

PORTLAND HARBOR SEDIMENT MANAGEMENT PLAN

APPENDIX L

GLOSSARY OF TERMS



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Appendix L Glossary of Terms

Applicable or relevant and appropriate requirements (ARARs): The federal superfund law (CERCLA) specifies that remedial actions must comply with requirements or standards under federal or more stringent state environmental laws that are applicable or relevant and appropriate to the hazardous substances or particular circumstances of a site. Applicable requirements are those protection requirements that specifically address a hazardous substance at a CERCLA site. Relevant and appropriate requirements are those protection requirements that, while not applicable to a hazardous substance, address problems sufficiently similar to those encountered at a CERCLA site to make them useful. (52 FR 32496, August 27, 1987)

Assessment endpoint: An explicit expression of a specific ecological receptor and an associated function or quality that is to be maintained or protected. Assessment endpoints represent ecological receptors directly or as their surrogates for the purposes of an ecological risk assessment. (OAR 340-122-115(7))

Background level: Concentration of hazardous substances, if any, existing in the environment in the location of the facility before the occurrence of any past or present release or releases. (OAR 340-122-115(8))

Benthic infaunal communities: An assemblage of plants, animals, and other organisms that live in or on the sediment and interact with one another, forming a distinct living system with its own composition, structure, environmental relationships, development, and function.

Best Management Practices (BMPs): Methods that have been determined to be the most effective, practical means of preventing or reducing pollution from non-point sources.

Bioaccumulation: The ratio of the concentration of a chemical in an organism to the concentration of that chemical in the ambient medium (usually water).

Bioconcentration: The ratio of the concentration of a chemical in an organism to the concentration of that chemical in the organism's food or in the water it ingests.

Biota-Sediment Accumulation Function (BSAF): The relationship between tissue concentrations and sediment concentrations derived using tissue and sediment chemistry data.

Bioassays: Various biological tests used to determine the toxicity and/or bioaccumulation potential of a hazardous substance.

Brownfields: Abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

Carcinogens: Any substance or agent that produces or tends to produce cancer in humans. (OAR 340-122-115(10))

Chemical of interest: This is a hazardous substance that has been identified, without considering toxicity (i.e., by using frequency of detection or comparison to background), as having the potential to pose a risk to human health or the environment.

Cleanup level: Residual concentration of a hazardous substance that is determined to be protective of public health, safety and welfare, and the environment under specified exposure conditions. (OAR 340-122-115(11))

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal act (Public Law 96-510; December 11, 1980) that provides for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive waste disposal sites.

Conceptual model: A written description and visual representation of predicted relationships between receptors (both human and ecological) and the hazardous substances to which they may be exposed.

Consent orders: Legal vehicle to ensure cleanup move forwards at a contaminated site; typically contains stipulated penalties for non-performance by the liable person and cannot be unilaterally terminated.

Contaminant of concern: A hazardous substance that is present in such concentrations that the contaminant poses a threat or a potentially unacceptable risk to public health, safety or welfare, or the environment. (OAR 340-122-115(15))

Data Quality Objectives (DQOs): qualitative and quantitative statements of the overall level of uncertainty that a decision-maker will accept in results or decisions based on environmental data. These provide the statistical framework for planning and managing environmental data operations consistent with user's needs.

Endangered Species Act (ESA): Federal statute enacted in 1973 to conserve species and ecosystems. Species facing possible extinction are listed as “threatened” or “endangered,” or as “candidate” species for such listings. When such a listing is made, recovery and conservation plans are draw up to ensure the protection of the species and its habitat.

Environmental Cleanup Law: Oregon’s revised cleanup law, enacted in 1995, which expanded DEQ’s authority related to identification, investigation, and cleanup of hazardous substances.

Facility: Any site or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise come to be located, and where a release has occurred or whether there is a threat of a release. (OAR 340-122-115(26))

Feasibility study: Provides the decision-maker with an assessment of remedial alternatives, including their relative strengths and weaknesses, and the trade-offs in selecting one alternative

over another. Conducted if the risk assessment performed during the remedial investigation establishes the presence of unacceptable risks.

Harbor-wide assessment: Remedial and other investigations conducted in the lower Willamette River (River Miles 0.0 to 26.5), inclusive of Portland Harbor (River Miles 3.5 to 9.5), and possibly extending into the Columbia River near its confluence with the Willamette.

Hazard Index: A number equal to the sum of the hazard quotients attributable to systemic toxicants with similar toxic endpoints, where hazard quotient is the ratio of the applied dose to the reference dose and the reference dose is typically the highest dose causing no adverse effects on survival, growth or reproduction in human populations.

Hazard Ranking System: The principal mechanism EPA uses to place uncontrolled waste sites on the National Priorities List. Numerically based screening system that uses information from initial, limited investigations to assess the relative potential of sites to pose a threat to human health or the environment.

Hazardous waste: Solid wastes that have been determined to be a hazardous waste because they possess at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), appear on special EPA lists, or are defined as hazardous by Oregon Rule.

Hot spots: For groundwater or surface water, hazardous substances having a significant adverse effect on beneficial uses of water or waters to which the hazardous substance would be reasonably likely to migrate and for which treatment is reasonably likely to restore or protect such beneficial uses within a reasonable time; for media other than water (including sediments), defined by the presence of high concentrations of hazardous substances that are likely to migrate and create a hot spot of contamination elsewhere, or by the presence of hazardous substances that are not reliably confinable. (OAR 340-122-115(31))

Institutional control: Legal or administrative tool or action taken to reduce the potential for exposure to hazardous substances, which may include, but are not limited to, use restrictions, environmental monitoring requirements, and site access and security measures. (OAR 340-122-115(32))

Joint and several liability: Under CERCLA, this legal concept relates to the liability for Superfund site cleanup and other costs on the part of more than one potentially responsible party (i.e., if there were several owners or users of a site that became contaminated over the years, they could all be considered potentially liable for cleaning up the site).

National Contingency Plan (NCP): A set of regulations that describe the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants.

National Priorities List (NPL): A published list of hazardous waste sites in the country that are eligible for extensive, long-term cleanup under the Superfund program.

No further action (NFA): A determination by DEQ, following a preliminary assessment, a risk assessment or the completion of remedial action, that no unacceptable risks remain to human health or to the environment.

Noncarcinogen: hazardous substance with adverse health effects on humans other than cancer. (OAR 340-122-115(36))

Orphan Site Account (OSA): Account established to be used to fund investigation and remedial actions where liable parties are unknown, unwilling or unable to participate. DEQ uses litigation to recover Orphan Site Account funds from recalcitrant responsible parties.

Preliminary assessment (PA): An assessment conducted for the purpose of determining whether additional investigation, removal, remedial action, or related engineering or institutional controls are needed to assure protection of public health, safety and welfare, and the environment. (OAR 340-122-072).

Record of decision (ROD): A document that details the factors that shaped the decision to select a specific remedial alternative over others. (OAR 340-122-110)

Release: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment including the abandonment or discarding of barrels, containers and other closed receptacles containing any hazardous substance, or any threat thereof, but excluding exposures within a workplace, emissions from the engine exhaust, nuclear material and the normal application of fertilizer.

Remedial Alternative: An action considered in the feasibility study intended to reduce or eliminate unacceptable risks to human health and the environment at a site. A range of remedial alternatives are considered in the feasibility study while the selection of a specific remedial alternative over others is documented in the record of decision.

Remedial action: The selected alternative that is documented in the record of decision.

Remedial investigation (RI): Actions undertaken to characterize the full nature and extent of contamination, including characterization of hazardous substances, characterization of the facility, performance of human health and ecological risk assessments, and collection and evaluation of information relevant to the identification of hot spots of contamination.

Removal action: An action necessary to prevent, minimize, or mitigate damage to the public health, safety, and welfare, and the environment (OAR 340-122-070). Generally taken in response to an imminent threat, it may be conducted at any point in the site response process, and may include source control measures, removal of highly contaminated material, and/or posting warning signs or constructing fences around a contaminated site.

Risk: Probability that a hazardous substance, when released into the environment, will cause adverse effects in exposed humans or ecological receptors.

Risk assessment: The process of evaluating whether a hazardous substance poses a potential threat, either currently or in a reasonably likely future, to human health and the environment.

Sediment: Soils, sand, organic matter, or minerals that wash from land or accumulate on the bottom of a water body

Sediment Quality Guidelines (SQGs): Numeric sediment concentrations above which further biological testing and/or a feasibility study may be warranted and below which suspected sediment contaminants are unlikely to pose an unacceptable risk.

Site assessment: Investigation to assess priority for follow-up, which may be based on the adequacy of data linking a site to a release or on the presence of potentially impacted receptors.

Site discovery: Process of identifying and documenting a release of hazardous substance to the environment.

Site-specific assessment: A remedial investigation conducted at a site or facility under the jurisdiction of Oregon's environmental cleanup statutes and rules.

Subsistence fishing: Persons who obtain a significant portion, more than the general or recreational fish-eating population, of their dietary protein from the consumption of self-caught fish of various species.

Tissue Screening Concentrations (TSCs): Contaminant concentration in fish tissue below which adverse effects are not expected for 95% of the fish species.

Target Tissue Levels (TTLs): A tissue concentration in food items (e.g., fish or shellfish) which does not pose an unacceptable risk to birds, mammals, or humans that consume these food items.

Portland Harbor: The six-mile (River Mile 3.5 to 9.5) industrialized segment of the Willamette River located between Swan and Sauvie Islands.

Voluntary cleanup agreement: Legal vehicle to ensure cleanup moves forward at a contaminated site; entered into voluntarily by the site, enforceable by administrative penalties or by court action.

Willamette River: The 187-mile long river which flows northward in northwestern Oregon between the coast and Cascade Mountains.