OWEB Focused Investment Partnership Priority
AQUATIC HABITAT FOR NATIVE FISH SPECIES

Summary Statement of Priority

The OWEB Board will consider proposals for investment in initiatives that address habitat conservation and restoration needs for **inland aquatic habitat for native fish species** that are identified in **a federal recovery, state conservation, or tribal plan**. Habitat conservation and restoration must achieve ecological outcomes over time at the landscape scale[1].

OWEB's Focused Investment Priority for Inland Aquatic Habitat for Native Fish Species guides voluntary actions that address limiting factors related to the protection and restoration of the watershed functions and processes in this habitat type. **Initiatives under this Priority will identify the primary limiting factors outlined in associated federal recovery, state conservation, or tribal plans that the initiative is aiming to address, and will be guided by the habitat and population objectives and conservation approaches set forth in these plans** (see Table 1 below for a list of recovery and conservation plans).

Focal areas for this Priority (see map below) are defined as those native fish habitats in Oregon that are identified as priorities in associated federal recovery, state conservation, or tribal plans. In select cases, habitat needs for threatened, endangered, or sensitive species that do not yet have an associated plan were also considered in assigning focal area priority designations. In some cases, priority designations could be drawn directly from federal recovery, state conservation, or tribal plans, while in other cases professional judgement was needed to assign priorities based on guidance in the plans. Professional judgement included designation and review of priority watersheds by ODFW district biologists, research staff, Implementation Coordinators, and Conservation and Recovery Program staff. Priority designations reflect their knowledge of plans, implementation needs, and watershed conditions in each of the planning areas, and refine where focused investment is most likely to achieve conservation goals.

For the purposes of this Priority, OWEB Focused Investment Partnership investments will be focused in areas shown in green and yellow on the Aquatic Habitat for Native Fish Species map. Within these identified areas, voluntary restoration and conservation actions are especially encouraged in locations where investments will also address identified non-point source water-quality concerns.

Background

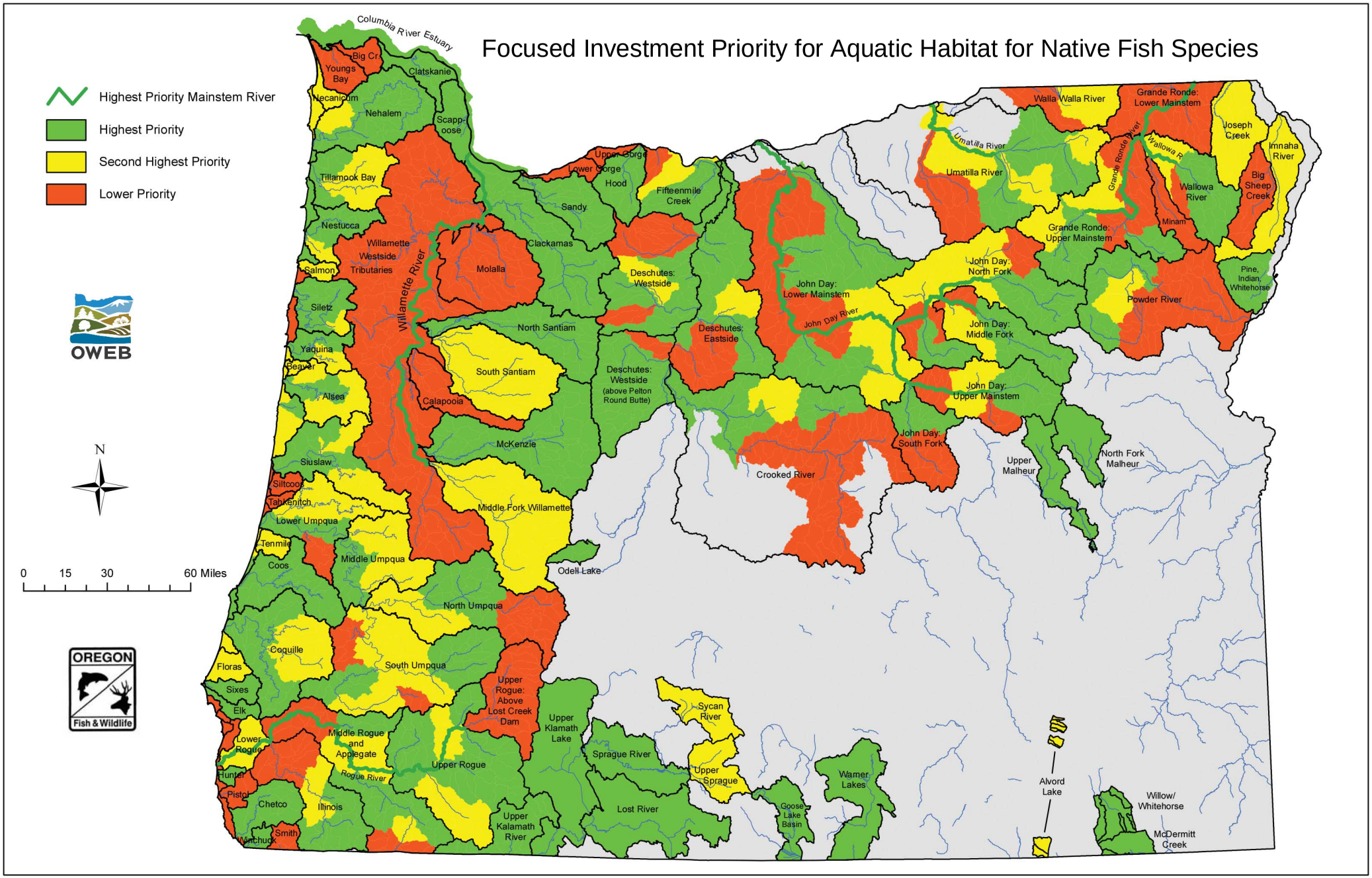
Where it occurs

As defined here, inland aquatic habitats include rivers, streams, floodplains, lakes and tidally influenced waters. These habitats typically contain water year-round. These areas occur around the state and provide essential habitat to many at-risk species, including important spawning and rearing habitat for salmonids.

Oregon's inland aquatic habitats are highly diverse. For example, as described in the Oregon Conservation Strategy, the headwaters of many of Oregon's rivers are located high in the state's various mountainous areas. In contrast, the eastern half of the state contains several playa lakes, formed when runoff from precipitation and mountain snowpack flows into low-lying areas, then evaporates and leaves mineral deposits.

[1] The landscape scale refers to the scale at which environmental, economic, and social factors intersect.

Focused Investment Priority for Aquatic Habitat for Native Fish Species



Note: The GIS data used to create this map comes from both State and Federal conservation and recovery plans. Priorities are based on information provided in those plans or professional judgement regarding the potential contribution of populations, watersheds (10-digit HUCs), or mainstem habitats to plan goals.

Indicator species and/or species of interest supported by these habitats

Several native fish species have been listed or are candidates for listing under the federal Endangered Species Act (ESA) or have been identified as threatened, endangered, or sensitive by the state of Oregon. These species include, but are not limited to: Chinook salmon, chum salmon, steelhead, bull trout, and several species of sucker, lamprey, and chub. Some populations of these species that are not currently identified as threatened, endangered, or sensitive are also a focus of this Priority due to the substantial ecological, economic, and cultural benefits they provide, including cultural significance to Oregon tribes. Native fish species to be addressed under this Focused Investment Priority are identified, by geography, in Table 1 below.

In certain instances, the limiting factors and habitat needs of the aforementioned native fish species overlap with coastal Coho during at least a portion of their life-cycle. However, because the overlap is not complete, this Priority focuses on the inland aquatic habitat needs for a broader collection of native fish species. Pacific lamprey and other native lamprey species are also included in this Priority, and there are no geographic limits for proposed conservation actions targeting lamprey. Proposed FIP initiatives that include lamprey as a focal species will be assessed independently of the associated Aquatic Habitat for Native Fish Species map. The approaches described above ensure that primary limiting factors can be addressed for a range of native fish species that are of significance to the state.

Why it is significant to the state

Inland aquatic habitat supports an incredible number of Oregon's native fish and wildlife species. The extent of biodiversity in an aquatic habitat is a reflection of the native fish, plants, and other aquatic species present there. All require water, and high-quality aquatic systems provide essential habitat to many at-risk species, including important spawning and rearing habitat for salmonids and other native fishes.

Sustaining aquatic biodiversity is essential to the health of our environment and to the quality of human life. Healthy aquatic ecosystems are imperative for continuing to contribute to Oregon's communities and economy, including fisheries and recreation. Because native fish communities are central to the structure, function, and process within aquatic habitats, they serve as ideal indicator species of the overall health of these habitats.

An excellent example of a successful focused investment effort is the de-listed Oregon chub. This native fish species, which is endemic to the Willamette Valley, is the first fish species to be removed from the federal ESA due to species recovery. Since 1993, significant conservation efforts, partnerships, and funding have addressed Oregon chub habitat, which contributed to the recovery of the fish and ESA de-listing in March, 2015.

Key limiting factors and/or threats, with a focus on ecosystem function and process

Proposals must address primary limiting factors for aquatic habitats, as identified in associated federal recovery, state conservation, or tribal plans, including:

- Impaired water quality (e.g., temperature and sedimentation), including those factors associated with the loss of riparian and floodplain vegetation;
- Reduced water quantity (e.g., low streamflow and altered hydrology);
- Loss of habitat complexity (e.g., high-quality instream structure and spawning gravel, floodplain connectivity, connected off-channel habitat, presence of pools, and presence of large woody debris);

- Loss of habitat connectivity, including: floodplain connectivity; access to cold-water refugia; and fish-passage barriers that are identified as primary limiting factors for native fish species and as noted by Oregon Department of Fish and Wildlife's statewide fish passage priority list; and
- Spread of invasive species.

Investments for this Priority will focus on addressing primary limiting factors, as described in the plans referenced below in Table 1, with actions such as: 1) in mainstem rivers, reconnecting and restoring floodplain, riparian, side-channel, and tidal habitat; and 2) in tributaries, restoring whole watersheds to address such limiting factors as loss of instream habitat complexity and degradation of riparian areas.

Reference plans

See Table 1 below for species-specific conservation and recovery plans to be addressed under this Priority.

In addition to these plans, Oregon's Native Fish Conservation Policy (NFCP), the state policy for managing native fish, provides guidance to support the implementation of the Oregon Plan for Salmon and Watersheds and Oregon Conservation Strategy. Conservation and recovery plans developed under the NFCP by Oregon Department of Fish and Wildlife (ODFW) and/or in conjunction with federal agencies detail how Oregon proposes to recover ESA-listed native fish species. ODFW has also developed, or is in the process of developing, conservation plans for native fish species that aren't listed under the ESA. Oregon Tribes may also have native fish species plans guiding conservation efforts that can be referenced in developing FIP initiatives under this Priority. All of the plans noted here focus on maintaining sustainable native fish populations that contribute to their ecosystems and provide a variety of recreational, commercial, cultural, and aesthetic benefits.

These plans identify key limiting factors for specific fish species, geographies in which habitat for these species occur, and priority actions that will address limiting factors. While these plans have a species focus, addressing the limiting factors and meeting the goals of each plan supports native fish communities and the ecosystem function of aquatic habitats more generally. Thus, achieving the desired habitat and population objectives within these plans will provide significant ecological, economic and cultural benefits for all Oregonians.

Table 1. Conservation and Recovery Plans for Native Fish Species

USFWS = U.S. Fish and Wildlife Service
NMFS = NOAA Fisheries
ODFW = Oregon Department of Fish and Wildlife

Conservation and Recovery Plans	Native Fish Species	Associated Basin(s)
USFWS Recovery Plan for the Threatened and Rare Native Fishes of the Warner Basin and Alkali Sub-basin (1998)	Warner Sucker, Hutton Tui Chub, Foskett Speckled Dace *Co-benefit species: Warner Valley Redband Trout*	Closed Lakes
USFWS Recovery Plan for the Lahontan Cutthroat Trout (1995)	Lahontan Cutthroat Trout	Closed Lakes
USFWS Recovery Plan for the Coterminous United States Population of Bull Trout (2015)	Bull Trout *Co-benefit species: Redband Trout*	Deschutes, John Day, Upper Klamath, Lower Columbia, Willamette, Grande Ronde
USFWS Revised Recovery Plan for the Lost River Sucker and Shortnose Sucker (2013)	Lost River Sucker, Shortnose Sucker	Upper Klamath
USFWS Action Plan for Recovery of the Modoc Sucker (1983)	Modoc Sucker *Co-benefit species: Goose Lake Sucker*	Goose Lake
NMFS/ODFW Conservation & Recovery Plan for Oregon Steelhead Populations in the Middle Columbia River Steelhead DPS (2010)	Steelhead *Co-benefit species: Chinook Salmon, Redband Trout*	Deschutes, John Day, Umatilla
NMFS ESA Recovery Plan for Northeast Oregon Snake River Spring and Summer Chinook Salmon and Snake River Steelhead Populations	Spring Chinook Salmon, Steelhead *Co-benefit species: Redband Trout*	Grande Ronde
ODFW Lower Columbia River Conservation and Recovery Plan for Oregon Populations of Salmon and Steelhead (2010)	Spring and Fall Chinook Salmon, Chum Salmon, Coho Salmon, Summer and Winter Steelhead *Co-benefit species: Redband Trout*	Lower Columbia River
NMFS/ODFW Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead (2011)	Spring Chinook Salmon, Steelhead	Willamette
ODFW Coastal Multi-Species Conservation and Management Plan (2014) **NOTE:** this plan does not assess or address coastal coho, thus differentiating this priority from the Focused Investment Priority for Oregon Coastal Coho Habitat and Populations	Chinook salmon, Chum Salmon Steelhead, Cutthroat Trout	Coastal watersheds from Cape Blanco to the Columbia River (including Umpqua, Tillamook, many others)
ODFW Rogue Spring Chinook Salmon Conservation Plan (2007)	Spring Chinook Salmon	Rogue
ODFW Conservation Plan for Fall Chinook Salmon in the Rogue Species Management Unit (2013)	Fall Chinook Salmon	Rogue, coastal watersheds south of Cape Blanco