for breeding purposes and react to land use changes that occurred while the nest was inactive. The likelihood that an alternate nest will again become active decreases the longer it goes unused. If you plan activities in the vicinity of an alternate bald eagle nest and have information to show that the nest has not been active during the preceding 5 breeding seasons, the recommendations provided in these guidelines for avoiding disturbance around the nest site may no longer be warranted. The nest itself remains protected by other provisions of the Eagle Act, however, and may not be destroyed.

If special circumstances exist that make it unlikely an inactive nest will be reused before 5 years of disuse have passed, and you believe that the probability of reuse is low enough to warrant disregarding the recommendations for avoiding disturbance, you should be prepared to provide all the reasons for your conclusion, including information regarding past use of the nest site. Without sufficient documentation, you should continue to follow these guidelines when conducting activities around the nest site. If we are able to determine that it is unlikely the nest will be reused, we may advise you that the recommendations provided in these guidelines for avoiding disturbance are no longer necessary around that nest site.

This guidance is intended to minimize disturbance, as defined by Federal regulation. In addition to Federal laws, most states and some tribes and smaller jurisdictions have additional laws and regulations protecting bald eagles. In some cases those laws and regulations may be more protective (restrictive) than these Federal guidelines.

### **Temporary Impacts**

For activities that have temporary impacts, such as the use of loud machinery, fireworks displays, or summer boating activities, we recommend seasonal restrictions. These types of activities can generally be carried out outside of the breeding season without causing disturbance. The recommended restrictions for these types of activities can be lifted for alternate nests within a particular territory, including nests that were attended during the current breeding season but not used to raise young, after eggs laid in another nest within the territory have hatched (depending on the distance between the alternate nest and the active nest).

In general, activities should be kept as far away from nest trees as possible; loud and disruptive activities should be conducted when eagles are not nesting; and activity between the nest and the nearest foraging area should be minimized. If the activity you plan to undertake is not specifically addressed in these guidelines, follow the recommendations for the most similar activity addressed, or contact your local U.S. Fish and Wildlife Service Field Office for additional guidance.

If you believe that special circumstances apply to your situation that increase or diminish the likelihood of bald eagle disturbance, or if it is not possible to adhere to the guidelines, you should contact your local Service Field Office for further guidance.

#### **Category A:**

Building construction, 1 or 2 story, with project footprint of ½ acre or less.  
Construction of roads, trails, canals, power lines, and other linear utilities.  
Agriculture and aquaculture – new or expanded operations.  
Alteration of shorelines or wetlands.  
Installation of docks or moorings.  
Water impoundment.

#### **Category B:**

Building construction, 3 or more stories.  
Building construction, 1 or 2 story, with project footprint of more than ½ acre.  
Installation or expansion of marinas with a capacity of 6 or more boats.  
Mining and associated activities.  
Oil and natural gas drilling and refining and associated activities.

	<i><b>If there is no similar activity within 1 mile of the nest</b></i>	<i><b>If there is similar activity closer than 1 mile from the nest</b></i>
<i><b>If the activity will be visible from the nest</b></i>	660 feet. Landscape buffers are recommended.	660 feet, or as close as existing tolerated activity of similar scope. Landscape buffers are recommended.
<i><b>If the activity will not be visible from the nest</b></i>	Category A: 330 feet. Clearing, external construction, and landscaping between 330 feet and 660 feet should be done outside breeding season.  Category B: 660 feet.	330 feet, or as close as existing tolerated activity of similar scope. Clearing, external construction and landscaping within 660 feet should be done outside breeding season.

The numerical distances shown in the table are the closest the activity should be conducted relative to the nest.

**Category C. Timber Operations and Forestry Practices**

- Avoid clear cutting or removal of overstory trees within 330 feet of the nest at any time.
- Avoid timber harvesting operations, including road construction and chain saw and yarding operations, during the breeding season within 660 feet of the nest. The distance may be decreased to 330 feet around alternate nests within a particular territory, including nests that were attended during the current breeding season but not used to raise young, after eggs laid in another nest within the territory have hatched.
- Selective thinning and other silviculture management practices designed to conserve or enhance habitat, including prescribed burning close to the nest tree, should be undertaken outside the breeding season. Precautions such as raking leaves and woody debris from around the nest tree should be taken to prevent crown fire or fire climbing the nest tree. If it is determined that a burn during the breeding season would be beneficial, then, to ensure that no take or disturbance will occur, these activities should be conducted only when neither adult eagles nor young are present at the nest tree (i.e., at the beginning of, or end of, the breeding season, either before the particular nest is active or after the young have fledged from that nest). Appropriate Federal and state biologists should be consulted before any prescribed burning is conducted during the breeding season.
- Avoid construction of log transfer facilities and in-water log storage areas within 330 feet of the nest.

**Category D. Off-road vehicle use** (including snowmobiles). No buffer is necessary around nest sites outside the breeding season. During the breeding season, do not operate off-road vehicles within 330 feet of the nest. In open areas, where there is increased visibility and exposure to noise, this distance should be extended to 660 feet.

**Category E. Motorized Watercraft use** (including jet skis/personal watercraft). No buffer is necessary around nest sites outside the breeding season. During the breeding season, within 330 feet of the nest, (1) do not operate jet skis (personal watercraft), and (2) avoid concentrations of noisy vessels (e.g., commercial fishing boats and tour boats), except where eagles have demonstrated tolerance for such activity. Other motorized boat traffic passing within 330 feet of the nest should attempt to minimize trips and avoid stopping in the area where feasible, particularly where eagles are unaccustomed to boat traffic. Buffers for airboats should be larger than 330 feet due to the increased noise they generate, combined with their speed, maneuverability, and visibility.

**Category F. Non-motorized recreation and human entry** (e.g., hiking, camping, fishing, hunting, birdwatching, kayaking, canoeing). No buffer is necessary around nest sites outside the breeding season. If the activity will be visible or highly audible from the nest, maintain a 330-foot buffer during the breeding season, particularly where eagles are unaccustomed to such activity.

**Category G. Helicopters and fixed-wing aircraft.**

Except for authorized biologists trained in survey techniques, avoid operating aircraft within 1,000 feet of the nest during the breeding season, except where eagles have demonstrated tolerance for such activity.

**Category H. Blasting and other loud, intermittent noises.**

Avoid blasting and other activities that produce extremely loud noises within 1/2 mile of active nests, unless greater tolerance to the activity (or similar activity) has been demonstrated by the eagles in the nesting area. This recommendation applies to the use of fireworks classified by the Federal Department of Transportation as Class B explosives, which includes the larger fireworks that are intended for licensed public display.

**RECOMMENDATIONS FOR AVOIDING DISTURBANCE AT FORAGING AREAS AND COMMUNAL ROOST SITES**

1. Minimize potentially disruptive activities and development in the eagles' direct flight path between their nest and roost sites and important foraging areas.
2. Locate long-term and permanent water-dependent facilities, such as boat ramps and marinas, away from important eagle foraging areas.
3. Avoid recreational and commercial boating and fishing near critical eagle foraging areas during peak feeding times (usually early to mid-morning and late afternoon), except where eagles have demonstrated tolerance to such activity.
4. Do not use explosives within ½ mile (or within 1 mile in open areas) of communal roosts when eagles are congregating, without prior coordination with the U.S. Fish and Wildlife Service and your state wildlife agency.
5. Locate aircraft corridors no closer than 1,000 feet vertical or horizontal distance from communal roost sites.

### **ADDITIONAL RECOMMENDATIONS TO BENEFIT BALD EAGLES**

The following are additional management practices that landowners and planners can exercise for added benefit to bald eagles.

1. Protect and preserve potential roost and nest sites by retaining mature trees and old growth stands, particularly within ½ mile from water.
2. Where nests are blown from trees during storms or are otherwise destroyed by the elements, continue to protect the site in the absence of the nest for up to three (3) complete breeding seasons. Many eagles will rebuild the nest and reoccupy the site.
3. To avoid collisions, site wind turbines, communication towers, and high voltage transmission power lines away from nests, foraging areas, and communal roost sites.
4. Employ industry-accepted best management practices to prevent birds from colliding with or being electrocuted by utility lines, towers, and poles. If possible, bury utility lines in important eagle areas.
5. Where bald eagles are likely to nest in human-made structures (e.g., cell phone towers) and such use could impede operation or maintenance of the structures or jeopardize the safety of the eagles, equip the structures with either (1) devices engineered to discourage bald eagles from building nests, or (2) nesting platforms that will safely accommodate bald eagle nests without interfering with structure performance.
6. Immediately cover carcasses of euthanized animals at landfills to protect eagles from being poisoned.
7. Do not intentionally feed bald eagles. Artificially feeding bald eagles can disrupt their essential behavioral patterns and put them at increased risk from power lines, collision with windows and cars, and other mortality factors.
8. Use pesticides, herbicides, fertilizers, and other chemicals only in accordance with Federal and state laws.
9. Monitor and minimize dispersal of contaminants associated with hazardous waste sites (legal or illegal), permitted releases, and runoff from agricultural areas, especially within watersheds where eagles have shown poor reproduction or where bioaccumulating contaminants have been documented. These factors present a risk of contamination to eagles and their food sources.

## CONTACTS

The following U.S. Fish and Wildlife Service Field Offices provide technical assistance on bald eagle management:

<u>Alabama</u>	Daphne	(251) 441-5181	<u>New Hampshire</u>	Concord	(603) 223-2541
<u>Alaska</u>	Anchorage	(907) 271-2888	<u>New Jersey</u>	Pleasantville	(609) 646-9310
	Fairbanks	(907) 456-0203	<u>New Mexico</u>	Albuquerque	(505) 346-2525
	Juneau	(907) 780-1160	<u>New York</u>	Cortland	(607) 753-9334
<u>Arizona</u>	Phoenix	(602) 242-0210		Long Island	(631) 776-1401
<u>Arkansas</u>	Conway	(501) 513-4470	<u>North Carolina</u>	Raleigh	(919) 856-4520
<u>California</u>	Arcata	(707) 822-7201		Asheville	(828) 258-3939
	Barstow	(760) 255-8852	<u>North Dakota</u>	Bismarck	(701) 250-4481
	Carlsbad	(760) 431-9440	<u>Ohio</u>	Reynoldsburg	(614) 469-6923
	Red Bluff	(530) 527-3043	<u>Oklahoma</u>	Tulsa	(918) 581-7458
	Sacramento	(916) 414-6000	<u>Oregon</u>	Bend	(541) 383-7146
	Stockton	(209) 946-6400		Klamath Falls	(541) 885-8481
	Ventura	(805) 644-1766		La Grande	(541) 962-8584
	Yreka	(530) 842-5763		Newport	(541) 867-4558
<u>Colorado</u>	Lakewood	(303) 275-2370		Portland	(503) 231-6179
	Grand Junction	(970) 243-2778		Roseburg	(541) 957-3474
<u>Connecticut</u>	(See New Hampshire)		<u>Pennsylvania</u>	State College	(814) 234-4090
<u>Delaware</u>	(See Maryland)		<u>Rhode Island</u>	(See New Hampshire)	
<u>Florida</u>	Panama City	(850) 769-0552	<u>South Carolina</u>	Charleston	(843) 727-4707
	Vero Beach	(772) 562-3909	<u>South Dakota</u>	Pierre	(605) 224-8693
	Jacksonville	(904) 232-2580	<u>Tennessee</u>	Cookeville	(931) 528-6481
<u>Georgia</u>	Athens	(706) 613-9493	<u>Texas</u>	Clear Lake	(281) 286-8282
	Brunswick	(912) 265-9336	<u>Utah</u>	West Valley City	(801) 975-3330
	Columbus	(706) 544-6428	<u>Vermont</u>	(See New Hampshire)	
<u>Idaho</u>	Boise	(208) 378-5243	<u>Virginia</u>	Gloucester	(804) 693-6694
	Chubbuck	(208) 237-6975	<u>Washington</u>	Lacey	(306) 753-9440
<u>Illinois/Iowa</u>	Rock Island	(309) 757-5800		Spokane	(509) 891-6839
<u>Indiana</u>	Bloomington	(812) 334-4261		Wenatchee	(509) 665-3508
<u>Kansas</u>	Manhattan	(785) 539-3474	<u>West Virginia</u>	Elkins	(304) 636-6586
<u>Kentucky</u>	Frankfort	(502) 695-0468	<u>Wisconsin</u>	New Franken	(920) 866-1725
<u>Louisiana</u>	Lafayette	(337) 291-3100	<u>Wyoming</u>	Cheyenne	(307) 772-2374
<u>Maine</u>	Old Town	(207) 827-5938		Cody	(307) 578-5939
<u>Maryland</u>	Annapolis	(410) 573-4573			
<u>Massachusetts</u>	(See New Hampshire)				
<u>Michigan</u>	East Lansing	(517) 351-2555			
<u>Minnesota</u>	Bloomington	(612) 725-3548			
<u>Mississippi</u>	Jackson	(601) 965-4900			
<u>Missouri</u>	Columbia	(573) 234-2132			
<u>Montana</u>	Helena	(405) 449-5225			
<u>Nebraska</u>	Grand Island	(308) 382-6468			
<u>Nevada</u>	Las Vegas	(702) 515-5230			
	Reno	(775) 861-6300			

<u>National Office</u> U.S. Fish and Wildlife Service Division of Migratory Bird Management 4401 North Fairfax Drive, MBSP-4107 Arlington, VA 22203-1610 (703) 358-1714 <a href="http://www.fws.gov/migratorybirds">http://www.fws.gov/migratorybirds</a>
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### State Agencies

To contact a state wildlife agency, visit the Association of Fish & Wildlife Agencies' website at [http://www.fishwildlife.org/where\\_us.html](http://www.fishwildlife.org/where_us.html)

## GLOSSARY

The definitions below apply to these National Bald Eagle Management Guidelines:

**Communal roost sites** – Areas where bald eagles gather and perch overnight – and sometimes during the day in the event of inclement weather. Communal roost sites are usually in large trees (live or dead) that are relatively sheltered from wind and are generally in close proximity to foraging areas. These roosts may also serve a social purpose for pair bond formation and communication among eagles. Many roost sites are used year after year.

**Disturb** – To agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

In addition to immediate impacts, this definition also covers impacts that result from human-caused alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

**Fledge** – To leave the nest and begin flying. For bald eagles, this normally occurs at 10-12 weeks of age.

**Fledgling** – A juvenile bald eagle that has taken the first flight from the nest but is not yet independent.

**Foraging area** – An area where eagles feed, typically near open water such as rivers, lakes, reservoirs, and bays where fish and waterfowl are abundant, or in areas with little or no water (i.e., rangelands, barren land, tundra, suburban areas, etc.) where other prey species (e.g., rabbit, rodents) or carrion (such as at landfills) are abundant.

**Landscape buffer** – A natural or human-made landscape feature that screens eagles from human activity (e.g., strip of trees, hill, cliff, berm, sound wall).

**Nest** – A structure built, maintained, or used by bald eagles for the purpose of reproduction. An **active** nest is a nest that is attended (built, maintained or used) by a pair of bald eagles during a given breeding season, whether or not eggs are laid. An **alternate** nest is a nest that is not used for breeding by eagles during a given breeding season.

**Nest abandonment** – Nest abandonment occurs when adult eagles desert or stop attending a nest and do not subsequently return and successfully raise young in that nest for the duration of a breeding season. Nest abandonment can be caused by altering habitat near a nest, even if the alteration occurs prior to the breeding season. Whether the eagles migrate during the non-breeding season, or remain in the area throughout the non-breeding season, nest abandonment can occur at any point between the time the eagles return to the nesting site for the breeding season and the time when all progeny from the breeding season have

dispersed.

**Project footprint** – The area of land (and water) that will be permanently altered for a development project, including access roads.

**Similar scope** – In the vicinity of a bald eagle nest, an existing activity is of similar scope to a new activity where the types of impacts to bald eagles are similar in nature, and the impacts of the existing activity are of the same or greater magnitude than the impacts of the potential new activity. Examples: (1) An existing single-story home 200 feet from a nest is similar in scope to an additional single-story home 200 feet from the nest; (2) An existing multi-story, multi-family dwelling 150 feet from a nest has impacts of a greater magnitude than a potential new single-family home 200 feet from the nest; (3) One existing single-family home 200 feet from the nest has impacts of a lesser magnitude than three single-family homes 200 feet from the nest; (4) an existing single-family home 200 feet from a communal roost has impacts of a lesser magnitude than a single-family home 300 feet from the roost but 40 feet from the eagles' foraging area. The existing activities in examples (1) and (2) are of similar scope, while the existing activities in example (3) and (4) are not.

**Vegetative buffer** – An area surrounding a bald eagle nest that is wholly or largely covered by forest, vegetation, or other natural ecological characteristics, and separates the nest from human activities.

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# BALD EAGLE MANAGEMENT PLAN

*Haliaeetus leucocephalus*

Adopted:  
April 9, 2008



FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
620 South Meridian Street  
Tallahassee, Florida 32399-1600

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## EXECUTIVE SUMMARY

The dramatic recovery of the bald eagle (*Haliaeetus leucocephalus*) in the past 35 years represents one of the great conservation success stories in our nation's history. This management plan provides the framework for the conservation and management of the bald eagle in Florida to ensure its continued recovery. This plan meets the requirements of the Florida Fish and Wildlife Conservation Commission's (FWC) listing process (Rule 68A-27.0012, *Florida Administrative Code* [F.A.C.]). The listing process was initiated in July 2002, when the FWC was petitioned to reevaluate the status of the bald eagle, which was considered a threatened species in Florida (Rule 68A-27.004, F.A.C.). Action on the petition was delayed due to a listing moratorium, which was lifted in April 2005.

Following the guidance of FWC's listing process, a five-member biological review panel was approved in June 2005. The panel assessed the eagle's population and distribution data against species-imperilment criteria (Rule 68A-1.004, F.A.C.), and determined that the bald eagle no longer met the criteria for state listing at any level. As a result, the panel unanimously recommended that the bald eagle be removed from Florida's list of imperiled species. The panel also acknowledged the importance of protecting nest sites, and suggested that continued protection of nesting habitats was necessary to sustain recovery of the species (Sullivan *et al.* 2006). The decision to delist the bald eagle in Florida is based on the following biological data: (1) bald eagles occur throughout the state; (2) the population does not experience extreme fluctuations in distribution or numbers; (3) the estimated number of adults has increased more than 300% during the past three eagle generations (defined in this document as a total of 24 years); and (4) the population is not expected to experience significant declines over the next 24 years.

The continental bald eagle population began to decline in the 18th century as a result of habitat loss and direct persecution. The decline intensified during the mid-20th century with widespread use of organochlorine pesticides such as DDT compounding the losses from habitat destruction and shooting. DDT was used widely in the U.S. until it was banned in 1972, in part because it caused eggshell thinning in raptors, resulting in widespread reproductive failure.

Bald eagles reclaimed their entire historic range by the late 1990s, and their estimated population in the Lower 48 states increased from an estimated 417 pairs in 1963 to 9,789 pairs by 2007. Bald eagles have met or exceeded the population goals established in each of the five regional recovery plans, and in August 2007, the U.S. Fish and Wildlife Service (USFWS) removed the species from the list of species protected by the Endangered Species Act. The USFWS recovery plan for the southeastern United States established 400 bald eagle nesting territories as the number necessary to down-list the Florida population from endangered to threatened, and 1,000 nesting territories in the state as one criterion for delisting the eagle nationally. By early 2007, there were 1,218 active bald eagle nesting territories in Florida (FWC unpublished data).

The goal of this management plan is to maintain a stable or increasing population of bald eagles throughout Florida in perpetuity. To achieve this goal, bald eagles and their nests must continue to be protected through science-based management, regulation, public education, and law enforcement. Continued conservation efforts are required to prevent a population decline of 10% or more that might trigger a re-evaluation for relisting the bald eagle. To maintain the

conservation goal, this management plan establishes four conservation objectives that will be calculated annually as five-year running averages. All of these objectives have already been met, and maintaining these objectives will assure that the goal of this management plan is met: (1) a minimum of 1,020 nesting territories per year over the next 24 years; (2) an average of 68% of nesting territories producing  $\geq 1$  nestling per year; (3) an average reproductive success of  $\geq 1.5$  fledglings per active nest; and (4) maintain the current area of occupancy ( $>770$  mi<sup>2</sup>) and extent of occurrence (52,979 mi<sup>2</sup>) of eagles statewide.

In addition to being our national symbol, reasons for continued conservation, management, and monitoring of Florida's bald eagles include the following: (1) Florida supports 11% of the nesting population in the Lower 48 states, more than any state other than Alaska and Minnesota; (2) 67% of all eagle nests in the state are located on private lands; (3) disturbance can negatively affect the reproductive success of nesting eagles; (4) growth of Florida's human population assures continued encroachment into eagle nesting and foraging habitats; and (5) the public insists on continued conservation of this magnificent species. The FWC's biological review panel determined that Florida's eagle population would not experience significant declines over the next three generations, but acknowledged that protection of nest sites should continue. This plan proposes continued regulation of nesting habitats during the first five years following delisting. The FWC will monitor Florida's eagle population and will study the effects of human activities near eagle nests. After five years, results of this research will be evaluated and regulations will be adjusted as appropriate.

To ensure that the conservation goal and objectives continue to be met, this management plan recommends a suite of conservation actions. These actions are best accomplished by applying an adaptive management approach that allows adjustment to policies, guidelines, and techniques based on science and observed responses to implemented conservation measures. The conservation actions are organized into the following sections or sub-sections: Habitat Management, Land Acquisition, Private Lands Incentives, Law Enforcement, Proposed Regulations, Permitting Framework April 2008, Local Government Coordination, Monitoring Plan, Education and Outreach, and Ongoing and Future Research.

Management of bald eagles in Florida through the implementation of this plan requires the cooperation of local, state, and federal governmental agencies; non-governmental organizations; business, agricultural, and forestry interests; universities; and the public. This plan was developed by the FWC in collaboration with a diverse group of stakeholders, and its successful implementation requires the cooperation of and coordination with other agencies, organizations, private interests, and individuals. Any significant changes to this management plan will be made with the involvement of our stakeholders.

The FWC formally solicited public comment and peer-review on the proposed delisting action of the bald eagle in Florida at several junctures of the delisting process and the writing of this management plan. Comment periods were noticed in the *Florida Administrative Weekly* to solicit: (1) information on the bald eagle's biological status to be considered during the development of the Biological Status Report for the Bald Eagle (Sullivan *et al.* 2006); (2) information on the management needs of the eagle and any economic, social, and ecological factors to consider as part of its management; and (3) public and stakeholder input on drafts of

the management plan. Public comments also were received following release of the Biological Status Report for the Bald Eagle in 2006, and at the September 2007 FWC Commission meeting when a draft of this Bald Eagle Management Plan and its associated rule changes were presented to the Commissioners and received conceptual approval. Following this meeting, the FWC created an “ad-hoc” committee of some of its most active bald eagle stakeholders, and this committee met several times into early 2008 to assist the FWC in resolving issues remaining with regulation and management of the state’s bald eagle population.

Five years following approval of this plan, the FWC and its stakeholders will re-evaluate the biological status of the bald eagle in Florida. If nest-monitoring data suggest that modification of guidelines for the regulation of land uses surrounding eagle nests may be appropriate, then this management plan will be revised accordingly.

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## GLOSSARY AND ACRONYMS

**Abandoned Nest:** A bald eagle nest that is intact or partially intact but has been inactive through six or more consecutive nesting seasons. While the buffer zone surrounding the nest is no longer protected, the nest itself may not be altered. *Compare with Alternate Nest.*

**Active Nest:** A nest that shows or showed evidence of breeding by bald eagles, such as an adult attending the nest or in incubating position, a clutch of eggs, or a brood of nestlings, at any time during the current or most recent nesting season.

**Active Territory:** A bald eagle nesting territory that contains or contained an active nest at any time during the current or most recent nesting season.

**Adaptive Management:** A decision process that promotes flexible decision-making that can be adjusted as outcomes from management actions and other events are better understood. Adaptive management recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a “trial and error” process, but rather emphasizes “learning while doing.”

**Alternate Nest:** A bald eagle nest that is intact or partially intact and has been used by bald eagles at any time during the past five nesting seasons, but that was not used during the current or most recent nesting season. An inactive nest is considered to be an alternate nest until it has been inactive for five consecutive nesting seasons, at which time it becomes an Abandoned Nest. Bald eagles often build multiple nests within their territory, but usually only one will be used for nesting in any given nesting season. *Compare with Abandoned Nest.*

**Area of Occupancy:** The smallest area of suitable habitats essential at any stage to the survival of bald eagles in Florida, based on the presumption that each active nesting territory contains 397–794 acres (1–2 km<sup>2</sup>). Based on 1,101 known active territories, the Area of Occupancy of bald eagles in Florida was estimated to be between 658 and 1,275 mi<sup>2</sup> in early 2005 (Sullivan *et al.* 2006, Figure 2). To qualify for listing as a species of special concern in Florida, a species must have an area of occupancy of <700 square miles. *See also Extent of Occurrence.*

**Bald and Golden Eagle Protection Act:** The federal law enacted in 1940 that now serves as the primary protection for bald eagles nationally now that the eagle has been removed from protection under the U.S. Endangered Species Act.

**Bald Eagle Conservation Fund:** A fund to be established between the FWC and the Wildlife Foundation of Florida to collect “monetary contributions” (conservation funds) from the issuing of FWC Eagle Permits to applicants whose projects impact buffer zones of active or alternate bald eagle nests. Each year, the amount charged will change by an amount equal to the annual Consumer Price Index for the Southeast region, and will be based on changes during the CPU calendar year (1 January–31 December). The appropriate change to the monetary contribution should take effect on 1 March of each year because the CPI

for the previous year is usually not available until mid-February. The contribution will be calculated based on the date that a completed application is received by FWC.

**Breeding Productivity:** The number of nestlings produced by an eagle pair or population. Nestlings should be surveyed just before they fledge. The recommended procedure for determining breeding productivity is to divide the number of nestlings produced by the number of active nesting territories. *Compare with Reproductive Success.*

**Communal Roost:** An area where bald eagles gather and perch overnight, or and sometimes during the day during inclement weather. Communal roosts are usually in large trees (alive or dead) that are close to foraging areas. Communal roosts are rare in Florida.

**Conservation Measures:** One or more actions provided by landowners to benefit bald eagles in exchange for a permit to conduct an activity within the buffer zone of an active or alternate bald eagle nest in Florida..

**Core Nesting Area:** One of 16 regions in Florida that contains a high density of bald eagle nesting territories (Figure 3, page 7). Together, the core areas support a majority of the state's known active nesting territories. The core nesting areas are numbered chronologically from the year of discovery and are located in the following regions: (1) lakes Lochloosa, Newnans, and Orange in Alachua County; (2) Lake George in Lake, Marion, Putnam, and Volusia counties; (3) the middle St. Johns River in Brevard, Seminole, and Volusia counties; (4) the Kissimmee chain of lakes in Osceola and Polk counties; (5) the Placida Peninsula in Charlotte and Sarasota counties; (6) the Harris chain of lakes in Lake, Marion, and Sumter counties; (7) the Lee County coast; (8) St. Vincent National Wildlife Refuge in Franklin County; (9) St. Marks National Wildlife Refuge in Wakulla County; (10) the Lower St. Johns River in Clay, Flagler, and St. Johns counties; (11) Rodman Reservoir in Marion and Putnam counties; (12) the central Gulf Coast in Citrus, Hernando, and Pasco counties; (13) central Polk County; (14) Lake Istokpoga in Highlands County; (15) the northeast shore of Lake Okeechobee in Martin and Okeechobee counties; and (16) coastal Charlotte County.

**Development of Regional Impact:** A development that is likely to have regional effects beyond the local government jurisdiction in which it is located.

**Disturb:** (as defined by USFWS (2007b): "To agitate or bother a bald or golden eagle to the degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

**Endangered Species Act:** The federal law enacted in 1973 that offered primary protection nationally to bald eagles. When the bald eagle was removed from the list of species protected under the Endangered Species Act on 8 August 2007, the Bald and Golden Eagle Protection Act became the primary protection to eagles nationwide.

**Extent of Occurrence:** The area contained within a minimum convex polygon encompassing all known nesting territories. Based on 1,101 known active territories, the Extent of Occurrence of bald eagles in Florida was estimated to be 52,979 mi<sup>2</sup> in early 2005 (Sullivan *et al.* 2006). To qualify for listing as a species of special concern in Florida, a species must have an extent of occurrence of <7,700 mi<sup>2</sup>. *See also Area of Occupancy.*

**Exterior Construction:** All construction and related work for homes or other buildings, including roads, sewer and water lines, powerlines, fill, or excavation work.

**F.A.C.:** Florida Administrative Code.

**Fledgling:** A young eagle that is capable of flight and that has left the nest, usually at 10–12 weeks of age. Fledglings may return to the nest for several weeks to be fed or to roost. *Compare with Nestling.*

**FWC:** The Florida Fish and Wildlife Conservation Commission, the state agency legally mandated to protect and manage Florida's native wildlife resources.

**FWC Eagle Permit:** A permit issued by the FWC to allow for activities that would otherwise be prohibited by law, such as disturbance, nest removal, capture for rehabilitation, or scientific collection. Some activities require conservation measures to be conducted before a permit will be issued. Because the USFWS has yet to finalize its permitting process, the relationship between state and federal permits remains to be determined, but the need for duplicative permits will be minimized to the greatest extent possible.

**Harass:** *see Disturb.*

**Harm:** *see Disturb.*

**Inactive Nest:** A bald eagle nest that was not used during the current or most recent nesting season. *See Abandoned Nest and Alternate Nest.*

**Inactive Territory:** A bald eagle nesting territory that does not contain an active nest during the current or most recent nesting season.

**Interior Construction:** Any activity or related work for homes or other buildings that is carried out inside a building that has completed exterior walls, roof, windows, and doors.

**Land Development Code:** Any ordinance that regulates development.

**Local Government:** Any agency or governmental body including state agencies such as the Florida Department of Environmental Protection and the five water management districts.

**Lost Nest:** A nest that is no longer present from natural causes (*e.g.*, one that fell apart or was blown out of a tree). In some cases, the nest tree itself may be lost. The FWC recommendations in the section entitled Permitting Framework April 2008 section apply

to lost nests through two complete, consecutive nesting seasons. *Compare with Abandoned Nest.*

**Nest:** A structure of sticks created, modified, or used by bald eagles for reproduction, whether or not reproduction was successful. Most nests are in living trees, but some nests are built in snags, on communication towers or other artificial structures, or on the ground. Most eagle territories contain more than one nest; the average across the eagle's range is 1.5 nests/territory. *See also Abandoned Nest, Active Nest, Alternate Nest, Lost Nest, and Unknown Nest.*

**Nesting Season:** In Florida, the period 1 October–15 May, unless the young fledge before or after 15 May.

**Nesting Success:** *See Breeding Productivity and Reproductive Success.*

**Nesting Territory:** The area associated with one breeding pair of bald eagles and that contains one or more nests. In rare cases, a nesting territory may lack a nest at the time of the survey, as when the nest is destroyed by severe weather.

**Nestling:** A young eagle (eaglet) that is incapable of flight and that is dependent on its parents. Once an eaglet fledges (*i.e.*, leaves the nest), it becomes a fledgling.

**Non-Injurious Disturbance:** Persistent and intentional disturbance to disperse bald eagles from a site, such as an airport or a fish hatchery, without physical capture or direct handling, or by any means likely to cause injury.

**Permanent Activity:** Any activity expected to disturb bald eagles during two or more nesting seasons.

**Reproductive Success:** The number of fledglings produced annually by a bald eagle pair. *Compare with Breeding Productivity.*

**Scientific Collection Permit:** A permit issued for activities that include salvage, voucher, bird banding, wildlife possession, or special purpose. Applications must demonstrate a scientific or educational benefit for bald eagles, and must identify the purpose, scope, objective, methodology, location, and duration of the project.

**Similar scope:** A measure comparing activities near bald eagle nests. An existing activity near a bald eagle nest is of similar scope to a proposed activity, when the project is similar in nature, size, and use.

**Site Work:** Construction activities such as land clearing or road building that precede construction of homes or other building.

**Successful Nest:** A bald eagle nest that produces at least one fledgling.

“Take” (as defined in 68A-1.004 F.A.C.): “Taking, attempting to take, pursuing, hunting, molesting, capturing, or killing any wildlife or freshwater fish, or their nests or eggs by any means whether or not such actions result in obtaining possession of such wildlife or freshwater fish or their nests or eggs.”

Temporary Activity: 1) Outside the nesting season: any activity that will leave no permanent structure or have any permanent effect. 2) During the nesting season: any activity expected to disturb bald eagles during only one nesting season.

Unknown Nest: A bald eagle nest that was surveyed (usually only once) during the current or most recent nesting season, but that its status could not be determined.

U.S.C.: United States Code.

USFWS: The United States Fish and Wildlife Service, the federal agency mandated to protect and manage the nation’s native wildlife resources.



## CHAPTER 1: BIOLOGICAL BACKGROUND

The bald eagle (*Haliaeetus leucocephalus*) is the symbol of the United States and one of North America's most spectacular birds. It is also one of the most thoroughly studied birds, with perhaps 2,500 articles published on its biology or management (Buehler 2000). This chapter summarizes some aspects of the bald eagle's biology, primarily in Florida. Detailed information on the biology of bald eagles throughout their range is found in Stalmaster (1987), Gerrard and Bortolotti (1988), and Buehler (2000).

### Distinguishing Characteristics

The bald eagle is the largest raptor (bird of prey) that occurs in North America, ranging from 28 to 38 inches in length and with a wingspan from 66 to 96 inches. The largest eagles are found in Alaska and the smallest occur in the southern United States and Mexico (Buehler 2000). The sexes are indistinguishable by plumage, but females are as much as 25% larger than males. Adults are dark brown with a white head and tail. The eyes, bill, legs, and feet are yellow. Juveniles are dark brown overall with white mottling on the belly, tail, and underwings. The eyes are dark brown and the bill is gray to black. The plumage of sub-adults is highly variable, according to age, with a decreasing amount of white on the body and an increasing amount of white on the head and tail attained with each successive molt. The eyes and bill turn yellow during the eagle's fourth year, and full adult plumage is attained during the bird's fifth or (usually) sixth year (Buehler 2000).

### Taxonomy

The bald eagle is a member of the family Accipitridae and the order Falconiformes. It is one of eight members of the genus *Haliaeetus*, which is from the Greek and means *sea eagle*; the bald eagle's full scientific name means *white-headed sea eagle*. The bald eagle is the only member of its genus that occurs regularly in North America. Two other species, the white-tailed eagle (*H. albicilla*) of Eurasia and the Steller's sea-eagle (*H. pelagicus*) of Asia, have strayed to the United States, and the white-tailed eagle has bred in Alaska (AOU 1998). Fossil evidence of bald eagles dates back at least one million years and comes from several sites, including three from Florida (Buehler 2000). Two subspecies are recognized by some ornithologists, the larger *H. l. alascanus* breeding north of 40° N latitude and the smaller *H. l. leucocephalus* to the south. However, the bald eagle may have no subspecies, with its size and mass differences merely representing a decrease along a north-to-south gradient (Curnutt 1996, Buehler 2000). The only other eagle that occurs regularly in North America is the golden eagle (*Aquila chrysaetos*), which in Florida is a rare non-breeding winter resident, primarily of the panhandle (Stevenson and Anderson 1994).

### Life History and Habitat

#### *Breeding Behavior*

Bald eagles are highly social outside of the nesting season, but are extremely territorial when nesting. They are capable of breeding in their fourth year, while still in sub-adult plumage, but may not breed until their sixth or seventh year where breeding competition is intense (Buehler

2000). Bald eagles are thought to be monogamous, with pair bonds persisting for several years, but this is largely unproven. Eagles are single-brooded, although pairs may renest if the first clutch is lost.

Bald eagles in Florida begin nest building or nest maintenance activities in late September or early October. The nesting season is prolonged, with egg-laying beginning as early as October or as late as April (later nests are mostly renesting attempts; Millsap *et al.* 2004). For purposes of this management plan, the bald eagle nesting season is defined as the period 1 October–15 May. Nest sites tend to be built near habitat edges (McEwan and Hirth 1980) in a living tree that offers a view of the surrounding area and that can support the eagle's often sizeable nest. Substrates used in Florida vary according to local conditions, and include pines (*Pinus palustris* and *P. elliottii*), cypress (*Taxodium* spp.), mangroves (*Avicennia germinans* and *Rhizophora mangle*), great blue heron (*Ardea herodias*) nests, artificial structures such as communication towers, transmission towers, and raptor nesting platforms, and even—very rarely—on the ground (Broley 1947, Shea *et al.* 1979, Curnutt and Robertson 1994, Curnutt 1996, Millsap *et al.* 2004). However, bald eagles in Florida strongly prefer living native pines to all other substrates; 75% of all eagle nests surveyed during 2006 were built in living native pines (FWC unpublished data).

*The bald eagle nesting season in Florida is defined as 1 October–15 May.*

Nearly all bald eagle nests in Florida are built within 1.8 miles of water (Wood *et al.* 1989). Territory size varies depending on habitat and prey density but is thought to encompass 0.6–1.2 square miles (Buehler 2000). Bald eagle nests are spaced apart to ensure sufficient food resources for nestlings and to raise young with minimal disturbance from other eagles. Eagle pairs often build more than one nest, which allows them to move to an alternate nest while remaining in their territory. Throughout their range, eagles maintain an average of 1.5 nests per territory, ranging from one nest to five nests (Stalmaster 1987, Buehler 2000).

*Bald eagles in Florida strongly prefer live, native pines to all other nesting substrates.*

Most clutches of eggs in Florida are laid between December and early January. Mean clutch size throughout the bald eagle's range is 1.87 eggs, with most nests containing two eggs. Incubation lasts about 35 days. Average brood size in Florida is 1.56 nestlings per nest (FWC unpublished data). Nestlings in Florida fledge at around 11 weeks of age and remain with their parents near the nest for an additional 4–11 weeks (Wood 1992, Wood *et al.* 1998). Fledglings begin widespread local movements before initial dispersal, which occurs from April to July (Millsap *et al.* 2004). Based on a sample of 18,838 nests in Florida during 1973–2004, average annual breeding productivity was 70.6%, ranging from 52.2% in 1974 to 82.7% in 1996 (Nesbitt 2005). Average reproductive success during 1973–2004 was 1.16 fledglings for all nests and 1.54 fledglings per successful nest.

### ***Movements***

Most of Florida's breeding bald eagles, especially those nesting in the extreme southern peninsula, remain in the state year-round, but most sub-adults and non-breeding adults migrate out of Florida (Stevenson and Anderson 1994, Curnutt 1996, Mojica 2006). Eagles migrate

northward between April and August and return southward from late July through late December. Juveniles migrate northward later than older sub-adults (Broley 1947, Wood and Collopy 1995, Mojica 2006). Most juveniles disperse at about 128 days of age and spend their first summer as far north as Newfoundland, with peak numbers summering around Chesapeake Bay and the coastal plain of North Carolina (Broley 1947, Millsap *et al.* 2004, Mojica 2006). Florida's bald eagles use three migration flyways—the Atlantic coast, Appalachian Mountains, and the Mississippi River valley—with equal frequency, and they use stopover sites for resting or foraging (Mojica 2006). Eagles also exhibit nomadic wandering, mostly by sub-adults. Northern-breeding *alascanus* bald eagles winter in Florida at least occasionally (Stevenson and Anderson 1994).

### ***Food***

Bald eagles are opportunistic foragers, feeding or scavenging on a wide variety of prey. Primary prey of eagles in Florida includes various fish and waterfowl species. Prey from one study in north-central Florida was composed of 78% fish (mostly catfish, especially brown bullhead; *Ictalurus nebulosus*), 17% birds (mainly American coot; *Fulica americana*), 3% mammals, and 1% amphibians and reptiles combined (McEwan and Hirth 1980). Most prey is captured from the surface of the water, but bald eagles often harass ospreys (*Pandion haliaetus*) in flight to drop fish that they have captured. Bald eagles in Florida often scavenge carcasses along roadways or garbage at landfills (Millsap *et al.* 2004).

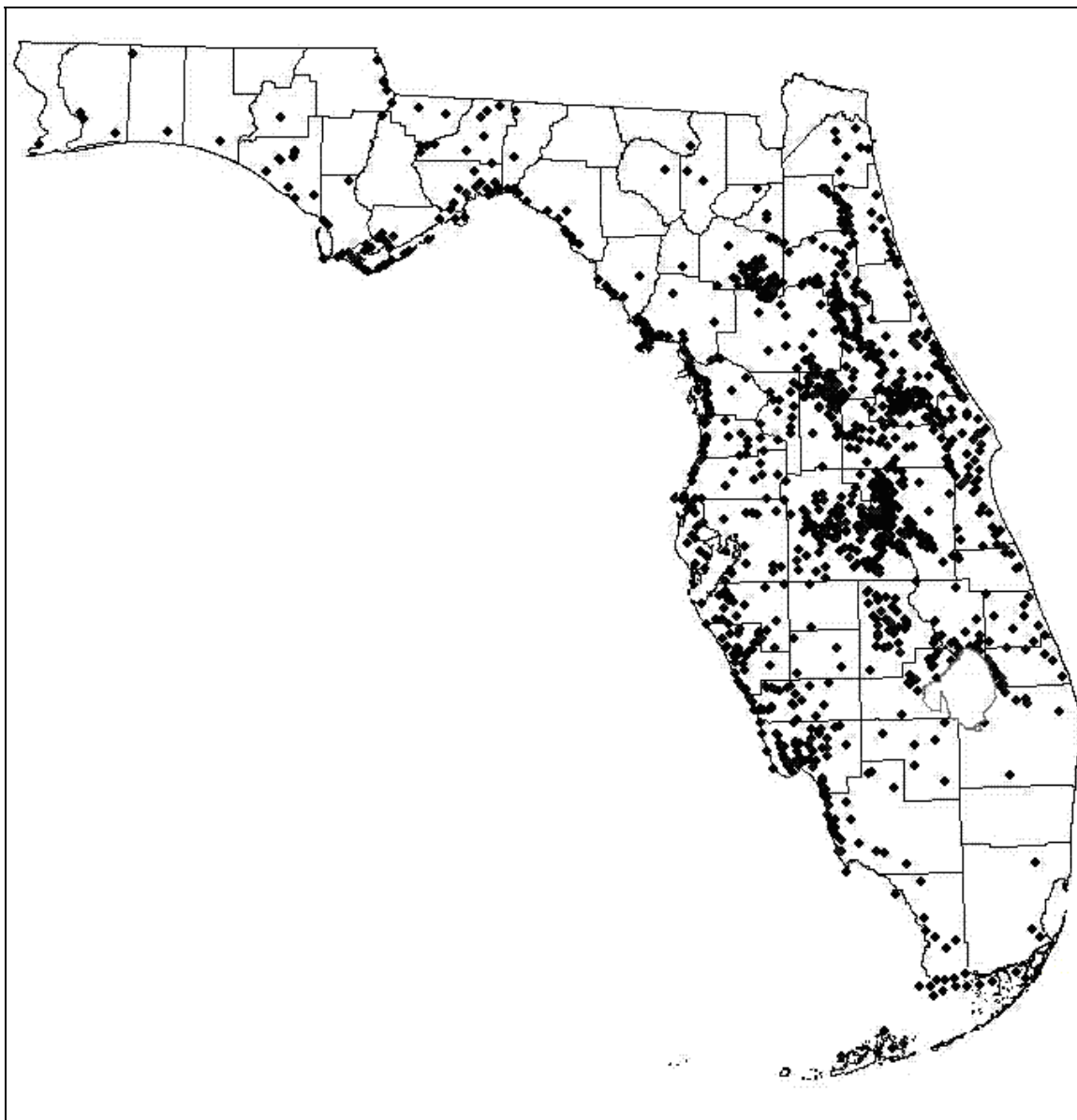
### ***Longevity***

The record lifespan for a bald eagle in the wild is 28 years. Eagles follow a pattern typical of raptors, with lower juvenile survival followed by increasing survival to adulthood (Buehler 2000, Millsap *et al.* 2004).

### ***Habitat***

Throughout their range, bald eagles use forested habitats for nesting and roosting, and expanses of shallow fresh or salt water for foraging. Nesting habitat generally consists of densely forested areas of mature trees that are isolated from human disturbance (Buehler 2000). Daytime roosts are generally in “super-canopy” trees adjacent to shorelines, and are typically located away from human disturbance (Buehler 2000). Communal roosts, which are rare in Florida, are located within three miles of water (Mojica 2006). The quality of foraging habitat is characterized by the diversity, abundance, and vulnerability of eagle prey, the structure of the aquatic habitat (*e.g.*, presence of shallow water), and the extent of human disturbance (Buehler 2000). Bald eagle nesting habitats are protected by law, but little or no emphasis has yet been placed on the preservation of roosting or foraging habitats (Mojica 2006). The greatest numbers of bald eagle nesting territories in Florida are found along the Gulf coast and around some of the larger inland lakes and river systems in the peninsula (Figure 1).

*Bald eagles use forested habitats for nesting and roosting, and expanses of shallow fresh or salt water for foraging.*



**Figure 1. The distribution of active bald eagle nesting territories in Florida, 2005–2006.**

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## **Distribution and Population Status**

### ***Historical Distribution***

Bald eagles formerly bred from central Alaska and the Maritime Provinces south to Baja California and Florida. It is widely believed that eagles were abundant in areas with high quality forested and aquatic habitats, both coastally and inland. In Florida, the eagle was called “abundant” (Bailey 1925) and “common” (Howell 1932) during the early 20th century. The size of Florida’s historic bald eagle population is unknown but it “must have been well in excess of

1,000 nesting pairs,” with numbers around Tampa Bay and Merritt Island thought to be “among the densest breeding concentrations of a large raptor known anywhere on earth” (Peterson and Robertson 1978).

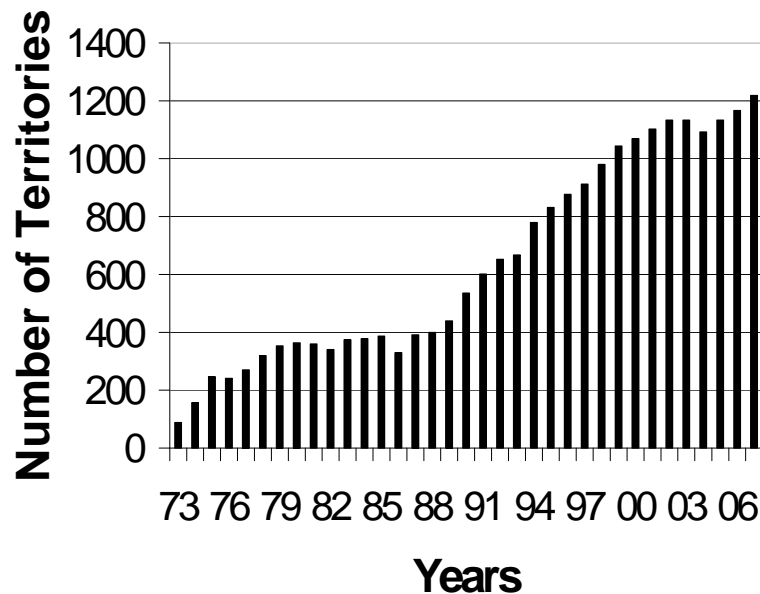
### ***Population Trends***

The continental eagle population began to decline during the 18th century from loss of breeding habitat and from direct persecution—more than 128,000 bald eagles were shot in Alaska between 1917 and 1952 (Buehler 2000). The population decline intensified during the mid-20th century with widespread use of DDT compounding the continuing losses from habitat destruction and direct persecution. DDT is an organochlorine pesticide that was widely used in agriculture and mosquito control beginning in the 1940s.

Widespread use of DDT was banned in the United States in 1972, partially because it

disrupted calcium metabolism in raptors. This calcium reduction resulted in eggshells that ruptured during incubation, causing significant and widespread reproductive failure in bald eagles and other raptors (Stalmaster 1987, Buehler 2000). Broley (1950) documented “heavy nesting failures” of eagles in Florida, and Cruickshank (1980) wrote of their “alarming decrease” and near-extirpation as a breeding species in Brevard County after 1950.

Substantial recovery of the bald eagle, continentally and in Florida, began in the 1970s, following the banning of DDT and a reduction in persecution brought on in part by passage of the U.S. Endangered Species Act of 1973. The Florida eagle population has increased greatly since statewide breeding season surveys began in 1972–1973, and especially since the early 1990s (Figure 2). The federal recovery plan for bald eagles in the southeastern states (USFWS 1989) established a “recommended recovery level” for Florida of 1,000 nesting territories, an average of 0.9 fledglings per active nest and  $\geq 1.5$  fledglings per successful nest, and  $\geq 50\%$  breeding productivity. Eagles in Florida have exceeded each of these parameters for the past 20 years (Nesbitt 2005). One reason for the recovery of the eagle in Florida has been the continued availability of appropriate nesting and foraging habitats, thought to be the result of adherence to management guidelines for construction activities near eagle nests (Nesbitt *et al.* in review).



**Figure 2. The number of bald eagle nesting territories in Florida, 1973–2007.**

By 1997, Florida's bald eagle population was thought to exceed 4000 individuals, including sub-adults and other non-breeders (Buehler 2000). The increase in the breeding population appears to have slowed recently, from 1,043 nesting territories in early 1999 to 1,218 territories in early 2007 (Nesbitt 2005, Figure 2). The actual number of territories present in Florida is not known; the USFWS will conduct a survey in Florida in 2009 to determine the proportion of nests that are undetected during annual surveys. The Biological Status Report for the Bald Eagle (Sullivan *et al.* 2006) reported that "recent studies indicate 24% of bald eagle nests go undetected" and that "based on this correction factor, it is estimated there were 1,405 active nests in Florida in 2005." However, the analysis on which this figure was based was flawed (M. Otto, pers. comm.). A new analysis is currently being conducted at Patuxent Wildlife Research Center to develop an accurate estimate of the number of nests.

The apparent slower growth of the number of bald eagle nesting territories in Florida since 1999 (Figure 2) may suggest that eagles are reaching their current carrying capacity in the state. If this is the case, then a slight population decline in the future might eventually be expected as the population adjusts to carrying capacity. However, because carrying capacity diminishes with habitat loss, it may be difficult to distinguish a decline caused by habitat loss from a decline due to an adjustment of carrying capacity.

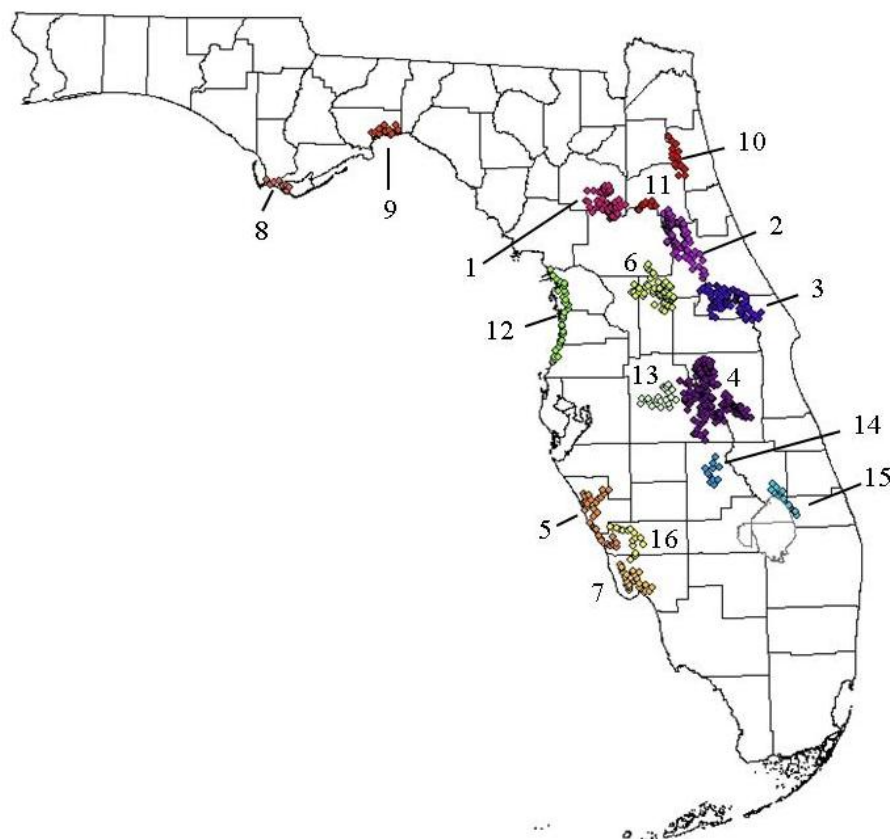
### ***Current Distribution***

Bald eagles reclaimed their entire historic range by the late 1990s (Buehler 2000). Recovery in the Lower 48 states has been dramatic, increasing from an estimated 417 pairs in 1963 to an estimated 9,789 pairs by 2007 (USFWS 2007a). Bald eagles have met or exceeded the population goals established in all five regional recovery plans, and on 8 August 2007, the USFWS removed the species from the list of federally endangered and threatened species.

Bald eagles were known to breed in 59 of Florida's 67 counties by 2005, the exceptions being Baker, Broward, Calhoun, Gilchrist, Holmes, Lafayette, Madison, and Nassau (Nesbitt 2005; Figure 1). Most nests are found on privately-owned lands (67% in 2003; Nesbitt *et al.* in review; unpublished GIS data), underscoring the importance of private lands in the conservation of eagles in Florida. The growth of the state's eagle population during the 1990s, when the human population grew at a high rate, shows that bald eagle populations can flourish even when faced with development pressures, if appropriate habitat protections are in place.

*Bald eagles were breeding in 59 of Florida's 67 counties by 2005.*

Concentrations of nesting territories are clustered around several significant wetland systems. The FWC has identified 16 areas of concentrated bald eagle nesting activity that contain a majority of the known nesting territories in Florida (Figure 3, Table 1). Many of these "core nesting areas" have persisted for decades, suggesting the presence of high-quality breeding and foraging habitats (Nesbitt *et al.* in review). These core nesting areas are located along the Gulf coast from St. Vincent Island to Lee County, and inland from the lower St. Johns River to Lake Okeechobee (Figure 3). Changes in the size, configuration, and location of these core nesting areas are monitored, and their importance to the overall population of bald eagles in Florida will be determined as new data become available.



**Figure 3. Location of bald eagle core nesting areas in Florida, 2005–2006.** These core nesting areas, which are numbered chronologically from their discovery, are found in the following sites: (1) lakes Lochloosa, Newnans, and Orange; (2) Lake George; (3) the middle St. Johns River; (4) the Kissimmee chain of lakes; (5) the Placida Peninsula; (6) the Harris chain of lakes; (7) the Lee County coast; (8) St. Vincent National Wildlife Refuge; (9) St. Marks National Wildlife Refuge; (10) the lower St. Johns River; (11) Rodman Reservoir; (12) the central Gulf coast; (13) central Polk County; (14) Lake Istokpoga; (15) northeast Lake Okeechobee; and (16) coastal Charlotte County.

**Table 1. The number of bald eagle nesting territories in the top 10 counties in Florida, 2004–2005.** Data source is Nesbitt (2005).

County	Territories	County	Territories
Osceola	113	Seminole	45
Polk	112	Lee	42
Volusia	68	Brevard	41
Lake	63	Monroe	40
Putnam	56	Alachua	39

## **Historic and Ongoing Conservation Efforts**

Substantial monitoring, management, and research activities have been conducted on Florida's bald eagles for more than 60 years, and many journal articles and reports have been produced. Since the 1972–1973 nesting season, all known nesting territories are monitored annually by use of aircraft to determine reproductive parameters such as territory occupancy, brood size, breeding productivity, and reproductive success. Eggs laid by eagles in Florida were used to successfully reestablish populations in other states during the 1970s and 1980s (Nesbitt and Collopy 1985). Wildlife rehabilitation centers in Florida have successfully treated and released hundreds of sick or injured bald eagles, while eagles with permanent injuries have provided opportunities for public education, lobbying, and fund-raising. Many of these conservation activities are anticipated to continue following delisting.

Several federal and state laws have directly or indirectly protected bald eagles. The most important laws include the federal Migratory Bird Treaty Act, the federal Bald and Golden Eagle Protection Act, and the federal Endangered Species Act, as well as state regulations noted in this document. The bald eagle was first protected nationally in 1918 under the Migratory Bird Treaty Act (16 U.S.C. 703–711), which protected nearly all native birds and their nests. The Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668a–668c) offered additional protection against take and disturbance of bald eagles and their nests. In 1972, the U.S. Environmental Protection Agency banned all domestic use of DDT, and this prohibition allowed bald eagle populations to recover from pesticide poisoning. The following year, the Endangered Species Act of 1973 (16 U.S.C. 1531–1544) was passed, and the bald eagle was added to the list of federally endangered and threatened species in 1978.

Bald eagle nesting habitats in Florida have been protected primarily through the Endangered Species Act in accordance with habitat management guidelines in the southeastern United States (USFWS 1987). These federal guidelines created buffers around eagle nests in which activities such as development or logging were restricted. Two buffer zones were recommended: a primary zone (0 to 750–1500 feet from the nest) and a secondary zone (1,500 feet to one mile beyond the end of the primary zone). Recently, the USFWS (2007b) published new federal guidelines that recommend a buffer zone that extends up to 660 feet from the nest depending upon whether a visual screen of vegetation exists around the nest, and the presence of existing activities in the vicinity of the nest, with additional recommendations for proposed activities occurring during the nesting season.

Florida also had state regulations that protected the bald eagle. The eagle was listed as threatened and therefore received protections afforded it by Rule 68A-27.004 of the Florida Administrative Code (F.A.C.), which prohibited the non-permitted take or harassment of eagles or their nests. There are local and state regulations tied to the listing category of a species. The Florida Land and Water Management Act of 1972 indirectly protected some eagle habitats by establishing two state programs: Development of Regional Impact and Area of Critical State Concern. The Area of Critical State Concern Program regulates development in areas of regional or statewide natural significance, such as Apalachicola Bay, the Green Swamp, Big Cypress Swamp, and the Florida Keys. The bald eagle is listed as a species of “greatest conservation need” in the Florida Comprehensive Wildlife Conservation Strategy (FWC 2005). This is not a legal designation but

rather makes conservation work on the bald eagle eligible to receive State Wildlife Grant funds to address the need for continued management and monitoring activities.

State water management districts and local governments provided additional layers of protection for bald eagles. Local regulations emphasize listed species (endangered, threatened, or species of special concern) and their habitats when considering comprehensive planning, zoning, development review, and permitting activities. Prioritization of listed species, requirements for surveys and documentation, increased buffer zones, protection of upland habitats, additional mitigation requirements, more intensive levels of review, and coordination and compliance with appropriate federal and state wildlife agencies are some of the procedures that local governments and state wildlife agencies apply to listed species.

During 2006, the USFWS proposed removing the bald eagle from the list of federally endangered and threatened species, and this action was finalized in August 2007. Although the bald eagle is no longer protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The USFWS (2007b) has redefined some of the terminology included in the Bald and Golden Eagle Protection Act, which prohibits the unpermitted “take” of bald eagles, including their nests or eggs. The act defines “take” to mean to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb” an eagle. The new definition of “disturb” is to “agitate or bother a bald or golden eagle to the degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior” (USFWS 2007b). This management plan adopts the federal definition of “disturb” in 50 C.F.R. § 22.3 and Florida’s definition of “take” in Rule 68A-1.004, F.A.C.

## CHAPTER 2: THREAT ASSESSMENT

### Reasons for Delisting

In response to a petition filed in 2002, the FWC convened a panel to review the biological status of the bald eagle in Florida (Sullivan *et al.* 2006). The panel concluded that bald eagles in Florida did not meet the criteria for listing at any level and had not met the criteria for the previous five years. Consequently, the panel unanimously recommended that the bald eagle be removed from Florida's list of imperiled species. This decision was based on the following facts: (1) the bald eagle population occurs throughout Florida; (2) the population has not experienced extreme fluctuations in range or numbers; (3) the estimated number of adults had increased >300% during the past three eagle generations (defined here as a total of 24 years); and (4) the population is not projected to experience significant declines over the next 24 years (Sullivan *et al.* 2006).

### Present and Anticipated Threats

Threats to the bald eagle in Florida include both natural and human-related causes that individually or in combination could cause reductions in reproductive or survival rates. This section highlights the most serious threats known to impact bald eagles in Florida currently, as well as a few threats that may potentially affect Florida's eagles in the future. This section emphasizes human-caused threats, which are more likely to be controlled via a management plan. Some sources of eagle mortality in Florida—natural as well as human-caused—have no clear remedy. Forrester and Spalding (2003) is an excellent reference for causes of injury and mortality to Florida's eagles. Other than intraspecific aggression, most natural mortalities probably go undetected. Human-related mortality is known from sick or injured eagles or eagle carcasses examined by the National Human Health Center, eagles brought to Audubon's Center for Birds of Prey, or other veterinary or rehabilitation centers (Forrester and Spalding 2003), as well as recent radio-telemetry studies of eagles in the wild (*e.g.*, Millsap *et al.* 2004, Mojica 2006).

The greatest cause of documented mortality to bald eagles in Florida during 1963–1994 was trauma, representing 59% of diagnosed mortalities (Forrester and Spalding 2003). Other causes of eagle mortality were electrocution (16%), poisoning (10%), infectious diseases (6%), emaciation (4%), and other (2%). Among 182 eagle deaths from trauma, vehicle collision accounted for 44%, gunshot 10%, intraspecific aggression 7%, powerline collision 4%, six other causes accounted for a total of 9%, and the causes of 26% of deaths were unknown (Forrester and Spalding 2003).

### *Human-caused Threats*

Although the bald eagle population has grown concurrently with the growth of the human population in Florida, the continued conversion of nesting or foraging habitats to development can be expected to reduce the amount and quality of eagle habitats. Some of the most intense development pressure in peninsular Florida is occurring along the shores of large inland lakes that support core nesting areas (Figure 3), such as Lake Tohopekaliga in Osceola County.

Some eagles in Florida have shown great tolerance for nesting in suburban or urban areas—in some cases even establishing new territories in these habitats (Millsap *et al.* 2004). In one study, survival rates were similar for juveniles from rural and suburban nests, however mortality of those from suburban areas was almost always a result of direct or indirect human interactions while no mortality of rural birds were known to be associated with human interactions. Bald eagles raised in suburban habitats seem to become acclimated to human-related landscape features and do not regard these features with the same amount of caution that is shown by eagles raised from rural nests (Millsap *et al.* 2004). Nevertheless, more research is needed to determine effects of human activities in close proximity to eagle nests (Millsap *et al.* 2004).

Bald eagles often scavenge road-kills along roadways and are therefore susceptible to being struck by vehicles. Collision with motor vehicles represents the most frequent cause of documented eagle mortality in Florida, representing 19–44% of all eagles' deaths due to trauma, 1963–1994 and 1997–2001 (Forrester and Spalding 2003, Millsap *et al.* 2004).

Although protected from direct persecution for more than 50 years, bald eagles are occasionally still shot in Florida. Audubon's Birds of Prey Center received seven bald eagles with gunshot wounds during 2001–2006 (L. White, pers. comm.).

Powerlines cause eagle mortality in two ways, by electrocution and collision. Powerlines accounted for 19% of the mortality of bald eagles in Florida during 1963–1994, with electrocution representing more than 86% of this total (Forrester and Spalding 2003). Power companies in Florida have not yet retrofitted older distribution lines with modern features to reduce the incidence of eagle electrocutions.

The deaths of 19 bald eagles in Florida during 1973–1994 were attributed to lead poisoning, which usually affects eagles after they feed on waterfowl imbedded with lead shot. The use of lead shot for waterfowl hunting was banned in 1991. Pentobarbital poisoning of eagles occurs mostly at landfills, where eagles feed on the carcasses of euthanized animals, such as from a veterinary clinic or animal shelter. Forrester and Spalding (2003) discussed eight such eagle deaths in Florida, mostly at landfills. Bald eagles that breed in Florida forage heavily at landfills throughout the eastern United States, and are therefore exposed to this threat over a wide area (Millsap *et al.* 2004). Mercury contamination is another threat to eagles, although no known mortality has occurred (Forrester and Spalding 2003). However, the bioaccumulation of mercury in fish ingested by eagles suggests that sub-lethal effects will continue to be a potential threat.

### ***Natural Threats***

Bald eagles are extremely territorial when establishing or defending their nesting territories and may be badly injured or even killed during territorial battles. Intraspecific aggression accounts for 7% of documented eagle mortality in the state (Forrester and Spalding 2003). Along with food availability and inclement weather, intraspecific aggression is thought to be one of the primary regulators of eagle populations where human interactions are limited, especially in areas that are close to their carrying capacity (Buehler 2000). Mortality from intraspecific aggression may be expected to increase as Florida's eagle population approaches carrying capacity.

Hurricanes and other severe storms can damage or blow down eagle nests or nest trees, and storms that occur during the eagle nesting season can break eggs or kill nestlings. Forrester and Spalding (2003) detail several instances of storm-related mortality of bald eagles in Florida. Nesbitt (2005) determined that more than one-third of all eagle nesting territories monitored in Florida during 2004–2005 were within the paths of Hurricanes *Charley*, *Frances*, and *Jeanne*. Although there was significant local damage (*e.g.*, five of the six nests in DeSoto County were destroyed), overall effects of the storms were minimal. Fewer than 10% of the nests within the paths of the storms showed any lasting impacts, and most destroyed nests were rebuilt in the same or a nearby tree within weeks (Nesbitt 2005). Nevertheless, the loss of trees large enough to support eagle nests may cause local shortages of nesting sites in developed areas, where such trees may be scarce. Meteorologists are warning that we have recently entered a 25- to 50-year cycle of greater hurricane activity and intensity (Landsea *et al.* 1996), and, coupled with anticipated longer-term climate change associated with global warming (McCarthy *et al.* 2001), inclement weather may in the future have a greater impact on Florida's bald eagle population.

Forrester and Spalding (2003) list 112 diseases or parasites that have been found on or in the bodies of bald eagles in Florida. Most parasites are not lethal, but several infectious diseases have been implicated in the deaths of bald eagles. One suburban-raised eagle fledgling from Florida died from a chlamydial infection that was most likely transmitted by non-native monk parakeets (*Myiopsitta monachus*) that built their nest at the bottom of the eagle's nest (Millsap *et al.* 2004). Avian vacuolar myelinopathy (AVM) is a recently discovered neurological disease that attacked bald eagles and American coots in Arkansas during 1994. It has since been implicated in more than 100 bald eagle deaths in Georgia, North Carolina, and South Carolina (Wilde *et al.* 2005). AVM has yet to be detected in Florida, but it may eventually spread here, or Florida's eagles may contract the disease while summering out of state. West Nile virus colonized much of the continental United States within a few years of its discovery in 1999, and has been documented in 285 species of birds in North America, including bald eagles (Centers for Disease Control and Prevention 2006). However, the degree to which West Nile virus is a threat to Florida's eagles is unknown. Likewise, avian influenza is another potential threat to Florida's eagles.

## CHAPTER 3: CONSERVATION GOAL AND OBJECTIVES

### Conservation Goal

The goal of this management plan is to establish conservation actions that will maintain a stable or increasing population of bald eagles in Florida in perpetuity. To achieve this goal, a decline of 10% of the number of eagle nesting territories in Florida over a period of 24 years (three eagle generations) must be prevented through science-based management, regulations, public education, and law enforcement. The FWC anticipates that without continued protection of eagle nesting habitats, the number of nesting territories in Florida could decline by 10% or more over the next 24 years, which could trigger a relisting effort. The FWC has therefore set a conservation goal for bald eagles that is higher than the minimum threshold to avoid a need for relisting.

*The data for the conservation objectives are from the annual nest surveys conducted by FWC biologists for the past 35 years.*

### Conservation Objectives

Conservation objectives are benchmarks used to measure progress toward the conservation goal. The following conservation objectives have been met or exceeded in Florida, and maintaining these objectives will help to ensure that the conservation goal is sustained. Annual nest surveys conducted by FWC biologists since 1972 provide the data used to establish the following objectives. Determining annual reproductive success will provide the information needed to monitor the population and to measure the success of the objectives. The FWC listing process has five criteria—three based on population size or trend, one on geographic range, and one on quantitative analysis of the probability of extinction (see Sullivan *et al.* 2006). The first three conservation objectives below provide a means by which changes in population size or trend can be detected, while the fourth objective is intended to ensure that the bald eagle maintains its current geographic distribution. Maintaining a stable or increasing population of eagles throughout their current distribution will ensure a healthy bald eagle population in Florida, and will prevent the need to relist eagles under FWC's imperiled-species regulations. The following conservation objectives will be calculated annually from five-year running averages, beginning with data collected during the period 2002–2006. We use five-year averages to avoid the possibility that one or two years of poor reproductive success might trigger a relisting effort. These numbers are subject to revision based on changes in monitoring data and/or methods.

**1. Maintain a minimum of 1020 active territories per year over the next 24 years (i.e., through 2032).**

The listing criterion that seems most likely to trigger a future listing petition for the bald eagle in Florida is Criterion C: Small Population with Compounding Problems. To trigger this criterion, a species must be below the threshold of 10,000 mature individuals **and** must meet one of two possible sub-criteria, more likely sub-criterion C1 (a 10% decline over three generations). The Biological Status Report for the Bald Eagle (Sullivan *et al.* 2006)

*The conservation objectives will be calculated annually from five-year running averages of bald eagle population data.*

defined 8–12 years as the length of one bald eagle generation. The FWC believes that it is acceptable to use eight years as the generation length, as this number is compatible with USFWS's Draft Post-delisting Monitoring Plan (2007c). The Biological Status Report estimated that the population in Florida numbered 3,372 mature individuals during 2005. That same year, there were 1,133 active bald eagle nesting territories in the state (Nesbitt 2005), so Florida must maintain a breeding population of  $\geq 1020$  nesting territories (*i.e.*, 90% of 1,133) to avoid triggering sub-criterion C1 of the listing process.

**2. Maintain an average of 68% of the active territories producing  $\geq 1$  nestling per year.**

Because bald eagles require 4–5 years to reach sexual maturity, it is important to monitor breeding productivity to determine potential future impacts to the population. A decrease in reproduction may provide an early warning for a pending population decline. The value of 68% represents the current five-year average of bald eagle nesting territories in Florida producing  $\geq 1$  nestling per year. As it appears that the eagle population has slowed its increase since 2000, it is appropriate to use the most recent five-year average available (2002–2006) of breeding productivity as the benchmark, since this level has resulted in an apparently stable population.

**3. Maintain an average reproductive success of  $\geq 1.5$  fledglings per active nest over five years.**

Since FWC surveys began in 1972, reproductive success of bald eagles in Florida has averaged 1.54 fledglings per active nest. Five-year running averages were calculated for all survey years, and fledgling production never dropped below 1.5 fledglings per nest, so this number was chosen to ensure a stable population.

**4. Maintain the current area of occupancy ( $>770 \text{ mi}^2$ ) and extent of occurrence ( $52,979 \text{ mi}^2$ ) of bald eagles statewide.**

Maintaining the current area of occupancy and extent of occurrence of bald eagles statewide will help maintain a stable or increasing population. Further, the Biological Status Report (Sullivan *et al.* 2006) indicated that bald eagles in Florida may be near the threshold for listing as a species of special concern, based on which figure is used for the Area of Occupancy. While this criterion can be triggered only in combination with two sub-criteria, the FWC believes that the prudent benchmark is to maintain an area of occupancy in excess of the threshold, as calculated in the Biological Status Report (Sullivan *et al.* 2006).

## CHAPTER 4: RECOMMENDED CONSERVATION ACTIONS

### Strategies to Achieve the Conservation Objectives

This chapter describes the strategies to be undertaken to maintain Florida's bald eagle population at or above the levels specified by the conservation objectives. Virtually all of the conservation actions address each of the objectives. These actions are best accomplished by using an adaptive management approach that allows for adjustments to policies, guidelines, and techniques based on science and observed responses to implemented conservation measures. New biological information will be used to adjust bald eagle conservation actions as it becomes available. The FWC will monitor the eagle population and will study the effects of human activities near eagle nests. Results of this research will be evaluated and the FWC will propose adjustments in regulations, minimization, and conservation measures as appropriate. Any substantive changes to FWC policies or guidelines will be made with stakeholder involvement and Commission approval.

### *Habitat Management*

This management plan relies in part on the ability of public lands to support bald eagles. Currently, approximately 33% of all known bald eagle nests in Florida occur on public lands (Sullivan *et al.* 2006, Nesbitt *et al.* in review). Public lands provide a high level of security for wildlife because of statutory provisions for long-term management funding and for guiding habitat management on those lands (Florida Statutes 259.105 and 259.032).

The FWC encourages land management practices that benefit bald eagles by decreasing the risk of catastrophic wildfire, by maintaining healthy forests, and by providing suitable nest trees. These management practices include the use of prescribed fire, removal of exotic species, reduction of excess fuel loads, thinning of overstocked stands, replanting with native species (primarily pines), and uneven-aged timber management. Retaining large-diameter native pines will ensure that suitable potential nest trees may be available in the future. All of these land-management activities should use the appropriate protections outlined in the Permitting Framework. The FWC recommends siting high-impact recreational activities away from any active or alternate bald eagle nest and restricting activity and/or posting signs during the nesting season, where appropriate. The FWC will provide to managers of Florida's public lands the resources to identify bald eagle nests on lands they manage. The FWC will also provide technical assistance in managing habitats within nest buffers, and will ensure that future Conceptual Management Plans of lands managed by FWC include a component that follows recommended management practices of habitats surrounding bald eagle nests.

*The FWC encourages land management practices that decrease the risk of catastrophic wildfire or an outbreak of timber disease, and that retain old-growth native pines.*

### **Nesting Habitat**

The USFWS (2007b) Bald Eagle Management Guidelines help the public comply with the Bald and Golden Eagle Protection Act by avoiding activities that disturb bald eagles. These federal guidelines serve as the basis for the FWC Habitat Management Guidelines recommended in this management plan to ensure compliance with Florida wildlife laws concerning bald eagles (see Permitting Framework), and to minimize potentially harmful activities conducted within 660 feet of active or alternate bald eagle nests. In addition, the FWC recommends that nesting habitat be managed as described in the preceding section on habitat management.

### **Foraging Habitat**

Aquatic habitats that support fish and waterfowl are essential to maintaining healthy prey populations for bald eagles. The FWC monitors and manages freshwater habitats and fish populations in more than one million acres of lakes, rivers, and streams, and provides funding to restore and enhance these habitats. Several federal and state agencies in Florida work together to maintain quality aquatic habitats. The U.S. Environmental Protection Agency, Florida Department of Environmental Protection (DEP) and the five water management districts monitor and regulate water quality (nutrient input) and quantity (minimum flows and levels) to maintain healthy conditions for aquatic plants, fish, and other wildlife. The FWC and DEP also work together to monitor, restore, and control aquatic plants through permit reviews, chemical, mechanical, or biological control of invasive exotic species, and through enhancement projects to improve habitats for fish and other wildlife. These combined habitat management efforts are expected to provide suitable eagle foraging habitats in Florida in perpetuity.

Bald eagles frequently feed at landfills, and some eagles have been killed by secondary pentobarbital poisoning from feeding on carcasses of euthanized animals. For this reason, it is imperative to incinerate or quickly bury the bodies of euthanized animals.

### **Land Acquisition**

Continued acquisition of private lands is one of several strategies for preserving bald eagle habitats in Florida. Approximately 28% of Florida's land area is publicly owned or protected under perpetual conservation easements, and these lands support about 33% of the bald eagle nests in the state. Conservation easements can be used to set aside private lands from future development and are an important component of the conservation of bald eagles. The FWC, local governments, other state agencies, and private organizations acquire habitat through a variety of programs. The FWC will support legislation as part of the Florida Forever successor program to allocate sufficient funds necessary to acquire and manage suitable or potentially suitable habitat for imperiled species and bald eagles. Acquiring, managing, and restoring additional lands that support bald eagle habitats should remain a state priority so long as the acquisitions are compatible with priorities for imperiled species.

### Private Lands Incentives

Private lands play an important role in the long-term conservation of bald eagles in Florida, currently supporting about 67% of all currently known nests. To promote the enhancement of bald eagles and eagle habitats on private lands in Florida, the FWC will:

1. **Inform private landowners of existing land-use incentive programs.** Incentive programs that can be used to promote conservation of bald eagles are listed in Table 2 (following page). FWC staff will work with owners of private lands who wish to manage their lands for the benefit of bald eagles to determine the most appropriate incentive programs.
2. **Inform private landowners of opportunities to sell conservation easements around bald eagle nests on their properties.** A developer whose activity is not conducted consistent with the FWC Eagle Management Guidelines (page 23) may elect to purchase a conservation easement around an eagle nest offsite or other suitable bald eagle habitat as a conservation measure. This action will provide another landowner the opportunity to be compensated for permanently conserving a bald eagle nest or nesting habitat.
3. **Work with local governments to encourage expedited permit-review and/or reduced development-review fees in exchange for voluntarily following the FWC Eagle Management Guidelines.** The FWC recommends that developers who voluntarily avoid potential disturbance of bald eagles by following the FWC Eagle Management Guidelines be granted financial incentives or expedited project review. This recommendation will require the cooperation of local governments.

**Table 2. Landowner assistance programs that may be used to promote the conservation of bald eagles in Florida.**

<b>Program</b>	<b>Description</b>	<b>Contact</b>
Common Species Common (CSC)	Administered by FWC. Improves wildlife habitat by focusing conservation on high-priority habitats outlined in FWC's Comprehensive Wildlife Conservation Strategy.	FWC Habitat Conservation Scientific Services (HCSS) biologist*
Conservation Reserve Program (CRP)	Administered by U.S. Department of Agriculture's (USDA) Farm Service Agency (FSA). Provides annual payments and cost-share assistance to establish long-term, resource-conserving landcover on eligible farmland.	Local FSA office through the nearest USDA center
Environmental Quality Incentives Program (EQIP)	Administered by USDA's Natural Resources Conservation Service (NRCS). Provides technical assistance and up to 50% of the cost to farmers and ranchers who face threats to soil, water, air, or natural resources.	USDA district conservationist
Forest Stewardship Program (FSP)	Administered by FWC. Helps landowners to increase the economic value of their forestland while maintaining its environmental integrity. Stewardship is based on the multiple-use land strategy.	Local forester or a HCSS biologist
Partners for Fish and Wildlife Program (PFW)	Administered by USFWS. Provides technical assistance and up to 50% of the cost-sharing to landowners who conduct habitat restoration or improvement activities on their lands. The focus in Florida is on restoration of native habitats, restoration of degraded streams or other wetlands, and eradication of exotic species.	HCSS biologist
Wetlands Reserve Program (WRP)	Administered by NRCS. Provides technical and financial assistance to restore wetlands and purchase conservation easements.	USDA district conservationist
Wildlife Habitat Incentives Program (WHIP)	Administered by NRCS. Provides technical assistance and up to 75% of the cost-sharing to establish or improve wildlife habitat.	USDA district conservationist

\* Regional HCSS biologists can be contacted through FWC's regional offices;  
 <<http://myfwc.com/Contact/regnoffc.htm>>.

## Law Enforcement

The FWC's Division of Law Enforcement, in conjunction with federal, state, and local partners, is responsible for enforcing Florida's wildlife and fisheries laws. From 2003 through 2006, FWC officers responded to more than 400 incidents involving bald eagles, and this effort will not diminish upon delisting. Efforts to protect bald eagles include the following actions: patrolling areas where eagles and eagle nests occur; responding to calls of illegal activity in progress; investigating reports of illegal activity; documenting and referring illegal acts for prosecution; picking up sick or injured eagles for transport to rehabilitation facilities; retrieving and storing carcasses of non-evidentiary eagles; and providing proactive, public guidance about bald eagle conservation.

One of the most important components of the enforcement strategy is ensuring compliance through education. The FWC's law enforcement officers understand the importance of explaining wildlife laws to the public to avoid unintentional violations. However, FWC law enforcement officers actively pursue and refer for prosecution those who intentionally violate wildlife laws.

The FWC law enforcement officers also educate the public on how to identify and report violations. The FWC's Division of Law Enforcement administers the Wildlife Alert program, which receives information via a toll-free number (1-888-404-3922) that is answered 24 hours a day, seven days a week. Cash rewards are offered to callers who provide information about any illegal activity that results in an arrest. Callers may remain anonymous and are not required to testify in court.

*Potential wildlife violations should be reported to FWC's Wildlife Alert toll-free number (1-888-404-3922), which is answered 24 hours a day.*

The FWC law enforcement officers and USFWS special agents partner to protect Florida's wildlife and fisheries resources via a Cooperative Law Enforcement Agreement. This Agreement grants FWC officers the authority to enforce federal laws, including the Bald and Golden Eagle Protection Act. Additionally, FAC 68A-13.002 adopts the federal Migratory Bird Treaty Act as state law and applies state penalties for violations. The FWC officers provide most of the routine patrol of eagle habitats and nests. Agents from USFWS and FWC often jointly investigate wildlife violations to decide whether to prosecute in state or federal court.

## Proposed Regulations

Even though the FWC proposes to remove the bald eagle from the state's list of imperiled species under Rule 68A-27.004 (F.A.C.), management of bald eagles remains important to maintain the recovered status of the species. The FWC will gradually modify protections and conservation measures, if population trends warrant such actions, while monitoring the impacts of these actions.

Management guidelines established for bald eagles by the U.S. Fish and Wildlife Service (1987) consisted primarily of recommending that buffer zones be established around active and alternate eagle nests, and then providing biological opinions and technical assistance under provisions of Section 7 of the Endangered Species Act regarding land-use activities within these zones. These

buffer zones were effective in assuring that development activities did not significantly affect nesting eagles in Florida. When reproductive success was compared between rural eagle nests and nests subject to regulated development (recommendations were followed within 750 feet of the nest), no differences were detected, regardless of whether the development was residential or commercial (Nesbitt *et al.* 1993). This study demonstrates that when management guidelines were followed, bald eagle nesting was not significantly affected, and therefore the 750-foot buffer zone around eagle nests was considered effective and sufficient for minimizing the effects of development. Two other reviews of eagle nests in Florida have suggested that occupation rates of nests by eagles did not change following construction activities (T. Logan, S. Godley, pers. comm.). Nevertheless, observations by others have suggested that eagles have been substantially affected by construction activities (L. White, pers. comm.).

The National Bald Eagle Management Guidelines (USFWS 2007b) recommend the establishment of a single buffer zone 660 feet or less from the nest, depending on the presence or absence of existing activities (of “similar scope”) and the visibility of the activity from the nest. The guidelines also recommend minimization measures to reduce the potential for human activities to affect nesting bald eagles. When the bald eagle was listed by the USFWS as threatened, the recommended buffers around bald eagle nests were larger than those now adopted under the National Bald Eagle Management Guidelines (USFWS 2007b). The Southeastern Bald Eagle Habitat Management Guidelines (USFWS 1987) recommended against most activities within 750 feet of an active or alternate bald eagle nest (the primary zone), and added a suite of seasonal recommendations for activities up to 1,500 feet (the secondary zone).

The USFWS and FWC have approved the installation of infrastructure and external residential/commercial construction within the secondary zone (750–1,500 feet) of bald eagle nests during the nesting season in Florida since the mid-1990s, with the provision that monitoring be conducted to evaluate the response of the eagles to authorized activities. These joint monitoring guidelines were formalized in 2002 to ensure that nest monitoring was conducted consistently, and to serve as a database for evaluating the ongoing and future changes in management recommendations. Results of this monitoring indicate that actions that occurred in the secondary zone were not likely to have a direct negative impact on bald eagles. The Bald Eagle Monitoring Guidelines subsequently were modified on three occasions to obtain data used to evaluate eagles’ response to the revised buffer-zone distances already implemented in Florida and incorporated into the National Bald Eagle Management Guidelines (USFWS 2007b) and to reflect current USFWS policy and regulatory changes in Florida. Initial review of the information in these more recent monitoring reports suggests the current USFWS guidelines are appropriate.

Some bald eagle pairs in Florida tolerate disturbance much closer than 660 feet from the nest, and the behavior of eagles nesting close to or within developed areas seems to be increasing in Florida. Bald eagle use of urban areas is a relatively new event, and the long-term stability of urban eagle territories has not been documented fully. Although some eagles have demonstrated tolerance for intensive human activity, this does not mean that all eagles will do so (Millsap *et al.* 2004). A minimum of five years of post-impact data is needed to study the long-term effects of development within regulated nest buffer zones (Nesbitt *et al.* 1993). Both studies described above (Nesbitt *et al.* 1993, Millsap *et al.* 2004) recommended retaining buffer zones around bald

eagle nests. Therefore, the conservation of active or alternate bald eagle nests and the retention of recommended buffer zones (USFWS 2007b) are recommended to sustain the bald eagle population in Florida at or above its current level.

To better organize existing rules and to provide a location for eagle-specific rules, the FWC proposes to establish a new section within F.A.C. Chapter 68A for nongame birds (Rules Relating to Birds. F.A.C. 68A-16). Currently there are specific sections of Chapter 68A that regulate the “take” of game species, freshwater fish, fur-bearing animals, reptiles, amphibians, and many saltwater species. F.A.C. 68A-16 will create one location for existing rules pertaining to all non-listed, nongame birds. The FWC proposes moving F.A.C. 68A-13.002, “Migratory Birds; Adoption of Federal Statutes and Regulations,” to this new section (Rules Relating to Birds. F.A.C. 68A-16.001). A review of current FWC rules will likely identify other rules that should be moved to this new section. Other than the eagle specific rule proposed below, the FWC is not proposing any new rules, only the reorganization of existing rules.

One rule change is necessary to implement the removal of the bald eagle from the list of threatened species (68A-27.004 F.A.C.). This management plan recommends that 68A-27.004 F.A.C. be amended by removing the bald eagle from the list simultaneously with the addition of the bald eagle rule language proposed below.

Following is draft language for a proposed Florida regulation to protect bald eagles:

F.A.C. 68A-16.002 Bald Eagle (*Haliaeetus leucocephalus*).

(1) No person shall take, feed, disturb, possess, sell, purchase or barter, or attempt to engage in any such conduct, any bald eagle or parts thereof, or their nests or eggs, except:

- (a) As authorized from the executive director by specific permit, which will be issued based upon whether the permit would advance the management plan goal and objectives;
- (b) When such conduct is consistent with the FWC Eagle Management Guidelines;
- (c) When such conduct is consistent with a previously issued permit, exemption, or authorization issued by the FWC under imperiled species regulations (Chapter 68A-27, F.A.C.) or by the USFWS under the Endangered Species Act (U.S.C. 1531 et seq.)

(2) For purposes of this section, the term “disturb” is defined as, “To agitate or bother a bald eagle to the degree that causes, or is likely to cause (a) injury to an eagle, (b) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (c) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

(3) On public land, it is unlawful for any person to knowingly enter any area posted as closed for the protection of bald eagles, their nests, or their nest trees, except the staff or authorized agents of the managing public entity for that area, or as authorized pursuant to subsection 1.

(4) The section of the Bald Eagle Management Plan entitled “Permitting Framework April 2008,” which includes the FWC Eagle Management Guidelines, is incorporated herein by reference.

### Permitting Framework April 2008

To advance the conservation goal and objectives of this management plan, the proposed regulations listed above and this Permitting Framework are intended to assist land-use planning to minimize the potential for certain actions to disturb or “take” nesting bald eagles. This Permitting Framework clarifies (1) those activities that are not likely to result in a “take” or disturbance of bald eagles, and (2) those activities for which permits are available to assure compliance with the rules. A FWC Eagle Permit is not required to conduct any particular activity occurring near a bald eagle nest, but such a permit may be necessary to avoid liability for “take” or disturbance caused by the activity. Because the rule standard for any permit issued is “would advance the management plan goal and objectives”, this section establishes criteria that meet the standard. This Permitting Framework and the FWC Eagle Management Guidelines, contained herein should be used together. Individuals who cannot follow the Guidelines and want to avoid liability for a possible disturbance or take can apply for a permit. A FWC Eagle Permit can only be issued when acceptable minimization and conservation measures are provided as permit conditions.

*The Permitting Framework applies to all activities within 660 feet of any active or alternate bald eagle nest.*

The FWC intends for this management plan to be compatible with the USFWS Bald and Golden Eagle Protection Act (BGEPA) and the associated National Bald Eagle Management Guidelines (USFWS 2007b). The FWC will work with the USFWS to implement a single permit framework for bald eagles. The FWC is already coordinating with the USFWS on an agreement that will clarify under what circumstances federal authorization will be required to conduct activities that cannot be conducted consistent with the Bald and Golden Eagle Protection Act. Development of such an agreement will take time in part because the USFWS has not yet developed a draft permitting framework under BGEPA. Additionally, as new information becomes available on the effectiveness of the proposed conservation measures, this permitting framework may be revised. Changes to this Permitting Framework section will require stakeholder involvement and Commission approval. Any change in policy, including any revisions to this Permitting Framework, will be posted to the FWC website <<http://www.myfwc.com>>, after consultation with stakeholders and the public and upon approval by the Commission.

Unless otherwise specified, this section provides guidelines for activities that occur within 660 feet of any active or alternate bald eagle nest. The framework does not apply to lost or abandoned nests. An **active** nest shows evidence of breeding by a bald eagle pair during the current or most recent nesting season. An **alternate** nest has been used for nesting during the past five nesting seasons, but was not used during the current or most recent nesting season. An **abandoned** nest has not been used for nesting for more than five consecutive nesting seasons. The recommendations in the FWC Eagle Management Guidelines (below) no longer apply to abandoned nests, but the nest itself cannot be altered. A nest is considered **lost** if the nest tree is destroyed, or if the nest is destroyed by natural causes and is not rebuilt in the same tree within two nesting seasons. The USFWS (2006b) recommends protecting lost nests for three years, but the FWC uses a two-breeding-season period because this duration has been in place in Florida for several years. Future research on nest reactivation may provide information to justify revising these recommended protection periods.

The bald eagle nesting season is 1 October–15 May unless the young fledge before or after 15 May. The following sections identify activities that should not occur within 660 feet of a bald eagle nest during the nesting season unless monitoring is conducted. Nest monitoring must follow the protocol outlined in the Bald Eagle Monitoring Guidelines (USFWS 2007d), or subsequent versions.

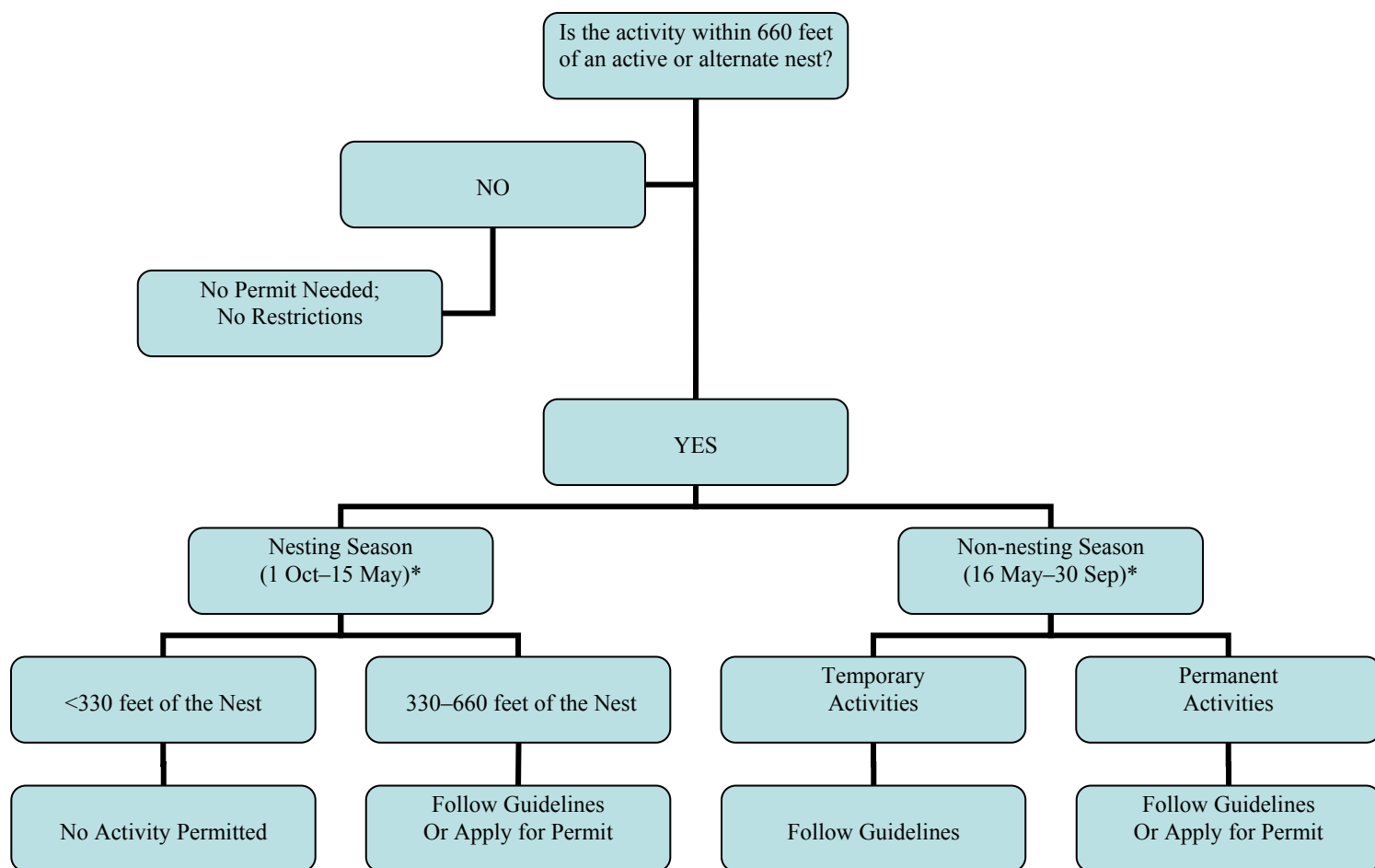
**A. FWC Eagle Management Guidelines (Activities That Do Not Require a FWC Eagle Permit)**

Activities that can be undertaken consistent with the FWC Eagle Management Guidelines do not require a FWC Eagle Permit. A process map (Figure 4) clarifies when application for a permit is recommended. Activities that do not require a permit include (1) those conducted at any time more than 660 feet from an eagle nest, (2) any temporary activity (defined below) conducted at any distance from a nest outside the nesting season, or (3) any activity conducted consistent with the FWC Eagle Management Guidelines.

*Activities that do not require a FWC eagle permit include (1) those conducted more than 660 feet from a bald eagle nest, (2) any temporary activity conducted outside the nesting season, or (3) any activity that follows the FWC Eagle Management Guidelines.*

The FWC recommends that the FWC Eagle Management Guidelines be followed unless a permit is issued. The FWC will not issue citations to or seek prosecution of persons whose activities are conducted consistent with the FWC Eagle Management Guidelines, even if the activity results in a “take” or disturbance of bald eagles. If it is unclear whether a proposed activity can be undertaken consistent with the FWC Eagle Management Guidelines, then the local FWC regional nongame biologist should be contacted <<http://myfwc.com/Contact/regnoffc.htm>> for guidance.

*The FWC will not seek to prosecute persons whose activities are conducted consistent with the FWC Eagle Management Guidelines, even if the activity results in a “take” or disturbance to bald eagles.*



**Figure 4. Process map for determining whether or not a FWC Eagle Permit would be recommended for a proposed activity near a bald eagle nest. For ongoing activities that are conducted at the historic rate, or for activities that may fall under similar scope to existing activities, refer to the FWC Eagle Management Guidelines for more detail.**

\* Unless nestlings fledge before or after these dates.

*Existing Uses Within 660 Feet of an Eagle Nest.*—Eagles are not likely to be disturbed by routine use of roads, homes and other infrastructure, routine agricultural operations, or pre-existing vegetation management of linear utilities occurring within 660 feet of an active or alternate bald eagle nest.

*Existing activities can continue at the same intensity with little risk of disturbing eagles.*

Therefore, in most cases, existing activities of the same degree (“similar scope”) may continue with little risk of disturbing nesting bald eagles and a FWC Eagle permit is not needed. However, some *intermittent, occasional, or irregular* activities may disturb eagles. For example, activities associated with auctions, field dog trials, or other sporting events may disturb a pair of bald eagles even though the events have been held at the same location for several years. In such situations, the activity should be adjusted or relocated to minimize potential disturbance to the eagles.

Any artificial structure that contains a bald eagle nest may be maintained, repaired, or upgraded when conducted consistent with the guidelines if: (1) the work will not remove or substantially alter the nest to the extent that further use for nesting is affected; **and** (2) the work is conducted outside the nesting season or when nest monitoring in accordance with the Bald Eagle Monitoring Guidelines (2007d) documents that the nest is not being used by eagles when the work occurs.

*New Activities Proposed Within 660 Feet of an Eagle Nest.*—The FWC Eagle Management Guidelines provided here describe measures to avoid disturbing bald eagles caused by new activities. To determine if an activity can be conducted consistent with these Guidelines, the FWC proposes to design a system to provide voluntary, self-service technical assistance through a web-based format. This format will provide data that will assist the FWC in evaluating the effectiveness of current rules and Guidelines. If proposed activities cannot be conducted consistent with the FWC Eagle Management Guidelines, then the local FWC regional nongame biologist should be contacted for guidance.

*If special circumstances that might increase or diminish the likelihood of disturbing nesting bald eagles apply to a project, or if these FWC Eagle Management Guidelines cannot be followed, then the local FWC regional nongame biologist should be contacted for guidance.*

The buffer zones around eagle nests that are provided in this section are based on those recommended in the National Bald Eagle Management Guidelines (USFWS 2007b). A distance of 1,500 feet is used to evaluate the degree to which a nesting pair of bald eagles has been exposed to human-related activities (Table 3). The National Bald Eagle Management Guidelines (USFWS 2007b) use a distance of one mile from the nest to evaluate this distance, but the FWC uses 1,500 feet because this distance has been used in Florida for several years. Recommendations for nests that are distant from human activities are subject to larger buffer zones (660 feet) because eagles in these nests are more likely to be disturbed by activities near the nest.

Activities that may disturb nesting bald eagles are divided into nine categories (A–I) based on their nature and magnitude:

### ***Category A***

- Building construction of one or two stories, and with a project footprint of  $\leq 0.5$  acre;
- Construction of roads, trails, canals, powerlines, or other linear utilities;
- New or expanded agriculture or aquaculture operations;
- Alteration of shorelines, aquatic habitat, or other wetlands;
- Installation of docks or moorings;
- Water impoundment.

### ***Category B***

- Building construction of one or two stories, and with a project footprint of  $>0.5$  acre;
- Building construction of three or more stories;
- Installation or expansion of marinas with a capacity of six or more boats;
- Mining;
- Oil or natural gas drilling or refining.

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**Table 3. The minimum allowed distances from an active or alternate bald eagle nest that a Category A or Category B activity can occur without the need for a FWC bald eagle permit. Activities proposed to occur closer to an eagle nest than the distances designated here should apply for a FWC Eagle Permit.**

	<i>No Similar activity within 1,500 feet of the nest</i>	<i>Similar activity closer than 1,500 feet from the nest</i>
<b><i>There is no visual buffer between the nest and the activity</i></b>	Categories A and B: 660 feet.	Categories A and B: 660 feet, or as close as existing activities of similar scope.
<b><i>There is a visual buffer between the nest and the activity</i></b>	Category A: 330 feet. Site work and exterior construction between 330-660 feet should be conducted outside the nesting season unless the Bald Eagle Monitoring Guidelines (USFWS 2007d) are followed.  Category B: 660 feet.	Categories A and B: 330 feet, or as close as existing activity of similar scope. Site work and exterior construction between 330-660 feet should be performed outside the nesting season.

For projects in categories A or B, exterior construction activities and site work within 330 feet of an active or alternate bald eagle nest should be conducted during the non-nesting season (16 May–30 September). Site work and exterior construction activities between 330 and 660 feet from the nest may be conducted during the nesting season when the Bald Eagle Monitoring Guidelines (USFWS 2007d) are followed. The use of dump trucks within 660 feet of an eagle nest should occur during the nesting season only when the Bald Eagle Monitoring Guidelines (USFWS 2007d) are followed. Minimize noise and human activity associated with interior construction during the nesting season.

Construction activities may occur during the nesting season if nest monitoring, following the Bald Eagle Monitoring Guidelines (USFWS 2007d), confirms that eagles have not returned to the nest by 1 October, or that nestlings have fledged before 15 May. In either situation, the regional FWC nongame biologist should be notified.

Managers of any project that follows these guidelines and use nest monitoring to allow construction within 660 feet during the nesting season must provide monitoring reports to the FWC. In addition to ensuring that the eagles are not disturbed while nesting, this will also provide data to analyze the appropriateness of the protective measures.

### ***Category C: Land Management Practices, including Forestry***

Certain land management practices benefit bald eagles and their habitats. Land management practices that retain old-growth native pines and that decrease the risk of catastrophic wildfire or an outbreak of timber disease are recommended. However, some management practices could “take” or disturb nesting bald eagles. A FWC Eagle Permit is not needed for land management practices occurring near an active or alternate bald eagle nest when undertaken consistent with the following guidelines.

*The FWC encourages land management practices that decrease the risk of catastrophic wildfire or an outbreak of timber disease, and that retain old-growth native pines.*

- Avoid clear-cutting within 330 feet of the nest at any time. This restriction may be lifted outside the nesting season for emergency provisions, such as to control disease outbreak or an insect infestation, especially when the health of the nest tree may be at risk. The regional FWC nongame biologist should be notified prior to initiating any emergency activities within 330 feet of the nest.
- Avoid construction of log transfer facilities and in-water log storage areas within 330 feet of the nest. Use of any existing road may continue at the historic rate, but avoid routing logging traffic within 330 feet of an active nest during the nesting season.
- Avoid timber harvesting, replanting, or other silvicultural operations, including road construction and chain saw and yarding operations, within 660 feet of the nest tree during the nesting season. If the Nest Monitoring Guidelines (USFWS 2007d) are applied, then activities between 330 and 660 feet may be allowed during the nesting season. If nest monitoring confirms that the nest is inactive, then the seasonal restrictions would not

apply. Selectively thin to retain at least 50% of the total canopy and the largest native pines within 660 feet of the nest. Take precautions to protect the nest tree.

- Prescribed burning within 330 feet of the nest or the installation or maintenance of firelines within 660 feet of the nest should be undertaken outside the nesting season. Precautions such as hand-raking of leaf litter and hand removal of excess fuel loads near the nest tree should be taken to decrease the threat of crown fire or fire climbing the nest tree, but these actions should not occur when eagles are present. If it is determined that a burn during the eagle nesting season would be beneficial, then these activities must be conducted when eagles are absent (*e.g.*, before eggs are laid or after the young have fledged). When appropriate to reduce fuel loads, land managers should consider mechanical treatment of the area within 330 feet outside the nesting season to allow for a safer growing-season burn. Smoke screening should be implemented to avoid impacting an active nest.
- Contact the regional FWC biologist if the use of heavy equipment within 50 feet of the nest tree is planned for an activity.

***Category D: Agriculture and Linear Utilities (Existing Operations)***

No buffer is necessary outside the nesting season. During the nesting season, routine agriculture or linear utility vegetation management are not anticipated to result in disturbance as long as those activities are conducted consistent with these guidelines (also see “Existing Uses Within 660 of an Eagle Nest”). For new or expanded agricultural operations, see Category A.

***Category E: Off-road Vehicles***

No buffer is necessary outside the nesting season. During the nesting season, off-road vehicles should not be operated within 330 feet of the nest or within 660 feet where visibility and exposure to noise are increased.

***Category F: Motorized Watercraft***

No buffer is necessary outside the nesting season. During the nesting season, loud vessels and concentrations of vessels (*e.g.*, commercial fishing boats or tour boats) should not be operated within 660 feet of the nest. Other motorized boat traffic within 330 feet of the nest should be minimized, and stopping should be avoided.

***Category G: Non-motorized Recreation such as Hiking, Camping, Birding, Fishing, Hunting, or Canoeing***

No buffer is necessary outside the nesting season. Activities visible or highly audible from the nest should not occur within 330 feet of the nest during the nesting season.

*The bald eagle nesting season in Florida is 1 October–15 May, unless the young fledge before or after 15 May.*

***Category H: Aircraft (Including Helicopters)***

No buffer is necessary outside the nesting season. During the nesting season, aircraft should not be intentionally operated within 1,000 vertical or horizontal feet of an eagle nest, except for authorized biologists trained in survey techniques and aircraft at airports or operating in prescribed landing and departure patterns. This guidance also does not apply to through-flights operating within FAA rules that unintentionally encounter eagle nests, but rather to intentional harassment of nests and eagles such as repeated passes of a nest for sight-seeing.

***Category I: Blasting or Other Loud, Intermittent Noises***

No buffer is necessary outside the nesting season for blasting activities that do not alter the landscape. During the nesting season, no blasting should occur within 660 feet of an active nest. Loud noises (including Class B fireworks) or blasting activities that alter the landscape within 660 of the nest should not occur during the nesting season, except where eagles have demonstrated tolerance for such activity.

**B. Activities That Do Not Require a FWC Eagle Permit if Federally Authorized**

In 2007, the USFWS proposed a draft permitting process under the Bald and Golden Eagle Protection Act. Because the FWC seeks to avoid duplication of effort, then the following actions permitted by USFWS will not need a FWC bald eagle permit provided that the federal permit is available for inspection while the permitted activity is being conducted. If federal rules defer to states or require proof of state authorization, then the actions listed below may need to be reevaluated.

1. *Modifications within the buffer zone of a lost nest.*—The FWC Eagle Management Guidelines prescribe protection buffers for lost nests for two consecutive nesting seasons. If federal authorization in the form of a “take” permit is obtained for an activity within the recommended buffer of a naturally-destroyed bald eagle nest prior to the nest being declared lost (*i.e.*, prior to two nesting seasons post-destruction), then no state permit will be required. Once a nest meets the definition of lost (see Glossary, p. ix: has been missing for more than two consecutive nesting seasons), then the buffer zone no longer applies, and therefore no eagle permit is necessary.
2. *Destruction of a bald eagle nest.*—Notwithstanding anything to the contrary herein, no state permit is needed if a federal “take” permit is obtained to destroy an abandoned nest.
3. *Previously permitted projects.*—The FWC will not refer the “take” of a bald eagle or parts thereof, or its nests or eggs, for prosecution if such “take” is in compliance with the terms and conditions of any USFWS bald eagle Technical Assistance Letter or any Biological Opinion or Incidental Take Permit issued under Sections 7 or 10 of the Endangered Species Act of 1973, as amended. Such letters, opinions, and permits shall serve as state authorization provided that the authorizations are issued prior to the effective date of the proposed state bald eagle rule, and that the FWC is provided with a copy of the federal authorization upon request.

4. *Salvage*.—Federal authorization to handle bald eagle carcasses, parts, or eggs for salvage purposes functions as state authorization, provided that the authorized individual carries a copy of the federal authorization.
5. *Possession for religious or cultural purposes*.—Federal authorization for the possession of bald eagles or their parts for religious or cultural purposes functions as state authorization, provided that the authorized individual carries a copy of the federal authorization.
6. *Possession of eagle parts for educational purposes*.—Federal authorization for the possession of bald eagle parts, nests, or eggs for educational purposes functions as state authorization, provided that the authorized individual carries a copy of the federal authorization, and all requirements of the federal authorization are being fulfilled.
7. *Airports*.—If federally authorized, eagles that pose an imminent jeopardy to aircraft safety and human life may be harassed by persistent, non-injurious disturbance without physical capture or direct handling by airport operators or their agents on airport property in order to prevent collisions.

### **C. Activities That Require a FWC Eagle Permit**

Except for the federally-authorized actions listed above, any action that cannot be undertaken consistent with the FWC Eagle Management Guidelines may require a FWC Eagle Permit to avoid a violation of rule. As such, any action that results in the taking, feeding, disturbing, possessing, selling, purchasing, or bartering of eagles or eagle parts requires a permit. As defined in 68A-1.004, F.A.C., “take” includes pursuing, hunting, molesting, capturing, or killing. Under the appropriate conditions (described in this section) the FWC will issue several types of permits for bald eagles including disturbance, scientific collection, and nest removal. Other, more general permits may be issued for certain activities listed below.

*Eagle Depredation at Agriculture or Aquaculture Facilities*.—Non-injurious disturbance of bald eagles that are depredating agriculture or aquaculture resources requires a FWC Eagle Permit. These permits will be issued solely in accordance with appropriate federal law. Permit provisions should include required husbandry techniques that reduce or prevent future problems when applicable or reasonable. No conservation measures are required, as these permits authorize only non-injurious harassment. Permits should be issued solely for persistent depredations rather than occasional events. If federal rules adequately protect bald eagles at agriculture or aquaculture facilities, then the need for a state permit will be reevaluated.

#### ***Activities That Involve Possession***

The following activities involve possession and therefore require a FWC permit. Existing rules and permitting programs for possession will not change. Applicants should be aware that federal permits for these actions are required unless federal rules or a FWC/USFWS agreement defers

the need for a federal permit when the action is authorized by the state. No conservation measures are necessary for educational display, rehabilitation, or scientific collection because these activities provide a conservation benefit to eagles.

1. *Educational Display*.—Any facility that wishes to possess live bald eagles for educational purposes must abide by caging requirements (Rule 68A-6, F.A.C.) and obtain a license for exhibition/public sale (372.921 Florida Statutes). Federal authorization for the possession of bald eagle parts, nests, or eggs for educational purposes functions as state authorization, provided that the authorized individual carries a copy of the federal authorization, and that all requirements of the federal authorization are met.
2. *Rehabilitation*.—Wildlife rehabilitators who possess a FWC Wildlife Rehabilitation permit (Rules 68A-6 and 68A-9, F.A.C.) for migratory birds also require federal authorization to possess bald eagles for rehabilitation purposes. No eagle nestling or fledgling that is attended by adult eagles should be handled for rehabilitation without first consulting the FWC regional nongame biologist, except when an emergency exists and inaction may endanger the nestling or fledgling.
3. *Scientific Collection*.—Research that might result in disturbance to bald eagles requires a Scientific Collection permit (Rule 68A-9.002, F.A.C.). Scientific Collection permits will be issued solely for projects with a sound scientific design and those that demonstrate scientific or educational benefits to the bald eagle. Federal authorization may also be required.
4. *Falconry*.—Rules pertaining to the use of birds of prey in Florida for falconry purposes are found in 68A-9, F.A.C. While the bald eagle currently may not be used in falconry, its status in falconry may change upon delisting. If the joint federal-state falconry rules provide for the possession of bald eagles for falconry purposes, then a falconry permit will be required. Conservation measures, if any, will be determined at a later date.

#### ***Activities That Require Emergency Authorization***

*Declared emergency*.—Emergency activities associated with recovery from a federal- or state-declared disaster will require an after-the-fact FWC Eagle Permit if the activities cannot be undertaken consistent with the FWC Eagle Management Guidelines. Such activities may include operation of equipment associated with rescue, road or utility repair, or clearing of debris in transportation or utility corridors. The FWC regional non-game biologist should be contacted within 30 days to discuss possible minimization measures, and conservation measures will be assessed on a case-by-case basis on the extent of the emergency and the impacts to eagles.

#### ***Activities That Require Nest Removal***

Except for the federally-authorized activities listed above, a FWC nest removal permit is required for authorization to remove or destroy any bald eagle nest, even when eagles are not present. Nest removal may be necessary because the nest presents a threat to human safety or a threat to the safety of bald eagles or their eggs or nestlings. Minimization and conservation

measures for these permits will be based on the extent of the emergency and the impacts to eagles.

An abandoned nest as defined in this management plan is still considered a nest by FWC for the purposes of state rule and it also remains protected under the Bald and Golden Eagle Protection Act. If the federal permitting process adequately provides for the conservation of Florida's bald eagles, then the need for a state nest-removal permit could be waived.

*A FWC Eagle Permit is required to remove or destroy any bald eagle nest, even an abandoned nest.*

**Airports.**—Bald eagle nests on or adjacent to airports could increase the risk of an aircraft/avian strike, and are therefore considered hazardous to human safety and to nesting bald eagles and their young. Federal law requires airports to develop and implement a Wildlife Hazard Management Plan (WHMP) to manage and control wildlife that presents a risk to public safety from aircraft collisions. These plans include techniques to avoid attracting eagles, and non-injurious harassment to prevent eagles from frequenting the property. Both a FWC nest removal permit and federal authorization are required for the removal of eagle nests on or adjacent to airports.

**Nest removal from artificial structures.**—When maintenance of an artificial structure requires the removal of an active or alternate bald eagle nest that is *not* an immediate threat to human safety, then the nest may be removed only outside the nesting season and only after a FWC nest-removal permit has been issued. Federal authorization may also be required. Minimization and conservation measures will be assessed on a project-by-project basis.

#### **D. Activities That May Require a FWC Eagle Permit**

A permit is not required to conduct any particular activity, but is necessary to avoid liability for take or disturbance caused by the activity. Therefore, any land-altering activity within 660 feet of an active or alternate bald eagle nest that cannot be undertaken consistent with the FWC Eagle Management Guidelines may require a FWC eagle permit. Activities beyond 660 feet do not ever require a FWC

Eagle Permit. The FWC will issue an eagle permit where the applicant provides minimization and/or conservation measures that will advance the goal and objectives of this management plan.

*No FWC Eagle Permit is required for any activity that is conducted consistent with the FWC Eagle Management Guidelines.*

#### ***Minimization Measures***

The following minimization measures are intended to reduce the potential for disturbing eagles and may be required as part of a FWC Eagle Permit.

### Construction-related Activities Within 660 Feet of an Eagle Nest

For projects that receive a FWC Eagle Permit, the following minimization efforts may be required:

1. Implement the Bald Eagle Monitoring Guidelines (USFWS 2007d) for all site work or exterior construction activities. Avoid exterior construction activities within 330 feet of the nest during the nesting season.
2. Avoid construction activity (except those related to emergencies) within 100 feet of an eagle nest during any time of the year except for nests built on artificial structures, or when similar scope may allow construction activities to occur closer than 100 feet.
3. Avoid the use or placement of heavy equipment within 50 feet of the nest tree at any time to avoid potential impacts to the tree roots. This minimization does not apply to existing roads, trails, or other linear facilities near an eagle nest, or to nests built on artificial structures.
4. Schedule construction activities so that construction farther from the nest occurs before construction closer to the nest.
5. Shield new exterior lighting so that lights do not shine directly onto the nest.
6. Create, enhance, or expand the visual vegetative buffer between construction activities and the nest by planting appropriate native pines or hardwoods.
7. Site stormwater ponds no closer than 100 feet from the eagle nest, and construct them outside the nesting season. Consider planting native pines or hardwoods around the pond to create, enhance, or expand the visual buffer.
8. Incorporate industry-approved avian-safe features for all new utility construction [www.fws.gov/migratorybirds/issues/APP/AVIAN%20PROTECTION%20PLAN%20FINAL%204%2019%2005.pdf](http://www.fws.gov/migratorybirds/issues/APP/AVIAN%20PROTECTION%20PLAN%20FINAL%204%2019%2005.pdf).
9. Retain the largest native pines for use as potential roost or nest sites.

### Land-Management Activities Within 660 Feet of an Eagle Nest

Most land management activities can be planned to comply with the FWC Eagle Management Guidelines and will not require a permit. For land management activities that receive a FWC Eagle Permit, the following minimization efforts are recommended:

1. Avoid the use or placement of heavy equipment within 50 feet of the nest tree to avoid potential impacts to tree roots. This minimization does not apply to existing roads, trails, or other linear facilities near an eagle nest or to nests built on artificial structures.
2. Plan the activity to avoid the nesting season to the greatest extent possible. Avoid disruptive activities when eagles are incubating eggs or when nestlings are close to fledging.
3. Schedule activities so that activities farther from the nest occur before activities closer to the nest.
4. Maintain the greatest possible vegetative buffer between land management activities and the nest.
5. Retain the largest native pines for use as potential roost or nest trees.

### ***Conservation Measures***

The conservation measures listed below will advance the management plan goal and objectives by (1) continuing to provide suitable eagle nesting habitats throughout Florida, and (2) funding monitoring, research, and management activities.

When an activity cannot be undertaken consistent with the FWC Eagle Management Guidelines (*e.g.*, when disturbance or take may occur), then a FWC Eagle Permit is recommended to avoid a possible violation of the FWC eagle rule.

*Conservation measures apply to any active or alternate bald eagle nest.*

When construction activities are planned inside the recommended buffer zone of an active or alternate bald eagle nest, then issuance of a FWC Eagle Permit will require conservation measures. The following conservation measures are considered to advance the goal of the management plan; alternatives submitted under option 5 will be reviewed by FWC staff to determine if they will advance the goal of the management plan. The number of conservation measures will depend upon the distance that the activity will occur from a bald eagle nest. For activities between 330 and 660 feet, one conservation measure is sufficient. For activities within 330 feet of a nest, two conservation measures should be included with the application and one of the two measures should be a \$35,000 contribution to the Bald Eagle Conservation Fund (#1, below). When activities would likely cause disturbance during only one nesting season, conservation measures need not be provided if they would only affect an alternate nest, but conservation measures should be provided if they will affect an active nest.

1. Contribute \$35,000 to the Bald Eagle Conservation Fund to support bald eagle monitoring and research.
2. Provide a financial assurance (such as a bond) in the amount of \$50,000.
3. Grant a conservation easement over the 330-foot buffer zone of an active or alternate bald eagle nest within the same or an adjacent county, or within the same core nesting area (Figure 3). When the buffer is only partially owned by the applicant, contribute an onsite easement over the portion of the 330-foot buffer zone to which the applicant holds title.
4. Grant a conservation easement over suitable bald eagle nesting habitat (see #5, below) onsite or offsite.
5. Propose an alternate conservation measure that advances the goal of the management plan based upon the particular facts and circumstances presented by the applicant.

Conservation measures are based on the following guidelines:

1. Conservation easements and financial assurances can be terminated, released, or returned to the landowner if the nest for which an activity is permitted is successful (produces at least one fledgling) for at least one of the three years after the permitted activity is completed; the burden of proof is upon the applicant. If a nest is lost to natural causes (*i.e.* strong winds, fire), the easement or bond may be released on the third year if eagles have not built a new nest within the buffer. Financial assurances that

are not returned to the landowner will be turned over to the Bald Eagle Conservation Fund.

2. Fee structure is based on the likelihood of disturbance to eagles; activities closer to a nest provide more conservation measures than activities farther away. As such, activities permitted within 330 feet of an active or alternate bald eagle nest should contribute \$35,000 to the Bald Eagle Conservation Fund as one of two conservation measures **and** provide an additional conservation measure.
3. The amount of fees paid outright is lower than fees paid as a bond because costs for FWC administration (including site visits) are less.
4. The fee amount is for calendar year 2008; the fee will be adjusted in subsequent years as specified below in the Monetary Contribution section (next page).
5. Suitable habitat for bald eagles will be evaluated based upon the following characteristics: within 1.86 miles of a permanent water body  $\geq 0.2$  square miles in size; contain a canopy of mature native pines or cypresses with several perch trees and an unimpaired line of sight (habitat in southern Florida may include mangrove or other native species); few land-use features (low density housing, industrial, etc.) and linear and point features (roads, powerlines, railroads, etc.) within 0.5 mile; ideally should be located in a previously identified bald eagle core nesting area.
6. Conservation easements must include at least the 330-foot buffer around an active or alternate eagle nest. Where the buffer is only partially owned by the applicant, an onsite easement may be placed over that portion of the property to which the applicant holds title. Easements may be placed only around nests that are in suitable habitat as described above.
7. Conservation easements must include provision of funds for management practices for the life of the easement. Management practices should include all activities listed under “Category C: Land Management Practices, including Forestry” and must be conducted by the landowner or other entity. The FWC will hold all easements and will ensure compliance with minimization and conservation measures.
8. Bald eagles often build multiple nests that are used alternately. Projects that either avoid potential take by avoiding impacts within the buffer zone or that receive a permit to conduct activities within the buffer zone may later be affected if an eagle pair initiates construction of a new nest within the project boundary. The FWC believes that projects that follow proper procedures for bald eagles should not have to provide additional conservation measures for any new eagle nest built on the site after the planning and permitting procedures have been completed. Therefore, other than the fact that the nest itself cannot be destroyed, such projects will not be expected to provide further conservation measures if bald eagles choose to move their nest location within the project site.

### ***Monetary Contribution***

The Conservation Measures portion of this management plan references a contribution to the Bald Eagle Conservation Fund. The fund was created by a Memorandum of Understanding between the USFWS, the FWC, and the Wildlife Foundation of Florida. The fund collects monetary contributions from the issuance of FWC Eagle Permits to applicants whose projects impact the buffer zones of active or alternate bald eagle nests. Funds may be spent on surveys,

monitoring, other research needs, or any other activity that promotes the conservation goal of bald eagles. The contribution amount will be adjusted over time to ensure that conservation funding keeps pace with inflation. Tying the change to the Consumer Price Index will ensure the contribution is adjusted relative to actual price increases or decreases. The FWC will use the “All Urban Consumers Consumer Price Index” (CPI-U), which is a reflection of the highest percentage of the population, and the CPI-U for the Southeast region. Information on the Consumer Price Index is available at [www.bls.gov/cpi](http://www.bls.gov/cpi).

In the first year following the effective date of the FWC bald eagle rule, the monetary contribution will be as specified above. In each subsequent year, this amount will change by an amount equal to the annual CPI-U for the Southeast region, and will be based on changes during the CPU calendar year (1 January–31 December). Adjustments to the contribution amount should take effect on 1 March of each year because the CPI for the previous year is usually not available until mid-February. The contribution will be calculated based on the date that a completed application is received by FWC.

For example, if the FWC bald eagle rule takes effect during April 2008, and if the appropriate contribution to the Bald Eagle Conservation Fund through February 2009 is \$35,000, then on 1 March 2009, the amount would change at the same rate as the CPI-U for the Southeast Region for the 2009 calendar year. If the CPI-U for the Southeast Region increased by 3%, then the appropriate contribution would be \$36,050 (3% of 35,000 = 1,050; 35,000 + 1,050 = 36,050).

The amount of the monetary contribution is due prior to conducting the permitted activities. Contributions may be applied toward annual monitoring surveys, research, purchase of eagle habitat, or other conservation activities. To offset local impacts of projects, preference will be given to land purchases within the same county or core nesting area.

### **Local Government Coordination**

The FWC has the constitutional authority and duty in Florida to manage wildlife in the state. The role of local government and other agencies in the regulation and management of wildlife must be well-defined. Local governments are statutorily required to include a conservation element in their comprehensive plans for the conservation, use, and protection of natural resources, including fisheries and wildlife, pursuant to Chapter 163, F.S. Coordination between the FWC and local governments in implementing components of this plan is essential for the successful conservation and management of bald eagles in Florida.

Local governments and regional or state agencies (e.g. water management districts) often are the first to conduct site inspections of properties where land-clearing or building permits are sought. These on-site inspections typically occur early in the permit process and provide the opportunity to confirm the presence or absence of bald eagles, and to inform landowners and developers about required FWC permits and authorizations. This action by local governments or other agencies provides a mechanism to assure that necessary FWC permits can be issued earlier in the permit approval process, prior to issuance of local government land-clearing or building permits.

Local governments and other agencies also play a substantial role in bald eagle conservation and management by providing protected and managed areas for eagles. Many local governments have created habitat-acquisition and management programs, which can provide important assistance in achieving the goal and objectives of this management plan. The FWC will coordinate with local governments and other agencies to help ensure that local land-acquisition programs and their implementing ordinances and policies are: (1) consistent with the goal and objectives of this management plan; and (2) focus on acquisition priorities for bald eagles and other important wildlife species.

Coordination between the FWC and local governments is crucial in efforts to increase funding for land acquisition and management. The FWC will encourage local governments and other agencies to support the FWC's efforts to assure adequate funding within the successor to the Florida Forever program.

Effective cooperation between the FWC and local governments can streamline the permit review process, improve regulatory compliance, and improve management of locally owned or managed lands that support bald eagles and other species of conservation concern. The FWC will assist and encourage local governments to perform the following activities:

- Remain current with FWC regulations related to the management of the bald eagles.
- Provide information to landowners, builders, and the general public about this management plan and regulatory prohibitions and permit options. These efforts will help promote compliance with FWC regulations and understanding of FWC incentives available to landowners.
- Include on permit applications for land-clearing or building activities a questionnaire to determine whether surveys have been conducted for bald eagles.
- Inspect parcels that are undergoing development review for the presence or absence of bald eagles, and when eagles are present (as confirmed through site visits by trained county staff, or environmental consultant reports/data) notify FWC staff to assure compliance with FWC eagle rules and guidelines.
- Consider requiring the issuance of a FWC Eagle Permit early in a project's permit-approval process before issuing local land-clearing or development permits.
- Notify the FWC of wildlife complaints or potential FWC rule violations through the Wildlife Alert number (1-888-404-3922). Coordinate with FWC law enforcement in providing supporting information for law enforcement investigations.
- Use Memoranda of Understanding with FWC to implement any of the above actions.

The FWC will:

- Create outreach materials for local governments, landowners, and the general public to foster better understanding of and compliance with this management plan and with other FWC regulations.
- Provide to managers of Florida's public lands the locations of all active and alternate bald eagle nests to allow for proper management of surrounding habitats.

- Cooperate with the Prescribed Fire Strike Team program set up as part of implementation of the Gopher Tortoise Management Plan and other fire strike teams to assist with management of bald eagle habitats on public lands.
- Lead efforts to attain additional funding through the successor to the Florida Forever program to allow local and state governments to acquire and manage additional conservation lands for bald eagles.
- Identify and prioritize through the FWC management-needs database potentially suitable sites on publicly owned or controlled lands that are in need of habitat restoration.
- Assist in establishing incentives in land development codes to better manage and restore publicly owned or controlled land to provide habitat for bald eagles and other wildlife.
- Schedule workshops with local governments and other agencies to provide information on this plan and FWC regulations applicable to bald eagles and information on the role of local governments and other agencies in providing compliance assistance with FWC rules.

## **Monitoring Plan**

### ***Population Monitoring***

FWC staff and others have monitored bald eagle nests in Florida since 1972. The information gathered during the past 35 years includes the locations of thousands of eagle nests and nesting territories, breeding productivity, core nesting areas, reproductive success, and population trends. Current information pertaining to the status and trends of the eagle population in Florida, as well as the current status of all known active eagle nests, is available online at [www.myfwc.com/imperiledspecies/eagle](http://www.myfwc.com/imperiledspecies/eagle). An online database for reporting new or previously undiscovered eagle nests in the state is anticipated to be available during spring 2008. Continued monitoring of bald eagle nests in Florida will provide the scientific data necessary to evaluate whether the objectives of this management plan are being achieved, and to determine whether future modification of this management plan and its guidelines may be warranted.

A survey of all known bald eagle nests in Florida is conducted annually between November and March of each nesting season. Surveys are flown by FWC biologists or contractors, and, for Everglades National Park, by National Park Service staff. New or previously undiscovered nests are searched for opportunistically during the regular survey flights. Replication of the survey methodology ensures that effort is comparable among years. All nesting and productivity data for bald eagles in Florida are compiled and analyzed to generate annual population estimates that are used to determine population trends.

Additional surveys were conducted during the 2006–2007 nesting season to determine the efficiency of the current protocol for finding previously undiscovered bald eagle nests and to locate new nests in potential bald eagle habitat.

FWC researchers have identified 16 core areas of bald eagle nesting activity (Figure 3). Changes in size, configuration, and location of these areas will be monitored, and their importance to the overall bald eagle population in Florida will be determined as new data become available.

The Draft Post-Delisting Monitoring Plan (USFWS 2007c) recommends that bald eagle nests be monitored every five years for three eagle generations (24 years). Monitoring eagle nests and nesting territories in Florida at a five-year interval would not provide adequate information to verify that the conservation objectives of this plan were being maintained. Additionally, annual surveys provide to contractors, consultants, land owners, and other interested parties the status of all known active and alternate eagle nests in the state, and provide a basis for declaring nests to be lost or abandoned. To ensure that the conservation objectives of this management plan are being maintained, the FWC recommends that annual surveying continues for the next 24 years (*i.e.*, until 2032). In addition to existing information about the status of eagle nests, biologists characterize the habitat and land-use changes within each nesting territory in Florida. This information may help to identify the factors that affect population changes, movements patterns, habitat changes, and other trends.

The continuation of FWC surveys of all known eagle nests and nesting territories is dependent on securing funding. If funding is limited, then the FWC may choose to survey only a sample of the eagle nests and nesting territories statewide annually, and to develop methods to estimate the overall population. This sub-sampling approach, if developed, will reduce funding costs while continuing to monitor the status of bald eagle nests and nesting territories statewide on an annual basis.

The FWC may partner with other agencies, colleges or universities, or non-governmental organizations in Florida (*e.g.*, Audubon's Eagle Watch program) to assist in the monitoring of bald eagle nests and nesting territories. Such partnering would be another way to possibly reduce monitoring costs while assuring that the appropriate data are collected. Every five years, the FWC will ensure that the data collected in Florida are comparable with data from other states to contribute to the national breeding population estimate.

### ***Project-Specific Nest Monitoring***

The Bald Eagle Monitoring Guidelines (USFWS 2007d) recommend monitoring an eagle nest if construction activities occur within 660 feet of the nest during the nesting season (1 October–15 May). These federal guidelines standardize the method for gathering data to evaluate eagle responses to activities that may cause disturbance. The guidelines are designed to: (1) describe normal nesting behavior of bald eagles; (2) identify specific behavioral responses of adult and young eagles that may warrant cessation of development activities; (3) propose the type and level of monitoring necessary to detect a change in normal eagle behavior; (4) prescribe a procedure for reporting to the USFWS and the FWC the observations that may be used to halt or modify construction activities; and (5) provide data to the FWC to evaluate the effectiveness of the current FWC Eagle Management Guidelines. The FWC has adopted the Bald Eagle Monitoring Guidelines (USFWS 2007d). To ensure compliance with these guidelines, the FWC may conduct random spot-checks of projects that are following the guidelines, as resources allow. The information obtained from these monitoring efforts may provide additional insight into the tolerance of bald eagles to human activities near their nests.

***Mortality Monitoring***

The FWC will evaluate the sources and extent of bald eagle mortality in Florida. These data, coupled with population monitoring, will aid in determining the cause or causes of any decline in the eagle population. An increased mortality rate or a rapid change in the causes of mortality may trigger a management action to address the problem. The FWC's Division of Law Enforcement and the USFWS have worked cooperatively to develop protocols for salvaging and storing eagle carcasses that are sent to the National Eagle Repository in Denver, Colorado. The USFWS has purchased freezers for FWC to store these carcasses until shipments to Colorado can be made. The FWC and USFWS have developed a mortality database that includes the cause of each eagle death.

## Education and Outreach

An active conservation education and outreach program will help ensure that the public understands the status of the bald eagle's recovery, knows what protections and management strategies maintain the population, and, most importantly, what citizens can do to aid the eagle's recovery.

Key messages for education and outreach efforts include:

- The bald eagle is an Endangered Species Act success story that is no longer threatened with extinction;
- Delisting does not mean that the bald eagle is no longer protected—state and federal regulations will continue to protect bald eagles, their nests, and their nesting territories; and
- The bald eagle's recovery is a result of prescribed management efforts that will continue, so that a population decline does not occur and trigger a need for future relisting of the species.

This education and outreach plan includes an emphasis on the following audiences:

- Local government planning and permitting staff
- Other federal or state governmental agencies
- Development professionals and private land owners
- Environmental consulting firms
- Conservation-oriented public and groups
- Media representatives
- Local, state, and federal law-enforcement personnel
- Managers of public lands
- Land-acquisition organizations
- Agricultural, silvicultural, ranching, and aquacultural interests
- Power companies
- Communication tower managers
- Landfill managers
- Veterinary associations
- Airport managers and Federal Aviation Authority representatives

Although some of these efforts may be concentrated within bald eagle core nesting areas, efforts will be statewide when possible to maximize benefits to eagle conservation in Florida. All education and outreach efforts such as handbooks, brochures, and PowerPoint presentations will be available for downloading from the FWC's bald eagle website

<[www.myfwc.com/imperiledspecies/eagle](http://www.myfwc.com/imperiledspecies/eagle)>. Bald eagle interest groups, stakeholders, and the media will be notified when these materials are available online. FWC staff will give presentations about bald eagle conservation in Florida to various interest groups.

All Audiences:

- Create and distribute a brochure that contains key messages about bald eagle recovery, provisions of this management plan, and actions that citizens can take to continue the conservation of eagles in Florida.
- Develop and maintain web pages that contain popular, scientific, legal, and permitting information on bald eagles.
- Create a PowerPoint presentation that is adaptable to different audiences.
- Create a 2-minute video about bald eagle recovery.
- Promote FWC's Wildlife Alert Program in all materials.

Developers, Consultants, Government Agencies, Private Landowners, and Land-Use Planners:

- Create a handbook that describes new regulations, permit options, and management guidelines. This will include bald eagle biology and recovery status, effects of development on nesting eagles, conservation and minimization measures of this management plan, landowner stewardship incentives, and how to comply with state and federal laws and guidelines.

Conservation-oriented Citizens:

- Publish articles in appropriate print and electronic media that highlight key messages about bald eagle biology, recovery status, new rules and guidelines, how and where to observe eagles, and what citizens can do to aid eagle conservation.

Law Enforcement Personnel:

- Provide information on the management implications of federal and state delisting efforts on conservation of bald eagles in Florida. Emphasize that regulations and guidelines will continue to protect eagles, their nests, and their nesting territories.

Land Managers and Land-Acquisition Agents:

- Provide information on the need for continued acquisition of bald eagle habitats, particularly parcels within core breeding areas. Give presentations to inform managers about the FWC's bald eagle website <[www.myfwc.com/imperiledspecies/eagle](http://www.myfwc.com/imperiledspecies/eagle)> and technical assistance available from the FWC to properly manage habitats around eagle nests.

Agricultural, Silvicultural, Ranching, and Aquacultural Interests:

- Prepare a fact sheet that includes information on land-use regulations, industry-specific management recommendations, and stewardship incentives.

Power Companies and Communication Tower Managers:

- Provide information on threats posed to eagles by powerlines and communication towers from electrocution or collision, and include recommendations for retrofitting utilities with "avian-friendly" hardware. Provide information on how to discourage eagles and other large raptors from perching on or near hazardous towers. Focus on areas with high raptor mortality, and near core bald eagle nesting areas

Landfill Managers and Veterinary Associations:

- Provide information about the importance of incinerating or quickly burying the carcasses of euthanized animals to prevent the deaths of eagles from secondary barbitol poisoning.

Airport Managers, Federal Aviation Administration Officials:

- Provide information on rules and regulations pertaining to bald eagles and their nests on or adjacent to airports. Provide information on how to discourage eagles from frequenting areas around airports.

**Research**

Much information concerning the life history and habitat requirements of the bald eagle is known from previous studies. Among numerous other topics published from Florida are the following: research on bald eagle nesting requirements (Broley 1947, McEwan and Hirth 1979, Wood *et al.* 1989); effects of habitat protection (Nesbitt *et al.* 1993); analyses of setback distances and disturbance levels (Nesbitt *et al.* 1993, Millsap *et al.* 2004); and habitat use and movements (Wood 1992, Wood *et al.* 1998, Mojica 2006). Despite the wealth of information gathered previously, much information remains to be obtained or refined to ensure the long-term conservation of bald eagles in Florida.

***Current or Planned Research***

The FWC has already secured funding for the following projects.

Maximize effort to locate new or previously unreported bald eagle nests.

The FWC is using Geographic Information System (GIS) software to evaluate potential bald eagle nesting habitat to locate new nesting territories. This project will determine the precision of the current survey and what modifications need to be made.

Determine the number of nests on properties that are protected.

Although only about 33% of all known bald eagle nesting territories in Florida occur on public lands (Sullivan *et al.* 2006, Nesbitt *et al.* in review), it is thought that many more territories are located on privately-owned lands that are protected via perpetual conservation easements or similar instruments. The FWC will analyze the protection status of lands surrounding all bald eagle nesting territories in the state.

Evaluate the effectiveness of the FWC Eagle Management Guidelines and determine the long-term effects of development near eagle nests.

As additional residential, commercial, or industrial developments encroach on previously undisturbed bald eagle nesting territories, it would be beneficial to test not only the proximate effects of encroachment on eagle nests, but also the long-term post-construction history of nesting territories. Data supplied via nest monitoring and through the self-service, technical assistance website will assist in this effort. The FWC will determine the population trends and demographic characteristics of bald eagles in Florida, and will assess the long-term effects of human activities on eagle productivity and survivorship. Results of these and other analyses will

guide future research, and may result in lessening of regulations related to buffer zones around eagle nests, should population trends warrant such changes.

### ***Future Research***

The FWC needs to identify funding sources for the following proposed projects.

#### Determine the appropriateness of the FWC Eagle Management Guidelines.

Upon delisting the bald eagle in Florida, the FWC proposes to determine the level of protection needed to ensure a stable or increasing eagle population. This would include evaluating the need for and if needed, the required size of buffer zones around active or alternate bald eagle nests, and how many nesting territories need to be protected to ensure a stable or increasing population.

#### Determine the frequency of nest reoccupation.

Current guidelines provide for buffer zones to be maintained around abandoned eagle nests for five consecutive nesting seasons. The FWC proposes to determine to what degree abandoned eagle nests may be reoccupied.

#### Determine success of the delisting protection measures.

The FWC proposes to compare bald eagle data from Florida collected post-delisting with data collected pre-delisting to determine changes in population trends, management effects, and territory occupancy potentially resulting from the delisting protections or modifications.

#### Investigate the utility of a population viability analysis (PVA) to address specific questions about bald eagles in Florida.

A PVA can be of great use to modeling anticipated threats to bald eagles, such as those from continued encroachment of nest buffers by human activities. A PVA may also allow the determination of a conservation “end point,” after which regulation of land-use of private lands that support eagle nests may no longer be necessary. Many components and parameters need to be considered to conduct an accurate PVA, including data on bald eagle survivorship, movements, and reproductive rates. The usefulness of a PVA will be evaluated based on questions that may be answered with available data.

#### Test the Bald Eagle Habitat Index of Viability (BEHIV) model to determine its value and accuracy as a tool for management.

The BEHIV analysis (Nesbitt *et al.* in review) uses GIS to score bald eagle nests in Florida based on several site-specific parameters. This analysis may identify the long-term stability of eagle nesting habitats, and could be used to aid the decision-making process when considering whether to regulate land-use within eagle nesting territories.

#### Study use of landfills by bald eagles in Florida.

Many eagles forage or loaf at landfills, where they may be exposed to secondary pentobarbital poisoning or other dangers. The FWC proposes to monitor the use of landfills by bald eagles in Florida, examining non-nesting roost populations, temporal use, age-class, land use, and other topics.

Study the use of artificial nesting structures by bald eagles in Florida.

The use of artificial structures as nesting substrates by bald eagles in Florida seems to be increasing. The FWC proposes to monitor the use and success of bald eagles nesting on these structures, and will determine if this behavior is a result of the increased availability of artificial substrates, an increasing willingness of bald eagles to nest in urban areas, and/or a decrease in the availability of suitable natural structures. Because most structures are not built to support bald eagle nests, and the nests may be considered hazards to human safety or property (as well as to the eagles and their eggs or nestlings), then the FWC will also examine ways to discourage eagles from nesting on these structures.

Study the movements of post-breeding adult bald eagles from Florida.

The FWC proposes to identify areas that support Florida's breeding bald eagles during the non-nesting season. This information is not well known and is important for understanding the risks and hazards posed to Florida's nesting eagles during migration and on their summering grounds. The FWC will partner with wildlife agencies in other states because most of Florida's nesting eagles summer outside the state.

Study how, when, and where Florida-produced eagles enter the breeding population.

The FWC proposes to study the tendency of eagles to return to their natal areas, sex ratios of adult eagles in the population, and habitat choices of eagles during their initial breeding attempt.

## CHAPTER 5: IMPLEMENTATION STRATEGY

### Priority Actions

A prioritized approach to this management plan will help maintain the conservation objectives and will facilitate the coordination necessary to successfully implement the plan. The actions in the summary list below are described in more detail in Chapter 4.

#### *Priority Actions to be Undertaken by the FWC*

- Approve and implement the proposed rule to protect bald eagles (68A-16.002, F.A.C.), simultaneously with removing the bald eagle from 68A-27.004 F.A.C.
- Implement the proposed permitting framework.
- Design a technical assistance system that operates effectively and efficiently to minimize FWC staffing requirements and provides optimal customer service and conservation benefit.
- Prepare press releases and print- or web-based materials to communicate to the concerned, conservation-oriented public and other stakeholders the new protection rules and FWC Eagle Management Guidelines.
- Develop and maintain a website to centralize information on bald eagles.
- Create a handbook for development professionals, local governments, water management districts, and private landowners that describes new regulations, stewardship incentives, and FWC Eagle Management Guidelines to be followed upon delisting of the bald eagle in Florida. Concentrate efforts to circulate the handbook and other presentations in regions that support bald eagle core nesting areas.
- Work with local governments to make them aware of FWC wildlife regulations.
- Work with water management districts and DEP to make them aware of FWC's regulation and habitat management guidelines for eagles.
- Work with Florida state agencies such as the Department of Transportation to develop agreements to streamline permitting and provide suitable conservation actions when needed.
- Apply for grants to fund implementation of additional conservation actions.
- Continue aerial surveys to monitor the reproductive success of bald eagles in Florida and the locations and status of their nests, and convey this information annually to stakeholders and other interested parties.

- Increase efforts to locate new or previously undiscovered bald eagle nests.
- Reevaluate the distance at which nesting bald eagles are disturbed.

***Priority actions to be undertaken by other agencies with assistance from FWC***

- Adopt language in land development codes and/or comprehensive plans to include wildlife protected under FWC rules, whether or not classified as imperiled.

***Priority actions for private citizens***

- Report new or previously undiscovered bald eagle nests to the FWC.
- Report violations of the bald eagle rule to the Wildlife Alert number (1-888-404-3922).
- Manage habitats on private lands to benefit bald eagles and other species of conservation concern.
- Support bald eagle conservation actions.

**Required Resources and Other Costs Associated with Implementation**

Many of the conservation actions identified in this management plan have been in place for many years; the FWC has been actively managing Florida's bald eagle population since the early 1970s. Ongoing conservation actions include annual monitoring of all known bald eagle nests and nesting territories, investigating and prosecuting illegal activities, recovering eagle carcasses, and maintaining a website for inquiries about bald eagles, their nests, and their nesting territories. The FWC will continue these activities upon delisting of the bald eagle.

Many FWC staff will assist with implementation of this plan. The FWC may require additional staff and funding to perform some or all of the following activities: continue the annual aerial nest surveys; update and expand the bald eagle website to provide information on permitting, the FWC Eagle Management Guidelines, and nest locations; implement incentive programs; work with local governments; and provide public education and outreach. Funds paid into the Bald Eagle Conservation Fund to compensate for permitted activities within buffer zones around eagle nests will provide the funding necessary for some of these activities. Expected annual costs of implementing the plan (in 2007 dollars) are as follows:

- \$ 6,950 – salary and benefits for Avian Taxa Coordinator for 10% time
- \$ 8,700 – salary and benefits for 5 Regional Nongame Biologists for 2.5% time each
- \$ 13,900 – salary and benefits for Avian Research Biologist for 25% time
- \$ 17,300 – salary for OPS Biological Scientist II 50% time
- \$ 14,800 – salary for OPS Fish and Wildlife Technician 50% time
- \$ 14,000 – salary for OPS Biological Scientist (database manager) for 25% time
- \$ 40,800 – salary and benefits for one new Law Enforcement officer

\$ 60,000 – salary and expenses for OPS Biological Scientist III to lead plan implementation  
\$ 80,500 – aerial survey costs (two years of funding is secured)  
\$ 5,000 – field and office equipment and supplies  
\$ 5,500 – salary for one Public Information Coordinator for 10% time  
\$ 8,000 – salary for Conservation Stewardship Coordinator for 20% time  
**\$315,080 – Total Annual Recurring Cost**

Expected one-time costs over five years are as follows:

\$ 17,500 – development and production of brochures, handbooks, and fact sheets  
\$ 25,000 – startup costs for plan implementation

Efforts to effectively implement the plan will be greatly enhanced by cooperation with and active participation of external agencies. In particular, local governments, water management districts, DEP, and the USFWS will play important roles in implementing this plan, and numerous other stakeholders have expressed an interest in bald eagle issues.

### **Implementation Schedule**

As noted above, conservation of the bald eagle through implementation of this management plan requires the cooperation of an array of agencies, managers, universities, landowners, and stakeholders. The following list is divided into priorities to be initiated in the first year and those to be initiated within the next five years to maintain the conservation goal and objectives for bald eagles.

#### ***Actions that the FWC should begin within the next 12 months***

- Approve and implement the proposed rule to protect bald eagles and their nests;
- Implement a permitting framework as described in Chapter 4;
- Prepare press releases and print -or web-based materials to communicate to all audiences the key messages, new protection rules and guidelines, and ways that citizens can contribute to maintaining recovery;
- Continue law enforcement activities such as patrol, enforcement, and education;
- Develop a website to centralize all available information on bald eagles;
- Create resources (*e.g.*, a handbook or PowerPoint presentation) for development professionals, county governments, water management districts, and private landowners that describe new regulations, stewardship incentives, and FWC eagle management guidelines developed to protect bald eagles upon delisting. Concentrate efforts to circulate the handbook and make presentations in regions that support bald eagle core nesting areas (Figure 3, page 7);

- Continue aerial surveys to monitor the reproductive success of bald eagles in Florida and the locations and status of their nests and nesting territories;
- Expand efforts to locate new and previously undiscovered eagle nests;
- Reevaluate the distance at which some nesting bald eagles may be disturbed;
- Work to enhance and manage bald eagle habitats on state-owned and state-managed lands;
- Apply for grants to fund priority actions/research;
- Initiate random spot-checks of construction projects that are following the FWC Eagle Management Guidelines;
- Review the information provided during nest-monitoring events and evaluate the annual nest-monitoring protocol to ensure that the information collected can assist in answering some of the most pressing management questions.

***Actions that local governments and other state agencies should begin within the next 12 months with assistance from the FWC***

- Adopt procedures within ordinances to assist and assure consistency with management guidelines and policies for bald eagles.
- Work to enhance and manage bald eagle habitat on state-owned and state-managed state-owned lands.

***Actions that the FWC should continue or implement during the next five years with assistance from outside entities***

- Continue aerial surveys to monitor the reproductive success of bald eagles in Florida and to update the locations and status of eagle nests and nesting territories;
- Determine the percentage of bald eagle nests that are protected on public lands or by perpetual conservation easements, or otherwise unlikely to be further developed;
- Continue to monitor and manage fish populations and aquatic habitats;
- Continue law enforcement activities such as patrol, enforcement, and education;
- Develop and maintain funding sources for continued monitoring and data analysis of bald eagle nests and nesting territories;
- Study long-term trends in the statewide bald eagle population;

- Study the frequency at which bald eagles reactivate an abandoned nest, and after how many years of non-use;
- Study the effectiveness of post-delisting regulations and recommendations;
- Test the value and accuracy of the BEHIV model (Nesbitt *et al.* in review) as a tool for habitat management;
- Study the long-term effects of development near bald eagle nests;
- Study the use of artificial nesting structures by bald eagles in Florida;
- Study the movements of post-breeding bald eagles after they migrate out of Florida;
- Study how, when, and where Florida-produced bald eagles enter the breeding population;
- Monitor the sources and extent of bald eagle mortality;
- Prepare a fact sheet that describes the need for continued acquisition of bald eagle habitats, particularly within core nesting areas;
- Create and distribute a brochure with key messages about bald eagle biology and recovery status, observing eagles, and what citizens can do to aid recovery;
- Prepare a fact sheet that includes information on land-use regulations, the threat posed to eagles by power lines, industry-specific management recommendations, and stewardship incentives;
- Create a video highlighting key messages and citizen involvement, and post this to FWC's website.

***Priority action to be undertaken by local governments with assistance from the FWC within the next five years***

- Offer expedited permit review and/or reduced development review fees to developers who voluntarily follow the FWC Eagle Management Guidelines.
- Adopt procedures within ordinances to assist and assure consistency with science-based management guidelines and policies for bald eagles.

**Management Plan Review and Revision**

To ensure that the conservation goal of this management plan is maintained, the FWC will review the status of Florida's bald eagle population based upon annual surveys of nests and nesting territories. This management plan will be reviewed and revised after five years (*i.e.*, in 2013). Significant changes to the management plan will be made with public input and Commission approval.

## **CHAPTER 6: ANTICIPATED IMPACTS**

### **Economic Impacts**

This preliminary assessment of economic impacts of delisting the bald eagle in Florida was based on the conservation strategies and actions proposed in this management plan.

#### ***Estimated cost to the FWC of implementing proposed conservation strategies and actions.***

Resources required to implement this bald eagle management plan are described in Chapter 5. The conservation actions proposed in the management plan will require a commitment of staff time to review applications for FWC Eagle Permits, develop landowner-incentive programs, coordinate research and monitoring programs, and develop and implement appropriate education and outreach programs. One-time costs associated with producing informational brochures over five years are estimated to be \$17,500. Annual costs for staff to implement the management plan are estimated to be \$315,080. Of these totals, the one-time cost to produce brochures (\$17,500), start-up costs (\$25,000), and approximately \$60,000 of annual costs represent new costs to the FWC, for which funding sources must be secured.

It is unlikely that the FWC can conduct additional activities with existing staff and resources. Management actions proposed in this plan will need to be prioritized along with other agency programs, species needs, and available resources. New funding and personnel dedicated to implementation of this plan are necessary to accomplish all outlined strategies and tasks. The exact costs will depend on the amount of resources that local governments and landowners can devote to bald eagle conservation in Florida.

#### ***Estimated cost to potentially affected parties of implementing the proposed conservation strategies and actions.***

The permits required under the proposed rules are no-cost permits. Conservation and minimization measures recommended under FWC Eagle Permits may increase costs incurred by permit applicants. The exact costs would vary from site to site depending on the size of the project, the size of the recommended buffer, and potential impacts to bald eagles. Sale of conservation easements around an active or alternate bald eagle nest will financially benefit some owners of private lands, and may also increase their eligibility to receive funds through state and federal land-management incentive programs.

Actions listed in the FWC Eagle Management Guidelines may lower costs to private landowners. By providing the option of following these guidelines instead of applying for a FWC Eagle Permit, developers can conserve bald eagle habitats rather than having to compensate for construction activities.

### **Social Impacts**

The bald eagle was chosen as the national symbol of the United States on 20 June 1782 because of its longevity, great strength, and majestic bearing. The bald eagle appears on the Great Seal of

the United States and represents freedom. President John F. Kennedy wrote that, “The Founding Fathers made an appropriate choice when they selected the bald eagle as the emblem of the nation. The fierce beauty and proud independence of this great bird aptly symbolize the strength and freedom of America.”

During the public comment period of this management plan, one social theme was repeatedly expressed: That delisting of the bald eagle could create the perception that there is less need for conservation and management. This misperception could potentially lead to an increase in the illegal take of or disturbance to eagles, which may negatively impact the population. If this were to happen, it would erode public confidence in the FWC’s ability to manage the state’s wildlife.

Conversely, successfully managing the public’s perception about the delisting of bald eagles in Florida will help to accomplish the goals of this management plan, and will enhance public confidence in the agency. The bald eagle has successfully recovered from its imperiled status. The FWC has the opportunity to make the public aware of this success story, and to assure the public that conservation of bald eagles will continue.

This management plan includes an Education and Outreach section that identifies the need to explain to key audiences the rules and guidelines that remain in place for the protection of bald eagles, their nests, and their nesting territories. This plan also commits that the current level of law enforcement will not decrease upon delisting of the eagle. These actions should create public awareness of the continuance of actions that protect bald eagles in Florida, and should generate support for this management plan.

The delisting process will place responsibility on local governments to remain involved with regulations and guidelines that protect bald eagles and their habitats under the guidance of this management plan. This responsibility will create a closer working relationship between FWC and local governments.

### **Ecological Impacts**

Upland and aquatic habitats that support bald eagles in Florida also support a large number of other species. Acquiring lands that support eagle nests, or placing buffer zones around eagle nests into perpetual conservation easements, will benefit a host of other plant and animal species. Continued conservation and management of aquatic habitats will provide healthy feeding areas for bald eagles and will benefit a multitude of other species that depend on Florida’s aquatic environments. Electrocution-related mortality of bald eagles and other birds may be reduced as a result of power companies incorporating “avian-friendly” devices and fittings on their equipment.

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- USFWS 2007. Proposal to create a permit process for bald and golden eagles.  
<<http://www.fws.gov/policy/library/07-2697.pdf>>.

**APPENDIX 2: LIST OF FWC STAKEHOLDERS**

Individuals on the FWC's stakeholder contact list, some of whom provided comments or other assistance to the bald eagle management team. \*A member of the "ad-hoc" bald eagle committee who participated in meetings, November 2007–January 2008.

<b>STAKEHOLDER</b>	<b>AFFILIATION</b>
Yvette Alger	St. Lucie County
Bonnie Basham	Standing Watch
Teresa Bishop	St. Johns County
Jan Brewer	St. Johns County
Karl Bullock	Golder Associates
Barbara Burgeson	Collier County
Gail Carmody	U.S. Fish and Wildlife Service
Resee Collins	U.S. Fish and Wildlife Service
Ron Concoby	Independent scientist
Lori Cunniff	Orange County
Amy Dierolf	Progress Energy
Seth Drawdy	Foley Land and Timber Company
Michael Drummond	Alachua County
Todd Engstrom	Florida Ornithological Society
Susan Farnsworth	Citrus County
Sammi Fitch	City of Cape Coral
*Monica Folk	The Nature Conservancy
Jerris Foote	Sarasota County Parks and Recreation
Shane Fuller	St. Joe Company
*Steve Godley	Biological Research Associates, Inc.
Phil Gornicki	Florida Forestry Association
Mary Ann Gosa	Florida Farm Bureau
Richard Hamann	Center for Governmental Responsibility
Dennis Hardin	Florida Division of Forestry
David Hartgrove	Halifax River Audubon Society
Clay Henderson	Holland and Knight LLP
Rob Hicks	Plum Creek Timber Company
Stephen Hofstetter	Alachua County
Wade Hopping	Wade Hopping Associates
Kim Iverson	South Atlantic Fisheries Management Council
Steve Kintner	Volusia County
*Tom Logan	Breedlove, Dennis & Associates, Inc.
*Laurie Macdonald	Defenders of Wildlife

*Candace Martino	U.S. Fish and Wildlife Service
Matt Osterhoudt	Sarasota County
Franklin Percival	Florida Cooperative Fish & Wildlife Research Unit
Barbara Jean Powell	Everglades Coordinating Council
*Doug Rillstone	FL Chamber Commerce/Developers Assoc.
Preston Robertson	Florida Wildlife Federation
Vicki Sharpe	Florida Department of Transportation
Arnette Sherman	West Volusia Audubon Society
Stan Simpkins	U.S. Fish and Wildlife Service
Parks Small	Florida Department of Environmental Protection
Caroline Stahala	U.S. Fish and Wildlife Service
*Tony Steffer	Raptor Management Consultants
Andy Stevens	Charlotte County
Becky Sweigert	Lee County
Tim Telfer	Flagler County
Kim Trebatoski	Lee County
Tom Trettis	Wilson Miller Engineering
Christina Uranowski	Osceola County
Carol Wehle	South Florida Water Management District
*Lynda White	Audubon of Florida
*Julie Wraithmell	Audubon of Florida

**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.