

Chapter 7

Glossary

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Note: These definitions are specific to the Washington State Department of Natural Resources' Aquatic Lands Habitat Conservation Plan. Additional definitions may exist in other contexts.

abandoned structures	Improvements or fixtures that are no longer in use. If the abandoned structures are also in poor condition, they may be referred to as <i>derelect</i> .
accretion	A natural or artificial process whereby the size of a beach, spit, bar, or flat gradually increases through the deposition of sand, gravel, or sediment particles.
abiotic	The non-living factors of a given area, such as temperature, wind, and substrate.
adfluvial	A fish life-history strategy whereby spawning and juvenile rearing take place in rivers or streams, but adults live in lakes or reservoirs.
adjudicate	To settle a dispute or conflict through the use of a judge or arbiter.
affect	To act upon or have an effect on somebody or something. (verb)
aggregating area	A relatively small area within which individuals of the same species gather in large numbers for various purposes.
alevin	A larval salmonid approximately 25 millimeters (1 inch) in length and still attached to the yolk sac. Alevins remain buried under the gravel of the redd for safety and live off the yolk sac.
algae	Photosynthetic organisms that are primarily aquatic. Algae are differentiated from plants by their lack of lignin and xylem. Algae range from microscopic single-celled forms to macroscopic multicellular forms 30 meters (98 feet) or more in length. Macroscopic algae include the seaweeds, and microscopic algae are included in the phytoplankton. <i>Algae</i> is plural; the singular form is <i>alga</i> .
algal bloom	The rapid reproduction of microscopic algae leading to large, dense populations.
ambient light	Natural light that is not filtered or blocked by water, structures, or organisms.
anaerobic	A situation in which molecular oxygen is virtually absent from the environment. Also referred to as <i>anoxic</i> .
anadromous	A fish life-history strategy whereby spawning and juvenile rearing take place in freshwater, but young fish then migrate to saltwater for their adult phase.
anoxic	A situation in which molecular oxygen is virtually absent from the environment. Also referred to as <i>anaerobic</i> .

anthropogenic	Caused by humans.
aquatic vegetation	Plants and algae that either require or tolerate partial or total submergence in water and that are rooted in water for most of each day.
area of alteration	The area around the footprint of a structure that is altered as a result of the structure or the operational components of the use (or both).
areal	Pertaining to a spatial area or the area covered by a structure or use.
atmospheric deposition	The addition of nitrogen compounds from the atmosphere to water bodies.
authorization	A generic term for instruments authorizing the use of state-owned aquatic lands. Authorizations include leases, licenses, and registrations.
bank armoring	The placement of materials (for example, along a stream bank) so as to resist erosion.
barbel	A whisker-like, tactile organ found near the mouth of some fish species, such as sturgeon and catfish.
barrier beach	A long and narrow strip of sand and gravel built by the action of waves, currents, and wind. Barrier beaches extend above ordinary high water and run parallel to the shoreline, protecting small embayments, such as lagoons.
baseline condition	The biological, chemical, and physical conditions in which a project or action will be located and on which impacts will occur. Baseline condition is the standard against which anticipated future conditions and actions are measured and assessed.
basin	A part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water, together with all tributary surface streams and bodies of impounded surface water.
bathymetry	The measurement of depths of water in oceans, rivers, and lakes. Also, information derived from such measurements.
beach nourishment	See <i>nourishment</i> .
beach seining	A means of catching fish whereby a net (called a <i>seine</i>) is carried into the water, deployed, and pulled back into shore. Beach seining is useful for catching fish that school close to shore.
behavioral avoidance	Changing behavior to avoid something perceived as a threat or otherwise disliked.
benthos/benthic	A region of a water body that includes the bottom substrate, the zone of substrate-water interface, and the organisms that dwell within or on the substrate.
berth/berthing	A location alongside a dock or wharf where a boat may be moored. Also referred to as a <i>slip</i> .

bioaccumulation	An increase in the concentration of a chemical within the tissues of an organism over time.
bioassay endpoint	The point at which the biological effects of a chemical or toxin are exhibited in a laboratory test.
biota	All of the living organisms of a given area or time.
biodiversity	The number and variety of species within a given ecosystem or region. Biodiversity is often used as an indicator of the health of an ecosystem, with higher diversity usually meaning greater health.
biological assessment	A document, prepared for the Endangered Species Act Section 7 consultation process, wherein a federal agency that is undertaking a project describes the project and its potential biological consequences for listed species and their habitat.
biological opinion	A scientific judgment concerning whether a project described in a biological assessment is likely to result in jeopardy for threatened and endangered species and their habitat. A biological opinion can include conservation recommendations to avoid or minimize possible adverse effects, impose reasonable and prudent measures to minimize harmful impacts, and require monitoring and reporting.
biological oxygen demand (BOD)	A chemical procedure for determining how fast oxygen is used up by all of the organisms in a water body. Biological oxygen demand is used as an indicator of water quality, with higher levels indicating decreased water quality.
biomass	The amount of living or very recently dead organic matter in a given area.
biotoxin	A toxic substance produced by a living organism.
bioturbation	The displacement and mixing of sediment particles by benthic animals and plants.
bivalve	A group of invertebrates defined as having two shells connected by a hinge on one side. Mussels, clams, and oysters are bivalves.
black water	Wastewater comprised of untreated fecal matter or urine.
boulder	A rock with a diameter greater than 256 millimeters (10 inches).
brackish water	Water with salinities greater than those found in freshwater, but less than that in seawater. Brackish water occurs naturally in estuaries.
breakwaters	Structures that dissipate wave energy off-shore. Breakwaters can be floating or fixed structures and are used to protect shorelines and infrastructure.
breeding chorus	A dense aggregation of male frogs sending out mating calls.
broadcast spawning	Expelling both eggs and sperm into the water at the same time and relying on proximity for fertilization.
brooding	The action of incubating eggs.

bulkheads	A retaining structure to protect against slippage or erosion.
bycatch	Aquatic organisms other than the target species, or individuals of the target species that are too small or of the wrong gender to be legally kept, which are caught in a fishery.
carapace	The shell that covers the back of turtles.
cetaceans	Marine mammals from the order Cetacea, which includes all whales, dolphins, and porpoises.
channel	A natural or artificial waterway of perceptible extent that either periodically or continuously contains moving water, or forms a connecting link between two bodies of water.
channel incision	The process of a stream or river cutting into the substrate and lowering the level of the water body, undercutting banks, and making flood events less frequent or halting them altogether.
chemical oxygen demand	A measure of the oxygen that was consumed by the chemical reactions necessary for the decomposition of organic matter and the oxidation of inorganic chemicals, such as ammonia and nitrite, in order to form the concentrations of nitrogen and phosphorous compounds measured in the water column.
circulation	The flow of water currents within a large body of water.
clan	A large group of killer whales (orcas) consisting of several pods with common vocalizations and behaviors.
clay	Substrate particles with a diameter less than 0.004 millimeters (0.00016 inches).
clutch	The number of eggs laid in one batch.
coarse sediment	A mixture of sand and gravel.
cobble	Rocks with a diameter between 75 and 256 millimeters (approximately 3–10 inches).
community	Any naturally occurring group of species inhabiting a common environment, interacting with each other (especially through food relationships), and remaining relatively independent of other groups.
conductivity	A measure of the ability of water to conduct electricity through dissolved ions. Conductivity describes the total dissolved solids within freshwater in much the same way that salinity is used to describe the concentration of dissolved salts in saltwater.
confluence	The point where two or more water bodies flow together.
connectivity	Proximity of acceptable habitat to other areas of acceptable habitat, sufficient to allow species to travel from one area of acceptable habitat to another. <i>Connectivity</i> can also refer to a connection between parts of a process, such as sediment transport between feeder bluffs and beaches.

consolidated habitat	Habitat where the substrate is solid material, such as bedrock, or where the material is so interlocked that it is not mobile.
coulee	A set of dry, braided stream channels formed by glacial drainage.
critical habitat	Specific geographic areas designated by NOAA Fisheries and the U.S. Fish and Wildlife Service. Critical habitat designations include those areas that are occupied by threatened and endangered species at the time of their listing and that contain the physical and biological features essential to the conservation of the species.
cubic feet per second (CFS)	A measure of water flow expressed as the number of cubic feet of water that flows past a given point in one second.
cultch	Fragmented shells used as a substrate for collecting wild shellfish larvae as seed for commercial shellfish aquaculture.
cumulative impacts	Large-scale impacts on the environment that result from the combination of many small-scale impacts.
current	The flow of water.
deep-draft	A boat that extends 2 meters (about 6.6 feet) below the waterline or more.
delta	A low-lying landform at the confluence of a river and a larger water body. Deltas are formed by the deposition of the sediment carried by the river.
demersal	The part of the water column that is close to, and significantly affected by, the benthos. <i>Demersal</i> also refers to fish that primarily inhabit the demersal zone.
deposition	The deposit of materials (for example, sediment or wood waste) in an area. This can occur by natural means, such as wave action or currents, or by human-induced means.
depositional reach	A stretch of river where water slows and suspended sediment is deposited.
derelict fishing gear	Fishing gear (such as pots, nets, lines, and hooks) that has been abandoned underwater.
desalinization	The removal of salts from seawater for the purpose of rendering the water drinkable or otherwise usable by humans.
desiccation	The loss of water; drying up.
diatoms	Single cell algae with glass shells. Diatoms are found in both marine and freshwater systems and comprise the bulk of the phytoplankton. Diatoms participate in algal blooms.
dikes	A bank, usually of earth, used to continually confine or control water. Dikes are similar to levees, but protect land that would be continuously underwater without a dike.

dinoflagellates	Single-cell, mobile organisms found in both marine and freshwater. Half are photosynthetic and make up a large portion of the phytoplankton. The other half are included in the zooplankton. Dinoflagellates participate in algal blooms.
displacement volume	The amount of water that a vessel displaces when it is floating. The greater the displacement volume, the deeper the water needs to be to float the vessel.
distributary channels	A stream that branches off and flows away from a mainstream channel. Such channels are commonly seen in deltas. The opposite of a <i>tributary</i> .
disturbance	A temporary change in average environmental conditions that causes a pronounced change in an ecosystem.
dissolved oxygen	The amount of gaseous oxygen dissolved in the water column.
dolphins	Multiple pilings lashed together and used for moorage, as protection, or to mark boundaries.
downwelling	The accumulation and sinking of colder or more saline water, which allows warmer or less saline water to move in. The opposite of <i>upwelling</i> .
drainage area	See <i>watershed</i> .
dredge	To deepen by removing substrate material and depositing it in another location. Also, the mechanical or hydraulic equipment used for such excavation.
dredge spoil piles	The piles of sediment or other materials removed through the process of dredging and deposited in a new location.
dry dock	A structure used for building, repairing, or deconstructing vessels that are too large to be pulled up onto land. Dry docks are floated under the vessel that is to be worked on and then raised to lift the vessel out of the water.
duff layer	Organic matter in various stages of decomposition that lies on the floor of a forest. The duff layer is usually comprised primarily of leaves.
dynamic equilibrium	The balancing point where movement in one direction is equal to movement in the opposite direction. Movement continues, but there is no net gain in any direction.
ecological function	Any ecological process—including disturbance, nutrient cycling, water cycling, and succession—in any ecosystem.
ecological services	The benefits to humans arising from the ecological functions of healthy ecosystems.
ecoregion	A geographically distinct landform and all the biotic and abiotic factors found within that landform.
ecosystem	The combination and interaction of all biotic and abiotic factors in an area, usually delineated by natural geographic barriers.

ecosystem function	Any ecological process in a given ecosystem. Ecosystem function is similar to ecological function, but limited to a given (or set of given) ecosystems.
ectothermic	Having a limited ability to produce warmth through biological processes and relying heavily on external sources of heat. Formerly referred to as <i>cold-blooded</i> .
effect/impact	Under NEPA regulations, a direct result of an action that occurs at the same time and place; or an indirect result of an action that occurs later in time or in a different place and is reasonably foreseeable; or the cumulative results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 Code of Federal Regulation (CFR) 1508.8). Under Endangered Species Act, Section 7 regulations, "effects of the action" means "the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline (50 CFR 402.02).
effluent	Wastewater, treated or otherwise.
embayment	An indentation of the shoreline.
emergence	For salmon, the emergence of salmon fry from the gravel of the redd: The point in salmonid life histories when they change from alevin to fry.
emergent vegetation	Aquatic plants that are rooted in the water, but extend most of their form above the water.
encrusting	Organisms that permanently attach themselves to a given substrate or object and do not extend very far from the surface. Examples include barnacles and lichens.
endangered species	Any species that is in danger of becoming extinct throughout all or a significant portion of its range.
enhancement	The improvement of existing habitat or the addition of new habitat through restoration.
entrained	Trapped.
environmental impact statement (EIS)	A document required by state and federal law for actions that may significantly alter the quality of the environment. An EIS is a decision making tool that describes both positive and negative effects, as well as alternatives to the proposed action.
ephemeral	A temporary stream or pool, usually existing only in the wetter periods of the year and drying up in the summer.
epibenthic	Living on top of the bottom substrate of a water body.
epilimnion	The top layer of water of a thermally stratified lake. The epilimnion is generally warmer than the other layers in the summer and colder than the other layers in the winter.

escape cover	Physical structures within which fish can hide to avoid predation. Escape cover includes aquatic vegetation, exposed tree roots, and large woody debris.
estuary/estuarine	The region near the mouth of a river where fresh water mixes with saltwater to create brackish water. This region includes the tidally influenced part of the river.
euphotic zone	The portion of the water column that receives sufficient light for photosynthesis to occur.
eutrophic	A water body with high nutrient enrichment and primary productivity rates. Eutrophic waters are usually oxygen poor and highly turbid.
eutrophication	The process of nutrient enrichment in a water body.
evolutionarily significant units	A population or subspecies that is considered genetically or behaviorally distinct for purposes of conservation.
exceedance	Exceeding a given threshold. Exceedance can be negative (for example, above the range of acceptable concentrations) or positive (for example, more light passage than is required).
exotic species	A species that is living outside its natural distribution due to having been brought there intentionally or accidentally by humans, but the species is not outcompeting all other species to the point that it is damaging biodiversity. Also referred to as <i>non-native</i> .
exposed	A section of coastline that is not sheltered from ocean waves and frequently or continually contends with strong waves.
extreme higher high water	The highest high tide recorded during a given period.
extreme low tide	The lowest low tide recorded during a given period.
fallow	Land normally impacted by shellfish cultivation that is not impacted by cultivation for a year or more to give it a chance to recover.
fecal coliform bacteria	Bacteria found in the intestinal tract of animals and excreted from the body in feces. Levels of fecal coliform bacteria in water bodies are used as an indicator of fecal contamination in the water and can lead to closures of shellfish harvesting.
fecundity	The potential reproductive capacity of an organism or population. Generally, fecundity is defined as the number of eggs or spores produced, which is impacted by both genetic and environmental factors.
feeder bluffs	A coastal cliff or headland that adds sediment to the nearby water body through erosion.
fetch	The distance over unobstructed open water on which waves are generated by a wind having a constant direction and speed.

fill/filling	The transformation of aquatic land into terrestrial land by dumping rock, trash, dirt, or other materials into the water close to a shoreline until the substrate has been raised above the water column.
filter feeder	An animal that obtains food by filtering the water column through a membrane and straining out plankton and organic particles. Also referred to as a <i>suspension feeder</i> .
fine sediment	A type of unconsolidated habitat comprised of a mixture of silt and clay.
finfish	Fish with fins. The term is used to separate fish with fins from shellfish, jellyfish, starfish, and any other aquatic organism that might otherwise be lumped under the term <i>fish</i> .
fitness	The ability to successfully reproduce.
fjord	A long, narrow, marine water body with relatively steep sides carved by glacial activity.
flats	Areas of gently sloping shores that contain fine to coarse unconsolidated sediments. Also referred to as <i>mud flats</i> , <i>salt flats</i> , or <i>tidal flats</i> .
fledging	The stage in a bird's lifecycle when it grows flight feathers for the first time and starts flying.
floating bog	A mass of floating vegetation (such as algae, aquatic plants, grasses, and trees) that is not rooted to the lakebed. Floating bogs can reach several acres in size and change location as they are pushed by waves, wind, and currents.
floodplain	Any flat or nearly flat lowland that borders a stream or river and is covered by its waters when it is at flood stage.
flood pulse	The concept that recurrent, seasonal, short-term flooding is an important ecological factor driving the biology of rivers.
flushing	In the context of water bodies, flushing is the replacement of old water with new water through inputs or tidal cycles. In the context of birds, flushing is sudden flight due to fear.
fluvial	A salmonid life-history strategy in which spawning and juvenile rearing take place in small freshwater streams, but young fish then migrate to larger rivers for their adult phase.
fouling	The growth of invertebrates or algae on underwater structures or shellfish. The growth of something unwanted on something that is wanted.
fry	The life stage of a salmonid after it emerges from the redd and before it leaves the natal stream to migrate to another water body.
FTE	Stands for <i>full time equivalent</i> and is a means of measuring a Washington DNR employee's involvement in a program.
fuel transfer	The transfer of engine fuel from fueling facilities to vessels.

gabions	Large, wire mesh boxes filled with rocks and generally stacked into a wall to protect a shoreline from erosion. A type of hard armoring.
gangway	A narrow ramp, usually with railings, that connects a dock to piers or to the shore. Also referred to as a <i>walkway</i> .
geomorphology	The shape or form of a natural surface or object. Also, the study of the forms of land and the processes that produce them.
gestation	Carrying an embryo. Pregnancy.
grain size	The size of soil or rock particles that comprise the substrate at a given location. Substrates usually include several different grain sizes in varying proportions.
gravel	Rocks with a diameter between 4.75 and 75 millimeters (about 0.2–3.0 inches).
gray water	Wastewater generated by dishwashing, laundry, and bathing.
groundwater	Underground water supplies, also called aquifers. Groundwater is formed by water soaking into the ground until it reaches a point where the ground is not permeable. Groundwater usually flows laterally underground toward a river, lake, or ocean.
groundwater recharge	The movement of water from the surface to an underground supply.
habitat	A location that provides all of the organisms and environmental conditions, including air, water, soil, mineral elements, moisture, temperature, and topography, that a given species needs to survive. Also, a general description of all of the species and environmental conditions present at a given location.
habitat complexity	The amount of natural variation in the physical characteristics of a habitat, such as vegetation, topography, or grain size of sediment.
habitat connectivity	The concept that patches of appropriate habitat need to be close enough together or joined by corridors of similar habitat in order to sustain animals that require large ranges.
habitat creation	A process whereby a location that has lost all natural processes as a result of human impacts and development has natural processes established. This includes the creation of natural processes that never previously existed at that location, such as the creation of intertidal habitat in deep water through the addition of fill.
habitat fragmentation	The patchy destruction of a given type of habitat, leaving islands of the given type of habitat surrounded by other types of habitat.
habitat function	Any ecological process in a given habitat. Habitat function is similar to ecological function, but is limited to a given or set of given habitats.
hard armoring	Materials (such as riprap, sea walls, bulkheads, and breakwaters) that deflect wave energy and block erosion in an unnatural fashion.

headwater streams	The small creeks and streams with relatively small watersheds that are the origin of many rivers and lakes.
heavy metals	A metallic element that is toxic to organisms. At low concentrations, some heavy metals are necessary to organisms, while at high concentrations, these same metals are toxic (for example, iron, copper, and zinc); others are toxic at any concentration (for example, lead, mercury, and plutonium).
herbivore	An organism that primarily feeds on plants or algae (or both).
herptofauna	Amphibians and reptiles.
high-energy	In the context of water, the term <i>high-energy</i> refers to water moving with a lot of speed (current velocity) or a lot of force (waves).
holding pools	Deep riverine pools of slow-moving water where salmonids gather in large numbers.
hydraulic residence time	The amount of time necessary to flush a water body completely.
hydrograph	A graph that tracks the discharge of a stream or river over time.
hydrology	The dynamics of water movement through an area.
hypereutrophic	A water body with extremely high nutrient enrichment and rates of primary productivity. Usually, such a water body has dense mats of surface algae, is generally anoxic, and may frequently experience fish kills.
hypolimnion	The bottom layer of water in a thermally stratified lake. The hypolimnion is generally colder than the other layers in the summer and warmer than the other layers in the winter.
hyporheic	The mixing of surface water and shallow groundwater in the soil beneath a riverbed. River-influenced groundwater exchange.
ichthyoplankton	The eggs and larvae of fish floating or swimming in the water column. Ichthyoplankton are included in the zooplankton.
impervious surface	A constructed surface (such as a building, street, sidewalk, or parking lot) that is covered by impenetrable materials, such as concrete, asphalt, or brick. Such surfaces increase runoff and can contribute toxins and pollutants to nearby water bodies.
impounded river	A section of river backed up behind a dam. Also referred to as <i>impoundments</i> .
impoundments	See <i>impounded river</i> .
imprinting	The process whereby salmonid fry memorize the odor of their natal stream, allowing them as adults to find their way back to that stream for spawning.
infauna/infaunal	Animals or invertebrates that live within the sediment.
inlet	A narrow body of water, often leading inland from a larger body of water.

insectivore	An organism that primarily feeds on insects.
interspecific competition	Competition for resources between individuals of different species.
interstitial	Existing between and surrounding the particles of soil or rock in the sediment.
intertidal	The area that lies between the highest high tide and lowest low tide and is exposed to the air periodically.
intraspecific competition	Competition for resources between individuals of the same species
invasive species	A species that is living outside of its natural distribution (having been brought there intentionally or accidentally by humans) and is outcompeting all other species to the point that it is damaging biodiversity.
invertebrates	Animals that lack a bony or cartilaginous skeletal structure.
iteroparous	Capable of reproducing more than once in a lifetime.
jetties	Structures that extend into a water body and are intended either to prevent channels, river mouths, or bay entrances from shifting position, or to direct or confine a stream or tidal flow.
lacustrine	Pertaining to a lake or lakes.
lagoon	A body of shallow, salty, or brackish water separated from the ocean by a sand spit or other barrier. The barrier may be temporarily breached periodically.
lake outlet	A stream or river that flows away from a lake.
laminar flow	A smooth flow of water that generally does not include mixing or sudden changes in direction or speed. The opposite of <i>turbulence</i> .
landscape planning	Land use planning that facilitates decision-making by looking at entire watersheds or ecosystems, instead of treating each location as a separate entity that is completely isolated from its surroundings.
larvae/larva	The newly-hatched life stage of species that will undergo a metamorphosis. Many aquatic species have a larval stage during which they are included in the zooplankton. <i>Larvae</i> is the plural form; <i>larva</i> is singular.
leachate	See <i>wood leachate</i> .
leaf detritus	Leaves, twigs, and bark that have fallen to the ground or into the water. Also referred to as <i>leaf litter</i> .
legacy wood	Wood waste that is present in a leasehold as a result of the activities of a lessee prior to the one currently authorized to use the leasehold.
levees	A bank, usually of earth, used to confine or control riverine water during flood events. Levees are similar to dikes, but levees protect ground that would only be underwater during flood events.

life history	A description of all the life stages of an organism, including birth, growth, maturity, reproduction, and death.
life stage	One particular phase of an organism's life history.
limnetic	The photic portion of the water column in the lacustrine ecosystem, starting offshore at the 2-meter (6.6-foot) depth.
listed species	Species listed in any Washington state or federal endangered, threatened, proposed, sensitive, candidate, concern, or monitor list.
litterfall	The movement of leaves, twigs, and bark from the plant to the ground or into the water.
littoral	The shallow waters where sunlight reaching the benthos is sufficient to support the growth of submerged vegetation. Also referred to as the <i>nearshore</i> .
littoral drift	The sediment that is transported parallel to the shore by waves and currents.
loafing	Bird behavior that is not connected with feeding or nesting. Loafing includes preening and resting.
log dumping	Putting logs into the water for booming, storage, and rafting. The term is used especially to refer to the practice of rolling the logs down a slope into the water.
log handling	A general term that includes log booming, log dumping, and log storage.
longshore current	A water current that moves parallel to the shoreline.
low-energy	In the context of water, the term <i>low-energy</i> refers to water moving with very little speed (current velocity) or very little force (waves).
macroscopic	Large enough to be visible to the human eye without the aid of a microscope.
main stem river	The primary river. The river that tributaries drain into.
maintenance	The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by Washington DNR, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original authorization or the most recently authorized modification.
marine rails	A pair of rails set parallel and running from land into the water, with a winch at the top. A boat is winched into or out of the water, and the rails guide the boat.
marsh	An area of soft, wet, or periodically inundated land, generally treeless and usually characterized by grasses, sedges, rushes, and other low growth. A marsh can be marine or freshwater.

matriline	A population of organisms related along the maternal line.
mean lower low water (MLLW)	The average of all the lower low water heights of each tidal day observed over the previous 19 years.
meander	A curve in a shoreline or river channel.
meander line	An irregular, surveyed line following the outline of a water body.
meander zone	The area surrounding a river within which all meanders of that river occur.
mesotrophic	A water body with moderate nutrient enrichment and rates of primary productivity. The water usually has moderate oxygen levels and moderate turbidity.
metalimnion	The middle layer of water in a thermally stratified lake. The metalimnion generally contains a wider range of temperatures than any other layer. In a well-mixed lake, the metalimnion may not develop. It is also referred to as a <i>thermocline</i> .
metamorphose/ metamorphosis	Undergoing an extreme physical change as part of leaving one life stage and entering another, such as a tadpole changing into a frog.
migration	Either the seasonal travel of an animal between widely separated locations, or the shifting of a river, sand dune, or other topographic feature due to natural processes.
minus tides	Low tides that will be below mean sea level (0 elevation) at their lowest point. Minus tides usually do not occur on a daily basis, but occur twice per month (once during the full moon and once during the dark of the moon). Also referred to as <i>spring low tides</i> .
monitoring	Regularly scheduled testing, sampling, or surveys of defined parameters to determine a condition.
monotypic	Containing a single species.
montane	Pertaining to mountains.
morphological	Referring to the external appearance of an organism.
mud	Substrate particles with diameters between 0.075 and 0.062 millimeters (about 0.003–0.002 inches).
natal	Pertaining to birth. For salmonids, the natal stream is the one in which they were hatched.
native species	Any species of a given geographic location that includes that geographic location within its natural distribution. (<i>Natural distribution</i> in this context is defined as the total geographic area that a species has colonized without human assistance).
nearshore	The shallow waters where sunlight reaching the benthos is sufficient to support the growth of submerged vegetation. Also referred to as the <i>littoral</i> .
nest flushing	Sudden flight of birds from the nest due to fear.

nest predation	Predation on the eggs in the nests of fish and birds and also on the unfledged chicks in birds' nests.
net pen	A type of finfish aquaculture in which the fish being farmed are kept in large, submerged pens made of netting to allow the passage of water.
neurotoxin	A poison that attacks the nervous system and can lead to paralysis and death.
nexus	A nexus, or connection, to the federal government triggers requirements under Section 7 of the Endangered Species Act. A federal nexus occurs when a federal agency funds, authorizes, or carries out a project or activity.
non-native species	A species that is living outside of its natural distribution (having been brought there, intentionally or accidentally, by humans), but is not outcompeting all other species to the point that it is damaging biodiversity. Also referred to as <i>exotic</i> .
non-point source pollution	Pollution that does not come from one specific location, but from many locations along and surrounding a water body.
nonwater-dependent uses	Uses of state-owned aquatic lands that could occur on uplands.
nourishment	The process of replenishing a beach, either naturally by longshore transport, or artificially by deposition of dredged material. Also referred to as <i>beach nourishment</i> .
noxious weeds	Any non-native plant designated by a federal, state, or county government as injurious to public health, agriculture, recreation, wildlife, or property and placed on a noxious weed list.
nutrient flux	Changes in nutrient concentrations in the water column or sediment that occurs over time or in response to environmental factors.
nutrient load	The total concentration of all nutrients in a given water body or section of a water body at a given point in time.
offshore	A type of marine habitat that begins at water depths greater than 20 meters (about 65.6 feet) and encompasses all deeper waters. Offshore habitat begins at a water depth where the level of photosynthetically active radiation (PAR) is certain to be insufficient to support the long-term survival of attached submerged vegetation.
oligotrophic	A water body with low or non-existent nutrient enrichment and low primary productivity rates. The water usually has high oxygen levels and very low turbidity.
ordinal ranking	A ranking system that uses ordinal numbers (1, 2, 3) as opposed to words (high, medium, low).
ordinary high tide	The average of all the high water heights of each tidal day observed over the previous 19 years.

ordinary high water	The water level of a lake or river so common and usual and so long continued in ordinary years as to mark its presence upon the sediment and the vegetation. Ordinary high water is usually delineated by the line of permanent upland vegetation.
ordinary mean high water	See <i>ordinary high tide</i> .
organic matter	Material from a once-living organism or material that includes compounds created by living organisms.
organic carbon content	The concentration of carbon-containing organic compounds.
orphan sites	Leaseholds with a current authorization where all authorized users have gone bankrupt and there is no longer anyone legally responsible for complying with the use authorization.
osmoregulatory	A mechanism by which the osmotic pressure of body fluids is regulated to avoid dehydration or bloating. The mechanism is different for freshwater organisms than for saltwater organisms.
outmigration	The migration of anadromous salmonids from freshwater to saltwater.
outwash fan	The fan-shaped accretion of sediment deposited by the streams emanating from the base of a melting glacier.
oversight	The concept that separate government agencies have authority over each other and monitor each other's actions and decisions.
oxbow lake	A crescent-shaped lake that is formed as a river cuts through a meander channel to shorten its course, causing the old channel to be blocked off.
oxygenation	The process of adding oxygen to the water column, sediment, or other medium.
particulate	A tiny particle of solid matter suspended in air or water.
patch	An area of aquatic vegetation comprising a density of three individuals per square meter (about 10.8 square feet) of substrate.
pectoral fins	The two fins on a fish that are located where arms would be on a human.
pelagic	The water column from the surface down to 5 meters (about 16 feet) above the bottom.
periphyton/periphytic	Belonging to the group of organisms that live attached to submerged plants, rocks, or any other underwater structure other than the benthos.
pesticide	Poisons applied for the purpose of exterminating unwanted organisms. Pesticides include algicides, anti-fouling agents, biocides, fungicides, herbicides, insecticides, piscicides, and microbial pesticides.

pest management	Regulation and management of a species that is defined as a pest. Pest management includes control and deterrence.
pH	A measure of the acidity or basicity of a solution. Solutions with a pH of less than 7 are acidic, solutions with a pH higher than 7 are basic, and solutions with a pH equal to 7 are neutral.
photic zone	The portion of the water column that receives light.
phytoplankton	Photosynthetic organisms that are carried by water currents in both the freshwater and saltwater systems. Phytoplankton includes single-cell green, red, and brown algae, cyanobacteria, dinoflagellates, and coccolithophores.
piscicides	A pesticide that specifically kills fish.
piscivorous	Primarily feeding on fish.
planktivorous/planktivore	Primarily feeding on plankton.
plankton/planktonic	Suspended microorganisms with relatively little power of locomotion that drift in the water and are subject to the action of waves or currents. These include phytoplankton and zooplankton.
pocket water	A section of the stream channel that contains numerous boulders or other large obstructions, which create eddies or scour pockets.
pod	A group of whales or dolphins. Among killer whales (orcas), pods are family groups that are related through a recent, common female ancestor.
point source pollution	Pollution that is discharged from a discrete point or pipe or from several discrete points or pipes.
pool	A topographic depression within a stream channel that is characterized by deeper water, laminar flow, and lower water velocities.
population	A collection of interbreeding organisms of the same species.
possessory interest	The intent and right of a person to occupy or exercise control over a given plot of land.
prairie sloughs	A freshwater wetland where the dominant vegetation is grasses.
predicted habitat	The potential distribution of covered species in Washington as determined by the Washington Gap Analysis. Predicted habitat includes habitat that is appropriate for spawning, foraging, or other uses with or without the documented occurrence of species.
primary consumer	An organism that feeds primarily on plants or algae.
primary production	The biomass produced by plants and algae via photosynthesis.
priority habitat	Habitat types with a unique or significant value to a diverse assemblage of species, as defined by the Washington Department of Fish and Wildlife.

process water	Water used as a coolant for machinery.
productive	Adding a lot of biomass through high rates of photosynthesis.
profundal	The deep part of the water column within a lake, below the extent of light penetration. Also referred to as the <i>aphotic zone</i> .
prop scour	The formation of depressions in the sediment, increased turbidity, and physical uprooting of aquatic vegetation due to the high level of water turbulence produced by boat propellers.
propeller wash	The surface waves produced by the propeller of a boat.
proprietary	The authority provided by ownership of a piece of property.
pseudofeces	The means by which filter feeding bivalves eliminate indigestible particles strained out of the water column. The particles are formed into pellets and expelled.
pump-outs	Facilities that are used to empty vessels' black-water and gray-water holding tanks.
qualitative	A non-numeric value (for example: presence or absence; high, medium, or low).
quantitative	A numeric value.
race	Fish of the same salmon species that also share the same run-time and inhabit the same general geographic area. Within a salmon species, there are multiple races, each with different run-times (spring, summer, or fall), when the salmon return from the ocean to spawn.
redd	A pocket that a female salmonid excavates within the gravel substrate for her eggs.
refuge	An area of habitat that provides protection from predators or disturbance.
refugia	An area that has avoided ecological changes happening elsewhere and therefore still provides suitable habitat for an isolated population of a given species.
reliction	A gradual lowering of the water level that leaves the land permanently dry.
remediation	The removal of pollutants or contaminants from the environment.
resident	For salmonids, refers to spending their entire lives in smaller streams; for southern resident killer whales, refers to spending every spring, summer, and fall in Washington waters.
resource cycling	A natural process whereby resources, such as water or nutrients, are taken up by one individual and then passed on during life or after death.
restoration	The repair, improvement, or reestablishment of the original natural processes at a site where those original natural processes have been damaged or destroyed.

re-suspended	Sedimentary or biological particles that have been swept up from the substrate and suspended in the water column through increased water energy or turbulence.
riffle	Shallow riverine areas characterized by surface water turbulence, high water velocity, and exposed substrate.
rip current	A strong marine surface current flowing seaward from the shore.
riparian	Pertaining to the banks or shoreline of a water body. Riparian areas are transitional between terrestrial and aquatic ecosystems and are distinguished by gradients in biophysical conditions, ecological processes, and biota.
riparian buffers	Bands of terrain on the bank or shoreline of a water body that protect terrestrial lands from erosion and the water body from increased sediment loads. Human activities are typically regulated or controlled within riparian buffers, and buffers typically require maintenance of native vegetation.
riprap	Large boulders stacked against a steep shoreline or piled on a flatter shoreline to protect the shoreline from erosion caused by waves.
risk pathway	A specific path by means of which damage can occur.
riverine	Pertaining to a river or rivers.
root wad	The root mass of a tree, removed from the ground, plus a portion of the tree trunk. Rootwads are usually lined up along river banks to protect the bank from erosion. The roots extend into the water and provide habitat for aquatic species.
run	Fish migration. For salmonids, the term <i>run</i> is often used to refer to a return to the natal stream for spawning.
salinity	A measure of the concentration of dissolved salts in water, generally expressed as either parts per thousand (ppt), or as practical salinity units (psu).
salt pan	A flat expanse of ground covered with salt and other minerals that can form when shallow pools of saltwater evaporate.
salt pond	A shallow brackish embayment, with freshwater input at the head and saltwater input through an inlet from the sea, that may occasionally and temporarily close up. Salinity varies widely and seasonally, depending on the amount of freshwater and saltwater input.
sand	Rocks with a diameter between 0.075 and 4.75 millimeters (about 0.003–0.19 inches).
sand spit	A long, narrow landform created as a result of the deposition of sand by water currents.
scour	The removal of underwater material or re-suspension of sediment by waves, turbulence, and currents.

seasonal flow regimes	The amount of water that flows down a river and how that amount changes with the seasons.
seawall	A structure that separates areas of land from areas of water and is primarily designed to protect land from wave action. A type of hard armoring.
secchi depth	The water depth at which a secchi disk is visible when lowered into a water column. This method is used to measure water turbidity.
secondary consumer	An animal that eats primary consumers.
sediment	Rock and soil particles deposited by water, wind, or glaciers.
sediment load	The amount of sediment being carried suspended in the water column.
sediment storage	Maintaining a build-up of sediment by avoiding re-suspension of sediment.
sediment transport	The movement of sediment particles along a current pathway.
sediment trapping	The removal and storage of sediment from the water column, usually by slowing the flow of water.
sedimentation	The accumulation of sediment particles that have settled out of the water column.
seeps	Springs where water flows through very small openings and at a very slow rate.
seiche	Wind driven oscillation of the surface water of a lake. The phenomenon that occurs when prolonged wind from one direction drives water away from one shore, causing it to “pile up” on the opposite shore. With the cessation of the wind, the water oscillates back and forth, producing a series of standing waves.
semelparous	Only reproducing once in a lifetime, with death occurring shortly after reproduction.
semi-colonial	A nesting strategy whereby a small group of birds nest in relatively close proximity, but each bird defends only its own nest against predators.
sensitive species	Native species that are at risk of decline or are now declining and are likely to become endangered or threatened throughout a significant portion of their range.
sexually dimorphic	A species in which males are externally different from females.
shallow water habitat	Aquatic habitat with water less than 1.5 meters (5 feet) deep.
shear force	The force acting on a substance in a direction perpendicular to the extension of the substance, such as the pressure of air along the front of an airplane’s wing.
sheltered	Protected from the wind and from wave energy. The opposite of <i>exposed</i> .

shoal	Localized shallowing of the water due to an underwater sand bar.
shorebirds	Birds that live, nest, and obtain their food along shorelines or in wetlands. They are often insectivores that dig their bills into the sediment for insects and worms.
shoreline	The area of land at the edge of water bodies that lies between extreme high water and ordinary high water.
shoreline armoring	Physical modifications of the shoreline that are implemented by humans to decrease erosion at a specific location.
shore zone	A zone that extends 100 meters (about 328 feet) from the shoreline, both waterward and landward.
silt	Substrate particles with diameters between 0.062 to 0.004 millimeters (about 0.002–0.0016 inches).
slack water	The turning point of the tide, where all tidal currents briefly cease prior to reversing direction.
slip	See <i>berth</i> .
slump	The slow movement of soil down the slope of a hill. A slump is similar to a landslide, but encompasses the entire hillside and usually slides at the rate of an inch or two per day.
smolt	An anadromous salmonid that has entered or is entering the marine life stage, but is not yet reproductively mature.
smoltification	The physical changes that anadromous salmonids go through during the transition from freshwater to marine life stages.
soft bottom	Unconsolidated habitats comprised of mud, silt, and clay.
soft shoreline protection system	Materials that deflect wave energy and block erosion in a natural fashion, such as beach slopes, vegetation, large woody debris, and root wads.
spat	The post-larval, bivalve life stage that occurs immediately after metamorphosis and attachment to the substrate.
species distribution	A geographic description of where a given species may be found on the planet. Also, a description of how clumped or spread out a given species is within one area.
species richness	The number of different species present in a community. This is considered indicative of the health of the community and is used to compare the diversity of species among ecosystems.
staging	The act of gathering together prior to a communal event.
standard error	A statistical term referring to the estimated error in a series of measurements when compared to the true value.
stock ponds	A pond, often manmade, that serves as a water supply for farm animals.

storm water	Water that originates from precipitation events.
stratification	The natural division of the water column into horizontal layers with differing temperatures or salinity (or both).
stratospheric ozone	The ozone layer, found 9.6 to 48.3 kilometers (6–30 miles) above the ground, which blocks ultraviolet radiation from the sun.
subadult	The life stage between juvenile and adult when some adult characteristics have developed, but the organism is not yet reproductively mature.
subalpine	The biotic zone immediately below the tree line on a mountain. Subalpine trees are often stunted and twisted due to high winds, and shrubs often grow as groundcover.
sublethal effects	Negative effects that do not directly result in death.
subpopulation	A group within a population that is reproductively isolated from the rest of the population. For example, the spring run of Chinook salmon is reproductively isolated from the summer run and is therefore a subpopulation.
substrate	Any surface to which something can attach. Also, any lake, river, or ocean bottom.
substrate composition	All of the grain sizes present in the sediment at a given location.
subtidal	The part of the ocean that is never exposed to the air, even at the lowest low tides. The marine environment below the extreme low tide.
subyearling	See <i>young-of-the-year</i> .
succession	A process whereby the biological community of an area changes over time in response to the environmental alterations made by earlier inhabitants. Succession ends with a climax community that will not alter further until disturbance destroys or damages it and restarts succession.
surface-schooling fish	Fish that typically gather in large groups at or near the surface of the water. Such fish are easy prey for waterbirds and pelagic predators.
suspension feeder	See <i>filter feeder</i> .
tagging studies	A type of animal survey in which individuals are caught, marked with a tag, released and recaptured at a later date to gain information regarding migration, distribution, and changes in physical attributes over time.
tailrace	The downstream part of a dam where the impounded water rejoins the river.
taxonomic	Pertaining to the classification of organisms into groups or referring to one or more of those groups.
terrestrial	Growing on, living on, or particular to the land, as opposed to the aquatic environment.

thalli/thallus	The body of an alga. <i>Thalli</i> is plural; <i>thallus</i> is singular.
thermoregulatory	A mechanism for regulating the internal temperature of an organism.
thread	A river channel.
threatened species	Any species that is likely to become endangered in the foreseeable future.
threshold	A measurable standard for a physical or chemical characteristic that, when exceeded, begins producing a given effect, result, or response.
tidal eddies	Areas of circling water formed when the tidal current hits an obstruction, such as an island or headland.
tidal stage	A given point in the tidal cycle. A given tidal height.
tidally influenced	Lands and waters that see daily fluctuations in water level and salinity due to the tidal cycle of a marine water body. Rivers that empty into an ocean will be tidally influenced for a certain distance upstream.
torrent	A stream or river flowing with great velocity and turbulence.
toxicant	A chemical substance that has a negative impact on organisms. Also referred to as a <i>toxin</i> .
toxin	See <i>toxicant</i> .
transitional reach	A stretch of a river that transitions from one type of habitat to another. Such a transition often includes a change in elevation.
treated wood	Wood treated with chemical preservatives to extend the service life of the wood products.
tributary	A stream or river that flows into a larger stream or river.
trophic	Pertaining to nutrition or nutritional processes. For organisms, this involves the feeding habits or food relationships of different organisms in a food chain. In the case of lacustrine ecosystems, the term <i>trophic</i> refers to a classification system used to describe the productivity status and nutrient richness of lakes.
turbidity	A measure of the cloudiness of water, indicating the quantities of suspended particles and plankton. Higher turbidity results in lower levels of light penetration through the water column.
ultraviolet radiation	A component of sunlight with wavelengths ranging from 10 to 400 nanometers.
unconsolidated habitat	Aquatic habitat comprised of clay, silt, mud, sand, gravel, or cobble substrates, or any combination of those substrates.
undercut banks	Stream banks that have been eroded at the base by water, sometimes leading to the collapse of the top portion due to a lack of support.
upland	Terrestrial land.

upwelling	The process in which northwesterly winds push the upper 100 meters (about 328 feet) of the water column farther offshore, thus enabling the upwelling of relatively cold, high-salinity, nutrient-rich waters from beneath.
vertical dimension	The dimension between the substrate and surface waters. This term is generally used in relation to riverine ecosystems.
vessel scour	See <i>prop scour</i> .
water column	The dimension between the substrate and surface waters.
water quality	The physical, chemical, and biological characteristics of water in relation to a set of standards.
water-dependent use	A use that is authorized by Washington DNR and that cannot exist without being located on or in the water.
watershed	A topographic area where water from rain or snow melt drains downhill into a large body of water, such as a river, lake, or ocean. The watershed includes the streams that carry the water, as well as the land surfaces from which water drains into those streams. Also referred to as a <i>drainage basin</i> or <i>drainage area</i> .
wave boards	A type of floating breakwater comprised of a vertical wall.
wetlands	Lands that are transitional between terrestrial and aquatic systems and are covered by shallow water for a substantial portion of the growing season, as reflected in the plant community and soil profile.
wharf	An overwater platform that is similar to a dock, but is always raised above the water on pilings and attached directly to shore.
wood leachate	Natural or manmade compounds that leach out of wood once it is immersed in water.
wood recruitment potential	The likelihood of woody debris being added to an aquatic ecosystem.
young-of-the-year	Animals less than a year old. Also referred to as <i>subyearling</i> .
zooplankton	Microscopic animals that are carried by water currents.