

Glossary and Abbreviations

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Crooked Pond at Massasoit National Wildlife Refuge

Glossary and Acronyms

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Glossary

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abate	to reduce in amount, degree, intensity, to lessen or diminish.
abiotic	relating to the non-living chemical and physical factors of the environment (e.g. temperature, water, soil, atmosphere, etc.).
abut	to be adjacent, or to touch or join at the edge or border.
approved acquisition boundary	A project boundary which the Regional Director of the U.S. Fish and Wildlife Service approves upon completion of the planning and environmental compliance process. An approved refuge boundary only designates those lands which the Fish and Wildlife Service has authority to acquire and/or manage through various agreements. Approval of a refuge boundary does not grant the Fish and Wildlife Service jurisdiction or control over lands within the boundary, and it does not make lands within the refuge boundary part of the National Wildlife Refuge System. Lands do not become part of the National Wildlife Refuge System unless they are purchased or are placed under an agreement that provides for management as part of the refuge system.
acrolein	a yellow, volatile and flammable liquid (C ₃ H ₄ O), having a pungent odor, usually produced during the decomposition of glycerol or distillation of fats. Acrolein is also known as acraldehyde, acryl-aldehyde, or acrylic aldehyde.
adaptation	adjustment to environmental conditions.
adaptive management	focuses on learning and adapting, through partnerships of managers, scientists, and other stakeholders who learn together how to create and maintain sustainable ecosystems. Adaptive management helps science managers maintain flexibility in their decisions, knowing that uncertainties exist and provides managers the latitude to change direction will improve understanding of ecological systems to achieve management objectives is about taking action to improve progress towards desired outcomes.
adhesion	the union of adjacent normally separate biological parts or tissues; or the molecular force of attraction in the area of contact between unlike bodies that acts to hold them together.
aeolian	of or caused by the wind; wind-blown.
alternative	a reasonable way to fix an identified problem or satisfy a stated need (40 CFR 1500.2).
ambient	of the surrounding area or environment.
anthropogenic	caused or produced by humans or human activity.
appropriate use	a proposed or existing use on a refuge that meets at least one of the following three conditions: (1) the use is a wildlife-dependent one; (2) the use contributes to fulfilling the refuge purpose(s), the System mission, or goals or objectives described in a refuge management plan approved after October 9, 1997, the date the National Wildlife Refuge System Improvement Act was signed into law; or (3) the use has been determined appropriate as specified in section 1.11 of that Act.

aquatic	growing in, living in, or dependent upon water.
aquifer	A water bearing stratum (layer) of permeable rock, sand, or gravel.
assemblage	a grouping or aggregate of persons, things, or species; the collection of species making up any co-occurring community of organisms in a given habitat or area.
At-Risk Community	defined in Title I of the Healthy Forests Restoration Act as: 1) an area comprised of an interface community as defined in the notice <i>Wildland Urban Interface Communities Within the Vicinity of Federal Lands That Are at High Risk From Wildfire</i> issued by the Secretary of Agriculture and the Secretary of the Interior in accordance with Title IV of the U.S. Department of the Interior and Related Agencies Appropriations Act, 2001 (114 Stat. 1009) (66 FR 753, January 4, 2001), or; 2) a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes) within or adjacent to Federal land, in which conditions are conducive to a large-scale wildland fire disturbance event, and for which a significant threat to human life or property exists as a result of a wildland fire disturbance event.
Atlantic Flyway	a bird migration route that generally follows the Atlantic coast of North America and the Appalachian Mountains.
atmospheric deposition	atmospheric deposition is the pollution of water caused by air pollution.
atmospheric subsidence	a descending motion of air in the atmosphere occurring over a rather broad area.
avian	of or relating to birds.
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barrens	usually, level or slightly rolling land, usually with a sandy soil and few trees, and relatively infertile.
basin	the land surrounding and draining into a water body; see “watershed.”
best management practices	land management practices that produce desired results; usually describing forestry or agricultural practices effective in reducing non-point source pollution, like reseeding skidder trails or not storing manure in a flood plain.
biochemical cycling	any of the natural pathways by which essential elements of living matter are circulated. The term biogeochemical is a contraction that refers to the consideration of the biological, geological, and chemical aspects of each cycle.
biodiversity conservation	the goal of conservation biology, to retain indefinitely as much of the earth’s biotic diversity as possible, with emphasis on those biotic elements most vulnerable to human impacts.
biological diversity or biodiversity	The variety of life, including the variety of living organisms, the genetic differences among them, and the communities in which they occur.

biological integrity	biotic composition, structure, and functioning at genetic, organism, and community levels comparable with historic conditions, including the natural biological processes that shape genomes, organisms and communities. See “biotic.”
biomass	the amount of living matter in a given habitat, expressed either as the weight of organisms per unit area or as the volume of organisms per unit volume of habitat, or; organic matter, especially plant matter, that can be converted to fuel and is therefore regarded as a potential energy source.
biota	the plant and animal life of a region.
biotic	relating to the living components of the environment (e.g., plants, animals, fungi, bacteria).
bird conservation region	regions that encompass landscapes having similar bird communities, habitats, and resource issues; used as an administrative tool to aid in the conservation of birds and their habitats.
breeding habitat	habitat used by migratory birds or other animals during the breeding season.
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candidate species	plants and animals for which the U.S. Fish and Wildlife Service has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act, but for which development of a proposed listing regulation is precluded by other higher priority listing activities.
canid	any animal of the dog family Canidae, including the wolves, jackals, hyenas, coyotes, foxes, and domestic dogs.
canopy	the layer of foliage formed by the crowns of trees in a stand. For stands with trees of different heights, foresters often distinguish among the upper, middle and lower canopy layers. These represent foliage on tall, medium, and short trees.
carapace	a bony or chitinous shield, test, or shell covering some or all of the dorsal part of an animal, as of a turtle.
carbon footprint	the amount of carbon dioxide (CO ₂) emitted from the consumption of fossil fuels by a particular person, group, organization, agency, etc.
carbon sequestration	the process of capture and long-term storage of atmospheric carbon dioxide (CO ₂).
categorical exclusion	pursuant to the National Environmental Policy Act (NEPA), a category of Federal agency actions that do not individually or cumulatively have a significant effect on the human environment (40 CFR 1508.4); also known as CE, CX, CATEX, or CATX.
cation	any positively charged atom or group of atoms; a positively charged ion that is attracted to the cathode in electrolysis.

cation exchange	the ability of a substance such as soil, to attract, retain, and release positively charged ions (cations).
cation release	the loss or release of positively charged ions (cations) from a substance, such as soil.
chiefdom	the territory or people over which a Tribal chief rules.
chironomid	a family of nematoceran (suborder of elongated flies with thin, segmented antennae and mostly aquatic larvae) flies with global distribution.
coastal plain pond	Shallow, highly acidic groundwater ponds in glacial outwash, usually with no inlet or outlet. Water rises and falls with changes in the water table, typically leaving an exposed shoreline in late summer. In wet years, the pondshore may remain inundated. Substrate varies from sand - cobble to muck.
community	the locality in which a group of people resides and shares the same government community type; a particular assemblage of plants and animals.
combustion	the act or process of burning, commonly rapid oxidation accompanied by heat and, usually, light but also may be slow oxidation not accompanied by high temperature and light.
compaction	The process by which the porosity of a given form of sediment is decreased as a result of its mineral grains being squeezed together by the weight of overlying sediment or by mechanical means.
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.”—National Wildlife Refuge System Improvement Act of 1997 [Public Law 105-57; 111 Stat. 1253]
compatibility determination	a required determination for wildlife-dependent recreational uses or any other public uses of a refuge.
Comprehensive Conservation Plan	(CCP) mandated by the 1997 Refuge Improvement Act, a document that provides a description of the desired future conditions and long-range guidance for the project leader to accomplish purposes of the refuge system and the refuge. CCPs establish management direction to achieve refuge purposes. [P.L. 105-57; Service Manual 602 FW 1.4]
concern	see “issue.”
conifer	a tree or shrub in the phylum Gymnospermae; a tree or shrub that bears cones and has evergreen needlelike or scale-like leaves. Examples include pines and firs (family Pinaceae).
conservation	managing natural resources to prevent loss or waste; management actions may include preservation, restoration, and enhancement.
conservation easement	a non-possessory interest in real property owned by another imposing limitations or affirmative obligations with the purpose of returning or protecting the property’s conservation values.

conservation status	assessment of the status of ecological processes and of the viability of species or populations in an ecoregion.
contiguous	touching, in contact with or in close proximity to and nearby.
cooperative agreement	a usually long-term habitat protection action, which can be modified by either party, in which no property rights are acquired. Lands under a cooperative agreement do not necessarily become part of the National Wildlife Refuge System.
cover-type	characteristic dominant plant species, or a common aspect of the assemblage, such as an elevation range or environmental commonality.
critical habitat	according to U.S. Federal law, the ecosystems upon which endangered and threatened species depend.
crowning potential	the relative susceptibility of a forest stand to a crown fire, the likelihood that a fire spreading through forest fuels on the ground surface will move vertically into and begin spreading through the crowns of overtopping trees.
cultural resource inventory	a professional study to locate and evaluate evidence of cultural resources within a defined geographic area [Various levels of inventories may include background literature searches, comprehensive field examinations to identify all exposed physical manifestations of cultural resources, or sample inventories for projecting site distribution and density over a larger area. Evaluating identified cultural resources to determine their eligibility for the National Register follows the criteria in 36 CFR 60.4 (cf. Service Manual 614 FW 1.7).].
cutin	an insoluble mixture containing waxes, fatty acids, soaps, and resinous material that forms a continuous layer on the outer epidermal layer of a plant.
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database	a collection of data arranged for ease and speed of analysis and retrieval.
defoliation	a condition of when the leaves of (a plant, tree, or forest) to fall off.
degradation	the loss of native species and processes due to human activities such that only certain components of the original biodiversity persist, often including significantly altered natural communities.
deliverable	something that is or can be delivered, such as merchandise, especially to fulfill a contract.
demographer	a scientist who studies the growth and density of populations and their vital statistics.
demographic	a single vital or social statistic of a human population, as the number of births or deaths, or a specific segment of a population having shared characteristics.
deposition	the act or process of depositing something, such as eroded soil sediment, or contaminants or pollutants.

depot fat	body fat stored as tissue in which the tissue cells are distended by droplets of fat, also known as adipose tissue.
depredate	to prey upon; to plunder.
desired future condition	the future qualities of the refuge that the Service hopes to develop through management actions and decisions (i.e. What will the refuge look like in the future?).
detritus	any decomposed and disintegrated organic material; debris.
devolve	to roll or flow downward.
disjunct	marked by separation from usually contiguous parts or individuals.
disseminate	to scatter or spread widely, as though sowing seed; promulgate extensively; broadcast; disperse.
disturbance	any relatively discrete event in time that disrupts ecosystem, community, or population structure and changes resources, habitat availability, or the physical environment.
disturbance dependent	species associated with a wide variety of naturally open habitats including grasslands, prairies, savannas, glades and barrens, bogs, beaver meadows (floodplains), xeric scrublands, open pine or oak woodlands.
disturbance regime	the pattern of disturbances that shape an ecosystem over a long time scale; it describes a spatial disturbance pattern, a frequency and intensity of disturbances, and a resulting ecological pattern over space and time; includes disturbance distribution, frequency, rotation period, predictability, area disturbed, and magnitude intensity (or severity).
division	an administrative unit of the refuge defined by a geographic feature, usually a river or other body of water (see biological integrity).
donation	a citizen or group may wish to give land or interests in land to the Service for the benefit of wildlife. Gifts and donations have the same planning requirements as purchases.
drawdown	a lowering of water surface level, as in a well; a reduction or depletion.
duff	a layer of organic matter in various stages of decomposition on a forest floor.
dwarf shrub	a perennial, multi-stemmed low-growing woody plant that is usually under 0.5 m (1.5 feet) tall, never exceeding 1 meter (3 feet) tall at maturity, typically have several stems arising from or near the ground.

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early successional	species, assemblages, structures, and processes associated with pioneering natural communities that have recently experienced significant disturbance
easement	a non-possessory interest in real property that permits the holder to use another's land for a specified purpose. It may also impose limitations or affirmative obligations on the holder of the land subject to the easement. An agreement by which landowners give up or sell one of the rights on their property (e.g. landowners may donate rights-of-way across their properties to allow community members access to a river (see "conservation easement").
ecological integrity	The integration of biological integrity, natural biological diversity, and environmental health; the replication of natural conditions. For communities, integrity is governed by demographics of component species, intactness of landscape-level processes (e.g., natural fire regime), and intactness of internal community processes (e.g., pollination).
ecological processes	a complex mix of interactions among animals, plants, and their environment that ensures maintenance of an ecosystem's full range of biodiversity. Examples include population and predator-prey dynamics, pollination and seed dispersal, nutrient cycling, migration, and dispersal.
ecoregion	a territory defined by a combination of biological, social, and geographic criteria, rather than geopolitical considerations. Generally, a system of related interconnected ecosystems.
ecosystem	a natural community of organisms interacting with its physical environment, regarded as a unit.
ecosystem service	a benefit or service provided free by an ecosystem or by the environment, such as clean water, flood mitigation, or groundwater recharge.
emergence	when an adult insect emerges (or ecloses) from the pupal stage by splitting the pupal case.
emergent wetland	wetlands dominated by erect, rooted, herbaceous plants.
endangered species	a federally listed or State-listed protected species in danger of extinction throughout all or a significant portion of its range.
endemic	natural to or characteristic of a specific people or place; native; indigenous; belonging exclusively or confined to a particular place.
environment	the sum total of all biological, chemical, and physical factors to which organisms are exposed.
Environmental Assessment	(EA) a public document that discusses the purpose and need for an action, its alternatives, and provides sufficient evidence and analysis of its impacts to determine whether to prepare an environmental impact statement or a finding of no significant impact (q.v.) [cf. 40 CFR 1508.9].
environmental education	curriculum-based education aimed at producing a citizenry that is knowledgeable about the biophysical environment and its associated problems, aware of how to help solve those problems, and motivated to work toward solving them.

environmental health	the composition, structure, and functioning of soil, water, air, and other abiotic features comparable with historic conditions, including the natural abiotic processes that shape the environment. (see “abiotic”).
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.
ephemeral	lasting a very short time; short-lived; transitory; anything short-lived, as certain insects.
ericaceous	belonging to the heath family of plants (Ericaceae).
erosion	the process by which the surface of the earth is worn away by the action of water, glaciers, winds, waves, etc.
evaluation	examination of how an organization’s plans and actions have turned out — and adjusting them for the future.
evapotranspiration	the combination of evaporation from the ground and transpiration from plants.
exacerbate	to make more severe or harsh.
exceedance	above the limit or the standard.
exclosure	A non-lethal method for decreasing predation uses protective cages; an area protected against intruders such as predators, as by fences.
exotic species	a species that is not native to an area and has been introduced intentionally or unintentionally by humans; not all exotics become successfully established (see “invasive species”).
extinction	the termination of any lineage of organisms, from subspecies to species and higher taxonomic categories from genera to phyla. Extinction can be local, in which one or more populations of a species or other unit vanish but others survive elsewhere, or total (global), in which all the populations vanish.
extirpated	status of a species or population that has completely vanished from a given area but that continues to exist in some other location.
extrapolate	to estimate to values outside or beyond the known or observed range of those values; to infer an unknown from something that is known.
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fauna	all animal life associated with a given habitat, country, area or period.
fecundity	the capacity of abundant production; capacity, especially in female animals, of producing young in great numbers.
Federal land	public land owned by the Federal Government, including national forests, national parks, and national wildlife refuges.

Federal-Recognized Native American Tribe	A group of Native American Indians recognized by the United States as an Indian Tribe. This recognition establishes a Tribe as an entity with the capacity to engage in government-to-government relations with the United States, or individual states, and also as one eligible to receive Federal services. Federal recognition is established as a result of historical and continued existence of a Tribal government; by Executive Order or legislation; and through the Federal recognition process established by Congress.
Federal trust resource	a resource that the Federal Government holds in trust for the people through law or administrative act. A Federal trust resource is one for which responsibility is given wholly or in part to the Federal Government by law or administrative act. Generally, Federal trust resources are nationally or internationally important no matter where they occur, like endangered species or migratory birds and fish that regularly move across state lines. They also include cultural resources protected by Federal historic preservation laws, and nationally important or threatened habitats, notably wetlands, navigable waters, and public lands like state parks and national wildlife refuges.
Federal trust responsibility	In the Federal government, a special duty required of agencies to hold and manage lands, resources, and funds on behalf of Native American Tribes.
federally listed species	a species listed either as endangered, threatened, or a species at risk under the Endangered Species Act of 1973, as amended.
fee-title acquisition	the acquisition of most or all of the rights to a tract of land; a total transfer of property rights with the formal conveyance of a title. While a fee-title acquisition involves most rights to a property, certain rights may be reserved or not purchased, including water rights, mineral rights, or use reservation (e.g., the ability to continue using the land for a specified time period, such as the remainder of the owner's life).
Finding of No Significant Impact	(FONSI) supported by an environmental assessment, a document 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].
fire behavior	the manner in which fuel ignites, flame develops, and fire spread and exhibits other related phenomena as determined by the interaction of fuels, weather, and topography.
fire intensity	A general term relating to the heat energy released by a fire.
fire management	all activities related to the management of wildfires.
fire regime	the characteristic frequency, intensity, and spatial distribution of natural fires within a given ecoregion or habitat.
flora	all the plants found in a particular place.
flowage	an overflowing onto adjacent land; a body of water formed by overflowing or damming; floodwater especially of a stream; flowing or overflowing water, or other liquid.
flyway	any one of several established migration routes of birds.

focal species	a species that is indicative of particular conditions in a system (ranging from natural to degraded) and used as a surrogate measure for other species of particular conditions. An element of biodiversity selected as a focus for conservation planning or action.
focus areas	see “special focus areas.”
forbs	flowering plants (excluding grasses, sedges, and rushes) that do not have a woody stem and die back to the ground at the end of the growing season.
forest	land dominated by trees.
forest maturation	the point in the life cycle of a stand of trees or forest at which there is no net biomass accumulation; the stage before decline when annual growth is offset by breakage and decay.
formaldehyde	a colorless, toxic, potentially carcinogenic, water-soluble gas, CH ₂ O, having a suffocating odor, usually derived from methyl alcohol by oxidation, also known as methanal.
fragmentation	the disruption of extensive habitats into isolated and small patches. Fragmentation has two negative components for biota: the loss of total habitat area, and the creation of smaller, more isolated patches of habitat.
fuel break	A strip or block of land on which the vegetation, debris and detritus have been reduced and/or modified to control or diminish the risk of the spread of fire crossing the strip or block of land.
fuel load	The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area, for example tons per acre.
fyke nets	a long bag net kept open by hoops used to trap animals like fish and turtles.
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geographic information system	(GIS) a computerized system to compile, store, analyze, and display geographically referenced information. (e.g., GIS can overlay multiple sets of information on the distribution of a variety of biological and physical features).
geomorphic region	an area or landform shaped by a similar set of geologic forces and processes, exhibiting similar physical topographic and natural features.
girdling	killing a tree by removing a strip of bark from around its trunk.
glacial maximum	period in climate history when ice sheets reach their greatest areal extent, last reached in North America approximately 26,500 years ago.
glacial till	unsorted sediments directly deposited by a glacier, typically containing a mixture of clay, sand, gravel and boulders.
glaciofluvial	material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and may occur in the form of outwash plains, deltas, kames, eskers, and kame terraces.

glyphosate	a water soluble organophosphate compound of glycine and phosphate, $C_3H_8NO_5P$, used as a broad-spectrum systemic herbicide.
graminoid	grasses (family Gramineae or Poaceae) and grasslike plants such as sedges (family Cyperaceae) and rushes (family Juncaceae).
grassland	a habitat type with landscapes dominated by grasses.
groundwater	water in the ground that is in the zone of saturation, from which wells and springs and groundwater runoff are supplied.
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habitat fragmentation	the breaking up of a specific habitat into smaller, unconnected areas. A habitat area that is too small may not provide enough space to maintain a breeding population of the species in question.
habitat conservation	protecting a habitat to ensure that the use of that habitat wildlife and plants is not changed or reduced.
habitat	is a combination of environmental factors that provides food, water, cover and space that a living thing needs to survive and reproduce.
headstarting	hatching turtle eggs in controlled conditions and releasing these turtles in their natural environment when they reach an age and size that would have a better chance of survival against predators.
herbaceous	a plant that has a non-woody stem and which dies back at the end of the growing season; having the texture, color, etc., of an ordinary foliage leaf.
herpetofauna	the species of reptiles and amphibians in a particular area.
heterogeneity	the quality or state of being heterogeneous (diverse in character or content).
hibernacula	protective sites, especially for winter; winter quarters, used by hibernating animals.
historic conditions	the composition, structure, and functioning of ecosystems resulting from natural processes that we believe, based on sound professional judgement, were present prior to substantial human-related changes to the landscape.
historic range of variability	the maximum and minimum extremes in ecosystem or landscape structure, composition, and function during a prior time period. Departure of an ecosystem/landscape from the past range of variability is an important metric for sustaining biotic diversity and ecosystem integrity used by land managers.
hydrocarbons	any of a class of compounds containing only hydrogen and carbon, as: an alkane, methane (CH_4); an alkene, ethylene (C_2H_4); an alkyne, acetylene, (C_2H_2); or an aromatic compound, benzene, (C_6H_6).

hydrology	the science of waters of the earth, their occurrences, distributions, and circulations; their physical and chemical properties; and their reactions with the environment.
hydrophobic	having little or no affinity for water.
hyperendemic	exhibiting a high and continued incidence—used chiefly of human diseases.
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imazapyr	an imidazolinone herbicide used to control grasses, broadleaves, vines, brambles, brush, and trees. It disrupts an enzyme (found only in plants) necessary for protein synthesis, and interferes with cell growth and DNA synthesis in plants.
impact	influence; effect; to have an effect on; influence; alter.
incubation	sitting on or brooding the eggs of birds and other egg-laying animals to hatch them.
indigenous	native to an area; a species that historically occurred or currently occurs in a particular ecosystem.
infiltration	the seepage of water into soil or rock.
integrated pest management	(IPM) sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks.
interjurisdictional	a resource that occurs in an area under the jurisdiction of two or more states or countries; legislation arising from one level of jurisdiction may be applicable to matters covered at another level.
interpretive facilities	structures that provide information about an event, place, or thing by a variety of means, including printed, audiovisual, or multimedia materials (e.g., kiosks that offer printed materials and audiovisuals, signs, and trail heads).
interpretive materials	any tool used to provide or clarify information, explain events or things, or increase awareness and understanding of the events or things (e.g., printed materials like brochures, maps or curriculum materials; audio/visual materials like video and audio tapes, films, or slides; and, interactive multimedia materials, CD-ROM or other computer technology).
intradepartmental	involving or existing within the same or a single organizational department.
introduced invasive species	non-native species that have been introduced into an area and, because of their aggressive growth and lack of natural predators, displace native species.
invasive species	an alien species whose introduction causes or is likely to cause economic or environmental harm or harm to human health.
invertebrate	any animal lacking a backbone or bony segment that encloses the central nerve cord.

irretrievable	the use or consumption of a specified resource that is neither renewable nor recoverable for later use by future generations.
irreversible	a commitment of resources whose primary or secondary impacts limit the future option for using a specified resource.
issue	any unsettled matter that requires a management decision. [e.g., a Service initiative, an opportunity, a management problem, a threat to the resources of the unit, a conflict in uses, a public concern, or the presence of an undesirable resource condition. [A CCP should document, describe, and analyze issues even if they cannot be resolved during the planning process (Service Manual 602 FW 1.4).]
iterative	a process for calculating a desired result by means of a repeated cycle of operations. An iterative process should be convergent, i.e., it should come closer to the desired result as the number of iterations increases.
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kame	a hill or hummock composed of stratified sand and gravel laid down by glacial meltwater.
kettle hole	a generally circular hollow or depression in an outwash plain or moraine, believed to have formed where a large block of subsurface ice has melted.
kiosk	a small open structure with one or more sides used to display information.
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landscape	a heterogeneous land area composed of a cluster of interacting ecosystems that are repeated in similar form throughout.
landform	the physical shape of the land reflecting geologic structure and processes of geomorphology that have sculpted the structure.
late-successional	species, assemblages, structures, and processes associated with mature natural communities that have not experienced significant disturbance for a long time.
LD-50	the amount of a material, given all at once, which causes the death of 50 percent (one half) of a group of test animals.
lentic	pertaining to or inhabiting still water.
lepidopteran	insects comprising the butterflies, moths, and skippers that as adults have four broad or lanceolate wings usually covered with minute overlapping and often brightly colored scales and that as larvae are caterpillars.
leptospiiral	an infection or disease condition caused by any of several spirally shaped, aerobic bacteria of the genus <i>Leptospira</i> .
limiting factor	an environmental limitation that prevents further population growth.

littoral	the near shore region of freshwater lake beds from the sublittoral zone up to and including damp areas on shore; of or relating to the shore of a lake, sea, or ocean.
local agencies	generally municipal governments, regional planning commissions, or conservation groups.
logging slash	In forestry, slash are coarse and fine woody debris generated during logging operations or through wind, snow or other natural forest disturbances.
long-term protection	mechanisms like fee-title acquisition, conservation easements, or binding agreements with landowners that ensure land use and land management practices will remain compatible with maintaining species populations over the long term (see “fee-title acquisition”).
lotic	pertaining to or inhabiting flowing water.
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macrofauna	animals of soil or benthic sediments that are greater than about 1 or 2 millimeters in size, generally large enough to be visible with the naked eye, such as earthworms or polychaetes.
macroinvertebrates	invertebrates large enough to be seen with the naked eye (e.g., most aquatic insects, snails, and amphipods).
malady	any undesirable or disordered condition; any disorder or disease, especially if a chronic or deepseated disorder.
management alternative	a set of objectives and the strategies needed to accomplish each objective [Service Manual 602 FW 1.4].
management concern	see “issue.”
management opportunity	see “issue.”
management plan	a plan that guides future land management practices on a tract. [In the context of an environmental impact statement, management plans may be designed to produce additional wildlife habitat along with primary products like timber or agricultural crops (see “cooperative agreement”).]
management strategy	a general approach to meeting unit objectives. [A strategy may be broad, or it may be detailed enough to guide implementation through specific actions, tasks, and projects (Service Manual 602 FW 1.4).]
mastadons	an extinct group of mammal species related to elephants, that inhabited North and Central America during the late Miocene or late Pliocene up to their extinction at the end of the Pleistocene 10,000 to 11,000 years ago.
masticate	to reduce to a pulp by crushing or grinding, as rubber; to chew.
Memorandum of Understanding	(MOU) a document that describes an agreement between partners where a set of expectations, actions or commitments are agreed upon.

mesic	of, relating to, or adapted to an environment having a balanced supply of moisture.
metapopulation	a group of spatially separated populations of the same species which interact at some level.
microbial nitrogen fixation	a process in which nitrogen (N ₂) in the atmosphere is converted into ammonium (NH ₄ ⁺) or nitrogen dioxide (NO ₂) by microorganisms.
microburst	a very localized column of rapidly sinking air.
microclimate	climate of a small, specific place within a larger area. A small yard or park can have several microclimates differing by how much sunlight, shade, or exposure to the wind there is at a particular spot.
microfauna	animals that cannot be seen with the naked eye, normally observed with the aid of a microscope; small, often microscopic animals, especially those inhabiting the soil, an organ, or other localized habitat; the animals of a microhabitat.
microhabitat	the local habitat of a particular organism or microorganism. There are normally a number of different microhabitats within a large habitat (<i>macrohabitat</i>), each with its distinct set of environmental conditions.
mid-seral	an intermediate stage of secondary forest succession in which plant species typical of the potential natural community are increasing in the forest composition as a result of their active colonization of the site, and are approaching equal proportions with the seral species.
migratory birds	species that generally migrate south each fall from breeding grounds to their wintering grounds and vice versa in the spring
milfoil	a widely distributed aquatic plant with whorls of fine submerged leaves and wind-pollinated flowers from the Genus <i>Myriophyllum</i> , family <i>Haloragaceae</i> , often considered a highly invasive aquatic plant.
mineralization	mineralization is a decomposition process in which complex organic substances are converted to simpler inorganic substances by heat, sunlight, water, chemicals, or biological metabolism such as by soil microorganisms.
mission statement	a succinct statement of the purpose for which the refuge was established; its reason for being.
mitigation	actions to compensate for the negative effects of a particular project (e.g., wetland mitigation usually restores or enhances a previously damaged wetland or creates a new wetland).
monitoring	the process of collecting information to track changes of selected parameters over time.
monoculture	a land management strategy in which large areas are planted with a single crop, over many years.

monotype	the plant species dominating an area to the near exclusion of all other potential plant species suited to the area.
moraine	a mass or ridge of earth scraped up by ice and deposited at the edge or end of a glacier.
mosaic	an interconnected patchwork of distinct vegetation types.
motile	moving or capable of moving spontaneously.

- N -

National Environmental

Policy Act of 1969	(NEPA) requires all Federal agencies to examine the environmental impacts of their actions, incorporate environmental information, and use public participation in planning and implementing environmental actions. [Federal agencies must integrate NEPA with other planning requirements, and prepare appropriate NEPA documents to facilitate better environmental decision-making (cf. 40 CFR 1500).]
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National Wildlife

Refuge Complex	(refuge complex) an internal Service administrative linking of refuge units closely related by their purposes, goals, ecosystem, or geopolitical boundaries.
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National Wildlife

Refuge System	(Refuge System) all lands and waters and interests therein administered by the U.S. Fish and Wildlife Service as wildlife refuges, wildlife ranges, wildlife management areas, waterfowl production areas, and other areas managed to preserve a national network for the conservation and management of fish, wildlife, and plant resources of the United States, for the benefit of present and future generations (National Wildlife Refuge System Improvement Act, 16 USC 668dd).
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native	a species that historically occurred or currently occurs in a particular ecosystem.
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native plant	a plant that has grown in the region since the last glaciations and occurred before European settlement.
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natural disturbance event	any natural event that significantly alters the structure, composition, or dynamics of a natural community: e.g., floods, fires, and storms.
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natural processes	a complex mix of interactions among animals, plants, and their environment that ensures maintenance of an ecosystem's full range of biodiversity. Examples include population and predator-prey dynamics, pollination and seed dispersal, nutrient cycling, and migration.
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neotropical migrant	birds, bats, or invertebrates that seasonally migrate between the Neartic region (North America as far south as northern Mexico) and the neotropical region (South America as far north as northern Mexico).
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nitrification	the chemical process in which a nitro group is added to or substituted for an organic compound; the oxidation of ammonium compounds in dead organic material into nitrates and nitrites by soil bacteria (making nitrogen available to plants); conversion of nitrogen from inorganic to organic by nitrate bacteria, into a form that it can be taken up through plant roots and used again for plant growth.
nitrogen oxides	the mono-nitrogen oxides NO and NO ₂ (nitric oxide and nitrogen dioxide). Nitrogen oxides (NO _x) are produced during combustion in the presence of nitrogen from the reaction among nitrogen, oxygen and/or hydrocarbons, especially at high temperatures, as in air-breathing engines or by lightning. In atmospheric chemistry, the term means the total concentration of NO and NO ₂ . NO _x gases react to form smog and acid rain and are central to ground level ozone formation.
nonattainment	to have air quality worse than the National Ambient Air Quality Standards as defined in the Clean Air Act Amendments of 1970.
non-consumptive, wildlife-oriented recreation	wildlife observation and photography and environmental education and interpretation (see “wildlife-oriented recreation”).
non-native species	see “exotic species” or “invasive species.”
non-point source	pollution originating from multiple, diffuse locations, generally resulting from land runoff, precipitation, atmospheric emissions and deposition, drainage, seepage or hydrologic modification. As the runoff or polluted air mass moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and ground waters.
Notice of Intent	(NOI) an announcement we publish in the Federal Register that we will prepare and review an environmental impact statement [40 CFR 1508.22].
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objective	a concise statement of what a refuge wants to achieve, how much a refuge wants to achieve, when and where the refuge wants to achieve it, and who is responsible for the work. Objectives derive from refuge goals and provide the basis for determining strategies, monitoring refuge accomplishments, and evaluating the success of strategies.
odonate	a predatory insect of the order <i>Odonata</i> ; a dragonfly or damselfly.
open canopy	the condition when individual plants forming the upper layer or habitat zone, formed by mature tree crowns and including other biological organisms (epiphytes, lianas, arboreal animals, etc.) are widely spaced, allowing unfiltered sunlight to reach the ground surface. The term is most commonly used when forest canopy closure falls within the range of 25 to 70 percent.
organo-chlorine	an organic compound containing at least one covalently bonded chlorine atom as the dominant functionality, of which chloroalkane and chlorinated solvent as examples are major members. Their wide structural variety and divergent chemical properties lead to a broad range of names and applications, many of which are controversial because of their effects on the environment, human and animal health.

outwash plain	the plain formed by deposits from a stream or river originating from the melting of glacial ice that are distributed over a considerable area; generally coarser, heavier material is deposited nearer the ice and finer material carried further away.
overstory	the uppermost layer of foliage that forms a forest canopy.
<hr/> - P - <hr/>	
pandemic	a disease epidemic over a large area, such as an entire country, continent, or the whole world.
parameter	characteristic or factor; aspect; element; limits or boundaries; guidelines a variable entering into the mathematical form of any distribution such that the possible values of the variable correspond to different distributions. A variable that must be given a specific value during the execution of a program or of a procedure within a program.
particulate matter	microscopic solid or liquid matter suspended in the atmosphere; a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles.
partnership	any time that a Federal or non-Federal individual or entity work together with the U.S. Fish and Wildlife Service to achieve a mutual goal.
patch-mosaic	a means of visualizing spatially heterogeneous ecosystems or natural landscapes as a larger matrix (mosaic) smaller areas or patches, the patches differing from the larger matrix and each other in size, shape, composition, natural history, duration in the landscape, and/or boundary characteristics.
payment in lieu of taxes	see Revenue Sharing Act of 1935, Chapter One, Legal Context.
phenology	the study of cyclical and seasonal natural phenomena, especially in relationship to climate and plant and animal life cycle events.
physiographic	relating to physical geography.
plant community	a distinct assemblage of plants that develops on sites characterized by particular climates and soils.
plume	something (such as smoke, steam, or water) that moves into the air, water, or ground as it disperses in a long or tall, thin or conical shape, such as sewage outflow from a sewage treatment plant, or smokestack emissions from a factory.
population	an interbreeding group of plants or animals. The entire group of individuals of one species.
population monitoring	assessing the characteristics of populations to ascertain their status and establish trends on their abundance, condition, distribution, or other characteristics.

population persistence	when a given interbreeding group of individuals of a single species, generally living in the same geographic area, (a population) continues to exist (avoid extinction), over a specified time period, usually expressed as a probability of persistence over a specified number of years or generations. Commonly used by conservation biologists as a relative index of extinction risk.
preferred alternative	The alternative determined by the decision-maker that best achieves the refuge's 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.
prescribed fire	the application of fire to wildland fuels, either by natural or intentional ignition, to achieve identified land use objectives [Service Manual 621 FW 1.7] Also referred to as prescribed burn and controlled burn.
presence-absence data	results (data) from biological survey methods recording when one or more species of interest was detected as present within the area surveyed. A species is inferred as absent from the area if it was not detected by the survey method(s) used.
priority public use	a compatible wildlife-dependent recreational use of a refuge involving hunting, fishing, wildlife observation and photography, or environmental education and interpretation.
private land	land owned by a private individual or group or non-government organization.
private organization	any non-government organization.
proposed wilderness	an area of the Refuge System that the Secretary of the Interior has recommended to the President for inclusion in the National Wilderness Preservation System.
protection	mechanisms that ensure land use and land management practices will remain compatible with maintaining species populations at a site.
public	individuals, organizations, and non-government groups; officials of Federal, state, and local government agencies; Native American Tribes, and foreign nations— includes anyone outside the core planning team, those who may or may not have indicated an interest in the issues, and those who do or do not realize that our decisions may affect them.
public involvement	offering an opportunity to interested individuals and organizations whom our actions or policies may affect to become informed; soliciting their opinions. We thoroughly study public input, and give it thoughtful consideration in shaping decisions about managing refuges.
public land	land owned by the local, state, or Federal government.
public use	when individuals utilize the property or lands possessed by another (e.g. the government) who holds them for the benefit of others.

– R –

rare species	species identified for special management emphasis because of their uncommon occurrence within a given region.
rate of spread	the linear rate of advance of a wildland fire into unburned fuel in the direction perpendicular to the fire front, expressed as distance spread during a specified period of time (e.g. feet per minute).
Record of Decision	(ROD) a concise public record of a decision by a Federal agency pursuant to NEPA. A ROD includes the decision; all the alternatives considered; the environmentally preferable alternative; a summary of monitoring and enforcement, where applicable, for any mitigation; and, whether all practical means have been adopted to avoid or minimize environmental harm from the alternative selected (or if not, why not).
refuge goals	descriptive, open-ended, and often broad statements of desired future conditions that convey a purpose but do not define measurable units (see “desired future conditions”).
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, refuge unit, or refuge subunit.
refuge lands	lands in which the Service holds full interest in fee-title or partial interest, such as an easement.
refugia	areas where special environmental circumstances enable individuals of a species or a community to survive when otherwise fatal conditions or events affect the surrounding areas.
residual smoldering	the long-duration combustion that may persist for several hours or several days following the passage of the flame front.
resiliency	an ability to recover from or adjust easily to change.
restoration	management of a disturbed or degraded habitat that results in the recovery of its original state (e.g., restoration may involve planting native grasses and forbs, removing shrubs, prescribed burning, or reestablishing habitat for native plants and animals on degraded grassland).
retention cut	a silvicultural system that retains individual trees or groups of trees to: 1) maintain structural diversity over the area of the cutblock for at least one rotation, or 2) leave more than half the total area of the cutblock within one tree height from the base of a tree or group of trees, whether or not the tree or group of trees is inside the cutblock.
revegetate	to grow plants again; to cause vegetation to grow again on a given area.
riparian	of, relating to, or situated or dwelling on the bank of a river or other body of water.

riverine	within the active channel of a river or stream.
riverine wetlands	all the wetlands and deepwater habitats occurring within a freshwater river channel not dominated by trees, shrubs, or persistent emergents.
ruderal	a plant growing in waste places, along roadsides or in rubbish; a weedy plant.
runoff	water from rain, melted snow, or agricultural or landscape irrigation that flows over a land surface into a water body (see “urban runoff”).

— S —

sachemship	the domain or area ruled by the chief of an American Indian Tribe.
scale	the magnitude of a region or process. Refers to both spatial size—for example, a (relatively small-scale) patch or a (relatively large-scale) landscape; and temporal rate—for example, (relatively rapid) ecological succession or (relatively slow) evolutionary speciation.
sedge	any plant of the sedge family; any rushlike or grasslike plant of the genus <i>Carex</i> , growing in wet places.
sediment core	a sample of 2-5 inch diameter of undisturbed soil deposits in the bottom of a lake or wetland which reflect changes over time, typically extracted using a long narrow metal (generally aluminum) tube. The soil samples are removed, dried, and analyzed in a laboratory.
sequestration	the trapping of a chemical in the atmosphere or environment and its isolation in a natural or artificial storage area.
seral stage	an intermediate phase found in ecological succession in an ecosystem advancing towards its climax community.
Service	U.S. Fish and Wildlife Service.
Service presence	public awareness of the Service; programs and facilities directed by the Service or that the Service shares with other organizations.
shrublands	habitats dominated by various species of shrubs, often with many grasses and forbs.
siltation	to fill, cover, or obstruct with silt or mud.
silvicultural	the cultivation of forest trees; forestry.
site improvement	any activity that changes the condition of an existing site to better interpret events, places, or things related to a refuge (e.g., improving safety and access, replacing on-native with native plants, refurbishing footbridges and trails, and renovating or expanding exhibits).

small patch	communities that form small, discrete areas of vegetation cover. Individual occurrences of this community type typically range in size from 1 to 50 hectares. Small patch communities occur in very specific ecological settings, such as on specialized landform types or in unusual microhabitats. The specialized conditions of small patch communities, however, are often dependent on the maintenance of ecological processes in the surrounding matrix and large patch communities. In many ecoregions, small patch communities contain a proportionately large percentage of the total flora, and also support a specific and restricted set of associated fauna (e.g., invertebrates or herpetofauna) dependent on specialized conditions.
snag	a standing dead tree.
socioeconomic	social and economic conditions and their interplay.
soil aeration	the ability of the soil to have air that makes it favorable for plant growth.
soil porosity	the ratio, expressed as a percentage, of the volume of the pores, voids or interstices of a soil, to the total volume of the soil mass.
spatial analysis	a set of techniques for analyzing the attributes of data or objects that are dependent on the locations of the objects being analyzed.
species	the basic category of biological classification intended to designate a single kind of animal or plant. Any variation among the individuals may be regarded as not affecting the essential sameness which distinguishes them from all other organisms.
species of concern	an informal term referring to a species that might be in need of conservation action. This may range from a need for periodic monitoring of populations and threats to the species and its habitat, to the necessity for listing as threatened or endangered under the Endangered Species Act. Such species receive no legal protection and use of the term does not necessarily imply that a species will eventually be proposed for listing.
species richness	a simple measure of species diversity calculated as the total number of species in a habitat or community.
stakeholder	individuals, groups, organizations or agencies representing a broad spectrum of interests offering business, tourism, conservation, recreation, and historical perspectives.
stand	an area of trees (or other vegetation) with a common set of conditions (e.g., based on age, density, species composition, or other features) that allow a single management treatment throughout.
state agencies	agencies of state governments.
state land	state-owned public land.
state-listed species	a species listed as endangered, threatened, or a species of conservation concern by a state.

status assessment	a compilation of biological data and a description of past, present and likely future threats to a species.
stepdown management plan	a plan for dealing with specific refuge management subjects, strategies, and schedules (e.g., Habitat Management Plan, Fire Management Plan, Inventorying and Monitoring Plan) [Service Manual 602 FW 1.4].
stormwater	water runoff generated when precipitation from rain and snowmelt events flows over land or impervious surfaces.
strategy	a specific action, tool, technique, or combination of actions, tools, and techniques for meeting refuge objectives.
strategic management	the continual process of inventorying, choosing, implementing, and evaluating what an organization should be doing.
stratified	to lie in beds or layers.
structure	the horizontal and vertical arrangement of trees and other vegetation having different sizes, resulting in different degrees of canopy layering, tree heights, and diameters within a stand.
subclimax species	a species associated with the stage in the ecological succession of a plant or animal community immediately preceding a climax, often persisting because of the repeated effects of fire, flood, or other conditions.
submerged aquatic vegetation	(SAV) plants that live under water, such as sea grasses like eelgrass.
subpopulation	a part or subdivision of a population, especially one originating from some other population.
substrate	the base or material on which a non-motile organism lives or grows; something that underlies or serves as a basis or foundation.
succession	the natural, sequential change of species composition of a community in a given area.
successional habitat	the plants and animals typically occurring together in a given seral stage of ecological following a disturbance event such as from a lava flow or a severe landslide, or by some form of disturbance of a community, such as from a fire, severe windthrow, or logging.
sulfate aerosol	a suspension of fine solid particles of a sulfate or tiny droplets of a solution of a sulfate or of sulfuric acid (not technically a sulfate).
supraglacial	of, relating to, or situated or occurring at the surface of a glacier.
surface water	all waters whose surface is naturally exposed to the atmosphere, or wells or other collectors directly influenced by surface water.

surrogate species	a species that serves as an indicator of landscape habitat and system conditions.
suspended solids	small solid particles which remain in suspension in water as a colloid or due to the motion of the water. It is used as one indicator of water quality.
<hr/> - T - <hr/>	
taxonomic status	the unique nomenclature and categories assigned to a given biological organism through the scientific classification process known as taxonomy.
terminal moraine	a mass of rocks and sediment carried down and deposited by a glacier at the point of furthest advance of a glacier.
terrace	a step-like landform, consisting of a flat or gently sloping geomorphic surface, called a tread, that is typically bounded one side by a steeper ascending slope, which is called a “riser” or “scarp.” The tread and the steeper descending slope (riser or scarp) together constitute the terrace.
terrestrial	living on land.
territory	an area over which an animal or group of animals establishes jurisdiction.
thermal stratification	the vertical temperature stratification of a lake or reservoir which consists of: (a) the upper layer, or epilimnion, in which the water temperature is virtually uniform; (b) the middle layer, or thermocline, in which there is a marked drop in temperature per unit of depth; and (c) the lowest stratum, or hypolimnion, in which the temperature is again nearly uniform.
thinning	reducing the density of trees in a stand primarily to improve the growth and condition of the remaining trees and prevent mortality.
threatened species	a federally listed, protected species that is likely to become an endangered species in all or a significant portion of its range.
torpor	a diurnal hibernation-like state.
total maximum daily load	(TMDL) a calculation of maximum amount of a pollutant that a waterbody can receive and still meet water quality standards.
transect	a path along which one counts and records occurrences of the phenomena of study (e.g. plants).
trust resource	a resource that the Government holds in trust for the people through law or administrative act. A Federal trust resource is one for which responsibility is given wholly or in part to the Federal Government by law or administrative act. Generally, Federal trust resources are nationally or internationally important no matter where they occur, like endangered species or migratory birds and fish that regularly move across state lines. They also include cultural resources protected by Federal historic preservation laws, and nationally important or threatened habitats, notably wetlands, navigable waters, and public lands like state parks and national wildlife refuges.

tryclopyr a systemic foliar pyridine herbicide, used to control broadleaf weeds while leaving grasses and conifers unaffected.

turbidity refers to the extent to which light penetrates a body of water.

tussock a tuft or clump of growing grass or the like.

- U -

unconsolidated loose materials, ranging from clay to sand to gravel. Ground water flows through spaces between the grains. Geologic processes can likewise erode and metamorphose unconsolidated sediments.

understory the lower layer of vegetation in a stand, which may include short trees, shrubs, and herbaceous plants.

upland dry ground (i.e., other than wetlands).

- V -

vernal pool a type of seasonal wetland formed by isolated depressions in the landscape that hold water in the winter and spring and are usually dry by midsummer or fall. There are no permanent surface connections to flowing water. Water sources include rainfall, snowmelt and elevated water tables. Although fish are usually absent, vernal pools in riparian floodplains may contain fish periodically. Vernal pools are important breeding sites for amphibians. The woody debris and emergent grasses provide attachment sites for egg masses.

vision statement a concise statement of what a refuge hopes to achieve over the next 15 years.

volatile organic compound (VOC) hydrocarbon compounds that have low boiling points, usually less than 100°C, and therefore evaporate readily. Some are gases at room temperature. Propane, benzene, and other components of gasoline are all volatile organic compounds; when released into the atmosphere by anthropogenic and natural emissions they are important because of their involvement in photochemical pollution.

volatilization passing off in vapor.

- W -

waterbody Any significant accumulation of water forming a physiographic feature, such as a river, lake, bay, a sea or a reservoir.

watershed the geographic area within which water drains into a particular river, stream, or body of water. A watershed includes both the land and the body of water into which the land drains.

water supply the supply of purified, drinkable or potable water available to a community.

water withdrawal	freshwater taken from ground or surface water sources, either permanently or temporarily, and conveyed to a place of use.
wetlands	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. These areas are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted to life in saturated soil conditions.
White-nose syndrome	a fungal disease of bats caused by the fungus <i>Pseudogymnoascus destructans</i> (formerly known as <i>Geomyces destructans</i>).
wilderness area	an area designated by Congress as part of the National Wilderness Preservation System [Service Manual 610 FW 1.5 (draft)].
wilderness study area	lands and waters identified by inventory as meeting the definition of wilderness and being evaluated for a recommendation they be included in the Wilderness System. A wilderness study area must meet these criteria: generally appears to have been affected primarily by the forces of nature, with the imprint of human substantially unnoticeable; has outstanding opportunities for solitude or a primitive and unconfined type of recreation; has at least 5,000 contiguous, roadless acres, or sufficient size to make practicable its preservation and use in an unimpaired condition (Service Manual 610 FW 1.5 (draft)).
wildfire	a free-burning fire requiring a suppression response; all fire other than prescribed fire that occurs on wildlands [Service Manual 621 FW 1.7]. An unplanned ignition caused by lightning, volcanoes, unauthorized, and accidental human-caused actions and escaped prescribed fires.
wildland urban interface	The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.
wildlife-dependent recreational use	use of a national wildlife refuge involving hunting, fishing, wildlife observation and photography, or environmental education and interpretation (National Wildlife Refuge System Administration Act of 1966).
wildlife management	manipulating wildlife populations, either directly by regulating the numbers, ages, and sex ratios harvested, or indirectly by providing favorable habitat conditions and alleviating limiting factors.
wildlife-oriented recreation	recreational activities in which wildlife is the focus of the experience. [“The terms ‘wildlife-dependent recreation’ and ‘wildlife-dependent recreational use’ mean a use of a refuge involving hunting, fishing, wildlife observation and photography, or environmental education and interpretation.”—National Wildlife Refuge System Improvement Act of 1997]
wind throw	trees uprooted or broken by wind.
xeric	of an environment (or habitat) containing little moisture; very dry.

Acronyms and Abbreviations

Acronym	Full Name
ACJV	Atlantic Coast Joint Venture
AHWP	Annual Habitat Work Plan
ARPA	Archaeological Resources Protection Act
ATV	All-terrain Vehicle
BCC	Birds of Conservation Concern
BCR	Bird Conservation Region
BMP	Best Management Practices
BP	Before Present
CAA	Clean Air Act
CCP	Comprehensive Conservation Plan
CCSP	U.S. Climate Change Science Program
CD	Compatibility Determination
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EA	Environmental Assessment
EEE	Eastern Equine Encephalitis
EO	Executive Order
ESA	Endangered Species Act
FMP	Fire Management Plan
FOA	Findings of Appropriate Use
FONSI	Finding of No Significant Impact
Gd	<i>Geomyces destructans</i>
GIS	Geographic Information System
HMP	Habitat Management Plan
IMP	Inventory and Monitoring Plan
IPCC	Intergovernmental Panel on Climate Change
IPMP	Integrated Pest Management Plan
LCC	Landscape Conservation Cooperative
MA	Massachusetts
MADCR	Massachusetts Department of Conservation and Recreation

Acronyms

Acronym	Full Name
MADEP	Massachusetts Department of Environmental Protection
MANEM	Mid-Atlantic/New England/Maritime
MassWildlife	Massachusetts Division of Fisheries and Wildlife
MHC	Massachusetts Historical Commission
MOU	Memorandum of Understanding
MSSF	Myles Standish State Forest
NAAQS	National Ambient Air Quality Standards
NABCI	North American Bird Conservation Initiative
NAGRPA	Native American Graves Protection and Repatriation Act
NAWCP	North American Waterbird Conservation Plan
NAWMP	North American Waterfowl Management Plan
NEAFWA	Northeast Association of Fish and Wildlife Agencies
NEPA	National Environmental Policy Act
NHESP	(Massachusetts) Natural Heritage and Endangered Species Program
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOI	Notice of Intent
NO_x	Nitrous Oxides
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NVCS	National Vegetation Classification System
NWPS	National Wilderness Preservation System
NWR	National Wildlife Refuge
NWRS	National Wildlife Refuge System
ORV	Off-Road Vehicle
PARC	Partners in Amphibian and Reptile Conservation
Pd	<i>Pseudogymnoascus destructans</i>
PIF	Partners in Flight
PL	Public Law
PM	Particulate Matter
PPM	Parts per Million

Acronym	Full Name
RCN	Regional Conservation Need
RHPO	Regional Historic Preservation Officer
RM	Refuge Manual
ROW	Right-of-Way
SGCN	Species of Greatest Conservation Need
SHC	Strategic Habitat Conservation
SHPO	State Historic Preservation Office
SMART	Specific, Measurable, Achievable, Results-oriented, and Time-fixed
SO₂	Sulfur Dioxide
SUP	Special Use Permit
SSURGO	Soil Survey Geographic Database
SWAP	State Wildlife Action Plan
SWG	State Wildlife Grant
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
TWA	Time-weighted Average
USC	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UV	Ultraviolet
WNV	West Nile Virus
WSA	Wilderness Study Area