

8. Lake Powell Headwaters Conservation Unit

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8.1 General Description of Conservation Unit

The 912-acre Lake Powell Headwater Conservation Unit, situated on the northeast side of Lake Powell and encompassing streams flowing into Lake Powell, buffers and filters surface waters flowing into the lake (Figures 2-1 and 8-1). This unit has also been identified as a primary wildlife habitat area, with the potential for supporting both uplands and wetlands important to wildlife diversity in the Florida panhandle. Because the Lake Powell Headwater Conservation Unit links western conservation units with eastern ones, this unit also is important to maintaining the continuity of the proposed conservation units. Data sheets reporting the results of the GIS ERATools™ analyses for the Lake Powell Headwater Conservation Unit are included at the end of this section.

The current land cover (NFWFMD 1995) is divided between silviculture (coniferous plantations) and forested wetlands. The National Wetlands Inventory (NWI, 1982-87) classifies approximately 40% of the land cover as uplands and 60% as wetlands dominated by palustrine forested wetlands (Figure 4-2).

Historically, the uplands component of this area was a blend of North Florida Pine Flatwoods, Longleaf Pine-Turkey Oak Hills, and relatively little Mixed Hardwood/Pine forests, and the wetlands component of this area was dominated by Cypress and Hardwood Swamps and Shrub Bogs (NRCS 1989) (Figure 4-1). Historical land cover may indicate restoration potential. Pine plantations have replaced most of the North Florida Pine Flatwoods and Longleaf Pine-Turkey Oak Hills communities and some of the forested wetlands. However, the current pine plantations not only support the state's forestry resource, but when placed under conservation status, these lands potentially can be restored to the historical land cover, including the FNAI-identified priority natural communities/under-represented natural communities of Sandhill or Pine Flatwoods, as practicable. Tables 2-1 and 2-2 present wildlife and listed species generally associated with these natural communities.

8.2 Regional Significance

Because of the Lake Powell Headwaters unit's central position within the conservation network, its occurrence within the Lake Powell basin, and its protection of Lake Powell headwaters, limiting construction in this area and protecting and restoring components of both the upland and wetland systems will serve to protect and maintain ecological integrity within the region (Figure 2-1).

Approximately 90 acres of the 921-acre conservation unit are within the boundaries of the Lake Powell Special Outstanding Florida Water (OFW). Several Recreational Trails overlap the 2-mile and more overlap the 5-mile buffers. One managed land, Camp Helen State Park, overlaps the 2-mile buffer. Several managed lands, Point Washington State Forest, Camp Helen State Park, and Deer Lake State Park; the South Walton County Ecosystem CARL; and the Point Washington and Lake Powell OFWs overlap the 5-mile buffer (FNAI 2000, 2001; FDEP 2003). Additional regionally significant ecological features, such as FWC-identified priority habitat for wetland species and strategic habitat conservation areas (SHCAs), are discussed in the following subsections.

8.3 Biodiversity

Historically, the Lake Powell Headwater Conservation Unit was cypress, mixed forested, and shrub wetlands; pine flatwoods; and some longleaf pine-turkey oak hills. The cypress and forested wetlands are primarily unaffected by silviculture or other land uses. The part of the landscape currently in silviculture retains the physical characteristics for restoring it to its historical natural state as FNAI priority/under-represented natural communities of Pine Flatwoods and Sandhills.

FNAI priority natural and endemic communities identified within the 1-mile buffer include Pine Flatwoods and Scrub, and within the 3-mile buffer include Seepage Slopes, Sandhills, Scrub, and Pine Flatwoods.

A large percentage (90%) of this conservation unit and 77% of the landscape within the 1-mile buffer around the unit is identified as priority habitats for key focal wetland-dependent species (Kautz et al. 1994). Of particular interest is that almost all the uplands within the conservation unit have been identified as important habitat for 1-3 wetland-dependent species. Within the 1- and 3-mile buffers around the unit, substantial acreages of priority upland and wetland habitats occur for 1-3 and some acreage for 4-6 focal wetland-dependent species. Restoration of this unit's uplands to natural communities will contribute to the state's conservation strategy for both upland and wetland focal species (Kautz et al. 1994; Cox et al. 2000).

This conservation unit provides for wildlife habitat conservation and the preservation of wildlife corridors. The Lake Powell Headwater unit is a necessary part of the chain linking the natural systems in the west with those in the east, allowing for relatively unobstructed movement of species through the Project area.

Threatened and Endangered Species

FWC strategic habitat conservation areas (SHCAs) for the Gulf salt marsh snake (*Nerodia clarkii clarkii*) and the snowy plover (*Charadrius alexandrinus*) that are located along the north shore of Lake Powell are within the 1-mile buffer around this unit. Sea turtle nesting beaches occur within the 3-mile buffer around this unit.

There have been no known recorded occurrences within the Lake Powell Headwater Conservation Unit of federally or state-listed threatened or endangered species¹, and there is no U.S. Fish and Wildlife Service-designated critical habitat. No federally listed species were observed within the 1-mile buffer; two federally listed species, piping plover (*Charadrius melodus*) and inactive red-cockaded woodpecker (*Picoides borealis*) cavity trees, were observed within the 3-mile buffer. Two plant species state-listed as threatened have been observed within the 1-mile buffer, and several animal and plant species state-

¹ Surveys completed by FNAI and FWC are not comprehensive or exhaustive and are opportunistically based on priorities and funding as well as access to land.

listed as endangered, threatened, or species of special concern have been observed within the 3-mile buffer around the unit.

The proposed conservation plan for the Lake Powell Headwaters unit should improve the quality of potentially suitable habitat for listed species within the unit as well as protecting and maintaining the suitability of the regional landscape for listed species (St. Joe Timberland Company 2003). Tables 2-1 and 2-2 present many of the common and federally and state-listed animal and plant species, respectively, that would likely benefit if this conservation unit's planted acreage were restored to its historical natural land cover of pine flatwoods, longleaf pine-turkey oak, and forested wetlands.

8.4 Water Quality

Approximately 10% of the Lake Powell Headwater Conservation Unit falls within the Lake Powell-Phillips Inlet OFW boundaries. Forty-seven percent (47%, 432 acres) of the Lake Powell Headwaters Conservation Unit is within the Phillips Inlet (Lake Powell) drainage basin; this area of the unit within the Lake Powell drainage basin contributes surface waters directly to Lake Powell. The rest of the unit contributes surface water flow to West Laird Drain basin (42%) and the Direct Runoff to Bay basin (10%), which drains to West Bay through the ICW.

The environmental issues surrounding Lake Powell, designated an OFW and a Class III – Recreational Use water body, focus primarily on maintaining water quality and quantity. Currently, the water quality trends for Lake Powell are listed as good and fully meeting the water quality standards set forth by the state in the 2000 Water Quality Assessment: 305(b) Report (FDEP 2000). The 1998 305(b) report (FDEP 1998) lists the water quality trend to be good. The 1996 305(b) report lists the water body, but does not give a status on the water quality standards or trends (FDEP 1996). Lake Powell is not listed on the 1998 303(d) Impaired Waters list.

The water quality status for The Direct Runoff to the Bay Basin has been fair for the 1998 and 2000 305(b) reports (FDEP 1998, 2000). No status is given for this basin in the 1996 305(b) report (FDEP 1996).

About 62% of the Lake Powell Headwaters unit contributes to maintaining blackwater inflow to Lake Powell and West Bay; all of this contribution comes from Rutlege Sand, a primary hydric depressional soil. The direct flow into the Lake Powell and West Bay systems and the blackwater inflow characteristics emphasize the importance of this conservation unit within the study area.

There are no known immediate point-source water quality threats to the system within the boundary or within 1 mile of the 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. The estimated percentage of land use within the Lake Powell Headwater Conservation Unit that is wetland ranges from 46% to 60% (NFWFMD and NWI, respectively, in FDEP 2003) to 84% (762 acres) using the method for estimating Corps' jurisdiction.

The wetland systems within this conservation unit connect directly with wetland systems in the Wildlife Corridor, Side Camp Road, and Cypress and Wet Pine Flats conservation units which extend to the northwest, north, and east, respectively. Field observations indicate surface water flows from the Lake Powell Headwater Conservation Unit into adjacent conservation units as well as into Lake Powell.

On-site wetlands currently filter surface water in the Lake Powell-Phillips Inlet OFW and the Phillips Inlet, West Laird Drain, and Direct Runoff to Bay drainage basins. This unit currently provides necessary buffering of any adverse runoff into Lake Powell from silviculture practices or future development north of the lake and around the two headwater streams included in the conservation unit. There is no stormwater flow from developed areas into surface water bodies within or from this unit.

Upland areas in this unit are described in the field notes as moderate quality. When these lands become inactive from silviculture and are restored to their natural land cover, the entire unit will buffer Lake Powell from silvicultural or development activities outside the unit.

8.5 Essential Fish Habitat and Living Marine Resources

The Lake Powell Headwaters Conservation Unit buffers and filters surface water flow into Lake Powell as well as into the ICW, which drains to West Bay. Both West Bay and Lake Powell support extensive saltwater and freshwater marshes and seagrass beds that provide Essential Fish Habitat (EFH). Two FNAI-identified coastal priority areas overlap the 2-mile buffer (FNAI 2001). Conserving and restoring this conservation unit will protect and improve the abundance and health of the existing EFH and other living marine resources in West Bay.