

9 Glossary

Aquatic habitat: Areas associated with water that provide food and cover and other elements critical to the completion of an organism's life cycle (e.g., bogs, swamps, riparian areas and streams).

Avoidance: Minimizing the effects of an undertaking on fish habitat through the identification and bypassing of areas of concern to fisheries.

Bedload: Particulates that are transported along the channel bottom in the lower layers of stream flow by rolling and bouncing.

Best Practices (BPs): A practice or combination of practices that are determined to be the most technologically and economically feasible means of preventing or managing potential impacts.

Berm: A ridge or small dyke that breaks the continuity of a slope.

Buffer: An area left undisturbed between a leave area and work site.

Bioengineering: The use of living plant materials to perform some engineering function (e.g., enhanced soil stability).

Check dam: A small dam constructed in a ditch or similar place to decrease water velocity and promote the accumulation of sediment.

Cofferdam: A watertight enclosure built in a shallow river or creek that is pumped dry to allow construction activities in the isolation of flowing water.

Compensation: "The placement of natural habitat, increase in the productivity of existing habitat or maintenance of fish production by artificial means in circumstances dictated by social and economic conditions, where mitigation techniques and other measures are not adequate to maintain habitats for Canada's fisheries resources" (DFO, 1986).

Contaminated site: An area of land in which the soil, surface water or groundwater contains harmful substances in quantities or concentrations that exceed specified criteria, standards, or conditions.

Critical habitat: Habitat that is necessary for the survival or recovery of a listed species and which may be identified as critical in the species' recovery strategy. Critical habitat may be legally identified by the federal government (*Species at Risk Act*, 2[1]).

Deleterious substance: Any substance harmful to fish or fish habitat.

DFO: Department of Fisheries and Oceans, also Fisheries and Oceans Canada.

Diversion dam: A barrier built within the active channel of a watercourse in order to divert water along a different flow path.

Diversion ditch: A ditch that directs water and silt into stabilized areas away from a watercourse.

Due diligence: A legal term that requires individuals on the job to maintain a reasonable standard of care. This term applies to environmental precautions but also to other areas such as safety, for example.

Dyke: An impervious elongated mound of earth constructed to confine water or another liquid from entering or leaving an area of land.

Erosion: The wearing away of soil and rock by water and wind action.

Environmentally Sensitive Areas (ESAs): Areas requiring special management attention to protect important scenic values, fish and wildlife resources, historical and cultural values, and other natural systems or processes.

Fish: The term “fish” includes “shellfish, crustaceans, marine animals, and the eggs, spawn, sperm, spat and juvenile stages of fish, shellfish, crustaceans and marine animals” (*Fisheries Act*).

Fish habitat: The *Fisheries Act* defines fish habitat as “spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes”. Fish habitat comprises physical, chemical and biological attributes of the freshwater, estuarine, marine and terrestrial (riparian) environment that directly or indirectly support fish populations.

Fisheries Sensitive Zone (FSZ): An area that comprises the watercourse as well as associated riparian areas. Includes in-stream aquatic habitats, as well as the out-of-stream habitat features such as side channels and wetlands.

Fisheries window: Also referred to as the reduced risk window, timing window, or instream window. A time of reduced risk for important commercial, sport and resident fish species when instream construction is permitted.

Fragmentation: A process whereby large, connected ecological units (e.g., woodland) are transformed into one or more smaller patches surrounded by disturbed areas. This often results in the loss of continuous linkages used by wildlife for movement, food and shelter.

Grade: The slope of road, channel, or natural ground.

Geotextile fabric: A synthetic material placed under erosion control material (i.e., riprap), with the primary functions of layer separation, aggregate confinement and distribution of load.

Harmful Alteration, Disruption or Destruction of fish habitat (HADD): The DFO defines HADD of fish habitat as “any change in fish habitat that reduces its capacity to support one or more life processes of fish”.

Habitat: The place where an organism lives and the conditions of that environment including the soil, vegetation, water and food.

Glossary

Habitat enhancement: Any manipulation of habitat that improves its value and ability to meet the specified requirements of one or more species.

Impervious surface: Surfaces that prevent water from returning back into the ground, such as paved highways, roads, parking lots, roofs and compact soils.

Invasive species: Plants and animals that colonize and take over the habitats of native species. Most invasive species are also alien (non-native) to the area and can become dominant since natural population controls (e.g., predators, disease) in their native environment do not occur in their new location.

Leave area: The area of land and vegetation adjacent to an aquatic area that is to remain in an undisturbed state, throughout and after works.

LWBC: Land and Water British Columbia

Migration: Fish movements between two or more separate habitats (e.g., from over-wintering habitat to spawning habitat).

Mitigation: Actions taken during the planning, design, construction, and operation of a project to control, reduce or eliminate a potential adverse impact of a project.

MoE: BC Ministry of Environment, the Ministry formerly known as the Ministry of Water, Land and Air Protection (WLAP).

MoT: BC Ministry of Transportation and Infrastructure

MoU: Memorandum of Understanding between the Ministry of Transportation and Infrastructure and the Ministry of Environment

No Net Loss: A working principle of the Federal DFO which strives to balance unavoidable habitat losses through avoidance, mitigation, and habitat replacement on a project-by-project basis. (DFO, 1986).

Nursery habitat: Habitat where juvenile fish feed or take refuge (e.g., backwater areas, shallow creek margins).

Results-based performance standards: Typically define a maximum permissible disposal or impact threshold. For example, the concentration of a particular chemical in waste water discharge or a receiving environment; minimum in-stream flow levels; forest age class distribution within a defined zone. Requiring users of the environment to stay within the established threshold is presumed to achieve the environmental goal that the standard relates to. Results-based performance standards must be scientifically supported, as locally-relevant as possible, accepted by the public and stakeholders, enforceable by being capable of being measured, and affordable and feasible to implement (Brown, 2002)

Revegetation: The re-establishment of vegetation in disturbed areas.

Riparian vegetation: Vegetation adjacent to a watercourse, lake, swamp, or spring, that is generally critical for wildlife cover, fish food organisms, stream nutrients and large organic debris, and for stream bank stability.

Riprap: Rock or stone placed on earth surfaces for protection of the soil against the erosive action of flowing water or precipitation.

Risk: the probability that an undesirable event will or will not occur. It is the product of the probability of the event taking place, the probability of being exposed to the event, and the probability of certain outcomes occurring if exposure did take place. Risk can be statistically quantified in a risk assessment. (Dunster and Dunster 1996).

Salmonid: A general term that collectively refers to salmon species, trout and char.

Sediment: Particulate matter that is entrained within, or settled out from, water.

Silt: The fine-particulate fraction of sediment.

Silt fence: A synthetic barrier erected to restrict the movement of unconsolidated material from a disturbed area to any sensitive areas.

Standard: quantifiable and measurable thresholds that are typically defined in law or regulation, and are mandatory. A statement that outlines how well something should be done, rather than how it should be done. A standard does not necessarily imply fairness or equity, nor an absolute knowledge of cause-and-effect linkages. Standards are typically established using a combination of best available scientific knowledge, tempered by cautious use of an established safety (caution) factor. (Dunster and Dunster 1996).

Stewardship: caring for the land and associated resources so that healthy ecosystems can be passed on to future generations. (Dunster and Dunster 1996).

Stream: A watercourse, having an alluvial sediment bed, formed when water flows on a perennial or intermittent basis between continuous definable banks.

Substrate: The bottom or bed materials of a water body or watercourse in which plants and organisms live and grow.

Suspended solids: Particulate matter, such as silt or clay that is entrained within a water column (i.e., has not settled to the substrate)

Spawning habitat: Fish habitat associated with the breeding of fish.

Watercourse: Any channel carrying water, either continuously or intermittently.

Wildlife tree: A standing live or dead tree with special characteristics that provide valuable habitat for wildlife. Characteristics include large diameter

Glossary

and height for the site, current use by wildlife, declining or dead condition, value as a species, valuable location, and relative scarcity.

WLAP: British Columbia Ministry of Water, Land and Air Protection, the former name of the present Ministry of Environment.

Woody debris: Sound and rotting logs and stumps that provide cover for fish and wildlife.