

Oregon Department of State Lands

Fact Sheet

Essential Indigenous Anadromous Salmonid Habitat

October 2014

The Reason the Department of State Lands Designates Essential Indigenous Salmonid Habitat

In 1967, the legislature established the Oregon Removal-Fill Law to address a concern about the effects of gravel removal on fish spawning areas. The law only required a permit from the Oregon Department of State Lands (DSL) for projects greater than 50 cubic yards of removal or fill within waters of the state.

The 1993 Legislature recognized that many salmon stocks (chum, sockeye, Chinook and Coho Salmon, and steelhead and cutthroat trout, all members of the family of Salmonidae) were in decline. State or federal governments also had listed these salmonids as either sensitive, threatened or endangered, and had found that unregulated small projects (less than 50 cubic yards) may have adverse effects on salmonid habitat.

Due to this concern, Senate Bill 81 was enacted in 1993. This legislation gave DSL the authority to require a permit for any fill or removal in areas designated "*essential indigenous anadromous salmonid habitat*" (ESH) for anadromous salmonid populations listed as *threatened* or *endangered* by the federal government or *sensitive* by the Oregon Department of Fish and Wildlife (ODFW). It eliminated the 50 cubic yard exemption for ESH waters,

The bill defined "indigenous anadromous salmonid" and "essential indigenous anadromous salmonid habitat" and required DSL to develop administrative rules to implement the new provisions. DSL consulted with ODFW on how it should map the occurrence of spawning and rearing areas of those species, and in 1994, the two agencies entered into an interagency agreement (IAA) to address the requirements of SB 81.

As outlined in the IAA, DSL undertook a study on the relationship between the removal of material from streams and stream health for salmonid habitat. That study was published in two volumes by the Oregon Water Resources Research Institute, Oregon State University, March 1995. The study's conclusions and recommendations have informed the Department in implementing the ESH program. The study is available on-line:

<http://andrewsforest.oregonstate.edu/pubs/pdf/pub2207.pdf>

Salmonids are Very Sensitive to Disturbance

Here is what we know: The population of many salmonid species along the Pacific Coast, including Oregon's coast and rivers, is very low compared to historic numbers. For example, since the turn of the 20th century, there has been a 90 percent reduction in wild Coho numbers. We also know that it is important to maintain fresh-water habitat and survival rates of salmonid populations to buffer periods of decreased ocean survival. Even if a fish population is lost from a stream during periods of low population numbers, fish can re-colonize the stream from nearby fish-bearing areas that are maintained as suitable habitat.

Even small amounts of stream disturbance can have a significant adverse effect on these populations because these species are widely distributed throughout the watershed. For example, chum, chinook, Coho, steelhead and cutthroat usually occupy progressively higher reaches of stream in the watershed. Thus, their habitat needs are additive and spawning and rearing habitat for all of these species, collectively, covers an extensive amount of stream miles in order to support their habitat requirements.

Extent of ESH

Originally, the legislature limited the extent of habitat that DSL could designate to no more than 20 percent of a waterway. 1997's Senate Bill 343 eliminated the 20 percent limitation on essential salmonid habitat. In 1999, the legislature asked how much habitat should be designated "essential" and requested that DSL further define the terms "essential," "spawning" and "rearing" so DSL convened a Technical Advisory Committee (TAC). Based upon the recommendations of ODFW and the TAC, all habitat for spawning (i.e. depositing and fertilizing eggs and gravel emergence) and rearing (i.e. areas where juvenile fish develop and are used for feeding, shelter and growth) for all listed species were proposed for designation as "essential" habitat.

It is important to note that even artificially manipulated streams and ditches can and do provide essential habitat. When fish are moving, they may pass through or occupy ditches and channelized streams for rearing and migration. They are most likely to use these types of corridors during certain times of the year. Water temperature must be low enough (55-65 degrees F), and water quality must be high enough, to support their physiological needs.

Applicable Statutes and Rules Pertaining to ESH

ORS 196.810 establishes the policy of the State of Oregon to protect ESH. As part of this policy, DSL consults with ODFW and identifies ESH consistent with statute

and rule (see below)¹. ORS 196.810 defines "indigenous anadromous salmonid" as chum, sockeye, Chinook and Coho salmon, steelhead and anadromous cutthroat trout, which are members of the family Salmonidae and are listed as state sensitive², or federally listed as threatened or endangered. Salmonids that are not anadromous (populations that do not migrate from salt water to fresh water to spawn), or not listed under one of these categories, do not qualify for ESH status. Non-salmonid species (e.g., lamprey), are also not included in the designation.

According to OAR 141-102-0020:

(1) "Essential" means those portions of a stream reach that fill all or part of the basic or indispensable spawning or rearing needs of indigenous anadromous salmonids and are those areas necessary to prevent the depletion of indigenous anadromous salmonids. Such areas include "spawning habitat" and "rearing habitat" as defined below under sections (3) and (4) of this rule (Oregon Fish Habitat Distribution Data Standard, Version 1.0, March 2008:

<http://gis.oregon.gov/DAS/EISPD/GEO/docs/bioscience/OregonFishHabitatDistributionDataStandardv1.pdf>).

(2) "Indigenous anadromous salmonid" means chum, sockeye, Chinook and Coho Salmon, and steelhead and cutthroat trout, that are members of the family of Salmonidae and are listed as sensitive, threatened or endangered by a state or federal authority.

(3) "Spawning Habitat" " includes areas where eggs are deposited and fertilized. For some species, including salmonids, this also includes areas where gravel emergence occurs and where at least some juvenile development occurs.

(4) "Rearing Habitat" includes areas outside primary spawning habitats where juvenile fish take up residence during some stage of juvenile development and use the area for feeding, shelter, and growth. Some migration also occurs as juvenile and adult fish move between the ocean and spawning grounds.

Scientific Basis for the ESH Designation and Data Source

The ESH designations are based upon ODFW's Fish Habitat Distribution data, which existed since 1994. ODFW hosts this data, which serves as the authoritative source of information within Oregon. The ODFW Natural Resource Information Management Program (NRIMP) posts the available fish habitat distribution data for public use on the ODFW website, including the source information or metadata³. The ODFW Fish Habitat Distribution Data Update Protocol (Update Protocol)⁴ and the Oregon Fish Habitat Distribution Data Standard (Standard)⁵ are publicly

¹ http://arcweb.sos.state.or.us/pages/rules/oars_100/oar_141/141_102.html

² http://www.dfw.state.or.us/wildlife/diversity/species/sensitive_species.asp

³ <https://nrimp.dfw.state.or.us/nrimp/default.aspx?pn=fishdistdata>

⁴ <https://nrimp.dfw.state.or.us/nrimp/information/docs/fishreports/distributionupdateprotocol200509.pdf>

⁵ <http://www.oregon.gov/DAS/CIO/GEO/standards/docs/oregonfishhabitatdistributiondatastandardv2.pdf>

available on ODFW's website. They provide a consistent framework and transparent set of procedures for establishing and modifying fish distribution data in Oregon.

2014 ESH Map Updates

This update resulted in the addition of new stream reaches and deletion of others. There was a net increase of 500 stream miles (or roughly 3percent) over the current 2010 ESH designation.

DSL Coordinates with ODFW during ESH Rulemaking

ODFW sends a data request to each of its Watershed Districts before DSL initiates rulemaking. ODFW provides DSL with its most up-to-date mapped fish distribution data, including the spawning, rearing and migration habitat for all of the currently listed anadromous salmonids in Oregon. Since the ODFW data includes additional features that DSL does not need for ESH (e.g., migratory corridors), DSL extracts only the GIS data features it needs (e.g., spawning and rearing).

Note: the Standard contains an attribute to identify ESH features, and ODFW populates this attribute as the data are developed or modified.

Website for Viewing ESH Maps

<http://www.oregon.gov/dsl/Pages/Rulemaking-Activity.aspx>

Permitting Requirements in ESH

An ESH designation does not prohibit permits for removal or fill activities. For waterways not designated as ESH, up to 50 cubic yards of material may be removed or filled before a permit is needed. If your property has a designated ESH stream segment, or any adjacent off-channel rearing or high-flow refugia habitat with a permanent or seasonal surface water connection to the stream, it means the 50 CY exemption does not apply to regulated activities.

Certain activities are exempt. Agricultural exemptions are outlined in OAR 141-085-0535. Exemptions for certain voluntary habitat restoration activities are specified in 085-0534, and exemptions that apply program-wide for certain activities and structures are specified in 085-0530.

Process for Proposing Modifications to ESH

Proposed modifications to the Fish Habitat Distribution data are evaluated by ODFW based on the completeness of the existing dataset, the strength of supporting evidence, and the agency/entity providing the data. ODFW follows the rules as outlined in the Standard to update these data in a consistent manner, depending on the data provider (e.g. ODFW District Biologist, university researchers, watershed

council coordinators, etc.). For example, if a watershed council coordinator or non-biologist submitted fish distribution data, the distribution dataset would still need a “sign-off” by ODFW biologists. ODFW coordinates with DSL to address public comments received during ESH rulemaking.

The Standard is referenced in the ESH rules (OAR 141-102-0020(1)). However, the Standard does not stand entirely on its own in terms of providing all the necessary information for implementing a change to the Oregon Fish Habitat Distribution Database. The Protocol is an essential supplementary document for outlining the steps required to implement changes, such as addition or deletion of fish distribution. To propose a change to ESH through DSL rulemaking, the following information is required in the public comment. Note: As much detail as possible should be provided to accurately identify the location and the species:

1. Location Information (stream, river mile, etc.)
2. Species information (listed fish)
3. Habitat use information (spawning or rearing)
4. Observation records/habitat surveys (please submit any notes, maps, photos or data)

To propose a change to the fish habitat distribution data, contact ODFW for specific information requirements.

Key Contacts

Eric D. Metz, P.W.S.
Planning and Policy Manager
Aquatic Resource Management Program
Department of State Lands
503-986-5266/eric.metz@state.or.us

Joy Vaughan
Land Use and Waterway Alterations Coordinator
Oregon Department of Fish and Wildlife
503-947-6089/joy.r.vaughan@state.or.us