

Feather River Watershed Biodiversity

The Feather River Watershed is one of the most biodiverse landscapes in the United States.

What is biodiversity?

Biodiversity is a simple measure of the numbers of different plants and animals that occur within a given geographic region.

E.O. Wilson (biologist): *Unless humanity learns a great deal more about global biodiversity and moves quickly to protect it, we will soon lose most of the species composing life on Earth. Only by committing half of the planet's surface to nature can we hope to save the immensity of life-forms that compose it. If present conditions persist likely only ¼ of the present species will survive by the end of this century.*¹

Why is biodiversity important?

- **Biodiversity** boosts ecosystem productivity where each species, no matter how small, all have an important role to play. Diverse systems are better able to adjust to changes, for example to changing climatic conditions, and are naturally more resilient than simple systems.
- **Free Services** provided by healthy biodiversity include more rapid recovery from unpredictable events, medicinal resources, recreation, agriculture and tourism. Example: One third of all our food—fruits and vegetables—would not exist without pollinators visiting flowers.

Threats to biodiversity that we have some control over are listed below. Feather River Land Trust is working to decrease the impact of all five.

- Habitat loss and degradation
- Invasive alien species
- Over-exploitation and unsustainable use
- Climate change
- Excessive nutrient load and other forms of pollution

Why is the Feather River Watershed (FRW) so important for biodiversity in the United States?

- Biological diversity in California's Sierra Nevada is among the highest in the United States²
- The FRW represents some of the greatest biodiversity (plants and animals) in the Sierra Nevada and California in proportion to its land area. The Feather River Watershed is home to 38 special status species including the largest population of Willow Flycatchers, an endangered species.

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- The FRW represents greater biodiversity (plants and animals) than Yellowstone National Park and Yosemite National Park.

Info	Feather River Watershed	Yellowstone National Park	Yosemite National Park
Size (acres)	2.3 million ac	2.2 million ac	800,000 ac
Bird species (observed at least once)	325 spp.	330 spp.	262 spp.
Nesting Bird species	175 spp.	148 spp.	140 spp.
Mammal species	88 spp.	67 spp.	85 spp.
Reptile species	22 spp.	6 spp.	20 spp.
Amphibian species	17 spp.	4 spp.	15 spp.
Plant species (including varieties)	2,200	1,200	1,500

What makes the Feather River Watershed so biodiverse?

- The proportion of the FRW that is comprised of meadows is among the highest in the Sierra Nevada, as it contains a number of very large meadow complexes.²
- Sierra Valley is the largest wetland in the Sierra Nevada.
- Sierra meadows and wetlands are biodiversity hotspots for the animal species of California, particularly birds and amphibians, but they represent a small percentage of the Sierra Nevada landscape.

How is FRLT conserving its biodiversity?

- FRLT's conservation focus is on the wetlands and meadows of the Feather River Watershed which are predominately in private ownership (approximately 80% in private ownership).
- By 2021, FRLT will have conserved approximately 50,000 acres of wet meadows/wetland/riparian habitat which includes 30,000 acres in the next five year.
- On land owned by FRLT work is in progress to reduce invasive species.
- On fee title and conservation easements sustainable grazing practices will help protect and restore meadow and wetland ecosystem

1 (HALF EARTH, OUR PLANET'S FIGHT FOR LIFE, 2016)

2 (AVIAN MONITORING OF NORTHERN SIERRA MEADOWS, 2/2015, BURNETT AND CAMPOS, POINT BLUE CONSERVATION SCIENCE)