

Appendix A – Glossary of Terms

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Adaptive management - The rigorous application of management, research, and monitoring to gain information and experience necessary to assess and modify management activities. A process that uses feedback from refuge research and monitoring and evaluation of management actions to support or modify objectives and strategies at all planning levels.

Adjuvant - any substance added to the spray tank, separate from the pesticide formulation that will improve the performance of the pesticide.

Alliance (plant Alliance) - A uniform group of plant associations sharing one or more dominant or diagnostic plant species, which are found in the uppermost strata of the vegetation.

Alkalinity - Refers to the extent to which water or soils contain soluble mineral salts. Waters with a pH greater than 7.4 are considered alkaline.

Alluvial - Pertaining to clay, sand, silt or gravel, or other sedimentary material deposited by flowing water.

Alternatives - Different sets of objectives and strategies or means of achieving refuge purposes and goals, helping fulfill the Refuge System mission, and resolving issues. (1) A reasonable way to fix the identified problem or satisfy the stated need. (40 CFR 150.2) (2) Alternatives are different means of accomplishing refuge purposes and goals and contributing to the System mission (Draft Service Manual 602 FW 1.5).

Anadromous - A lifecycle of fish that involves migrating up rivers from the sea to breed in fresh water followed by young returning to the sea until reaching maturity.

Animal Unit (AU) - Defines forage consumption on the basis of one standard mature 1,000-pound cow, either dry or with calf up to 6 months old; all other classes and kinds of animals can be related to this standard.

Animal-unit-day (AUD) - The amount (26 pounds) of air-dry forage calculated to meet one animal unit's requirement for one day.

Animal-unit-month (AUM) - The amount (780 pounds) of air-dry forage calculated to meet one animal unit's requirement for one animal unit for one month. Or, the amount of air-dry forage necessary to maintain one 1,000-pound animal for one month.

Appropriate use - A proposed or existing use on a refuge that meets at least one of the following four conditions:

- The use is a wildlife-dependent recreational use as identified in the Improvement Act.
- The use contributes to fulfilling the refuge purpose(s), the Refuge System mission or goals, or objectives described in a refuge management plan approved after October 9, 1997, the date the Improvement Act was signed into law.
- The use involves the take of fish and wildlife under State regulations.

- The use has been found to be appropriate as specified in Section 1.11 of the U.S. Fish and Wildlife Service's Appropriate Use Policy (603FW1).

Approved acquisition boundary - The approved acquisition boundary includes those lands that the U.S. Fish and Wildlife Service has authority to acquire for a refuge. This boundary often encompasses both public and private land, but does not imply that all private parcels within the boundary are targeted for acquisition.

Aquatic - Pertaining to water, in contrast to land. Living in or upon water.

Aquatic habitat - The physical, chemical, and vegetative features that occur within the water of lakes, ponds, reservoirs, rivers, irrigation canals, and other bodies of water.

Artifact - An object made by humans; usually in reference to primitive tools, vessels, weapons, etc.

Baiting - Baiting means the direct or indirect placing, exposing, depositing, distributing, or scattering of salt, grain, or other feed that could serve as a lure or attraction for migratory game birds to, on, or over any areas where hunters are attempting to take them (50 CFR Subpart B, § 20.11 (k)).

Biodiversity (biological diversity) - Refers to the full range of variability within and among biological communities, including genetic diversity, and the variety of living organisms, assemblages of living organisms, and biological processes. Diversity can be measured in terms of the number of different items (species, communities) and their relative abundance, and it can include horizontal and vertical variability. The variety of life (including the variety of living organisms) the genetic differences among them, and the communities in which they occur.

Biological Control - The use of organisms or viruses to control weeds or other pests.

Biological integrity - Biotic composition, structure, and functioning at the genetic, organism, and community levels consistent with natural conditions, including the natural biological processes that shape genomes, organisms, and communities.

Biota - The plant and animal life of a region.

Birds of Conservation Concern - A U.S. Fish and Wildlife Service designation given to bird species (beyond those listed as endangered or threatened) that represent our highest conservation priorities and draw attention to species in need of conservation action.

Browse - That part of a leaf and twig growth of shrubs, woody vines and trees available for animal consumption.

Bunch grass - A grass having a growth habit of a bunch, lacking stolons or rhizomes.

California Special Concern Species - A California Department of Fish and Wildlife designation given to certain vertebrate species because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

Carnivore - An animal that kills and eats other animals.

Carrying capacity - The average number of livestock and wildlife that may be sustained on a management unit compatibly with management objectives. It is a function of site characteristics, and management goals and intensity.

Categorical Exclusion (CE, CX, CATEX, CATX) - 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).

Cereal grains - Cereal grains include crops such as barley, winter wheat, or oats.

CFR - Code of Federal Regulations.

Chemigation - Chemigation is the injection any chemical such as nitrogen, phosphorus or a pesticide into irrigation water and applied to the land using the irrigation system. The proper use of chemigation is recognized as a Best Management Practice (BMP) for irrigated agriculture.

Class of animal - Description of age and sex group for a particular kind of animal (e.g., cow, calf, yearling heifer, ewe, fawn).

Closed-cone pines - Pine species that rely upon fire to open their cones and release seeds.

Community - The combined populations of all organisms in a given area, and their interactions. For example, the frogs, fish, algae, cattails, and lily pads in a backyard pond make up a community.

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).

Compatibility Determination – A written determination signed and dated by the refuge manager and regional chief signifying that a proposed or existing use of a national wildlife refuge is a compatible use or is not a compatible use. The Director of the U.S. Fish and Wildlife Service makes this delegation through the Regional Director.

Comprehensive Conservation Plan (CCP) - A document that describes the desired future conditions of the refuge or planning unit; and provides long-range guidance and management direction to accomplish the purposes of the refuge, helps fulfill the mission of the Refuge System; maintains and, where appropriate, restores the ecological integrity of each refuge and the Refuge System; helps achieve the goals of the National Wilderness Preservation System; and meets other mandates.

Continuous grazing - The grazing of a specific unit throughout a year, growing season, or that part of a year when grazing is feasible.

Cool-season plant - A plant that generally makes the major portion of its growth during the late fall, winter, and spring.

Cooperative farming - Stated in the Kuchel Act for the Klamath Project: Managed by the Secretary "...for waterfowl purposes, including the growing of agricultural crops by direct planting and sharecrop agreements with local cooperators where necessary..." (78 Stat. 851; 16 U.S.C. § 695n).

Cover - The plant or plant parts, living or dead, on the ground surface. The proportional area of ground covered by plants on a stated area.

Cultural resource - The physical remains of human activity (artifacts, ruins, burial mounds, petroglyphs, etc.) and conceptual content or context (as a setting for legendary, historic, or prehistoric events, such as a sacred area of native peoples) of an area. It includes historical, archaeological and architectural significant resources.

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).

Cultural Resource Overview - A comprehensive document prepared for a field office that discusses, among other things, its prehistory and cultural history, the nature and extent of known cultural resources, previous research, management objectives, resource management conflicts or issues, and a general statement on how program objectives should be met and conflicts resolved. An overview should reference or incorporate information from a field offices background or literature search described in Section VIII of the Cultural Resource Management Handbook (Service Manual 614 FW 1.7).

Decadent - Vegetation that is marked by decay or decline with reduced wildlife habitat values; such as its value as cover, foraging, or nesting habitat.

Deposits - Material that is laid down through the actions of wind, water, ice, or other natural process.

Dike - An embankment of earth and rock built to prevent floods.

Diversion - A structure in a river or canal that diverts water from the river or canal to another water course.

Drain - A canal that collects and transports excess water from irrigated farmland.

Easement - A privilege or right that is held by one person or another entity in land owned by another.

Ecological integrity - The integration of biological integrity, natural biological integrity, and environmental health; the replication of natural conditions (Service Manual 602FW1.6).

Ecology - The branch of biology that studies the interactions of organisms within an environment, either with other organisms (biotic factors) or with the non-living components (abiotic factors) of that ecosystem.

Ecosystem - The sum of all interacting parts of the environment and associated ecological communities within a particular area; an ecological system. Many levels of ecosystems have been recognized. Very few, if any ecosystems are self-contained; most influence, or are influenced by, components or forces outside the system. For administrative purposes, we have designated 53 ecosystems covering the United States and its possessions. These ecosystems generally correspond with watershed boundaries, and their sizes and ecological complexity vary.

Ecosystem approach - Protecting or restoring the natural function (processes), structure (physical and biological patterns), and species composition of an ecosystem, recognizing that all components are interrelated.

Effect - A change in a resource, caused by a variety of events including project attributes acting on a resource attribute (direct), not directly acting on a resource attribute (indirect), another project attributes acting on a resource attribute (cumulative), and those caused by natural events (e.g., seasonal change).

Emergent vegetation - Rooted, aquatic plants that have most of their vegetative (nonroot) parts above water.

Endemic species - Plants or animals that occur naturally in a certain region and whose distribution is relatively limited to a particular locality.

Endangered species - Any species that is in danger of extinction throughout all or a significant portion of its range and listed as such by the Secretary of the Interior in accordance with the Endangered Species Act of 1973. Endangered species are afforded protection under the Act as amended and under various State laws for State-listed species.

Enhancement - The modification of specific structural features of an existing wetland (or upland) to increase one or more functions based on management objectives.

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 education - A process designed to develop a citizenry that has awareness, concern, knowledge, attitudes, skills, motivation, and commitment to work toward solutions of current environmental problems and the prevention of new ones. Environmental education within the National Wildlife Refuge System incorporates materials, activities, programs, and products that

address the citizen's course of study goals, the objectives of the refuge/field station, and the mission of the Refuge System.

Environmental health - Abiotic composition, structure, and functioning of the environment consistent with natural conditions, including the natural abiotic processes that shape the environment (Service Manual 602FW1.6).

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).

Ephemeral - Pertains to streams, lakes, and wetlands that exist temporarily each year.

Euro American - A U.S. citizen or resident of European descent.

Eutrophic - Having waters rich in mineral and organic nutrients that promote a proliferation of plant life, especially algae, which reduces the dissolved oxygen content and often causes the extinction of other organisms. Often used to describe a lake or pond.

Eutrophication - The process of becoming eutrophic.

Evapotranspiration - The collective processes by which water is transferred from the surface of the earth, including from the soil and the surface of water-bodies (through evaporation) and from plants (through transpiration).

Evolutionarily significant unit (ESU) - A population or group of populations inhabiting a defined geographical area that comprises a unique segment of the species; a distinct population, reproductively isolated from other nonspecific populations and is an important evolutionary legacy of the species.

Exotic and invading species (noxious weeds) - 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 insects or disease; or nonnative, 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 has 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.

Eyrie (aerie) - The nest of a bird, such as an eagle, built on a cliff or other high place.

Fallow - Allowing land that normally is used for crop production to lie idle.

Federal Trust Resources - A trust is something managed by one entity for another who holds the ownership. The U.S. Fish and Wildlife Service holds in trust many natural resources for the people of the United States of America as a result of Federal Acts and treaties. Examples are species listed under the Endangered Species Act, migratory birds protected by the Migratory

Bird Treaty Act, and other international treaties, and native plant or wildlife species found on the Refuge System.

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).

Floodplain - The relatively flat area along the sides of a river which is naturally subjected to flooding.

Fluvial - Pertaining to a river.

Flyway - A route taken by migratory birds between their breeding grounds and their wintering grounds. Four primary migration routes have been identified for birds breeding in North America: the Pacific, Central, Mississippi, and Atlantic Flyways.

Forage - Browse and herbage that are available for food for grazing animals or may be harvested for feeding. Forage production: the weight of forage that is produced within a designated period of time on a given area (e.g. pounds per acre).

Foraging - The act of feeding; another word for feeding.

Forbs - Herbaceous dicotyledonous plants (e.g., non-woody, broad-leafed, low-growing plants other than grasses).

Fragmentation - The process of reducing the size and connectivity of habitat patches.

Fungi (plural of fungus) - Any of numerous organisms of the kingdom Fungi, which lack chlorophyll and vascular tissue and range in form from a single cell to a body mass of branched filamentous hyphae that often produce specialized fruiting bodies (mushrooms, puff balls, etc.). The kingdom includes the yeasts, molds, smuts, and mushrooms.

GIS - Geographic Information System; a computer system that allows information about land to be mapped. Different characteristics, such as vegetation or soil types, are stored as separate "layers." The layers can be combined to display interactions of characteristics. Refers to such computer mapping programs as ArcView, ArcInfo, ERDAS, etc.

Goal - A 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).

Grain - A single, hard seed of a cereal grass.

Grazing management - The control of grazing and browsing animals to accomplish a desired result.

Grazing preference - (1) Selection of plants or plant parts, over others by grazing animals. (2) In the administration of public lands, a basis upon which grazing-use permits and licenses are issued.

Grazing pressure - An animal-to-forage relationship measured in terms of animal units per unit weight of forage at any instant.

Grazing system - Grazing management that defines the periods of grazing and non-grazing.

Grazing unit - A grazing area enclosed and separated from other areas by fencing or other barriers.

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

Hydrologic regime - The local pattern and magnitude of water flow influenced by season.

Hydrobasin - A major hydrological drainage basin.

Hydrology - The science dealing with the properties, distribution, and circulation of water on and below the earth's surface and in the atmosphere. The distribution and cycling of water in an area.
Impoundment - A body of water created by collection and confinement within a series of levees or dikes thus creating separate management units although not always independent of one another.

Impact - See effect.

Indigenous - Native to the area.

Integrated Pest Management (IPM) - Methods of managing undesirable species, such as weeds, including education; prevention, physical or mechanical methods or control; biological control; responsible chemical use; and cultural methods.

Interpretation - A teaching technique that combines factual information with stimulating explanation. This technique is frequently used to help people understand natural and cultural resources.

Introduced species - A species that is not a part of the original fauna or flora of a given area.

Inundation - To cover with water, naturally or through manipulation.

Invasive species - An alien (non-native) species whose introduction does or is likely to cause economic or environmental harm or harm to human health

Invader - Plant species that were absent in undisturbed portions of the original vegetation of a specific range site and will invade or increase following disturbance or continued heavy grazing.

Inventory - A survey that documents the presence, relative abundance, status and/or distribution of abiotic resources, specie, habitats, or ecological communities at a particular time.

Invertebrate - Animals that do not have backbones. Included are insects, spiders, mollusks (clams, snails, etc.), and crustaceans (shrimp, crayfish, etc.).

Inviolate sanctuary - The original intent of the term inviolate sanctuary is found in the Migratory Bird Conservation Act (first passed in 1918 as the Migratory Bird Treaty Act and amended in 1934 and 1938). This Act originally required that all refuges be inviolate sanctuaries and deemed that refuges' purposes were as breeding grounds and habitat for migratory birds. Migratory bird hunting was prohibited in migratory waterfowl areas by the Act, but most other human uses were not addressed. The 1938 amendment to the Act gave refuge managers authority to decide if, when, and how bird hunting would be allowed. After World War II, public demand for opening refuges to recreation increased. The 1949 Duck Stamp Act allowed waterfowl hunting on refuges, but restricted the percentage of each refuge open to hunting. Current policy states that portions of a refuge are considered "inviolate sanctuaries" if they were (a) acquired with the approval of the Migratory Bird Conservation Commission (MBBC) for the purpose of an inviolate sanctuary; (b) acquired with MBBC approval or Land and Water Conservation Funds to protect a threatened or endangered species; or (c) established by an instrument or document that states the intent to manage the area as an "inviolate sanctuary for migratory birds" or to fulfill the purpose of the Migratory Bird Conservation Act. Policy further allows migratory game bird hunting on no more than 40 percent of the area considered inviolate sanctuary if it is compatible with a refuges' purpose and mission. Inviolate sanctuary classification imposes no limits on hunting non-migratory birds, fur bearers, or other game species.

Irrigation drain water - Ideally, subsurface water which flows from irrigated land and generally transports higher concentrations of dissolved salts than the water applied to the land.

Irrigation return flow - Water which reaches surface drainage by overland flow or through groundwater discharge as a result of applied or natural irrigation.

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

Kuchel Act - (Public Law 88-567) 1964 Kuchel Act Provides that 21,000 acres of refuge land within the Klamath Reclamation Project be managed for waterfowl and leased for farming; prohibits further homesteading; moves management of refuge land under the Secretary of the Interior.

Lacustrine - Of or relating to a lake.

Landscape ecology - A sub-discipline of ecology, which focuses on special relationships and interactions between patterns and processes. This emerging science integrates hydrology, geology, geomorphology, soil science, vegetation science, wildlife science, economics, sociology, law, engineering, and land use planning to conserve, enhance, restore, and protect the sustainability of ecosystems on land.

Lease land program - Reclamation continues to administer the Lease Land Program under a Cooperative Agreement with the U.S. Fish and Wildlife Service. The primary objective of the Lease Land Program is to comply with the law and provide a commercial farming program using proven conservation practices with benefits for wildlife. While responsible stewardship and integrated pest management is required in all lease land contracts, these lands also provide an

area for research and demonstration projects that strive to balance agriculture and wildlife habitat.

Lek – A lek is an aggregation of male birds (such as sage grouse) that gather to engage in competitive displays that may entice visiting females who are surveying prospective partners for copulation. Leks are commonly formed before or during the breeding season.

Levee - An elevated embankment to prevent a river from overflowing.

Lichens - A fungus that grows symbiotically with algae, resulting in a composite organism that characteristically forms a crust-like or branching growth on rocks or tree trunks.

List 1B Plants (California Native Plant Society) - Plants that are rare, Threatened or Endangered in California and elsewhere.

List 4 Plants (California Native Plant Society) - Plants of limited distribution, often referred to as a plant watch list.

Managed wetlands - Managed wetlands are those managed for wetland functions and where water is intentionally and actively applied annually through a managed process. For the purposes of this CCP, wetlands that receive water only from rainfall, runoff, or other natural sources are not considered managed wetlands.

Marsh - An area of soft, wet, low-lying land, characterized by grassy vegetation and often forming a transition zone between water and land.

Memorandum of Understanding - A legal document outlining the terms and details of an agreement between parties, including each parties requirements and responsibilities.

Midden site - A mound or deposit containing shells, animal bones, and other refuse that indicates the site of a human settlement.

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

Migratory bird - Those species of birds listed under 50 CFR 10.13 (as defined by various treaties) (720FW1). Birds that migrate south of Mexico for the winter are considered Neotropical migrants.

Mitigation - To avoid or minimize impacts of an action by limiting the degree or magnitude of the action; to rectify the impact by repairing, rehabilitating, or restoring the affected environment; to reduce or eliminate the impact by preservation and maintenance operations during the life of the action.

Moist soil - A process where water is drawn down intentionally or naturally to promote mudflats (i.e., moist soil) that is required for germination for many desirable plants.

Monitoring - The orderly collection, analysis, and interpretation of resource data over time to evaluate progress toward meeting management objectives.

National Environmental Policy Act (NEPA) - An act which encourages productive and enjoyable harmony between humans and their environment, to promote efforts that will prevent or eliminate damage to the environment and atmosphere, to stimulate the health and welfare of humans. The act also established the Council on Environmental Quality (CEQ). Requires all agencies, including the U.S. Fish and Wildlife 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 Wildlife Refuge (Refuge or NWR) - A designated area of land or water or an interest in land or water within the system, including national wildlife refuges, wildlife ranges, wildlife management areas, waterfowl production areas, and other areas (except coordination areas) under the U.S. Fish and Wildlife Service jurisdiction for the protection and conservation of fish and wildlife. A complete listing of all units of the Refuge System may be found in the current "Report of Lands Under Control of the U.S. Fish and Wildlife Service."

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

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

No action alternative - An alternative under which existing management would be continued.

Objective - A concise statement of what we want to achieve, how much we want to achieve, when and where we want to achieve it, and who is responsible for the work. Objectives derive from goals and provide the basis for determining strategies, monitoring refuge accomplishments, and evaluating the success of strategies. Make objectives attainable, time-specific, and measurable.

Ornithology - The branch of zoology that deals with the study of birds.

Overgrazing - Continued heavy grazing that exceeds refuge habitat objectives and the recovery capacity of individual plants in the community and creates a deteriorated range.

pH - An index of acidity/alkalinity of a solution, being an expression of concentration of hydrogen ions.

Palatability - The relish with which a particular species or plant part is consumed by an animal.

Palustrine - Being, living, or thriving in a marsh.

Palustrine wetland - All non-tidal wetlands dominated by trees, shrubs, and persistent emergent vegetation.

Permanent wetlands - Lands flooded 12 months of the year.

Phenology - The study of periodic biological phenomena that is recurrent such as flowering or seeding, especially as related to climate.

Plant community - An assemblage of species or populations of plants growing together in a particular area at a particular point in time; the biological part of an ecosystem as distinct from its physical environment. The plant community of an area can change over time due to disturbance (e.g., fire) and succession.

Plant succession - The process of vegetation development whereby an area over time is occupied by different plant communities of later ecological stage.

Plant vigor - Plant health; relates to the relative robustness of a plant in comparison to other individuals of the same species.

Population - All the members of a single species coexisting in one ecosystem at a given time.

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. The U.S. Fish and Wildlife Service's may propose a preferred alternative at the Draft CCP stage.

Prescribed fire - Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements (where applicable) must be met, prior to ignition.

Prescribed fire burn plan - A plan required for each fire application ignited by management. Plans are documents prepared by qualified personnel, approved by the agency administrator, and include criteria for the conditions under which the fire will be conducted (a prescription). Plan content varies among the agencies.

Prescribed grazing - Managing the harvest of vegetation with grazing and/or browsing animals (USDA NRCS 2010) (Code 528 of Conservation Practice Standard).

Priority public uses - Hunting, fishing, wildlife observation and photography, and environmental education and interpretation, where compatible, are identified under the National Wildlife Refuge System Improvement Act of 1997 as the six priority public uses of the National Wildlife Refuge System.

Propagules - Any of various usually vegetative portions of a plant, such as a bud or other offshoot, that aid in dispersal of the species and from which a new individual may develop.

Public involvement - A process that offers impacted and interested individuals and organizations an opportunity to become informed about and to express their opinions on the U.S. Fish and Wildlife Service's actions and policies. In the process, these views are studied thoroughly and thoughtful consideration of public views is given in shaping decisions for refuge management.

Public scoping - See public involvement.

Purposes of the Refuge - "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, refuge unit, or refuge subunit." For refuges that encompass congressionally designated wilderness, the purposes of the Wilderness Act are additional purposes of the refuge.

Range condition - The health of range as compared to some standard at a point in time. The standard can be defined in ecological terms or in terms of a particular use. In the ecological determination, the degree of departure from climax determines condition.

Range management - A discipline founded on ecological principles with the objective of sustainable use of rangelands and related resources for various purposes.

Raptor - A bird of prey, such as a hawk, eagle, or owl.

Refuge - Short form of National Wildlife Refuge.

Refuge Operating Needs System (RONS) - The Refuge Operating Needs System is a national database that contains the unfunded operational needs of each refuge. We include projects required to implement approved plans and meet goals, objectives, and legal mandates.

Residual dry matter (RDM) - The amount of old plant material left on the ground at the beginning of a new growing season.

Resilience - Capacity of an ecosystem to regain its fundamental structure, processes, and functioning when altered by stresses like increased CO₂, nitrogen deposition, and drought and to disturbances like land development and fire.

Rest - Leaving an area ungrazed for a specific time. Rest period. The length of time that a management unit is not grazed.

Rest-rotation - A grazing management scheme in which rest periods, usually for a full growing season, for individuals grazing units are incorporated into a grazing rotation.

Restoration - Rehabilitation of a degraded area that was previously a healthy, functioning, and self-sustaining natural ecosystem.

Riparian zone - The banks and adjacent areas of water bodies, water courses, seeps and springs whose waters provide soil moisture sufficiently in excess of that otherwise available locally so as to provide a moister habitat than that of contiguous flood plains and uplands.

Rotation grazing - A grazing scheme where animals are moved from one grazing unit in the same group of grazing units to another without regard to specific graze: rest periods or levels of plant defoliation.

Sand - A sedimentary material, finer than a granule and coarser than silt, with grains between 0.06 and 2.0 millimeters in diameter.

Salinity - An expression of the amount of dissolved solids in water.

Seasonal grazing - Grazing only in a portion of the calendar year to achieve habitat management goals. For example, seasonal grazing could prescribe early season grazing, with cattle removed from the area prior to the drying of annual forage (UCIHRMP 1996). (See also year-round grazing and prescribed grazing.)

Semi-permanent wetlands – Lands typically flooded in fall or winter with water removal occurring in spring or early summer.

Silt - A sedimentary material consisting of very fine particles intermediate in size between sand and clay.

Siltation - The process of becoming covered with silt.

Sound professional judgment - A finding, determination, or decision that is consistent with principles of sound fish and wildlife management and administration, available science and resources, and adherence to the requirements of the Refuge Administration Act and other applicable laws.

Species - A distinctive kind of plant or animal having distinguishable characteristics, and that can interbreed and produce young. A category of biological classification.

Species composition - The proportions of various plant species in relation to the total on a given area.

Special status species - Special status species include any species which is listed, or proposed for listing, as threatened or endangered by the U.S. Fish and Wildlife Service (Service) under the provisions of the Endangered Species Act; any species designated by the Service as a "listed," "candidate," "sensitive" or "species of concern," and any species which is listed by the State in a category implying potential danger of extinction or any species listed as a California Species of Special Concern (<http://www.dfg.ca.gov/wildlife/nongame/ssc/>). For plants, special status species also include species that have been observed on the refuge and are ranked 1B in the California Native Plant Society's California Rare Plant Rank (<http://www.cnps.org/cnps/rareplants>).

Stocking density - The relationship between the number of animals and the area of land at any given time.

Stocking rate - The number of specific kinds and classes of animals grazing a unit of land for a specified time period.

Step-down management plan - A plan that provides specific guidance on management subjects (e.g., habitat, public use, fire, safety) or groups of related subjects. It describes strategies and implementation schedules for meeting CCP goals and objectives.

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).

Stratigraphy - The study of rock strata, especially the distribution, deposition, and age of sedimentary rocks.

Sump - A reservoir holding water to be used at a later date. Tule Lake sumps 1-A and 1-B hold water from Upper Klamath Lake, via the Lost River Diversion Channel and A Canal which includes irrigation return water, and continues to the Lower Klamath Refuge via the Tule Lake Tunnel. Irrigation water is managed by the Tule Lake Irrigation District under a contract with Reclamation.

Targeted grazing - See prescribed grazing.

Threatened species - Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, and one that has been designated as a threatened species in the Federal Register by the Secretary of the Interior. Threatened species are afforded protection under the Endangered Species Act of 1973.

Trust resources - Those resources for which the U.S. Fish and Wildlife Service (Service) has been given specific responsibilities under federal law. These include migratory birds, interjurisdictional fishes (fish species that may cross state lines), federally listed threatened or endangered species, some marine mammals, and lands owned by the Service.

Upland - An area where water normally does not collect and where water does not flow on an extended basis. Uplands are non-wetland areas.

Year-round grazing - Grazing throughout the entire calendar year. (See also seasonal grazing and prescribed grazing.)

Vision statement - A concise statement of what the planning unit should be, or what we hope to do, based primarily upon the Refuge System mission and specific refuge purposes, and other mandates. We will tie the vision statement for the refuge to the mission of the Refuge System; the purpose(s) of the refuge; the maintenance or restoration of the ecological integrity of each refuge and the Refuge System; and other mandates.

Walking wetlands - A one to four year fallow cycle in which croplands are flooded either seasonally (fall through spring) or year round, then returned to agricultural production.

Waterfowl - A group of birds that include ducks, geese, and swans (belonging to the order Anseriformes).

Watershed - The entire land area that collects and drains water into a river or river system.

Warm-season plant - A plant that makes most or all its growth during late spring, summer, or early fall and is usually dormant in winter.

Weed - (1) A plant growing where unwanted. (2) A plant having a negative value within a given management system.

Wetland - Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of the year (from U.S. Fish and Wildlife Service's Classification of Wetlands and Deepwater Habitats of the United States).

Wilderness Review - The process the U.S. Fish and Wildlife Service uses to determine if we should recommend Refuge System lands and waters to Congress for wilderness designation. The wilderness review process consists of three phases: inventory, study, and recommendation. The inventory is a broad look at the refuge to identify lands and waters that meet the minimum criteria for wilderness. The study evaluates all values (ecological, recreational, cultural), resources (e.g., wildlife, water, vegetation, minerals, soils), and uses (management and public) within the Wilderness Study Area. The findings of the study determine whether we will recommend the area for designation as wilderness.

Wildfire - An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out. Source:
<http://www.nwecg.gov/pms/pubs/glossary/index.htm>

Wildfire suppression - An appropriate management response to wildfire, escaped wildland fire use or prescribed fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

Wildland fire - Any non-structure fire that occurs in the wildland. Three distinct types of wildland fire have been defined and include wildfire, wildland fire use, and prescribed fire.

Wildland-Urban Interface (WUI) - The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

Wildlife - All undomesticated animal life; included are vertebrates and invertebrates.

Wildlife-dependent recreational use - "A use of a refuge involving hunting, fishing, wildlife observation and photography, or environmental education and interpretation." These are the six priority public uses of the Refuge System as established in the National Wildlife Refuge System Administration Act, as amended. Wildlife-dependent recreational uses, other than the six priority public uses, are those that depend on the presence of wildlife. We also will consider these other uses in the preparation of refuge CCPs; however, the six priority public uses always will take precedence.

Wildlife-friendly fence - Wildlife-friendly fences allow native ungulates (such as deer) safe passage over and under the fence. A wildlife-friendly fence has no barbs on the top and bottom wires and other modifications.