

**Identification:** A dry land turtle, the gopher tortoise (*Gopherus Polyphemus*) has a high, domed shell up to 15 inches in length. These tortoises can weigh from eight to 15 pounds. They have stubby, elephant-like hind feet and flattened front feet with large toenails for digging. They have a long life span, ranging to 80 years old in the wild and to over 100 years in captivity. The gopher tortoise is considered a keystone species, which means its presence is required for the health of the ecosystem. Their burrows provide refuge to over 360 other species throughout its range. Some of those species include the gopher frog, eastern indigo snake, and gopher mouse. Many of those species are protected by state or federal law, which adds value to the tortoise burrow's role in the ecosystem.



**Habitat:** Gopher Tortoises favor dry, sandy ridges with open stands of longleaf pine, black jack oak, and other scrub oaks. They also frequent open areas around road shoulders, food plots, and right-of-ways with well drained sandy soil. They dig long sloping burrows up to 30 feet long, extending up to nine feet below the surface. Burrows typically have a characteristic mouse hole shape, with a flat bottom and rounded arched top and sides, much like the tortoises shell. The dens are shelter for the gopher tortoise as well as a variety of other sand hill residents, including the eastern diamondback rattlesnake.

They feed on grass and other plant material near the ground. Feeding trails are often visible leading from the den's sandy apron to foraging areas. Eggs are laid in or near the den apron in May, June, and July and hatch in about 80-100 days. Young tortoises are about the size of silver dollars. The nest is very vulnerable to predation by crows, raccoons, opossums, foxes, skunks, and other animals.

**Importance:** The gopher tortoise was listed as a Threatened Species in the western portion of its range on August 6, 1987. This area includes everything west of the Tombigbee and Mobile Rivers in Alabama to southeastern Louisiana. The gopher tortoise is a candidate species for listing as Threatened under the Endangered Species Act in the eastern portion of its range. Threatened species are species that are likely to become endangered in the future. Endangered species are those that are in danger of becoming extinct.

**Reasons for Current Listing & Proposed Listing:** The US Fish and Wildlife Service determined that the western population of gopher tortoises warranted listing due to substantial loss of habitat, low reproductive rate, and long age to reach sexual maturity. Habitat loss includes conversion of open longleaf pine forests to agriculture, pasture, and heavily managed short rotation off site pine plantations. The remaining habitat is often degraded because of fire suppression and a prevalent mid-story that does not allow sunlight to reach the forest floor. Urbanization and fragmentation are also significant factors that contribute to habitat loss. Human predation and road mortality have also contributed to the gopher tortoises decline in population.

In the eastern portion of its range many of the same negative factors are present. Habitat fragmentation and degradation are still significant threats. Human predation has been reduced through education and outreach. Interest in restoration of the longleaf pine ecosystem has seen an increase in recent years, which will hopefully benefit the species in the future. The overall magnitude of threats to the eastern range is considered to be moderate to low because this population extends across a broad geographic area and there are conservation measures in place in some areas. Some of these conservation measures include the Gopher Tortoise Candidate Conservation Agreement and the Gopher Tortoise Council.

**Forestry Considerations:** Managing for open canopy and early successional habitat is ideal for gopher tortoises. Plant applicable sites in longleaf pine at lower densities to allow for more sunlight to reach the ground. Plant approximately 400 longleaf pine or 300 loblolly/slash pine trees per acre if managing for early successional habitat reliant species. If heavy chemical site preparation was conducted reseedling of native warm season grasses and forbs is recommended. In existing stands of mature loblolly or slash pine frequent thinning and prescribed burning will improve the habitat for gopher tortoises. Prescribe burn on a two to three year rotation, this will help reduce hardwood ingrowth and stimulate native warm season grasses and forbs. It is important to rotate between dormant and growing season burns. If possible extend rotation lengths before conducting a final harvest. A “plantation cut”, which leaves approximately 30 basal area per acre, is a viable alternative to a final harvest for landowners that want to manage for gopher tortoises and other species that rely on open early successional habitat. Disking permanent openings in the fall and winter will stimulate early successional plant species preferred by gopher tortoises. In areas where prescribed burning is not applicable, mowing or bush hogging between the rows is an alternative. Be cautious with heavy equipment around the burrows to avoid collapsing them, crushing eggs and harming young tortoises that dig very shallow burrows. Mark burrows with flagging or stakes and make operators aware of them. Fire lanes, logging decks, and skid trails should be directed away from burrows. It is recommended to maintain a fifteen foot radius around the burrow.

**Endangered Species Act Protection and Rules:** The western portion of the range, which is listed as Threatened, is protected by the Endangered Species Act (ESA). The Act and implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of general prohibitions and exceptions that apply to all threatened wildlife. These prohibitions, in part, make it illegal for any person subject to jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally.  
*(Text taken directly from Federal Register Vol. 52 No. 129.)*

**Distribution by County:** Listed as Threatened and protected by ESA in counties west of the Mobile and Tombigbee Rivers: Mobile, Washington, and Choctaw. They are protected by state law in the rest of Alabama. Counties in which they are state protected include: Baldwin, Barbour, and Bullock. Butler, Clarke, Crenshaw, Coffee, Conecuh, Covington, Dale, Escambia, Geneva, Henry, Houston, Monroe, Montgomery, Pike, Sumter and Wilcox.



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