

Appendix A: Glossary of Terms

1. ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
AFB	Air Force Base
AHPA	Archaeological and Historic Preservation Act
ARPA	Archaeological Resources Protection Act
BCC	Birds of Conservation Concern
BOD	biological oxygen demand
BNSF	Burlington Northern Santa Fe
BRT	Biological Review Team
CCP	Comprehensive Conservation Plan
CFR	Code of Federal Regulations
cfs	cubic feet per second
cfu	colony-forming units
dB	decibel
DDT	Dichlorodiphenyltrichloroethane
DEA	Draft Environmental Assessment
DEIS	Draft Environmental Impact Statement
DNT/TNT	di- and tri-nitrotoluenes
DoA	Department of the Army
DOI	Department of the Interior
DOT	Washington State Department of Transportation
DPS	Distinct Population Segment
DU	Ducks Unlimited
EA	Environmental Assessment
EE	environmental education
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	evolutionary significant unit
FHA	Federal Highway Administration
FR	Federal Register
FTE	full-time equivalent
FWS	U.S. Fish and Wildlife Service (also, Service)
FY	Fiscal Year
GIS	Global Information System
GMA	Growth Management Act
GPS	Global Positioning System
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
HB	House Bill
HUD	Housing and Urban Development
I-5	Interstate 5
Improvement Act	National Wildlife Refuge System Improvement Act of 1997
MHHW	mean higher high water
MHW	mean high water

MLLW	mean low low water
MOU	Memorandum of Understanding
mph	miles per hour
MPO	Metropolitan Planning Organization
NA	Nisqually Agriculture (zoning designation)
NAGPRA	Native American Graves Protection and Repatriation Act
NGOs	non-government organizations
NEPA	National Environmental Policy Act
NGDV	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NMML	National Marine Mammal Laboratory
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRHP	National Register of Historic Places
NRTF	Nisqually River Task Force
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
NWRS	National Wildlife Refuge System
OAHP	Office of Archaeology and Historic Preservation
OFM	Washington Office of Financial Management
ORV	off-road vehicle
PCBs	polychlorinated biphenyls
PDR	Purchase of Development Rights
PGFSPDC	Ad-Hoc Pacific Groundfish Fishery Strategic Plan Development Committee
PHS	Priority Habitats and Species
ppm	parts per million
ppt	parts per thousand
PRISM	Program for Regional and International Shorebird Monitoring
PSRC	Puget Sound Regional Council
PUNA	Public Use Natural Area
PWC	personal watercraft
RA	Research Activity Management
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RI/RA/FS	Remedial Investigation/Risk Assessment/Feasibility Study
RNA	Research Natural Area
ROD	Record of Decision
RONs	Refuge Operating Needs System
RRP	Refuge Roads Program
RTPO	Regional Transportation Planning Organization
SEPA	State Environmental Policy Act
Service	U.S. Fish and Wildlife Service (also, FWS)
SHB	State House Bill
SHPO	State Historic Preservation Office
SoC	Species of Concern
SPI	Superintendent of Public Instruction
SUP	Special Use Permit

TES	Threatened and Endangered Species
TM	Thematic Mapper
TNC	The Nature Conservancy
TPH	total petroleum hydrocarbon
UGA	Urban Growth Area
USC	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WDOE	Washington Department of Ecology
WNHP	Washington Natural Heritage Program
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
YCC	Youth Conservation Corps

2. GLOSSARY OF TERMS

Achievement Strategy. See Strategy.

Adaptive Management. Refers to a process in which policy decisions are implemented within a framework of scientifically driven experiments to test predictions and assumptions inherent in management plan. Analysis of results help managers determine whether current management should continue as is or whether it should be modified to achieve desired conditions.

Alluvial. Sediment transported and deposited in a delta or riverbed by flowing water.

Alternative. 1. A reasonable way to fix the identified problem or satisfy the stated need (40 CFR 1500.2). 2. Alternatives are different means of accomplishing refuge purposes and goals and contributing to the System mission (draft Service Manual 602 FW 1.5).

Amphipod. Any of a large order of small, usually aquatic crustaceans with a laterally compressed body (for example, beach fleas).

Anadromous. Migratory fishes that spend most of their lives in the sea and migrate to fresh water to breed.

Basin. A region drained by a river system.

Benthic. Refers to organisms associated with the bottom of the sea, lake, or river.

Biological Diversity. The variety of life and its processes, including the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur (USFWS Manual 052 FW 1. 12B). The System's focus is on indigenous species, biotic communities, and ecological processes. Also referred to as Biodiversity.

Bivalve. Common term for pelecypods, members of the Mollusca in which the hard parts are composed of 2 sections fitting together to enclose a space that contains the soft part of the organism.

Brown Farm Dike. The approximately 5-mile long dike that was built in the late 1800s and early 1900s to convert salt marsh areas into farmland by preventing saltwater inundation.

Carrying Capacity. The maximum population of a species able to be supported by a habitat or area.

Categorical Exclusion. A category of actions that do not individually or cumulatively have a significant effect on the human environment and have been found to have no such effect in procedures adopted by a Federal agency pursuant to the National Environmental Policy Act (40 CFR 1508.4).

Class A Noxious Weed. Those noxious weeds not native to the state that are of limited distribution or are unrecorded in the state and that pose a serious threat to the state.

Class B Noxious Weed. Those noxious weeds not native to the state that are of limited distribution or are unrecorded in a region of the state and that pose a serious threat to that region.

Class C Noxious Weed. Any other noxious weed.

Compatible Use. A wildlife-dependent recreational use or any other use of a refuge that, in the sound professional judgment of the Director, will not materially interfere with or detract from the fulfillment of the Mission of the System or the purposes of the refuge (Draft Service Manual 603 FW 3.6). A compatibility determination supports the selection of compatible uses and identifies stipulations or limits necessary to ensure compatibility.

Comprehensive Conservation Plan (CCP). A document that describes the desired future conditions of the refuge, and provides long-range guidance and management direction for the refuge manager to accomplish the purposes of the refuge, contribute to the mission of the System, and to meet other relevant mandates (Draft Service Manual 602 FW 1.5).

Concern. See definition of “Issue.”

Cover Type. The present vegetation of an area.

Cultural Resources. The remains of sites, structures, or objects used by people in the past.

Cultural Resource Inventory. A professionally conducted study designed to locate and evaluate evidence of cultural resources present within a defined geographic area. Inventories may involve various levels, including background literature search, comprehensive field examination to identify all exposed physical manifestations of cultural resources, or sample inventory to project site distribution and density over a larger area. Evaluation of identified cultural resources to determine eligibility for the National Register follows the criteria found in 36 CFR 60.4 (Service Manual 614 FW 1.7).

Delta. The alluvial deposit at the mouth of a river.

Demersal. Organisms living at or near the bottom of a sea or lake but having the capacity for active swimming.

Disturbance. Significant alteration of habitat structure or composition. May be natural (e.g., fire) or human-caused events (e.g., aircraft overflight).

Ecosystem. A dynamic and interrelating complex of plant and animal communities and their associated non-living environment.

Ecosystem Management. Management of natural resources using system-wide concepts to ensure that all plants and animals in ecosystems are maintained at viable levels in native habitats and basic ecosystem processes are perpetuated indefinitely.

Endangered Species (Federal). A plant or animal species listed under the Endangered Species Act that is in danger of extinction throughout all or a significant portion of its range.

Endangered Species (State). A plant or animal species in danger of becoming extinct or extirpated in Washington within the near future if factors contributing to its decline continue. Populations of these species are at critically low levels or their habitats have been degraded or depleted to a significant degree.

Environmental Assessment (EA). A concise public document, prepared in compliance with the National Environmental Policy Act, that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an environmental impact statement or finding of no significant impact (40 CFR 1508.9).

Environmental Impact Statement (EIS). A detailed written statement required by section 102(2)(C) of the National Environmental Policy Act, analyzing the environmental impacts of a proposed action, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources (40 CFR 1508.11).

Epibenthic. Pertaining to the environment and conditions of organisms living near the water bottom.

Estuarine. Deepwater tidal habitats and adjacent tidal wetlands that are usually partly enclosed by land but have some access to the open ocean and are diluted by freshwater.

Estuary. The wide lower course of a river into which the tides flow. The area where the tide meets a river current.

Euryhaline. Organisms that are tolerant of a wide range of salinity.

Finding of No Significant Impact (FONSI). A document prepared in compliance with the National Environmental Policy Act, supported by an environmental assessment, that briefly presents why a Federal action will have no significant effect on the human environment and for which an environmental impact statement, therefore, will not be prepared (40 CFR 1508.13).

Forb. A broad-leaved, herbaceous plant; for example, a columbine.

Gastropod. Any of a large class of mollusks, usually with a univalve shell or no shell and a distinct head bearing sensory organs, such as snails and slugs.

Gill Net. A type of fishing net utilized by commercial, tribal, and occasionally recreational fishing operations. These nets are the center of much controversy due to the high incidence of by-catch associated with their use.

Goal. Descriptive, open-ended, and often broad statement of desired future conditions that conveys a purpose but does not define measurable units (Draft Service Manual 620 FW 1.5).

Habitat. Suite of existing environmental conditions required by an organism for survival and reproduction. The place where an organism typically lives.

Habitat Type. See Vegetation Type.

Habitat Restoration. Management emphasis designed to move ecosystems to desired conditions and processes, and/or to healthy ecosystems.

Improvement Act. The National Wildlife Refuge System Improvement Act of 1997.

Intergrade. An individual occurring on the boundary between adjacent subspecies and which possesses intermediate characters or traits.

Introgression. The spread of genes of one population into the gene pool of another by hybridization and backcrossing.

Inversion. A state in which the temperature of the air increases with increasing altitude and keeps the surface air and pollutants down.

Issue. Any unsettled matter that requires a management decision (e.g., a Service initiative, opportunity, resource management problem, a threat to the resources of the unit, conflict in uses, public concern, or the presence of an undesirable resource condition) (Draft Service Manual 602FW 1.5).

Lacustrine. Pertaining to, or living in, lakes or ponds.

Landbird. A category of birds that obtains at least part of their food from the land and nest in mainland areas (though some can also be found on islands). Landbirds include raptors and songbirds among others.

Management Alternative. See Alternative.

Migration. The seasonal movement from one area to another and back.

Minimal Critical Staffing. The core staffing needed at Nisqually NWR to meet minimum resource needs, approved by the Service pre-CCP.

Mission Statement. Succinct statement of a unit's purpose and reason for being.

Monitoring. The process of collecting information to track changes of selected parameters over time.

Mysids. A group of crustaceans, also known as opossum shrimps, that feed upon small zooplankton.

National Environmental Policy Act of 1969 (NEPA). Requires all Federal agencies, including the Service, to examine the environmental impacts of their actions, incorporate environmental information, and use public participation in the planning and implementation of all actions. Federal agencies must integrate NEPA with other planning requirements, and prepare appropriate NEPA documents to facilitate better environmental decision making (from 40 CFR 1500).

National Oceanic and Atmospheric Administration (NOAA) Fisheries. A branch of the Federal government under the U.S. Department of Commerce. The mission of NOAA Fisheries is to rebuild and maintain sustainable fisheries, promote the recovery of protected species under the Endangered Species Act (ESA), and protect and maintain the health of coastal marine habitats for marine animals.

National Wildlife Refuge. A designated area of land, water, or an interest in land or water within the System.

National Wildlife Refuge System. Various categories of areas administered by the Secretary of the Interior for the conservation of fish and wildlife, including species threatened with extinction; all lands, waters, and interests therein administered by the Secretary as wildlife refuges; areas for the protection and conservation of fish and wildlife that are threatened with extinction; wildlife ranges; games ranges; wildlife management areas; or waterfowl production areas.

National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57). Under the Refuge Improvement Act, the U.S. Fish and Wildlife Service is required to develop 15-year Comprehensive Conservation Plans for all National Wildlife Refuges outside Alaska. The Act also describes the six public uses given priority status within the NWRS (i.e., hunting, fishing, wildlife observation, photography, environmental education, and interpretation).

National Wildlife Refuge System Mission. The mission is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Native Species. Species that normally live and thrive in a particular ecosystem.

Nematodes. Non-segmented roundworms of the phylum Nematoda. They range widely in size and can be free-living or parasitic.

Neritic. Pertaining to the marine zone between low tides and the edge of the continental shelf, a depth of roughly 200 m. A neritic environment supports marine organisms, also described as

neritic, that are capable of surviving in shallow water with moderate exposure to sunlight.

Nisqually Reach. Portion of south Puget Sound extending northwest from DuPont Wharf, including Nisqually River delta, to the southern end of Case Inlet at Johnson Point.

Nisqually River Dike. The portion of the Brown Farm Dike that is located along the Nisqually River.

Noxious Weed. A plant species designated by Federal or State law as generally possessing one or more of the following characteristics: aggressive or difficult to manage; parasitic; a carrier or host of serious insect or disease; or non-native, new, or not common to the United States, according to the Federal Noxious Weed Act (PL 93-639), a noxious weed is one that causes disease or had adverse effects on man or his environment and therefore is detrimental to the agriculture and commerce of the United States and to the public health.

Objective. An objective is a concise target statement of what will be achieved, how much will be achieved, when and where it will be achieved, and who is responsible for the work. Objectives are derived from goals and provide the basis for determining management strategies. Objectives should be attainable and time-specific and should be stated quantitatively to the extent possible. If objectives cannot be stated quantitatively, they may be stated qualitatively (Draft Service Manual 602 FW 1.5).

Obligate Species. Species that require a specific habitat type or plant species for their existence.

Oligohaline. Pertaining to water having low salinity, 0.5-3 ppt for brackish or 17-30 ppt for sea water.

Opisthobranchs. Members of a subclass of gastropods containing such groups as the sea hares and nudibranchs.

Palustrine. Freshwater wetlands that are less than 2 meters deep at low water. They do not include areas regularly impacted by waves or part of a bedrock shoreline. They are familiarly known as marshes, swamps, bogs, wet meadows, prairies, and small shallow ponds.

Passerines. See songbirds.

Pelagic. Referring to organisms that inhabit open waters of the oceans or large lakes.

Personal Watercraft. Personal watercraft (PWC) are small vessels that use inboard motors powering water jet pumps. They are known by such trade names as Jet-ski, Waverunner, and Sea-Doo. Personal watercraft are high performance vessels, designed for speed and maneuverability and are often used to perform stunts. They typically have loud 50 - 100 horsepower engines and are capable of traveling more than 60 mph.

Pinniped. A suborder of carnivores that are marine mammals, have flippers, and eat mostly fish and marine invertebrates (e.g., sea lions, seals).

Plant Association. A classification of plant communities based on the similarity in dominants of all layers of vascular species in a climax community.

Plant Community. An assemblage of plant species unique in its composition; occurs in particular locations under particular influences; a reflection or integration of the environmental influences on the site such as soils, temperature, elevation, solar radiation, slope, aspect, and rainfall; denotes a general kind of climax plant community (e.g., Sitka spruce).

Polychaetes. Any of a class (Polychaeta) of chiefly marine annelid worms (such as clam worms), usually with paired segmental appendages, separate sexes, and a free-swimming trochophore larva.

Preferred Alternative. This is the alternative determined [by the decision maker] to best achieve the Refuge purpose, vision, and goals; contributes to the Refuge System mission, addresses the significant issues; and is consistent with principles of sound fish and wildlife management.

Priority Species. Fish and wildlife species that the Washington Department of Fish and Wildlife believe require protective measures and/or management guidelines to ensure their perpetuation. Priority species include the following: (1) State-listed and candidate species; (2) species or groups of animals susceptible to significant population declines within a specific area or statewide by virtue of their inclination to aggregate (e.g., seabird colonies); and (3) species of recreation, commercial, and/or tribal importance.

Public. Individuals, organizations, and groups; officials of Federal, State, and local government agencies; Indian tribes; and foreign nations. It may include anyone outside the core planning team. It includes those who may or may not have indicated an interest in Service issues and those who do or do not realize that Service decisions may affect them.

Purpose(s) of the Refuge. The purpose of a refuge is specified in or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorization, or expanding a refuge, refuge unit, or refuge subunit.

Raptor. A category of carnivorous birds, most of which have heavy, sharp beaks, strong talons, and take live prey (e.g., peregrine falcon, bald eagle).

Refuge Goal. See Goal.

Refuge Purposes. The purposes specified in or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorizing, or expanding a refuge, a refuge unit, or refuge subunit (Draft Service Manual 602 EW 1.5).

Rhizomes. A rootlike stem growing horizontally below the surface. The rhizome is used for food storage and can produce roots and shoots.

Riparian. Refers to an area or habitat that is transitional from terrestrial to aquatic ecosystems; including streams, lakes wet areas, and adjacent plant communities and their associated soils which have free water at or near the surface; an area whose components are directly or indirectly attributed to the influence of water; of or relating to a river; specifically applied to ecology, “riparian” describes the land immediately adjoining and directly influenced by streams. For example, riparian vegetation includes any and all plant life growing on the land adjoining a stream and directly influenced by the stream.

Riverine. Freshwater wetlands and deepwater habitats within a channel containing periodically or continuously moving water. It includes wetlands with primarily or mostly submerged vegetation but does not include those wetlands with mostly emergent vegetation or shrubs and trees. This habitat encompasses a river or stream, its channel, and the associated aquatic vegetation.

Seabird. A group of birds that obtain at least some food from the ocean by traveling some distance over its surface. They also typically breed on islands and along coastal areas. Seabirds include gulls, alcids, pelicans, albatrosses, storm-petrels, and cormorants, among others.

Songbirds (Also Passerines). A category of birds that are medium to small, perching landbirds. Most are territorial singers and migratory.

Spionids. A type of polychaete.

Step-down Management Plans. Step-down management plans provide the details necessary to implement management strategies identified in the Comprehensive Conservation Plan (Draft Service Manual 602 FW 1.5).

Strategy. A specific action, tool, or technique or combination of actions, tools, and techniques used to meet unit objectives (Draft Service Manual 602 FW 1.5).

Study Area. The area reviewed in detail for wildlife, habitat, and public use potential. For purposes of this CCP/EIS the study area includes the lands within the currently approved Refuge boundary and potential Refuge expansion areas. See page 3-1 for more details.

Sublittoral. Relating to or describing an organism living immediately below low-tide level.

Subsidence. Movement to a lower level or elevation.

Surge Plain. A type of riparian forest flooded during high tides and freshwater storm events from up-river.

Threatened Species (Federal). Species listed under the Endangered Species Act that are likely to become endangered within the foreseeable future throughout all or a significant portion of their range.

Threatened Species (State). A plant or animal species likely to become endangered in Washington within the near future if factors contributing to population decline or habitat degradation or loss continue.

U.S. Fish and Wildlife Service Mission. The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people.

Vegetation Type, Habitat Type, Forest Cover Type. A land classification system based upon the concept of distinct plant associations.

Vision Statement. A concise statement of the desired future condition of the planning unit, based primarily upon the System mission, specific refuge purposes, and other relevant mandates (Draft Service Manual 602 FW 1.5).