

**Table 1. Management priorities and environmental issues for selected National Wildlife Refuges (NWRs) in Region 4 of the U.S. Fish and Wildlife Service, southeastern United States.**

[USACOE, U.S. Army Corps of Engineers. Lower Mississippi and South Atlantic-Gulf drainage boundaries shown in figure 1. As, arsenic; Hg, mercury; PCBs, polychlorinated biphenyls]

Refuge name	State	Year established	Refuge area <sup>1</sup> (acres)	Refuge management priorities <sup>2</sup>	Environmental issues <sup>3</sup>
<b>Lower Mississippi drainage</b>					
Cache River NWR	Arkansas	1986	174,800 (56,000)	Wetland habitat protection; Migratory waterfowl protection; Relink fragmented bottomland hardwood and swamp forest habitat through reforestation	Agricultural impacts
White River NWR	Arkansas	1935	175,200 (160,000)	Migratory waterfowl protection; Preservation of one of the largest remaining bottomland hardwood forests in the Mississippi River Valley; Forest thinning; Water-level management; Managed wildlife harvesting	Agricultural impacts; USACOE diversion of White River water to agricultural aqueducts upstream of Cache and White River NWRs; USACOE plans to prevent the Arkansas and White Rivers from merging downstream of White River NWR (levee construction); Backwater from flooding in the lower portion of White River NWR
<b>South Atlantic-Gulf drainage</b>					
Cahaba River NWR	Alabama	2002	7,300 (3,582)	Protection and management of a unique river corridor; Contains 5 federally-listed species; Largest-known stand of the imperiled shoal lily; Restoration of native longleaf pine, removal of loblolly pine, prescribed burning	Birmingham, AL, withdrawals from the Black Warrior River being discharged to the Cahaba River, increased baseflow; Urbanization, non-point runoff from greater Birmingham area changing flow characteristics and water quality
Lower Suwannee NWR	Florida	1979	84,040 (54,000)	Preservation of the Suwannee River delta and estuary (one of the largest undeveloped in the United States); Monitoring endangered and sensitive species; Forest management through prescribed burning, tree thinning, and native plant-community restoration	Groundwater withdrawals could stress the flow system during drought; Minimum-flow criteria established for the Suwannee River (state of Florida); Conversion of freshwater swamp to marsh
Caloosahatchee NWR	Florida	1920	40 (10)	Established as a native bird preserve and breeding ground; Uplands and mangrove wetlands managed as habitat for birds, fish, invertebrates, and other animals; Refuge for the endangered West Indian manatee	Mangrove habitat loss resulting from shoreline development, dredging, and construction of the I-75 bridge; Brazilian pepper invasive; Caloosahatchee River discharge impacts; Release of nutrient-rich bottom water from Lake Okeechobee; Sediment dredging (As, Hg, PCBs)
J.N. "Ding" Darling NWR <sup>4</sup>	Florida	1945	8,103	Part of the largest undeveloped mangrove ecosystem in the United States; Two impoundments (850 acres) managed for fish, foraging habitat for migratory birds, and control of saltmarsh mosquitoes; Vegetation management through prescribed burning	Brazilian pepper invasive; Additional water-control structures are needed; Vegetation dieoff (native seagrasses) and estuarine salt balance; High nutrient loads during wet seasons promote algal growth

<sup>1</sup> The first number given is acreage within the acquisition boundary. Acreage numbers in parentheses are for land presently acquired (U.S. Fish and Wildlife Service, 2008b–g).

<sup>2</sup> U.S. Fish and Wildlife Service, 2008b–g.

<sup>3</sup> Written communication, Steven Earsom (Raleigh, North Carolina) and William Starkel (Atlanta, Georgia), U.S. Fish and Wildlife Service.

<sup>4</sup> Established in 1945 as the Sanibel NWR. Renamed in 1967 in honor of conservationist and political cartoonist Jay Norwood "Ding" Darling.