DEPARTMENT OF THE ARMY PERMIT
REGIONAL GENERAL PERMIT
SAJ-2010-01997
SAJ-105

Residential, Commercial, Recreational, and Institutional Fill and Restoration Activities in the West Bay Watershed Bay County, Florida

I. Permittee: Recipient of a verification of a Regional General Permit (RGP) SAJ-105 from the Regulatory Division of the U.S. Army Corps of Engineers (Corps), South Atlantic Division, Jacksonville District (SAJ).

NOTE: The term "you" and its derivatives, as used in this permit, means the Permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

II. Effective Date: March 3, 2026

III. Expiration Date: March 3, 2031

This RGP will be valid for a period of five years from the effective date specified above unless suspended or revoked by the District Engineer prior to that date. If SAJ-105 expires or is revoked prior to completion of the authorized work, authorization of activities that have commenced or are under contract to commence in reliance on SAJ-105 will remain in effect provided the activity is completed within 12 months of the date SAJ-105 expired or was revoked.

IV. Issuing Office: Regulatory Division, Jacksonville District.

V. Authorized Activities: The following activities are authorized by SAJ-105, in accordance with the terms and conditions of this permit:

This permit applies to discharges of dredged or fill material into non-Section 10 waters of the United States for the construction of residential, commercial, recreational, and institutional projects and restoration activities, and their components, which comprise and are necessary for the construction, use and maintenance of such projects. Project components may include, but are not limited to roads, parking lots, garages, yards, utility lines, temporary construction facilities and stormwater management facilities. Residential developments include multiple and single unit developments. Examples of commercial

developments include retail stores, light industrial facilities, research facilities, warehouses, distribution facilities, hotels, 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. Restoration activities include those designed to manipulate the physical, chemical, or biological characteristics of a site with the goal of returning or enhancing natural/historic ecological functions to a former or degraded aquatic resource. This permit applies only to the portions of Bay County, Florida as depicted by Exhibit 1, as being within the "SAJ-105 Boundary."

This RGP authorizes impacts to wetlands that are defined as altered and high quality. Altered wetlands are hydric pine plantations (silviculture lands), as estimated on the map of high quality and altered wetlands onsite (Exhibit 2). To the extent that silvicultural activities in any area of altered wetlands, as shown by Exhibit 2, have ceased for more than 5 years after the final cut, such wetlands shall be identified as high quality wetlands. The class of altered wetlands may also include ditches and borrow pits. High quality wetlands are all other jurisdictional wetlands, and include cypress domes/strands, bay/gallberry swamps, cypress swamps, titi swamps, seepage slopes, *Hypericum* bogs, emergent marsh and other similar areas.

Project design criteria (PDC) required to qualify for verification under SAJ-105:

1. Impacts to wetlands must meet all of the following criteria:

a. Impacts to altered wetlands shall not exceed 15% of the total altered wetlands in any one sub-basin. The area within a particular sub-basin to be used to make the 15% calculation does not include areas within Conservation Units (CUs) located within the sub-basin. Sub-basins are depicted in Exhibit 4. The 15% calculation is the equivalent of a 5.67:1.00 (85/15) preservation to impact ratio on an areal basis.

b. Projects may impact more than 15% of the altered wetlands within an individual project site if cumulative altered wetland impacts for all approved individual projects within the sub-watershed do not exceed 15%, as defined above, at any time. Examples of how this may occur include:

(1) An applicant proposes an individual project, which would impact 10 acres of the 100 acres of altered wetlands located within the proposed project site and preserve the remaining 90 acres of altered wetlands through placement under a conservation easement (CE). This example would result in an altered wetland overage of 33.3 acres, since 56.7 acres of altered wetland preservation would be required to comply with the 15% allowable impacts to altered wetlands within a specific sub-basin. The same applicant, or succeeding assignee, with a subsequent individual project, located at a different site within the same sub-basin, and containing a total of 5 acres of

altered wetlands, proposes to impact all 5 acres of altered wetlands for the project. The applicant may use 28.4 acres of the 33.3-acre overage of preserved altered wetlands from the first project to comply with the 15% requirement for the second project.

(2) An applicant proposes an individual project on a site with a total of 10 acres of altered wetlands. The applicant proposes to impact all 10 acres of the altered wetlands for the project. To comply with the 15% allowable impacts to altered wetlands requirement, the applicant would preserve 56.7 acres of altered wetlands through the placement of a CE, elsewhere within the same sub-basin in which the impact site is located.

c. Impacts to high quality wetlands:

(1) Must be limited to road and bridge 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. The impacts shall typically not exceed a width of 100 feet of combined filling or clearing at each crossing but may, on a case-by-case basis, be allowed up to a total width of 160 feet. Florida Department of Transportation (FDOT) roads may be allowed up to a width of 200 feet consistent with criteria in this section.

(2) The aggregate total filling or clearing of high quality wetlands within the RGP area shall not exceed 229 acres.

(3) The first preference for new road crossings of high quality wetlands and associated waters of the United States will be at existing silviculture road crossings. Road crossings at locations other than existing silviculture crossings are allowed if the crossing is designed and constructed to minimize impacts. In addition, for each road crossing of wetlands or other waters of the United States proposed at a point where no previous crossing existed, an existing silviculture road crossing within the sub-basin must be removed and the wetland connection restored (restoration in this section is defined as re-establishment of natural soil surface grades and natural re-vegetation.) Once all existing silviculture crossings have been restored within a particular sub-basin, this requirement will lapse.

(4) All crossings in high quality wetlands shall be designed so that reduction of capacity or impairment of the hydrologic conveyance is minimized to the maximum extent practicable. Bridging, co-locating utilities and infrastructure and directional boring under high quality wetlands is required to the maximum extent practicable. The following factors shall be considered when determining if bridging or directional boring under the high quality wetlands is practicable: (1) The degree of water flow within the high

quality wetland, (2) The length of the high quality wetland crossing, (3) The topography of the high quality wetland and associated upland, and (4) The degree to which a roadway would adversely affect the movement of wildlife expected to use the high quality wetland.

2. Buffers:

a. High Quality Wetland Buffers: Buffers will be required around all high quality wetlands within individual project sites. Except at road crossings, buffers adjacent to high quality wetlands shall be an average of 50 feet wide, with a minimum 30-foot width. Buffers shall be placed under CE, which must substantially comply with the CE template in Exhibit 5.

b. Stream and Tributary Buffers: Buffers will be required around all natural streams and tributaries located in CUs, except at bridges and crossings. Buffers can consist of high quality wetlands, altered wetland, or uplands The exact width of the buffer from the natural streams and tributaries located in CUs shall be evaluated and determined during Individual Project review. However, the buffer along natural streams and tributaries located in CUs shall be a minimum of 100 feet as measured from the edge of the stream or tributary.

c. Protection: All buffers, whether upland or wetland, will be preserved and maintained in a natural condition, except for the construction of boardwalks and on-grade trails. Buffers may be enhanced or restored to increase their ecological functions. If approved by the Corps, buffers may also be managed to provide an urban wildfire interface, as may be requested by local emergency management officials.

3. No discharge of dredged or fill material is allowed that would sever hydrological connection in high quality wetlands.

4. Discharge of dredged or fill material may sever hydrologic connection in altered wetlands; however, severed altered wetlands are treated as impacted wetlands for purposes of this RGP. The required 5.67:1.00 preservation to impact ratio for altered wetland impacts must be met, and compensatory mitigation must be provided for the area of altered wetlands within the severed area.

5. Proposed projects must include appropriate compensatory mitigation to replace functions lost as a result of permitted impacts in accordance with the following:

a. Compensatory mitigation consistent with the 2008 Mitigation Rule for individual project wetland impacts may be satisfied using:

(1) Federal mitigation bank (MB) credits from approved MBs.
(2) Permittee-responsible mitigation within designated CUs in accordance with a mitigation plan approved by the Corps.

(3) Onsite permittee-responsible mitigation in accordance with a mitigation plan approved by the Corps.

b. The Corps on a case-by-case basis may approve compensatory mitigation projects located within the CUs or within individual project sites in accordance with the 2008 Mitigation Rule. CEs shall be placed over areas on which compensatory mitigation projects are located, in the form of Exhibit 5. Exhibit 5 lists the activities that are prohibited and those that are allowed within compensatory mitigation project areas within CUs or within individual project sites, unless otherwise prohibited or modified by the specific compensatory mitigation plan for the site.

c. For compensatory mitigation credits and debits defined in terms of functional units using the UMAM assessment method, each acre of impact to altered wetlands shall be valued at 0.53 FU, and each acre of impact to high quality wetlands shall be valued at 0.87 FU. For MB credits and debits that were previously defined in terms of functional units using the WRAP assessment method, each acre of impact to altered wetlands valued at 0.65 FU, and each acre of impact to high quality wetlands valued at 0.92 FU.

d. Compensatory mitigation will occur prior to or be implemented concurrent with permitted impacts.

e. Compensatory mitigation required for projects authorized by this RGP will be maintained in perpetuity in the enhanced/restored ecological condition, as described in the individual project's compensatory mitigation plan.

6. Conservation units (CUs):

a. Five CUs in Exhibits 8 through 13 are excluded from development, must be preserved, and are subject to the restrictions described below.

b. CUs shall be divided between Type I CUs and Type II CUs, as shown in the SAJ-105 Conservation Units Map (Exhibit 8) and Exhibits 9 through 13.

c. CUs can only be used for conservation purposes, wetland or habitat mitigation, limited recreational purposes, sustainable forestry, and other allowable uses, activities and facilities. Allowable uses of Type I CUs are outlined within Exhibit 6 and allowable uses of Type II CUs are outlined within Exhibit 7.

d. Land Disturbance:

(1) Activities, which would result in “Land Disturbance”, are prohibited within CUs, except those as allowed in Exhibit 6 and Exhibit 7. Land Disturbance for the purposes of this RGP is defined as any manmade change of the land surface, including removing vegetative cover that exposes the underlying soil, excavating, filling, grading, grubbing, discing, blading, contouring, ripping, and root raking. Land Disturbance

includes areas covered by impervious surfaces such as roofs, concrete and asphalt. No new water withdrawal wells shall be installed within the CUs.

(2) A total of 183 acres (1% of area within Type I and Type II CUs) may be impacted by land disturbance. This total does not include impacts associated with pervious hiking and biking trails, pervious horseback riding trails, and boardwalks.

(3) Areas that are temporarily impacted by Land Disturbance activities will not be included in the 100-acre cap. Temporary impacts are defined as areas where natural soil surface grades have been re-established and appropriate vegetation is naturally re-emerging no later than the 365th day following the date that the Land Disturbance began. Replanting of some areas of Land Disturbance may be required on a case-by-case basis, as determined by the Corps, during the Corps' review of proposed Land Disturbance activities.

(4) The acreage of disturbance to altered wetlands within a CU must be offset by an equal acreage of altered wetlands outside of the CU but located within the same sub-basin (Land Disturbance Offset).

e. Prior to initiation of construction, written approval from the Corps is required for any uses, activities or facilities (projects) proposed to be constructed in CUs. Development proposals must include Conservation Unit Checklist (Exhibit 16) and be consistent with allowable uses, activities and facilities in the CUs. The applicant will be required to include an avoidance and minimization impact analysis with respect to the proposed uses, activities and facilities. Review by the Corps will include an evaluation of the total scale of the facility to ensure that the proposed use, activity or facility is limited and consistent with the preservation objectives of the CUs.

f. As part of each individual project authorization under the RGP, perpetual CEs shall be placed on portions of CUs equal to the percentage of the total acreage of approved projects in the sub-basin. CEs placed within CUs shall be recorded using the form in Exhibit 6 for Type I CUs and Exhibit 7 for Type II CUs, with proof provided to the Corps within 6 months of commencement of project construction.

(1) Acreages of CUs required to be progressively placed under CE shall be calculated as follows: Using the EMA area only, divide a given project's total approved site acreage (including upland, buffer, impact, and preserved areas) by the total developable acreage within its corresponding sub-basin (not including CU areas) to calculate the percentage of developable acreage utilized for the project. Then multiply the percentage of developable acreage utilized for the project by the total acres within the corresponding sub-basin's CUs to calculate the number of acres required to be placed under CE within the CU.

Once all CU acreage within the sub-basin has been placed under CE this requirement shall cease for any additional projects within the sub-basin.

(2) Sale or transfer of the underlying property within a CU may only be made to a governmental entity or a non-profit conservation/natural resource management entity. Prior to conveying a CU or any portion thereof or interest therein, St. Joe shall record CEs on such property, if not already subject to CE. The CE shall be in the form of Exhibit 6 for Type I CUs, Exhibit 7 for Type II CUs, Exhibit 15 for the Hydrologically Sensitive Area, and Exhibit 5 for CUs used for compensatory mitigation.

(3) CEs in the form of Exhibit 5 shall replace any other CEs for CUs used for compensatory mitigation.

(4) Within seven days of conveyance of any portion of or interest in a CU, St. Joe shall provide to the new owner a complete copy of the RGP, including the Biological Assessment (Exhibit 23), and the recorded CE. Written assurance that a complete copy of the RGP has been given and received shall be provided to the Corps by St. Joe within fourteen days of any such conveyance. The written assurance shall consist of a letter to the Corps stating that the conveyance has taken place and shall be signed by the appropriate representatives of St. Joe and the new owner.

(5) Acreages of CUs transferred or sold to governmental entities or non-profit conservation/natural resource management entities contributes to the total acreage required to be placed under CEs for corresponding watersheds.

g. Type I and Type II Conservation Units: As described in Section 1.2 of this decision document, CUs are divided between Type I and Type II and will be protected by CEs that limit the type of activities allowed within each type of CU. Type I CUs include higher quality wetlands and habitats and would be protected by more restrictive CEs. Type II CUs would be less restrictive and allow some development activities including road and bridge crossings and recreational activities.

(1) Perpetual CEs will be placed on Type I CUs. This easement shall be in the form of Exhibit 6.

(2) Perpetual CEs will be placed on Type II CUs. This easement shall be in the form of Exhibit 7.

h. The Principles of Forestry Management Plan (Exhibit 24) shall be utilized for all land management practices, as required in the FDEP EMA.

i. Crooked Creek/West Bay Conservation Unit: The natural streams and tributaries located within portions of the Crooked Creek/West Bay Type II CU as shown on Exhibit 14 (Hydrologically Sensitive Area Map), are further protected by the following additional conditions and restrictions:

(1) Bridging:

a. All road crossings over the natural streams and tributaries are required to be bridged where practicable. Bridging shall occur over the portion of a crossing that has a discernible channel with well-defined banks and flow. The exact length and cross section of a bridge shall be determined at the time of Individual Project Approval, based on professionally accepted engineering practice and the characteristics of the channel.

b. A maximum of six (6) non-bridge crossings will be allowed. The first preference for new non-bridged crossings will be at existing silviculture road crossings. Non-bridged crossings at locations other than existing silviculture road crossings are allowed if the crossing is designed and constructed to minimize wetland impacts.

c. For each non-bridged crossing proposed at a point where no previous crossing existed, an existing silviculture road crossing within the same sub-basin must be removed, and the wetland connection including any associated natural stream or tributary within the area of removal, shall be restored. Restoration activities must occur no later than February 15th of each year following the date of the initiation of construction of the new crossing. Projects authorized 45 days prior to February 15th may be completed by the following year. Once all existing silviculture crossings have been restored within a particular sub-basin this requirement shall lapse.

d. Combined filling or clearing at each non-bridged road crossing may not exceed 100 feet unless approved during individual project review. In no case may the crossing exceed 160 feet.

(2) Stormwater Management Systems: Must be designed to reduce flow velocity and hydraulic energy into natural streams and tributaries. Design considerations may include but are not limited to U-Type Concrete End walls with optional baffles and grates, U-Type Concrete End walls with engineered energy dissipater, structurally lined outfall aprons, plunge pool outfall aprons, and spreader swales. Vegetated natural buffers shall be utilized for stormwater purposes adjacent to natural streams and tributaries.

7. Conservation easements (CEs): There are 4 types of CEs recorded within the RGP area. CEs placed on lands within CUs (including Type I and Type II) and CEs placed on the Hydrologically Sensitive Area have different allowable uses than CEs on lands outside

of CUs and the Hydrologically Sensitive Area. PDC 6 above discusses CUs and their CE requirements. This section addresses the placement of CEs, as required by this RGP:

a. Perpetual CEs will be placed on all unimpacted wetlands on each project site; and will include any required buffers. CEs must be in place prior to commencing any activities authorized by this RGP or according to the timeframe specified in the individual project approval. The easement shall be in the form of Exhibit 5.

b. Perpetual CEs will be placed on areas within the subbasin, but outside of the CUs to compensate for individual project impacts greater than the allowed ratio. The easement shall be in the form of Exhibit 5.

c. Perpetual CEs will be placed on the Hydrologically Sensitive Area. The easement shall be in the form of Exhibit 15.

d. For areas to be used for compensatory mitigation outside of a MB, a CE will be placed on the mitigation area prior to commencement of any activities authorized by this RGP. The easement shall be in the form of Exhibit 5.

8. Wetland Identification: For the purposes of this RGP, in order to establish one wetland line for impacts on all individual project verifications, the identification and delineation of wetlands is the most landward line identified in accordance with the Corps of Engineers Wetlands Delineation Manual (1987) and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region (2010)) or the State of Florida methodology prescribed in Chapter 62-340, F.A.C. Wetland boundaries may be identified using aerial photo interpretation (API) and ground-truthing, and, if necessary, mapped using GPS and other Geographical Information System (GIS) mapping techniques. In much of the project area, historical aerial photography will be used to obtain pre-pine plantation wetland community signatures. A documented field verification based on ground-truthing with flagged wetland delineation lines will be required.

9. Stormwater management systems for projects authorized under this RGP area will be designed, constructed, operated, and maintained in accordance with the most recent FDEP Stormwater System Design and Review Criteria Manual. A signed statement by a Florida licensed engineer which verifies that the project conforms to the aforementioned manual will be submitted prior to permit issuance.

VI. <u>Geographic Area</u>: As shown in Exhibit 1, this RGP applies to non-navigable and non-tidal waters, including wetlands, which are located within the West Bay watershed. The RGP area also includes Crooked Creek and Burnt Mill Creek, which drain directly into West Bay. The RGP area is located within western Bay County. More specifically, the RGP project area is located north of the Intracoastal Waterway (ICW) and north and south of U.S. Highway 388 (US 388). It extends from US 77 to west of US 79. Five conservation units (Exhibits 8-13) are located within the boundaries of the RGP. In Bay County, Township, Range, and Sections are: T1S, R14W, S30-32; T1S, R15W, S15-36;

T1S, R16W, S10-15, & 22-36; T2S, R14W, S5-8, 16-21, & 30; T2S, R15W, S1-13, 16-22, 24-26, 28-30, & 35; T2S, R16W, S1-18, & 20-26; and T3S, R15W, S1-2 & 11-12.

VII. Excluded Uses: This RGP does not authorize:

1. Discharge of dredged or fill material into wetlands for septic tanks or drainfields.

2. Stormwater ponds within high quality wetlands.

3. Application of fertilizers, herbicides or pesticides in all buffers, except to the extent herbicides are used to control nuisance invasive vegetation.

4. New direct outfall pipes or stormwater channels that discharge into natural streams and tributaries within the Crooked Creek West Bay Hydrologically Sensitive Area.

5. This RGP does not authorize impacts to navigable waters of the United States (i.e. Section 10 Waters). For these projects, separate authorization would be required.

VIII. Pre-Application Notification and Application Procedures:

1. To be authorized under this RGP, the applicant must first submit a pre-application notification (PAN), including a draft application form ENG 4345 and satisfactory drawings, to the appropriate permitting section. This information will be discussed during standing monthly pre-application meetings with appropriate representatives from the USACE, USFWS, EPA, FDEP, FWC, and the NWFWMD (Team). The application must be provided 14 days prior to the scheduled meeting and include all of the information required in the Individual Project Approval Checklist (Exhibit 17) including the following information:

(a) Scope of the project - Type of project and how it comports with activities authorized by the RGP.

(b) Location / project boundaries - Exhibits showing general project location within the project area boundaries and specific location (1"=200' or other appropriate scale).

(c) Proposed wetland impacts. The number, type, location, and acreage of all wetland impacts, as well as drawings and other exhibits that sufficiently depict that the proposed project fully complies with this RGP. Under current guidance, the Preliminary Jurisdictional Determination form provided in Exhibit 18 may be utilized for each Individual Project Approval under this RGP. Wetland Determination Data Form - Atlantic and Gulf Coastal Plain Region must be submitted with the draft application prior to the formal pre-application meeting.

(d) Maps of high quality and altered wetlands onsite. The existing high quality/altered wetland map shall be used as a starting point for delineation of altered versus high quality wetlands (Exhibit 2). During or after wetland boundaries have been established, the resulting wetland areas will be classified and mapped by quality, as defined above. The procedure will use a combination of GPS technology, visual inspection of photography, timber stand data and ground-truthing.

(e) Prior to submittal of formal application, a site visit must be conducted to verify the wetland limits and quality.

(f) Mitigation Requirements: Applicant must provide documentation that the project complies with avoidance, minimization and compensatory mitigation requirements.

(g) Reticulated flatwoods salamander (*Ambystoma bishopi*): Locations of ponds that have been determined to have the potential to support reticulated flatwoods salamander are depicted on Figure 6 of the SAJ-105 Biological Assessment (Exhibit 23). If the proposed project is within 1500 feet of a documented potential pond, then a re-initiation of consultation with FWS will occur. Documentation of a site evaluation for the reticulated flatwoods salamander must be performed and documented through completion of the RGP-105 Flatwoods Salamander Pre-application Evaluation (Exhibit 19). The completed site evaluation must be provided at the pre-application meeting.

(h) Bald eagle (*Haliaeetus leucocephalus*): Provide documentation of the location of known bald eagle nests and distance from proposed project area. If a bald eagle's nest occurs within 660 feet of a project, provide documentation that shows that the applicant followed the FWS May 2007 National Bald Eagle Management Guidelines and has contacted the FWC for recommendations relative to Florida's Bald Eagle Management Plan and Permitting Guidelines (Exhibit 24). Appropriate protections must be incorporated in the project design and documentation must be provided showing how the appropriate protections will be implemented.

(i) Eastern indigo snake (*Drymarchon corais couperi*): The applicant must provide documentation that impacts to the eastern indigo snake have been evaluated using the EIS Effects Determination Key. The Permittee shall comply with the most current USFWS Standard Protection Measures for the Eastern Indigo Snake (Exhibit 22). The applicant must provide documentation that these protection measures will be implemented during the design and construction of the permitted work.

(j) Documentation of coordination by the applicant with the State Historic Preservation Officer (SHPO) regarding potential impacts on cultural and historical resources associated with a project is required. When a Cultural Resource Assessment Survey has been conducted, SHPO's written response to the report shall be included with the applicant's coordination documentation.

(k) The applicant shall provide documentation whether coordination

with the USFWS and/or FWC was required and/or initiated regarding any needed fish and wildlife surveys for the project area, and any measures needed to avoid, minimize, or mitigate adverse impacts to listed/protected fish and wildlife species and their habitats.

2. Once the comments received at the pre-application meeting are incorporated into the application package, the application for an individual project may be formally submitted to the Corps for processing. Authorization of the proposed work would be provided through a verification that the project meets the requirements of the RGP if performed in accordance with the terms and conditions specified in this permit instrument and any project-specific terms and conditions in the verification.

IX. Terms and Conditions:

1. **Reporting Address**: The Permittee shall submit all reports, notifications, documentation, and correspondence required by the general and special conditions of this permit to either (not both) of the following addresses:

a. For electronic mail (preferred): SAJ-RD-Enforcement@usace.army.mil (not to exceed 15 MB).

b. For standard mail: U.S. Army Corps of Engineers, Regulatory Division, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232-0019.

2. **Cultural Resources/Historic Properties:**

a. No structure or work shall adversely affect, impact, or disturb properties listed in the *National Register of Historic Places* (NRHP), or those eligible for inclusion in the NRHP.

b. If, during the ground disturbing activities and construction work within the permit area, there are archaeological/cultural materials encountered which were not the subject of a previous cultural resources assessment survey (and which shall include, but not be limited to: pottery, modified shell, human remains, ceramics, stone tools or metal implements, dugout canoes, evidence of structures or any other physical remains that could be associated with native cultures or early colonial settlement), the Permittee shall immediately stop all work and ground-disturbing activities within a 100-meter diameter of the discovery and notify the Corps at the addresses listed in the **Reporting Address Special Condition** within the same business day (8 hours). The Corps shall coordinate with the Florida State Historic Preservation Officer (SHPO) to assess the significance of the discovery and devise appropriate actions.

c. Additional cultural resources assessments may be required of the permit area in the case of unanticipated discoveries as referenced in accordance with the above Special Condition and, if deemed necessary by the SHPO or Corps, in accordance

with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend, or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO for finds under his or her jurisdiction, and from the Corps.

d. In the unlikely event that unmarked human remains are identified on non-federal lands; they will be treated in accordance with Section 872.05 Florida Statutes. All work and ground disturbing activities within a 100-meter diameter of the unmarked human remains shall immediately cease and the Permittee shall immediately notify the medical examiner, Corps, and State Archaeologist within the same business day (8-hours). The Corps shall then notify the appropriate SHPO. Based on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend, or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the SHPO and from the Corps.

3. **Erosion Control:** Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the work area into waters of the United States. The erosion control measures shall remain in place and be maintained until all authorized work is completed and the work areas are stabilized.

4. **Fill Material:** The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance in toxic amounts, in accordance with Section 307 of the Clean Water Act.

5. **Onsite Wetlands and Offsite Preservation Areas**: All unimpacted onsite wetlands and offsite preservation areas must be placed under a CE. Activities allowed within CEs and CE Instrument are included in Exhibit 5.

6. **Offsite Preservation Location**: Locations outside of an individual project boundary may be approved for use as the required preservation for a project. These offsite preservation locations must be abutting a designated CU or existing preservation area and must consist of a mosaic of upland and altered and high quality wetlands. See PDC 1.b.2 for an example of an offsite preservation scenario. Offsite preservation locations must be placed into CE in the form of Exhibit 5.

7. **Buffers**: Buffers will be required around all high quality wetlands within a project site. Except at road crossings, buffers adjacent to high quality wetlands shall be an average of 50 feet wide, with a minimum 30-foot width. Buffers shall be placed under CE in the form of Exhibit 5. All buffers, whether upland or wetland, will be preserved and maintained in a natural condition, except for boardwalks for dock access and at-grade trails. Buffers

may be enhanced or restored to increase their ecological functions. Application of fertilizers, herbicides, or pesticides is prohibited in all buffers, except for the use of herbicides for the eradication of exotic and invasive plants.

8. **Crossings**: For each crossing proposed at a point where no previous crossing existed, an existing silviculture road crossing within the same sub- watershed must be removed and the wetland connection including any associated natural stream or tributary within the area of removal, must be restored. Restoration in this section is defined as re-establishment of natural soil surface grades and natural re-vegetation. Restoration activities must occur no later than February 15th of each year following the date of the initiation of construction of the new crossing. Projects authorized 45 days prior to February 15th may be completed by the following year. Once all existing silviculture crossings have been restored within a particular sub-basin this requirement shall lapse.

9. **Conservation Easements (CE)**:

a. The permittee shall have any required CE, including a legal description, survey, and scaled drawings of the areas in question, prepared and sent for legal review and approval to the U.S. Army Corps of Engineers, Regulatory Division, Enforcement Section via electronic mail at SAJ-RD-Enforcement@usace.army.mil.

b. Within 30 days of U.S. Army Corps of Engineers' approval of the proposed easement, the permittee shall record the easement in the public records of Bay County, Florida. Within 60 days of the Corps' approval of the draft CE, the permittee shall forward a certified copy of the recorded easement to the Regulatory Division, at the addresses listed in the Reporting Address Special Condition.

c. The Permittee must show that it has clear title to the real property and can legally place it under a CE. Along with the submittal of the draft CE, the Permittee shall submit a title insurance commitment, in favor of the grantee, for the property that is being offered for preservation or mitigation. Any existing liens or encumbrances on the property must be subordinated to the CE. At the time of recordation of the CE, a copy of a title insurance policy written in favor of the FDEP must be provided to the Corps in an amount equal to the current market value of the property.

d. In the event the permit verification is transferred, proof of delivery of a copy of the recorded CE to the subsequent permittee or permittees must be submitted to the Corps together with the notification of permit transfer.

e. Grantee shall not assign its rights or obligations under a CE except to another organization qualified to hold such interests under the applicable state and federal laws, including §704.06 Florida Statutes, and committed to holding the CE exclusively for conservation purposes. The Grantee shall notify the Corps in writing of any intention to reassign the CE to a new grantee and the Corps must approve selection of the grantee. The new grantee must accept the assignment in writing and deliver a copy of the acceptance to the Corps. The CE must then be re-recorded and indexed

in the same manner as any other instrument affecting title to real property, and a certified copy of the recorded CE shall be furnished to the Corps.

f. Any required CEs must be recorded prior to commencing any activities authorized by this RGP or according to the timeframe specified in the individual project verification.

g. The required CU acreages must be placed under CE within six months from the date of issuance of individual project verification. St. Joe shall record CEs in CUs as described in PDC 6 of the permit instrument, using the form in Exhibits 6 and 7.

10. **Reporting and Monitoring Requirements**: By 15 February of every year in which impacts are authorized, St. Joe must provide an Annual Report. The Annual Report must include:

a. The total acreage of high quality and altered impacts approved.

b. The location and acreage of any mitigation activity undertaken.

c. The number and acreage of each type of CE listed in PDCs 6 and 7 above. CEs for projects authorized 45 days prior to February 15th may be recorded in the following year.

d. CUs conveyed to other owners.

e. The number and location of high quality wetland road crossings restored.

f. Activities undertaken within CUs including the total number of acres of land disturbance.

g. Other activities that may impact this RGP.

11. **Ledger**: St. Joe will maintain a GIS-based ledger and map depicting the amount, type and percentage of wetland impact and mitigation implemented in the EMA area. The Corps will provide St. Joe with information regarding the amount, type and percentage of wetland impact and mitigation implemented in areas not owned by St. Joe. Updated ledger balance sheet shall be submitted with each individual request for project approval. The ledger shall include the following by sub-watershed:

a. Total high quality and altered wetlands in the EMA area.

b. Total project size - uplands and wetlands total.

c. Project impacts - high quality and altered wetlands amount and percent of total.

d. Mitigation required and location.

e. Cumulative project high quality and altered impacts (acreage total and percentage).

f. Total high quality and altered wetlands remaining in the EMA area.

12. **Sale of Conservation Units**: Prior to the sale or transfer of a CU to a governmental entity or 501c(3) private conservation owner, St. Joe shall place CEs on such property to assure the perpetual conservation use of the CUs. The perpetual CE shall be in the form of Exhibit 6 for Type I CUs, Exhibit 7 for Type II CUs, and Exhibit 5 for CUs used for Compensatory Mitigation. CEs in the form of Exhibit 5 shall replace any other CEs for CUs used for compensatory mitigation. Within seven days of conveyance of any portion or interest of a CU, St. Joe shall provide to the new owner a complete copy of the RGP, including the Biological Assessment (Exhibit 23), and the recorded CE. Within fourteen days of any such conveyance St. Joe will provide a letter signed by the appropriate representatives of St. Joe and the new owner to the Corps stating that the exchange has taken place.

13. **Proposed Species and Critical Habitat**: If any species or critical habitat should become federally listed within the range of the permitted action, the Permittee is required to stop work and ask the Corps to re-evaluate effects on the species or designated critical habitat, and if needed, complete Section 7 consultation with the FWS or NMFS to address potential impacts to the species and/or designated critical habitat.

14. **As-Built Certification**: Within 60 days of completion of the work authorized by this permit, the Permittee shall submit as-built drawings of the authorized work and a completed “As-Built Certification by Professional Engineer” form to the Corps. The as-built drawings shall be signed and sealed by a registered professional engineer and include the following:

a. A plan view drawing of the location of the authorized work footprint, as shown on the permit drawings, with transparent overlay of the work as constructed in the same scale as the permit drawings on 8½-inch by 11-inch sheets. The plan view drawing should show all "earth disturbance," including wetland impacts and water management structures.

b. A list of any deviations between the work authorized by this permit and the work as constructed. In the event that the completed work deviates, in any manner, from the authorized work, describe on the attached “As-Built Certification by Professional Engineer” form the deviations between the work authorized by this permit and the work as constructed. Clearly indicate on the as-built drawings any deviations that have been listed. Please note that the depiction and/or description of any deviations on the drawings and/or “As-Built Certification by Professional Engineer” form does not constitute approval of any deviations by the Corps.

c. Include the Department of the Army permit number on all sheets submitted.

15. **Section 408**: Any proposed work that may alter or occupy a Civil Works project will require case-specific review by the USACE Mobile District in accordance with 33 USC 408 (Section 408) and approval prior to authorization under this RGP. Under the terms of 33 USC 408, any proposed modification requires a determination that such proposed alteration or permanent occupation or use of a Civil Works project is not injurious to the public interest and will not impair the usefulness of such work. For those Civil Works projects with Non-Federal Sponsors, Section 408 requests must be approved by the appropriate Non-Federal sponsor prior to submittal to the Corps Regulatory Office. Additional conditions may be required pursuant to Section 408 approval.

16. **40 CFR 121.7(d) Condition of General Water Quality Certification**: Prior to construction, activities qualifying for RGP SAJ-105 must receive an Individual Project Approval under Section IX of the St. Joe Ecosystem Management Agreement for Bay County and Walton County, Florida (Bay-Walton Sector Plan).

17. **15 CFR 930.4(a)(1) Florida Coastal Zone Management Program**: Prior to construction, activities qualifying for RGP SAJ-105 must receive an Individual Project Approval under Section IX of the St. Joe Ecosystem Management Agreement for Bay County and Walton County, Florida (Bay-Walton Sector Plan).

X. Discretionary Authority: Conformance with the descriptions and criteria contained herein does not guarantee authorization under this RGP. The District Engineer reserves the right to require that any request for authorization under this RGP be processed as an individual permit.

XI. General Conditions:

1. The time limit for completing the work authorized ends on **3/3/2031.**

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with the permit verification, you must obtain the signature and mailing address of the new owner in the space on the transfer page provided below and forward a copy of the permit verification and executed transfer page to this office to validate the transfer of the authorization.

5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

XI. Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403)

(X) Section 404 of the Clean Water Act (33 U.S.C. § 1344)

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. § 1413)

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or Construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 3 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

6. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 C.F.R. § 325.7 or enforcement procedures such as those contained in 33 C.F.R. § 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 C.F.R. § 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Shawn H. Zinszer
_____ _____
(DISTRICT ENGINEER) (DATE)
Brandon L. Bowman
Colonel, U.S. Army
District Commander

Attachments to Department of the Army Regional General Permit SAJ-105

Exhibit 1: SAJ-105 Boundary Map

Exhibit 2: High Quality/Altered Wetlands

Exhibit 3: Aerial Photo

Exhibit 4: Sub-watershed Map

Exhibit 5: Conservation Easement

Exhibit 6: Conservation Unit Easement for Conservation Units Type I

Exhibit 7: Conservation Unit Easement for Conservation Units Type II

Exhibit 8: Conservation Units Map

Exhibit 9: Conservation Unit 1 – Crooked Creek/West Bay

Exhibit 10: Conservation Unit 2 – Fannin Bayou/Warren Bayou

Exhibit 11: Conservation Unit 3 – Burnt Mill Creek/Doyle Creek Frontal

Exhibit 12: Conservation Unit 4 – Little Mill Creek

Exhibit 13: Conservation Unit 5 – Pine Log Creek

Exhibit 14: Hydrologically Sensitive Area Map

Exhibit 15: Hydrologically Sensitive Conservation Easement

Exhibit 16: Conservation Units Checklist

Exhibit 17: Individual Project Approval Checklist

Exhibit 18: Preliminary Jurisdictional Determination Form

Exhibit 19: RGP-105 Flatwoods Salamander Pre-Application Evaluation

Exhibit 20: National Bald Eagle Management Guidelines (USFWS, May 2007)

Exhibit 21: FWC Bald Eagle (Haliaeetus leucocephalus) Management Plan Handbook (FWC, June 2010)

Exhibit 22: Standard Protection Measures for the Eastern Indigo Snake

Exhibit 23: Biological Assessment

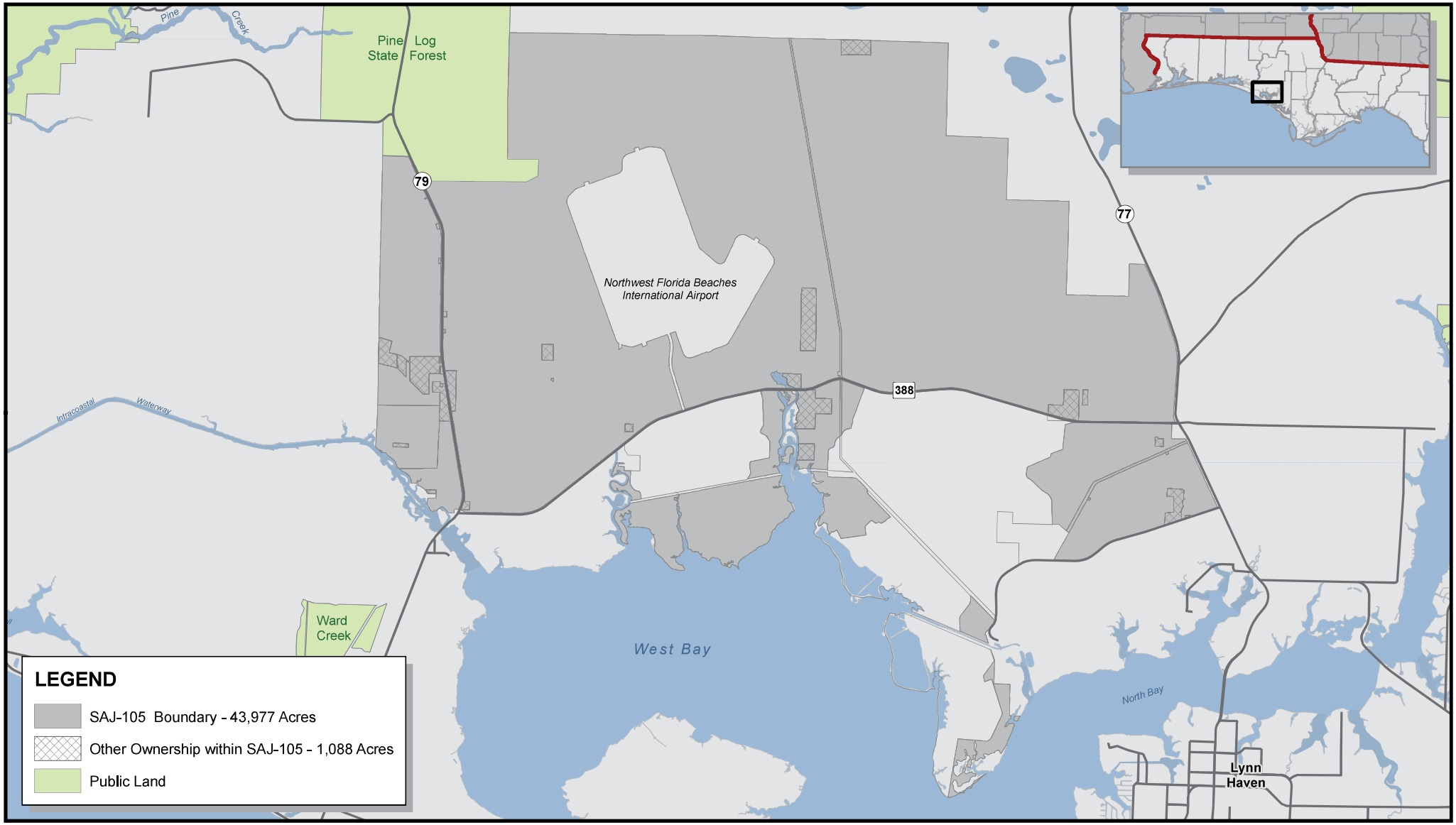
Exhibit 24: Principles of Forestry Management

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of the permit verification and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____ _____
(TRANSFEREE-SIGNATURE) (DATE)

_____
(NAME-PRINTED)

_____
(ADDRESS)

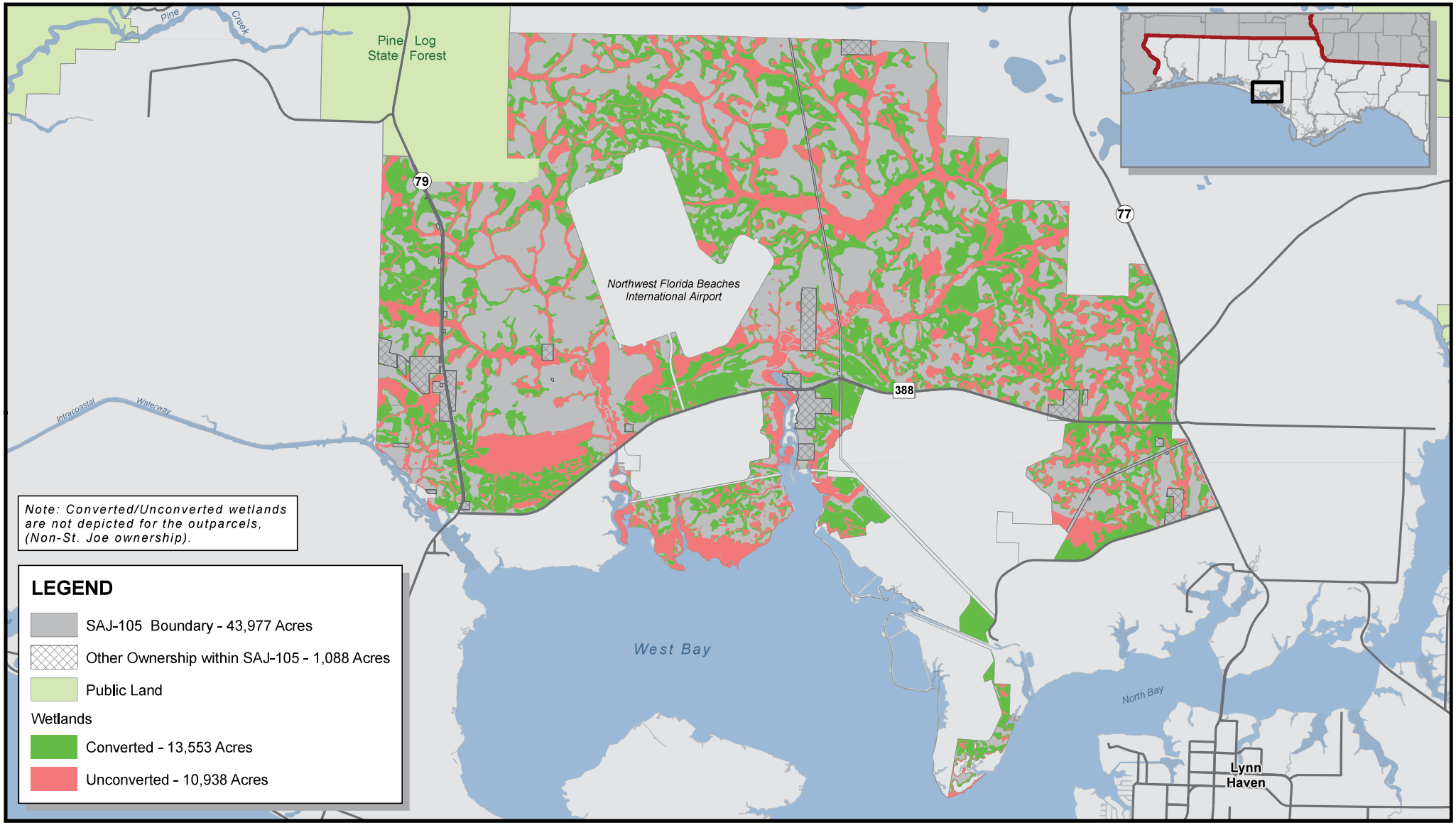


SAJ-105 BOUNDARY MAP

Total Acres - 43,977

EXHIBIT 01

MARCH, 2015



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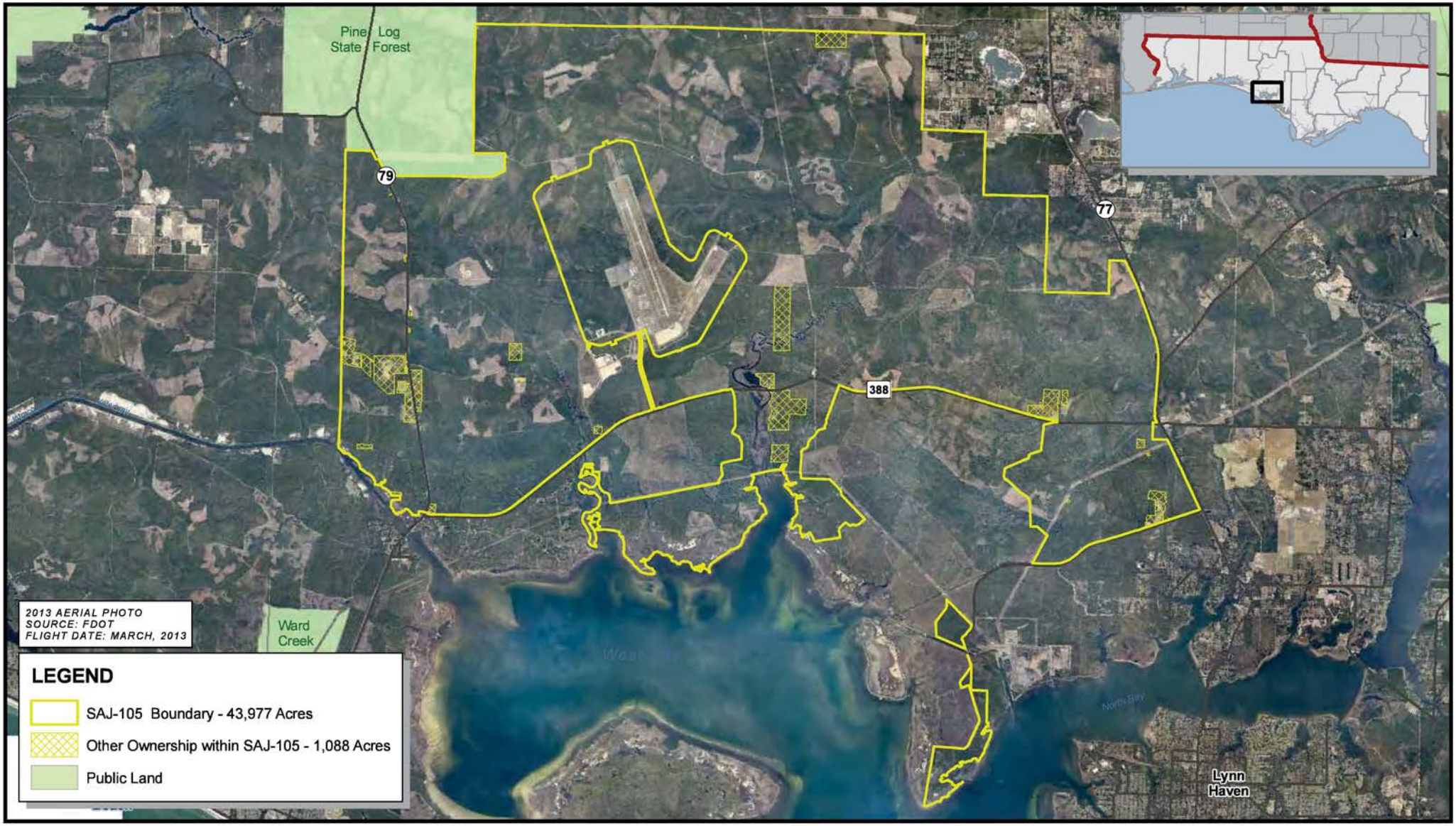
SAJ-105
CONVERTED/UNCONVERTED WETLANDS MAP

EXHIBIT 02

MARCH, 2015

0 1 2 3 4 5
MILES

1 INCH = 1.42 MILES
1:90,000



SAJ-105 2013 AERIAL PHOTO

EXHIBIT 03

MARCH, 2015

N W E S

0 1 2 3 4 5
MILES

1 INCH = 1.39 MILES

1:88,000



N
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FOR THE PURPOSE OF CALCULATING ANNUAL CONSERVATION UNIT PRESERVATION REQUIREMENTS, THE INTERCOASTAL WATERWAY-WEST BAY AND THE CROOKED CREEK WEST BAY SUB-WATERSHEDS CAN BE CONSIDERED AS ONE UNIT, SINCE THE INTERCOASTAL WATERWAY – WEST BAY SUB-WATERSHED WILL NOT CONTAIN A CONSERVATION UNIT.

SAJ-105
SUB-WATERSHED MAP

EXHIBIT 04
MARCH, 2015

0 1 2 3 4 5
MILES

1 INCH = 1.42 MILES
1:90,000

Exhibit 5: Conservation Easement Allowable Activities and Instrument

Activities Allowed in Conservation Easement Areas:

(1) Wetland and upland habitat enhancement and restoration.

(2) Wetland mitigation.

(3) Firefighting or fire suppression activities.

(4) Mechanical clearing of fire lanes/fire breaks as part of controlled burn activities, firefighting, or fire suppression.

(5) Installation of fences for land management or habitat protection purposes.

(6) Removal or extermination of nuisance or exotic animal species.

(7) Hunting of deer, quail, and other indigenous animal species pursuant to properly issued hunting permits only where consistent with the St. Joe Hunt Plan approved by and on file with Grantee at the time of the recording of the conservation easement.

(8) Installation of signs for land management, facilitation of passive recreation or habitat protection purposes.

(9) Maintenance of unpaved nature trails.

(10) Installation of interpretive signs for nature trails.

(11) Maintenance of existing drainage ditches to original as-built dimensions and configurations. All materials removed for the maintenance of existing ditches must be disposed of within an upland disposal site, which is not located within any preserved lands subject to this RGP.

Prepared by:

Return original or certified recorded document to:
(Insert name and address
of WMD or DEP)

Deed of Conservation Easement
Third Party Beneficiary Rights to the
U.S. Army Corps of Engineers

THIS DEED OF CONSERVATION EASEMENT ("Conservation Easement") is given this day of , 20 , by ("Grantor") whose mailing address is to the Choose an item. ("Grantee") with third party enforcement rights to the U.S. Army Corps of Engineers ("Corps") ("Third Party Beneficiary"). As used herein, the term "Grantor" shall include any and all heirs, successors, or assigns of the Grantor, and all subsequent owners of the "Conservation Easement Area" (as hereinafter defined); the term "Grantee" shall include any successor or assignee of Grantee; and the term "Third Party Beneficiary" shall include any successor or assignee of the Third Party Beneficiary.

WITNESSETH

WHEREAS, the Grantor is the fee simple owner of certain lands situated in County, Florida, and more specifically depicted on the location map in Exhibit "A" attached hereto and incorporated herein (the "Property"); and

WHEREAS, Permit No. ("Permit") and any modifications thereto issued by the Grantee authorizes certain activities which could affect wetlands or other surface waters in or of the State of Florida; and

WHEREAS, the U.S. Army Corps of Engineers Permit No. ("Corps Permit") authorizes certain activities in the waters of the United States and requires this site protection instrument over the lands identified in Exhibit B as mitigation for such activities;

WHEREAS, the Grantor, in consideration of the consent granted by the Permit or other good and valuable consideration provided to Grantor, is agreeable to granting and securing to the Grantee a perpetual Conservation Easement as defined in Section 704.06, Florida Statutes (F.S.), over the area of the Property described on Exhibit "B" ("Conservation Easement Area"); and

WHEREAS, Grantor grants this Conservation Easement as a condition of the Permit, solely to off-set or prevent adverse impacts to natural resources, fish and wildlife, and wetland functions; and

WHEREAS, Grantor desires to preserve the Conservation Easement Area in perpetuity in its natural condition, or, in accordance with the Permit, in an enhanced, restored, or created condition; and

NOW, THEREFORE, in consideration of the issuance of the Permit to construct and operate the permitted activity, and as an inducement to Grantee in issuing the Permit, together with other good and valuable consideration provided to the Grantor, the adequacy and receipt of which are hereby acknowledged, Grantor hereby voluntarily grants, creates, conveys, and establishes a perpetual

Conservation Easement for and in favor of the Grantee upon the Conservation Easement Area 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. **Recitals.** The recitals hereinabove set forth are true and correct and are hereby incorporated into and made a part of this Conservation Easement.

2. **Purpose.** It is the purpose of this Conservation Easement to retain land or water areas in their existing, natural, vegetative, hydrologic, scenic, open, or wooded condition and to retain such areas as suitable habitat for fish, plants, or wildlife in accordance with Section 704.06, F.S. Those wetland and upland areas included in this Conservation Easement which are to be preserved, enhanced, restored, or created pursuant to the Permit (or any modification thereto) and any Management Plan attached hereto as Exhibit "C" ("Management Plan") which has been approved in writing by the Grantee, shall be retained and maintained in the preserved, enhanced, restored, or created condition required by the Permit (or any modification thereto).

To carry out this purpose, the following rights are conveyed to Grantee by this Conservation Easement:

a. To enter upon the Conservation Easement Area at reasonable times with any necessary equipment or vehicles to inspect, determine compliance with the covenants and prohibitions contained in this Conservation Easement, and to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Conservation Easement Area by Grantor at the time of such entry; and

b. To proceed at law or in equity to enforce the provision of this Conservation Easement and the covenants set forth herein, to prevent the occurrence of any of the prohibited activities set forth herein, and to require the restoration of such areas or features of the Conservation Easement Area that may be damaged by any activity or use that is inconsistent with this Conservation Easement.

3. **Prohibited Uses.** Except for activities that are permitted or required by the Permit (or any modification thereto) (which may include restoration, creation, enhancement, maintenance, monitoring activities, or surface water management improvements) or other activities described herein or in the Management Plan (if any), any activity on or use of the Conservation Easement Area inconsistent with the purpose of this Conservation Easement is prohibited. Without limiting the generality of the foregoing, the following activities are expressly prohibited in or on the Conservation Easement Area (except as authorized or required by the Permit (or any modification thereof) or in a Management Plan which has been approved in writing by the Grantee):

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

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. Removing, destroying or trimming trees, shrubs, or other vegetation, except:

i. The removal of dead trees and shrubs or leaning trees that could cause damage to property is authorized;

ii. The destruction and removal of noxious, nuisance or exotic invasive plant species as listed on the most recent Florida Exotic Pest Plant Council's List of Invasive Species is authorized;

iii. Activities authorized by the Permit or described in the Management Plan or otherwise approved in writing by the Grantee are authorized; and

iv. Activities conducted in accordance with a wildfire mitigation plan developed with the Florida Forest Service that has been approved in writing by the Grantee are authorized. No later than thirty (30) days before commencing any activities to implement the approved wildfire mitigation plan, Grantor shall notify the Grantee in writing of its intent to commence such activities. All such activities may only be completed during the time period for which the Grantee approved the plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural, restored, enhanced, or created condition;

f. 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, clearing, and fencing;

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

h. Acts or uses which are detrimental to the preservation of the structural integrity or physical appearance of sites or properties having historical, archaeological, or cultural significance.

4. **Grantor's Reserved Rights.** Grantor reserves all rights as owner of the Conservation Easement Area, including the right to engage or to permit or invite others to engage in all uses of the Conservation Easement Area that are not prohibited herein and which are not inconsistent with the Permit (or any modification thereto), Management Plan, or the intent and purposes of this Conservation Easement.

5. **Rights of the U.S. Army Corps of Engineers ("Corps").** The Corps, as a third-party beneficiary, shall have the right to enforce the terms and conditions of this Conservation Easement, including:

a. The right to take action to preserve and protect the environmental value of the Conservation Easement Area;

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

c. The right to enter upon and inspect the Conservation Easement Area in a reasonable manner and at reasonable times to determine if Grantor or its successors and assigns are complying with the covenants and prohibitions contained in 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 set forth herein, and the right to require Grantor, or its successors or assigns, to restore such areas or features of the Conservation Easement Area that may be damaged by any inconsistent activity or use or unauthorized activities.

The Grantor, including their successors or assigns, shall provide the Corps at least 60 days advance notice in writing before any action is taken to amend, alter, release, or revoke this Conservation Easement. The Grantee shall provide reasonable notice and an opportunity to comment or object to the release or amendment to the Corps. The Grantee shall consider any comments or objections from the Corps when making the final decision to release or amend this Conservation Easement.

6. **No Dedication.** No right of access by the general public to any portion of the Conservation Easement Area is conveyed by this Conservation Easement.

7. **Grantee's and Third Party Beneficiary's Liability.** Grantee's liability is limited as provided in Sections 704.06(10) and 768.28, F.S. Additionally, Grantee and Third Party Beneficiary shall not be responsible for any costs or liabilities related to the operation, upkeep, or maintenance of the Conservation Easement Area.

8. **Enforcement.** Enforcement of the terms, provisions, and restrictions of this Conservation Easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights hereunder. Grantee shall not be obligated to Grantor, or to any other person or entity, to enforce the provisions of this Conservation Easement.

9. **Third Party Beneficiary's Enforcement Rights.** The Third Party Beneficiary of this Conservation Easement shall have all the rights of the Grantee under this Conservation Easement, including third party enforcement rights of the terms, provisions, and restrictions of this Conservation Easement. Third Party Beneficiary's enforcement of the terms, provisions, and restrictions shall be at the discretion of the Third Party Beneficiary, and any forbearance on behalf of the Third Party Beneficiary to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Third Party Beneficiary's rights hereunder. Third Party Beneficiary shall not be obligated to Grantor, or to any other person or entity, to enforce the provisions of this Conservation Easement.

10. **Taxes.** When perpetual maintenance is required by the Permit, Grantor shall pay before delinquency any and all taxes, assessments, fees, and charges of whatever description levied on or assessed by competent authority on the Conservation Easement Area, and shall furnish the Grantee with satisfactory evidence of payment upon request.

11. **Assignment.** 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 or entity qualified to hold such interests under the applicable state laws.

12. **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.

13. **Terms and Restrictions.** Grantor shall insert the terms and restrictions of this Conservation Easement (or incorporate the terms and restrictions by reference) in any subsequent deed or other legal instrument by which Grantor divests itself of any interest in the Conservation Easement.

14. **Written Notice.** 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.

15. **Modifications.** This Conservation Easement may be amended, altered, released, or revoked only by written agreement between the parties hereto or their heirs, assigns, or successors-in-interest, which shall be filed in the public records in County, Florida.

16. **Recordation.** Grantor shall record this Conservation Easement in timely fashion in the Official Records of County, Florida, and shall rerecord it at any time Grantee may require to preserve its rights. Grantor shall pay all recording costs and taxes necessary to record this Conservation Easement in the public records. Grantor will hold Grantee harmless from any recording costs or taxes necessary to record this Conservation Easement in the public records.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions, and purposes imposed with this Conservation Easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Conservation Easement Area.

Grantor hereby covenants with Grantee that Grantor is lawfully seized of said Conservation Easement Area in fee simple; that the Conservation Easement is free and clear of all encumbrances that are inconsistent with the terms of this Conservation Easement; all mortgages and liens on the Conservation Easement Area, if any, have been subordinated to this Conservation Easement; that Grantor has good right and lawful authority to convey this Conservation Easement; and that it hereby fully warrants and defends record title to the Conservation Easement Area hereby conveyed against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, ("Grantor") has hereunto set its authorized hand this day of , 20 .

,

☐ A Florida corporation or ☐ (*choose one*)

By: _____
(Signature)
Name:

Title:

Signed, sealed and delivered in our presence as witnesses:

By: _____ By: _____
(Signature) (Signature)

Name: _____ Name: _____
(Print) (Print)

STATE OF FLORIDA
COUNTY OF _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____, the person who subscribed to the foregoing instrument, as the _____ (title), of _____ _____ ☐ (corporation), a Florida corporation, or ☐ _____ _____ (*choose one*) and acknowledged that he/she executed the same on behalf of said ☐ corporation, or ☐ _____(*choose one*) and that he/she was duly authorized to do so. He/She is personally known to me or has produced a _____ (state) driver's license as identification.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA

_____
(Signature)

_____
(Name)

My Commission Expires: _____

Mortgagee (Lender) Joinder, Consent, and Subordination

For Ten Dollars ($10.00) and other good and valuable consideration, the adequacy and receipt of which are hereby acknowledged, , the owner and holder of a mortgage dated , given by (“Mortgagor/Borrower”) to (“Mortgagee/Lender”), encumbering the real property described on Exhibit "B" attached hereto ("Conservation Easement Area"), which is recorded in Official Records Book at Page ,(together with that certain Assignment of Leases and Rents recorded in Official Records Book , at Page , and those certain UCC-1 Financing Statement(s) recorded in Official Records Book , at Page , all in the Public Records of County, Florida (said mortgage, assignment of leases and rents, and UCC-1 Financing Statements, as modified, are hereinafter referred to as the "Mortgage"), hereby joins in, consents to and subordinates the lien of its Mortgage, as it has been, and as it may be, modified, amended and assigned from time to time, to the foregoing Conservation Easement granted to the Choose an item., as said Conservation Easement may be modified, amended, and assigned from time to time, with the intent that the Mortgage shall be subject and subordinate to the Conservation Easement.

IN WITNESS WHEREOF, this Mortgagee/Lender Joinder, Consent, and Subordination is made this _____ day of _____, 20____.

By: _____ _____
(Signature) (Mortgagee/Lender)

Name: _____

Title: _____
(Print)

WITNESSES:

By: _____ By: _____
(Signature) (Signature)

Name: _____ Name: _____
(Print) (Print)

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____ (print name), as _____ _____ (title) of _____ (Mortgagee/Lender) on behalf of the ☐ (corporation), a Florida corporation, or ☐ _____ (*choose one*). He/She is personally known to me or has produced a _____ (state) driver's license as identification.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA

_____
(Signature)

_____
(Name)

My Commission Expires: _____

EXHIBIT A

[LOCATION MAP]

EXHIBIT B

[LEGAL DESCRIPTION AND SKETCH OF CONSERVATION EASEMENT AREA]

EXHIBIT C

[MANAGEMENT PLAN OR “INTENTIONALLY LEFT BLANK”]

Exhibit 6: Conservation Unit Type I Easement Allowable Activities and Instrument

Activities Allowed in Conservation Easement Areas:

(1) Wetland and upland habitat enhancement and restoration.

(2) 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 West Bay Ecosystem Management Agreement and RGP-SAJ-105 ("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.

(3) Hunting, fishing, and birding.

(4) 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.

(5) Wetland mitigation as required by any future permit.

(6) 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 area.

(7) Reinstitution of fire regime, including necessary firebreaks, which mimics natural conditions.

(8) 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 this Regional General Permit.

(9) Activities needed to maintain in current condition, existing access, roads and ditches within and through the Conservation Units. These allowable maintenance activities do not include activities to relocate such access, roads and ditches.

(10) Nature centers, including single access roads. Nature centers shall only be located in uplands. Access roads to serve nature centers must comply with the terms set forth in this Regional General Permit.

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) with third party enforcement rights to the U.S. Army Corps of Engineers (the "Corps") (Third Party Beneficiary). 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; and the term "Third Party Beneficiary" shall include any successor or assignee of the Third Party Beneficiary.

WITNESSETH

WHEREAS, the Grantor is the sole owner in fee simple of certain lands situated in Bay 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 General Permit No. SAJ-105 (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 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;

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 West Bay 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 West Bay Ecosystem Management Agreement and RGP-SAJ-105 ("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 altered 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. Additionally, Grantee and Third Party Beneficiary shall not be responsible for any costs or liabilities related to the operation, upkeep, or maintenance of the Conservation Easement Area.

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, Florida. 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, Florida.

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:

_____
Print Name:

_____
By:_____
Print Name:
Title: _____

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this _____ day of _____, 2020, ___(name)_____ as _____(title)_____ of the Department of Environmental Protection. He/She is personally known to me or has produced _____ as identification.

WITNESS my hand and official seal at in the County and State last aforesaid this _____ day of _____, 20___.

_____
Notary Public

[Notary Seal]

_____
Print Notary Name
Commission Expiration: _____

Commission Number: _____

Exhibit 7: Conservation Unit Type II Easement Allowable Activities and Instrument

Activities Allowed in Conservation Easement Areas:

(1) Wetland and upland habitat enhancement and restoration.

(2) 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 West Bay Ecosystem Management Agreement and RGP-SAJ-105 ("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.

(3) Hunting, fishing, and birding.

(4) 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.

(5) Wetland mitigation as required by any future permit.

(6) 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 area.

(7) Reinstitution of fire regime, including necessary firebreaks, which mimics natural conditions.

(8) 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 this Regional General Permit.

(9) Activities needed to maintain in current condition, existing access, roads and ditches within and through the Conservation Units. These allowable maintenance activities do not include activities to relocate such access, roads and ditches.

(10) Nature centers, including single access roads. Nature centers shall only be located in uplands. Access roads to serve nature centers must comply with the terms set forth in this Regional General Permit.

(11) 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: (i) The degree of water flow within the wetland, (ii) The length of the wetland crossing, (iii) The topography of the wetland and associated upland, and (iv) 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 the terms set forth in this Regional General Permit.

(12) Certain recreational facilities including, but not limited to boat ramps, fishing piers, parks, picnic areas and pavilions, playgrounds/tot lots, nature facilities, but excluding any sports or ball fields, such as baseball fields, soccer fields, tennis courts, basketball courts and golf courses. Associated parking facilities are authorized, but must be constructed with pervious surfaces, unless it is impractical to use pervious surfaces. Boat ramps, fishing piers and access roads may cross wetlands, but impacts must be minimized to the maximum extent practicable. All other facilities must be located in uplands. Access roads to serve recreational uses and activities must use existing roads to the maximum extent practicable and otherwise must comply with the terms set forth in this Regional General Permit.

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) with third party enforcement rights to the U.S. Army Corps of Engineers (the "Corps") ("Third Party Beneficiary"). 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; and the term "Third Party Beneficiary" shall include any successor or assignee of the Third Party Beneficiary.

WITNESSETH

WHEREAS, the Grantor is the sole owner in fee simple of certain lands situated in Bay 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 General Permit No. SAJ-105 (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, 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;

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 West Bay 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 West Bay Ecosystem Management Agreement and RGP SAJ-105 ("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, 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 altered 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. Additionally, Grantee and Third Party Beneficiary shall not be responsible for any costs or liabilities related to the operation, upkeep, or maintenance of the Conservation Easement Area.

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, Florida. 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, Florida.

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:

_____

Print Name:

_____

By:_____
Print Name:
Title: _____

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this _____ day of _____, 2020, ___(name)_____ as _____(title)_____ of the Department of Environmental Protection. He/She is personally known to me or has produced _____ as identification.

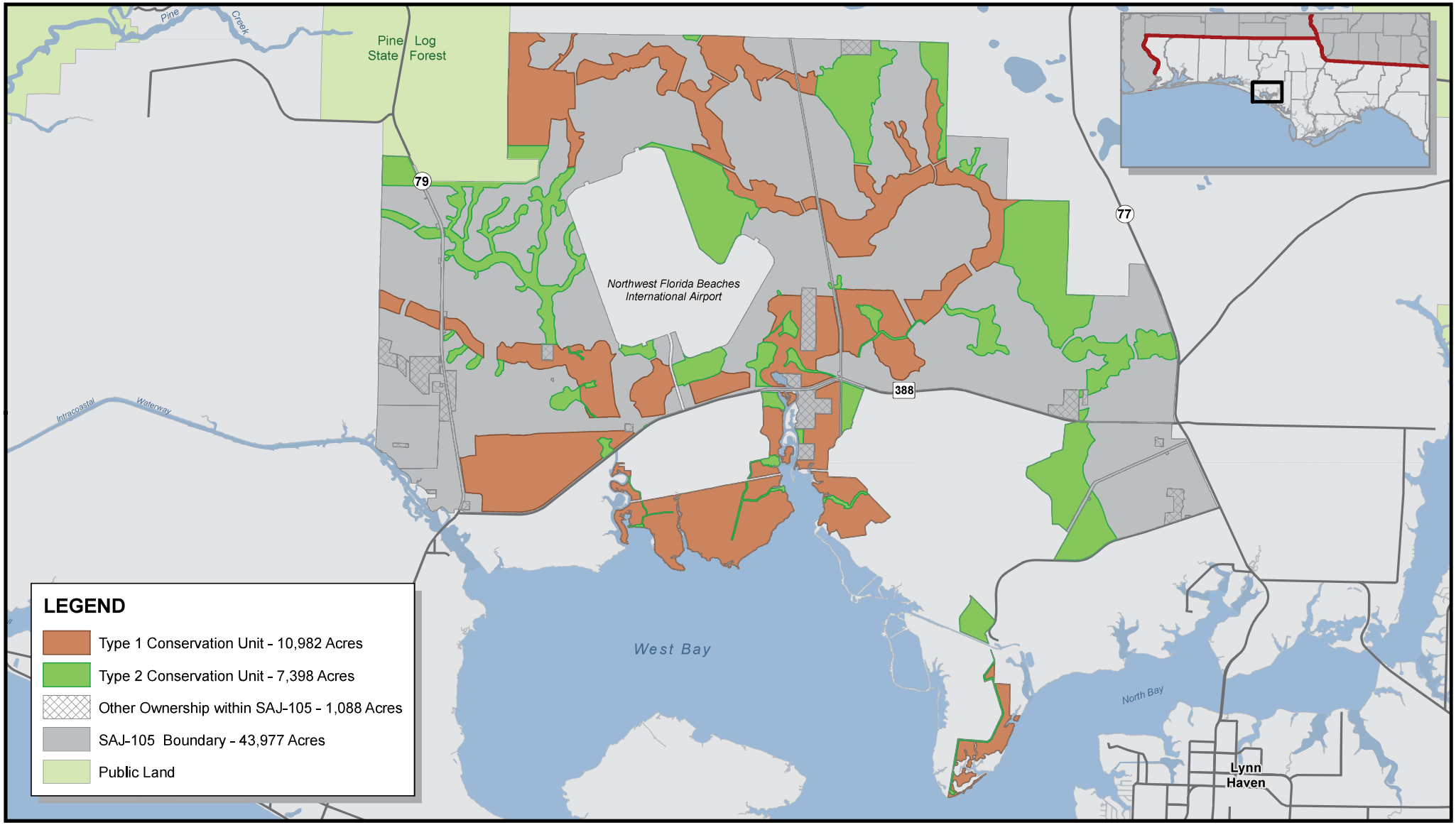
WITNESS my hand and official seal at in the County and State last aforesaid this _____ day of _____, 20___.

_____
Notary Public

[Notary Seal]

_____
Print Notary Name
Commission Expiration: _____

Commission Number: _____



SAJ-105 CONSERVATION UNITS MAP

EXHIBIT 08

MARCH, 2015

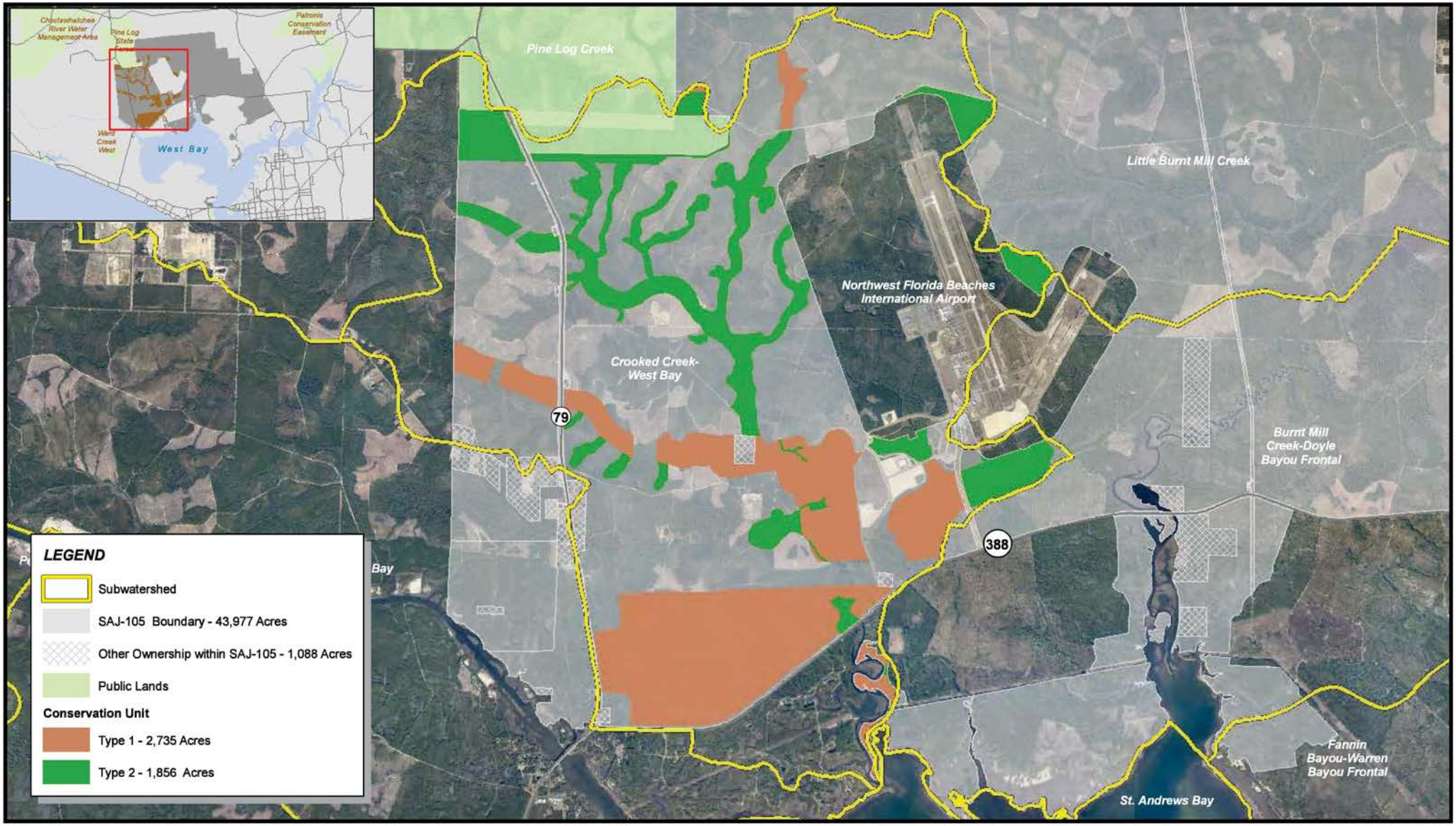
N W E S

0 1 2 3 4 5

MILES

1 INCH = 1.42 MILES

1:90,000



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SAJ-105 CONSERVATION UNIT MAP
CROOKED CREEK-WEST BAY - 4,591 ACRES

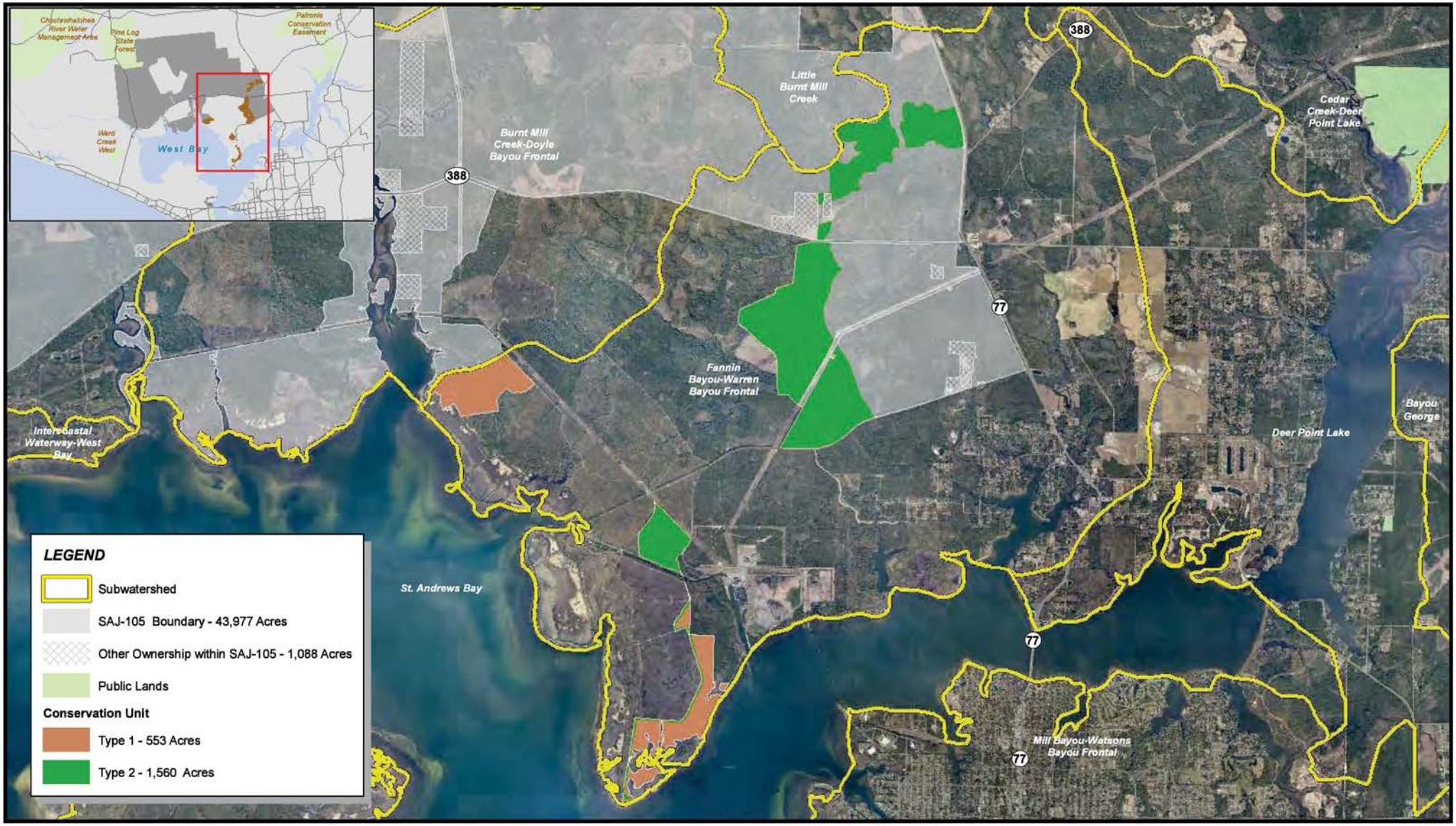
EXHIBIT 09
March, 2015

2013 AERIAL PHOTO

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Miles

1 INCH = 0.82 MILES

1:52,000



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SAJ-105 CONSERVATION UNIT MAP
FANNIN BAYOU-WARREN BAYOU FRONTAL - 2,113 ACRES

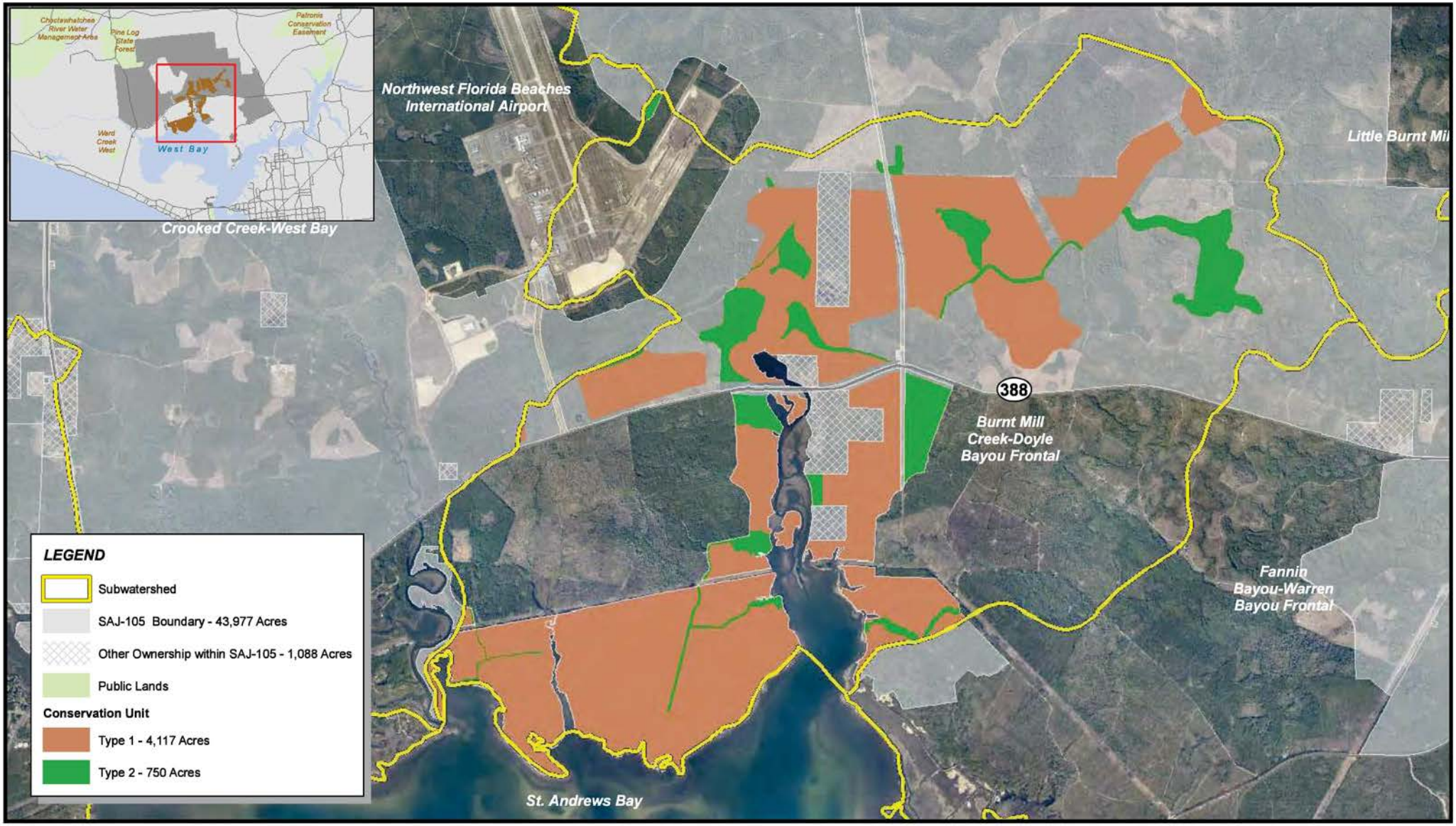
EXHIBIT 10
MARCH, 2015

2013 AERIAL PHOTO

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Miles

1 INCH = 0.95 MILES

1:60,000



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SAJ-105 CONSERVATION UNIT MAP
BURNT MILL CREEK-DOYLE BAYOU FRONTAL - 4,867 ACRES

EXHIBIT 11

MARCH, 2015

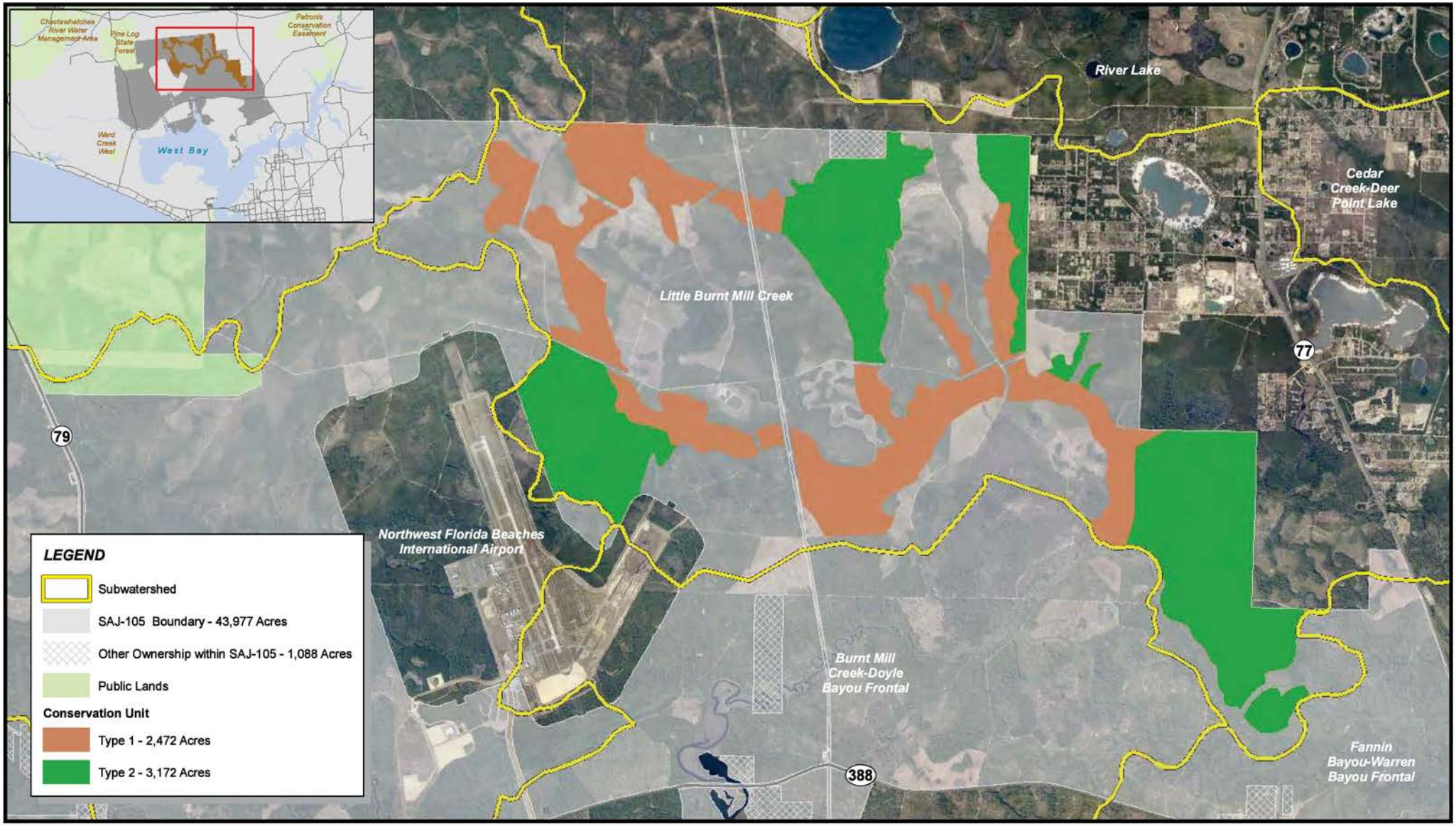
2013 AERIAL PHOTO

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Miles

1 INCH = 0.66 MILES

1:42,000



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SAJ-105 CONSERVATION UNIT MAP
LITTLE BURNT MILL CREEK - 5,644 ACRES

EXHIBIT 12

MARCH, 2015

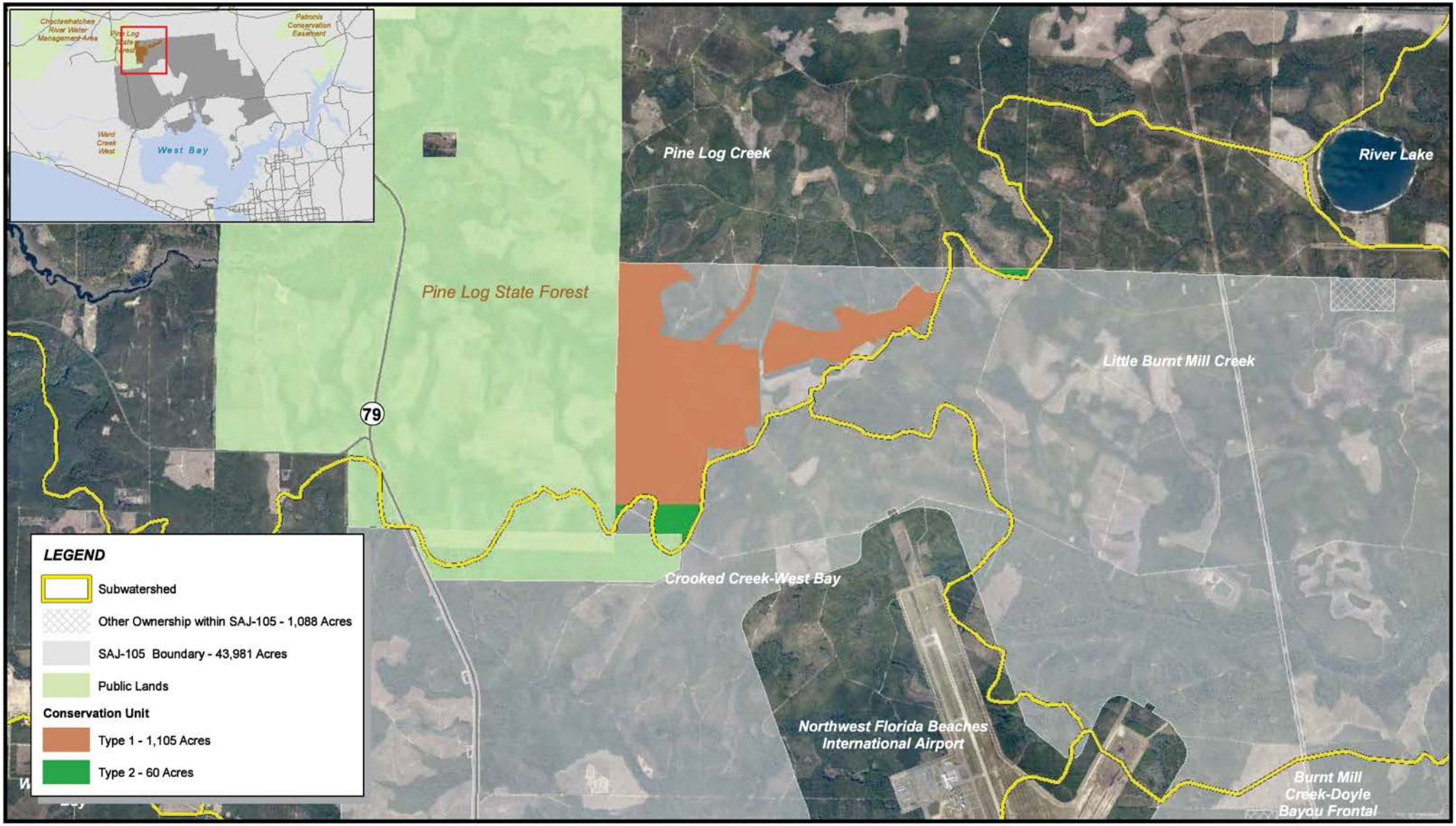
2013 AERIAL PHOTO

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Miles

1 INCH = 0.76 MILES

1:48,000



SAJ-105 CONSERVATION UNIT MAP
PINE LOG CREEK - 1,165 ACRES

EXHIBIT 13

MARCH, 2015

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2013 AERIAL PHOTO

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Miles

1 INCH = 0.66 MILES

1:42,000



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SAJ-105
HYDROLOGICALLY SENSITIVE AREAS MAP

EXHIBIT 14

MARCH, 2015

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MILES
1 INCH = 0.35 MILES
1:22,433

Exhibit 15: Hydrological Sensitive Area Conservation Easement Allowable Activities and Instrument

Activities Allowed in Conservation Easement Areas:

(1) Wetland and upland habitat enhancement and restoration.

(2) 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 West Bay Ecosystem Management Agreement and RGP-SAJ-105 ("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.

(3) Hunting, fishing, and birding.

(4) 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.

(5) Wetland mitigation as required by any future permit.

(6) 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 area.

(7) Reinstitution of fire regime, including necessary firebreaks, which mimics natural conditions.

(8) 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 this Regional General Permit.

(9) Activities needed to maintain in current condition, existing access, roads and ditches within and through the Conservation Units. These allowable maintenance activities do not include activities to relocate such access, roads and ditches.

(10) Nature centers, including single access roads. Nature centers shall only be located in uplands. Access roads to serve nature centers must comply with the terms set forth in this Regional General Permit.

(11) 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: (i) The degree of water flow within the wetland, (ii) The length of the wetland crossing, (iii) The topography of the wetland and associated upland, and (iv) 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 the terms set forth in this Regional General Permit.

(12) Certain recreational facilities including, but not limited to boat ramps, fishing piers, parks, picnic areas and pavilions, playgrounds/tot lots, nature facilities, but excluding any sports or ball fields, such as baseball fields, soccer fields, tennis courts, basketball courts and golf courses. Associated parking facilities are authorized, but must be constructed with pervious surfaces, unless it is impractical to use pervious surfaces. Boat ramps, fishing piers and access roads may cross wetlands, but impacts must be minimized to the maximum extent practicable. All other facilities must be located in uplands. Access roads to serve recreational uses and activities must use existing roads to the maximum extent practicable and otherwise must comply with the terms set forth in this Regional General Permit.

(13) 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.

(14) The natural streams and tributaries located within the Property shall be further protected by the following additional conditions and restrictions.

a) All road crossings over the natural streams and tributaries within the property are required to be bridged where practicable. Bridging shall occur over the portion of a crossing that has a discernable channel with well defined banks and flow. The exact length and cross section of a bridge shall be determined at the time of the Approval, based on professionally accepted engineering practice and the characteristics of the channel. A maximum of six (6) nonbridge crossings will be allowed. The first preference for new non-bridged crossings will be at existing silviculture road crossings. Non-bridged crossings at locations other than existing silviculture road crossings are allowed if the crossing is designed and constructed to minimize wetland impacts. In addition, for each non-bridged crossing proposed at a point where no previous crossing existed, an existing silviculture road crossing within the sub-watershed must be removed and the wetland connection restored within one year of initiation of construction of the new crossing. The removal of existing silviculture road crossings shall be coordinated with land management operations. Non-bridged road crossing rights of way shall usually not exceed a width of 100 feet of combined filling or clearing at each crossing, but may in certain cases, consistent with criteria in this section be allowed up to a total width of 160 feet.

b) In designing stormwater management systems adjacent to these natural streams and tributaries, flow velocity and hydraulic energy at the outfall shall be minimized. These design considerations may include, but are not limited to U-Type Concrete Endwalls with optional baffles and grates, U-Type Concrete Endwalls with engineered energy dissipater, structurally lined outfall aprons, plunge pool outfall aprons, and spreader swales. No new direct outfall pipes or new channels shall be permitted into any of these natural streams and tributaries. Instead, vegetated natural buffers shall be utilized for stormwater purposes adjacent to these natural streams and tributaries.

HYDROLOGICAL SENSITIVE AREA CONSERVATION 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) with third party enforcement rights to the U.S. Army Corps of Engineers (the "Corps") ("Third Party Beneficiary"). 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; and the term "Third Party Beneficiary" shall include any successor or assignee of the Third Party Beneficiary.

WITNESSETH

WHEREAS, the Grantor is the sole owner in fee simple of certain lands situated in Bay 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 General Permit No. SAJ-105 (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, 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;

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 West Bay 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 West Bay Ecosystem Management Agreement and RGP SAJ-105 ("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.

o. The natural streams and tributaries located within the Property shall be further protected by the following additional conditions and restrictions.

(1) All road crossings over the natural streams and tributaries within the property are required to be bridged where practicable. Bridging shall occur over the portion of a crossing that has a discernable channel with well defined banks and flow. The exact length and cross section of a bridge shall be determined at the time of the Approval, based on professionally accepted engineering practice and the characteristics of the channel. A maximum of six (6) non-bridge crossings will be allowed. The first preference for new non-bridged crossings will be at existing silviculture road crossings. Non-bridged crossings at locations other than existing silviculture road crossings are allowed if the crossing is designed and constructed to minimize wetland impacts. In addition, for each non-bridged crossing proposed at a point where no previous crossing existed, an existing silviculture road crossing within the sub-watershed must be removed and the wetland connection restored within one year of initiation of construction of the new crossing. The removal of existing silviculture road crossings shall be coordinated with land management operations. Non-bridged road crossing rights of way shall usually not exceed a width of 100 feet of combined filling or clearing at each crossing, but may in certain cases, consistent with criteria in this section be allowed up to a total width of 160 feet.

(2) In designing stormwater management systems adjacent to these natural streams and tributaries, flow velocity and hydraulic energy at the outfall shall be minimized. These design considerations may include, but are not limited to U-Type Concrete Endwalls with optional baffles and grates, U-Type Concrete Endwalls with engineered energy dissipater, structurally lined outfall aprons, plunge pool outfall aprons, and spreader swales. No new direct outfall pipes or new channels shall be permitted into any of these natural streams and tributaries. Instead, vegetated natural buffers shall be utilized for stormwater purposes adjacent to these natural streams and tributaries.

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 altered wetlands within the Conservation Units.

6. Written Approval. 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. Additionally, Grantee and Third Party Beneficiary shall not be responsible for any costs or liabilities related to the operation, upkeep, or maintenance of the Conservation Easement Area.

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, Florida. 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, Florida.

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:

_____
Print Name:

_____
By:_____
Print Name:
Title: _____

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this _____ day of _____, 2020, ___(name)_____ as _____(title)_____ of the Department of Environmental Protection. He/She is personally known to me or has produced _____ as identification.

WITNESS my hand and official seal at in the County and State last aforesaid this _____ day of _____, 20___.

_____
Notary Public

[Notary Seal]

_____
Print Notary Name
Commission Expiration: _____

Commission Number: _____

Department of the Army
Regional General Permit (RGP) SAJ-105
and
Florida Department of Environmental Protection
West Bay 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-105 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-105 and under the EMA, all applicable responses must be marked "Yes."

	Yes	No	N/A	**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):**
1.	☐	☐	☐	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?
2.	☐	☐	☐	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?
3.	☐	☐	☐	Is the proposed project limited to and consistent with the preservation objectives for Conservation Units under RGP SAJ-105, and is it anticipated to result in no more than minimal adverse impacts to the Conservation Unit?
4.	☐	☐	☐	If the proposed project is a *Conservation Burial Ground*, has the proposed project been certified by the Green Burial Council as a *Conservation Burial Ground* and would the project aid in the restoration, acquisition and/or stewardship of the Conservation Unit?

5.	☐	☐	☐	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?
6.	☐	☐	☐	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?
7.	☐	☐	☐	If the proposed linear utility or infrastructure facility project includes work in wetlands, is the project co-located with road crossings where practicable?
8.	☐	☐	☐	If the proposed linear utility or infrastructure facility project includes work in wetlands, will the project be installed by directional bore methodology where practicable?
9.	☐	☐	☐	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?
10.	☐	☐	☐	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?
11.	☐	☐	☐	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?
12.	☐	☐	☐	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 183 acres?

13.	☐	☐	☐	Has Land Disturbance acreage associated with the project proposed within converted wetlands been offset by an equal acreage amount consisting of preserved converted wetlands outside of the Conservation Unit but located within the same sub-watershed?
14.	☐	☐	☐	Has Land Disturbance acreage associated with the project proposed within converted wetlands met the applicable provisions in Special Condition 5?
15.	☐	☐	☐	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.	☐	☐	☐	Has Land Disturbance acreage associated with the project proposed within unconverted wetlands been demonstrated to meet the provisions of Special Condition 5.c.?
	Yes	**No**	**N/A**	**Questions 17 through 25 are applicable to projects proposed within Type II Conservation Units for activities listed in Special Condition 12.e:**
17.	☐	☐	☐	If the proposed project is a road or bridge wetland crossing, has the crossing been designed to not reduce or impair hydrologic conveyance?
18.	☐	☐	☐	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.	☐	☐	☐	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?

20.	☐	☐	☐	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?
21.	☐	☐	☐	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?
22.	☐	☐	☐	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?
23.	☐	☐	☐	If the proposed project is a recreational facility, does the project utilize existing access roads to the maximum extent practicable?
24.	☐	☐	☐	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?
25.	☐	☐	☐	If the proposed project is a road crossing in the "Hydrologically Sensitive Area" of the Crooked Creek/West Bay Conservation Unit, does the proposed road crossing comply with Special Condition 12.f. of the RGP?

Department of the Army
Regional General Permit (RGP) SAJ-105
and
Florida Department of Environmental Protection
West Bay Ecosystem Management Agreement (EMA)
Individual Project Approval Checklist

Completion of this Individual Project Approval Checklist is required to demonstrate project compliance with the requirements of Regional General Permit (RGP) SAJ-105 and the EMA as indicated in Special Condition 18.a. In order for a proposed project to qualify for authorization under RGP SAJ-105 and under the EMA, all applicable responses must be marked "Yes" or Non-applicable (N/A).

	Yes	No	N/A	
1.	☐	☐	☐	Was a draft application submitted to the appropriate agency representatives two weeks prior to the individual project approval meeting pursuant to Special Condition 18.a.? Date of draft application submittal: _____ Date of individual project approval meeting: _____
2.	☐	☐	☐	Was a complete application to the Corps for this project made using the form "Joint Application for Environmental Resource Permit/Authorization to Use State-Owned Submerged Lands/Federal Dredge and Fill Permit", Form #62-330.060(1) or other permit application form acceptable to the Corps and FDEP?
3.	☐	☐	☐	Were exhibits provided which show the specific location of the proposed project and confirm that the proposed project is located within the RGP area boundaries (1"=200' or other appropriate scale)?
4.	☐	☐	☐	RGP SAJ-105 only authorizes Section 404 activities. Are all regulated activities associated with the proposed project located: 1) in Section 404 waters only, or 2) if there are associated Section 10 activities, will these Section 10 activities be evaluated separately as a NWP, GP, LOP or IP?

5.	☐	☐	☐	Does the application include a written scope of the project which describes the type of project and confirms that it comports with activities authorized by the RGP (i.e. the proposed project is a type of residential, commercial, recreational, or institutional development)?
6.	☐	☐	☐	Are project wetland delineations in accordance with the most recent guidance and wetland delineation manual or manual supplement issued by the Corps (which as of this date is the *Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region (2010)*), or the State of Florida methodology prescribed in Chapter 62-340, F.A.C., *Delineation of the Landwater Extent of Wetlands and Surface Waters* (whichever is the most landward line of wetlands)?
7.	☐	☐	☐	Have Corps wetland delineation data sheets and a completed Preliminary Jurisdictional Determination Form (Exhibit 20) been completed, signed, and included for the project?
8.	☐	☐	☐	Have all wetlands on the project site been identified as either converted or unconverted quality wetlands?
9.	☐	☐	☐	Do all wetlands identified as converted wetlands on the proposed project site consist of hydric pine plantations as shown on the aerial photo dated March 2007 (Exhibit 5), non-Section 10 ditches, or non-Section 10 borrow pits; and were confirmed by a combination of remote sensing and ground-truthing; and has a March 2007 aerial photo been included indicating the project boundary?
10.	☐	☐	☐	Have converted wetlands as shown on the aerial dated March 2007 (Exhibit 5) been subjected to ongoing silviculture activities within the past 5 years from the pre-application meeting?
11.	☐	☐	☐	Do proposed direct impacts to converted wetlands comply with the 15% limit as specified in Special Conditions 5.a. and 5.b. of the RGP?

12.	☐	☐	☐	Are unconverted wetland impacts limited to impact types allowed by Special Condition 5.c. (Road and bridge crossings, boardwalks and paths, linear infrastructure including stormwater conveyances but not stormwater ponds, utility corridors, and any other linear access facilities necessary to support the associated development)?
13.	☐	☐	☐	Has consideration of the following factors been demonstrated by the Applicant for determining if bridging or directional boring of the unconverted 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?
14.	☐	☐	☐	If impacts to unconverted wetlands are proposed to exceed 100 feet in width of combined filling or clearing for a road crossing, has need been adequately demonstrated by the Applicant?
15.	☐	☐	☐	Was first preference for each new unconverted wetland road crossing location given to existing silviculture road crossings?
16.	☐	☐	☐	If road crossings at locations other than existing silviculture road crossings are proposed, was the crossing designed and constructed to minimize wetland impacts?
17.	☐	☐	☐	For each road crossing proposed at a point where no previous silviculture road crossing existed, will an existing silviculture road crossing within the same sub-watershed be removed and the wetland connection restored?
18.	☐	☐	☐	Overall, do the application's drawings and other exhibits that document and show the number, type, location, and acreage of all wetland impacts sufficiently confirm that the proposed project fully complies with this RGP?
19.	☐	☐	☐	Has the Applicant avoided placing fill material in wetlands for septic tanks or drainfields?
20.	☐	☐	☐	Will only clean fill and rock material compatible with existing soils (e.g., soil, rock, sand, marl, clay, stone, and/or concrete rubble) be used for wetland fills?

21.				Has the Applicant demonstrated that wetland fill will not sever a jurisdictional connection or isolate a jurisdictional area?
22.				If the site includes/abuts unconverted wetlands, will all unconverted wetlands within the project site include preserved buffers (except at road crossings), which on an individual impact site basis, are comprised of uplands and/or converted wetlands and are on average 50 feet wide, with a minimum 30-foot width, and will the buffers be placed under a conservation easement?
23.				If the site abuts a Conservation Unit, has an analysis been made regarding any natural streams or tributaries located within the Conservation Unit, as to the width of required buffers to be preserved between the stream or tributary and the proposed work on the site; is the preserved buffer a minimum of 100 feet in width as measured from the edge of the stream or tributary to the proposed work; is the preserved buffer included in the site plan; and if a portion of a buffer is located within a site, will it be placed under a conservation easement?
24.				Except for the control of exotic plant species, will the application of fertilizers, herbicides, or pesticides be prohibited in all preserved buffers?
25.				Will compensatory mitigation for individual project wetland impacts be satisfied within one or more of the following: 1) mitigation banks; 2) Conservation Units; or 3) within the project site?
26.				If the project includes compensatory mitigation located within the Conservation Units or on individual project sites, does the proposed compensatory mitigation plan comply with the requirements of 33 CFR Part 332, “Compensatory Mitigation for Losses of Aquatic Resources”?
27.				Were direct wetland impacts associated with the proposed project and the compensatory mitigation to offset those direct wetland impacts calculated in terms of functional units (FU), as determined using the Uniform Mitigation Assessment Method (UMAM) with each acre of impact to converted wetlands assessed at 0.53 FU, and each acre of impact to unconverted wetlands assessed at 0.87 FU or in the case when a Wetland Rapid Assessment Method (WRAP) only credited mitigation bank is used, was each acre of impact to converted wetlands assessed at 0.65 FU, and each acre of impact to unconverted wetlands assessed at 0.92 FU?

28.				Will the compensatory mitigation be implemented concurrent with or before proposed project impacts?
29.				Conservation Units (CUs): If the proposed project or a portion of the project is located within the EMA area, and in a sub-watershed in which one of the CUs is located, will The St. Joe Company place perpetual conservation easements with the DEP as the grantee on portions of CUs equal to the percentage of the total acreage of approved projects in the affected sub-watershed per the following calculation: Using the EMA area only, divide the total acreage within an approved project boundary in a sub-watershed (including impact and preserved area) by the total acreage of land within the sub-watershed minus the area of any conservation units with the same sub-watershed?
30.				Will perpetual conservation easements with the DEP as the grantee, be placed on wetlands not authorized for impact on each project site (including offsite preservation areas to meet the 15% converted wetland requirement) following individual project approval, but prior to commencing any activities authorized by this RGP (or according to the timeframe specified as a special condition in the project specific approval); and does the proposed conservation easement comport with Exhibit 19 of the RGP?
31.				For projects that include off-site preservation of converted wetlands, are the boundaries of the off-site preservation area reasonable and include intermixed and adjacent unconverted wetlands?
32.				For compensatory mitigation conducted outside of a mitigation bank, will a perpetual conservation easement with the DEP as the grantee, be placed on the mitigation area prior to commencing any activities authorized by this RGP on the individual project for which the mitigation is approved (or according to the timeframe specified as a special condition in the project specific approval); and does the proposed conservation easement comport with Exhibit 19 of the RGP?
33.				Has a set of signed and sealed stormwater management system plans been submitted by a Florida registered professional to the DEP for review as required by Part III, Section D of the ERP application?

34.				Does the application include a signed statement by a Florida registered professional certifying that the project conforms to Chapter 62-330 F.A.C. and Applicant's Handbook, Volumes 2, to the additional level of treatment as set forth in the EMA, and to the heightened sediment erosion control measures (Exhibit 2)?
35.				Was documentation of coordination with SHPO provided?
36.				If required by the SHPO, did the applicant conduct a Phase I archeological and historical survey on the proposed project site?
37.				If required, will measures identified to avoid, minimize or mitigate adverse impacts to historic properties listed, or eligible for listing in the *National Register of Historic Places*, or otherwise of archeological or historical, be made special conditions of the RGP authorization for the proposed project?
38.				Was documentation provided with respect to the Bald Eagle (*Haliaeetus leucocephals*) that states whether or not a bald eagle's nest is located on or in the vicinity of the project site?
39.				If a bald eagle's nest occurs within 660 feet of a project, has the applicant followed the U.S. Fish and Wildlife Service's May 2007 National Bald Eagle Management Guidelines? Has the applicant contacted the Florida Fish and Wildlife Conservation Commission for recommendations relative to Florida's Bald Eagle Management Plan and Permitting Guidelines to ensure the project is consistent with the provisions of Rule 68A-16.002, Florida Administration Rule? Have appropriate protections been incorporated in the project and documentation provided showing how the appropriate protections will be implemented?

40.	☐	☐	☐	Has documentation of coordination with the FWC regarding any needed fish and wildlife surveys for the project area, and any measures needed to avoid, minimize, or mitigate adverse impacts to state listed/protected fish and wildlife species and their habitats including any plan to obtain a permit if required by Chapter 68A-27, F.A.C. been provided?
41.	☐	☐	☐	Has an updated ledger balance sheet demonstrating compliance with the RGP been submitted in accordance with Special Condition 14?
42.	☐	☐	☐	If the project is located within a Conservation Unit for an activity listed in Special Conditions 12.d (4), (6), (9), (11), and 12.e, has the Checklist for Activities Requiring Conservation Unit Project Approval within Type I and Type II Conservation Units (Exhibit 15) been completed and provided?

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM
(RGL 16-01 Appendix 2)

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD:

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES 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:

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

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e. wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e. Section 404 or Section 10/404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
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 AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) that the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) 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) 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) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (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 PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives 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 AJD or a PJD, the JD will be processed as soon as is practicable. Further, an AJD, 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. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there "*may be*" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

☐ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor: Map: _____

☐ Data sheets prepared/submitted by or on behalf of the PJD requestor.
- ☐ 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: .

☐ 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 Geodectic 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 staff member completing PJD	Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Where appropriate, surveys shall be accompanied by the raw data, in digital format submitted on CD ROM, and tables which contain the respective state (FL, PR, VI) plane coordinates (x, y) of each point ("flag") on the survey, as well as those for the property corners. Each page of the state plane coordinates tables must also be signed and sealed by a registered surveyor. Each point in the state plane coordinates tables shall be identified by the corresponding descriptor depicted on the survey.

Unless precluded by state regulations, the horizontal datum shall be North American Datum of 1983.

GEOGRAPHIC APPLICABILITY:

This policy will be applicable to the entire Jacksonville District, including the State of Florida, the Commonwealth of Puerto Rico and the U.S. Virgin Islands.

If you have any questions, you may contact Stuart L. Santos at the letterhead address or by telephone (904) 232-2018.

Lawrence C. Evans
Chief, Regulatory Division

U.S. Army Corps of Engineers **WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region** See ERDC/EL TR-10-20; the proponent agency is CECW-COR	*OMB Control #: 0710-0024, Exp: 09/30/2027* *Requirement Control Symbol EXEMPT:* *(Authority: AR 335-15, paragraph 5-2a)*

Project/Site: _____ City/County: _____ Sampling Date: _____

Applicant/Owner: _____ State: _____ Sampling Point: _____

Investigator(s): _____ Section, Township, Range: _____

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes ____	No ____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No ____	Depth (inches): ____
Water Table Present?	Yes ____	No ____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ____	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: _____

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	=Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
	=Total Cover		

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
	=Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	=Total Cover		

50% of total cover: _____ 20% of total cover: _____

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** ____ **No** ____

Remarks: (If observed, list morphological adaptations below.)

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: _____

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species _____	x 5 =	_____
Column Totals: _____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** ____

Remarks: (If observed, list morphological adaptations below.)

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (**MLRA 150A)**
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- ___ Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Coast Prairie Redox (A16) **(outside MLRA 150A)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, T)**
- ___ Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

VEGETATION Continued (Five Strata) – Use scientific names of plants. Sampling Point: _____

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
7.			
8.			
9.			
10.			
11.			
12.			
	=Total Cover		
50% of total cover:		20% of total cover:	
Sapling Stratum			
7.			
8.			
9.			
10.			
11.			
12.			
	=Total Cover		
50% of total cover:		20% of total cover:	
Shrub Stratum			
7.			
8.			
9.			
10.			
11.			
12.			
	=Total Cover		
50% of total cover:		20% of total cover:	
Herb Stratum			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
	=Total Cover		
50% of total cover:		20% of total cover:	
Woody Vine Stratum			
6.			
7.			
8.			
9.			
10.			
	=Total Cover		
50% of total cover:		20% of total cover:	

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody Vine – All woody vines, regardless of height.

Remarks: (If observed, list morphological adaptations below.)

VEGETATION Continued (Four Strata) – Use scientific names of plants. Sampling Point: _____

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Woody Vine Stratum			
6.			
7.			
8.			
9.			
10.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Remarks: (If observed, list morphological adaptations below.)

AGENCY DISCLOSURE NOTIFICATION

The public reporting burden for this collection of information, OMB Control Number 0710-0024, is estimated to average 30 minutes per response, including the timefor reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services,at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR REQUEST TO THE ABOVE EMAIL.**

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

Exhibit 19
(Revised March 3, 2005)

RGP-86 Flatwoods Salamander Pre-Application Evaluation

Endangered Species Act formal consultation was conducted between the U.S. Fish and Wildlife Service and the Corps of Engineers as part of the development of RGP-86. Consultation was based on presumed presence of salamanders due to the proximity of two known locations and the observance of suitable habitat in the action area. Best available methods were used to determine potential impacts to flatwoods salamanders that could be expected from implementation of the permit. However, it is reasonable to expect that with a project area covering more than 47,000 acres (about 1/3 of which is potentially developable) undetected habitat could be present. In order to avoid and minimize potential take of salamanders in these situations, the following habitat evaluation was developed. This evaluation must be completed by all applicants and performed by a qualified ecologist/biologist.

Step 1: Preliminary Project Site Review

1.. Applicants and consultants shall obtain and review an informational brochure developed by the Florida Fish and Wildlife Conservation Commission. The brochure is available from Florida Fish and Wildlife Conservation Commission, Bureau of Wildlife Diversity Conservation, 620 South Meridian Street, Tallahassee, Florida 32399-1600..

2.. Applicants and/or their consultants shall compare aerial photographs of their project site to Figures 2, 3 and 4 of the Biological Opinion. Note all data points located within the project site and within 450 meters (1,476 feet) of the project site or limits of construction..

3. If any data points of Figure 4 are located within the project site or within 450 meters of the project site or limits of construction, **re-initiation of consultation is required. Continue with Step 2.**

4.. Other data points of Figures 2 and 3 that are within the project site action area (including 450 meters) do not need further evaluation. Previous work conducted as part of the biological opinion addressed these sites. **Continue with Step 2.**

Step 2: Procedures for Reviewing Other Data to Determine Whether Additional Field Surveys Should be Conducted (based on Palis 2003)

There is a potential that suitable habitat may have been overlooked during the analysis for the biological opinion. Therefore, specific project sites must be reviewed using the procedures outlined below to determine whether they need to be field surveyed.

1.- Review project site using high-resolution recent infrared aerials (scale of 1 inch = 400 feet), NRCS soils data for Bay and Walton counties, and historical aerials of your project area that are of as high a resolution as is obtainable. Note any ponds[1] not depicted on Figures 2 or 3 with similarity of appearance to those of Figure 4 in the biological opinion.

2.. Features to look for on the infrared aerials are as follows:.

- Absence of a dense titi cover completely surrounding ponds. Absence is a positive indicator. Dense titi appears relatively dark red and smooth
- A graminaceous, treeless ecotone along part of the pond edges. Presence is a positive indicator. Wet herbaceous edges appear as smooth grayish blue, greenish grayish blue, or as a light band along the edge.
- Absence of deep water. Absence of deep water is a positive indicator. Deep water appears dark blue or almost black..

[1] "Ponds" are not traditional open waterbodies, but are ephemeral wetlands that are ponded for a portion of the year.

3. On historical aerials, look for open savannahs or pine flatwoods around ponds. These are positive indicators and appear as smooth, light-colored areas with scattered-to-no-trees.

4. On soil maps, where ponds occur, look for hydric or mesic soils around pond: hydric or mesic soils are positive indicators of flatwoods salamander use.

5. The presence of all of the above positive indicators means that the pond(s) should be field surveyed.

- If yes, then you must conduct field surveys to determine whether the pond(s) is a potential flatwoods salamander pond. **Continue with Step 3.**
- If no here and no to Step 1. 3., then **you are finished with the flatwoods salamander evaluation - Go to Step 5** (Flatwoods Salamander Findings).
- If no here and yes to Step 1. 3., then **re-initiation of consultation is required.**

Step 3: Field Assessment of Potential Flatwoods Salamander (*Ambystoma cingulatum*) Ponds

The Description Data Sheet (next page) may be completed at the same time as other fieldwork, such as wetland delineation. The field data sheet that must be completed at the time of the field survey follows. Photographs must also be taken of the ecotone and pond, particularly noting the location of the most graminaceous portion of ecotone and wetland groundcover.

Potential Flatwoods Salamander *(Ambystoma cingulatum)* Pond Description Data Sheet

Instructions: Circle the number of the most appropriate descriptor in each category. If no description option applies, circle "other" and describe. In some categories, such as ECOTONE VEGETATION DESCRIPTION, SPECIES COMPOSITION, and SURROUNDING UPLANDS, circle the number for all appropriate descriptors.

Pond# _____ Date _____ Observer(s) _____

ECOTONE VEGETATION DESCRIPTION

(If more than one descriptor applies, circle and estimate percentage of pond perimeter. ***Also circle appropriate grass and shrub species)***

1) undisturbed graminaceous (*Aristida stricta, Calamovilfa curtissii*)[1], few to no shrubs (*Clethra, Cliftonia, Cyrilla, Hypericum, Ilex myrtifolia, Lyonia*) _____%
2) disturbed graminaceous (*Aristida stricta, Calamovilfa curtissii*; bedded/rutted), few to no shrubs (*Clethra, Cliftonia, Cyrilla, Hypericum, Ilex myrtifolia, Lyonia*) _____%
3) undisturbed graminaceous (*Aristida stricta, Calamovilfa curtissii*) under thick *Clethra, Cliftonia, Cyrilla, Hypericum, Ilex myrtifolia, Lyonia*) _____%
4) weedy graminaceous (*Andropogon, Panicum verrucosum*, and/or *weedy Rhynchospora*), few to no shrubs (*Clethra, Cliftonia, Cyrilla, Hypericum, Ilex myrtifolia, Lyonia*) _____%
5) disturbed graminaceous (*Aristida stricta, Calamovilfa curtissii*; bedded/rutted), under thick *Clethra, Cliftonia, Cyrilla, Hypericum, Ilex myrtifolia, Lyonia* _____%
8) weedy graminaceous (*Andropogon, Panicum verrucosum*, weedy *Rhynchospora*) under thick *Clethra, Cliftonia, Cyrilla, Hypericum, Ilex myrtifolia, Lyonia* _____%
9) thick shrubs (*Clethra, Cliftonia, Cyrilla, Hypericum, Ilex myrtifolia, Lyonia*) over little to no graminaceous (*Aristida stricta, Calamovilfa curtissii, Andropogon, Panicum verrucosum*, weedy *Rhynchospora*) _____%
10) no ecotone _____%
11) other:_____ _____%

GRAMINACEOUS ECOTONE EXTENT DESCRIPTION

1) > 75 % of pond perimeter
2) 51-75% of pond perimeter
3) 26-50 % of pond perimeter
4) <25% of pond perimeter

GRAMINACEOUS ECOTONE WIDTH DESCRIPTION

1) > 0 m wide
2) 6-10 m wide
3) 3-5 m wide
4) 1-2m wide

---

1 "Undisturbed graminaceous" and "disturbed graminaceous" mean that the appropriate ground cover species are present (*Aristida stricta, Calamovilfa curtissii*, wiry *Rhynchospora* spp., and *Sporobolus*). However, "disturbed graminaceous" indicates that the soil has been disturbed by human activities such as chopping, bedding, ATV or skidder tracks. "Weedy graminaceous" means that not only are the appropriate ground cover species absent, but that the soil has been disturbed.

POND GRAMINACEOUS GROUNDCOVER SPECIES COMPOSITION
(place asterisk adjacent to visually dominant species)

1) *Aristida affinis*
2) *Carex*
3) *Dichanthelium (Panicum) erectifolium*
4) *Eriocaulon compressum*
5) *Panicum rigidulum*
6) *Rhynchospora inundata/corniculata*
7) *Rhynchospora* _____
8) *Sphagnum*
9) *Xyris*
10) other: _____

POND GRAMINACEOUS VEGETATION COVERAGE

1) extensive throughout basin, marsh-like
2) over most of basin (> 75 %)
3) scattered and local in basin (approx 25-74%)
4) limited to basin edge
5) sparse
6) none

POND CANOPY SPECIES COMPOSITION
(place asterisk adjacent to visually dominant species)

1) *Taxodium ascendens*
2) *Nyssa biflora*
3) *Pinus elliottii*
4) *Ilex myrtifolia*
5) other: _____

POND CANOPY COVERAGE

1) <25% 2) 26-50% 3) 51-75% 4) >75%

POND SUBSTRATE

1) relatively firm mud/sand with little to no leaf/needle litter
2) relatively firm mud/sand with abundant leaf/needle litter
3) soft and peaty (thick leaf/needle litter)

APPROXIMATE WATER DEPTH (_____ m)

If site dry, estimate using high water stains on trees: ____ m

WATER COLOR

1) clear to light stain 2) moderate stain (ice tea) 3) dark stain (coffee) 4) no water

SURROUNDING UPLANDS
(circle every applicable number and indicate relative percentage of area around pond)

1) undisturbed graminaceous (*Aristida stricta, Sporobolus*) dominated, few to no shrubs _____%
2) disturbed graminaceous (*Aristida stricta, Sporobolus*) dominated, few to no shrubs _____%
3) approximately 50/50 undisturbed graminaceous (*Aristida stricta, Sporobolus*)/shrubs _____%

4) approximately 50/50 disturbed graminaceous (*Aristida stricta, Sporobolus*)/shrubs ____%
5) disturbed with sparse vegetation (i.e., principally pine straw) ____%

6) shrub dominated (shrubs knee high or less), sparse graminaceous (*Aristida stricta, Sporobolus*) ____%

7) shrub dominated (shrubs between knee and head high), sparse graminaceous (*Aristida stricta, Sporobolus*) ____%
8) shrub dominated (shrubs head high or more), sparse graminaceous (*Aristida stricta, Sporobolus*) ____%
9) weedy graminaceous (e.g., *Andropogon*), few to no shrubs ____%
10) shrub dominated (shrubs knee high or less), sparse weedy graminaceous (*Andropogon*, etc.) ____%
11) shrub dominated (shrubs knee to head high), sparse weedy graminaceous (*Andropogon*, etc.) ____%
12) shrub dominated (shrubs head high or more), sparse weedy graminaceous (*Andropogon*, etc.) ____%
13) other _____ ____%

UPLANDS SPECIES PRESENT
(circle number and place asterisk by visually dominant species)

1) *Andropogon*
2) *Aristida stricta*
3) *Conradina canescens*
4) *Cyrilla racemiflora*
5) *Ilex glabra*
6) *Kalmia hirsuta*
7) *Licania michauxii*
8) *Lyonia lucida*
9) *Myrica cerifera*
10) *Pteridium aquilinum*
11) *Quercus minima/pumila*
12) *Serenoa repens*
13) *Vaccinium darrowi/myrsinites*
14) _____

General Notes: _____

SKETCH WETLAND/UPLAND (North ↑)
(delineate locations of vegetational differences in ecotone and in wetland and uplands)
(**photograph** the ecotone and pond noting the location of the most graminaceous portion of ecotone and wetland ground cover, note photo points)

Step 4: Expert Review of Field Results

When Steps 2 and 3 have been completed, the completed field data sheets and photographs should be sent to a recognized flatwoods salamander expert. In addition, the current and historical aerials, soil data, and a map of the

project site should also be forwarded to the expert. The expert will review all the information to determine whether the pond might be a potential flatwoods salamander pond.
The field data sheet used in Step 3 has been organized so that the descriptors under each category of interest are ordered from best to worst conditions for flatwoods salamanders. For example, under the category Ecotone Vegetation Description, the first descriptor [1) undisturbed graminaceous... few to no shrubs...] describes the best conditions for flatwoods salamanders and the last two descriptors [9) thick shrubs... and 10) no ecotone] describe the worst conditions.

The expert will evaluate the descriptors selected for each category of interest to determine whether the pond might be a potential flatwoods salamander breeding pond. If mostly low number descriptors were selected on the field data sheet, then the pond is more likely to be considered a potential breeding pond; conversely, if primarily high number descriptors were selected on the field data sheet, then the pond is less likely to be considered a potential breeding pond. However, no formula presently exists that encompasses all the possibilities that might eliminate or elect a pond for further consideration as a potential breeding pond.

If the expert cannot determine whether or not the pond should be considered a potential flatwoods salamander breeding pond, s/he may request additional information from the ecologist/biologist who visited the pond and/or the project applicant. If the request for additional information is not fulfilled within a reasonable time period or the response is not sufficiently helpful, the expert may also elect to visit the pond himself at the expense of the project applicant.

The expert will provide a written determination as to whether the surveyed pond(s) is likely to be a potential flatwoods salamander breeding pond.

Review Time Frames:

- Provide field data sheets to expert;
- Expert reviews field data sheets within 10 working days of receipt, and
    - Requests additional information, or
    - Provides[2] written determination;
- Project applicant or their consultant provides additional information to expert;
- Expert provides written determination to project applicant within 5 working days of receipt of sufficient additional information;
- Project applicant provides the expert's written determination and background documentation (prepared map of ponds, aerials, soil data, field data sheets, and photographs) to the agencies as part of the pre-application Item #8.

2 "Provides" implies postmarked, emailed or faxed.

Step 5: Flatwoods Salamander Findings

	Yes	No
1. The project site contains or is within 450 meters (1,476 feet) of one or more of the data points indicated in Figure 4 of the biological opinion. **If yes, re-initiation of consultation is required.**	____	____
2. The project site contains or is within 450 meters of potential habitat not evaluated in the biological opinion.	____	____
3. Field evaluations and expert review were necessary for additional habitat.	____	____
4. Expert review indicates that suitable habitat is located within the project action area. Name of flatwoods salamander expert _____. **If yes, re-initiation of consultation is required.**	____	____
5. Appropriate documentation is included to support these findings.	____	____

Signature _____ Date _____

Ecologist/Biologist who Performed the Evaluation

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

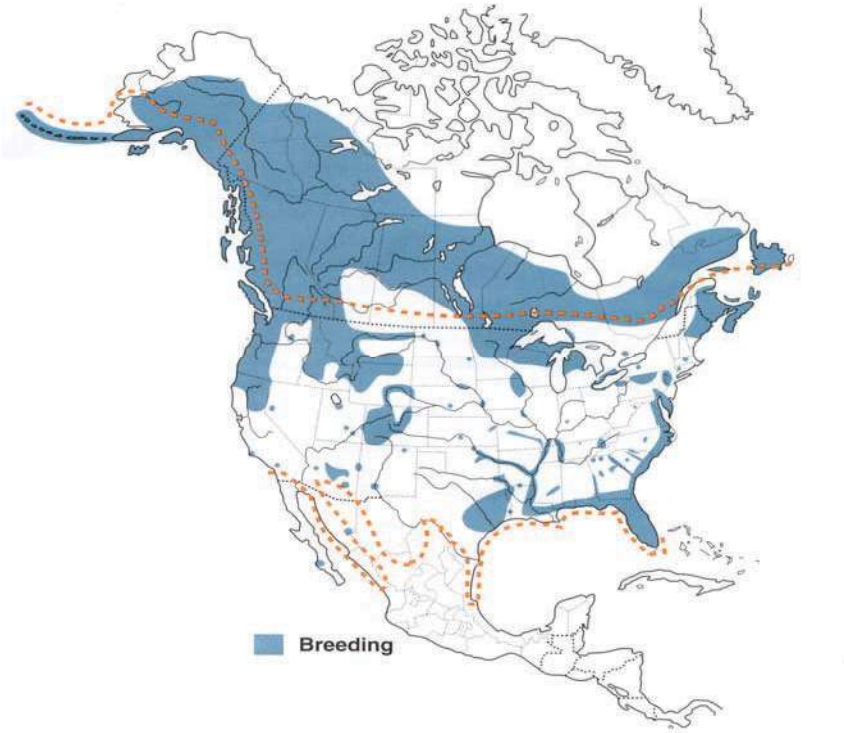
Bald eagles are a North American species that historically occurred throughout the contiguous United States and Alaska. After severely declining in the lower 48 States between the 1870s and the 1970s, bald eagles have rebounded and re-established breeding territories in each of the lower 48 states. The 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.



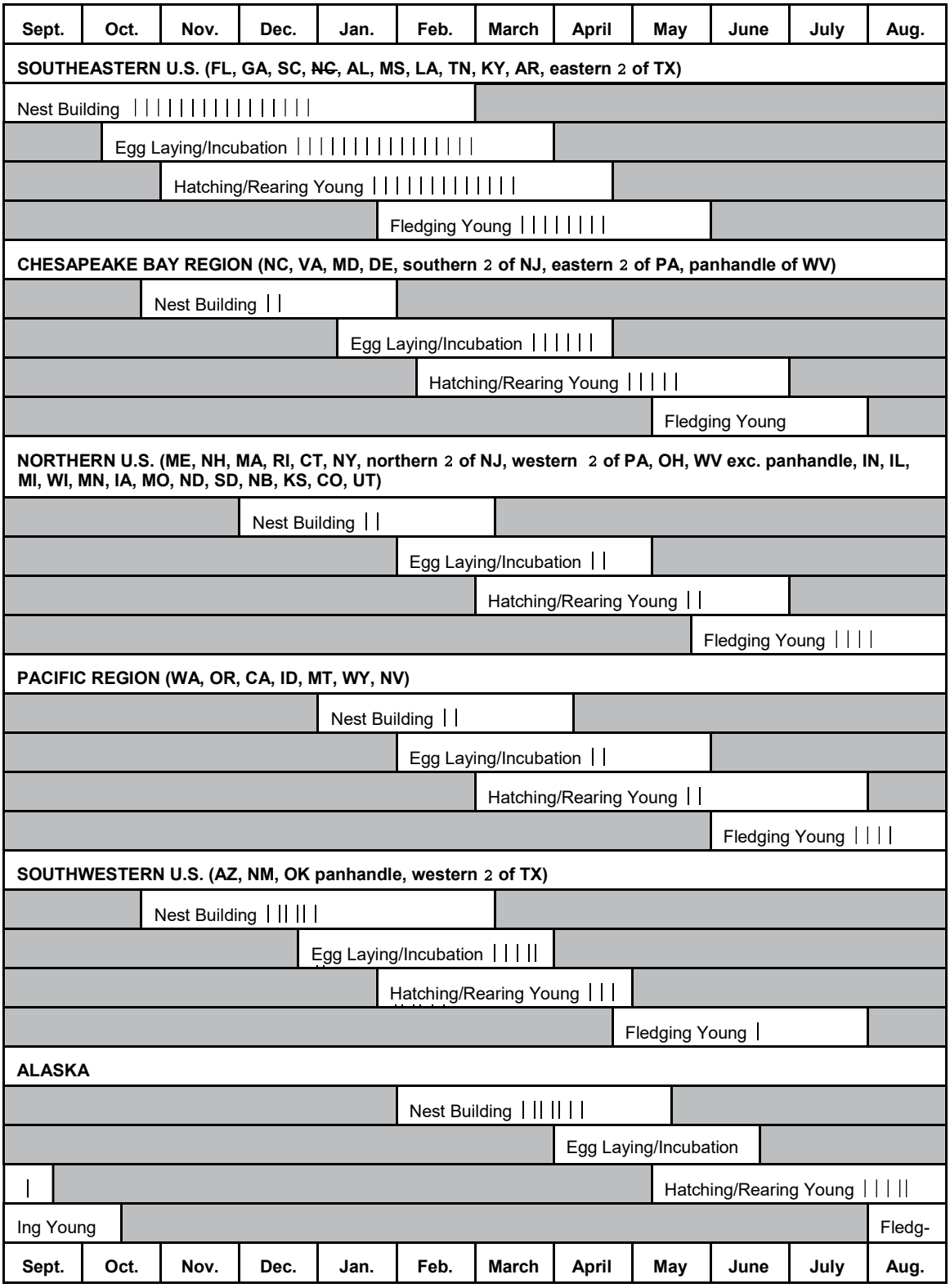
Copyright *Birds of North America*, 2000

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.



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

Phase	Activity	Sensitivity to Human Activity	Comments
I	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.
II	Egg laying	Very sensitive period	Human activity of even limited duration may cause nest desertion and abandonment of territory for the breeding season.
III	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.
IV	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.
V	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.

	If there is no similar activity within 1 mile of the nest	***If there is similar activity closer than 1 mile from the nest***
If the activity will be visible from the nest	660 feet. Landscape buffers are recommended.	660 feet, or as close as existing tolerated activity of similar scope. Landscape buffers are recommended.
If the activity will not be visible from the nest	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:

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

National Office
U.S. Fish and Wildlife Service
Division of Migratory Bird Management
4401 North Fairfax Drive, MBSP-4107
Arlington, VA 22203-1610
(703) 358-1714
http://www.fws.gov/migratorybirds

State Agencies

To contact a state wildlife agency, visit the Association of Fish & Wildlife Agencies' website at 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 ≥1 nestling per year; (3) an average reproductive success of ≥1.5 fledglings per active nest; and (4) maintain the current area of occupancy (>770 mi^2) and extent of occurrence (52,979 mi^2) 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^2). 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^2 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^2 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^2. *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 *Haliaeetu*s, 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 40E 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.

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

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 herodia*) 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).

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

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).

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

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

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).

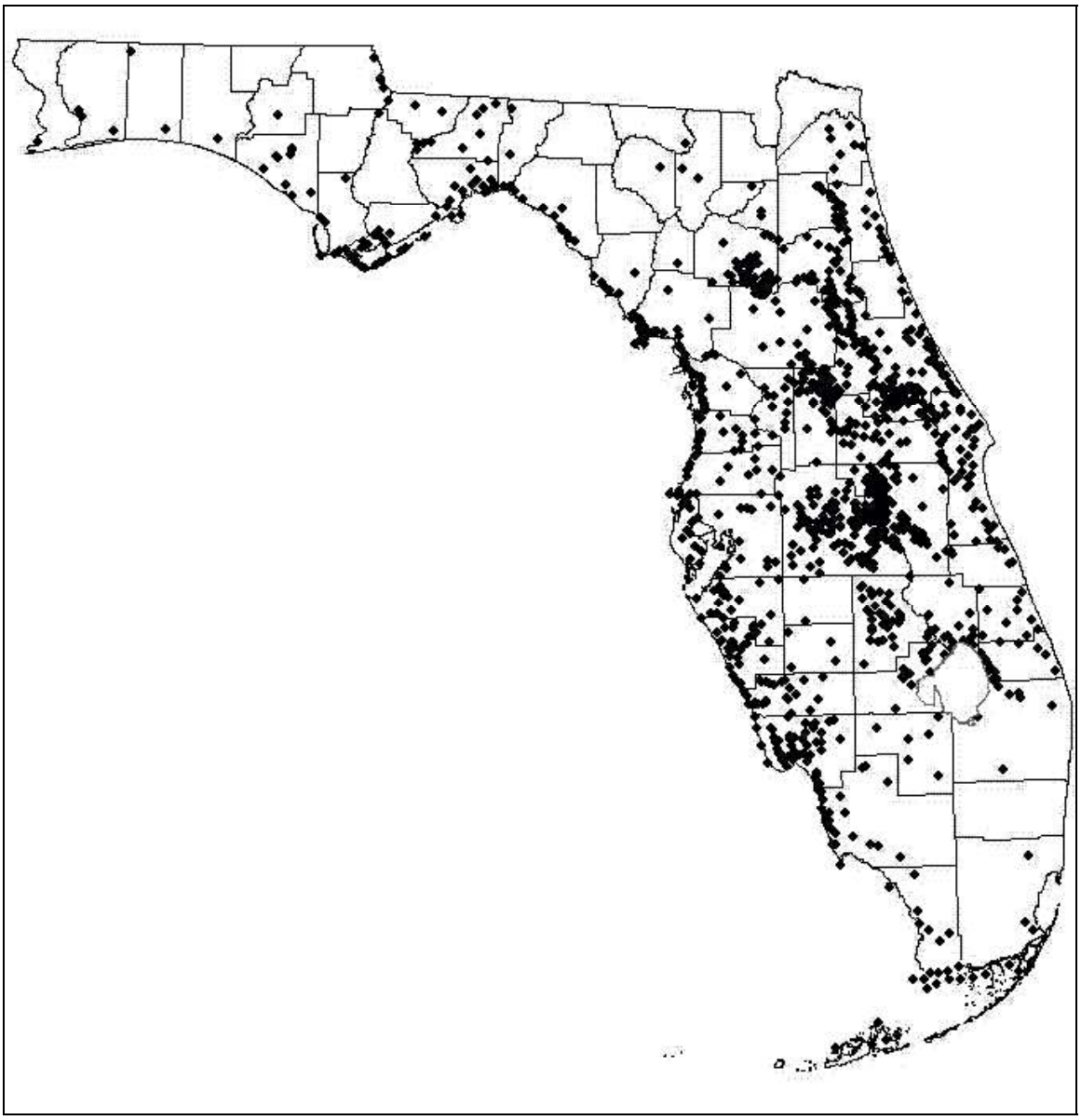


Figure 1. The distribution of active bald eagle nesting territories in Florida, 2005–2006.

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.

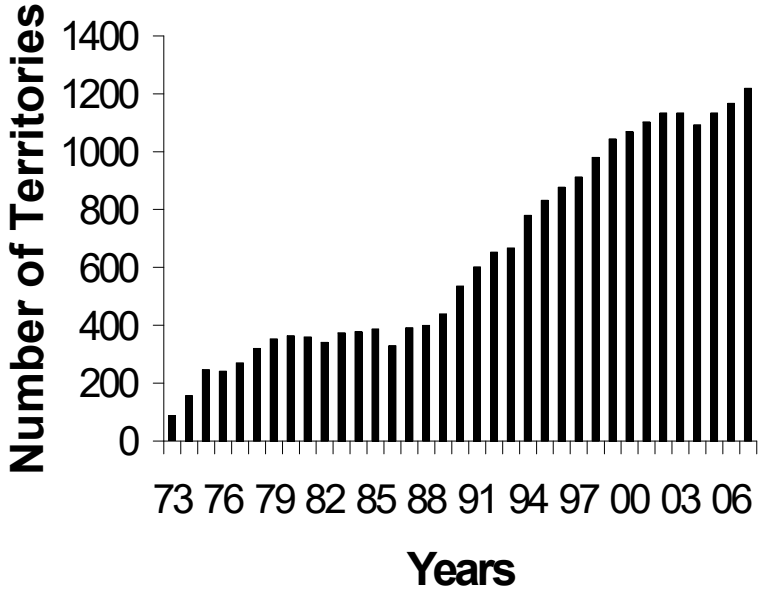


Figure 2. The number of bald eagle nesting territories in Florida, 1973–2007.

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 ≥1.5 fledglings per successful nest, and ≥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).

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.

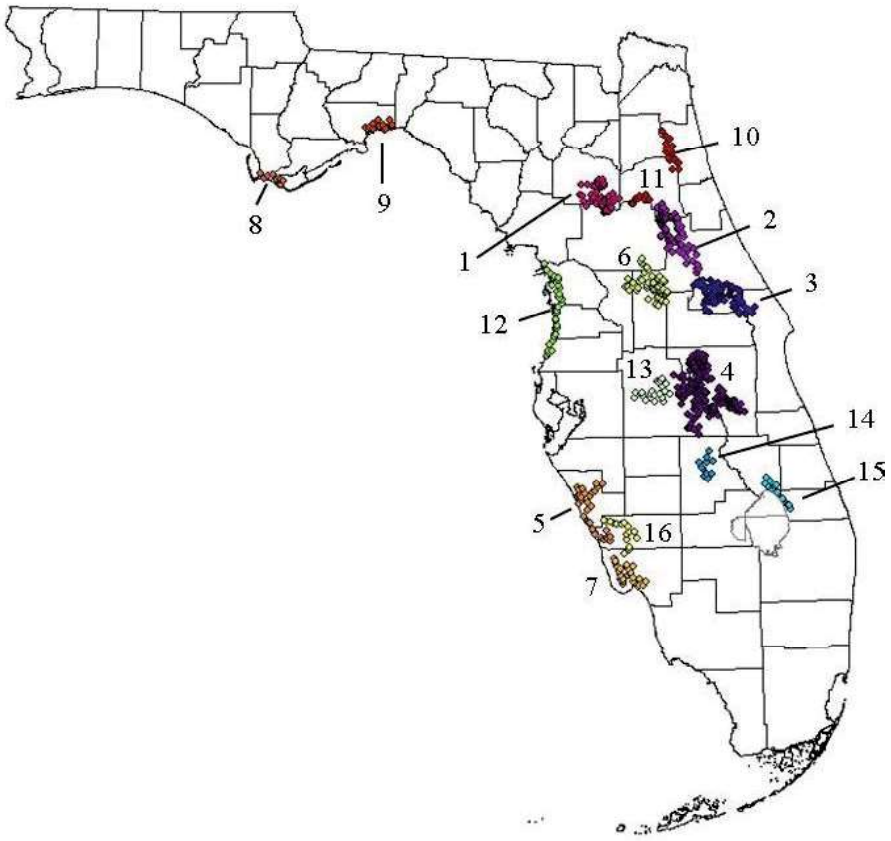


Figure 3. Location of bald eagle core nesting areas in Florida, 2005–2006. These core nesting areas, which are numbered chronologically from their discovery, are found in the following sites: (1) lakes Lochloosa, Newnans, and Orange; (2) Lake George; (3) the middle St. Johns River; (4) the Kissimmee 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.

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

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)

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 ≥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 ≥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 ≥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 ≥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 mi^2) and extent of occurrence (52,979 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 decrease the risk of catastrophic wildfire or an outbreak of timber disease, and that retain old-growth native pines.

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.

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.

Program	Description	Contact
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 environ-mental 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.

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.

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.

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

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

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 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.

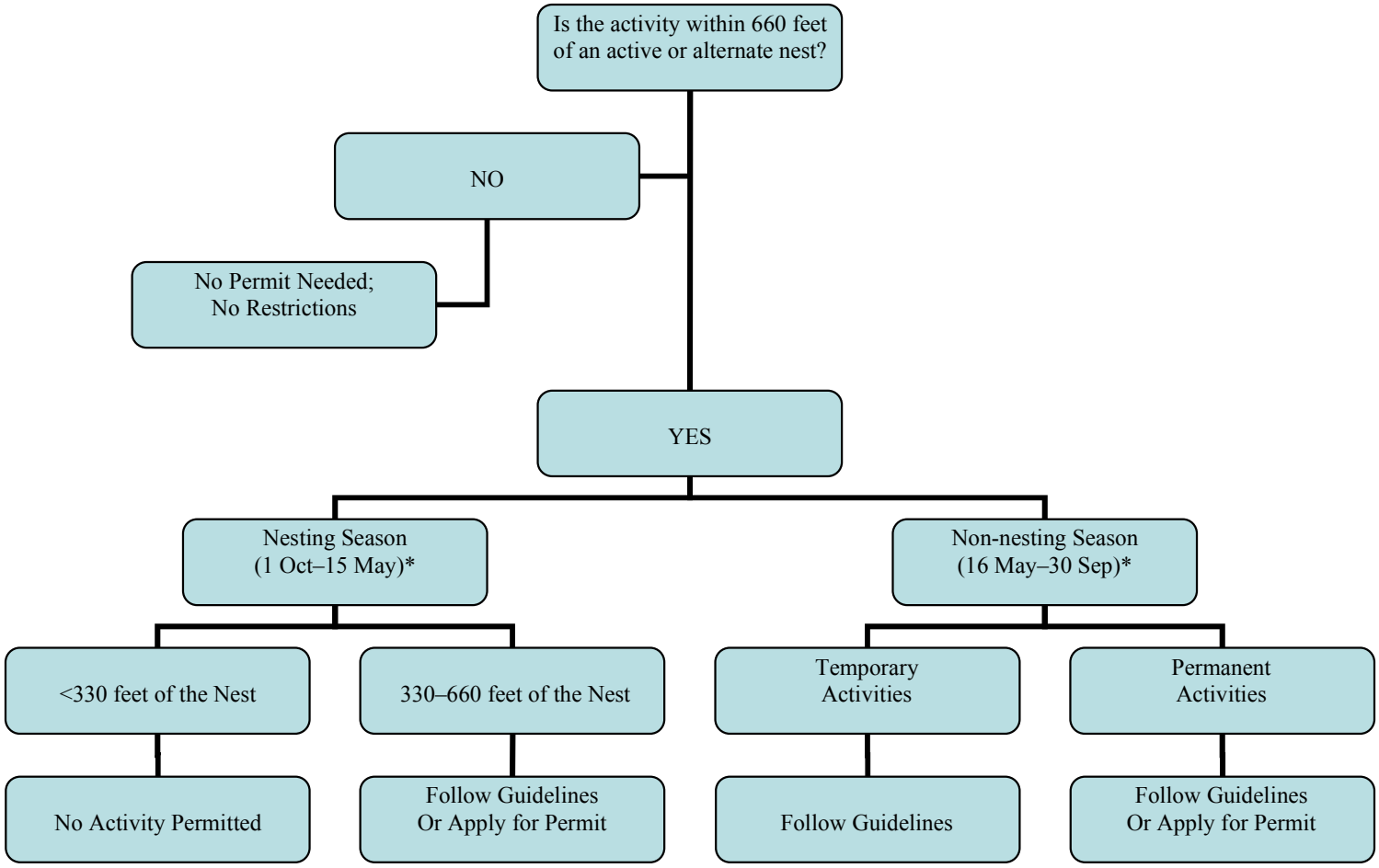


Figure 4. Process map for determining whether or not a FWC Eagle Permit would be recommended for a proposed activity near a bald eagle nest. For ongoing activities that are conducted at the historic rate, or for activities that may fall under similar scope to existing actvities, refer to the FWC Eagle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

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

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.

	No Similar activity within 1,500 feet of the nest	***Similar activity closer than 1,500 feet from the nest***
There is no visual buffer between the nest and the activity	Categories A and B: 660 feet.	Categories A and B: 660 feet, or as close as existing activities of similar scope.
There is a visual buffer between the nest and the activity	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.

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

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.

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

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

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.

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>.
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 ≥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>.

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>. 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>. 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> 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 barbital 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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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.

STAKEHOLDER	AFFILIATION
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; South Florida Field Office: verobeach@fws.gov; Panama City Field Office: 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, blueblack 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 <u>LIVE</u> 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 <u>DEAD</u> 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.

SAJ-105 Exhibit 23

Biological Assessment

Proposed Regional General Permit and Ecosystem Management Agreement II Project

Bay County, Florida

April 20, 2011

Prepared by:

Florida Environmental & Land Services, Inc.

221-4 Delta Court

Tallahassee, Florida 32303

(850) 385-6255 Phone

(850) 385-6355 Fax

Contact Person: Elva Peppers

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Eastern Indigo Snake (*Drymarchon corais couperi*)

Fuzzy Pigtoe (*Pleurobema strodeanum*)

Gulf Moccasinshell Mussel (*Medionidus penicillatus*)

Gulf Sturgeon (*Acipenser oxyrinchus desotoi*)

Hawksbill Sea Turtle (*Eretmochelys imbricata*)

Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)

Leatherback Sea Turtle (*Dermochelys coriacea*)

Oval Pigtoe Mussel (*Pleurobema pyriforme*)

Piping Plover (*Charadrius melodus*)

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Acronyms

AFB	U.S. Air Force Base
ANF	Apalachicola National Forest
BA	Biological Assessment
DSAP	Detailed Specific Area Plans
EMA	Environmental Management Agreement
EO	Element Occurrence
ESA	Endangered Species Act
FDEP	Florida Department of Environmental Protection
FMRI	Florida Marine Research Institute
FNAI	Florida Natural Areas Inventory
FWC	Florida Fish and Wildlife Conservation Commission
GIS	Geographic Information Systems
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resource Conservation Service
NWI	USFWS National Wetlands Inventory
RCW	Red-cockaded Woodpecker
RGP	Regional General Permit
SHCA	Strategic Habitat Conservation Areas
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture

USFWS	U.S. Fish and Wildlife Service
WBAS	West Bay Area Sector
WBASP	West Bay Area Sector Plan
WBPA	West Bay Preservation Area

1.0 INTRODUCTION

The purpose of this Biological Assessment (BA) is to review an area of approximately 44,501 acres located in Bay County and associated with the potential issuance of a Regional General Permit SAJ 105 (RGP) by the U.S. Army Corps of Engineers (USACE), in order to determine if and how the issuance of the RGP will affect Federally listed species, candidate species and other protected species that may occur within the Action Area. Figure 1 shows the location of the Action Area. Figure 2 shows the Project Area. This BA has been prepared in accordance with 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. The Action Area also includes the Crooked Creek Basin and a portion of Pine Log Creek.
"Applicant"	The St. Joe Company and others who would use the SAJ 105 permit.
"Candidate"	According to February 28, 1996 Federal Register, page 7597, a candidate species are "those species for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list but issuance of the proposed rule is precluded."
"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 44,501 acre area which is subject to the proposed RGP, but *not* including adjacent downstream water bodies including West Bay.
"Proposed Action"	The proposed issuance of the RGP.

1.2 *Objectives*

The objectives of this BA are to:

- Document all federally listed species, candidate, 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, Candidate and Other Protected Species Considered in this Document*

The list of federally listed, candidate and other protected species that were reviewed as part of this BA and are known or suspected to occur in Bay County were obtained from the USFWS (2010) and were considered to have potential to occur within the Action Area (Figure 1).

Animals	**Plants**
Atlantic Green Turtle	Crystal Lake Nailwort
Leatherback Sea Turtle	Florida Skullcap
Atlantic Loggerhead Sea Turtle	Godfrey's Butterwort
Bald Eagle	Telephus Spurge
Oval Pigtoe Mussel	White Birds-In-A-Nest
Piping Plover	Harper's Beauty
Choctawhatchee Beach Mouse	
Eastern Indigo Snake	
Red Knot	
St. Andrews Beach Mouse	
Gulf Moccasinshell Mussel	
Red-cockaded Woodpecker	
Gulf Sturgeon	
Wood Stork	
Hawksbill Sea Turtle	
West Indian Manatee	
Kemp's Ridley Sea Turtle	
Reticulated Flatwoods Salamander	
Southern Sandshell	
Fuzzy Pigtoe	
Choctaw Bean	
Tapered Pigtoe	
Southern Kidneyshell	

Table 1.0 presents additional information about these federally protected animals and plants. Table 1.1 presents the rationale for whether each federally listed species is considered likely to occur within the Action Area and the determination of effects of the Proposed Action on each species.

The USFWS website (http://endangered.fws.gov/); USFWS Recovery Plans and Habitat Management Guidelines; 2007 infrared aerial photography; historical aerial photography (1952); and several databases were reviewed for indications of listed species occurrences and associated suitable habitat. Data sets included:

- FNAI element occurrences (EO)
- FWC manatee mortality data
- Florida Marine Research Institute (FMRI) sea turtle nesting beaches
- FMRI data on seagrasses
- FWC Prioritized Strategic Habitat Conservation Areas (SHCAs)
- FWC Wildlife Observations, including bald eagles nests.
- Florida Department of Environmental Protection (FDEP) Aquatic Preserves
- 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)
- St. Joe Timberland Company timber data
- USFWS Critical Habitat Portal

Table 1.0 Federally Listed and Other Protected Animal and Plant Species that May Occur within the Action Area

Common Name	Scientific Name	Federal Status	Habitat
Animals			
Atlantic Green Turtle	*Chelonia mydas mydas*	LE	Marine coastal and oceanic waters; nest on coastal sand beaches, near dune line. Known to forage in West Bay.
Atlantic Loggerhead Sea Turtle	*Caretta caretta*	LT	Marine coastal and oceanic waters; nest on coastal sand beaches, near dune line.
Bald Eagle	*Haliaeetus leucocephalus*	NA	Areas close to coastal areas, bays, rivers, lakes, or other bodies of water that provide food sources. Nests in tall trees that provide clear views of surrounding areas.
Choctaw Bean	*Villosa choctawensis*	C	Small to large creeks and rivers with moderate current over sand to silty sand substrates.
Choctawhatchee Beach Mouse	*Peromyscus polionotus*	LE	Primary and secondary dunes with moderate cover of grasses and forbs.
Eastern Indigo Snake	*Drymarchon corais couperi*	LT	In northern part of range, often winters in gopher tortoise burrows in sandy uplands and forages in more hydric habitats. Requires large tracts to survive.
Fuzzy pigtoe	*Pleurobema strodeanum*	C	Small to large creeks and rivers with moderate current over sand and sand with some silt.
Gulf Moccasinshell Mussel	*Medionidas penicillatus*	LE	Medium-sized creeks to large rivers with sand, muddy sand, and gravel substrates and slow to moderate currents; occasional in backwater areas with no current.
Gulf Sturgeon	*Acipenser oxyrinchus desoti*	LT	Forages in the Gulf of Mexico and major panhandle rivers eastward to the Suwannee River. Non-breeding animals observed in Tampa Bay and Charlotte Harbor and as far south as Florida Bay.
Hawksbill Sea Turtle	*Eretmochelys imbricata*	LE	Marine coastal and oceanic waters, commonly associated with coral reefs, keys, and mangroves. Nests on sandy beaches, often in vegetation.
Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	LE	Marine coastal waters, usually with sand or mud bottoms; nests on sandy beaches, but rarely in Florida. Juveniles frequent bays, inlets, and lagoons.
Leatherback Sea Turtle	*Dermochelys coriacea*	LE	Oceanic waters; nests on coastal sand beaches. Rarely seen in coastal waters except as hatchlings dispersing from nesting beaches and as adult females approaching the beach to nest.
Oval Pigtoe Mussel	*Pleurobema pyriforme*	LE	Medium-sized creeks to small rivers, usually with slow to moderate current and clean substrates of silty sand to sand-gravel mix.

Table 1.0 Continued. Federally Listed and Other Protected Animal and Plant Species that May Occur within the Action Area

Common Name	Scientific Name	Federal Status	Habitat
Piping Plover	*Charadrius melodus*	LT	Found on open, sandy beaches and on tidal mudflats and sandflats along both coasts. Winters on both Gulf and Atlantic coasts. Although more common on the Gulf Coast.
Red-Cockaded Woodpecker	*Picoides borealis*	LE	Open, mature pine woodlands that have diverse grass, forbs, and shrub species. Primarily longleaf in north Florida.
Red Knot	*Calidris canutus*	C	Winters along Gulf Coast primarily in intertidal, marine habitats, especially near coastal inlets, estuaries, and bays.
Reticulated Flatwoods Salamander	*Ambystoma bishopi*	LE	West of the Apalachicola-Flint Rivers within mesic longleaf pine -wiregrass flatwoods and savannas, breeding in isolated open ephemeral ponds.
Southern Kidneyshell	*Ptychobranchus jonesi*	C	Typically found in medium creeks to medium rivers in firm sand substrates with slow to moderate current. A recent survey in the Choctawhatchee basin in Alabama found its preferred habitat to be stable substrates near bedrock outcroppings.
Southern Sandshell	*Hamiota australis*	C	Small creeks and rivers in stable substrates of sand or mixtures of sand and fine gravel, with slow to moderate current.
St. Andrews Beach Mouse	*Peromyscus polionotus peninsularis*	LE	Primary and secondary dunes with moderate cover of grasses and forbs.
West Indian Manatee	*Trichechus manatus latirostris*	LE	Coastal waters, bays, rivers, and occasionally lakes in any coastal or estuarine waters during warmer months. Restricted to springs and warm-water areas in winter.
Tapered Pigtoe	*Fusconaia burkei*	C	Small to medium rivers in stable substrates of sand, small gravel, or sandy mud, with slow to moderate current.
Wood Stork	*Mycteria americana*	LE	Nests colonially in a variety of inundated forested wetlands, including cypress strands and domes, mixed hardwood swamps, sloughs, mangroves and in artificial habitats. Forages in shallow water in freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures and ditches.
Plants			
Crystal Lake Nailwort	*Paronychia chartacea ssp. minima*	LT	Sandy openings around sandhill upland lakes, karst ponds and disturbed sandy uplands such as sand pine plantation. Late summer.
Florida Skullcap	*Scutellaria floridana*	LT	Wet pine flatwoods; margins of cypress stands; seepage slopes; transition zones between flatwoods and wetlands. April-July
Godfrey's Butterwort	*Pinguicula ionantha*	LT	Seepage bogs. Edges of cypress stringers in flatwoods, roadside ditches, and in depressions in wet flatwoods and wetland prairies; sometimes in standing water. Feb-April
Harper's Beauty	*Harperocallis flava*	LE	Sunny, wet, acidic habitats, including wet prairies, seepage slopes, pitcherplant bogs and roadside ditches. Flowers May-July
Telephus Spurge	*Euphorbia telephioides*	LT	Longleaf pine-wiregrass flatwoods and savannas; dry to mesic pine-scrub oak stands. Flowers April-August
White Birds-in a-Nest	*Macbridea alba*	LT	Wet to mesic pine flatwoods, wet savannas, seepage slopes and roadsides. Flowers June-July

Table 1.1. Potential of Each Federally Listed and Other Protected Animal and Plant Species to Occur within the Action Area and Determination of Effect.

Common Name	Scientific Name	Federal Status	Potential of Occurring within Action Area	Determination of Effect
Animals				
Atlantic Green Turtle	*Chelonia mydas mydas*	LE	Medium; Foraging habitat within the Project Area; minimal nesting habitat within Action Area.	No effect
Atlantic Loggerhead Sea Turtle	*Caretta caretta*	LT	Low; Foraging habitat south of Project Area; minimal nesting habitat within Action Area.	No effect
Bald Eagle	*Haliaeetus leucocephalus*	MBTA/ BGEPA	Confirmed; Known active nest within and known active in vicinity of Project Area.	NA
Choctaw Bean	*Villosa choctawensis*	C	Negligible. Known from the Escambia, Yellow, and Choctawhatchee River drainages in Alabama and Florida, and not within the Action Area.	No effect
Choctawhatchee Beach Mouse	*Peromyscus polionotus allophrys*	LE	Negligible; Known population west of Project Area, but inappropriate habitat exists in Project Area.	No effect
Eastern Indigo Snake	*Drymarchon corais couperi*	LT	Low. Although suitable habitat is interspersed throughout the Project Area, there are limiting factors to the habitat available.	May affect, not likely to adversely affect
Fuzzy Pigtoe	Pleurobema strodeanum		Negligible. Endemic to the Escambia and Choctawhatchee River drainages in Alabama and Florida, and to the Yellow River drainage in Alabama. No known occurrences within the Action Area.	No effect
Gulf Moccasinshell Mussel	*Medionidas penicillatus*	LE	Negligible. Historically distributed within the Flint-Chattahoochee-Apalachicola River systems, now primarily found in Chipola and Ecofina Rivers (in Florida).	No effect
Gulf Sturgeon	*Acipenser oxyrinchus desoti*	LT	Moderate. No designated critical habitat occurs within the Action Area.	No effect
Hawksbill Sea Turtle	*Eretmochelys imbricata*	LE	Negligible. No confirmed nesting with the Project Area. Range appears to be outside Action Area but could enter the bay.	No effect
Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	LE	Low. Potential suitable foraging habitat in West Bay, adjacent to Action Area Not known to occur in Bay.	No effect
Leatherback Sea Turtle	*Dermochelys coriacea*	LE	Negligible. Possible roaming activities behavior adjacent to Action Area. Minimal nesting and no foraging habitat within Action Area.	No effect
Oval Pigtoe Mussel	*Pleurobema pyriforme*	LE	Negligible. Potential habitat appears low. Range is outside Action Area.	No effect
Piping Plover	*Charadrius melodus*	LT	Low. Confirmed observations on beaches south and outside of Project Area but within Action Area.	May affect, not likely to adversely affect

Table 1.1 Continued. Potential of Each Federally Listed Animal and Plant Species that Could Occur within the Action Area and Determination of Effect.

Common Name	Scientific Name	Federal Status	Potential of Occurring within Action Area	Determination of Effect
Animals				
Red-Cockaded Woodpecker	*Picoides borealis*	LE	Negligible. Suitable habitat not located within the Project Area.	May affect, not likely to adversely affect
Red Knot	*Calidris canutus*	C	Negligible. No confirmed observations or nesting with the Project Area. Range appears to be outside Action Area.	No effect
Reticulated Flatwoods Salamander	*Ambystoma bishopi*	LE	Negligible. No confirmed observations or likely habitat within the Project Area due to disturbance within its habitat.	May affect, not likely to adversely affect
Southern Kidneyshell	*Ptychobranchus jonesi*	C	Negligible. Endemic to the Escambia, Choctawhatchee, and Yellow River drainages in Alabama and Florida. No known occurances in Action Area.	No effect
Southern Sandshell	*Hamiota australis*	C	Negligible. Endemic to the Escambia River drainage in Alabama, and the Yellow and Choctawhatchee River drainages in Alabama and Florida. No known occurrences in Action Area.	No effect
St. Andrews Beach Mouse	*Peromyscus polionotus peninsularis*	LE	Negligible. No confirmed observations or nesting with the Project Area. Range appears to be outside Action Area.	No effect
Tapered Pigtoe	*Fusconaia burkei*	C	Low. Known from the Choctawhatchee River drainage in Alabama and Florida. Recently found in Pine Log Creek in Washington and Bay Counties outside the Action Area.	No effect
West Indian Manatee	*Trichechus manatus latirostris*	LE	Moderate. Suitable habitat within Action Area and Action Area is within range of species.	No effect
Wood Stork	*Mycteria americana*	LE	Low. No recorded observations within Project Area and may be outside the species range. Potentially suitable habitat interspersed throughout the Project Area.	No effect
Plants				
Crystal Lake Nailwort	*Paronychia chartacea ssp. minima*	LT	Moderate. Limited suitable habitat within the Project Area within disturbed sandy uplands.	May affect, not likely to adversely affect
Florida Skullcap	*Scutellaria floridana*	LT	Moderate. Known occurrences east of Action Area. Potential habitat interspersed throughout Project Area.	May affect, not likely to adversely affect

Godfrey's Butterwort	*Pinguicula ionantha*	LT	High. The Action Area is within range and the Project Area interspersed with potential habitat.	May affect, not likely to adversely affect
Harper's Beauty	*Harperocallis flava*	LE	Low. No confirmed observations and known range is outside the Action Area.	May affect, not likely to adversely affect
Telephus Spurge	*Euphorbia telephoides*	LT	Low. Has been confirmed adjacent to the Action Area. No identified suitable habitat.	May affect, not likely to adversely affect
White Birds-in a-Nest	*Macbridea alba*	LT	Moderate. Known occurrences east of Action Area. Potential habitat interspersed within the Project Area.	May affect, not likely to adversely affect

Key:

LE-Endangered: species in danger of extinction throughout all or a significant portion of its range.
LT-Threatened: species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
C-Candidate for listing under the Endangered Species Act
MBTA/BGEPA-Protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

1.4 *Critical Habitat*

There is no USFWS designated critical habitat within the Project Area or within the Action Area. The Action Area and Project Area are shown in Figure 1.

1.5 Discussions to Date

Summary of BA / BO discussion includes:

April 14th, 2009–Gail Carmody, USFWS, discussed the potential flatwoods salamander Action Area.

June 9, 2009–Gail Carmody recommended at least three facilitated public forum meetings to gather input.

December 8, 2009–Gail Carmody and Ted Martin led general discussion on the potential Action Area for the BO.

January 12, 2010–Significant discussion with USFWS.

February 9, 2010–Significant discussion with USFWS.

February 11, 2010- Site visit with the USFWS.

April 13, 2010–General discussion with USFWS concerning the species to include in the document. Directed by USFWS to use species list from their website.

June 22, 2010-Data concerning recent report of the Eastern Indigo Snake on Pine Log State Forest requested and provided by John Himes, FWC.

August 23, 2010-First Draft of BA forwarded to the USFWS and USACE for review prior to August 26th meeting.

August 26, 2010-Review draft BA with USFWS, NMFS, USACOE, St Joe Company, and FWC.

August 31, 2010- Data concerning the recent surveys for the Piping Plover at the Marifarms site requested and provided by Jeff Gore, FWC.

September 14, 2010-Discussions with Ted Martin with the USFWS.

September 14, 2010-Discussions with Don Imm with the USFWS primarily concerning protected plants.

September 17, 2010- Telephus spurge and other protected plant survey requirements forwarded by USFWS.

October 6, 2010- Review of the proposed Telephus spurge survey methodology by the USFWS.

October 22, 2010-Site visit with Dr. Vivian Negron-Ortiz, USFWS.

November 4, 2010- Submittal of the Telephus Spurge and other protected plants survey report to the USFWS.

November 29, 2010- Copy of second draft of BA emailed to USFWS for review prior to the December 3rd meeting.

November 30, 2010- Copy of second draft of BA emailed to USACE for review prior to the December 3rd meeting.

December 3, 2010- Meeting to review second draft BA with USFWS, USACE and St Joe Company.

December 7, 2010- Copy of second draft of BA emailed to Ted Hoehn with FWC for his review and comments.

December 17, 2010- Discussion with Ted Hoehn with FWC concerning agency comments to the second draft of the BA.

January 11, 2011- Meeting and discussion of effect determinations for sea turtles, gulf sturgeon, and manatee with USACE, FWC, USFWS and St. Joe Company.

February 8, 2011 – Meeting to discuss the addition of Candidate mussel species, wood stork data and other changes to the draft BA with St Joe Company, USFWS, and USACE.

February 8, 10, 11, 22 and 28, 2011- Email and phone discussions with Sandra Pursifull with the USFWS concerning the Candidate mussel species.

2.0 PROPOSED ACTION

2.1 *Purpose of the Proposed Action*

Within the Action Area is an innovative land use overlay, known as the West Bay Area Sector Plan (WBASP). The WBASP identifies potential development and conservation areas within the approximately 75,000-acre West Bay Area Sector (WBAS), which is located in northwestern Bay County. The process to develop the WBASP was initiated by Bay County, The St. Joe Company, the Panama City- Bay County Airport and Industrial District, and the Florida Department of Community Affairs in 2000. Development of the plan included numerous public meetings and extensive public input. The WSABP was adopted by the Bay County Commission in December 2002. The WBASP encourages large-scale, long-term land use planning. A significant portion of the WBAS is to be preserved for conservation purposes. The conservation set-aside areas are indentified in the WBASP as the West Bay Preservation Area (WBPA), and total approximately 40,000 acres.

Two Detailed Specific Area Plans (DSAPs) have been adopted by Bay County under the WBASP. The Airport DSAP includes approximately 4,000 acres for the newly relocated Panama City-Bay County

International Airport (now known as Northwest Florida Beaches International Airport), which serves Bay and surrounding counties. Associated with the new airport, but outside of the Airport DSAP, are approximately 10,000 acres of land within the WBAS, which have been placed under conservation easements and are undergoing ecological restoration, as mitigation for the new airport. The West Bay DSAP is approximately 16,500 acres in area and allows various uses including residential, commercial, light industrial, and conservation. See Figure 8 for the location of the WBAS and DSAPs.

The Project Area consists of the portions of the WBAS outside of areas that are already the subject of Corps individual permits (Panama City – Bay County International Airport and Industrial District and its mitigation areas, Department of the Army Permit # SAJ-2001-5264(IP-GAH); and Crooked Creek RiverCamps – St. Joe Land Company, Department of the Army Permit #SAJ-2002-00623), or covered by the Corps's RGP SAJ-86 (WBAS south of the Intracoastal Waterway). See Figure 8 for the location of the area covered by RGP SAJ-86 and the Project Area (RGP SAJ-105) in relation to the WBAS and DSAPs. Approximately 44,500 acres of the approximately 75,000 acres within the WBAS would be within the area of the proposed RGP. Approximately 97% of the Project Area is owned by The St. Joe Company with the remaining 3% under numerous other ownerships.

The proposed RGP is being cooperatively developed by an interagency team of senior staff representatives from USACE, FDEP, USFWS, FWC, and The St. Joe Company to address on a watershed and landscape scale, existing and anticipated development pressures within the Project Area. This effort is similar to that which was done for RGP SAJ-86. The goal is to build on the WBASP to further reduce impacts to the environment, and 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.

In accordance with the goal of watershed-level planning, five conservation units were identified within the area of the proposed RGP (see Figure 2). These five conservation units total 18,381 acres of uplands and wetlands and encompass two major drainages, Crooked Creek and Burnt Mill Creek, and their associated tributaries. The conservation units would overlap the areas identified as the WBPA by the WBASP within the Project Area. The highest quality wetland and upland habitats of the West Bay watershed within the Project Area are located within these conservation units. The conservation units create a continuous corridor of natural areas through the RGP area. 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.

Conservation Units

In accordance with the goal of watershed-level planning, five conservation units were identified within the area of the proposed RGP (see Figure 2). These five conservation units total 18,381 acres of uplands and wetlands and encompass two major drainages, Crooked Creek and Burnt Mill Creek, and their associated tributaries. As noted above, the large-scale, long-term planning of the West Bay Sector included the identification of special areas suitable for conservation and preservation and identified as the West Bay Preservation Area. Bay County described these areas in their Visioning Statement as

areas that "will protect ecological systems and provide connectivity to West Bay" and that will "link wildlife habitat and environmental resources through interconnected corridors."

A survey conducted by The Nature Conservancy stated:

> "The chance to protect the diverse ecosystem represented by the WBPA is a rare opportunity to conserve direct bay/estuarine frontage consisting of some 33 miles of almost unaltered shoreline, as well as ca. 44 miles of creek and tributary frontage/buffer lands. Protection of the WBPA would preserve virtually the entire coastal portion encompassing a near-pristine, and within Florida's panhandle a unique, estuarine ecosystem. Few opportunities with the significance of protecting a substantial portion of a self-contained watershed and the estuary it helps feed have ever been made available by a single owner."
>
> "..it has been shown through this report that the WBPA encompasses many areas of good to high quality natural communities supporting significant biological diversity – including rare species – and wildlife habitat. Because the block of lands that constitute the WBPA are envisioned to form a significant and undeveloped landscape and environmental buffer surrounding West Bay, as well as a completely interconnected system of buffer lands and other habitats associated with a substantial portion of its watershed, it is the opinion of The Nature Conservancy that the conservation, restoration/enhancement and management of this ecosystem will provide considerable ecological protection to the rich natural resources of the region."

Inclusion of these Conservation Unit areas within the RGP builds upon the measures taken by Bay County and further enhances the preservation principles of the West Bay Sector Plan. High quality wetland and upland habitats of the West Bay watershed within the Project Area are located within these conservation units. The conservation units create a continuous corridor of natural areas throughout the RGP area.

The conservation units are divided between Type I Conservation Units and Type II Conservation Units. Type I Conservation Units are considered to have higher quality habitat and function than the Type II Conservation Units. The allowed uses within Type I Conservation Units are significantly restricted. Within these units no development is allowed. Passive uses that are not detrimental to the ecological quality of the unit such as hunting, fishing, hiking, and biking will be allowed. The allowed uses within Type II Conservation Units are somewhat broader. In addition to the uses allowed in Type I units, road and bridge crossings (subject to conditions that will minimize their impact) necessary to support development outside of the Conservation Units and certain recreational activities that can be considered more active than those allowed in Type I Conservation Units, such as boat ramps, fishing piers, parks, picnic areas, pavilions, playgrounds, and other similar facilities will be allowed. Within the conservation units, traditional silviculture activities will be prohibited and will be replaced with activities consistent with a forestry management plan that is approved by all agencies reviewing the RGP or the EMA and prior to final approval of those documents. The primary forest management objective within the Conservation Units is to prescribe management activities that will restore and enhance the vegetative communities and function of historic ecosystems (St Joe Timberland Company 2010). The forestry management plan is expected to enhance the conservation units and provide for

additional habitat for both common and protected species. In addition, the conservation units may be further managed and enhanced as a result of permit mitigation requirements or by governmental or non-profit/natural resource management entities who acquire such areas.

Stormwater Management/Sediment and Erosion Control Measures

The RGP 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.

2.2 *Location of the Proposed Action*

The proposed 44,501 acre Proposed Action is located in Bay County, north of West Bay and south of State Road 20, extending from State Road 77 to State Road 79. The Section, Township Range of the Project Area are: T1S R14W S32; T1S R15W S15-23, 25-36; T1S R16W S13-15, 22-29, 32-36; T2S R14W S5-8, 16-21, 30; T2S R15W S1-13, 16-22, 24-26, 29, 30, 35;T2S R16W S1-5, 8-17, 20-28; and T3S R15W S1, 2, 11, 12. The location of the Project Area is shown as Figure 2.

2.3 *Description of the Proposed Action*

The Proposed Action is the issuance of a Department of the Army 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 unconverted wetlands, would be for necessary, minimized road crossings. The existing wetlands and uplands within the Project Area are shown in Figure 3. No more than 15% of converted 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 85% of converted wetlands preserved through placement under a conservation easement. Mitigation would include minimization of wetland impacts as described above, preservation of the six conservation units totaling approximately 18,381 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 RGP 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 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 and Anticipated Future Projects*

The majority of the RGP area has been managed as pine plantation. Silvicultural practices include logging of historical communities, construction of logging roads, bedding and row planting of pines. 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 3.

Recent changes within the Action area include the development of the Northwest Florida Beaches International Airport. The airport is built on approximately 1300 acres of a 4000 acre site that is not located within the Project Area, but is surrounded by the Project Area. The airport was the subject of an Environmental Impact Statement prepared by the Federal Aviation Administration (FAA) as the lead Federal agency, and the Corps as a cooperating agency. Prior to issuance of Corps permit SAJ-2001-05264, the FAA submitted a BA to the USFWS on August 30, 2005. The Action Area assessed for the airport project encompassed the 4,000 acres within the boundaries of the airport site, 37 acres for the access road to the airport, and 9,718 acres within the boundaries of the mitigation parcels. In response to the BA, the USFWS issued a Biological Opinion on October 3, 2005 that addressed incidental take for the Reticulated Flatwoods Salamander (*Ambystoma bishopi*).

Other recent changes within the Action Area include a small residential subdivision totaling approximately 32 acres with 15 lots is located within the Project Area and a 1500-acre residential subdivision known as RiverCamps located directly south of the Project Area. Breakfast Point Mitigation Bank, which totals 5,031 acres, is located to the south of the Project Area in Bay County and Devil's Swamp Mitigation Bank, which totals 3,049 acres, is located to the southwest of the Project Area in Walton County.

The VentureCrossings Enterprise Centre (VentureCrossings) is a planned office, retail, hotel and industrial development located on approximately 1,000 acres just south of the Northwest Florida Beaches International Airport. Projects that are currently under construction within VentureCrossings include a ±300 space covered airport parking facility, located near the intersection of West Bay Parkway and the airport property and the St Joe Company headquarters office building. This office building is a +35,000 square foot building that will be located on a 4 acre site on the southwest side of the intersection of West Bay Parkway and VentureCrossings Boulevard. Projects within VentureCrossings have been designed to incorporate the requirements of the proposed RGP.

The proposed construction of West Bay Parkway (Segment 2) by the Florida Department of Transportation is an anticipated future project within the Project Area. The purposes of this project are to provide access from the coastal areas of South Walton County to the Northwest Florida Beaches International Airport, to provide an alternate hurricane evacuation route for residents of coastal Walton County, and to avoid adding to future congestion on SR 30/SR 30A (US 98) by diverting through traffic around Panama City Beach and Panama City. Preliminary proposed routes for this project include roughly 100 acres of wetland impact. The wetland impacts associated with this anticipated project would either be evaluated directly under the proposed RGP or would be evaluated as an Individual Permit using the proposed RGP as a watershed plan.

Other features within the Action Area include Burnt Mill Creek, Crooked Creek, Doyle Bayou, Pigeon Creek, Kelly Branch, Little Crooked Creek and a small portion of Pine Log Creek. Court Martial Lake and White Western Lake are located northeast of the Project Area. There are several residential developments along the waterfront areas, particularly along Brunt Mill Creek and White Western Lake.

Regional General Permit Area

The majority of the 44,501 acre RGP area, which includes the Conservation Units, is currently undeveloped and is primarily used for timber production. Based upon historic aerial photography and historic ranges of populations, it is presumed that the Project Area was historically much more suitable to support the protected and sensitive species which are described further in this report.

The RGP area includes 6 drainage subwatersheds that ultimately discharge into West Bay. Out of those 6 subwatersheds, five have designated Conservation Unit acreages. The land cover types include pine plantation, upland coniferous forest, mixed forested wetlands, and mixed hardwood-pine wetlands.

Conservation Units

The Conservation Units total 18,381 acres and help create a wildlife corridor from Pine Log State Forest in the northwest through the Project Area and connecting to the open waters of West Bay. The development of the West Bay Sector Plan included the identification of special areas suitable for conservation and preservation which were identified as the West Bay Preservation Area. These units were described by the Bay County Vision Statement for the West Bay Area Sector Plan as they "will protect ecological systems and provide connectivity to West Bay. These ecological systems will link wildlife habitat and environmental resources through interconnected corridors." A survey conducted by The Nature Conservancy of the Conservation Units (at that time they were called the *West Bay Preservation Area [WBPA]*) found 16 distinct community types within these areas; Wet Flatwoods, Coastal Flatwoods, Mesic Flatwoods, Scrubby Flatwoods, Sandhill, Xeric Hammock, Upland Mixed Forest, Maritime Hammock, Wet Prairie/Seepage Slope, Dome Swamp, Baygall, Floodplain/Creek

Swamp, Blackwater/Seepage Stream, Estuarine Tidal Marsh, and Salt Flats." Additional community types within the Project Area include upland and wetland coniferous plantations (stands of various ages), inland ponds and sloughs, major bodies of water (West Bay) and titi swamps. Furthermore the report states;

> "The chance to protect the diverse ecosystem represented by the WBPA is a rare opportunity to conserve direct bay/estuarine frontage consisting of some 33 miles of almost unaltered shoreline, as well as ca. 44 miles of creek and tributary frontage/buffer lands. Protection of the WBPA would preserve virtually the entire coastal portion encompassing a near-pristine, and within Florida's panhandle a unique, estuarine ecosystem. Few opportunities with the significance of protecting a substantial portion of a self-contained watershed and the estuary it helps feed have ever been made available by a single owner."
>
> "..it has been shown through this report that the WBPA encompasses many areas of good to high quality natural communities supporting significant biological diversity – including rare species – and wildlife habitat. Because the block of lands that constitute the WBPA are envisioned to form a significant and undeveloped landscape and environmental buffer surrounding West Bay, as well as a completely interconnected system of buffer lands and other habitats associated with a substantial portion of its watershed, it is the opinion of The Nature Conservancy that the conservation, restoration/enhancement and management of this ecosystem will provide considerable ecological protection to the rich natural resources of the region."

2.5 *Anticipated Timeline of the Proposed Action*

The RGP 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. The first projects within the Project Area are expected to occur in 2011. Preservation of lands through the Conservation Units would occur annually based on individual project approvals (IPAs).

3.0 SPECIES ACCOUNTS AND HABITAT STATUS

Twenty-three federally listed or otherwise protected animal species and six federally listed plant species may potentially occur within the Action Area. Several databases and resources were researched to determine if any federally listed or protected species had been documented within the Action Area. Table 1.0 lists the species that may occur within the Action Area and the type of habitat each species occurs in. Table 1.1 provides the determination of the effect of the Proposed Action on each species and the rationale. A graphic depiction of the location of observations of these species within the Action Area is shown on Figure 4. Each species is discussed below.

During field surveys, the only protected species that was observed within the Project Area was the bald eagle. An eaglet was observed in the nest. The nest has been documented by FWC and designated as BA014. The location of documented and observed eagles' nests and a buffer of up to 660 feet are shown in Figures 7a and 7b.

3.1 Federally Listed Animal Species

Atlantic Green Turtle (*Chelonia mydas*)

Breeding populations of the Atlantic green turtle in Florida and along the Pacific Coast of Mexico were listed as endangered in 1978 under the United States Endangered Species Act (ESA) of 1973. The status also applies to eggs as well as turtles. According to the USFWS, all other populations are listed as threatened. The distribution of the green turtle is worldwide in tropical and sub-tropical waters.

There has been confirmed nesting activity along the Gulf Coast including the beaches of Bay County and surrounding counties. However, FWC (2009) did not report any green turtle nests in Bay County from 2005-2009. The majority of the confirmed green turtle nests are concentrated along the southeast coast of Florida (FWC 2009a).

Populations in Action Area

The Action Area touches the coastal beach in its extreme southwest corner, this is the only potential nesting habitat located within the Action Area. There is no nesting habitat within the Project Area. Juvenile turtles utilize the shallow areas of the near shore Gulf of Mexico and the shallow protected areas of West Bay to forage on seagrasses and algae (Thompson 2010).

Species Habitat Requirements

Green turtles are generally found in fairly shallow waters (except when migrating) inside reefs, bays, and inlets. The turtles are attracted to lagoons and shoals with an abundance of marine grass and algae. Open beaches with a sloping platform and minimal disturbance are required for nesting. Hatchlings have been observed to seek refuge and food in *Sargassum* rafts (USFWS 2009a).

Habitat Conditions within the Action Area

There is negligible nesting habitat within the Action Area and no nesting habitat within the Project Area. Several species of seagrasses have been documented in West Bay which may provide foraging opportunities for green turtles. There is suitable foraging habitat for the green sea turtle within the Project Area and within the Action Area.

Effects of the Proposed Action

A **"no effect"** determination was made for the Atlantic green turtle. Although several potential water access points have been established within the Action Area and adjacent to West Bay, the RGP will not permit any direct impacts which could affect seagrasses, a foraging resource for the turtle. Construction of docks, boat lifts, or other structures that could affect foraging resources in West Bay would require separate authorization including species effects evaluation and determination from the Corps.

Indirect effects due to development, such as stormwater runoff and subsequent water quality degradation have the potential to affect seagrass populations in water bodies within the Action Area. As a result, changes to seagrass populations may impact foraging resources. However, all areas that are adjacent to West Bay (where the seagrasses are located) are proposed as Conservation Units which will protect water quality associated with development in the surrounding area and all new development would be subject to the FDEP stormwater treatment permitting requirements and therefore if permitted,

are presumed to meet State Water Quality Certification. The RGP 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 the Outstanding Florida Water stormwater treatment volume requirements 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.

Nesting habitat within the Action Area is limited to the extreme southwest corner of the Action Area. No Project Area related development will directly or indirectly impact this portion of the coastal beach therefore no impacts to nesting habitat are expected.

Atlantic Loggerhead Sea Turtle (*Caretta caretta*)

Overall Range and Population Status

The Endangered Species Act listed the loggerhead sea turtle as threatened in July of 1978. Loggerheads are circumglobal, occurring throughout the temperate and tropical regions of the Atlantic, Pacific, and Indian Oceans. Loggerheads are the most abundant species of sea turtle found in U.S. coastal waters. In Florida, nesting occurs along the entire Atlantic coast, in the Keys and along the Gulf coast, from Pinellas County south and Franklin County west, with the greatest numbers from Brevard to Broward counties (Hipes et al. 2000). Nesting activity has been confirmed on many beaches in Bay County, including Panama City Beach, Tyndall AFB, Mexico Beach and St. Andrews State Park. From 2005-2009 a total of 447 loggerhead sea turtle nests were recorded in Bay County and a total of 102 nests were recorded in 2009 (FWC 2009a).

Populations in Action Area

The Action Area touches the coastal beach in its extreme southwest corner, this is the only potential nesting habitat located within the Action Area. There is no nesting habitat within the Project Area. Juvenile turtles typically do not enter the near shore areas until they are seven years of age or older and adults typically do not enter habitat such as West Bay for foraging. They utilize the shallow area of the near shore Gulf of Mexico as foraging habitat. Therefore, it is determined that there is no suitable foraging habitat known to be used by the loggerhead sea turtle located within the Action Area.

Species Habitat Requirements

Loggerheads occupy three different ecosystems during their lives: the terrestrial zone, the oceanic zone, and the inland coastal waters zone (neritic zone). Loggerheads nest on high energy ocean beaches. As juveniles they swim offshore to areas where the surface waters converge and where accumulations of *Sargassum* are found. In the southeast U.S. those areas are located between the Gulf Stream and the southeast U.S. coast, and between the Loop Current and the Gulf Coast of Florida. Oceanic juveniles migrate to near shore coastal areas and continue maturing until adulthood. In addition to providing critically important habitat for juveniles, the neritic zone also provides crucial foraging habitat and migratory habitat for adult loggerheads (Conant et al 2009).

Habitat Conditions within the Action Area

There is negligible nesting habitat within the Action Area and no nesting habitat within the Project Area. Several species of seagrasses have been documented in West Bay and may provide foraging resources for loggerhead turtles.

Effect of the Proposed Action

A **"no effect"** determination was made for the loggerhead sea turtle. Although several potential water access points have been established within the Action Area and adjacent to West Bay, the RGP will not permit any direct impacts which could affect seagrasses, a foraging resource for the turtle. Construction of docks, boat lifts, or other structures that could affect foraging resources in West Bay would require separate authorization including species effects evaluation and determination from the Corps.

Indirect effects due to development, such as stormwater runoff and subsequent water quality degradation, have the potential to affect seagrass populations in water bodies within the Action Area. As a result, changes to seagrass populations may impact foraging resources. However, all areas that are adjacent to West Bay (where the seagrasses are located) are proposed as Conservation Units which will protect water quality associated with development in the surrounding area. The RGP 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 the Outstanding Florida Water stormwater treatment volume requirements 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.

Nesting habitat within the Action Area is limited to the extreme southwest corner of the Action Area. No Project Area related development will directly or indirectly impact this portion of the coastal beach therefore no impacts to nesting habitat are expected.

Bald Eagle (*Haliaeetus leucocephalus*)

Overall Range and Population Status

The bald eagle was listed on the first federal endangered species list, issued in 1967, and reclassified to threatened in August 1995. In 1999, the process was initiated to delist it. The FWC included the bald eagle on its first endangered species list, issued in 1972, but reclassified it as threatened in 1974. The FWC approved to remove eagle from the state list of threatened species on April 9, 2008. On June 28, 2007 the Interior Department took the American bald eagle off the Federal List of Endangered and Threatened Wildlife and Plants. The bald eagle is still protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

The southeastern bald eagle ranges from south Florida north to North Carolina and west to Tennessee and Texas. Florida has the largest breeding population of any state outside Alaska. The majority of the nesting eagles occur in central and south Florida, along the Gulf coast north of Tampa, and Florida Bay and the southwest peninsula area.

Population in the Action Area

Three eagle's nests have been documented within the Project Area (BA007, BA014 and BA016). An eaglet was observed in nest BA014 during recent field surveys. FWC reported activity in BA007 in 2007. FWC reported an active nest (BA016) within the vicinity of BA014 in 2006, but a nest has not been observed since that time. Additional nests are recorded throughout Bay County along water bodies and waterways. The locations of the nests are shown on Figures 4, and 7a and 7b.

Species Habitat Requirements

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. Daytime roosts are generally in "super canopy" trees which are very large trees which will poke above most trees in the forest and are adjacent to shorelines, and are typically located away from human disturbance. Communal roosts, which are rare in Florida, are normally located within three miles of water. The quality of foraging habitat is characterized by the diversity, abundance, and vulnerability of eagle prey, the structure of the aquatic habitat (such as the presence of shallow water), and the extent of human disturbance (Buehler 2000). The nesting season extends from October through mid May.

Major threats include habitat loss because of development and commercial timber harvest, pollutants and decreasing food supply are also of concern (Wood 1989).

Habitat Conditions within the Action Area

Potential habitat is present within the Project Area, particularly within the area that borders West Bay and Burnt Mill Creek. These areas provide large trees for nesting with clear views to water that provide foraging habitat.

Effects of the Proposed Action

The habitats most suitable for the bald eagle within the Project Area are primarily located within the proposed Conservation Units. These areas include the lands bordering West Bay, Pigeon Creek, Crooked Creek and Burnt Mill Creek. The Proposed Action may provide indirect beneficial effects by protecting water quality from degradation associated with development around these water bodies, which protects bald eagle food sources in these water bodies. Appropriate habitat for nesting also exists in the Conservation Units.

Choctaw Bean (*Villosa choctawensis)*

Overall Range and Population Status

The Choctaw bean was listed as a Candidate for protection under the ESA in 2004. The Choctaw bean is a small freshwater mussel known from the Escambia, Yellow, and Choctawhatchee River drainages of Alabama and Florida (Williams et al. 2008). The Choctaw bean persists in most of its historical range, however its populations are fragmented and its numbers are low, particularly in the Escambia and Yellow River drainages. The number of locations in the Escambia River drainage known to support the species has declined from a total of 13 to 6 currently. The numbers of individuals found have also decreased. In the Choctawhatchee River drainage, the Choctaw bean continues to persist in most areas but has declined in the Yellow River drainage. It has been recorded in 40 locations throughout the

drainage, 34 of which are recent occurrences. Its status was assessed on 1975 (Heard) which found the Choctaw bean was formerly abundant in the main channel of the Choctawhatchee River in Florida, but has become quite rare.

Population in the Action Area
The Choctaw bean most likely does not occur in the Action Area as the Action Area is outside its known current and historical range. There are no recorded observations within the Action Area.

Species Habitat Requirements
Very little is known about the habitat requirements or life history of the Choctaw bean. It is found in large creeks and small rivers in stable substrates of silty sand to sandy clay with moderate current.

Habitat Conditions within the Action Area
None of the water bodies in which the Choctaw bean mussel is endemic occur within the Action Area.

Effects of the Proposed Action
The Proposed Action is determined to have **"no effect"** on the Choctaw bean mussel since potential habitat is not present.

Choctawhatchee Beach Mouse (*Peromyscus poliontus allophrys*)

Overall Range and Population Status
The Choctawhatchee beach mouse was listed as endangered in June of 1985. The designated critical habitat is 12.6 miles of coast in Walton and Bay Counties, including Grayton Beach State Recreation Area and Topsail Hill Preserve in Walton County, Shell Island and the mainland section of St. Andrews State Recreation Area in Bay County. The major threat to their population includes loss of habitat due to development and hurricanes and predation from native and non-native animals, such as cats (USFWS 2007).

Population in the Action Area
There are no recorded observations of this species within the Action Area. No nesting or foraging habitat is within the Action Area.

Species Habitat Requirements
The Choctawhatchee beach mouse inhabits primary, secondary and occasionally tertiary sand dunes with a moderate cover of grasses and forbs. This species finds refuge in adjacent sand live oak communities during and following hurricanes. They feed primarily on seeds of beach plants and insects.

Habitat Conditions within the Action Area
There is no nesting or foraging habitat within the Action Area.

Effects of the Proposed Action
A **"no effect"** determination was made for the Choctawhatchee beach mouse. The Proposed Action will not have a direct effect on species that utilize coastal beach habitat. Indirect effects due to development, such as stormwater runoff and subsequent water quality degradation may have the

potential to affect coastal dune vegetative communities. The areas within the Project Area closest to appropriate habitat for this species have been established as Conservation Units and should reduce or eliminate indirect impacts to water quality and runoff associated with development in the surrounding area.

Eastern Indigo Snake (*Drymarchon corais couperi*)

Overall Range and Population Status

The Eastern indigo snake was listed as threatened by Federal government in January of 1978. Historically, the Indigo Snake ranged from southern South Carolina to southeastern Mississippi. However, most, if not all, existing viable populations occur in Florida and Georgia. In Florida, the distribution is statewide with confirmed occurrences in every county, but with denser populations occurring within south Florida.

Population in Action Area

There has been one recorded observation of an Eastern indigo snake adjacent to the Project Area within Pine Log State Forest in June 2008. In addition, several observations were recorded in 1978 through 1982 by Paul Moler north and northeast of the Action Area in northeastern Bay County and southern Washington County (Wilson Miller, Inc. 2003). FNAI recorded an occurrence in 1974 east of Hwy 77, which borders the Project Area.

Species Habitat Requirements

The indigo snake occurs throughout a broad range of habitats, including sandhills/scrub to wet prairies and swamps, but appears to prefer sandhill habitat in close association with gopher tortoise burrows in north Florida. The indigo snake requires very large tracts to survive, which range from 45 to 250 acres or more. In northern Florida the snake actively forages, takes refuge and overwinters in gopher tortoise burrows (Hipes et al 2000).

Habitat Conditions within the Action Area

The effects of persistent silvicultural activities have greatly reduced the potentially suitable habitat within the Action Area. Such activities include clear cutting, soil compaction, rutting, bedding, dense shading of planted pine forests which reduces herbaceous ground cover and fire suppression. Gopher tortoise burrows were observed along some roadsides within sandhill/scrub habitat during field surveys within the Project Area. The thickly planted pine plantations reduce the suitability of habitat for the gopher tortoise due to shading and subsequently the likelihood that eastern indigo snakes are present.

Effects of the Proposed Action

There is potential for the indigo snake to utilize the Project Area and there is evidence that the snake has potentially occupied lands in the vicinity of the Project Area, therefore, a **"may affect but not likely to adversely affect"** determination was made for the snake.

The Conservation Units within the Project Area may provide direct benefits to the indigo snake habitat by protecting large areas of existing suitable habitat. Indirect benefits may also include watershed planning and growth management. Within the Project Area, direct negative effects to potential habitat may occur in association with fragmentation of habitat due to road construction and destruction of

upland habitat. Indirect effects also may include increased road kill, increased human access, deliberate killing and increased collection for the pet trade.

Fuzzy Pigtoe (*Pleurobema strodeanum)*

Overall Range and Population Status

The fuzzy pigtoe was listed as a Candidate for protection under the ESA in 2004. The fuzzy pigtoe is endemic to the Escambia and Choctawhatchee River drainages in Alabama and Florida, and to the Yellow River drainage in Alabama (Williams *et al.* 2008). Within the Escambia drainage, the number of locations that support fuzzy pigtoe populations has declined from 37 to 18 currently. It was not found at 4 recently surveyed locations on the main channel; however, 13 historical sites in the drainage have not been examined recently, and cannot be evaluated. The fuzzy pigtoe is exceedingly rare in the Yellow River drainage and is known from only four localities in the Yellow drainage. A single individual collected in 2010 in Florida, is the only recent record of the species in the drainage. Its range in the Yellow drainage has declined, and the species may no longer occur in the Alabama portions of its range. In the Choctawhatchee River drainage, the number of locations that support fuzzy pigtoe populations have declined from 61 to 54 currently. Although the species still occurs in much of its historic range in the drainage, it may be extirpated from localized areas. It appears sensitive to degradation, as once abundant populations have disappeared.

Population in the Action Area

The fuzzy pigtoe most likely does not occur in the Action Area as the Action Area is outside its known current and historical range. There are no recorded observations within the Action Area.

Species Habitat Requirements

The fuzzy pigtoe is found in medium sized creeks and rivers in stable substrates of sand and silty sand with slow to moderate current.

Habitat Conditions within the Action Area

None of the water bodies in which the fuzzy pigtoe mussel is endemic occur within the Action Area.

Effects of the Proposed Action

The Proposed Action is determined to have **"no effect"** on the fuzzy pigtoe mussel since potential habitat is not present.

Gulf Moccasinshell Mussel (*Medionidus penicillatus*)

Overall Range and Population Status

The Gulf moccasinshell mussel was listed as endangered in March of 1998. Historically, Gulf moccasinshells were found within the Apalachicola-Chattahoochee-Flint river system of Georgia, Florida and Alabama. However, today the Gulf Moccasinshell is only found at a few sites within Georgia and Florida, including a number of sites within the Flint and Chattahoochee Rivers of Georgia. Recent surveys suggest that the mussel is likely extirpated in Alabama. In Florida, the distribution is believed to be confined to the Chipola River and Econfina Creek in Bay County.

Populations in Action Area
The Gulf moccasinshell most likely does not occur in the Action Area as the Action Area is outside its known current and historical range.

Species Habitat Requirements
The Gulf moccasinshell inhabits medium-sized creeks to large rivers with sand, muddy sand, and gravel substrates and slow to moderate currents. They may occasionally occur in backwater areas with no current (Hipes et al. 2000).

Habitat Conditions within the Action Area
None of the water bodies in which the Gulf moccasinshell mussel is endemic occur within the Action Area.

Effects of the Proposed Action
The Proposed action is determined to **"no effect"** on the Gulf moccasinshell mussel since potential habitat is not present.

Gulf Sturgeon (*Acipenser oxyrinchus desoti*)

Overall Range and Population Status
The Gulf Sturgeon was listed as a threatened species under the ESA in September of 1991. Critical habitat was designated March in 1993. Choctawhatchee Bay and surrounding areas, as well as the nearshore areas of the Gulf of Mexico have been designated as critical habitat. Gulf sturgeons are found in river systems from Louisiana to Florida, in nearshore bays and estuaries and in the Gulf of Mexico. Critical habitat was designated in 2003 and includes the nearshore of the Gulf of Mexico and Choctawhatchee Bay. In Florida reproducing populations are distributed in the Gulf of Mexico and major panhandle rivers eastward to the Suwannee River. Non-breeding animals have been observed in Tampa Bay and Charlotte Harbor (Hipes et al. 2000).

Populations in the Action Area
It has been documented that the Gulf sturgeon overwinters in Choctawhatchee Bay which is approximately 12 miles to the west of the Project Area. Gulf sturgeons are known to be transient species within the southern portions of West Bay, which is at the southern end of the Action Area. There is no critical habitat located within the Action Area.

Species Habitat Requirements
Gulf sturgeons are anadromous. Adults spawn in freshwater and migrate into marine waters in the fall to forage and overwinter. Juveniles stay in the river for about the first 2-3 years and return to their natal stream to spawn. Riverine habitats where the healthiest populations of Gulf sturgeon are found include long, spring-fed, free-flowing rivers, typically with steep banks, a hard bottom, and an average water temperature of 60-72° F. Gulf sturgeon initiate movement up to the rivers between February and April and migrate back out to the Gulf of Mexico between September and November. Adults feed on mollusks as well as polychaetes, shrimp, isopods, amphipods, and small benthic fishes. Juveniles feed on benthic crustaceans and insect larvae within the rivers (NOAA n.d). Threats to the Gulf sturgeon include fishing pressures and spawning habitat loss through construction of dams, dredging and inputs of industrial pollutants especially within spawning areas.

Habitat Conditions within the Action Area

Gulf sturgeons overwinter in Choctawhatchee Bay, which is 12 miles west of the Project Area. Choctawhatchee Bay has been designated as critical habitat for the Gulf Sturgeon. Gulf sturgeons are known to be transient species within the southern portions of West Bay, however there is no suitable riverine habitat within the Action Area for spawning.

Effects of the Proposed Action

A **"no effect"** determination was made for the Gulf sturgeon. The Proposed Action is not likely to affect the Gulf sturgeon since its habitat is a significant distance away from the Project Area. The potential projects within or near the waters of West Bay that are located within the Project Area such as dock or pier construction at four access points and upland development, are not likely to impact resources necessary for the survival of the Gulf sturgeon. Water quality within the bay will be protected through the establishment of Conservation Units adjacent to waterways. The RGP 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 the Outstanding Florida Water stormwater treatment volume requirements 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.

Hawksbill Sea turtle (*Eretmochelus imbricata*)

Overall Range and Population Status

The hawksbill sea turtle was listed as endangered throughout their entire range in June of 1970. The hawksbill is found in tropical and subtropical regions of the Atlantic, Pacific, and Indian Oceans. The species is widely distributed in the Caribbean Sea and western Atlantic Ocean. In Florida, the hawksbill occurs primarily in the southern half of Florida, mostly in the Florida Keys and reefs along the southeastern peninsular coast. Nesting is infrequent but has been confirmed from Volusia County to the Marquesas (NMFS 1998).

Populations in Action Area

No hawksbill turtles have been observed in the Action Area. Since they are migratory and free roaming, they may possibly swim into West Bay, Choctawhatchee Bay or the nearshore areas of the Gulf of Mexico. The Action Area touches the coastal beach in its extreme southwest corner, this is the only potential nesting habitat located within the Action Area, however this species is not known to nest in Bay County. There is no nesting habitat within the Project Area.

Species Habitat Requirements

Hawksbills frequent rocky areas, coral reefs, shallow coastal areas, lagoons or oceanic islands, and narrow creeks and passes. They are seldom seen in water deeper than 65 feet. Hatchlings are often found floating in masses of sea plants, and nesting may occur on almost any undisturbed deep-sand beach in the tropics. Adult females are able to climb over reefs and rocks to nest in beach vegetation (NMFS 1998).

Habitat Conditions within the Action Area
There is no nesting habitat within the Action Area. Hawksbills may forage in the nearshore areas of the Gulf of Mexico, however they have not been observed within the Action Area.

Effects of Proposed Action
The Proposed Action is determined to have **"no effect"** on the Hawksbill sea turtle, since the species is not known to occur within the Action Area. Although several potential water access points have been established within the Action Area and adjacent to West Bay, the RGP will not permit any direct impacts which could affect habitat or foraging resources for the turtle. Construction of docks, boat lifts, or other structures that could affect habitat or foraging resources in West Bay would require separate authorization including species effects evaluation and determination from the Corps. The RGP 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 the Outstanding Florida Water stormwater treatment volume requirements 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.

Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)

Overall Range and Population Status
The Kemp's ridley was listed as endangered in December of 1970 under the Endangered Species Conservation Act, then the ESA of 1973. No critical habitat has been designated. The Kemp's ridley is the most seriously endangered of the sea turtles. Its numbers have precipitously declined since 1947, when over 40,000 nesting females were estimated in a single arribada. The nesting population produced a low of 702 nests in 1985; however, since the mid-1980's, the number of nests laid in a season has been increasing primarily due to nest protection efforts and implementation of regulations requiring the use of turtle excluder devices in commercial fishing trawls. During the 1999 and 2000 nesting seasons, more than 3,600 nests and 6,000 nests, respectively, were found on the Mexico nesting beaches (NOAA n.d.).

The range of the Kemp's Ridley includes the Gulf coasts of Mexico and the U.S., and the Atlantic coast of North America as far north as Nova Scotia and Newfoundland. Most Kemp's ridleys nest on the coastal beaches of Mexico, although a very small number of Kemp's ridleys nest consistently at Padre Island National Seashore, Texas. Hatchlings, after leaving the nesting beach, are believed to become entrained in eddies within the Gulf of Mexico, where they are dispersed within the Gulf and Atlantic by oceanic surface currents. As they mature, they enter coastal shallow water habitats.

It is thought that the Kemp's Ridley did not historically nest in Florida, but eight nests have been recorded since 1989, primarily in the southwestern portion of the state (Hipes et al. 2000).

Population in Action Area
Juveniles may utilize the shallow areas of the inshore Gulf of Mexico as feeding ground and may utilize West Bay to forage. No nesting habitat occurs within the Action Area. There have been no documented occurrences within the Action Area.

Species Habitat Requirements
Adults utilize marine coastal waters statewide, usually with sand or mud bottoms. Juveniles frequent utilize bays, inlets, and lagoons.

Habitat Conditions within the Action Area
No nesting habitat occurs within the Action Area. The diet of the Kemp's Ridley is primarily crustaceans, jellyfish and seagrasses. Several seagrass species are present in West Bay and may provide foraging habitat for Kemp's Ridleys, however they are not known to enter into the Bay.

Effects of the Proposed Action
A **"no effect"** determination was made for the Kemp's ridley turtle since the Proposed Action is not anticipated to affect this species or its habitat because the Action Area contains no nesting habitat and is not known to be utilized by the Kemp's Ridley as foraging habitat. Furthermore, although several potential water access points have been established within the Action Area and adjacent to West Bay, the RGP will not permit any direct impacts which could affect habitat or foraging resources for the turtle. Construction of docks, boat lifts, or other structures that could potentially affect habitat or foraging resources in West Bay would require separate authorization including species effects evaluation and determination from the Corps.

Indirect effects due to development, such as stormwater runoff and subsequent water quality degradation, have the potential to affect seagrass populations in water bodies within the Action Area. As a result, changes to seagrass populations may impact potential foraging resources. However, all areas that are adjacent to West Bay (where the seagrasses are located) are proposed as Conservation Units which will protect water quality associated with development in the surrounding area. The RGP 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 the Outstanding Florida Water stormwater treatment volume requirements 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.

Leatherback Sea Turtle (*Dermochelys coriacea*)

Overall Range and Population Status
The leatherback sea turtle was listed as endangered worldwide in June of 1970. Critical habitat has been designated in the U.S. Virgin Islands. The leatherback turtle is distributed worldwide in tropical and temperate waters of the Atlantic, Pacific, and Indian Oceans. It is also found in small numbers as far north as British Columbia, Newfoundland, and the British Isles, and as far south as Australia, Cape of Good Hope, and Argentina. Nesting populations have declined over the last two decades along the

Pacific coasts of Mexico and Costa Rica. The Mexican leatherback nesting population, once considered to be the world's largest leatherback nesting population (65 percent of worldwide population), is now less than one percent of its estimated size in 1980. The largest nesting populations now occur in the western Atlantic in French Guiana and Colombia, and in the western Pacific in West Papua and Indonesia. In the United States, small nesting populations occur on the Florida east coast, Sandy Point, U.S. Virgin Islands and Puerto Rico (NMFS 1992). In Florida, the entire coastline provides nesting habitat, with nesting known within every Atlantic coastal county and counties in the panhandle. In 2004, four leatherback nests were recorded in Bay County but none were recorded in 2009 (FWS 2009).

Population in Action Area

Leatherback turtles have been observed within the Action Area in the nearshore areas of the Gulf of Mexico. Leatherbacks are migratory animals that may occasionally wander into West Bay, however are not known to occur often within the Bay.

Species Habitat Requirements

The leatherback is the most pelagic of the sea turtles. Adult females require sandy nesting beaches backed with vegetation and sloped sufficiently so the crawl to dry sand is not too far. The preferred beaches have proximity to deep water and generally rough seas. They feed primarily on jellyfish.

Habitat Conditions with the Action Area

Leatherbacks only rarely nest on Florida beaches and a small amount of nesting habitat is located within the Action Area. Foraging habitat may occur in the nearshore areas of the Gulf of Mexico, but not within the Action Area.

Effects of the Proposed Action

The Proposed Action is determined to have **"no effect"** on the leatherback sea turtle because there is negligible nesting and no foraging habitat within the Action Area. The species is not likely to be present within the Action Area because it is unlikely to be found in bays. Furthermore, although several potential water access points have been established within the Action Area and adjacent to West Bay, the RGP will not permit any direct in-water impacts within the bays that could affect the turtle. Construction of docks, boat lifts, or other structures that could potentially affect the species in West Bay would require separate authorization including species effects evaluation and determination from the Corps.

Nesting habitat within the Action Area is limited to the extreme southwest corner of the Action Area. Project Area related development is not expected to indirectly impact this portion of the coastal beach therefore no impacts to nesting habitat are expected.

Oval Pigtoe Mussel (*Pleurobema pyriforme*)

Overall Range and Population Status.

The oval pigtoe mussel was listed as endangered in March of 1998. Historically, the oval pigtoe was found within the Apalachicola-Chattahoochee-Flint river system of Georgia and Florida and Alabama. However, today the oval pigtoe is only found at a few sites within Georgia and Florida, including a number of sites within the Flint and Chattahoochee Rivers of Georgia. In Florida, the distribution is

believed to be confined to the Chipola, Ochlocknee and Suwannee river systems and Econfina Creek (Bay County).

Populations in Action Area
The oval pigtoe mussel most likely does not occur in the Action Area as the Action Area is outside its known current range.

Species Habitat Requirements
The oval pigtoe mussel inhabits medium-sized creeks to small rivers with slow to moderate current and clean substrates of silty sand to sand-gravel mix (Hipes et al. 2000).

Habitat Conditions within the Action Area
None of the water bodies in which the oval pigtoe mussel is endemic occur within the Action Area.

Effects of the Proposed Action
The Proposed Action is determined to have **"no effect"** on the oval pigtoe mussel since potential habitat is not present.

Piping Plover (*Charadrius melodus*)

Overall Range and Population Status.
The Atlantic Coast population of piping plovers was listed as threatened in January of 1986. In July of 2000 critical habitat was designated for the wintering populations outside of the Action Area. The populations of the Northern Great Plains were listed as threatened and the Great Lakes population was listed as endangered. The piping plover breeds on coastal beaches from Newfoundland and southeastern Quebec to North Carolina. These birds winter primarily on the Atlantic Coast from North Carolina to Florida, although some migrate to the Bahamas and West Indies (USFWS 2010a). In Florida the piping plover winters on both Gulf and Atlantic coasts, although it is much more commonly found on the Gulf Coast. Wintering habitat occurs along beaches from Perdido Key in Escambia County to Dog Island in Franklin County (Hipes et al. 2000).

Populations in Action Area
Occurrences of the piping plover have been documented in the Action Area, within a site known as the Marifarms Site, on the south side of West Bay (Sprandel 1997).

Species Habitat Requirements
The piping plover's wintering habitat is found on open sandy beaches and on tidal mudflats and sandflats along both coasts.

Habitat Conditions within the Action Area
There is no designated critical habitat within the Action Area. Potential wintering habitat may occur along the tidal flats of West Bay which is within the Action Area.

Effects of the Proposed Action
A **"may affect, not likely to adversely affect"** determination was made for the piping plover because the Proposed Action is not expected to affect its wintering habitat.

Indirect effects associated with development, such as stormwater runoff and subsequent water quality degradation, may have the potential of affecting wintering habitat of the piping plover. However, all development within the Project Area will be subject to State stormwater permitting design and treatment and in addition, all areas that are adjacent to West Bay (where the potential wintering habitat is located) are proposed as Conservation Units which will protect the shoreline area. The RGP 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 treatment volume 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 of water quality, which will benefit species within the Project Area and Action Area.

Red-Cockaded Woodpecker (*Picoides borealis*)

Overall Range and Population Status

The red-cockaded woodpecker (RCW) was listed as endangered in 1970. The FWC listed the bird as threatened in 1974, endangered in 1975 and reclassified it again as threatened in 1979. In September of 2003, the FWC downlisted the bird to a species of special concern.

This bird's range is closely tied to the distribution of southern pines. Historically, the red-cockaded woodpecker occurred from East Texas and Oklahoma, to Florida, and North to New Jersey. The present distribution is similar, except that the species has been extirpated from Missouri, Maryland, and New Jersey. The remaining populations are fragmented into isolated, island populations. The current population level is estimated at 4,500 groups with 10,000 to 12,000 birds (USFWS 2010b). In Florida, it is estimated that 75 percent of the statewide breeding population occurs in the panhandle. The Apalachicola National Forest has the largest population in the species' entire remaining range and is the only recovered population (Wilson Miller 2003).

Populations in Action Area

One known location of a cavity tree was identified in 1978 within the Action Area (Figure 4). However, the location of the tree or suitable habitat within the area was not observed during recent field surveys. No other cavity trees or clusters were observed within the Project Area.

Species Habitat Requirements

The red-cockaded woodpecker inhabits open, mature pine forests that are frequently maintained by fire and provide an open midstory and diverse grass and forbs understory. The bird excavates cavities and nests exclusively in living pine trees, preferably longleaf pines but will nest in other species of pines, typically 60 to 80 years or older. Home ranges in northern Florida range from 300 to 350 acres (Hipes et al. 2000).

Habitat Conditions with the Action Area

The vegetative community within the Action Area is primarily planted slash or sand pine, therefore the potential for nesting or foraging habitat is poor. Habitat conditions within the Action Area are

inadequate to support active clusters or red-cockaded woodpeckers. Some large pines are sporadically located throughout the pine plantations and along the on-site waterways and small areas of sandhill communities. The sporadic mature longleaf pines with wiregrass understory that occur within the sandhills within the Project Area may provide fair to poor habitat.

Silviculture activities such as elimination of mature pine trees, maintenance of high density pine plantations, destruction of the herbaceous groundcover, soil disturbances from logging and planting, rutting and fire suppression have impacted the potential for appropriate habitat for the RCW. The closest known population occurs approximately 30 miles SE of the area, which falls outside the range of cluster foraging activity.

Effects of the Proposed Action

A **"may affect, not likely to adversely affect"** determination was made for the RCW because there may be suitable within the Action Area but there is no suitable habitat known to be within the Project Area.

The RCW may be directly and indirectly benefited by the Proposed Action. Protection of the Conservation Units will protect potential nesting and foraging habitat for the RCW. Timber management prescriptions at Devil's Swamp Mitigation Bank, Breakfast Point Mitigation Bank and Pine Log State Forest are conducive to generating the forest species composition, age and structure necessary for suitable habitat for RCWs. These areas may provide suitable habitat for natural or assisted RCW colonization of these sites within 50 years.

Red Knot (*Calidris canutus*)

Overall Range and Population Status

The red knot was listed as a candidate for protection under the ESA in September of 2006. The red knot, a member of the sandpiper family, breeds in the Arctic tundra in summer and then migrates south for the winter. The "rufa" subspecies breeds specifically in the central Canadian Arctic and winters in Tierra del Fuego in South America. Florida also hosts a population of wintering red knots. However, it is not known where in the Arctic, Florida's birds go to breed or whether the group wintering in Florida is genetically different from other subspecies. During its migration, the red knot has stopover areas where it forages primarily on horseshoe crab eggs. The red knot population declined drastically when populations of horseshoe crabs dropped in the 1990's, particularly in Delaware Bay. In Florida, the red knot utilizes the southwestern coast as a "stopover" location during migration.

Population in the Action Area

There are no recorded observations of this species within the Action Area. No habitat is located within the Action Area.

Species Habitat Requirements

The red knot migrates great distances and breeds on the mainland and islands of the Arctic and migrates to southern tip of South America. During this migration, the red knot has several "stopover" locations, such as the Delaware Bay area to forage on resources.

Habitat Conditions within the Action Area
There is no nesting or foraging habitat within the Action Area.

Effects of the Proposed Action
A **"no effect"** determination was made for the red knot because appropriate habitat does not exist in the Action Area.

Reticulated Flatwoods Salamander (*Ambystoma bishopi*)

Overall Range and Population Status
Surveys completed since 1990 indicate that 22 populations are known from across the historical range, with 2 in Georgia and the remainder in Florida (none known extant in Alabama) (USFWS 2005, Pauly et al.2007). Secretive habits of adults make population estimates difficult. Total adult population size presumably is at least 1,000, but actual number is unknown. During extensive surveys of historical (pre-1990) breeding ponds, researchers recorded the species at only a small minority of formerly inhabited sites. Currently, the species presumably is declining in concert with continued loss of remaining intact pine flatwoods community (particularly degradation of groundcover). The rate of decline is unknown.

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 11 miles from the Action Area. The documented occurrence on the 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 intensive survey was conducted by Joe McGlincy, wildlife biologist with The Wildlife Company. Potential flatwoods salamander habitat within the Project Area was found to be extremely limited. Field surveys revealed only 11 ponds that could be considered remotely potential, but not verified flatwoods salamander habitat within the Project Area. Of these 11, four have low-moderate, eight have moderate and three moderate-high potential as determined by Joe McGlincy. Given this breakdown, the lack of appropriate upland habitat structure and the distance from known populations, only the three moderate-high ponds are considered in this evaluation of potential effects.

Methods

Flatwoods salamander habitat was evaluated using a three phase process developed by HDR, Inc. U.S. Fish & Wildlife Service, Florida Wildlife Commission and Florida Department of Transportation to evaluate potential habitats surrounding the widening of US Highway 98 project. This method uses a scoring system to evaluate the quality of potential breeding ponds.

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 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 hydrologically isolated from other wetlands. These sites were dominated by pond cypress, swamp tupelo, and/or slash pine, or a shrub swamp dominated by titi (*Cyrilla racemiflora)*, Chapman's St. Johns-wort (*Hypericum chapmanii)* or myrtle-leaved holly *(Ilex myrtifolia)*. 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 scored 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. For evaluation purposes, this model defines the terrestrial habitat as those uplands within a 538-foot radius of the pond-ecotone margin. Each of the three habitat components is assigned a score from 0-3 (from "no" habitat to "high quality" habitat) for a total score between 0 and 9. A "metapopulation bonus" (designated by an asterisk) is ascribed to the site if it forms part of a "high quality habitat nexus," which is presumed to support a metapopulation of flatwoods salamanders. This nexus is defined herein as a cluster of three or more ponds, each with a habitat rank equaling or greater than low-moderate potential

(as defined below), which are located within 1.1 miles (1.7 kilometers) of each other, and situated within a mosaic of moderate to high quality pine-dominated uplands. An example of the data scoring sheet is in Appendix 1.

Phase III Evaluation. Following field visits and scoring for each pond selected in Phase I, those ponds that scored 5 (moderate potential) or higher were sampled for flatwoods salamander larvae. During each visit, the investigators swept a nylon dip net (4 mm mesh, 41 cm wide) through submerged vegetation approximately 125 times or until all areas of submerged vegetation had been sampled. The contents of each sweep were examined visually for salamander larvae, other vertebrates and invertebrates.

Results

Phase I evaluations resulted in 97 potential sites being identified within the action area (Figure 5). Four additional sites identified during Phase I were eliminated upon re-examination prior to Phase II because they did not meet the criteria. Upon field evaluation during Phase II, eight sites were eliminated from consideration because they were not depressional wetlands. Seventy-four ponds ranked low, four ponds rank low-moderate, eight ponds ranked moderate and three ponds ranked moderate-high. Photographs of most ponds are in Appendix 1.

The 11 ponds that ranked moderate or better were dip net sampled (Figure 6). The first sampling was conducted on Feb. 11 and 23, 2010, the second sampling was completed on March 18, 2010. Water levels were adequate for both samples. No flatwoods salamander larvae were found. Other specimens captured included mole salamander larvae, cricket frogs, crayfish, various tadpoles including leopard frogs, cricket frogs, ornate chorus frogs and bronze frogs, water moccasin, and several invertebrates including dragon fly larvae and other aquatic insects.

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

- The 11 ponds ranked moderate or better were dip net sampled. The first sampling was conducted on February 11 and 23, 2010 and the second sampling was completed on March 18, 2010. Sampling of the 11 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. The vast majority of the ponds visited were in this condition. Where any ecotone was present it was usually patchy and disturbed.

- Only ponds 74, 83 and 101 have moderate-high potential but still lack the appropriate upland habitat structure. Pond 74 is located within the AG/Timber land use overlay for the Sector, pond 83 is located within the Business Center land use overlay for the Sector and pond 101 is located within the West Bay Preservation Area land use overlay for the Sector.

- Based on the results and the condition of habitat throughout the action area it is expected that any project activity within the GPEMA action area will have no effect on reticulated salamanders.

Discussion

There were no previously known flatwoods salamander breeding ponds within the action area nor did our investigation locate any breeding ponds. The most proximal critical habitat occurs 5 miles NW of the action area. The uplands within the action area are being managed intensively for silviculture which includes the preclusion of fire. This has allowed the margins of most ponds to develop a thick titi/myrtle-leaved holly midstory canopy that shades out the graminaceous ecotone preferred by flatwoods salamanders. The vast majority of the ponds visited were in this condition. Where an ecotone was present, it was usually patchy and disturbed.

Only 11 of the 97 wetlands surveyed within the 44,501 acre Project Area ranked as either moderate to moderately good habitat for flatwoods salamanders. Sampling of these ponds during the peak times to find larvae and with adequate water conditions did not reveal any flatwoods salamander larvae. Based on these results and the condition of habitat throughout the activity area it is expected that any project activity within the GPEMA 2 action area is not likely to have any negative effect on flatwoods salamanders.

None of the ponds are considered in excellent condition for flatwoods salamanders. The Project Area is almost entirely in planted pine and thus generally provides poor to nonexistent conditions. Pine planting activities have severely altered almost all the essential mesic habitat surrounding breeding ponds. Silviculture-associated activities in these habitats that are detrimental to the flatwoods salamander include soil mixing, rutting, compaction, and bedding; dense shading which reduces herbaceous ground cover; clear cutting which reduces ambient moisture; and fire suppression.

Ponds and surrounding habitat in the Project Area have been affected by silvicultural activities, drought and fire suppression. In some cases, especially following drought years, pines may have been planted into the pond edges and other ponds may have completely dried due to drought and increased evapotranspiration due to pine trees. Fire suppression also has resulted in increased canopy and shrub cover within ponds, which shades out the graminaceous ground cover with the pond proper.

Effects of the Proposed Action

The Proposed action is determined that it **"may affect, not likely to adversely affect"** the reticulated flatwoods salamander.

This conclusion is supported by the analysis set forth above. Additional factors which support this conclusion are the actual land uses which are applicable to the pond areas and the fact that the conditions allowed substantial testing for the actual present of reticulated flatwoods salamanders within the Action Area.

Pond 74 is located in the AG/Timber portion of the Sector. Historic use of the area within the 1476 foot buffer will continue as it has under BMP silviculture operations, with the exception of a minor portion, 6.7 acres within the Little Burnt Mill Creek Conservation Unit. None of the upland habitat was considered suitable (McGlincy, 2010).

Pond 83 is located within the Business Center portion of the Sector, southeast of the future crosswind runway boundary of the existing Northwest Florida Beaches International Airport. Within the 1476 foot buffer are 39.3 acres included in the Burnt Mill Creek-Doyle Bayou Frontal Conservation Unit. One hundred and three acres are included in the Business Center land use designated by the DSAP. None of the upland habitat was considered suitable (McGlincy, 2010).

Pond 101 is located almost entirely within the Burnt Mill Creek-Doyle Bayou Frontal Conservation Unit. A small portion in the northern quadrant is located within the mitigation lands associated with the airport. None of the upland habitat was considered suitable (McGlincy, 2010).

Previous studies of reticulated flatwoods salamander presence in areas adjacent to the Action Area have been constrained. Dip net surveys were not possible for most ponds assessed during the flatwoods salamander surveys necessary for the Biological Assessment completed for RGP-SAJ86, due to drought conditions. Likewise, during the surveys for flatwoods salamanders as part of SAJ-2001-5264(IP-GAH), pond conditions were not ideal. Pond conditions during the recent survey efforts for the current proposed GP were considered by all knowledgeable authorities (FWC, USFWS, and McGlincy) to be the best surveying conditions in years. This allowed for a complete assessment under ideal conditions. This fact along with the silviculture use of the adjoining uplands, the lack of any significant high quality ecotone at any of the ponds, supports the determination that the salamander is not likely to be present. In addition, the majority of the wetlands are located within the Conservation Units where development will be severely restricted.

Flatwoods Salamander Habitat Component Scoring Guidance

Pond (0 – 3 points)

0 ***No pond*** (pond destroyed – filled or drained)

1 ***Low quality pond***

- dense overstory and/or midstory (combined for greater than 70% crown closure)
- extremely sparse of marginally desirable ground cover (i.e., low species diversity, limited occurrence of tufted or linear growth-form herbaceous species, and/or significant cover, greater than25%, of weedy and/or exotic species)
- modified hydrology such that it no longer appears to undergo seasonal inundation.

2 ***Moderate quality pond***

- Somewhat open overstory/midstory (31 to 70% crown closure) with sparse desirable, primarily graminaceous ground cover (i.e., moderate species diversity, significant occurrence of tufted or linear growth-form herbaceous species, and limited, 10 – 25% occurrence of weedy and/or exotic species)
- Hydrology indicative of seasonal inundation

3 ***High quality pond***

- Open overstory and midstory canopy (less than 31% crown closure) with abundant, diverse desirable graminaceous ground cover (i.e., high species diversity, significant occurrence of tufted or linear growth-form herbaceous species, and limited occurrence, less than 10% of weedy and/or exotic species)
- Hydrology indicative of seasonal inundation, less than one meter in depth

Ecotone (0 – 3 points)

0 ***No ecotone***

1 ***Low quality ecotone***
- Disturbed (exotic species dominated)
- Narrow
- Patchy graminaceous

2 ***Moderate quality ecotone***
- Moderately open mesic-hydric graminaceous ecotone with moderately diverse desirable wiregrass and other graminaceous species adjacent to pond

3 ***High quality ecotone***
- Open, broad, mesic-hydric graminaceous ecotone characterized by diverse and desirable species which surrounds the majority of the pond perimeter

Upland (0 – 3 points)

0 ***No suitable upland habitat***

1 ***Low quality upland***
- Slash or sand pine plantation where the wiregrass has been nearly eliminated

2 ***Moderate quality upland***
- Slash or sand pine plantation with relatively intact wiregrass ground cover

3 ***High quality upland***
- Second-growth longleaf and/or slash pine-dominated flatwoods or savanna with a nearly undisturbed wiregrass groundcover

St. Andrews Beach Mouse (*Peromyscus polionotus peninsularis*)

Overall Range and Population Range

The St. Andrews beach mouse was listed as endangered in December of 2008. Critical habitat along the St. Joseph peninsula and other nearby areas was designated in November of 2006. The St. Andrews beach mouse historically occurred from the eastern entrance of St. Andrews Bay, in Bay County, to St. Joseph Peninsula in Gulf County. It is now only known to occur from the north end of St. Joseph Peninsula to eastern Bay County. Major threats to their population include loss of habitat due to development, destruction of habitat due to hurricanes, and predation from native and non-native animals, such as cats (USFWS 2009b).

Population in the Action Area

There are no recorded observations of this species within the Action Area. No nesting or foraging habitat is within the Action Area.

Species Habitat Requirements

The St. Andrews beach mouse inhabits primary, secondary and occasionally tertiary sand dunes with a moderate cover of grasses and forbs. This species finds refuge in adjacent coastal palmetto flats and scrub during and following hurricanes. They feed primarily on seeds of beach plants and insects.

Habitat Conditions within the Action Area
There is no nesting or foraging habitat within the Action Area. The designated critical habitat is located approximately 9 miles from the Project Area.

Effects of the Proposed Action
A **"no effect"** determination was made for the St. Andrews beach mouse because of the lack of suitable habitat within the Action Area.

The areas within the Project Area closest to appropriate habitat for this species will be established as Conservation Units and should reduce or eliminate indirect impacts to water quality and runoff associated with development in the surrounding area.

Southern Kidneyshell *(Ptychobranchus jonesi)*

Overall Range and Population Status
The southern kidneyshell was listed as a Candidate for protection under the ESA in 2004. The southern kidneyshell is a medium-sized freshwater mussel historically known from the Escambia and Choctawhatchee river drainages in Alabama and Florida, and the Yellow River drainage in Alabama (Williams *et al* 2008). The southern kidneyshell is currently known only from the Choctawhatchee drainage. A recent survey where one fresh dead individual was found has led to the expansion of its range to include Holmes Creek in Washington County. Since 1995, the southern kidneyshell has been detected at only 10 locations within the Choctawhatchee River drainage. This species appears to have been common historically but it is currently considered one of the most imperiled species in the United States (Blalock-Herod *et al.* 2005; Williams *et al.* 2008). A 2006-2007 status survey in the Alabama portions of the Choctawhatchee basin found that the southern kidneyshell was extremely rare.

Population in the Action Area
The kidneyshell most likely does not occur in the Action Area as the Action Area is outside its known current and historical range. There are no recorded observations within the Action Area.

Species Habitat Requirements
Very little is known about the habitat requirements or life history of the southern kidneyshell. It is typically found in medium creeks to medium rivers in firm sand substrates with slow to moderate current. A recent status survey in the Choctawhatchee basin in Alabama found its preferred habitat to be stable substrates near bedrock outcroppings.

Habitat Conditions within the Action Area
None of the water bodies in which the southern kidneyshell mussel is endemic occur within the Action Area.

Effects of the Proposed Action
The Proposed Action is determined to have **"no effect"** on the southern kidneyshell mussel since potential habitat is not present.

Southern Sandshell *(Hamiota australis)*

Overall Range and Population Status

The southern sandshell was listed as a Candidate for protection under the ESA in 2004. The southern sandshell is a medium-sized freshwater mussel known from the Escambia River drainage in Alabama, and the Yellow and Choctawhatchee River drainages in Alabama and Florida. The southern sandshell persists in its historical range, however its range has been fragmented and numbers appear to be declining (Williams *et al.* 2008). The number of locations in the Escambia drainage known to support the species has declined. It is known from a total of 9 locations, however only 3 are recent occurrences. A total of 4 individuals (live and shell material) have been collected in the Escambia drainage since 1995. In the Yellow River drainage, the number of locations known to support southern sandshell populations has declined from a total of 15 to 10 currently. The number of locations known to support the species in the Choctawhatchee River drainage has declined from 44 to 25 currently; and it may be extirpated from central portions of the Choctawhatchee River main channel and from some of its tributaries. The species appears to be sensitive to degradation.

Population in the Action Area

The southern sandshell most likely does not occur in the Action Area as the Action Area is outside its known current and historical range. There are no recorded observations within the Action Area.

Species Habitat Requirements

The southern sandshell is typically found in small creeks and rivers in stable substrates of sand or mixtures of sand and fine gravel, with slow to moderate current.

Habitat Conditions within the Action Area

None of the water bodies in which the southern sandshell mussel is endemic occur within the Action Area.

Effects of the Proposed Action

The Proposed Action is determined to have **"no effect"** on the southern sandshell mussel since potential habitat is not present.

Tapered Pigtoe (*Fusconaia burkei)*

Overall Range and Population Status

The tapered pigtoe was listed as a Candidate for protection under the ESA in 2004. The tapered pigtoe is a small to medium-sized mussel endemic to the Choctawhatchee river drainage in Alabama and Florida. The tapered pigtoe appears to be absent from portions of its historical range and is found only in isolated locations (Blalock-Herod, 2005). The species is known from a total of 60 locations within the Choctawhatchee River drainage. It was not detected at 11 historical sites examined during recent status surveys (9 additional historic locations were not examined). Many of those historical occurrences are in the middle section of the drainage, and the species appears to be declining in that portion of its range The tapered pigtoe continues to persist in isolated locations, mainly in the Choctawhatchee River main channel in Florida and in the headwaters in Alabama.

Population in the Action Area
The tapered pigtoe most likely does not occur in the Action Area as the Action Area is outside its known current and historical range. There are no recorded observations within the Action Area.

Species Habitat Requirements
The tapered pigtoe is typically found in small creeks and rivers in stable substrates of sand or mixtures of sand and fine gravel, with slow to moderate current.

Habitat Conditions within the Action Area
None of the historical water bodies in which the tapered pigtoe mussel is endemic occur within the Action Area. However, recent surveys have found the tapered pigtoe in other areas of Florida, including Pine Log Creek. Pine Log Creek is downstream from the Crooked Creek drainage which is located within the Project Area (Pursifull 2011).

Effects of the Proposed Action
The Proposed Action is determined to have **"no effect"** on the tapered pigtoe mussel since potential habitat is not present. Furthermore, the RGP 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 the Outstanding Florida Water stormwater treatment volume requirements 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.

West Indian Manatee (*Trichechus manatus latirostris*)

Overall Range and Population Status
The manatee was listed as endangered in 1967 under the Endangered Species Preservation Act of 1966, which was later replaced by the ESA of 1973. Critical habitat was designated and then revised in October of 2000. The manatee occurs throughout tropical and sub-tropical regions of the eastern Atlantic Ocean, Gulf of Mexico and Caribbean. In Florida, manatees are most common in peninsular Florida during winter months but are increasingly sighted in areas of the panhandle within protected warmer waters.

Population in the Action Area
Manatees may occasionally occur in West Bay, Choctawhatchee Bay, and the Gulf of Mexico. Manatee use of these areas is most likely seasonal as they are susceptible to cold stress during the winters in the Florida panhandle.

Species Habitat Requirements
Manatees inhabit coastal water, bays, rivers and occasionally lakes. They are susceptible to cold stress and migrate to warm water during the winter months (Hipes 2000). They forage primarily on submerged vegetation. In estuaries and coastal marine areas, manatees feed on a variety of seagrasses.

Habitat Conditions within the Action Area

Seagrasses occur in West Bay which is within the Action Area. It is possible that manatees forage in West Bay during the summer months.

Effects of the Proposed Action

A **"no effect"** determination was made for the West Indian manatee. Although several potential water access points have been established within the Action Area and adjacent to West Bay, the proposed RGP does not authorize the construction of docks, boat lifts, or other regulated structures or activities in navigable waters that could affect the manatee. Such activities would require separate authorization from the Corps, and would include a project-specific effects evaluation and determination by the Corps using "The Corps of Engineers, Jacksonville District, and the State of Florida Effect Determination Key for the Manatee in Florida October 2008."

Indirect effects due to development, such as stormwater runoff and subsequent water quality degradation, have the potential to affect seagrass populations in water bodies within the Action Area. However, for this RGP, all areas that are adjacent to West Bay (where the seagrasses are located) are proposed as Conservation Units, which will ensure that only limited development occurs adjacent to the water bodies, and will provide water quality enhancement buffers between permitted upstream development and the water bodies. The RGP 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 the Outstanding Florida Water stormwater treatment volume requirements 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.

Wood Stork (*Mycteria americana*)

Overall Range and Population Status

All breeding populations of wood storks were listed as endangered in 1984. The current population of adult birds is difficult to estimate, since individuals may not nest every year. Presently, the wood stork breeding population is believed to be greater than 8,000 nesting pairs (16,000 breeding adults). Nesting has been restricted to Florida, Georgia, and South Carolina, however they may have formerly bred in most of the southeastern United States and Texas. A second distinct, non-endangered population of wood storks breeds from Mexico to northern Argentina. Storks from both populations move northward after breeding, with birds from the southeastern United States population moving as far north as North Carolina on the Atlantic coast and into Alabama and eastern Mississippi along the Gulf coast, and storks from Mexico moving up into Texas and Louisiana and as far north as Arkansas and Tennessee along the Mississippi River Valley. There have been occasional sightings in all States along and east of the Mississippi River, and sporadic sightings in some States west of the Mississippi and in Ontario. In Florida, the woodstork is locally rare to abundant in the peninsula and Big Bend, but generally rare in the panhandle and the Florida Keys. Four colonies are located within the eastern panhandle in Leon County (Hipes et al. 2000).

Populations in Action Area

No wood storks have been documented or observed within the Action Area, however, they may utilize the wetlands within the Project Area for foraging.

Species Habitat Requirements
Wood storks inhabit freshwater and estuarine wetlands, primarily nesting in cypress or mangrove swamps. They feed in freshwater marshes, narrow tidal creeks, or flooded tidal pools. Particularly attractive feeding sites are depressions in marshes or swamps where fish become concentrated during periods of falling water levels. They feed on small fish, particularly topminnows and sunfish. Roosting sites include cypress swamps, mixed hardwood swamps, sloughs and mangroves.

Habitat Conditions within the Project Area
The closest known breeding site is approximately 50 miles to the east and well outside of the Project Area, therefore no nesting habitat will be affected by the Proposed Action. Sightings of wood storks within this area of the panhandle are rare, and its location precludes forage by individuals using the closest breeding site. Many wetlands within the Project Area have been impacted by silvicultural practices, thus reducing the potential for appropriate foraging habitat.

Effects of the Proposed Action
It was determined that the Proposed Action will have a **"no effect"** on the wood stork because foraging habitat is low and the Action Area is outside of the wood stork's breeding range.

3.2 Federally Listed Plant Species

There are six federally listed plant species that could occur within the Project Area. Data of previously recorded occurrences were reviewed within and in the vicinity of the Project Area. No Federally protected species were identified within the Project Area. The Crystal Lake nailwort was reported by FNAI in two locations to the northeast of the Project Area in 1990 and 2001. Godfrey's butterwort was reported by FNAI in a location to the southeast of the Project Area in 1998.

Crystal Lake Nailwort (*Paronychia chartacea* ssp. *minima*)

Overall Range and Population Status
The Crystal Lake nailwort was listed as threatened in 1987. This species is endemic to Bay and Washington counties, Florida. Isolated populations of this species have also been observed in Lake, Highlands, Osceola, Orange and Polk Counties. Only 13 populations of this subspecies are known, which are mostly located on private lands (Chafin 2000; Weekley, et al 2009).
Populations in Action Area
There are no recorded or observed occurrences within the Project Area. Potentially suitable habitat around karst ponds was not observed within the Project Area. Potentially suitable habitat within disturbed sandy uplands is present within the Project Area.

Species Habitat Requirements
Crystal Lake nailwort inhabits sandy openings around sandhill upland lakes and karst ponds (Chafin 2000). Recently, a population has been documented as occurring within a former planted sand pine upland that is undergoing restoration efforts to return it to a longleaf pine and wiregrass sandhill (Weekley, et al, 2009).

Habitat Conditions within the Project Area

Although sandy openings were found sporadically throughout the sandhill communities that were recently timbered and in the southwestern portion (adjacent the Intracoastal Waterway and West Bay) of the Project Area, the Crystal Lake nailwort typically inhabits sandy openings around sandhill upland lakes and karst ponds. No karst ponds with sandy margins or upland sandhill ponds were observed within the Project Area (FELSI, 2010). Limited suitable habitat within sandy uplands does exist within the Project Area.

Effects of Proposed Action

A determination of **"may affect, not likely to adversely affect"** was made for this species due to the limited potential habitat. The Conservation Units will provide protection for many wetlands within the Project Area and may improve habitat for the Crystal Lake nailwort over time.

Florida Skullcap (*Scutellaria floridana*)

Overall Range and Population Status

The Florida skullcap was listed as threatened in May of 1992. This species is endemic to the Florida panhandle and has been documented in Bay, Gulf, Franklin and Liberty counties, Florida. In Bay County, a population of 550+ plants was recorded in 2008 at Lathrop Bayou in East Bay. With the implementation of management, more than 2000 plants were recorded in 2009 (USFWS 2009c).

Populations in Action Area

Although this species was not observed within the Project Area, suitable habitat may exist along the edges of cypress domes and wet pine flatwoods. It should also be noted that this species has been documented at only one site in Bay County, more than 30 miles from the Project Area. It is not likely to occur within the Action Area (Johnson, 2010).

Species Habitat Requirements

The primary habitat of the Florida skullcap is wet pine flatwoods and prairies, within the grassy seepage bog communities at the edge of forested or shrubby wetlands, a habitat that is a fire-dependent community. It is also found in the ecotones between mesic flatwoods and swamps or margins of wetland habitats, and somewhat disturbed wetland savanna. Florida skullcap can be found growing in full sun or light shade, and in low nutrient, acidic or sandy soil (USFWS 1994, Jenkins et al. 2007). It is not known to occur within areas that are actively managed as pine plantations.

Habitat Conditions within the Action Area

Silviculture activities in the Project Area that likely impact potential habitat for this species includes draining wetlands, dense shading from planted pine, fire suppression, soil bedding and soil compaction. Surveys confirmed that suitable habitat is not likely to occur within the Action Area (FELSI, 2010).

Effects of the Proposed Action

Due to the intensity of silviculture management within the Project Area, it has been determined that the Proposed Action **"may affect but not likely to adversely affect"** the Florida skullcap. Direct and

indirect beneficial effects to potential Florida skullcap habitat may be realized through protection of the Conservation Units and high quality wetlands. Suitable habitat may become available, thus potentially allowing the Florida skullcap to propagate within the Project Area.

Godfrey's Butterwort (*Pinguicula ionantha*)

Overall Range and Population Status

Godfrey's butterwort was listed as threatened in July of 1993. This plant is endemic and occurs in Bay, Franklin, Gulf, Liberty, Wakulla and Calhoun counties. The geographic range includes the panhandle between Tallahassee and Panama City. This species is locally abundant in Franklin County and the Apalachicola National Forest has more than half of the 65 documented populations (Chafin 2000). Five existing populations are known to occur in Bay County, east of the Action Area. Four previously documented populations have been extirpated (USFWS 2009d).

Populations in Action Area

No observations of this species have been recorded within the Action Area, however potentially suitable habitat exists within the Project Area, particularly within roadside ditches and depressional wetlands found within the Project Area (FELSI, 2010).

Species Habitat Requirements

This species occurs in herbaceous or seepage bogs, ditches, and depressions in grassy pine flatwoods and savannas. It can also occur in open peat or sandy peat in very wet areas, in shallow standing water or sometimes even submerged.

Habitat Conditions within the Project Area

Silviculture activities have impacted potential habitat for this species. These impacts include draining wetlands, dense shading from planted pine, fire suppression, bedding and soil compaction. However, appropriate habitat exists along the margins of small, depressional wetlands and transitional zones between the planted pines and depressional wetlands. This species may also occur within the roadside ditches present throughout the Project Area.

Effects of the Proposed Action

Due to the intensity of silviculture management within the Project Area, it has been determined that the Proposed Action **"may affect but not likely to adversely affect"** Godfrey's butterwort. Direct and indirect beneficial effects to potential habitat may be realized through protection of the Conservation Units and high quality wetlands. Suitable habitat may become available, thus potentially allowing Godfrey's butterwort to propagate within the Project Area.

Potentially suitable habitat may also be negatively affected by road construction, road improvements, and other development. Road right-of-ways, including ditches, will also be affected during road paving, widening or other alterations.

Harper's Beauty (*Harpocallis flava*)

Overall Range and Population Status

Harper's Beauty was listed as endangered in November 1979. No critical habitat has been designated for this species. This plant is endemic to Franklin, Liberty and Bay Counties of the Florida panhandle.

Approximately seventeen populations have been recorded within the Apalachicola National Forest in Franklin and Liberty Counties. Two populations have been recorded in Bay County, both are located on private lands

Populations in Action Area

There is no record of any populations occurring within the Action Area or the Project Area. A population of Harper's Beauty was recorded in 2003, more than 80 miles from the Action Area (USFWS 2008b). This population has been reduced by 61% from 2003 to 2007. A closer population has been documented approximately 10.4 miles to the southeast, also on private lands near Callaway Creek (St Joe Company 2010).

Species Habitat Requirements

The habitat for Harper's Beauty is associated with soils that are hydric, high in peat and sand and highly acidic. It occurs in herb bogs, wet prairies, seep slopes, transitional zones (into shrub zones) and in roadside ditches.

Habitat Conditions within the Project Area

Suitable habitat for Harper's Beauty within the Project may occur within the roadside ditches and along the margins of ephemeral ponds that occur within the planted pines. Silviculture activities have impacted potential habitat for this species. These impacts include draining wetlands, dense shading from planted pine, fire suppression, bedding and soil compaction. However, appropriate habitat exists along the margins of small, depressional wetlands and transitional zones between the planted pines and depressional wetlands (FELSI, 2010). This species may also occur within the roadside ditches present throughout the Project Area.

Effects of the Proposed Action

Due to the intensity of silviculture management within the Project Area, it has been determined that the Proposed Action **"may affect but not likely to adversely affect"** Harper's Beauty. Direct and indirect beneficial effects to potential habitat may be realized through protection of the Conservation Units and high quality wetlands. Suitable habitat may become available, thus potentially allowing Harper's Beauty to propagate within the Project Area.

Potentially suitable habitat may also be negatively affected by road construction, road improvements, and other development. Road right-of-ways, including ditches, will also be affected during road paving, widening or other alterations.

Telephus Spurge (*Euphorbia telephioides*)

Overall Range and Population Status

The Telephus spurge was listed as threatened in June 1992. No critical habitat has been designated. This plant is restricted to the Florida panhandle, specifically to coastal Bay, Franklin and Gulf counties. All known occurrences of Telephus spurge are on sites within 4 miles of the Gulf of Mexico. A few populations are protected on St. Joseph State Buffer Preserve; however, most occurrences are on private timberlands and utility right-of-ways (Chafin 2000).

Populations in Action Area

Five surveys conducted in four Bay County locations between 1988 and 2007 indicated the presence of more than 18,650+ plants (USFWS 2008). Some of these surveyed locations have been impacted by development or mowing. The population at Breakfast Point Mitigation Bank, south of the Action Area, has increased significantly since the inception of management practices in 2005 (USFWS 2008).

Prior to conducting on-site surveys of the telephus spurge, aerial photographs, the NRCS Bay County Soil Survey and FLUCCS code maps were used to identify suitable habitat within the Project Area. FELSI obtained the GIS data from Florida Natural Areas Inventory for the known locations of the telephus spurge within Bay and Gulf counties. Those locations were overlaid on a soils map to identify the soil types preferred by the plant. The identified soils include Leon, Pottsburg, and Mandarin sand and Pickney fine sand soil types.

Within the mapped soil areas, appropriate FLUCCS (Florida Land Use Cover and Forms Classification System, FDOT 1999) codes and areas that appeared to have an open canopy from aerial photo interpretation were also mapped. The FLUCCS types that were mapped included Upland Coniferous Forests, Pine Flatwoods, Longleaf Pine-Xeric Oak, Pine-Mesic Oak, Mixed Pine, Other Pines, Xeric Oak, Sand Live Oak, Upland Scrub, Pine and Hardwoods, Coniferous Plantations and Sand Other Than Beaches. Subsequently areas that were identified on the 2010 aerial as having thick, closed canopy were eliminated from the survey and areas that appeared to have sandy soils with an open canopy were added to the survey areas.

LIDAR contour data of the Project Area was also reviewed to determine the location of slope habitat with an open canopy. Any areas that appeared to exhibit moderate habitat were inspected for habitat suitability and individuals by meandering pedestrian surveys over 30% of the community. Prior to commencement of the field surveys, the entire field team visited a known population of telephus spurge at the Breakfast Point Mitigation Bank in south Bay County.

Areas that exhibited high quality habitat were inspected for habitat suitability and individuals by meandering pedestrian habitats over approximately 50-80% of the community. Road shoulder surveys along all roads traveled were conducted from the vehicles traveling slowly enough to allow a thorough visual inspection. Data such as the community description, photos and GPS points, were recorded at each area that was inspected. These points are shown on Figures 10a, 10b and 10c within this submittal and within. the Plant Survey for the Biological Assessment for the Proposed Regional General Permit and Ecosystem Management Agreement II Project in Bay County, Florida (PSR) (FELSI, 2010). A general description for the potential for each habitat is listed below. The quality of the habitat was designated prior to onsite surveys. These areas are shown in Table 1 under the Results section of the PSR (FELSI, 2010)

- Low potential-Areas that were deemed too thick with understory, closed or semi-closed canopy and inappropriate vegetative community. These areas were not inspected using meandering pedestrian surveys. A small portion of the community was visually inspected from the roadside or very limited pedestrian survey.
- Moderate potential-Areas that exhibited an open understory in areas, with an open or semi open canopy with some evidence of sandy soils. Often portions of the area exhibited the appropriate

vegetative community. Approximately 30-40% of these areas were visually surveyed by conducting meandering pedestrian transects.

- High Potential-These areas exhibited appropriate vegetative community, sandy soils and an open canopy. Approximately 50-80% of these areas were visually surveyed by conducting meandering pedestrian transects.

Surveys were conducted within the Project Area on October 18-22nd, 2010 and no observations of the Telephus spurge were recorded within the Project Area (FELSI, 2010).

Species Habitat Requirements

The telephus spurge is restricted to the Florida panhandle, specifically to coastal Bay, Franklin and Gulf counties. All known occurrences of telephus spurge are on sites within 4 miles of the Gulf of Mexico. A few populations are protected on the St. Joseph State Buffer Preserve; however, most occurrences are on private timberlands and utility right-of-ways. Historically, the habitat of telephus spurge was described as being associated with scrubby oaks on low sand ridges near the coast. It is now known to occur in a wider range of habitats. It has been reported from xeric to mesic pine flatwoods and in scrubby pinelands dominated by wiregrass and/or slash or longleaf pine. In general, the plants thrive on sandy, acidic soil, with no litter and low organic and moisture content.

Habitat Conditions within the Project Area

Management of the pine plantations has been focused on maximum yields for the silviculture operation, which, in several aspects, is contrary to the management requirements of the telephus spurge. The habitat for the telephus spurge within the Project Area has been determined to be poor. No specific moderate or high quality habitat was identified within the Project Area boundaries during the field surveys. The poor quality of the habitat was confirmed during a site visit by a USFWS representative, Dr. Vivian Negron-Ortiz, on October 22, 2010. Reasons for the lack of suitable habitat and the plant itself, include the lack of resource management, the distance from the coast, lack of fire, closed canopy, long term and intensive disturbance, thick understory, thick leaf litter and lack of suitable sandy soils.

Effects of the Proposed Action

A **"may affect, not likely to adversely affect"** determination was made for Telephus spurge, due to the Project Area's close proximity to previously documented populations and potential for suitable habitat within the Project Area. During surveys only low quality habitat was observed in the Project Area.

Direct and indirect beneficial effects to potential habitat may be realized through protection of the Conservation Units and high quality wetlands. Suitable habitat may become available, thus potentially allowing telephus spurge to propagate within the Project Area.

White Birds-in-a-Nest (*Macbridea alba*)

Overall Range and Population Status

This species was listed as threatened in June of 1992. This plant is endemic to the Florida panhandle and occurs in Bay, Gulf, Franklin and Liberty counties. Surveys conducted in Bay County from 1991 to 2008 indicated the presence of this plant. Most occurrences were documented in the Apalachicola National Forest (FNAI).

Populations in Action Area
This species has not been observed within the Project Area. Documented occurrences of this species have been made in Bay County, east of the Project Area. Within the Project Area, potentially suitable habitat for white birds-in-a-nest may occur in recently timbered areas, roadside ditches or along the edges of pine plantations.

Species Habitat Requirements
In general, plants are found in wet to mesic pine flatwoods, associated roadsides, wet savannas, seepage slopes, and ecotones between pine flatwoods and titi swamps (USFWS 2009e). There are small populations in ANF that occur on, or along, sandhill ecotones (Chafin 2000).

Habitat Conditions within the Project Area
Silviculture activities have impacted potential habitat for this species. These impacts include draining wetlands, dense shading from planted pine, fire suppression, bedding and soil compaction. However, appropriate habitat exists along the margins of small, depressional wetlands and transitional zones between the planted pines and depressional wetlands. This species may also occur within the roadside ditches, recently cleared pine areas, or edges of planted pine present throughout the Project Area.

Effects of the Proposed Action
A **"may affect, not likely to adversely affect"** determination was made for white birds-in-a-nest, due to the Project Area's close proximity to previously documented populations and potential for suitable habitat within the Project Area.

Direct and indirect beneficial effects associated within the Proposed Action on suitable habitat include the preservation within the Conservation Units. Potentially suitable habitat may be negatively affected by road construction and loss of potential habitat due to development within the Project Area, outside the Conservation Units.

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. Please refer to Figures 6a and 6b for a depiction of example buffer zones around the known eagle nests 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 refugia for the indigo snake will also be protected. Through the Conservation Units approximately 19,365 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

Three ponds were identified as having moderate to high quality habitat for the reticulated flatwoods salamander. None of the ponds were considered to have ideal conditions to support the flatwoods salamander. These ponds are identified as numbers 74, 83 and 101 and their locations are depicted on Figure 6. Sampling was conducted twice during 2010 during very favorable conditions and no larvae or adults were observed. In order to provide assurance that the salamander does not occur within these ponds, two years of sampling with no individuals being found is required to prove that the flatwoods salamander does not inhabit these ponds. The sampling, using approved sampling methods, will have to be conducted during favorable sampling conditions (i.e. adequate water and time of year). The sampling events must occur within 5 years of each other.

If salamanders are determined to be present or until it is determined that they are not present, primary and secondary buffer zones will be established according to the USFWS "Recommended Timber

Management Practices for the Flatwoods Salamander" informational sheet and the FWC's management plan for the flatwoods salamander (FWC 2001). These recommendations include establishing a primary zone of 538 feet, which allows for a selective harvest during dry periods on a 10 year interval and a secondary zone which extends to 1476 feet from the pond's edge and allows for a mix of clearcutting and selective harvest during dry periods on ten year intervals (see Figure 11). Additional restrictions include maintaining minimum basal areas within those zones, restrictions on soil disturbance and limited use of chemicals. If salamanders are determined not to be present, primary and secondary buffer zones will not be established.

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 ten listed species (bald eagle not included). The effect determinations are provided below:

"No effect"	**"May affect, not likely to adversely affect"**	**"May affect, likely to adversely affect"**
Atlantic green turtle	Crystal lake nailwort	None
Atlantic loggerhead	Eastern indigo snake	
Choctaw Bean	Florida skullcap	
Choctawhatchee beach mouse	Godfrey's butterwort	
Fuzzy Pigtoe	Harper's Beauty	
Gulf moccasinshell mussel	Piping plover	
Gulf sturgeon	Red-cockaded woodpecker	
Hawksbill sea turtle	Reticulated flatwoods salamander	
Kemp's ridley	Telephus spurge	
Leatherback sea turtle	White-birds-in-a-nest	
Oval pigtoe mussel		
Red Knot		
St. Andrews beach mouse		
Southern Kidneyshell		
Southern Sandshell		
Tapered Pigtoe		
West Indian manatee		
Wood stork		

The primary benefit of the watershed-level planning and growth management that is proposed in the RGP includes planned and thoughtful development, 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. These permits could include Federal and State wetland and stormwater permits and protected species impact or relocation permits.

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 any piecemeal 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 implementation of protection through Conservation Units I and II adds protection of the sensitive downstream environment of West Bay. West Bay is an important nursery and foraging area for many fish, invertebrates, and vertebrates including protected species. It is especially sensitive to increases in stormwater runoff from development, which could have a detrimental effect on the seagrasses, an important forage resource for many species. Within Type I Conservation Units no development is allowed. Passive uses that are not detrimental to the ecological quality of the unit such as hunting, fishing, hiking, and biking will be allowed. The allowed uses within Type II Conservation Units include those uses allowed in Type I units, road and bridge crossings (subject to conditions that will minimize their impact) necessary to support development outside of the Conservation Units and certain recreational activities that can be considered more active than those allowed in Type I Conservation Units, such as boat ramps, fishing piers, parks, picnic areas, pavilions, playgrounds, and other similar facilities will be allowed. Within the conservation units, traditional silviculture activities will be prohibited and will be replaced with activities consistent with a forestry management plan that is approved by all agencies reviewing the RGP or the EMA and prior to final approval of those documents. The primary forest management objective within the Conservation Units is to prescribe management activities that will restore and enhance the vegetative communities and function of historic ecosystems (St Joe Timberland Company 2010). The forestry management plan is expected to enhance the conservation units and provide for additional habitat for both common and protected species. In addition, the conservation units may be further managed and enhanced as a result of permit mitigation requirements or by governmental or non-profit/natural resource management entities who acquire such areas.

The RGP 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.

Five of the six 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, eastern indigo snake or telephus spurge.

The Proposed Action is not expected to take 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 exceeds 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. Cumulative watershed impacts are difficult to address in the context of project by project review in the absence of a watershed-based permitting mechanism such as the proposed Action. The Proposed Action would address cumulative impacts through impact caps and conservation units. By protecting the highest quality ecological features within the watershed, creating significant wildlife corridors and core habitats, protecting major and minor stream systems, and providing specific limits to wetland impacts, the Proposed Action sufficiently addresses cumulative impacts within the Project Area and vicinity. It does so by establishing conservation components of the landscape up front prior to development and creates an environmental framework to guide development. The final state of the landscape can be conceptualized because of the caps and conservation units. When fully implemented, the RGP will result in the preservation of nearly seventy percent of the Project Area with approximately thirty percent available for economic development. In contrast, watershed final build-out impacts are difficult to determine and linkages for preservation and wildlife corridors cannot be guaranteed in the context of project by project review.

The proposed environmental framework of the proposed RGP would extend the ecological benefits to the vicinity. The Conservation Units form a linkage between State Lands such as Pine Log State Forest and the Northwest Florida Water Management District lands of the Econfina Creek watershed. These substantial public landholdings will limit cumulative impacts in the vicinity of the Project Area.

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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PROJECT:

BIOLOGICAL ASSESSMENT FOR RGP EMA II IN BAY COUNTY

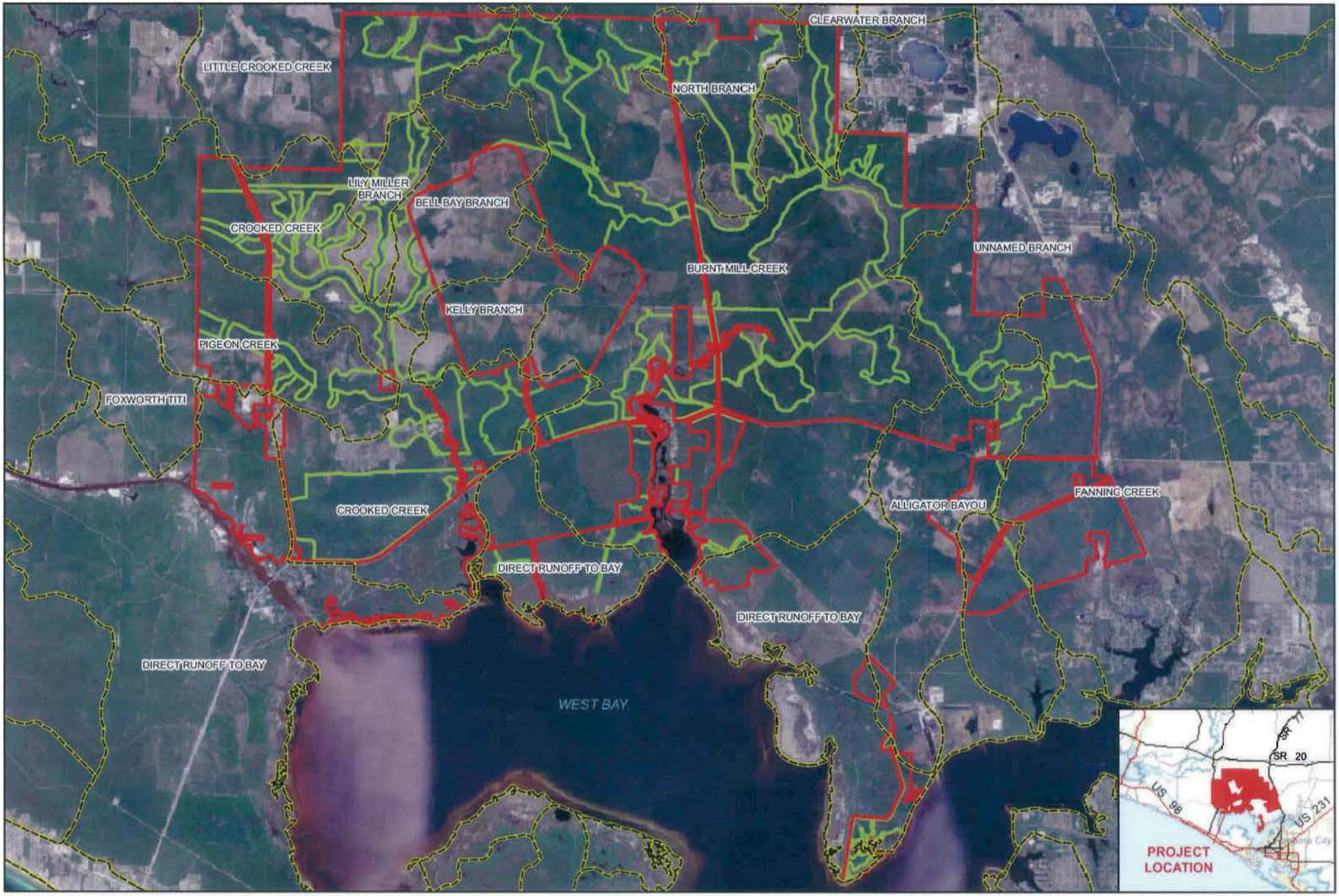
BAY COUNTY, FLORIDA

TITLE: **FIGURE 1 - LOCATION MAP FOR ACTION AREA BAY/WASHINGTON COUNTIES**

DATE:	BY:	CHECK:	FELSI PROJECT #
FEB-23-2011	CPS	EP	10-0932

PROJECT AREA
ACTION AREA 021811

N
1:150,000



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BIOLOGICAL ASSESSMENT FOR RGP EMA II IN BAY COUNTY

BAY COUNTY, FLORIDA

TITLE: **FIGURE 2 - LOCATION MAP FOR PROJECT AREA BAY COUNTY**

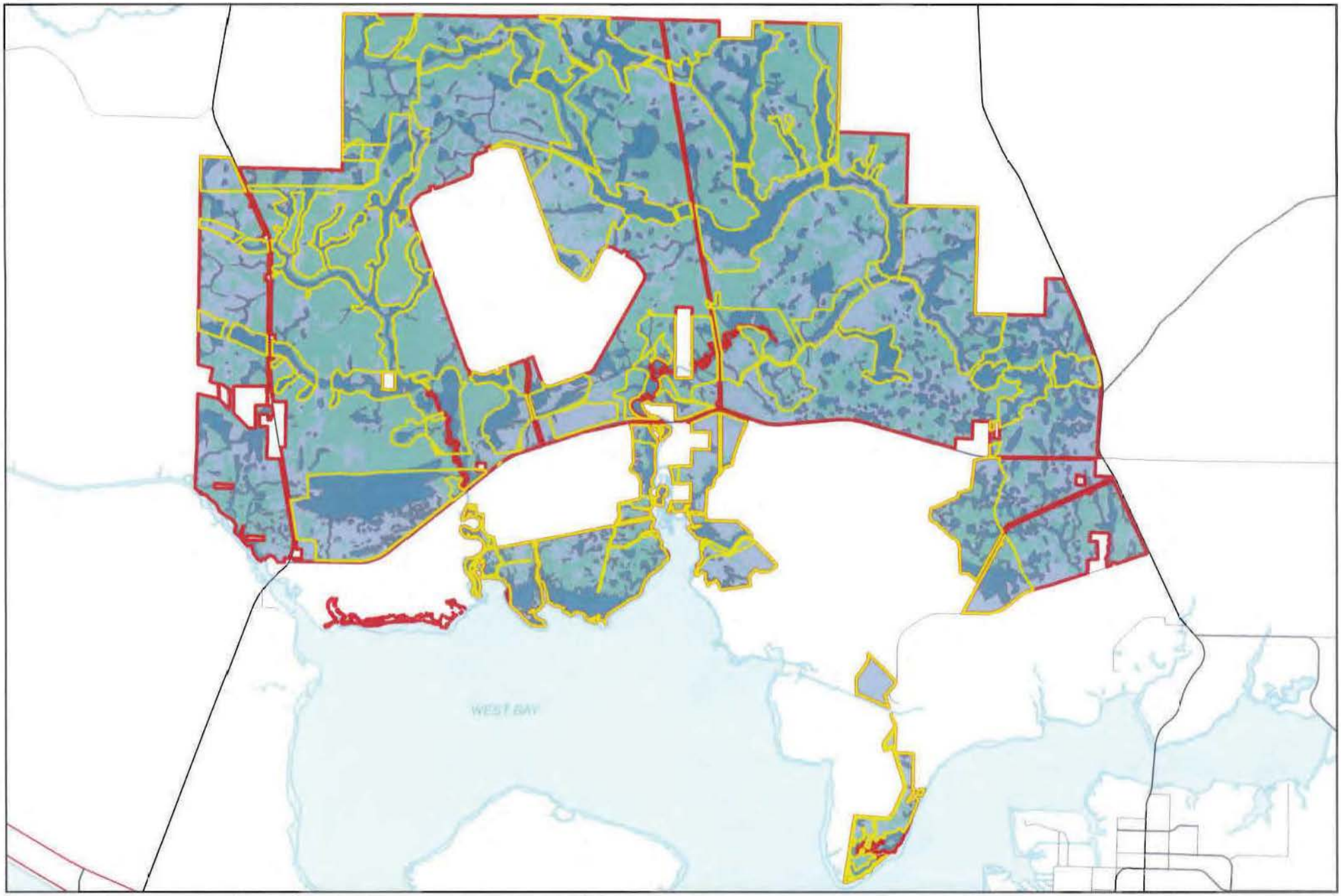
DATE:	BY:	CHECK:	FELSI PROJECT #
FEB-28-2011	CPS	EP	10-0932

SUBWATERSHED
PROJECT AREA
CONSERVATION UNITS (Type 1 & 2)

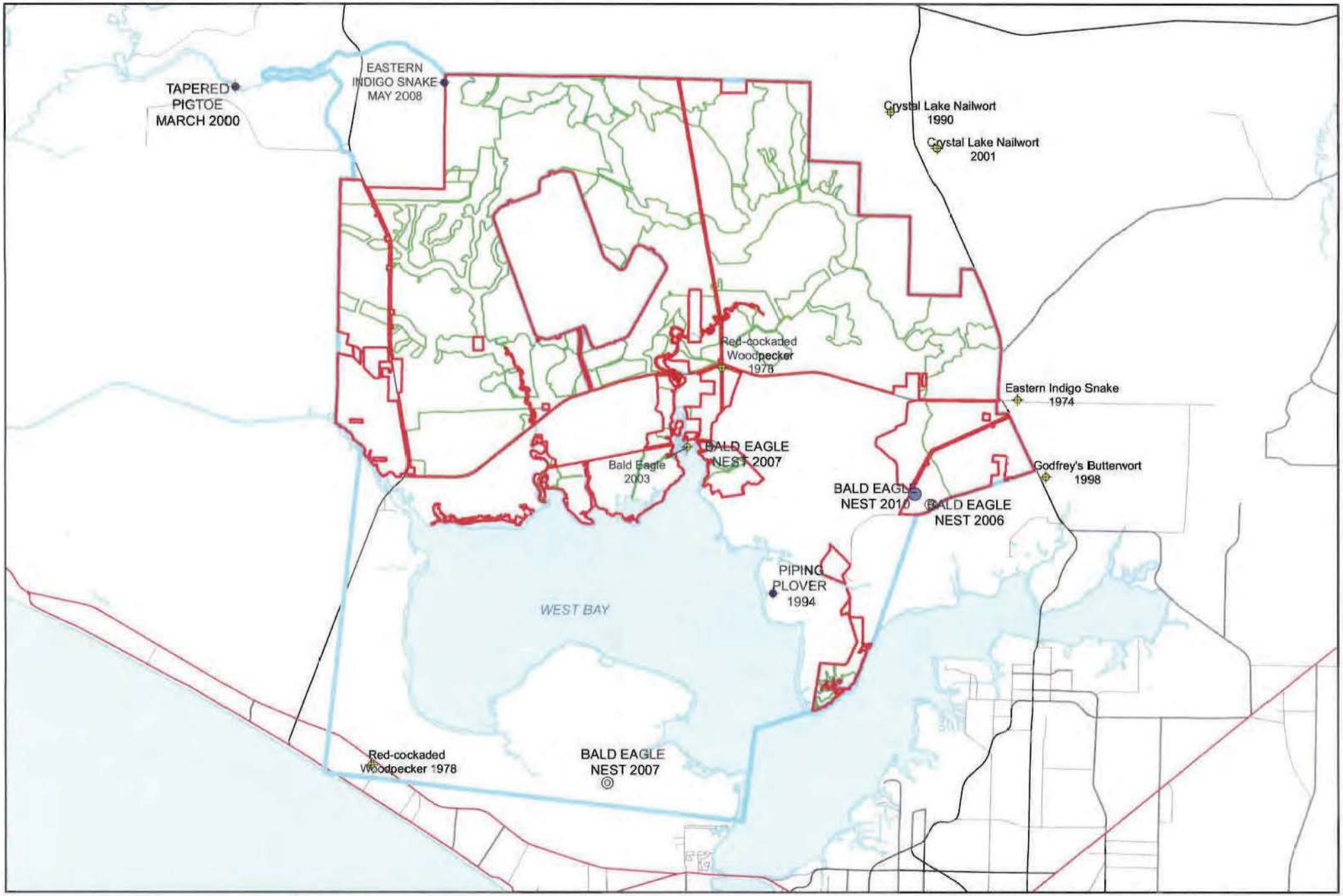
N

1:110,000

0 0.25 0.5 1 Miles



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		DATE: FEB-28-2011	BY: CPS	CHECK: EP	FELSI PROJECT # 10-0932	N 1:110,000 0 0.25 0.5 1 Miles



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BIOLOGICAL ASSESSMENT FOR RGP EMA II IN BAY COUNTY

BAY COUNTY, FLORIDA

TITLE: **FIGURE 4 - RECORDED OBSERVATIONS OF FEDERALLY LISTED SPECIES AND/OR SIGNS OF SPECIES WITHIN AND NEAR THE ACTION AREA. BAY/WASHINGTON COUNTIES, FLORIDA**

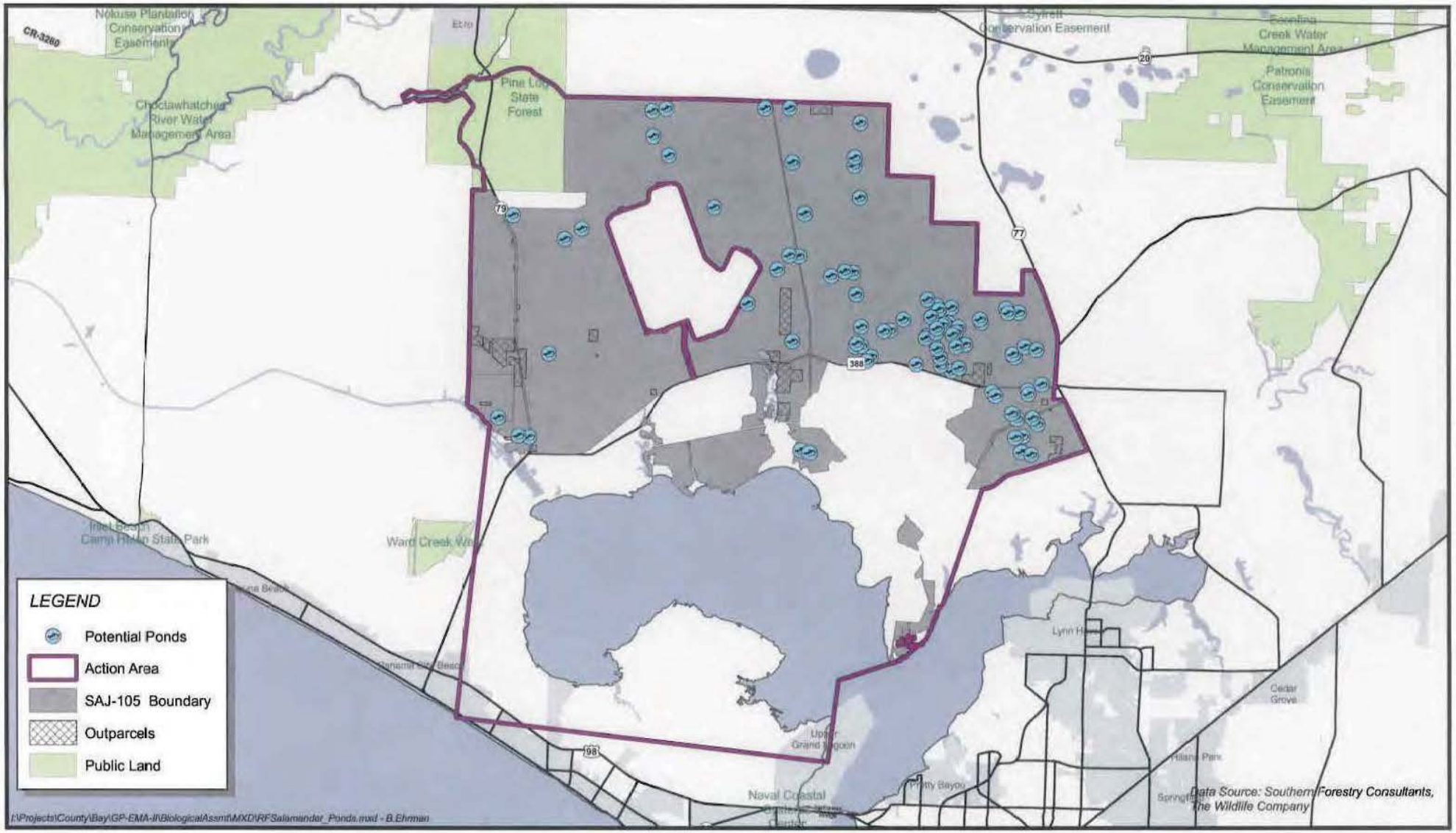
DATE:	BY:	CHECK:	FELSI PROJECT #
MAR-4-2011	CPS	EP	10-0932

- CONSERVATION UNITS (Type 1 & 2)
- ACTION AREA 021811
- FNAI ELEMENT OCCURRENCES
- FWC EAGLE NEST LOCATIONS
- FELSI FIELD SURVEY DATA
- PROJECT AREA
- FWC FIELD SURVEY DATA

N

1:150,000

0 .3 .6 1.2
Miles



N
W E
S

FIGURE 5: POTENTIAL PONDS RETICULATED FLATWOODS SALAMANDER

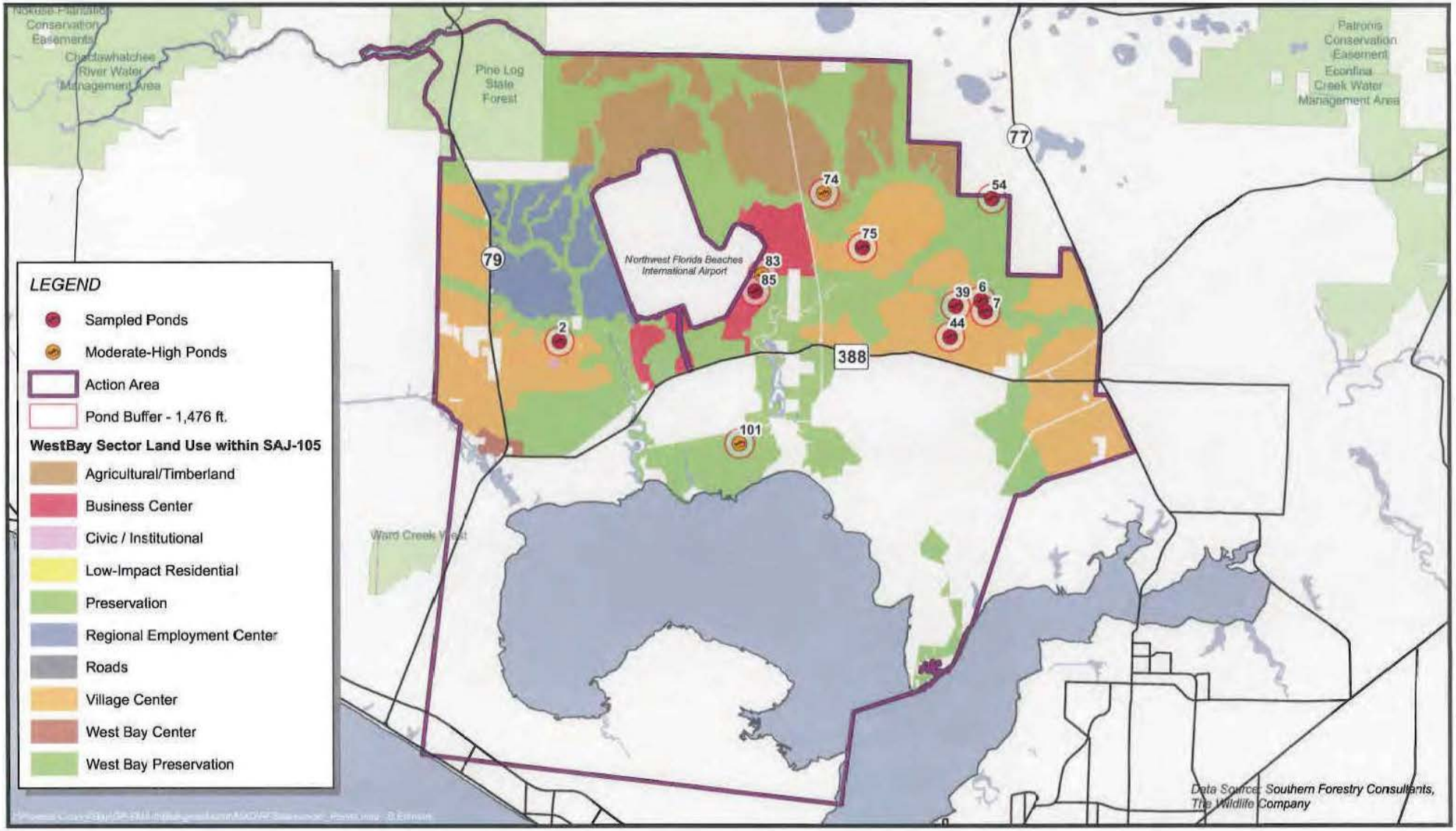
BAY COUNTY, FL

MARCH, 2011

0 7,000 14,000 28,000 Feet

1 INCH = 1.92 MILES

1:121,898



N
W E
S

FIGURE 6: SAMPLED PONDS, MODERATE-HIGH PONDS RETICULATED FLATWOODS SALAMANDER

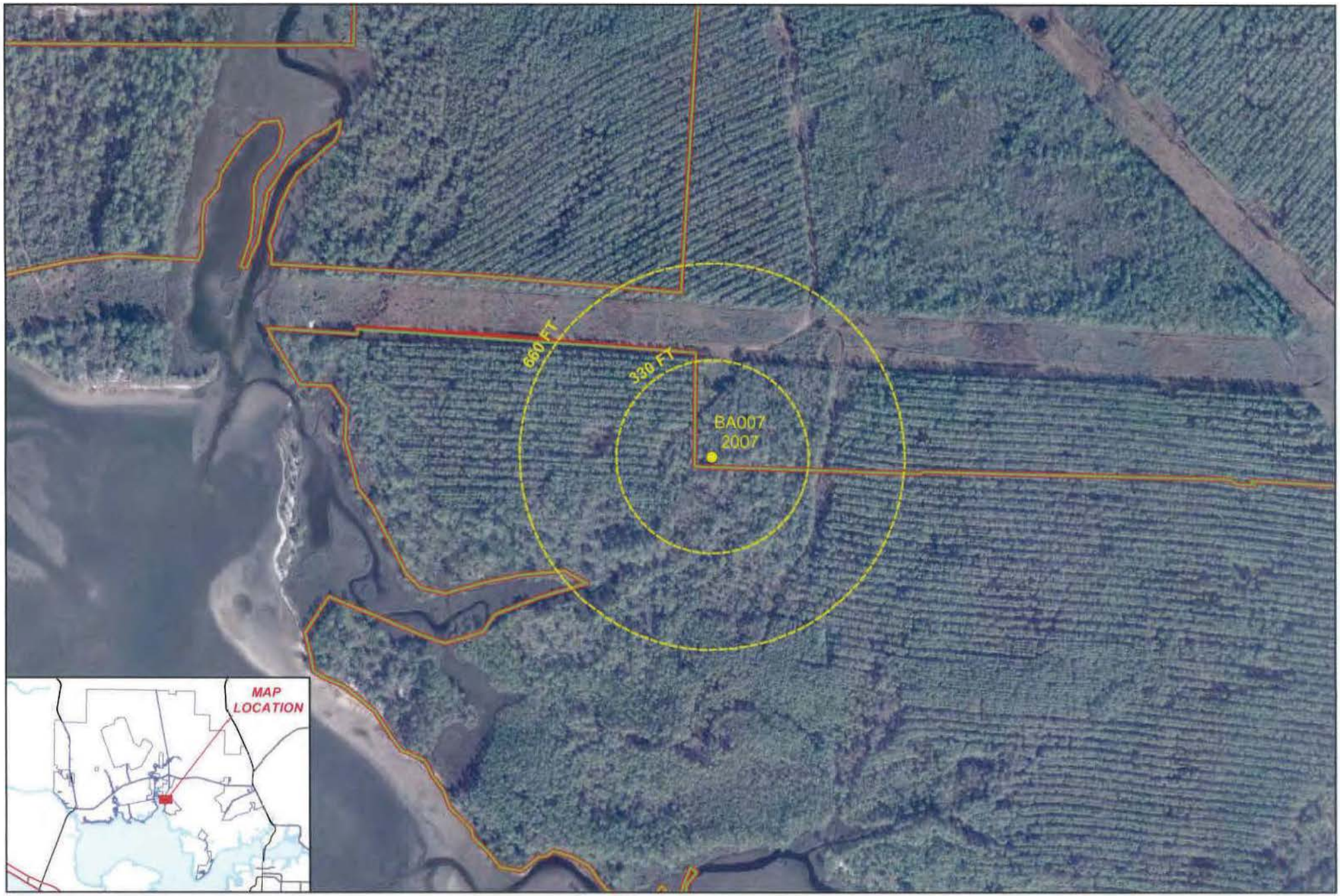
BAY COUNTY, FL

MARCH, 2011

0 5,000 10,000 20,000 Feet

1 INCH = 1.7 MILES

1:108,000



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BAY COUNTY, FLORIDA

TITLE: **FIGURE 7 A**
EAGLE NEST BUFFER ZONES WITHIN THE PROJECT AREA

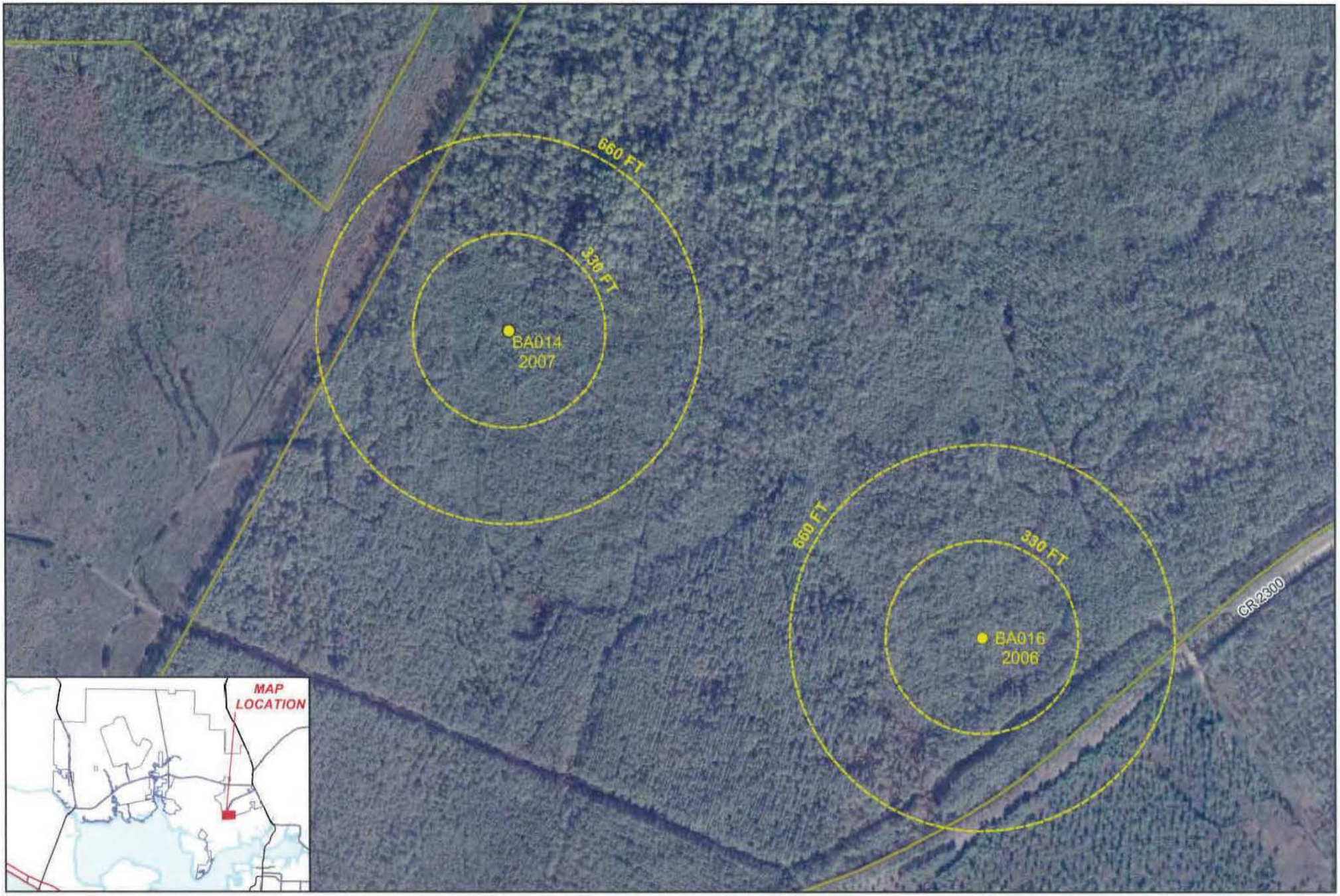
DATE:	BY:	CHECK:	FELSI PROJECT #
FEB-28-2011	CPS	EP	10-0932

- PROJECT AREA
- CONSERVATION UNITS
- FELSI FIELD SURVEY DATA
- FFWCC EAGLE NEST LOCATIONS
- EAGLE NEST BUFFER LINES

N

1:5,000

0 125 250
Feet

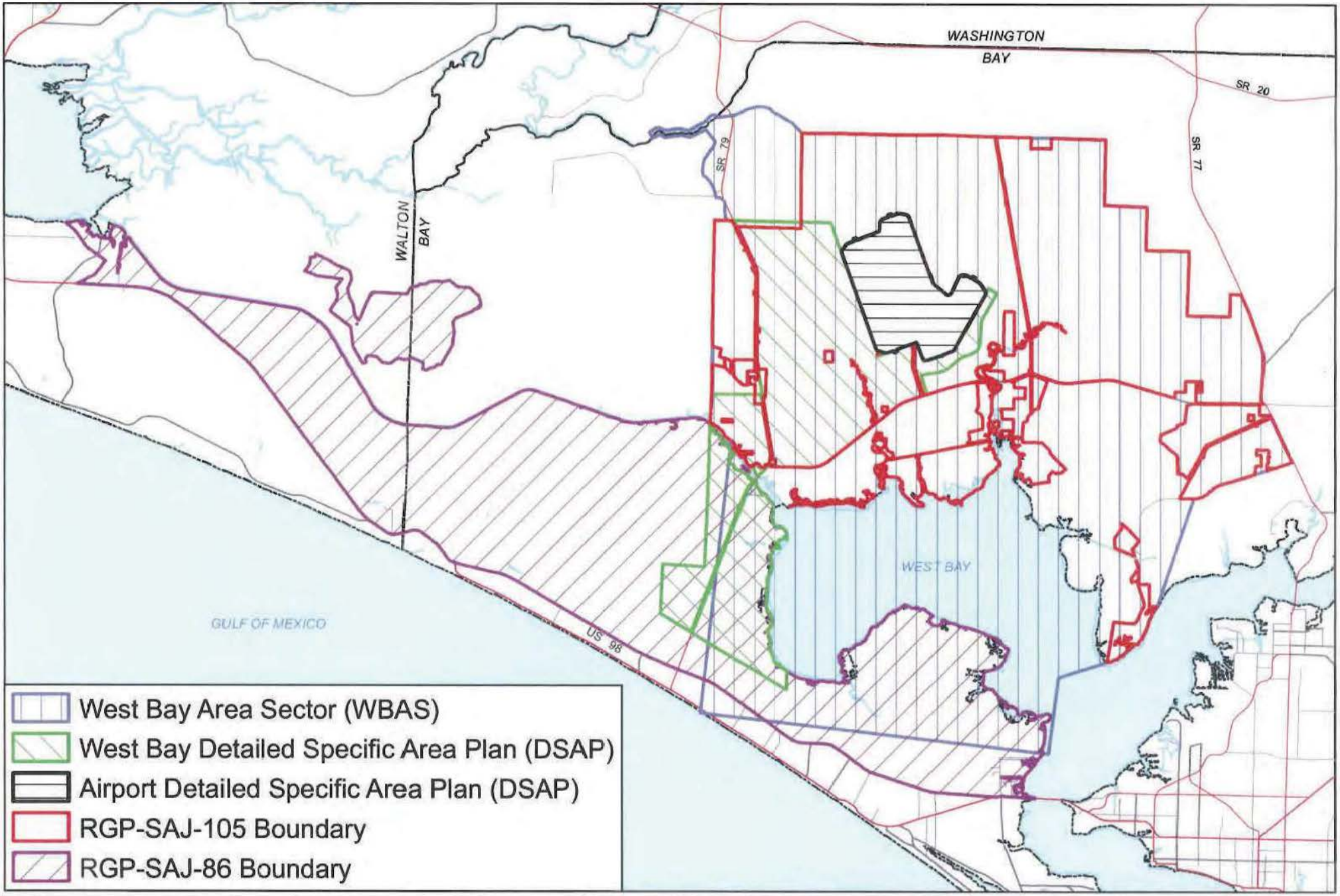


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		DATE: FEB-28-2011	**BY:** CPS	**CHECK:** EP	**FELSI PROJECT #** 10-0932

N

1:5,000

0 125 250
Feet



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PROJECT:
BIOLOGICAL ASSESSMENT FOR RGP EMA II IN BAY COUNTY
BAY COUNTY, FLORIDA

TITLE: **FIGURE 8 - Boundary of the WBAS, DSAP, Airport DSAP, RGP-SAJ-86 and the Proposed RGP-SAJ-105 Project Area.**

DATE:	BY:	CHECK:	FELSI PROJECT #
FEB-28-2011	CPS	EP	10-0932

County Boundaries
Water Bodies
Major Roads
Local Roads

N
1:180,000
0 0.5 1 2 Miles



SAJ-105 POTENTIAL WATER ACCESS

FIGURE 9

LOCATION OF ACCESS POINTS (DOCKS & PIERS)

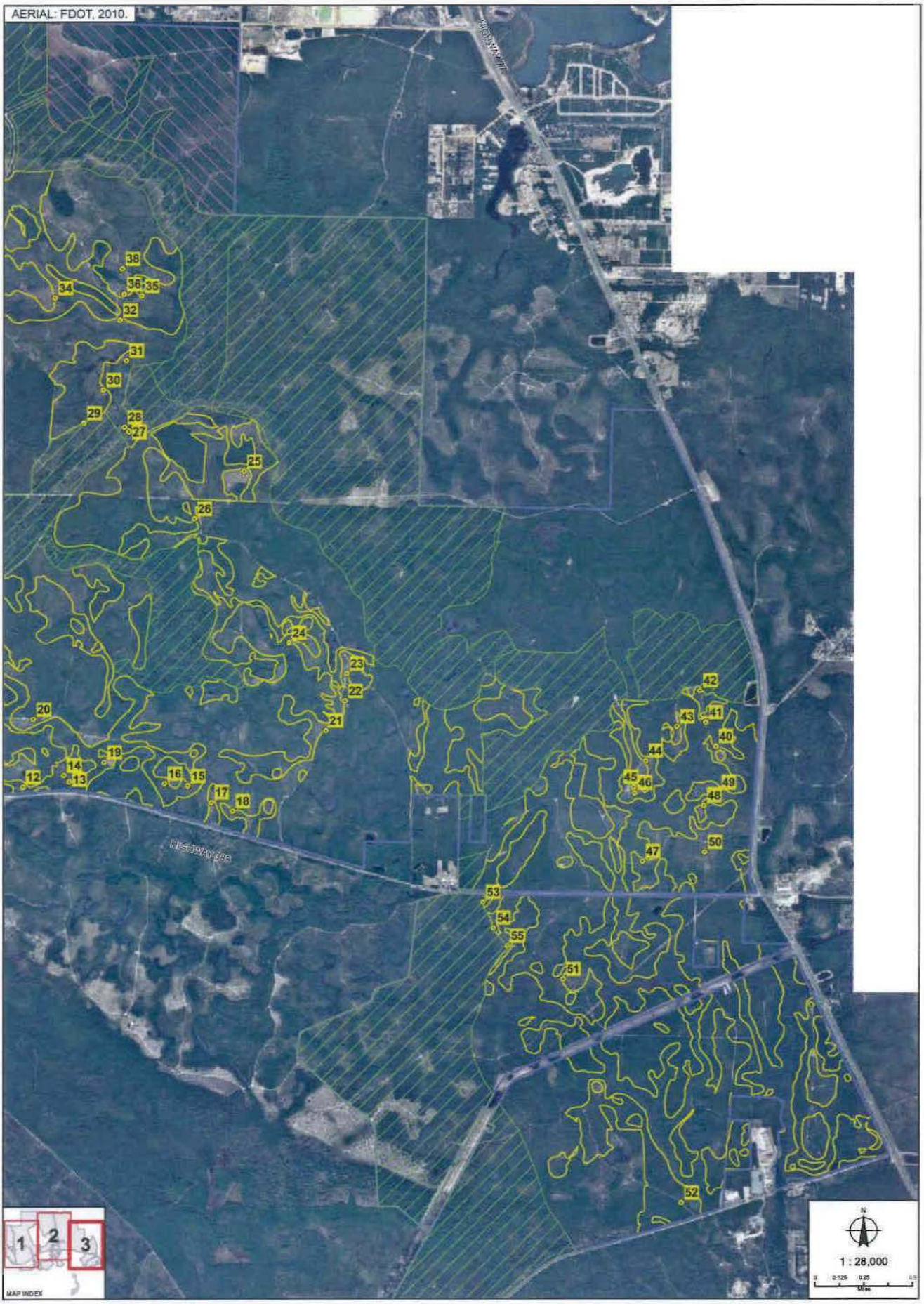
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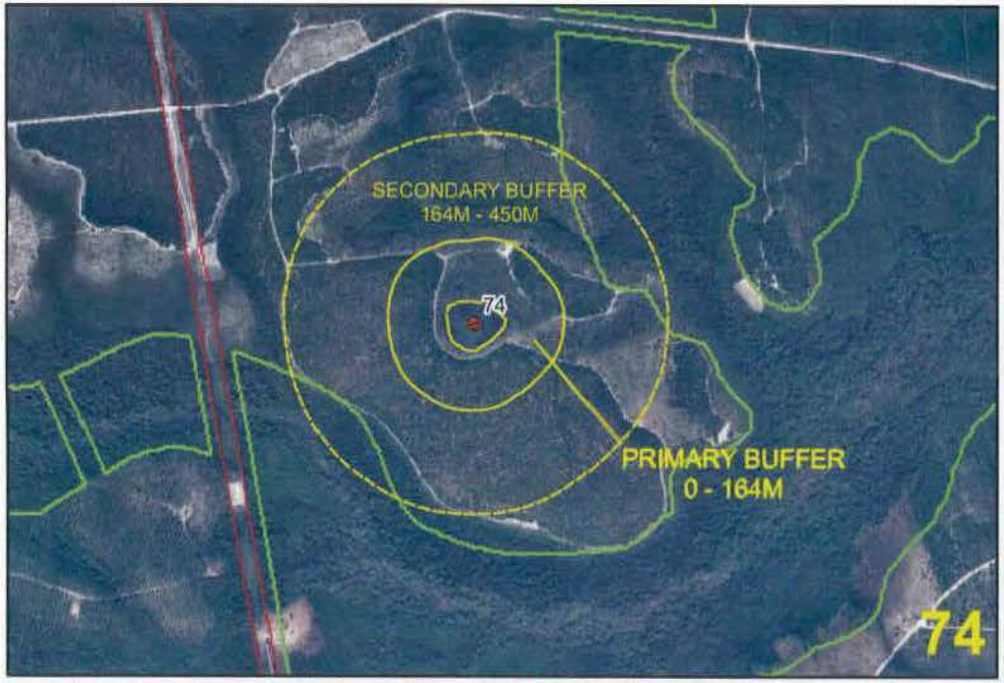
FLORIDA ENVIRONMENTAL AND LAND SERVICES, INC. 221-4 DELTA COURT TALLAHASSEE, FL 32303 (850) 385-6255 (850) 385-6355 (FAX)	**PROJECT:** **RGP AREA PLANT SURVEY** BAY COUNTY, FLORIDA	**TITLE:** **Figure 10 A**				PROJECT BOUNDARY Agricultural/Timberland Conservation Units (Type 1 & 2) SUITABLE SOILS/FLUCCS CODES
		DATE: FEB-28-2011	**BY:** CPS	**CHECK:** EP	**FELSI PROJECT #** **10-0936**	

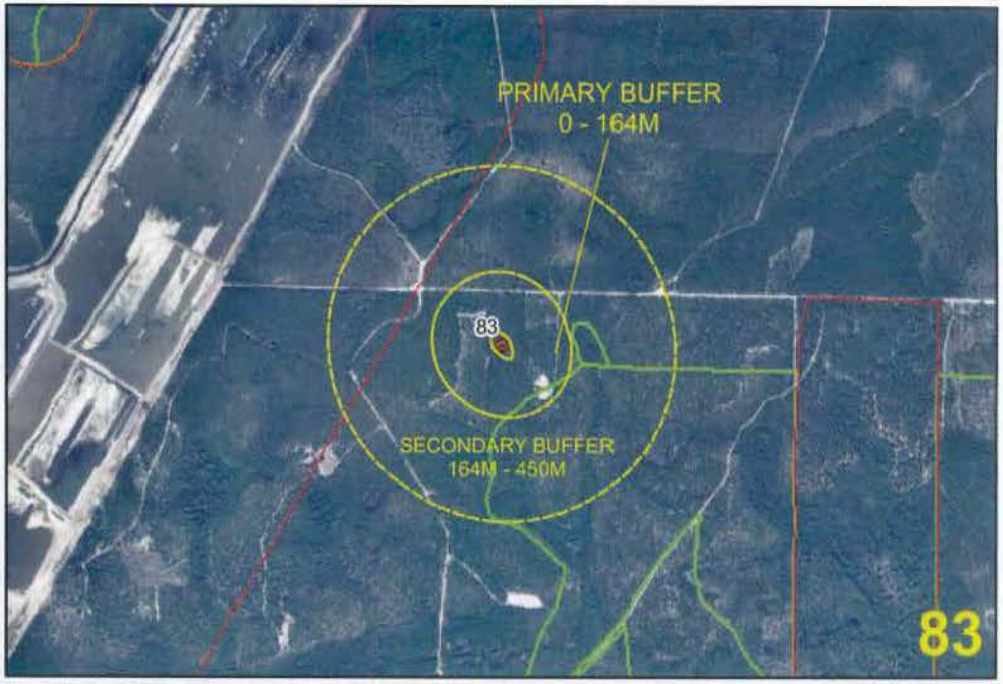


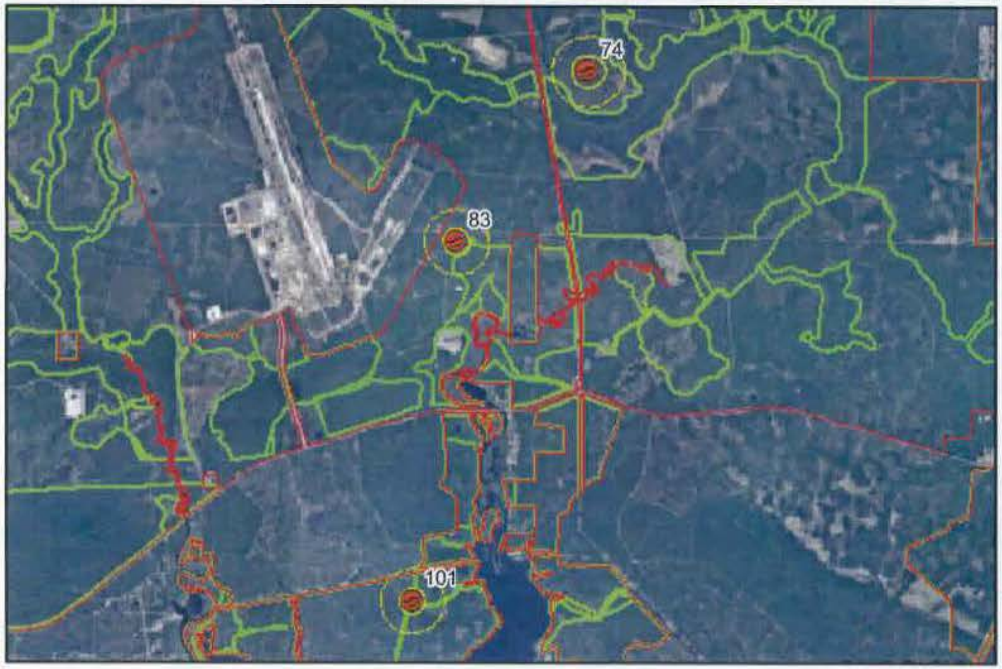
FLORIDA ENVIRONMENTAL AND LAND SERVICES, INC. 221-4 DELTA COURT TALLAHASSEE, FL 32303 (850) 385-6255 (850) 385-6355 (FAX)	PROJECT: **RGP AREA PLANT SURVEY** BAY COUNTY, FLORIDA	TITLE: **Figure 10 B**				PROJECT BOUNDARY Agricultural/Timberland Conservation Units (Type 1 & 2) SUITABLE SOILS/FLUCCS CODES
		DATE: FEB-28-2011	BY: CPS	CHECK: EP	FELSI PROJECT # 10-0936	

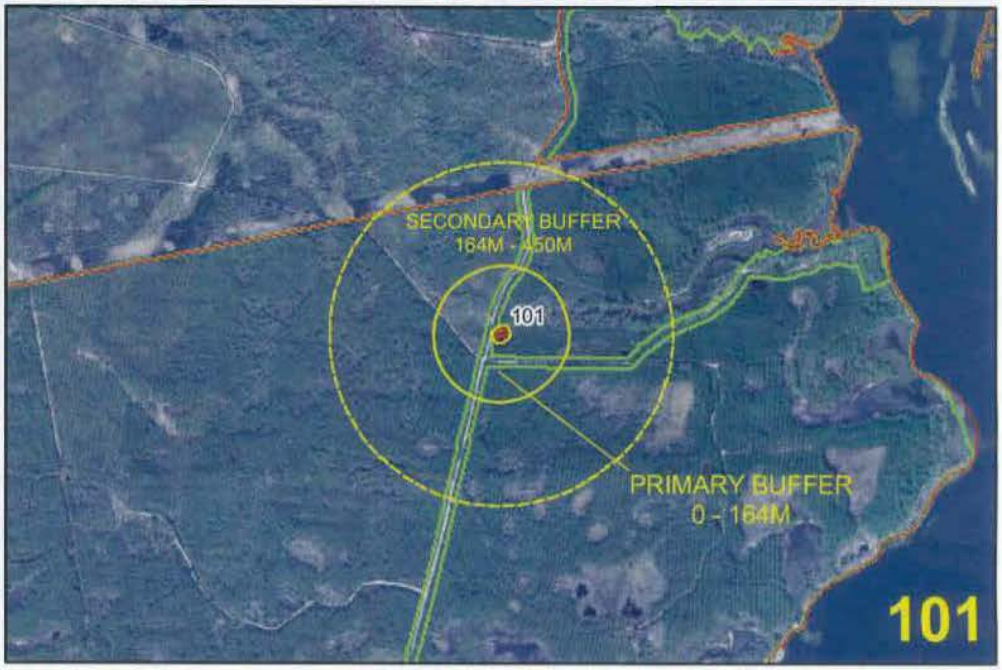


FLORIDA ENVIRONMENTAL AND LAND SERVICES, INC. 221-4 DELTA COURT TALLAHASSEE, FL 32303 (850) 385-6255 (850) 385-6355 (FAX)	PROJECT: **RGP AREA PLANT SURVEY** BAY COUNTY, FLORIDA	TITLE: **Figure 10 C**				PROJECT BOUNDARY Agricultural/Timberland Conservation Units (Type 1 & 2) SUITABLE SOILS/FLUCCS CODES
		DATE: FEB-28-2011	BY: CPS	CHECK: EP	FELSI PROJECT # 10-0936	









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		DATE: FEB-28-2011	BY: CPS	CHECK: EP	FELSI PROJECT # **10-0932**	N 0 0.5 1 Miles

Exhibit 24

Principles for Forest and Wildlife Management of Conservation Units within the West Bay Ecosystem Management Agreement RGP - SAJ 86



2014 Revision by:

Thomas Estes, Principal
Icarus Ecological Services, Inc.

and
James Moyers,
Wildlife Biologist
The St. Joe Company

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.

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 restore and maintain the vegetative species composition, stem density, basal area, understory, hydrology, wildlife species diversity, and ecological functions of historically naturally occurring ecosystems.

B. Prescription

All forest management operations will adhere to the latest edition of Silviculture Best Management Practices (BMPs) 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. Goals and

prescriptions of each community are described below.

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 FDOT FLUCCS 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 FLDOT FLUCCS habitat types Pine Flatwoods (4110), Coniferous Plantations (4410), and Forest Regeneration Areas (4430).
   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 existing slash pine plantations and convert to savannahs.
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), Zeric 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) 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.
    i. 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 Mesic Pine Flatwoods, Basin Swamps, Blackwater Stream, and Seepage Stream (FNAI 2010).
   c) 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.
      i. 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.
      i. Thinning operations are not economically feasible until stands reach merchantable age. Therefore, harvest prescriptions will not be implemented until stands attain minimum volume specifications.
      ii. Harvest activities in all wet pine flatwoods and other jurisdictional wetlands will adhere to FFS BMPs.
      iii. 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.
      iv. Clear-cutting combined with longleaf reestablishment will be used to convert even-aged slash and sand pine stands to uneven-aged longleaf stands over time. Clear-cutting will be used only for longleaf restoration and salvage cutting of storm, fire, disease, or insect damaged timber.
      v. Limited use of herbicides also will be used to complement prescribed burning to create uneven-aged slash pine stands.

C. 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. Return intervals 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.
    a) 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 prescribe and implement wildlife habitat and population management strategies that enhances species diversity and population levels.

B. Prescription

1. Where appropriate, determine the presence, location, and population status of threatened, endangered, and other protected species.
2. GIS location data obtained from FNAI for Florida protected species and species of concern will be used to map potential presence within conservation units.
3. When deemed necessary, monitor and evaluate responses of protected species to habitat management activities.
4. Where appropriate, identify and implement habitat and population management measures that improve the recovery and status of protected species.
    a) 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

Monitor vegetation and wildlife in the CUs to identify the occurrence, location and severity of exotic plant and animal infestations.

1. Develop and implement an exotic plant control and eradication plan.
2. Implement herbicide, fire, and other management prescriptions to meet eradication objectives.

3. Implement lethal and non-lethal measures to control exotic animals.
4. 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

A. **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.

B. **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.)

C. **Florida Natural Areas Inventory (FNAI). 2010**, Guide to the Natural Communities of Florida: 2010 Edition. Florida Natural Areas Inventory, Tallahassee, FL.

D. **Florida Exotic Pest Plant Council (FLEPPC). 2013,** List of Invasive Plant Species. Fort Lauderdale, FL.

E. **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.