Chapter 8

Glossary

8.0 GLOSSARY

Acclimation – A process of physiological adjustment by an organism to environmental change.

Adaptive Management – A process in which actions or a set of actions are taken. The effects of these actions are evaluated in terms of achieving overall goals, the actions are modified if they are not achieving the intended results, and information from early efforts is used to guide later efforts.

Aesthetic – Having to do with the outward appearance or visual properties. Especially used to describe preferable features.

Algae – Aquatic, nonflowering plants that lack roots and use light energy to convert carbon dioxide and inorganic nutrients (such as nitrogen and phosphorus) into organic matter by photosynthesis. Common algae include dinoflagellates, diatoms, seaweeds and kelp.

Alternative actions – A reasonable range of options that can accomplish the objectives of a proposed action (e.g., alternative locations for the proposed action). Under the National Environmental Protection Act (NEPA), the alternatives are analyzed in the same depth as the proposed action in an environmental impact statement (EIS) to provide a thorough comparison. In addition, a no-action alternative should be included in environmental impact analysis. (See also National Environmental Policy Act [NEPA].)

Ambient – Surrounding; of the surrounding area or environment.

Anadromous – Fish that spend their adult life in the sea but swim upriver to freshwater spawning grounds to reproduce (e.g., most Pacific species of salmon).

Animal and Plant Health Inspection Service (APHIS) – A U.S. Department of Agriculture (USDA) agency that administers the Animal Welfare Act. Within APHIS, Animal Care is the department that is responsible for ensuring compliance with the Animal Welfare Regulations.

Animal Welfare Act (AWA) – The Animal Welfare Act regulates the treatment of animals in research, exhibition, transport, and by dealers.

Anthropogenic – Of or relating to the influence of human beings on nature.

Archaeological Resource – Any physical remains of a past human culture that are found in a physical context, either on or below the surface of land or water, and that are capable of contributing to the understanding of the history of a people or place. Includes but is not limited to: pottery, basketry, bottles, weapons and weapon projectiles; tools of stone, bone or other material; structures or remains of structures such as foundations or house pits; rock art including painting, carving, intaglios; graves including human skeletal remains and associated artifacts; or any portion or piece of any of these items. Does not include paleontological materials unless found in a cultural context.

Architectural Resource – Any building, structure, district, or object constructed by humans.

Area of Concern – As defined by Washington State's Coastal Zone Management Program (CZMP), an Area of Concern is: (1) a resource feature of environmental value considered to be of greater than local significance or concern; (2) an area of particular concern by state or federal legislation, administrative and regulatory programs, or land ownership; or (3) an area that has the potential for more than one major land or water use or has a resource sought by ostensibly incompatible users. The Hood Canal is an Area of Concern.

Bathymetry – The measurement of water depth at various places in a body of water and the information derived from such measurements.

Benthic – Pertaining to the bottom of a sea or stream.

Best Management Practice (BMP) – Any practice proven effective in erosion control and management of surface runoff.

Bioaccumulation – A general term for the accumulation of substances, such as pesticides (e.g., DDT), methylmercury, or other organic chemicals in an organism or part of an organism. This results in a greater concentration in the organisms than their surrounding environment.

Biochemical Oxygen Demand (BOD) – The quantity of oxygen-demanding materials present in a sample as measured by a specific test. A major objective of conventional wastewater treatment is to reduce the biochemical oxygen demand so that the oxygen content of the water body will not be significantly reduced. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act (CWA).

Blubber – A dense, vascularized layer of fat beneath the skin of most marine mammals. Functions of blubber include energy storage, buoyancy, insulation, and structure.

Bulkhead – A retaining structure, usually vertical, which separates lake, river, or ocean waters from the land.

Canine Distemper Virus – A contagious, incurable, often fatal, multisystemic viral disease of the genus *Morbillivirus* that affects the respiratory, gastrointestinal, and central nervous systems. Primarily infects dogs but has also been observed in seals.

Carcinogen – A substance or agent that has been demonstrated to cause or produce cancer in mammals, including humans.

Causeway – A raised roadway over a body of water.

Cetacean – A word used to describe an animal in the Order Cetacea, which includes all whales, dolphins, and porpoises.

Clean Air Act – The Clean Air Act (42 USC 7622, Public Law 95-95) provides for protection and enhancement of the nation's air resources.

Clean Water Act – The Clean Water Act (CWA) (33 USC 1251), as amended, regulates actions potentially affecting the quality of waters of the United States.

Cleanup Screening Levels – Specified criteria of minor adverse effects that separate areas defined as potential concern and areas defined as low concern, per the procedures identified in WAC 173-204-510 (2).

Coastal Zone Management Program (CZMP) – The CZMP is a voluntary state-federal partnership which encourages states to adopt their own management programs to meet the federal goals of protection, restoration, and appropriate development of coastal zone resources. The states have broad latitude to adapt federal goals to state and local circumstances, needs, and legal traditions.

Coliform Bacteria – A type of bacteria that is coil or helix shaped. Fecal coliform bacteria are those coliform bacteria that are found in the intestinal tracts of mammals. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated waste water and/or the presence of animal feces. These organisms may also indicate the presence of pathogens, such as viruses, that are harmful to humans.

Combat Swimmer – Swimmers who can respond to security alerts by finding, identifying, and interdicting underwater objects or intruders.

Council on Environmental Quality (CEQ) – An advisory council to the President of the United States established by the National Environmental Protection Act (NEPA) of 1969. The CEQ reviews Federal programs for their effect on the environment, conducts environmental studies, and advises the president on environmental matters.

Critical Habitat – An area designated as critical habitat listed in 50 CFR Parts 17 or 226 (50 CFR §402.02). Critical habitat areas are specific geographic areas, whether occupied by special-status species or not at the time of listing, that are determined to be essential for the conservation and management of special-status species, and that have been formally described in the Federal Register. Critical habitats contain physical or biological features essential to conservation, and those features may require special management considerations or protection. Critical habitats may be specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation.

Cultural Resource – A fragile and nonrenewable remnant of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, or natural features.

Cultural Resource Inventory – A descriptive listing and documentation, including photographs and maps, of cultural resources. Processes involved include locating, identifying, and recording sites, structures, buildings, objects, and districts through library and archival research; collecting information from persons knowledgeable about cultural resources; and conducting on-the-ground field surveys of varying levels of intensity.

Cumulative Impact – The effect on the environment that results from the incremental effect of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (See also Effects.)

Decibel (dB) – A unitless measure of sound level based on a logarithmic scale

A-Weighted Decibel (dBA) – An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

dB re 1µPa at 1m – Decibels referenced at 1 micropascal and 1 meter from the source point.

dB_{PEAK} – Peak sound level expressed in decibels. This term is used to describe the maximum (peak) sound pressure level of noise.

dB_{RMS} – Root mean square pressure is the mean of the square of the sound pressure level over a specified time period, expressed in decibels. This term is used to describe the average sound pressure level of noise over a given duration.

Demersal – Living near or deposited on the bottom of the sea.

Deployment – In the case of swimmer interdiction security system (SISS), deployment refers to the initiation of movement of forces within areas of operation. In the case of the U.S. Navy Marine Mammal Program (MMP), deployment refers to commencing the utilization of the marine mammals in the field as they have been trained.

Detritus – Dead organic matter and the decomposers that live on it; when broken up by decomposers, detritus provides energy to many coastal ecosystems.

Diatom – Single-celled algae, mostly photosynthetic, that form silica cell walls and can grow singly, in chains or in simple colonies. Diatoms often float near the surface, are usually the first organism in a food chain or food web, and are a common component of plankton.

Diameter at Breast Height – Outside bark diameter at breast height where breast height is defined as 4.5 feet (1.37 meters) above the forest floor on the uphill side of the tree. This measurement has traditionally been used by foresters in making such calculations as growth and timber volume in a single tree or stand of trees.

Dinoflaggelate – A single-celled organism found in fresh and marine waters with characteristics of both plants (eg, photosynthesis) and animals (eg, uses outside organic sources of nutrition). Many harmful algae blooms are caused by dinoflagellates.

Dissolved Oxygen (DO) – Oxygen that is present (dissolved) in water and therefore available for fish and other aquatic animals to use. If the amount of dissolved oxygen in the water is too low, then aquatic animals may die. Wastewater and naturally occurring organic matter contain oxygen-demanding substances that consume dissolved oxygen.

Diurnal – Active predominately during the daytime (antonym: nocturnal).

Domoic Acid – A neurotoxin that can contaminate fish or shellfish. Produced by some diatoms, it can poison vertebrates who consume contaminated fish or shellfish.

Echolocation – The process whereby the distance and direction of objects is determined by the reception of the reflection of an ultrasonic pulse. Animals (e.g., dolphins, bats) use a high frequency echolocation to locate objects in the surrounding environment.

Ecotype – An isolated population of species that verges on its own taxonomic subspecies due to isolated environmental conditions and environmental selection.

Effects (Impacts) – Consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be direct or indirect:

Direct Effects – Caused by the action and occur at the same time and place.

Indirect Effects – Caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable, or cumulative.

El Niño – A large-scale warming of the Pacific Ocean that is centered along the Equator.

Elute – To wash out with a solvent or extract one material from another.

Endangered Species Act (ESA) – Provides for the conservation of endangered or threatened species and the ecosystems on which they depend.

Endotoxin – A naturally occurring toxin in bacteria/pathogens that is released when bacteria are lysed (broken open).

Environmental Justice – The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Epibenthos – Organisms that live on the surface of the bottom of a body of water.

Epiphyte – A plant growing on, but not parasitic on, another plant.

Escapement – The number of fish allowed to escape harvest in order to spawn.

Essential Fish Habitat (EFH) – The Sustainable Fisheries Act of 1996 (Public Law 104-297) establishes requirements for EFH descriptions in Federal Fishery Management Plans (FMPs). EFH includes those habitats that support the different life stages of each managed species. A single species may use many different habitats throughout its life to support breeding, spawning, nursery, feeding, and protection functions. EFH encompasses those habitats necessary to ensure healthy fisheries now and in the future. (See also Fishery Management Plan [FMP].)

Evolutionarily Significant Unit (ESU) – A term used by the National Marine Fisheries Service to describe a population or group of populations that is considered distinct (and hence a species) for purposes of conservation under the Endangered Species Act (ESA). To qualify as an ESU, a population must (1) be reproductively isolated from other conspecific populations, and (2) represent an important component in the evolutionary legacy of the biological species.

Explosive Ordnance Disposal (EOD) – Highly trained, skilled technicians who are experts in explosives, diving, and parachuting. EOD technicians share the task of rendering safe and disposing of explosive material. They support the U.S. Department of Homeland Security, U.S. Customs Office, and the FBI as well as state and local police bomb squads. EOD technicians also assist in security at large international events.

Extraordinary Quality – The Washington Department of Ecology designation for waterbodies that meet the goal of providing high quality water sufficient to support salmonid and other fish migration, rearing, and spawning; clam, oyster, and mussel rearing and spawning; and crustaceans and other shellfish (crabs, shrimp, crayfish, scallops, etc.) rearing and spawning.

Fecal Coliform – Bacteria present in mammalian feces. Elevated measurements of these bacteria in surface waters may indicate the presence of warm blooded animal waste. Most probable number (MPN) is widely used as the measurement of fecal coliform. MPN is a statistically determined number that represents the number of bacteria most likely present in a sample, based on test data.

Fetch – Distance over which wind acts on the water surface to generate waves; also, the distance that wind and waves can travel toward land without being blocked.

Fishery Management Plan (FMP) – The Sustainable Fisheries Act of 1996 (Public Law 104-297) establishes requirements for Essential Fish Habitat (EFH) descriptions in FMPs and requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on activities that would adversely affect EFH (50 CFR 600). FMPs are required for all commercially and recreationally significant species or fisheries that comprise state marine or estuarine resources. The goal of these plans is to ensure long-term viability of these fisheries.

Fjord – A long, narrow bay with steep sides, created in a glacially carved valley that is filled by rising sea water levels.

Forage Fish- Small schooling species that are important food organisms for a wide variety of animals including seabirds, marine mammals, and predatory fish. They feed mainly on zooplankton and phytoplankton and reside in the upper levels of the water column and in nearshore areas.

Formerly Restricted Data (FRD) – Classified information that has been removed from the Restricted Data category after the Department of Energy and the Department of Defense have jointly determined that it relates primarily to the military utilization of atomic weapons and can be adequately safeguarded as national security information.

Fouling Community – This term is commonly employed to distinguish the assemblages of animals and plants that grow on artificial structures (e.g., piers, docks, piles) from those occurring on rocks, stones, and other natural objects.

Fugitive Dust – An airborne particulate emission of anthropogenic (e.g., construction sites) or natural origin**.**

Geographic Information System (GIS) – An organized collection of computer hardware, software, geographic data, and personnel designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information.

Global Positioning System – A system of satellites and receiving devices used to compute positions on the earth.

Groundfish – Marine fish species that live on or near the sea bottom for most of their adult lives (e.g., English sole, rockfishes, Pacific cod, and Pacific hake).

Groundwater – Any water naturally stored underground in aquifers, or that flows through and saturates soil and rock, supplying springs and wells.

Hardpan – Various types of soils that are relatively impermeable and support perched water tables during winter months.

Hood Canal Coordinating Council (HCCC) – A watershed-based council of governments that monitors water quality problems and related natural resource issues in the Hood Canal watershed.

Hood Canal Dissolved Oxygen Program (HCDOP) – A partnership of 28 organizations that conducts monitoring and analysis and develops potential corrective actions to address the low dissolved oxygen problem in Hood Canal.

Hydrodynamics – The motions and forces of fluids and how they act on solid bodies.

Hydrography – The study of waters (including oceans, lakes, and rivers) embracing either their physical characteristics, from the standpoint of the oceanographer or limnologist; or the elements affecting safe navigation, from the point of view of the mariner.

Hypothermia – A lowering of body core temperature caused by losing heat faster than the body can produce.

Immunosuppressed – The state of having a damaged and/or weakened immune system and, therefore, increased susceptibility to illness.

In-Migration – With reference to salmonids, this is the migration from the ocean to rivers for spawning.

Integrated Natural Resources Management Plan (INRMP) – A Department of Defense (DoD) report delineating the use and conservation of natural resources on a military base. It is often a primary source of information for an environmental assessment (EA) or environmental impact statement (EIS).

Interdiction – An interception and prohibition in a usually formal or authoritative manner.

Intertidal Zone – The zone of marine habitat that is part of the littoral zone above the low-tide mark.

Irretrievable commitment – A loss of production or use of resources as a result of a decision. It represents opportunities forgone for the period of time that a resource cannot be used. Irretrievable refers to the permanent loss of a resource including extinction of a threatened or endangered species, disturbance of a cultural site, loss of land production, or use of natural resources (including minerals and coal). For example, production or loss of agricultural lands can be irretrievable, while the action itself may not be irreversible.

Irreversible commitment – This is related to the use of nonrenewable resources, such as soils, wetlands and visual resources, and the effects that the uses of these resources would have on future generations. Such actions are considered irreversible because their implementation would affect a resource that has deteriorated to the point that renewal can occur only over a long period of time or at great expense, or because they would cause the resource to be destroyed or removed.

Joint Aquatic Resources Permit Application (JARPA) – Multiple regulatory agencies (federal, state, and local) use this application to streamline the environmental permitting processes.

La Niña – La Niña is a large-scale cooling of the Pacific Ocean that is centered along the Equator.

Loudhailer – Similar to a megaphone, an underwater loudhailer can broadcast clear, intelligible speech to a distance of 500 yards underwater.

Lower Critical Temperature (LCT) – The temperature threshold for an organism when its basal metabolic rate increases in order to maintain body temperature.

Macroalgae – Multicellular algae that is large enough to be observable by the naked eye (e.g., sea lettuce).

Marine Mammal Protection Act (MMPA) – Established in 1972 to restrict take, possession, transportation, selling, offering for sale, and importing marine mammals. The act is administered by the National Marine Fisheries Service except for those marine mammals considered threatened or endangered that are regulated by the U.S. Fish and Wildlife Service under the Endangered Species Act (ESA).

Mean High Water of Spring Tides – The level of the average spring high tide just after full or new moon.

Mean Higher High Water – The average of the higher of the two high water tides of each day.

Mean Lower Low Water (MLLW) – The average of the lower of the two low water heights of each tidal day.

Metabolic Rate – The amount of energy an animal expends performing all of the chemical processes needed to support life. It contributes to keeping the body temperature stable.

Mitigation – A method or process by which impacts from actions may be made less injurious to the environment through appropriate protective measures.

On-Site – To mitigate a disturbance or removal of a resources such as a wetland, where the resource originally occurred.

Off-Site – To mitigate a disturbance or removal of a resource such as a wetland, in an area removed from the original site.

Morbillivirus –A genus of virus that causes disease in several species of marine mammals. Communicable among marine mammal populations, morbillivirus has been shown to cross over species, increase susceptibility to other diseases, and cause epizootics (outbreaks).

Mutagen – A substance that is capable of causing damage to genes (mutations).

National Environmental Policy Act (NEPA) – Passed by Congress in 1969, NEPA requires federal agencies to consider the environment when making decisions regarding their programs. Section 102(2)(C) requires federal agencies to prepare an environmental impact statement (EIS) before taking major federal actions that may significantly affect the quality of the human environment. The EIS includes: the environmental impact of the proposed action, any adverse environmental effects which cannot be avoided should the proposed action be implemented, alternatives to the proposed action, the relationship between local short-term uses of the environment and long-term productivity, and any irreversible commitments of resources which would be involved in the proposed action should it be implemented.

National Historic Preservation Act (NHPA) – This act established the National Register of Historic Places (NRHP) and the Advisory Council on Historic Preservation to encourage federal agencies to factor historic preservation into federal project requirements.

National Marine Fisheries Service (NMFS) – A division of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA). NMFS is responsible for conservation and management of offshore fisheries (and inland salmon). NMFS also oversees the actions of the eight regional Fishery Management Councils and is responsible for protecting marine mammals under the Marine Mammal Protection Act.

National Register of Historic Places (NHRP) – The Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966.

Native American Grave Protection and Repatriation Act – A federal law which describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with regard to human remains, funerary objects, sacred objects, and objects of cultural patrimony.

Nephelometric Turbidity Units – A point of compliance for non-flowing marine waters-turbidity not to exceed criteria at a radius of 150 feet from activity causing the exceedance.

Neurotoxin – A substance that causes damage to nerves or nerve tissue.

Notice of Intent – A notice published in the Federal Register advising that an environmental impact statement (EIS) will be prepared, with a brief description of the proposed action and possible alternatives, and contact information for obtaining further information about the project and preparation of the EIS.

Nutrients – Essential chemicals needed by plants or animals for growth. If other physical and chemical conditions are optimal, excessive amounts of nutrients can lead to degradation of water quality by promoting excessive growth, accumulation, and subsequent decay of plants, especially algae. Some nutrients can be toxic to animals at high concentrations.

Odontocete – A suborder of marine mammals that includes the toothed whales.

Organochlorines – A class of organic compounds that contain chlorine (e.g., polychlorinated biphenyl [PCBs], dioxins).

Otariid – Eared seals. Otariids that occur in Washington State include California sea lion, Steller sea lion, and northern fur seal.

Ozone – A molecule consisting of three bound atoms of oxygen. Its chemical nomenclature is O_3. It is a toxic gas that is bubbled through water during the treatment processes to kill microorganisms.

Pacific Fishery Management Council (PFMC) – The PFMC has conservation and management responsibility for federal fisheries out to 200 miles off the coasts of California, Washington, and Oregon.

Palustrine – Pertaining to a marsh or wetlands; wet or marsh habitats.

Paralytic Shellfish Poisoning – An illness, sometimes fatal to humans and other mammals, caused by a neuro-toxin produced by a type of plankton called Gonyaulax. Times of the year and at certain locations, these organisms proliferate in "blooms" (sometimes called red tides) and can be concentrated by clams, mussels, and other bivalves. The nervous system of affected shellfish is unaffected. Consumption of the shellfish can cause acute illness in humans and other mammals.

Particulate Matter – Extremely small particles and liquid droplets that are often airborne and inhalable.

PM_{10} – Particulate matter that is between 10 micrometers in diameter and 2.5 micrometers is known as coarse particulate.

$PM_{2.5}$ – Particulate matter that is less than 2.5 micrometers in diameter is fine particulate.

Pathogen – A specific causative agent of a disease, such as a bacterium or a virus.

Pelagic – Inhabiting the water column as opposed to being associated with the sea floor; generally occurring anywhere from the surface to 1,000 meters.

Peripheral Vasoconstriction –Constriction of the blood vessels in the skin.

Permanent Threshold Shift (PTS) – Permanent loss of hearing sensitivity.

pH – The degree of alkalinity or acidity of a solution. A pH of 7.0 indicates neutral water while a pH of 5.5 is acidic. A reading of 8.5 is alkaline or basic. The pH of water influences many of the types of chemical reactions that will occur within water. For instance, a slight decrease in pH may greatly increase the toxicity of substances such as cyanides, sulfides and most metals. A slight increase may greatly increase the toxicity of pollutants, such as ammonia.

Phocine Distemper Virus – A paramyxovirus of the genus morbillivirus that infects seals (see also morbillivirus).

Pier – A platform built out from the shore into the water and supported by piles; provides access to ships and boats. Usually it is roughly perpendicular to the shoreline.

Pinniped – A suborder of aquatic carnivorous mammals with four limbs modified into flippers.

Plankton – Small plants (phytoplankton) and animals (zooplankton) that are suspended in the water and either drift with the currents or swim weakly.

Polychlorinated Biphenyls (PCBs) – A highly lipophilic group of global pollutants, consisting of 209 forms with widely different toxicity. PCBs biomagnify up food chains and tend to resist degradation.

Polycyclic Aromatic Hydrocarbons (PAHs) – PAHs consist of hydrogen and carbon arranged in the form of two or more fused benzene rings. There are thousands of PAH compounds, each differing in the number and position of aromatic rings, and in the position of substituents on the basic ring system. Alkyl and chlorine groups attached to PAHs change the fate and effects characteristics, often for the worse. PAHs are ubiquitous in nature and generally show little tendency to biomagnify in food chains.

Low Molecular Weight PAHs – PAH compounds containing 2 or 3 rings. These compounds exhibit significant acute toxicity and other adverse effects to some organisms, but are not carcinogenic.

High Molecular Weight PAHs – PAH compounds containing 4 to 7 rings. These compounds are significantly less toxic than low molecular weight PAHs, but many of the 4- to 7-ring compounds are demonstrably carcinogenic, mutagenic, or teratogenic (causing birth defects) to a wide variety of organisms, including fish and other aquatic life, amphibians, birds, and mammals.

Porpoise Morbillivirus – A paramyxovirus of the genus morbillivirus that infects porpoises (see also morbillivirus).

Primary Contact Recreation - Activities where a person would have direct contact with water to the point of complete submergence including, but not limited to, skin diving, swimming, and water skiing.

Protozoan – Single-celled, animal-like, eukaryotic organisms of the kingdom Protista. Protozoa can occur wherever moisture exists.

Remotely Operated Vehicle (ROV) – A robot that allows the vehicle's operator to remain in a comfortable environment while the vehicle performs the work.

River and Harbors Act – Section 9 of this Act, passed in 1899, prohibits the construction of any bridge, dam, dike or causeway over or in navigable waterways of the U.S. without Congressional approval. Administration of Section 9 has been delegated to the Coast Guard. Under Section 10 of the Act, the building of any wharfs, piers, jetties, and other structures is prohibited without Congressional approval, and excavation or fill within navigable waters requires the approval of the Chief of Engineers.

Salinity – A measure of the quantity of dissolved salts in water.

Salmonids – Fish of the family Salmonidae, such as salmon, trout (including steelhead), char, and whitefish.

Saxitoxin – A powerful neurotoxin produced by certain dinoflagellates found in red tides; it can accumulate in molluscs that feed on the dinoflagellates and cause food poisoning to humans.

Secondary Contact Recreation - Activities where a person's water contact would be limited (e.g., wading or fishing) to the extent that bacterial infections of eyes, ears, respiratory or digestive systems, or urogenital areas would normally be avoided**.**

Sediment – Clay, silt, sand, gravel, and cobbles that are deposited into layers by wind, ice, water, or gravity.

Sediment Quality Standards (SQS) – The Washington State Sediment Management Standards (SMS) (WAC 173-204) provides the framework for the long-term management of marine sediment quality in the state of Washington. The SQS include numerical chemical concentration criteria (based on sediment chemistry) and biological effects criteria (based on sediment bioassays) that, if not exceeded, define the lower limit of sediment quality expected to have no adverse effects on biological resources in Puget Sound marine sediments.

Significant Impact – Under the National Environmental Policy Act (NEPA), an impact on some aspect of the environment or public health and safety caused by an action that exceeds a set criterion or established threshold. When determining whether an impact is significant, the analyst must consider the context in which it will occur and the intensity of the proposed action. If a proposed action has the potential for a significant impact, an environmental impact statement (EIS) must be prepared. (See also environmental impact statement [EIS], National Environmental Policy Act [NEPA].)

Smolt – Young salmon or trout migrating to the ocean and undergoing biological changes to enable them to move from freshwater streams to salt water.

Socioeconomics – The study of society as it relates to the social or economic aspects of a given activity or set of activities. Theory and applied tools from the fields of economics, sociology, anthropology, political science, public administration, and history are used.

Sonar – (Abbreviation for 'SOund Navigation And Ranging') Sonar is the utilization of echo-location using underwater sound waves. Several types of sonar are described below:

DIDSON Type – Dual-Frequency IDentification SONar (DIDSON®) is an acoustic-lens-based sonar, designed by Ed Belcher of the Applied Physics Laboratory of the University of Washington. It is a hand-held device that records video-like images to hard disk.

Side Scan – A category of sonar system that is used to create efficiently an image of large areas of the sea floor. This tool is used for mapping the seabed for a wide variety of purposes, including creation of nautical charts and detection and identification of underwater objects and bathymetric features. The frequencies used in side-scan sonar usually range from 100 to 500 kHz; higher frequencies yield better resolution but less range. The 100 kHz used by side scan sonar considered for the ROV alternative is outside the hearing range of most fish, but within the hearing range of some marine mammals.

Low Frequency – Low frequency active sonars use frequencies generally below 1,000 Hz, with relatively long signals (pulses) on the order of 60 sec. Low frequency sound [less than 1,000 Hz] can travel great distances and detect quiet submarines. The low frequency system uses intense sound, in the range of 215 decibels or greater.

Mid Frequency – Mid frequency sonars use frequencies between 1 and 10 kHz.

High Frequency – High frequency sonar (greater than 10 kHz) is primarily used for determining water depth (fathometers), hunting mines, and guiding torpedoes. Due to higher attenuation with distance, the ranges for high frequency sonar are less than that of mid and low frequency sonar.

Sound Exposure Level – A measure of the physical energy of a sound. Expressed in decibels.

Sound Pressure Level – Decibels referenced at a certain micropascal.

Space and Naval Warfare Systems Center, San Diego (SSC San Diego) – This center is responsible for development of the technology to collect, transmit, process, display and, most critically, manage information essential to successful military operations.

Stratification – The existence or formation of distinct layers in a body of water identified by differences in thermal or salinity characteristics (e.g., densities) or by oxygen or nutrient content. These layers do not mix or mix very slowly.

Study Area – In this environmental impact statement (EIS), the study area consists of the NBK–Bangor waterfront area (marine resources) and NBK–Bangor property at the Bangor installation (upland resources). However, social and anthropogenic resources may encompass a larger area depending on the resource application.

Subtidal – The portion of a tidal-flat environment that lies below the level of mean low water for spring tides.

Surface Water – All bodies of water on the surface of the earth and open to the atmosphere, such as rivers, lakes, reservoirs, ponds, seas, and estuaries.

Take – Under the MMPA, "take" means to "harm, harass, hunt, capture, or attempt to harm, harass, hunt, or capture any marine mammal."

Harm – Defined as "an act which actually kills or injures fish or wildlife."

Harass – Defined as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, including breeding, feeding, or sheltering."

Technology Readiness Levels (TRLs) – A systematic measurement system for assessment of the maturity of a particular technology. The system allows consistent comparison of maturity among different technology types. TRLs are used to assess the developmental status and risk of emerging technologies.

Temporary Threshold Shift (TTS) – The lowest sound level that an animal can hear at a specific frequency is called the *hearing threshold* at that frequency. Over-stimulation of the ear by sound can result in auditory fatigue. Because of this fatigue, there is a temporary loss of hearing sensitivity. This loss of sensitivity is called a *temporary threshold shift.*

Thermal Inertia – Resistance to a change in temperature as a function of body size (larger animals hold body heat better than smaller animals).

Thermal Neutral Zone (TNZ) – A range of environmental temperatures over which a mammal's metabolic rate remains stable.

Thermocline – Where the water temperature changes relatively rapidly and separates warmer oxygen-rich surface waters from the colder, oxygen-poor deep waters.

Total Organic Carbon (TOC) – A measure of the concentration of organic carbon in water, determined by oxidation of the organic matter into carbon dioxide**.**

Total Suspended Solids – The weight of particles that are suspended in water. Suspended solids in water reduce light penetration in the water column, can clog the gills of fish and invertebrates, and are often associated with toxic contaminants because organics and metals tend to bind to particles.

Traditional Resources – Cultural and traditional resources are any prehistoric or historic district, site or building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, religious or other purposes.

Turbidity – An interference to the passage of light through water due to insoluble particles of soil, organics, microorganisms, and other materials; muddy water has high turbidity and clear water has low turbidity.

Turf Algae – Algae on rock not forming understory canopy or surface canopy layers; includes green (e.g., *Enteromorpha* spp., *Ulva* spp.) and brown algae (e.g., *Laminaria* spp.).

U.S. Navy Marine Mammal Program – A program administered by the Navy that trains, manages, and utilizes marine mammals, such as dolphins and sea lions.

Upwelling – The process by which warm, less dense surface water is drawn away from a shoreline by offshore currents and replaced by cold, denser water brought up from the subsurface.

Vashon Till – A soil type characterized by dense, consolidated, pebbly-silty sand containing 10 to 20 percent clay.

Volatile Organic Compounds – Organic chemical compounds that have high enough vapor pressures under normal conditions to significantly vaporize and enter the atmosphere. The most common volatile organic compound is methane, a greenhouse gas. Common artificial sources of VOCs include paint thinners, dry cleaning solvents, and some constituents of petroleum fuels (e.g., gasoline and natural gas).

Wetlands – Areas that are inundated by surface water or groundwater frequently enough to support vegetation that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include marshes, bogs, peatlands, and similar areas, such as river overflows, mudflats, and natural ponds.