



AQUATIC LANDS HABITAT CONSERVATION PLAN — Species Spotlight

Northern Leopard Frog — *Rana pipiens*

Protection status: *Washington State endangered species listing*

In Washington State, the northern leopard frog makes its home on the eastern side of the Cascade Mountains, including areas near the Pend Oreille River, the Potholes Reservoir, Alder Creek in Klickitat County, and the Columbia, Snake, Spokane, and Walla Walla rivers.

Life history

Northern leopard frogs grow to 2 to 4 inches (5 to 10 cm) in length and have a maximum life span of 5 to 9 years, with females becoming sexually mature at 2 to 3 years of age. The northern leopard frog deposits between 645 and 7,648 eggs per spawning event, with tadpoles emerging within 2 to 17 days and undergoing metamorphosis within 3 to 6 months.



Northern Leopard Frog. Photo: K. McAllister

Although little is known about their overland movements in Washington, these frogs migrate to and from breeding ponds, as well as water bodies used for hibernating.

Adults of this species are entirely carnivorous and regularly feed on beetles, flies, ants, damselflies, dragonflies, grasshoppers, spiders, and small vertebrates such as birds, snakes, and other frogs.

Leopard frog tadpoles graze on attached algae, while developing in shallow nearshore waters, with metamorphosis completed during the summer of the first year. After metamorphosis, young frogs may emigrate from their natal ponds to permanent waters, such as a lake or stream.

In the winter, leopard frogs usually overwinter underwater among stones, sunken logs, or leaf litter along the bottom of ponds, lakes, and streams.

Habitat use

While this species depends on upland vegetation as a refuge from predators, they range widely across a variety of habitats including wet meadows, grassy woodlands, and hay fields. Northern leopard frogs spawn from April through June in shallow water with emergent or submerged vegetation, such as cattails and sedge marshes. Northern leopard frogs lay egg masses attached to emergent vegetation in water depths less than 26 inches (65 cm) and exposed to sunlight.

Breeding ponds are generally 5 feet (1.5 m) or deeper, with gradual sloping shorelines. The ponds contain substantial amounts of emergent and submerged vegetation that provide shelter for egg masses, food for grazing tadpoles, protection from predators, and open waters that warm quickly and

CONTACTS:

Lalena K. Amiotte | Aquatic Lands HCP Unit Supervisor | (360) 902-1152 | Lalena.Amiotte@dnr.wa.gov
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dry up periodically, thereby eliminating fish. Adult foraging habitat is generally associated with unmowed pastures, shallow marshes, or meadows.

Why are Northern leopard frogs included in the Aquatic Lands HCP?

The Aquatic Lands Habitat Conservation Plan (HCP) addresses 29 species of animals that depend on submerged or intertidal lands for either all or a significant portion of their life history. Specific threats that warrant protection of the northern leopard frog include:

- Changes in habitat structure.
- Increase in predation.
- Decline in water and sediment quality.
- Physical harm or harassment from covered activities.

The Aquatic Lands Habitat Conservation Plan

The Washington State Department of Natural Resources (DNR) is the steward of more than 2.6 million acres of state-owned aquatic lands beneath Washington's navigable lakes, rivers, marine waters, and estuaries. DNR sustainably manages these aquatic lands on behalf of the people of the state—to protect fish and wildlife and to provide opportunities for commerce, navigation, and public access.

The increased demand for the use of aquatic lands can be harmful to aquatic habitats and species. To encourage a balanced approach to managing and protecting these lands, DNR is developing an Aquatic Lands **Habitat Conservation Plan** (HCP). The HCP will provide a framework for managing the aquatic lands under DNR's stewardship to ensure the continued health of our state's marine and fresh waters and the species that inhabit them.

Learn more

For more information about DNR's Aquatic Lands HCP and the other species that are covered in the plan, visit: www.dnr.wa.gov/aquaticHCP.

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