

USACE Natural Resource Management Reptiles & Amphibians



Bog Turtle

REASONS FOR LISTING STATUS: The northern population (New York and Massachusetts to Maryland and Delaware) was listed as Threatened by the U.S. Fish and Wildlife Service as Threatened in 1997. The southern population (Virginia, North Carolina, Tennessee, Georgia) is listed as Threatened due to similarity of appearance.

Bog turtle populations face multiple threats including loss and destruction of habitat that continues despite the environmental protections afforded to this species. The habitat loss predominantly stems from residential and commercial development. The presence and expansion of invasive plant species degrades the quality of remaining bog turtle habitat. Native predators, most notably racoons, are known to destroy bog turtle nests. Additionally, bog turtles are still often targeted by the pet trade even though it is an illegal activity.

MANAGEMENT AND PROTECTION: A review of the bog turtle using the Climate Change Vulnerability Index by the Pennsylvania Natural Heritage Program found that the turtle indexed as "highly vulnerable" to climate change (PNHP 2011). Marsh and wetland environments could have lasting altered hydroperiods due to climate change, and consequently may become unsuitable for bog turtles.

HABITAT NEEDS: The species is dependent on a mosaic of microhabitats for foraging, nesting, basking, hibernation and shelter. (USFWS)

- Bog turtles inhabit slow, shallow, muck-bottomed bogs, fens, marshy /edge meadows, including wet cow pastures. (NatureServe)
- These small turtles feed opportunistically on insects, worms, slugs, crayfish, snails, and other small invertebrates.
- Maintenance of habitat is critical to limit the natural succession of the wetland ecosystem and remove invasive species.

Description: One of North America's smallest turtles, the bog turtle rarely exceeds four inches in length.

Bog turtles typically have a bright yellow, orange, or red blotch on each side of the head. The turtle's carapace is brown/black often with obvious growth rings on each scute. The plastron is cream colored with black patches.

Photo: USFWS, National Fish and Wildlife Federation, NRCS

Natural Resource Management (NRM)

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USACE ROLE: According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, over \$1,160,900 has been expended by USACE's Regulatory, Recreation, and Environmental Stewardship Programs primarily related to coordination and determination efforts since 2006.

Map: The bog turtle is ranked by Nature Serve as an Imperiled species with a critically imperiled status in six states. Photo: Blue Marsh Lake, Philadelphia District.

WHAT IS USACE NRM DOING: As reported in the NRM program annual assessment, the bog turtle has potential occurrences within the North Atlantic Division at projects such as Blue Marsh Lake, Francis E Walter Dam, and Beltzville Lake among others.

Blue Marsh Lake, Philadelphia District, encompasses over 6,100 acres of land with an additional 1,150 acres of water located within the priority area established for the bog turtle by the Working Lands for Wildlife Program. The bog turtle is a nationally identified target species of the Working Lands for Wildlife (WLFW) partnership, a collaborative approach to conserve habitat on working lands. While the WLFW program focuses on conservation efforts on private lands, the practices encouraged and implemented by this program can be applied to USACE lands as well.

