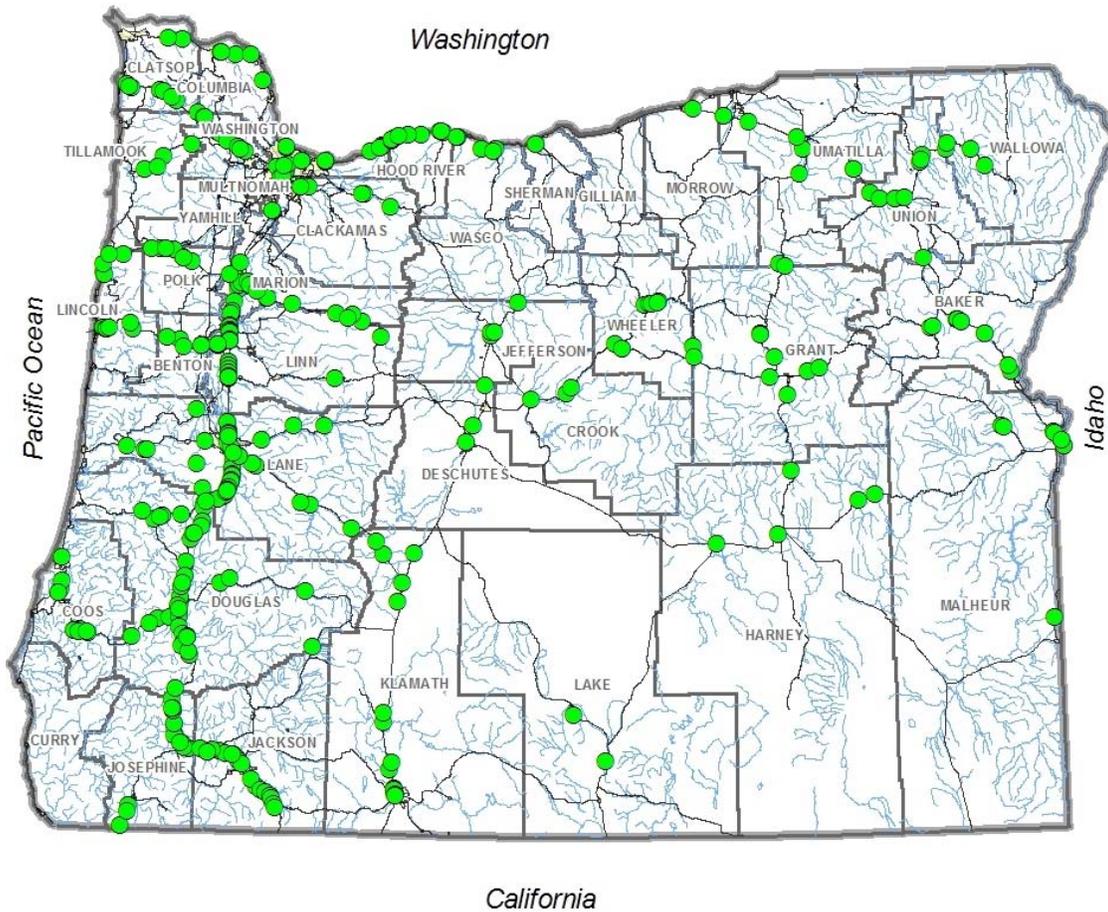


**Biological Assessment**  
**ODOT OTIA III**  
**Statewide Bridge Delivery Program**  
**March 1, 2004**



Prepared by:  
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## Glossary

**Action area** – All areas affected directly or indirectly by the Federal agency action and not merely the immediate area involved in the action. [50 CFR §402.02]

**Anadromous fish** – Fish such as lamprey, sturgeon, shad, Pacific salmon, steelhead, and striped bass that spawn in freshwater streams and migrate to marine environments for adult growth.

**Affected habitat** – Areas of land or water temporarily or permanently altered as a result of construction activities.

**Alevin** – In fisheries terminology, a larval salmonid that has hatched but has not fully absorbed its yolk sac, and generally has not yet emerged from the spawning gravel. Absorption of the yolk sac, the alevin's initial energy source, occurs as the larva develops its mouth, digestive tract, and excretory organs and otherwise prepares to feed on natural prey.

**Alkaline meadows** – Alkaline meadows generally occur in arid and semi-arid regions where rainfall is inadequate to leach naturally occurring salts from valley basin soils, allowing them to accumulate.

**Anthropogenic factors** – Relating to, or resulting from the influence of, human activity.

**Area of Potential Impact (API)** – The area within a 2,000-foot buffer around the bridge.

**Bankfull elevation** – The bank height inundated by a 1.5 to 2-year average recurrence interval and may be estimated by morphological features such as average bank height, scour lines, and vegetation limits. Bankfull elevation may be interchanged with Ordinary High Water (OHW).

**Basal attachment scar** – The mark on the stem of a plant that remains after a leaf has dropped from the plant.

**Baseline condition** – The past and present effects of all Federal, State, or private actions and other human activities in an action area; the anticipated effect of all proposed Federal projects in an action area that have already undergone formal or early section 7 consultation; and the effect of State or private actions that are contemporaneous with the consultation process.

**Batched consultation** – A section 7 streamlining process. Under this approach, the action agencies group, or batch, a series of similar proposed projects, and the Services produce a single review document that is appended to the programmatic consultation. The design of each proposed project is to be sufficiently developed to accurately assess its potential effects and anticipated take, if any. Such analyses often will be completed by the action agency as part of the environmental review processes that it completes for all

projects. Thus, effects of each proposed treatment project will be evaluated both individually and collectively within one document.

**Bioswale** – Shallow, open channels typically planted with grasses, which function to reduce discharge water velocity, trap sediments, and uptake nutrients.

**Conference determinations** – A determination regarding the likely effect of a Federal agency action on proposed species, candidate species, or proposed critical habitat.

**Conservation** – The terms “conserve,” “conserving” and “conservation” mean to use, and the use of, all methods and procedures that are necessary to bring any endangered or threatened species to the point at which measures provided pursuant to the ESA are no longer necessary.

**Conservation easements** – A restriction placed on a parcel of property to protect resources associated with the parcel. The easement is either voluntarily sold or donated by the landowner, and constitutes a legally binding agreement prohibiting certain types of development (residential or commercial) from taking place on the land.

**Conservation measures** – Actions to benefit or promote the recovery of listed species, included as an integral part of the proposed action. Conservation measures are implemented to minimize, or compensate for, project effects on the species. These may include actions taken prior to the initiation of consultation, or actions the Federal agency has committed to complete in a biological assessment or similar document.

**Contiguous populations** – Groups of a species for which habitat is broadly distributed over the species’ range, with opportunity for continuous or nearly continuous occupation by the species; little limitation on population interaction occurs.

**Contraction scour pools** – Pools caused by a bridge structure that may locally reduce the frequency and/or quality of current pool habitat.

**Corvids** – Members of the Corvidae family of birds distributed worldwide, including crows, jays, and magpies.

**Critical habitat** – Critical habitat for listed species consists of: (1) the specific areas within the geographical area occupied by the species (at the time it is listed in accordance with the provisions of section 4 of the ESA) on which are found those physical or biological features (PCE) (a) that are essential to the conservation of the species and (b) that may require special management consideration or protection; and (2) specific areas outside the geographical area occupied by the species (at the time it is listed in accordance with the provisions of section 4 of the ESA) upon a determination by the Secretary that such areas are essential for the conservation of the species.

**Designated critical habitat** – Applies to threatened or endangered species and means: (1) the specific areas within the geographical area occupied by the species, at the time

that it is listed (in accordance with the provisions of section 4 of the Endangered Species Act), on which are found those physical or biological features (a) that are essential to the conservation of the species and (b) that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed (in accordance with the provisions of section 4 of the ESA), upon a determination by the Secretary that such areas are essential for the conservation of the species. Critical habitat may be established for those species now listed as threatened or endangered for which no critical habitat has heretofore been established. Except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species.

**Design-build contractor** – A contractor responsible for both the design and construction of a project.

**Determination of Effect** – The conclusions of total effect on a Federally listed animal or plant species, from the sum of all activities associated with a proposed action (e.g., “may affect”, “not likely to adversely affect”).

**Diameter at breast height (dbh)** –The width of a plant stem (e.g., tree bole) as measured at 4.5 feet above the ground surface. DBH is measured from the uphill side of the plant.

**Dispersers** – Individual animals that have left an originally occupied area.

**Distinct Population Segment** – “Population,” or “distinct population segment,” are terms used for listing, de-listing, and reclassification purposes to describe a discrete stock that may be added or deleted from the list of endangered and threatened species. The use of the term “distinct population segment” will be consistent with the Services’ population policy.

**Disturbance** – Any activity with the potential to adversely affect the behavior or survival of a Federally listed plant or animal species.

**Ecoregion** – Relatively uniform geographic areas that respond in a similar manner to physical events and activities (i.e., rainfall, fire, land use, etc.). Ecoregions are based on similarity of important environmental variables such as climate, geology, physiography, vegetation, soils, land use, wildlife, and hydrology.

**Edaphic features** – Pertaining to soil or to the physical, chemical, and biological properties of the soil or substratum, such as pH and organic matter content, which influence associated biota.

**Effects Pathways** – The media through which species may be affected (e.g., air, soil, water).

**Effects Screening Layer** – Initial GIS screening process applied to all species addressed in this BA.

**Endangered** – Any species that is in danger of extinction throughout all or a significant portion of its range.

**Endemic** – Native or confined to a specific region or location.

**Entrenchment (E)** – The ratio between the floodprone width and bankfull width ( $E = FPW/BFW$ ). Values of less than 1.4 indicate a stream with a relatively small floodplain, while values over 2.2 indicate a system with high floodplain connectivity.

**Environmental Performance Standards** – Conservation and mitigation measures designed to be implemented in parallel with the construction activities of the Bridge Program in order to minimize its adverse effects on listed species—and, where possible, to cause the program to have beneficial effects on listed species.

**Evolutionarily Significant Unit (ESU)** – For a species, a population or set of populations that are morphologically and genetically distinct from other populations, or a population or set of populations with a distinct evolutionary history.

**Exotic** – A plant or animal that has been introduced into an ecosystem from a foreign ecosystem.

**Falsework** – The support system for a temporary work bridge.

**Fish passage barriers** – Any naturally occurring or human-made object or feature that restricts the natural movement of fish through their environment.

**Floodplain connectivity** – The hydrologic linkage between a fluvial channel and its associated floodplain.

**Floodprone width (FPW)** – The width at the elevation of twice the maximum bankfull depth or three times the average bankfull depth.

**Fluvial** – Pertaining to streams or rivers, or produced by stream action; also, migrating between main rivers and tributaries.

**Fluvial processes** – Produced by the action of a river or stream.

**Fry** – Life stage of salmonids between full absorption of the yolk-sac and the fingerling or parr stage, which generally is reached by the end of the first summer.

**Functional group** – The division into which species have been separated (i.e., fish, wildlife, and plants) for discussion of project-related effects.

**Functional habitat** – Functional habitat is synonymous with suitable habitat such that it is capable of supporting a protected species either presently or within the future.

**Geographic Information System (GIS)** – A database for capturing, storing, checking, integrating, manipulating, analyzing and displaying data related to positions on the Earth's surface. GIS may be used for producing maps to identify and show spatial relationships between resources and features (e.g., roads). Resources or features might be represented as layers built one upon the other, with each layer containing information about the feature or resource.

**Glabrous** – (of a plant) Having smooth, hairless leaves.

**Glaucous** – (of a plant) Covered with a waxy grayish-blue powder.

**Gross habitat acres** – The number of acres of habitat for a Federally listed species (fish, wildlife, or plant) that has the potential to be affected by the Bridge Program. This number includes bridges with overlapping APIs.

**Habitat** – The type of environment in which an organism or group of organisms normally lives or occurs.

**Habitat Conservation Areas** – Designated areas that are essential for the conservation of a particular species.

**Habitat refugia** – Important remnant habitat features (e.g., downed wood) essential for sensitive aquatic species.

**Harassment** – Any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal or marine mammal stock in the wild, or has the potential to disturb a listed species in the wild by causing disruption of behavioral patterns, including, but not limited to migration, breathing, nursing, breeding, feeding, or sheltering.

**Haulout** – Land areas used by adult marine mammals outside the breeding season, and by non-breeding adults and sub-adults throughout the year. Sites used as rookeries during the breeding season may be used as haulouts during other times of the year. Seal and sea lion rookeries and haulouts are areas that are known to be regularly occupied by two or more individuals for two consecutive days, identified as an existing haulout (ODFW 2003), or identified by local biologists.

**High noise** – For purposes of this project, “high noise” is defined as sound pressure levels greater than 10 dBA above the ambient as measured by the  $L_{AFmax}$  and  $L_{AFeq}$  at sensitive receptors (e.g., nests, roosting, nesting, foraging habitat).

**Historic range** – A species’ maximum distribution from the 1800s to the 1870s.

**HUC** – See Hydrologic Unit Code, below.

**Hybridization** – The mating of individuals of different species or sub-species.

**Hydroacoustic effects** – The effects to aquatic species caused by noise generated from driving steel piles through water.

**Hypereutrophication** – The condition of a water body that has excessive quantities of minerals and organic nutrients that have caused increased aquatic growth, especially algae. This increased aquatic growth reduces dissolved oxygen content to anoxic levels, which often results in the death of aquatic organisms.

**Hydrologic Unit Code (HUC)** – Divisions and subdivisions of the United States into successively smaller hydrologic units, classified into four levels: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are nested from the smallest (cataloging units) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.

**Incidental take** – Take of listed fish and wildlife species resulting from, but not the purpose of, an otherwise lawful activity conducted by a Federal agency or applicant.

**Incipient motion** – The velocity at which bed material becomes mobile.

**Independent utility** – A project that can function as a stand-alone project without forcing new actions that may have additional effects.

**Indicator species** – A species whose presence or state of health is used to identify a specific type of biotic community, or is used as a measure of ecological conditions or changes occurring in the environment.

**Indirect effects** – Those effects, reasonably certain to occur at a later time, caused by or resulting from the proposed action.

**Inflorescence** – A flower cluster.

**Interdependent actions** – Actions having no independent utility apart from the proposed action.

**Interrelated actions** – Actions that are part of a larger action and depend on the larger action for justification.

**Interstitial spaces** – Small voids within a specific medium.

**Invasive** – Describes a species (often non-native) taking over a habitat where it was not previously found, often to the detriment of species (frequently native) present prior to its arrival.

**Is likely to adversely affect** – This phrase is the appropriate finding in a BA if any adverse effect to listed species may occur as a direct or indirect result of the proposed

action or its interrelated or interdependent actions, and the effect is not: discountable, insignificant, or beneficial (see definition “is not likely to adversely affect”). In the event the overall effect of the proposed action is beneficial to the listed species, but is also likely to cause some adverse effects, then the proposed action "is likely to adversely affect" the listed species. If incidental take is anticipated to occur as a result of the proposed action, an "is likely to adversely affect" determination should be made. An "is likely to adversely affect" determination requires initiation of formal section 7 consultation.

**Is not likely to adversely affect** – This phrase is the appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species. **Insignificant effects** relate to the size of the effect and should never reach the scale where take occurs. **Discountable effects** are those effects that are extremely unlikely to occur, and based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur.

**Johnson and O’Neil habitat types** – Environments where an animal or plant normally lives, often characterized by a dominant plant form or physical characteristic. These habitat types are specifically designated areas within Oregon.

**Large wood** – For purposes of this project, “large wood” means a tree, log, or rootwad big enough to dissipate stream energy associated with high flows, capture bedload, stabilize streambanks, influence channel characteristics, and otherwise support aquatic habitat function, given the slope and bankfull channel width of the stream in or near which the wood occurs.

**Large wood transport capacity** – For purposes of this project, the “large wood transport capacity” is the maximum capability of the stream to move large wood under historic, current, and future land use activities and is a product of the channel morphology, stream power, and site potential tree height.

**Larval** – The stage in an insect’s development from the time it hatches from the egg until it pupates.

**Lethal take** – Effects that result in death of an individual.

**Life history** – The significant features of the life cycle through which an organism passes, with particular reference to strategies influencing survival and reproduction.

**Limiting factors** – Habitat conditions limiting sustainable populations of a species.

**Listed species** – Any species of fish, wildlife or plant, which has been determined to be endangered or threatened under section 4 of the ESA. [50 CFR §402.02]

**Loafing site** – Areas where species such as turtles and waterfowl leave the water to rest, preen, etc. (e.g., logs, stumps, muskrat houses, and tussocks).

**Long-term beneficial effects** – Effects on a listed species that are wholly positive. These effects may not be immediately evident, but will accrue through time or manifest themselves in the future.

**Macroinvertebrate** – An invertebrate that is large enough to be seen without magnification.

**Maintenance** – For the purposes of this BA, maintenance specifically refers to plantings and other habitat elements.

**Marine mammal habitat** – For purposes of this project, areas capable of supporting marine mammals, haulouts, and rookeries will be defined as marine mammal habitat, unless stated otherwise.

**May affect** – The appropriate conclusion when a proposed action may pose **any** effect on listed species or designated critical habitat. When the Federal agency proposing the action determines that a "may affect" situation exists, then the agency must either initiate formal consultation or seek written concurrence from the involved Service that the action "is not likely to adversely affect" [see definition above] listed species.

**Media** – Plural for “medium”; a substance through which something is transmitted.

**Mean lower-water mark** – Tidal datum used in reference to tidelands or the tidally affected portion of a stream. This mark is equal to the average lowest daily tide during a 19-year Metonic cycle, as established by the National Ocean Service of the National Oceanic and Atmospheric Administration.

**Mesic soils** – Soils conditioned by a temperate moist climate; neither xeric nor hydric; pertaining to conditions of moderate moisture supply.

**Metapopulation** – Interacting populations of a single species across a geographic region. Interbreeding and localized extirpation occur, and not all available habitats are used at one time.

**Minimization and avoidance measures** – Actions taken to minimize and avoid effects to Federally listed species.

**Monotypic** – Containing only one taxon of the next lower rank (e.g., a family containing only one genus; or describing site conditions of one taxon).

**Net habitat acres** – The number of acres of habitat potentially affected by project activities (after taking into consideration the overlapping bridge APIs).

**No effect** – The conclusion when the determination is made that a proposed action will not affect a listed species or designated critical habitat.

**Noise disturbance** – Adverse effects on a Federally listed species from construction activities.

**Noise harassment** – Adverse effects on a Federally listed species from construction activities. These adverse effects are less severe than those associated with noise disturbance.

**Non-lethal take** – Effects to a listed species that do not result in death of the individual.

**Non-native** – Fish, wildlife, or plant species not endemic to their present locale.

**Normative physical process (normative fluvial process)** – (Used in the Fluvial Performance Standard.) A condition achieved by promoting natural sediment transport patterns for the reach, providing unaltered fluvial debris movement, improving the longitudinal continuity and connectivity of the stream-floodplain system, and providing suitable passage for terrestrial and aquatic species.

**Not determinable critical habitat** – A critical habitat designation of “not determinable” may be made if the Service does not have enough information to define critical habitat at the time a species is listed. [See ESA Sec 4(b)(6)(C)(ii)]

**Not properly functioning** – A term describing the inhibition or restriction of natural habitat-forming processes in a watershed (e.g., riparian community succession, bedload transport, precipitation runoff pattern, channel migration) that are required for the long-term health of a fish species.

**ODFW-defined in-water work periods** – Guidelines that establish in-water work periods that minimize the potential effects on fish and other aquatic resources.

**ODOT standard specifications** – "Oregon Standard Specifications for Construction", current edition, published by the Oregon Department of Transportation.

**Off-channel habitat** – Aquatic habitat elements within a floodplain such as sloughs, beaver ponds, wetlands, and other permanently or seasonally flooded lands that promote fish spawning and rearing.

**Old growth** – Stands regenerated by natural succession, with a substantial number of old trees and amount of deadwood; often variably aged. These stands represent climax or late succession stages evidencing little or no effect from human activity.

**Oregon State Boundary GIS layer** – This layer shows the jurisdictional and cartographic state perimeters for Oregon in the Oregon Lambert Projection.

**OTIA III – Oregon Transportation Investment Act** – Oregon State House Bill 2041, the transportation funding package. This legislation will use increased DMV and trucking-related fees to finance \$2.5 billion in transportation construction projects in Oregon cities and counties, and along the Oregon State highway system.

**OTIA III: Statewide Bridge Delivery Program** – The ODOT construction program for 430 bridges within the State of Oregon funded by House Bill 2041.

**Performance standards** – see Environmental Performance Standards.

**Physiographic province** – A physiographic province is a landform region, delineated by similar terrain and shaped by a common geologic history.

**Pollutant loading** – For purposes of this project, “pollutant loading” includes, but is not limited to debris, sediment, nutrients, petroleum hydrocarbons, and metals.

**Primary constituent elements (PCEs)** – The physical and biological features of designated or proposed critical habitat that are essential to the conservation of the species, including, but not limited to: (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, the rearing of offspring, germination, or seed dispersal; and (5) areas that are protected from disturbance or are representative of the historic geographic and ecological distributions of a species.

**Programmatic consultation** – A consultation addressing the Federal agency’s multiple actions on a program, regional, or other basis.

**Project watershed** – For purposes of this project, “project watershed” refers to the 5<sup>th</sup> Field Hydrologic Unit Code.

**Proposed action** – For the OTIA III project, this includes the proposed actions’ scope and duration; construction to repair and replace bridges in the program during the next 10 years.

**Provincial radius** – The home range of a northern spotted owl around a known activity center. This term was developed through home range studies by the Interagency Scientific Council (1990) and geographic province descriptions by Franklin and Dyrness (1988).

**Pubescent** – (of a plant) Covered with short, soft, erect hairs.

**Range** – The biogeographic region and set of conditions throughout which an organism (e.g., plant species) naturally occurs.

**Rearing areas** – Areas that support the fish developmental life phase from fertilization of eggs to adulthood.

**Reasonable and prudent measures** – Actions identified during formal consultation that the Service believes necessary or appropriate to minimize adverse effects (i.e., amount or extent, of incidental take). [50 CFR §402.02]

**Recovery** – Improvement in the status of listed species to the threshold at which listing is no longer appropriate under the criteria set out in section 4(a) of the ESA.

**Recovery goal** – One of the objectives specified for an endangered species with an established comprehensive recovery plan.

**Recovery plan** – Detailed and comprehensive plan outlining methods to reach the recovery goal. Usually includes details about the species’ life history, limiting factors, and current distribution.

**Recovery units** – Management subsets of a listed species, created to establish recovery goals or carry out management actions. Pursuant to section 7 of the Endangered Species Act and to lessen confusion, a subset of animal or plant species identified for the purpose of recovery management will be called a “recovery unit” instead of a “population.”

**Redd** – A nest made in streambed gravel by fish for egg deposition, fertilization, and incubation.

**Refugia** – Habitat elements such as undercut banks, large boulders, root wads, and debris jams that promote freshwater aquatic habitat.

**Regulatory authorities** - include the ODEQ, ODSL, ODFW, ODA, Corps, and other agencies with project-specific or activity-specific jurisdiction.

**Reinitiation** – A formal reconsideration of a portion of the proposed action. Section 7 regulations outline four general conditions for reinitiating formal consultation: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the action is modified in a manner causing effects to listed species or critical habitat not previously considered; (4) a new species is listed or critical habitat designated that may be affected by the action.

**Resident fish** – Fish species that spend their entire life cycle in freshwater habitats.

**Rookery** – A breeding ground for certain gregarious birds and mammals.

**Significant project changes** – For purposes of this project, “significant project changes” encompass actions or designs that affect the take statement and include, but are not limited to, design elements or construction activities not described in the project

description that result in effects not discussed in the biological opinion, changes to the scope or magnitude of project effects that exceed the range of those described in the biological opinion or approved variances, and activities that exceed the quantification or extent of take identified in the project PCA or other appropriate reports. Significant project changes may also include project changes in magnitude appropriate for documentation in the Services' or appropriate Regulatory Authorities' administrative record(s).

**Site-potential tree height** – A tree that has attained the maximum height possible given the site conditions where it occurs.

**Stream floodplain corridor** – Floodplain width on either side of a stream for a set distance upstream and downstream of a specified bridge scheduled for repair or replacement in the Bridge Program.

**Sub-lethal** – Not resulting in death.

**Sub-lethal effects** – Effects resulting in disturbance of a species, but not death.

**Take** – The Federal ESA defines this term as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. **Harm** is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. **Harass** is defined by the Service as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.

**Temporary barriers** – Non-permanent obstructions to fish passage that may require moving fish around a project site by hand.

**Third-party contractor** – A contractor, hired by a principal contractor, to perform work for the principal contractor's client.

**Threatened** – Any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

**Tiering** – A categorization utilized in ESA Section 7 programmatic consultations. Subsequent “tiered” consultations are performed on individual project activities, groups of similar projects, or annual programs, where specific effects on species can be determined within the context of a local geographic area, or can contain incidental take statements identifying the anticipated amount of incidental take from the site-specific action under consultation.

**Timing restrictions** – See “Work timing restrictions”.

**Total Dissolved Solids (TDS)** – A measure of inorganic and organic materials dissolved in water (passing through a 0.45 micron filter); expressed as mg/l FR. Sometimes considered similar to conductivity as an indicator of potential production in habitat quality indices.

**Urbanized watersheds** – For purposes of this project, “urbanized watersheds” are determined by a low percentage of natural vegetation and a high percentage of impervious surface within the project watershed (5<sup>th</sup> Field HUC). Other methods may include FEMA mapping, land management, land cover types, or land ownership. The hydrology of these watersheds has been significantly altered by land development.

**Vacant structures** – For purposes of this project, “vacant structures” include unused, unnecessary, or abandoned structures that are no longer fulfilling their intended purpose, except for those structures that are potentially eligible for, eligible for, or listed on the National Register of Historical Places.

**Vernal pool complexes** – Hydrologically and ecologically functional units of vernal pool wetlands and depressions within a matrix of surrounding uplands.

**Vernal pool wetland** – Shallow, intermittently flooded wet meadow, generally dry for most of the summer and fall.

**Visual disturbance** – Construction activity in view of wildlife, which may disrupt normal behavior and adversely affect Federally listed wildlife species.

**Visual harassment** – Construction activity in view of wildlife, where the effect is less severe than visual disturbance.

**Waters** – For purposes of this project, “waters” includes any natural waterway, including all bays, intermittent streams, constantly flowing streams, lakes, wetlands, and other bodies of water, any part of which are located within the State of Oregon.

**Water quality event** – For purposes of this project, “water quality event” refers to the volume of runoff predicted from a 6-month, 24-hour storm, which may be assumed to be 72% of the 2-year, 24-hour amount (See, Washington State Department of Ecology (2001), Appendix I-B-1), unless another storm size is more appropriate for the local climate and hydrology and provides equivalent conservation benefit (less than or equal adverse effects provided by the defined storm size) and is approved in writing by the Services and the appropriate Regulatory Authorities.

**Working adequately** – For purposes of the Water Quality Performance Standard, “working adequately” means that project activities do not increase ambient stream turbidity by more than 10% above background 100 feet below the discharge, when measured relative to a control point immediately upstream of the turbidity-causing activity.

**Work timing restrictions** – Seasonal and/or diurnal restrictions placed on construction activities to protect Federally listed wildlife, fish, and plant species (e.g., in-water work periods for salmonids and time-of-day restrictions for northern spotted owls).

**Xeric soils** – Soils characterized by a scant supply of moisture; tolerating, or adapted to, arid conditions.

**1200CA permit** – A general National Pollution Discharge Elimination System Stormwater Discharge Permit from the Oregon Department of Environmental Quality. This permit is issued pursuant to ORS 468B.050 and the Federal Clean Water Act. The sources covered by this permit are all construction activities including clearing, grading, excavation, and stockpiling activities under the authority or jurisdiction of a public agency that will result in the disturbance of five or more acres. Also included are activities that disturb a total of five or more acres if part of a larger common plan of development.

**303(d) list** – Under section 303(d) of the 1972 Clean Water Act, states, territories, and authorized tribes are required to develop lists of impaired waters. These impaired waters do not meet water quality standards that states, territories, and authorized tribes have set for them, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop Total Maximum Daily Loads (TMDLs) for these waters

**5<sup>th</sup> field HUC** – USGS Hydrologic Unit Code of 5<sup>th</sup> order streams (i.e., the Upper Little Deschutes River in the Upper Deschutes River and Deschutes River systems).

## Acronyms

AASHTO	American Association of State Highway and Transportation Officials
API	Area of Potential Impact
BA	Biological Assessment
BLM	Bureau of Land Management
Dbh	Diameter at Breast Height
DOGAMI	Oregon Department of Geology and Mineral Industries
DPS	Distinct Population Segment
EBOR	Economic and Bridge Options Report
EFH	Essential Fish Habitat
EOE	Evaluation of Effects
EPA	U.S. Environmental Protection Agency
ESA	Federal Endangered Species Act
ESL	Effect Screening Layer
ESU	Evolutionarily Significant Unit
DSL	Division of State Lands
FHWA	Federal Highways Administration
GIS	Geographic Information System
HCA	Habitat Conservation Areas
HUC	Hydrologic Unit Code
NRCS	Natural Resource Conservation Society
NOAA Fisheries	National Marine Fisheries Service
ODOT	Oregon Department of Transportation
OHWM	Ordinary High Water Mark
ONHP	Oregon Natural Heritage Program
ORWD	Oregon Water Resources Department
OTC	Oregon Transportation Commission
OTIA III	Oregon Transportation Investment Act III
OWEB	Oregon Watershed Enhancement Board
PCE	Primary Constituent Elements
MB&G	Mason, Bruce & Girard
MSA	Magnuson Stevens Act
RCDG	reinforced concrete deck girder
SESA	Oregon State Endangered Species Act
SOER	Oregon State of the Environment Report
TE&P	Endangered, Threatened, or Proposed Species
TDS	Total Dissolved Solids
TNC	The Nature Conservancy
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife