6. OVERVIEW OF THE ECOSYSTEM MANAGEMENT AGREEMENT AREA

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6.1 Description of Ecosystem Management Agreement Area

The West Bay to East Walton Ecosystem Management Agreement (EMA) area is located in southern Bay and Walton Counties, south of the Intracoastal Waterway (ICW) and north of U.S. Highway 98, extending from West Bay west to Choctawhatchee Bay (Figures 2-1 and 2-2). The approximately 28,380-acre EMA area spans terrestrial, palustrine, lacustrine, riverine, and estuarine systems. It encompasses a wide variety and richness of ecologically significant wildlife habitats, natural communities, and surface waters and wetlands; species diversity, including federally and state-listed species, is very high. Although almost all of the area within the EMA is currently undeveloped and in silviculture, the cities of Panama City and Panama City Beach and most of the Gulf and Lake Powell coastlines have been and will continue to develop rapidly. The development from these cities and everywhere along the shores of the Gulf of Mexico, West Bay, and Lake Powell will continue to press inland into formerly undeveloped lands.

The EMA area encompasses 12 local drainage basins, both north and south of the ICW (Figure 2-3). The EMA area falls entirely within the Gulf Coast Flatwoods EPA Ecological Region (Florida Regionalization Project, Unpublished Report, 1994) and is classified within the 1969 Davis Land Cover as pine flatwoods, sand pine scrub forests, and forests of longleaf pine and xerophytic oaks.

The current land cover (NWFWMD 1995 in FDEP 2003) is dominated by silviculture (70%: 62% coniferous plantations, and 8% forest regeneration areas). Other land uses that cover substantial acreages are: 19% wetland forested mixed; 3% upland coniferous forest; 3% wetland scrub shrub, and 2% wetland coniferous forest. The National Wetlands Inventory (NWI, 1982-87) classifies approximately 49% of the land cover as uplands and 51% as wetlands dominated by palustrine emergent systems (50%; Figure 4-2).

Historically, north Florida flatwoods covered about 39% of the land area within the EMA boundary (Figure 4-1; NRCS 1989). Flatwoods span upland and wetland conditions. The uplands within the EMA area were dominated by longleaf pine-turkey oak hills (7%). The wetlands within this area were dominated by hardwood swamps, cypress, and shrub bogs (41%). The remaining acreage in the project area was made up of mosaics of xeric/mesic and mesic/hydric communities (e.g., north Florida

flatwoods/freshwater marsh; NRCS 1989). Historical land cover may indicate restoration potential; through conservation and restoration efforts, most of the planted pine areas can be returned to their natural communities. Tables 2-1 and 2-2 present wildlife and listed species generally associated with these historical natural communities.

6.2 Regional Significance

The EMA area spans terrestrial, palustrine, lacustrine, riverine, and estuarine systems. It encompasses a wide variety and richness of ecologically significant wildlife habitats, natural communities, and surface waters and wetlands; species diversity, including federally and state-listed species, is very high (Figures 2-1 and 4-1). Almost all of the area within the EMA is currently undeveloped, other than extensive silviculture; however, this area is experiencing already severe and rapidly increasing pressures from development along the shorelines of the Gulf of Mexico, Lake Powell, Choctawhatchee Bay, and West Bay, as well as other areas throughout the project area. Therefore, to best manage growth and protect areas of regional ecological and cultural significance, it is essential that an area-wide management and conservation plan (i.e., the RGP and EMA) be developed as quickly as possible.

More specifically, numerous features of ecological significance occur within or overlap the boundaries of the EMA area, such as: a recreational trail; two publicly managed lands Point Washington State Forest and Deer Lake State Park; and the South Walton County Ecosystem Conservation and Recreation Land (CARL; FDEP 2003). Many additional regionally significant ecological features are discussed in the following subsections.

6.3 Biodiversity

Historically, north Florida flatwoods covered about 39% (11,070 acres) of the land area within the EMA boundary (Figure 4-1; NRCS 1989). Flatwoods span upland and wetland conditions. The uplands within this area were dominated by flatwoods, longleaf pine-turkey oak hills (about 8%, 2,284 acres[1]), with limited acreage in sand pine scrub (about 1.2%, 338 acres) and mixed hardwood/pine (about 1.6%, 439 acres). The wetlands within this area were dominated by hardwood swamps, cypress, and shrub bogs (41%, 11,565 acres[2]; NRCS 1989) (Figure 4-1), with some saltmarsh (0.2%, 58.24 acres). Historical land cover may indicate restoration potential; through conservation and restoration efforts, most of the planted pine areas can be returned to their natural communities. Tables 2-1 and 2-2 present wildlife and listed species generally associated with these natural communities.

All four of FNAI's under-represented natural communities, seepage slopes, sandhill, scrub, and pine flatwoods, occur within the EMA area occupying 2,660 acres.

Eighty-three (83%) of the EMA area has been identified as upland or wetland priority habitats for key focal wetland-dependent species (Kautz et al. 1994). Of particular interest is that about 60% (17,013 acres) of the uplands within the project area have been identified as important habitat for 1-3 wetland-dependent species (Kautz et al. 1994; Cox et al. 2000).

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[1] This acreage obtained by summing category 4 with half of 4,5 (longleaf pine-turkey oak hills + ½ x longleaf pine-turkey oak hills, mixed hardwood/pine).

[2] This acreage obtained by summing the following categories: 17,21,22 + 21 + 21,22 + 22 (hardwood swamps, cypress, and shrub bogs + cypress + cypress, shrub bogs + shrub bogs, respectively).

Threatened and Endangered Species

Critical habitat designated for the Gulf Sturgeon (*Acipenser oxyrhinchus desotoi*) occurs northwest of the EMA in Choctawhatchee Bay. In addition, the EMA boundaries overlap with about 55 acres of FWC SHCAs for the Gulf salt marsh snake (*Nerodia clarkii clarkii*) and black bear (*Ursus americanus floridanus;* Cox et al. 1994).

There have been numerous recorded occurrences within the EMA area of state-listed species. The one federally listed (and state listed) species observed is the federally endangered red-cockaded woodpecker (*Picoides borealis*). According to FNAI, seven state-listed species observed within the EMA area include two endangered plant species and five threatened plant and animal species. WilsonMiller observations add three more state-listed species, one animal and two plants (see data sheets at the end of this section).

The proposed conservation units and mitigation banks should improve the quality of suitable habitat for listed species as well as protecting and maintaining the suitability of the regional landscape for listed species. Tables 2-1 and 2-2 present many of the common and federally and state-listed animal and plant species, respectively, that might benefit if the planted acreage within these areas were restored to historical natural land covers (NRCS 1989).

6.4 Water Quality

The 12 drainage basins within the EMA area filter and contribute surface waters directly to Choctawhatchee Bay, West Bay, Lake Powell, and the Gulf of Mexico. The extensive wetland systems within the EMA area are essential to this function. In addition, the Lake Powell, Phillips Inlet, and the Point Washington OFWs occur within the EMA boundary (about 1,411 acres).

The 2000 Florida Water Quality Assessment: 305(b) Report (FDEP 2000) provides water quality status for 13 water bodies or basins, including West Bay and Lake Powell, within the Choctawhatchee/St. Andrews watersheds. Of the statuses provided, all except one, are good; one is fair (for Botheration Bayou). The 2000 305(b) report for the Choctawhatchee/St. Andrews watersheds as a whole indicates that within the EMA area, the chemistry conditions are good, the biology conditions are fair, and trends have not changed. There are no known immediate point-source water quality threats within the EMA boundary (FDEP 2003). Silvicultural activities account for non-point source water quality threats. The remainder of the land cover is in natural communities, primarily wetlands, of various quality.

About 11,652 acres within the EMA area are sources for blackwater inflow to riverine systems. Soils contributing to the maintenance of blackwater inflow are the mucky (2,879 acres) and/or depressional soils (8,773 acres).

The estimated percentage of land use within the EMA that is wetland ranges from 25% to 51% (NWFWMD 1995 and NWI, respectively, in FDEP 2003) to 65% (18,322 acres) using the method for estimating Corps' jurisdiction (Appendix C-2). These wetlands filter surface water throughout the EMA area drainage basins and therefore help to filter adverse runoff associated with silviculture activities and existing and potential future development from entering Choctawhatchee Bay, West Bay, Lake Powell, and the Gulf of Mexico, as well as freshwater riverine systems.

6.5 Essential Fish Habitat and Living Marine Resources

Surface water from the EMA area flows directly to Choctawhatchee Bay, West Bay, Lake Powell, and the Gulf of Mexico. All of these water bodies support extensive saltwater and freshwater marshes and seagrass beds that provide EFH. No seagrass beds occur within the EMA boundary itself. In addition, two FNAI-identified coastal priority areas occur within the EMA area (FDEP 2003; FNAI 2001; FMRI

2002). The wetlands within the EMA area buffer and filter the surface water flow into these water bodies.