CHEHALIS LEAD ENTITY PRESENTS

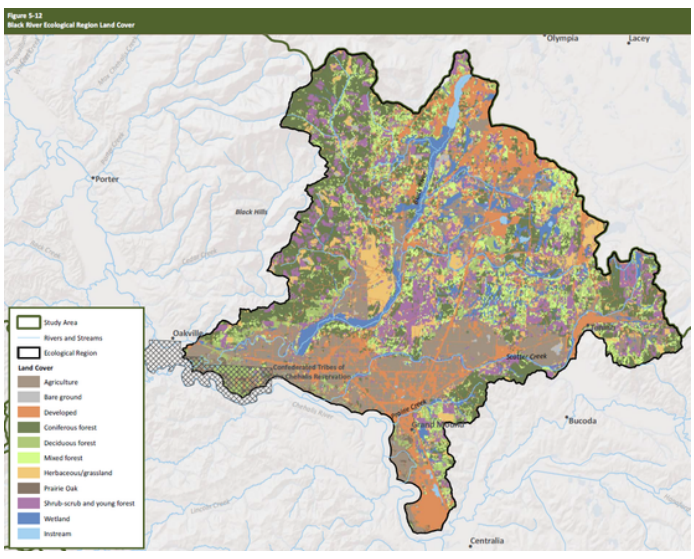
BLACK RIVER ECOLOGICAL REGION

AN AQUATIC SPECIES RESTORATION PLAN TRANSLATION

CLICK ON THE PICTURES AND LINKS FOR MORE INFORMATION

STATISTICS FOR THIS REGION

- This ecological region encompasses 200 square miles and represents approximately 7% of the overall Chehalis Watershed
- This highest point of this ecological region is Capitol Peak at 2,659 feet in the Capitol State Forest
- Average annual precipitation is 45 -75 inches
- 94% of this ecological region lies within Thurston County, 3% in Grays Harbor County, and 3% in Lewis County



Source: Chehalis Basin Strategy ASRP Phase 1, pg 140

CURRENT CONDITIONS

- Land cover is 22% coniferous forest, 16% developed. 15% agriculture, 14% scrub-shrub, 10% mixed forest, 7% deciduous forest, 7% grassland, and small percentages of other cover
- Water quality is impaired in multiple reaches, primarily for temperature, low dissolved oxygen, bacteria, and pH (Ecology 2018)
- It is estimated that over 50% of historical marsh habitats in both the Black River and Scatter Creek sub-basins have been lost or modified (Beechie 2018)
- Summer water temperatures are modeled to increase 2.7 - 4.5 degrees Fahrenheit by 2080 (Beechie 2018)

Black River Current Snapshot

Condition of Watershed Processes:
Hydrology –impaired
Floodplain connectivity – moderately impaired
Riparian condition – moderately impaired
Water quality – impaired

Restoration Potential: High

Protection Potential: Moderate

Geographic Spatial Units: Upper Black River, Lower Black River, Prairie Creek, and Scatter Creek

Salmon Use and Potential: Fall-run Chinook salmon, coho salmon, chum salmon, and steelhead

Source: Chehalis Basin Strategy ASRP Phase 1, pg 139

IMPORTANCE TO WILDLIFE

- The salmonid species present in this region include fall-run Chinook salmon, coho salmon, chum salmon, and steelhead
- Non-salmon indicator species include Western toad, coastal tailed frog, Oregon spotted frog, northern red-legged frog, North American beaver, Olympic mudminnow, largescale sucker, mountain whitefish, Pacific lamprey, riffle and reticulate sculpin, and speckled dace
- This region is the only known area in which the Oregon spotted frog occurs in the Chehalis Basin
- The bird indicator species present include great blue heron, Barrow's goldeneye, common goldeneye, and wood duck

Oregon Spotted Frog, Source: USGS Brome McCreary

LIMITING FACTORS

Salmon and other indicator species struggle with:

- High water temperatures
- Low flows
- Fish passage barriers
- Predation (non-native fish species and bullfrogs)
- Loss of floodplain habitat and beaver ponds

Invasive bullfrog, Rana catesbeiana, Source: Washington Invasive Species Council

- Sediment conditions (fine sediment accumulations)
- Low habitat diversity (lack of large wood, floodplain habitats, and spawning gravels)
- Channel instability (bed scour and sediment transport)

CREATED BY GRAYS HARBOR STREAM TEAM
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BLACK RIVER ECOLOGICAL REGION

ECOSYSTEM PROTECTIONS

- Protect Oregon spotted frog habitat (ponds and marshes)
- Protect areas with cool-water and groundwater inputs
- Prevent additional surface or groundwater withdrawals
- Protect wet prairie, floodplain, and marsh habitats

Oregon spotted frog habitat, Source: Chehalis Basin ASRP Phase 1. pg 143

RESTORATION REQUIRED

- Restore and manage Oregon Spotted frog habitat such as ponds and marshes
- Reduce or prevent surface or groundwater withdrawals that could decrease instream flows, including reconnecting diverted tributaries
- Restore riparian areas
- Install large wood structures and promote beaver ponds

Healthy Riparian Zone, Source: USDA Forest Service

OREGON SPOTTED FROG

- **Habitat and distribution**

The Oregon spotted frog survives the best in large wetland habitats with perennial water feeding them. They like shallow water habitats with floating native vegetation to feed on and hide under. They are distributed from British Columbia to Southern Oregon.

- **Description**

The Oregon Spotted frog is named after the black spots that cover their head, back, sides and legs. Young frogs are often brown with cream undersides and hints of red pigments. As these frogs age their black spots become larger and darker, their backs turn a reddish brick color and their undersides become darker red. They can range from 1.75 to 4 inches in length.

- **Life History**

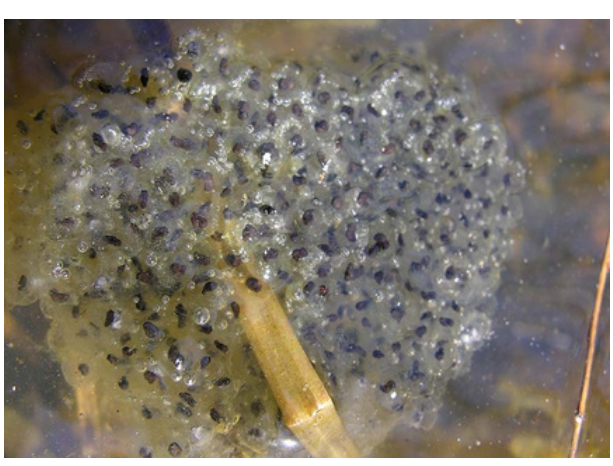
Oregon spotted frogs begin to breed at the age of three in mid-March. They lay their egg masses in temporary pools that are no deeper than 6 inches. Eggs hatch within three weeks and the tadpoles graze on plants, bacteria, algae, and detritus. Tadpoles then metamorphose into froglets during their first summer and begin feeding primarily on insects. During the winter they require habitat that is well oxygenated and does not freeze solid such as creeks, beaver complexes, riverine oxbows, lakes and ponds.

- **Reason for Decline**

There are many reasons for Oregon spotted frog decline but the most prominent are habitat loss and the introduction of invasive plants and exotic predators such as bullfrogs.

- **Conservation Measures**

Restoration is primarily focused on improving habitats and working to eliminate invasive plants and predators. Promoting beaver populations and activity is another form of restoration that increases wetland habitats for Oregon spotted frogs.



Oregon Spotted Frog egg mass, Source: https://americanconiferousforests.weebly.com/oregon-spotted-frog.html

Oregon Spotted Frog tadpoles , Source: William Leonard, https://americanconiferousforests.weebly.com/oregon-spotted-frog.html

Oregon Spotted Frog adult, Source: Brome McCreary, USGS

Source: https://www.fws.gov/oregonfwo/articles.cfm?id=149489458

CHECK OUT ADDITIONAL RESOURCES

- Chehalis Lead Entity: http://www.chehalisleadentity.org/
- Chehalis Basin Partnership: https://chehalisbasinpartnership.org/
- Chehalis Basin Strategy: https://chehalisbasinstrategy.com/asrp/

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