

Species Vulnerability in the Estuary and Watershed

DID YOU KNOW?
34 fish species were identified in a survey of the Navarro Estuary; steelhead was the species most commonly found. Other species included: top and surf smelt, sculpins, starry flounder, Pacific herring and threespine stickleback.

The Navarro River Estuary contains a diverse, rich mosaic of habitat types. As many as 55 special-status plant species and 22 special-status animal species may occur in the area. Two are coho salmon and steelhead trout, both listed as "threatened" under the Endangered Species Acts. These fish are sensitive to natural and human disturbances, including changes in ocean and climatic conditions, and habitat loss resulting from activities such as dam construction, logging, agriculture, and urban development. A variety of vulnerable plants, amphibians, mammals, and birds also live in or frequent the watershed and deserve our protection as well.

- Resource management actions in the watershed that can help these species thrive include:
- protecting, restoring, and properly managing habitat.
 - securing conservation easements through local land trusts or public agencies.
 - decreasing sediment loads in the river through proper forest management and organic / fish-friendly farming practices.
 - replacing culverts with bridges that eliminate barriers and allow channel restoration.
 - encouraging woody riparian vegetation along channel banks to provide shade and prevent increasing water temperatures.
 - discouraging conversion of natural habitat into vineyards or other developed lands.
 - controlling invasive exotic species.



Anadromous Fish

Anadromous fish hatch in fresh water, migrate to the ocean to mature, then return to freshwater to spawn the next generation.

Coho salmon

Oncorhynchus kisutch

- 24 to 28 inches in length and 7 to 11 pounds in weight, but may be larger, reaching 35 pounds.
- in ocean phase, silver sides with dark metallic blue or greenish backs; spawning phase show bright red sides, dark bellies, dark spots on back.
- can spawn only once.
- young feed on plankton and insects in freshwater; adults eat small fish in salt or brackish water.
- are a symbol representing life and sustenance for many indigenous peoples.

Steelhead trout

Oncorhynchus mykiss

- up to 45 inches long but usually much smaller; can weigh more than 50 pounds, but typically about 8 pounds.
- dark olive color shading to silvery-white on underside with speckled body and pink-red stripe on sides; more overall silvery in ocean waters.
- can spawn multiple times.
- diet is zooplankton for young; insects, mollusks, crustaceans, fish eggs and small fish for adults.



California red tree vole
Arborimus pomo

Nests in coniferous forests and feeds on needles.



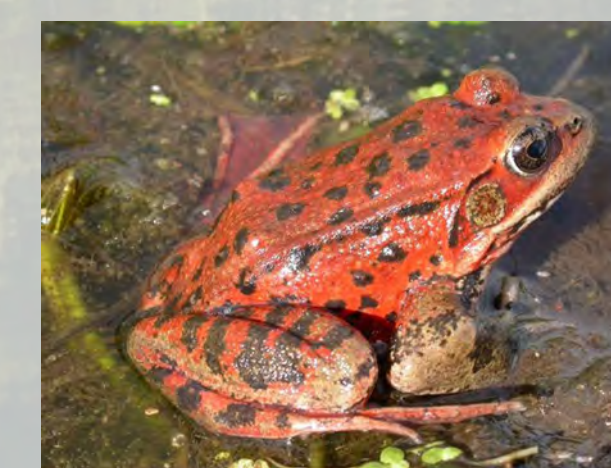
Northern spotted owl
Strix occidentalis caurina

Nests and forages in forests and woodlands with abundant prey of woodrats and small mammals.



Townsend's western big-eared bat
Corynorhinus townsendii

Roosts in caves, tree cavities, abandoned mines, and unused buildings; feeds largely on insects.



Northern redlegged frog
Rana aurora aurora

Found in freshwater ponds, streams, and marshlands; feeds on insects, crustaceans, worms, small fish, and other frogs.

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CHALLENGE

What species are vulnerable where you live and what can you do to help protect them?