
GLOSSARY

This glossary contains terms commonly used in fisheries and resource sciences and terms used throughout the National Marine Fisheries Service documents, as defined by laws, regulations, manuals, handbooks and specifications.

Abundance: Refers to the total number of individual organisms in a population or subpopulation. For the Plan, abundance refers to the total number of spawning adults within a population.

Adaptive management: An action-oriented approach to resource management that brings science and management together and allows managers to move forward in the face of uncertainty when dealing with complex ecological problems. Adaptive management tackles uncertainty about the system head-on by identifying clear objectives, developing conceptual models of the system, identifying areas of uncertainty and alternative hypotheses, learning from the system as actions are taken to manage it, updating the conceptual models, and incorporating what is learned into future actions.

Adipose fin: A small fleshy fin found on the back behind the dorsal fin, and just forward of the caudal fin.

Alevin: The larval salmonid that has hatched but has not fully absorbed its yolk sac and generally has not yet emerged from the spawning gravel.

Allele: An allele is an alternate form of a gene (the basic unit of heredity passed from parent to offspring). By convention, the “100 allele” is the most common allele in a population and is the reference for the electrophoretic mobility of other alleles of the same gene. Other genetic terms used in this document include allozymes (alternate forms of an enzyme produced by different alleles and often detected by protein electrophoresis); dendrogram (a branching diagram, sometimes resembling a tree, that provides one way of visualizing similarities between different groups or samples); gene locus (pl. loci; the site on a chromosome where a gene is found); genetic distance (D) (a quantitative measure of genetic differences between a pair of samples); and introgression (introduction of genes from one population or species into another).

Anadromous Fish: Pertaining to fish that spend part of their life cycle in the ocean and return to freshwater streams to spawn, for example salmon, trout, and shad.

Anthropogenic: Caused or produced by humans.

Artificial propagation: See hatchery.

Bacterial Kidney Disease (BKD): A bacterial kidney disease in fish caused by the bacterium *Renibacterium salmoninarum*.

Basin: Region drained by a single river system.

Benthic: Animals and plants living on or within the substrate of a water body

Biodiversity: The variability among living organisms on the earth, including the variability within and between species and within and between ecosystems.

Biological Review Team (BRT): The team of scientists from National Marine Fisheries Service formed to conduct the status review.

Biota: The combined flora and fauna of a region

Brackish Water: A combination of seawater and freshwater.

Captive Broodstock Program: A form of artificial propagation that breeds coho salmon from local genetic stock at a conservation hatchery and releases the produced juveniles into historic coho streams.

Carrying Capacity: The maximum equilibrium number of a particular species that can be supported indefinitely in a given environment.

Channel: A natural or artificial waterway of perceptible extent that periodically or continuously contains moving water. It has a definite bed and banks that serve to confine water.

Channel Complexity: Measure of multiple components determining the makeup of a given waterway. Some of these would include slope, meander, bedload/substrate makeup (i.e. gravel, cobble, boulder, or combination), presence/absence of large instream woody material, thalweg, etc.

Coded-wire Tag (CWT): A small piece of wire, marked with a binary code, which is normally inserted into the nasal cartilage of juvenile fish. Because the tag is not externally visible, the adipose fin of coded wire-tagged fish is removed to indicate the presence of the tag. Groups of thousands to hundreds of thousands of fish are marked with the same code number to indicate stock, place of origin, or other distinguishing traits for production releases and experimental groups.

Cohort: A group of fish that hatched during a given spawning season. When the spawning season spans portions of more than one year, as it does for coho salmon, the brood-year is

identified by the year in which spawning began. For example, offspring of coho salmon that spawned in 1996-1997 are identified as "brood-year 1996." (Synonym: Brood-year).

Conceptual Model: A qualitative model of the system and species life stages with the interrelations between the system and threats shown in diagrammatic form. Several threats are interlinked or Independent and these can be illustrated on the model of the system.

Confluence: A flowing together of two or more streams.

Connectivity: A natural pathway that provides for the movement of organisms from one habitat to another and creates a physical linkage between habitats. Spatial structure should have permanent or appropriate seasonal connectivity to allow adequate migration between spawning, rearing, and migration patches.

Conservation-Reliant Species: Species dependent on enforced protections for survival.

Conveyance: A pipeline, canal (natural or artificial), or similar conduit that transports water from one location to another.

Copepod: Small aquatic crustacean.

Critical Habitat: The specific areas within the geographical area occupied by the listed species, at the time it is listed in accordance with the provisions of the ESA. The habitat has the needed physical or biological features that are essential to the conservation of the species and may require special management considerations or protection.

Culvert: Buried pipe structure that allows streamflow or road drainage to pass under a road.

Cumulative Effects: Cumulative effects are "those effects on the environment that result from the incremental effect of the action when added to past, present and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time" (FEMAT, 1993).

Delisting: A species formally listed as threatened or endangered under the ESA.

Deme: A local population of organisms of one species that actively interbreed with one another and share a distinct gene pool. When demes are isolated for a very long time they can become distinct subspecies or species.

Dependent Population: Populations that rely upon immigration from surrounding populations to persist. They are an "at risk" group that has a substantial likelihood of going extinct within a

100-year time period in isolation, yet receives sufficient immigration to alter their dynamics and extinction risk, and presumably increase persistence or occupancy.

Depensation: The effect where a decrease in spawning stock leads to reduced survival or production of eggs through either 1) increased predation per egg given constant predator pressure, or 2) the "Allee effect" (the positive relationship between population density and the reproduction and survival of individuals) with reduced likelihood of finding a mate.

Desiccation: To dry out thoroughly, dehydrate.

Distinct Population Segment (DPS): A subdivision of a vertebrate species that is treated as a species for purposes of listing under the Endangered Species Act (ESA). To be so recognized, a potential distinct population segment must satisfy standards specified in a FWS or NOAA Fisheries policy statement (See the February 7, 1996, Federal Register, pages 4722 – 4725). The standards require it to be separable from the remainder of and significant to the species to which it belongs.

Diversity: All the genetic and phenotypic (life history, behavioral, and morphological) variation within a population.

Diversity Strata (Recovery Unit): Populations are categorized into diversity strata based on the geographical structure described in Spence *et al.* (2008).

DNA (deoxyribonucleic acid): DNA is a complex molecule that carries an organism's heritable information. The two types of DNA commonly used to examine genetic variation are mitochondrial DNA (mtDNA), a circular molecule that is maternally inherited, and nuclear DNA, which is organized into a set of chromosomes.

Downlisting: The moving of a species from the "Endangered" list to the "Threatened" list under CESA as a result of recovery of population sizes to the point where danger of extinction is less extreme than before, although continued protection is still warranted.

Ecosystem: The physical and climatic features of all the living and dead organisms in an area and are interrelated in the transfer of energy and material.

Effective population size: Used in management of genetic resources to express information about expected rates of random genetic change due to inbreeding and/or genetic drift. Typically the effective population size is lower than the census population size.

Effluent: Discharge or emission of a liquid or gas (usually waste material).

El Nino: A warming of the ocean surface off the western coast of South America that occurs every 4 to 12 years when upwelling of cold, nutrient-rich water does not occur. It causes die-offs of plankton and fish and affects Pacific jet stream winds, altering storm tracks and creating unusual weather patterns in various parts of the world.

Endangered Species Act (ESA): Federal legislation that provides protection for species at risk of extinction. Through federal action and by encouraging the establishment of state programs, the 1973 Endangered Species Act provides for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend.

Endangered Species: Any species which is in danger of extinction throughout all or a significant portion of its range

Endemic: Native to or confined to a certain region

Entrainment: To capture in a diversion by the flow of water.

Ephemeral stream: A stream that flows briefly and only in direct response to local precipitation, and whose channel is always above the water table.

Essential Fish Habitat (EFH): Those waters and substrate necessary for fish spawning, incubation, breeding, feeding, or growth to maturity. These areas include migration corridors and adult holding areas. Essential Fish Habitat must also include wetland/riparian shore that supports vegetation that projects shade/cover over waterways used by listed species.

Escapement: Adult fish that “escape” fishing gear to migrate upstream to spawning grounds. The quantity of sexually mature adult salmon (typically measured by number or biomass) that successfully pass through a fishery to reach the spawning grounds. This amount reflects losses resulting from harvest, and does not reflect natural mortality, typically partitioned between enroute and pre-spawning mortality. Thus, escaped fish do not necessarily spawn successfully.

Estuarine: Relating to an estuary.

Estuary: An area of water which joins marine and freshwater components. As such, these areas are heavily influenced by both tidal and riverine inputs.

Evolutionarily Significant Unit (ESU): A population (or group of populations) considered distinct (and hence a “species”) for purposes of the ESA. A population must meet two criteria in order to be considered an ESU: 1) it must be reproductively isolated from other conspecific population units; and 2) it must represent an important component of the evolutionary legacy of the species.

Extant: A population still existing or persistent.

Extinction: The failure of groups of organisms of varying size and inclusiveness (e.g., local geographic or temporally-defined groups to species) to have surviving descendants.

Extinction risk: In this document, the probability that a given population will become extinct within 100 years. Low probability of extinction is arbitrarily defined for this purpose as 5 percent over 100 years.

Extirpation: Loss of a taxon from a portion of its range.

Extirpated Species: A species that no longer survives in regions that were once part of its range, but that still exists elsewhere in the wild or in captivity.

Exotic Species (Also called Alien, Non-Indigenous or Non-Native Invasive Species): Plants and animals that originate elsewhere and migrate or are brought into an area. They may dominate the local species or have other negative impacts on the environment because they can often outcompete native species and they typically have no natural predators.

Fauna: Animals, especially the animals of a particular region or period, considered as a group

Fecundity: The number of offspring produced per female

Federal Register: The official journal of the U.S. Government, containing public notices and other routine publications. Published daily, the Federal Register includes rules, proposed rules, and notices of Federal agencies and organizations, as well as executive orders and other presidential documents. Fisheries regulations are not considered final until they are published in the Federal Register.

Fish Ladder: Structure that allows fish passage to areas upstream of obstructions (e.g. dams, locks). Fish ladders employ a series of stepped, terraced pools fed with spillover water cascading down the ladder. This allows fish to make incremental leaps upstream from pool to pool to access historical/ancestral habitat upstream...

Fish Screens: Physical exclusion structures placed at water diversion facilities to keep fish from becoming entrained, trapped and dying in a given water body.

Fishery Management Council: A regional fisheries management body established by the Magnuson-Stevens Fishery Conservation and Management Act to manage fishery resources in eight designated regions of the United States

Fishery Management Plan (FMP): A document prepared under supervision of the appropriate fishery management council for management of stocks of fish judged to be in need of

management. The plan must generally be formally approved. An FMP includes data, analyses, and management measures.

Floodplain: Level lowland bordering a stream onto which the stream spreads at flood stage

Flora: Plants considered as a group, especially the plants of a particular country, region, or time.

Focus Population: Populations selected by the recovery team to fulfill biological viability criteria per Spence *et al.* 2008 and be the focus of the CCC coho salmon recovery plan.

Fry: The life stage of salmonids between alevin and parr and must attain a length of at least one inch. They can typically swim and catch their own food. They are sometimes called “fingerlings.”

Functionally Independent Population (FIP): Population having a high likelihood of persisting over 100-year time scales and conform to the original definition of Independent “viable salmonid population.”

Fundamental Unit: A set of units for physical quantities from which every other unit can be generated. A reference unit.

Genetic Drift: The random change of the occurrence of a particular gene in a population; genetic drift is thought to be one cause of speciation when a group of organisms is separated from its parent population.

Gene(tic) Flow: The rate of entry of non-native genes into a population, measured as the proportion of the alleles at a locus in a generation that originated from outside of the population. Can be thought of as the genetically successful stray rate into a population.

Genetic Divergence: The process of one species diverging over time into more than one species.

Genetic Fitness: Generally depicted as the reproductive success of a genotype, usually measured as the number of offspring produced by an individual that survive to reproductive age relative to the average for the population.

Genetic Introgression: Introduction by interbreeding or hybridization of genes from one population or species into another.

Genetic Robustness: Demographic robustness.

Genotype: The genetic makeup, as distinguished from the physical appearance, of an organism or a group of organisms.

Gill net: With this type of gear, the fish are gilled, entangled or enmeshed in the netting. These nets can be used either alone or, as is more usual, in large numbers placed in line. According to their design, ballasting and buoyancy, these nets may be used to fish on the surface, in midwater or on the bottom.

Grilse: Salmon that have returned to their natal river.

Habitat: Areas that provide specific conditions necessary to support plant, fish, and wildlife communities. The natural abode of a plant or animal, including all biotic, climatic, and soil conditions, or other environmental influences affecting life.

Hatchery: Salmon hatcheries typically spawn adults in captivity and raise the resulting progeny in freshwater for release into the natural environment. In some cases, fertilized eggs are out-planted (usually in “hatch-boxes”), but it is more common to release fry (young juveniles) or smolts (juveniles that are physiologically prepared to undergo the migration into salt water). This “outplanting” of fish are released either at the hatchery (on-station release) or away from the hatchery (off-station release). Releases may also be classified as within basin (occurring within the river basin in which the hatchery is located or the stock originated from) or out-of-basin (occurring in a river basin other than that in which the hatchery is located or the stock originated from). The broodstock of some hatcheries is based on adults that return to the hatchery each year; others rely on fish or eggs from other hatcheries, or capture adults in the wild each year.

Hatchery-origin Fish: Also, “hatchery fish”. Fish that have spent some portion of their lives, usually their early lives, in a hatchery (see natural-origin fish.).

Headwaters: The source of a stream. Headwater streams are the small swales, creeks, and streams that are the origin of most rivers. These small streams join together to form larger streams and rivers or run directly into larger streams and lakes.

Heavy Metal: A group that includes all metallic elements with atomic numbers greater than 20, the most familiar of which are chromium, manganese, iron, cobalt, nickel, copper and zinc but that also includes arsenic, selenium, silver, cadmium, tin, antimony, mercury, and lead, among others.

Hook-and-line: A type of fishing gear consisting of a hook tied to a line. Fish are attracted by natural bait that is placed on the hook, and are impaled by the hook when biting the bait. Artificial bait (lures) with hooks are often used. Hook-and-line units may be used singly or in large numbers.

Hybridization: The process of mixing different species or varieties of organisms to create a hybrid.

Hydrologic Unit: A definitive geographical area, typically an entire watershed defined by the United States Geological Survey (USGS).

Inbreeding Depression: Reduced fitness in a given population as a result of breeding of related individuals.

Independent Population: A population that is any collection of one or more local breeding units whose population dynamics or extinction risk over a 100-year time period is not substantially altered by exchanges of individuals with other populations. In other words, if one Independent population were to go extinct, it would not have much impact on the 100-year extinction risk experienced by other Independent populations. Independent populations are likely to be smaller than a whole ESU and they are likely to inhabit geographic ranges on the scale of entire river basins or major sub-basins.

Indigenous: Originating and living or occurring naturally in an area or environment.

Interbreeding: To breed with another kind or species.

Intrinsic Potential: The potential of the landscape to support a fish population.

Invasive Species: See exotic species.

Irreversibility: The trend/probability of a process to continue in only one direction once a tipping threshold has been crossed or met.

Iteroporous: A condition in which a fish may spawn multiple times. Steelhead (*Oncorhynchus mykiss*) and cutthroat trout (*O. clarkii*) display this trait routinely while other Pacific salmonids expire after spawning only once (see semelparous).

Jacks: Precocious male salmonids that return from the ocean to spawn one or more years before full-sized adults of their same cohort return. For coho salmon in California, Oregon, Washington, and southern British Columbia, jacks are typically 2 years old, having spent only 6 months in the ocean, in contrast to adults, which are 3 years old after spending 1½ years in the ocean.

Jeopardize: To reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing reproduction, numbers, or distribution of that species.

Jills (sometimes also called “Jennys”): Female salmonids that have spent only a year at sea but have returned to spawn. This is a relative rarity within the population.

Kelt: A post-spawning salmonid. Salmon or trout that remains in freshwater after spawning in the fall and may return to the ocean. This is extremely rare in salmon and uncommon in trout.

Large Woody Debris: Any large piece of woody material that intrudes into a stream channel, whose smallest diameter is greater than 10cm, and whose length is greater than 1 m.

Limiting Factor: An environmental factor that limits the growth or activities of an organism or that restricts the size of a population or its geographical range.

Listed Species: Any species of fish, wildlife or plant which has been determined to be endangered or threatened under the Endangered Species Act.

Magnuson-Stevens Fishery Conservation and Management Act: Federal legislation responsible for establishing the fishery management councils (FMCs) and the mandatory and discretionary guidelines for Federal fishery management plans (FMPs). This legislation was originally enacted in 1976 as the Fishery Management and Conservation Act; its name was changed to the Magnuson Fishery Conservation and Management Act in 1980, and in 1996 it was renamed the Magnuson-Stevens Fishery Conservation and Management Act.

Mass Wasting: Downslope transport of soil and rocks due to gravitational stress.

Metapopulation: A population of sub-populations which are in turn comprised of local populations or demes. Individual sub-populations can be extirpated and consequently recolonized from other sub-populations. Stability in a metapopulation is maintained by a balance between rates of sub-population extinction and colonization.

Monitoring: Scientific inquiry focused on evaluation of a program in relation to its goals (see Research).

Morphology: Refers to the form and structure of an organism, with special emphasis on external features.

Natal Stream: The stream where a salmonid was produced and hatched.

Natural-origin fish: Also, "natural or wild fish". Fish that are offspring of parents that spawned in the wild. Natural-origin fish spend their entire lives in the natural environment. (See hatchery-origin fish).

Nautical Miles: A unit of length used in sea and air navigation, based on the length of one minute of arc of a great circle. One nautical mile is equal to 1,852 meters.

Pacific Northwest: A region of the northwest United States usually including the states of Washington and Oregon.

Parr: A young salmonid, in the stage between alevin and smolt, which has developed distinctive dark “parr marks” on its sides and is actively feeding in freshwater. Parr marks are vertical oval bars on the flanks of salmon fry that fade completely as the fish go through the smoltification process

Pelagic: Living in open oceans or seas rather than waters adjacent to land or inland waters.

Phenotype: The observable physical or biochemical characteristics of an organism, as determined by both genetic makeup and environmental influences.

Pinniped: Piscivorous aquatic mammals that include the seals, walrus, and similar animals having finlike flippers to use for locomotion.

Polymorphic: Having more than one form (e.g., polymorphic gene loci have more than one allele).

Population: A group of individuals of the same species that live in the same place at the same time and exhibit some level of reproductive isolation from other such groups. In some contexts, a randomly mating group of individuals that is reproductively isolated from other groups. A population may consist of a single isolated run or more than one connected run.

Population size: In this document, is the number of adult fish in the population. Also known as census size of the population.

Potentially Independent Population (PIP): Populations having a high likelihood of persisting in isolation over 100-year time scales, but are too strongly influenced by immigration from other populations to exhibit independent dynamics.

Precocious: Early arrival of sexual maturity. Some precocious males (jacks) return after only six months of ocean residence.

Predation: The act of acquiring sustenance and nutrition by killing and consuming living animals.

Primary Constituent Elements (PCE): A physical or biological feature essential to the conservation of a species for which its designated or proposed critical habitat is based on, such as space for individual and population growth, and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, rearing of offspring, and habitats that are protected from disturbance or are representative of the species historic geographic and ecological distribution.

Principal component analysis (PCA): A statistical technique that attempts to explain variation among several variables in terms of a smaller number of composite independent factors called principal components.

Progeny: An offspring or a dependent.

Proposed Rule: When one of the agencies of the United States wishes to add, remove, or modify a regulation, they inform the public through the administrative process called a proposed rulemaking. The public can comment on proposed rules. Rules are incorporated in the Code of Federal Regulations when approved.

Recovery: The reestablishment or rehabilitation of a threatened or endangered species to a self-sustaining level in its natural ecosystem. NMFS (2010) defines recovery as: "...the process by which listed species and their ecosystems are restored and their future safeguarded to the point that protections under the ESA are no longer needed."

Recovery Domain: The geographic area for which a Technical Recovery Team is responsible.

Recovery Plan: Under the ESA, a document identifying actions needed to improve the status of a species or ESU to the point that it no longer requires protection.

Recovery Supplementation: Short-term artificial propagation designed to reduce the risk of extinction of a small or chaotically fluctuating recovering population in its natural habitat by temporarily increasing population size using recovery hatchery fish, while maintaining available genetic diversity and avoiding genetic change in the natural and hatchery populations.

Redd: Nest-like depression constructed by female salmonids facilitating increased hyporheic flow for developing eggs and alevins. A type of fish-spawning area associated with running water and clean gravel.

Refugia: An area where special environment circumstances occur, enabling a species to survive in specific life stages.

Research: Scientific inquiry focused on answering original questions or increasing knowledge. May consist of experiments, systematic observations, or original descriptions of structures, relationships, and processes.

Restoration Potential: The potential for returning a damaged habitat, watershed or ecosystem to a condition or function that is (1) similar to pre-disturbance, or (2) self-sustaining and in equilibrium with the surrounding landscape and ecological processes necessary for carrying out the basic life history functions of target organisms. An area characterized as having a high restoration potential would be considered to have a high likelihood of returning to this

condition or function. Conversely, an area with low restoration potential would have little to no likelihood of returning to this condition or function.

Riparian Area: An area with distinctive soils and vegetation between a stream or other body of water and the adjacent upland. It includes wetlands and those portions of floodplains and valley bottoms that support riparian vegetation.

Riparian Vegetation: Vegetation growing on or near the banks of a stream or other body of water in soils that exhibit some wetness characteristics during some portion of the growing season.

Rip-rap: Layer of large, durable materials (usually rock) used to protect a stream bank or lake shore from erosion.

Riverine: Habitat within or alongside a river or channel.

River kilometer (RKM): Distance, in kilometers, from the mouth of the indicated river. Usually used to identify the location of a physical feature, such as a confluence, dam, waterfall, or spawning area.

Run: The spawning adults of a given species that return to a stream during a given season (*e.g.* winter run).

Salmon or salmonid: Any of various large food and game fishes of the family Salmonidae, the biological Family which includes the salmon, trout, and whitefish (genera *Salmo* and *Oncorhynchus*), of northern waters, having delicate pinkish flesh and characteristically swimming from salt to fresh water to spawn.

Salmon Fishery Management Plan: Any of a variety planning documents relating to salmon fisheries implemented or enforced by Federal or State, or local agencies.

Scope: The geographic area of the threat to the species or system. Impacts can be widespread or localized.

Sedimentary Rocks: Rocks formed by the deposition of sediment. Sediment: solid fragments of inorganic or organic material that comes from the weathering of rock and are carried and deposited by wind, water, or ice.

Sedimentation: Deposition of materials suspended in water or air, usually when the velocity of the transporting medium drops below the level at which the material can be supported.

Seine: A large fishing net made to hang vertically in the water by weights at the lower edge and floats at the top.

Self-sustaining Population: A population that perpetuates itself without human intervention, without chronic decline, and in its natural ecosystem, at sufficient levels that listing under ESA is not warranted.

Semelparous: Reproducing only once in a lifetime. Most salmon are semelparous, and die after spawning (see also interparous).

Severity: A measure of the level of damage to species or system(s) that can reasonably be expected within 10 years under current circumstances. Severity ranges from total destruction down to slight impairment.

Smolt: (Verb) - The physiological process that prepares a juvenile anadromous fish to survive the transition from fresh water to salt water. (Noun) - A juvenile anadromous fish that has made those physiological changes.

Smoltification: Describes the process by which salmonid fish acclimate metabolically over time from fresh water to marine environments as they emigrate from their natal streams to the ocean. During this process, parr marks fade and the fish takes on a silver color.

Spawner surveys: Spawner surveys utilize counts of **redds** (nests dug by females in which they deposit their eggs) and fish carcasses to estimate spawner escapement and identify habitat being used by spawning fish. Annual surveys can be used to compare the relative magnitude of spawning activity between years.

Spawner-to-spawner Ratio: Several measures are employed to estimate the productivity of salmon populations. The spawner-to-spawner ratio estimates the number of spawners (those fish that reproduced or were expected to reproduce) in one generation produced by the previous generation's spawners. A spawner-to-spawner ratio of 1.0 indicates that, on average, each spawner produced one offspring that survived to spawn. The recruit-to-spawner ratio estimates the number of recruits (fish that are available for harvest in addition to those that bypass the fishery to spawn) produced by the previous generation's spawners.

Species: A fundamental category of taxonomic classification, ranking below a genus or subgenus and consisting of related organisms capable of interbreeding.

Splash Dam: A dam built to create a head of water for driving logs downstream.

Stochastic: The term is used to describe natural events or processes that are random and unpredictable. Examples include environmental conditions such as earthquakes and severe storms, or life-cycle events, such as radically changed survival or fecundity rates.

Stock: See population.

Stock transfer: Human-caused transfer of fish from one location to another, typically in the context of out-of-basin or out-of-ESU transfers.

Stratified Random Sampling (SRS): Provides an estimate of the number of spawners in a given area based on spawner counts in both standard and supplemental surveys.

Straying: Occurs when some adult salmonids spawn in a stream other than the one they were produced in. Straying may be influenced by hatchery practices, water quality or water diversions.

Take: As defined by the Endangered Species Act, take refers to activities that harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt to engage in any such conduct to a listed species.

Technical Recovery Team (TRT): An appointed group of fishery experts, led by the NMFS Southwest Fisheries Science Center, and charged with development of technical documents providing the foundation for the development of recovery plans.

Thalweg: A line defining the deepest continuous portion of a valley, stream or waterway. Sometimes referred to as the “valley line”.

Thermocline: That layer in a body of water where the temperature difference is greatest per unit of depth. It is the layer in which the drop in temperature equals or exceeds one degree C. (1.8 degrees F) per meter (39.37 inches).

Threatened Species: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Total Maximum Daily Load: The amount of pollutant that a water body can receive and still meet water quality standards. These levels are set by the Environmental Protection Agency.

Tributary: A stream that flows into a larger stream or other body of water.

Trophic Levels: Hierarchical tiers within a food web system (*e.g.* top predator or primary producer).

Turbid: Water that is not clear, having sediment or foreign particles stirred up or suspended.

Viability: The likelihood that a population will sustain itself over a 100-year time frame.

Viable Salmonid Population: An independent population of any Pacific salmonid (genus *Onchorhynchus*) that has a negligible risk of extinction due to threats for demographic variation

(random or directional), local environmental variation, and genetic diversity changes (random or directional) over a 100-year time frame

Watershed: The region draining into a river, river system, or other body of water

Weir: A notch or depression in a dam or other water barrier through which the flow of water is measured or regulated. Also, a barrier constructed across a stream to divert fish into a trap or to raise the water level or divert water flow

Wetland: An ecological community such as a marsh or swamp that is permanently or seasonally saturated with moisture.

Zooplankton: Non-photosynthetic, heterotrophic planktonic organisms, including protists, small animals, and larvae, which exist within the water column.