Plan Components that support Restoration and Conservation of Aquatic Species

- ❑ **Desired Conditions for Watershed Function, Riparian and Aquatic Habitats and Species Diversity**
- ❑ **Riparian Management Areas**
- ❑ **Suitability Determinations for Management Activities in various Management Areas**
- ❑ **Key and Priority Watersheds (see map)**
- ❑ **Standards and Guidelines**
- ❑ **Objectives for Active Restoration in Priority Watersheds**
- ❑ **Implementation and Effectiveness Monitoring**

Focal Species

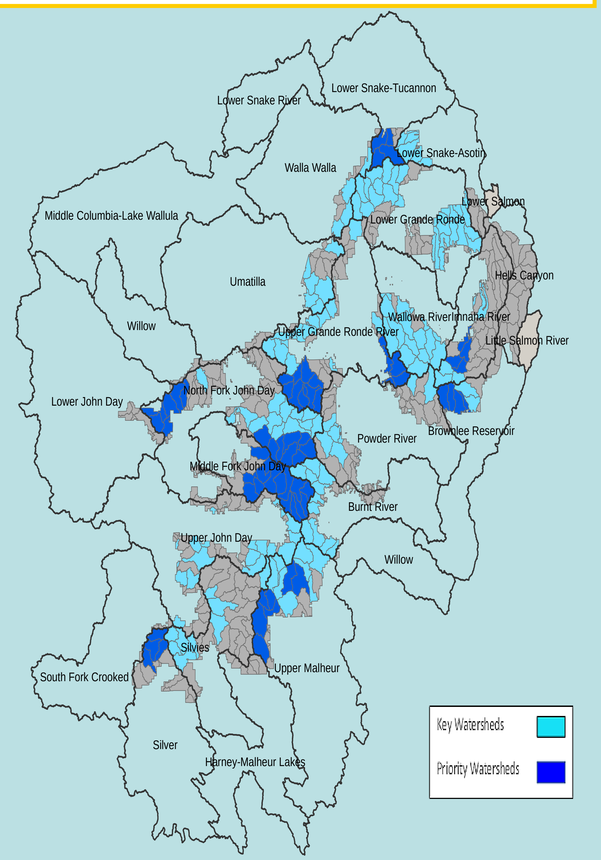
Focal species serve an umbrella function in terms of encompassing habitat needs for other species, being sensitive to changes likely to occur in an area, and otherwise serving as an indicator of ecological sustainability for its habitat group. Focal species represent the full array of potential responses to management activities and provide the coarse filter analysis of habitat and ecosystem health to aide in development of management direction for forest plan revision.

Blue Mountains National Forest Plan Revision— Aquatic Species and Habitats

The Preferred Alternative…

- Would contribute to recovery of aquatic species that are listed as Threatened under the Endangered Species Act, by protecting and restoring riparian and aquatic habitats.
- Would maintain other aquatic species of conservation concern, by protecting and restoring riparian and aquatic habitats for aquatic focal species.
- Would achieve desired conditions for aquatic species and their habits in two complementary ways:
  - By continuing protective elements from earlier aquatic conservation strategies, and
  - By adding a new emphasis on restoration for the longterm benefit of riparian and aquatic habitats and species.
- Protections provided by the Preferred Alternative include:
  - Riparian Management Areas as wide or wider than ones previously used,
  - Grazing Guidelines that reduce risk to aquatic species and habitats, and support ongoing habitat recovery for Threatened species.
  - Standards for management of **Key watersheds** to ensure new road construction would maintain or improve overall watershed and hydrologic function.
- Restoration Objectives for **Priority watersheds** would:
  - Restore upland vegetation conditions in priority watersheds
  - Replace or remove culverts that are problems for fish passage.
  - Restore riparian vegetation and water tables.
  - Reduce existing road impacts to streams and water quality
  - Increase use of wildland fire

Adults preparing to spawn in high-quality spawning and rearing habitat.



Juvenile Chinook salmon

Photo credits: U.S. Fish and Wildlife Service

Species Viability

The 1982 Planning Rule requires that Forest Plans ensure species viability:

"In order to insure [sic] that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area."

CFR 219.19

How focal species were used to determine species viability in the Revised Forest Plan:

Effects to population viability for each focal species were assessed, in accordance with the 1982 Planning Rule.

Headwater streams are increasingly recognized as valuable parts of the aquatic ecosystem and deserve management that maintains their role in providing clean cool water and habitat for aquatic species

Factors considered in the analysis

- **Spawning and Rearing Habitat**
- **Adult Migration Habitat**
- **Habitat Quantity**
  - Evaluated at multiple scales
  - Varies by focal species and by subbasin
- **Habitat Quality**
  - Evaluated at multiple scales
  - Considered both riparian and aquatic habitat conditions
- **Habitat Connectivity**
  - Considered at multiple scales
  - Considered presence and location of barriers

Adaptation for Climate Change

- ❑ Management that supports strong local populations and high-quality aquatic habitats in key watersheds will contribute to sustainability and resiliency of aquatic species in the face of climate change.

- ❑ Active restoration to improve habitat connectivity, will increase mobility for juveniles and adults so they can continue to access and use high-quality habitats

❑ **Aquatic Focal Species**

- Are aquatic species whose spawning and rearing habitats may be affected by forest management..
- Were selected to represent the diversity of aquatic species and habitats within the planning area.
- Four focal species were selected: spring Chinook salmon, steelhead, bull trout, and redband trout**.**
- Three of these focal species are currently listed partially or entirely as Threatened under the Endangered Species Act**.**

❑ **Aquatic Species Viability**

- Viability current condition analyses considered population conditions, habitat conditions, habitat quantity and habitat connectivity at multiple scales, for each focal species.
- Local population (subwatershed-scale) status assessed for each focal species using local knowledge, professional judgment.
- Viability effects analysis done for individual focal species populations, consistent with spatially-defined populations targeted for conservation and recovery by state and federal agencies.
- Current population viability and habitat conditions vary by subbasin and focal species.
- Effects modeling considered the degree of protections provided by land allocations and suitabilities for dominant land uses (timber production, livestock grazing, motorized access) by subbasin, for each species.
- Active restoration in priority watersheds will contribute to viability of one or more focal species,; benefits depend on which focal species are present.

❑ **Aquatic Species Diversity**

- Aquatic species diversity is sustained by:
- well-connected networks of high-quality, diverse aquatic habitats throughout each subbasin.
- continued presence of all focal species in subbasins currently occupied by each species.
- Each of the focal species consists of the variety of aquatic species by the variety and sustained or restored viability of the four focal species .
- The probability that forestwide aquatic species diversity will sustained, increases as habitat availability and habitat quality for aquatic species is maintained or restored on NFS lands and contribute to recovery of listed fish species.