

GLOSSARY AND ACRONYMS



Boardwalk on the Hutchinson Tract Trail: USFWS

accessibility

the state or quality of being easily approached or entered, particularly as it relates to complying with the Americans With Disabilities Act

accessible facilities

structures accessible for most people with disabilities without assistance; facilities that meet UFAS standards; ADA-accessible [E.g., parking lots, trails, pathways, ramps, picnic and camping areas, restrooms, boating facilities (docks, piers, gangways), fishing facilities, playgrounds, amphitheaters, exhibits, audiovisual programs, and wayside sites.]

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. (source: Williams, B. K., R. C. Szaro, and C. D. Shapiro. 2007. Adaptive Management: The U.S. Department of the Interior Technical Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.)

advanced regeneration

tree seedlings or small saplings that develop in the understory prior to the removal of the overstory.

aggregate

many parts considered together as a whole

alternative

a reasonable way to fix an identified problem or satisfy a stated need [40 CFR 1500.2 (cf. "management alternative")]

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.

approved acquisition boundary

a project boundary that the Director of the U.S. Fish and Wildlife Service approves upon completion of the planning and environmental compliance process. An approved acquisition boundary only designates those lands which the Service has authority to acquire or manage through various agreements. The approval of an acquisition boundary does not grant the 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 System until the Service buys them or they are placed under an agreement that provides for their management as part of the System.

Glossary and Acronyms

anadromous fish

from the Greek, literally “up-running”; fish that spend a large portion of their life cycle in the ocean and return to freshwater to breed

aquatic

growing in, living in, or dependent upon water

aquatic barrier

any obstruction to fish passage

avian

of or having to do with birds

avifauna

all birds of a given region

barrier

cf. “aquatic barrier”

basin

the land surrounding and draining into a water body (cf. “watershed”)

benthic

living at, in, or associated with structures on the bottom of a body of water

best management practices

land management practices that produce desired results [N.B. 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. In their broader sense, practices that benefit target species.]

biological diversity or biodiversity

the variety of life and its processes and includes the variety of living organisms, the genetic differences among them, and the communities and ecosystems 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

biodiversity conservation

the goal of conservation biology, which is to retain indefinitely as much of the earth’s biodiversity as possible, with emphasis on biotic elements most vulnerable to human impacts

biomass

the total mass or amount of living organisms in a particular area or volume

biota

the plant and animal life of a region

breeding habitat

habitat used by migratory birds or other animals during the breeding season

buffer species

alternate prey species exploited by predators when a more preferred prey is in relatively short supply; i.e., if rabbits are scarce, foxes will exploit more abundant rodent populations

buffer zones

land bordering and protecting critical habitats or water bodies by reducing runoff and nonpoint source pollution loading; areas created or sustained to lessen the negative effects of land development on animals, plants, and their habitats

candidate species

plants and animals for which the U.S. Fish and Wildlife Service (FWS) has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities (Source: http://www.fws.gov/endangered/factsheets/candidate_species.pdf)

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. The uppermost layers are called the overstory.

community

the locality in which a group of people resides and shares the same government

community type

a particular assemblage of plants and animals, named for its dominant characteristic

compatible use

“The term ‘compatible use’ means 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

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; FWS Manual 602 FW 1.4]

concern

cf. “issue”

conifer

a tree or shrub in the phylum Gymnospermae whose seeds are borne in woody cones. There are 500–600 species of living conifers (Norse 1990)

connectivity

community occurrences and reserves have permeable boundaries and thus are subject to inflows and outflows from the surrounding landscape. Connectivity in the selection and design of nature reserves relates to the ability of species to move across the landscape to meet basic habitat requirements. Natural connecting features within the ecoregion may include river channels, riparian corridors, ridgelines, or migratory pathways.

conservation

managing natural resources to prevent loss or waste [N.B. Management actions may include preservation, restoration, and enhancement.]

conservation agreements

written agreements among two or more parties for the purpose of ensuring the survival and welfare of unlisted species of fish and wildlife or their habitats or to achieve other specified conservation goals. Participants voluntarily commit to specific actions that will remove or reduce threats to those species.

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.

consultation

a type of stakeholder involvement in which decision makers ask stakeholders to comment on proposed decisions or actions.

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

cord

an 8-foot-long pile of wood stacked 4 feet high and composed of 4-foot-long pieces.

critical habitat

according to U.S. Federal law, the ecosystems upon which endangered and threatened species depend

cultural resource inventory

a professional study to locate and evaluate evidence of cultural resources within a defined geographic area [N.B. 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. FWS Manual 614 FW 1.7).]

cultural resource overview

a comprehensive document prepared for a field office that discusses, among other things, project 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 of how program objectives should be met and conflicts resolved [An overview should reference or incorporate information from a field office's background or literature search described in section VIII of the Cultural Resource Management Handbook (FWS Manual 614 FW 1.7).]

database

a collection of data arranged for ease and speed of analysis and retrieval, usually computerized

dbh

(diameter at breast height) — the diameter of the stem of tree measure at breast height (usually 4.5 feet above the ground). The term is commonly used by foresters to describe tree size.

dedicated open space

land to be held as open space forever

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

designated wilderness area

an area designated by Congress as part of the National Wilderness Preservation System [FWS Manual 610 FW 1.5 (draft)]

desired future condition

the qualities of an ecosystem or its components that an organization seeks to develop through its decisions and actions.

digitizing

the process of converting maps into geographically referenced electronic files for a geographic information system (GIS)

distribution pattern

the overall pattern of occurrence for a particular conservation target. In ecoregional planning projects, often referred to as the relative proportion of the target's natural range occurring within a given ecoregion (e.g. endemic, limited, widespread, disjunct, peripheral).

disturbance

any relatively discrete event in time that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment

donation

a citizen or group may wish to give land or interests in land to the Service for the benefit of wildlife. Aside from the cost factor, these acquisitions are no different than any other means of land acquisition. Gifts and donations have the same planning requirements as purchases.

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 (cf. "conservation easement").]

ecological integrity

native species populations in their historic variety and numbers naturally interacting in naturally structured biotic communities. For communities, integrity is governed by demographics of component species, intactness of landscape-level ecological processes (e.g., natural fire regime), and intactness of internal community processes (e.g., pollination).

ecological land unit (ELU)

mapping units used in large-scale conservation planning projects that are typically defined by two or more environmental variables such as elevation, geological type, and landform (e.g., cliff, stream, summit).

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

ecological process approach

an approach to managing for species communities that manages for ecological process (e.g., flooding, fire, herbivory, predator-prey dynamics) within the natural range of historic variability. This approach assumes that if ecological processes are occurring within their historic range of spatial and temporal variability, then the naturally occurring biological diversity will benefit.

ecological system

Dynamic assemblages of communities that occur together on the landscape at some spatial scale of resolution, are tied together by similar ecological processes, and form a cohesive, distinguishable unit on the ground. Examples are spruce-fir forest, Great Lakes dune and swale complex, Mojave desert riparian shrublands.

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

ecotourism

visits to an area that maintains and preserves natural resources as a basis for promoting its economic growth and development

ecosystem approach

a way of looking at socio economic and environmental information based on the boundaries of ecosystems like watersheds, rather than on geopolitical boundaries

ecosystem based management

an approach to making decisions based on the characteristics of the ecosystem in which a person or thing belongs [N.B. This concept considers interactions among the plants, animals, and physical characteristics of the environment in making decisions about land use or living resource issues.]

edge effect

the phenomenon whereby edge-sensitive species are negatively affected near edges by factors that include edge-generalist species, human influences, and abiotic factors associated with habitat edges. Edge effects are site-specific and factor-specific and have variable depth effects into habitat fragments.

emergent wetland

wetlands dominated by erect, rooted, herbaceous plants

endangered species

a Federal- or State-listed protected species in danger of extinction throughout all or a significant portion of its range

endemic

a species or race native to a particular place and found only there

environment

the sum total of all biological, chemical and physical factors to which organisms are exposed

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

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 Impact Statement

(EIS) a detailed, written analysis of 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 [cf. 40 CFR 1508.11]

euphotic

relating to the upper, well-illuminated zone of a lake where photosynthesis occurs

eutrophic lake

a lake possessing low or a complete absence of oxygen in the deeper portion in midsummer, rich in nutrients and plankton

eutrophication

enrichment of a body of water by the addition of nutrients which stimulate the growth of aquatic plants and may cause a decrease in the organoleptic properties of the water source.

evaluation

examination of how an organization's plans and actions have turned out — and adjusting them for the future.

even-aged

a stand having one age class of trees

exemplary community type

an outstanding example of a particular community type

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 (Wilson 1992)

extirpated

status of a species or population that has completely vanished from a given area but that continues to exist in some other location

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

extant

in biology, a species which is not extinct; still existing

fauna

all animal life associated with a given habitat, country, area or period

federal land

public land owned by the Federal Government, including national forests, national parks, and national wildlife refuges

federal-listed species

a species listed either as endangered, threatened, or a species at risk (formerly, a "candidate species") 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).

fen

A type of wetland that accumulates peat deposits. Fens are less acidic than bogs, deriving most of their water from groundwater rich in calcium and magnesium

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 regime

the characteristic frequency, intensity, and spatial distribution of natural fires within a given ecoregion or habitat

fish passage project

providing a safe passage for fish around a barrier in the upstream or downstream direction

flora

all the plants found in a particular place

floodplain

flat or nearly flat land that may be submerged by floodwaters; a plain built up or in the process of being built up by stream deposition

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. The two principal types of targets in Conservancy planning projects are species and ecological communities.

focus areas

cf. "special focus areas"

forest association

the community described by a group of dominant plant (tree) species occurring together, such as spruce-fir or northern hardwoods

forested land

land dominated by trees [For impacts analysis in CCP's, we assume all forested land has the potential for occasional harvesting; we assume forested land owned by timber companies is harvested on a more intensive, regular schedule.]

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 remaining.

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.]

graminoid

grasses and grasslike plants, such as sedges.

grant agreement

the legal instrument used when the principal purpose of the transaction is the transfer of money, property, services, or anything of value to a recipient in order to accomplish a public purpose of support or stimulation authorized by Federal statute and substantial involvement between the Service and the recipient is not anticipated (cf. "cooperative agreement") (Grants and Cooperative Agreement Act at 31 U.S.C. § 6305)

grassroots conservation organization

any group of concerned citizens who act together to address a conservation need

groundwater

water in the ground that is in the zone of saturation, from which wells and springs and groundwater runoff are supplied

guild

a group of organisms, not necessarily taxonomically related, that are ecologically similar in characteristics such as diet, behavior, or microhabitat preference, or with respect to their ecological role in general

habitat block

a landscape-level variable that assesses the number and extent of blocks of contiguous habitat, taking into account size requirements for populations and ecosystems to function naturally. It is measured here by a habitat-dependent and ecoregion size-dependent system

habitat fragmentation

the breaking up of a specific habitat into smaller, unconnected areas [N.B. 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 an animal or plant habitat to ensure that the use of that habitat by the animal or plant is not altered or reduced

habitat

the place or type of site where species and species assemblages are typically found and/or successfully reproduce. [N.B. An organism's habitat must provide all of the basic requirements for life, and should be free of harmful contaminants.]

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

hydrologic or flow regime

characteristic fluctuations in river flows

hydrology

the science of waters of the earth: their occurrences, distributions, and circulations; their physical and chemical properties; and their reactions with the environment, including living beings

important fish areas

the aquatic areas identified by private organizations, local, state, and federal agencies that meet the purposes of the Conte Act

impoundment

a body of water, such as a pond, confined by a dam, dike, floodgate, or other barrier, which is used to collect and store water for future use

indicator species

a species used as a gauge for the condition of a particular habitat, community, or ecosystem. A characteristic or surrogate species for a community or ecosystem

indigenous

native to an area

indigenous species

a species that, other than a result as an introduction, historically occurred or currently occurs in a particular ecosystem

interjurisdictional fish

populations of fish that are managed by two or more States or national or tribal governments because of the scope of their geographic distributions or migrations

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.]

interpretive materials projects

any cooperative venture that combines financial and staff resources to design, develop, and use tools for increasing the awareness and understanding of events or things related to a refuge

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

inventory

a list of all the assets and liabilities of an organization, including physical, financial, personnel, and procedural aspects.

invertebrate

any animal lacking a backbone or bony segment that encloses the central nerve cord

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.] [N.B. A CCP should document, describe, and analyze issues even if they cannot be resolved during the planning process (FWS Manual 602 FW 1.4).]

Land Protection Plan

(LPP) a document that identifies and prioritizes lands for potential Service acquisition from a willing seller, and also describes other methods of providing protection. Landowners within project boundaries will find this document, which is released with environmental assessments, most useful.

Land trusts

organizations dedicated to conserving land by purchase, donation, or conservation easement from landowners

landform

the physical shape of the land reflecting geologic structure and processes of geomorphology that have sculpted the structure

landscape

A heterogeneous land area composed of a cluster of interacting ecosystems that are repeated in similar form throughout.

landscape approach

an approach to managing for species communities that focuses on landscape patterns rather than processes and manages landscape elements to collectively influence groups of species in a desired direction. This approach assumes that by managing a landscape for its components, the naturally occurring species will persist.

large patch

Communities that form large areas of interrupted cover. Individual occurrences of this community type typically range in size from 50 to 2,000 hectares. Large patch communities are associated with environmental conditions that are more specific than those of matrix communities, and that are less common or less extensive in the landscape. Like matrix communities, large-patch communities are also influenced by large-scale processes, but these tend to be modified by specific site features that influence the community.

late-successional

species, assemblages, structures, and processes associated with mature natural communities that have not experienced significant disturbance for a long time

limiting factor

an environmental limitation that prevents further population growth

limits of acceptable change

a planning and management framework for establishing and maintaining acceptable and appropriate environmental and social conditions in recreation settings

local land

public land owned by local governments, including community or county parks or municipal watersheds

local agencies

generally, municipal governments, regional planning commissions, or conservation groups

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

macroinvertebrates

invertebrates large enough to be seen with the naked eye (e.g., most aquatic insects, snails, and amphipods)

management alternative

a set of objectives and the strategies needed to accomplish each objective [FWS Manual 602 FW 1.4]

management concern

cf. “issue” and “migratory nongame birds of management concern”

management opportunity

cf. “issue”

management plan

a plan that guides future land management practices on a tract [N.B. 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 (cf. “cooperative agreement”).]

management strategy

a general approach to meeting unit objectives [N.B. A strategy may be broad, or it may be detailed enough to guide implementation through specific actions, tasks, and projects (FWS Manual 602 FW 1.4).]

marshlands

areas interspersed with open water, emergent vegetation (hydrophytes), and terrestrial vegetation (phreatophytes).

matrix forming (or matrix community)

communities that form extensive and contiguous cover may be categorized as matrix (or matrix-forming) community types. Matrix communities occur on the most extensive landforms and typically have wide ecological tolerances. They may be characterized by a complex mosaic of successional stages resulting from characteristic disturbance processes (e.g. New England northern hardwood-conifer forests). Individual occurrences of the matrix type typically range in size from 2000 to 500,000 hectares. In a typical ecoregion, the aggregate of all matrix communities covers, or historically covered, as much as 75-80% of the natural vegetation of the ecoregion. Matrix community types are often influenced by large-scale processes (e.g., climate patterns, fire), and are important habitat for wide-ranging or large area-dependent fauna, such as large herbivores or birds

mesic soil

sandy-to-clay loams containing moisture-retentive organic matter, well drained (no standing matter)

metapopulation

a network of semi-isolated populations with some level of regular or intermittent migration and gene flow among them, in which individual populations may go extinct but can then be recolonized from other populations.

migratory nongame birds of management concern

species of nongame birds that (a) are believed to have undergone significant population declines; (b) have small or restricted populations; or (c) are dependent upon restricted or vulnerable habitats

mission statement

a succinct statement of the purpose for which the unit 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.]

mosaic

an interconnected patchwork of distinct vegetation types.

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).]

National Wildlife Refuge System

(Refuge System) all lands and waters and interests therein administered by the 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).

native

a species that, other than as a result of an introduction, historically occurred or currently occurs in a particular ecosystem

native plant

a plant that has grown in the region since the last glaciation, and occurred before European settlement

natural disturbance event

any natural event that significantly alters the structure, composition, or dynamics of a natural community: e.g., floods, fires, and storms

natural range of variation

a characteristic range of levels, intensities, and periodicities associated with disturbances, population levels, or frequency in undisturbed habitats or communities

niche

the specific part or smallest unit of a habitat occupied by an organism

Neotropical migrant

birds, bats, or invertebrates that seasonally migrate between the Nearctic and Neotropics

non consumptive, wild-life-oriented recreation

wildlife observation and photography and environmental education and interpretation (cf. “wildlife-oriented recreation”)

non-native species

See “exotic species.”

non point source pollution

a diffuse form of water quality degradation in which wastes are not released at one specific, identifiable point but from a number of points that are spread out and difficult to identify and control (Eckhardt 1998)

nonforested wetlands

wetlands dominated by shrubs or emergent vegetation

nonpoint source

a diffuse form of water quality degradation produced by erosion of land that causes sedimentation of streams, eutrophication from nutrients and pesticides used in agricultural and silvicultural practices, and acid rain resulting from burning fuels that contain sulfur (Lotspeich and Platts 1982)

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]

objective

cf. “unit objective”

obligate species

a species that must have access to a particular habitat type to persist

occurrence site

a discrete area where a population of a rare species lives or a rare plant community type grows

outdoor education project

any cooperative venture that combines financial and staff resources to develop outdoor education activities like labs, field trips, surveys, monitoring, or sampling

outdoor education

educational activities that take place in an outdoor setting

palustrine wetlands

“The Palustrine system includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0%.” - Cowardin et al. 1979

Partners for Wildlife Program

a voluntary, cooperative habitat restoration program among the Service, other government agencies, public and private organizations, and private landowners to improve and protect fish and wildlife habitat on private land while leaving it in private ownership

partnership

a contract or agreement among two or more individuals, groups of individuals, organizations, or agencies, in which each agrees to furnish a part of the capital or some service in kind (e.g., labor) for a mutually beneficial enterprise

passive management

protecting, monitoring key resources and conducting baseline inventories to improve our knowledge of the ecosystem

payment in lieu of taxes

cf. Revenue Sharing Act of 1935, Chapter One, Legal Context

point source

a source of pollution that involves discharge of waste from an identifiable point, such as a smokestack or sewage-treatment plant (Eckhardt 1998)

population

an interbreeding group of plants or animals. The entire group of organisms 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

prescribed fire

the application of fire to wildland fuels, either by natural or intentional ignition, to achieve identified land use objectives [FWS Manual 621 FW 1.7]

priority general 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 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 at a site (cf. “long-term ~”)

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 involvement plan

long-term guidance for involving the public in the comprehensive planning process

public land

land owned by the local, State, or Federal Government

rare species

species identified for special management emphasis because of their uncommon occurrence within a watershed

rare community types

plant community types classified as rare by any State program; includes exemplary community types

recharge

refers to water entering an underground aquifer through faults, fractures, or direct absorption

recommended wilderness

areas studied and found suitable for wilderness designation by both the Director (FWS) and Secretary (DOI), and recommended by the President to Congress for inclusion in the National Wilderness System [FWS Manual 610 FW 1.5 (draft)]

Record of Decision

(ROD) a concise public record of a decision by a Federal agency pursuant to NEPA [N.B. 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.” (Writing Refuge Management Goals and Objectives: A Handbook, FWS January 2004)

refuge purposes

“the terms ‘purposes of the refuge’ and ‘purposes of each refuge’ mean 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.” (National Wildlife Refuge System Improvement Act of 1997)

refuge lands

lands in which the Service holds full interest in fee title or partial interest like an easement

regenerating

establishing a new age class. Silviculture does this in a way that controls the species composition, seedling density, and other characteristics consistent with the landowner’s objectives.

relatively intact

the conservation status category indicating the least possible disruption of ecosystem processes. Natural communities are largely intact, with species and ecosystem processes occurring within their natural ranges of variation.

relatively stable

the conservation status category between vulnerable and relatively intact in which extensive areas of intact habitat remain, but local species declines and disruptions of ecological processes have occurred

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.]

restoration ecology

the process of using ecological principles and experience to return a degraded ecological system to its former or original state

riparian

referring to the interface between freshwater habitats and the terrestrial landscape

riparian forested land

forested land along a stream or river

riparian habitat

habitat along the banks of a stream or river [cf. note above]

riverine

within the active channel of a river or stream

riverine wetlands

generally, all the wetlands and deepwater habitats occurring within a freshwater river channel not dominated by trees, shrubs, or persistent emergents

rotation

the period of time from establishment of an even-aged stand until its maturity

runoff

water from rain, melted snow, or agricultural or landscape irrigation that flows over a land surface into a water body (cf. "urban runoff")

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 a temporal rate—for example, (relatively rapid) ecological succession or (relatively slow) evolutionary speciation

Selection cutting/selection system

The silvicultural system used to regenerate and maintain uneven-aged stands. Selection cuttings are used to remove individual or small groups of mature trees to regenerate a new cohort, as well as to thin the immature age classes to promote their growth and improve their quality.

Service presence

Service programs and facilities that it directs or shares with other organizations; public awareness of the Service as a sole or cooperative provider of programs and facilities

shifting mosaic

an interconnected patchwork of distinct vegetation types that may shift across the land surface as a result of dynamic ecosystem processes, such as periodic wildfire or flooding.

shrublands

habitats dominated by various species of shrubs, often with many grasses and forbs

silviculture

tending and regenerating forest stands to realize sought after benefits and sustain them over time

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 non-native with native plants, refurbishing footbridges and trailways, 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 disproportionately 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.

source population

a population in a high-quality habitat where the birth rate greatly exceeds the death rate, and the excess individuals emigrate

spatial pattern

within an ecoregion, natural terrestrial communities may be categorized into three functional groups on the basis of their current or historical patterns of occurrence, as correlated with the distribution and extent of landscape features and ecological processes. These groups are identified as matrix communities, large patch communities, and small patch communities.

special focus area

an area of high biological value [N.B. We normally direct most of our resources to SFA's that were delineated because of: the presence of Federal listed endangered and threatened species, species at risk (formerly, "candidate species"), rare species, concentrations of migrating or wintering waterfowl, or shorebird stopover habitat;

1. their importance as migrant landbird stopover or breeding habitat;
2. the presence of unique or rare communities; or
3. the presence of important fish habitat.]

special habitats

wetlands, vernal pools, riparian habitat, and unfragmented rivers, forests and grasslands [N.B. Many rare species depend on specialized habitats that, in many cases, are being lost within a watershed.]

special riparian project

restoring, protecting, or enhancing an aquatic environment in a discrete riparian corridor within a special focus area

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 assemblage

the combination of particular species that occur together in a specific location and have a reasonable opportunity to interact with one another

species at risk

A general term referring to species listed under the Endangered Species Act (ESA), as well as for unlisted species that are declining in population. Sometimes the term is used interchangeably with “species of concern”. Such species, unless already listed under ESA, receive no legal protection and use of the term does not necessarily imply that a species will eventually be proposed for listing (Source: <http://www.fws.gov/endangered/glossary.html>).

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 (Source: <http://www.fws.gov/endangered/glossary.html>).

species diversity

usually synonymous with “species richness,” but may also include the proportional distribution of species

species richness

a simple measure of species diversity calculated as the total number of species in a habitat or community (Fiedler and Jain 1992)

stand

an area of trees 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

natural resource agencies of State governments

state land

State-owned public land

state-listed species

cf. “Federal-listed species”

step-down management plan

a plan for dealing with specific refuge management subjects, strategies, and schedules, e.g., cropland, wilderness, and fire [FWS Manual 602 FW 1.4]

stopover habitat

habitat where birds rest and feed during migration

strategy

a specific action, tool, technique, or combination of actions, tools, and techniques for meeting unit objectives

strategic management

the continual process of inventorying, choosing, implementing, and evaluating what an organization should be doing.

stratification

thermal layering of water both in lakes and streams

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.

succession

the natural, sequential change of species composition of a community in a given area

surface water

all waters whose surface is naturally exposed to the atmosphere, or wells or other collectors directly influenced by surface water

sustainable development

the attempts to meet economic objectives in ways that do not degrade the underlying environmental support system. Note that there is considerable debate over the meaning of this term...we define it as "human activities conducted in a manner that respects the intrinsic value of the natural world, the role of the natural world in human well-being, and the need for humans to live on the income from nature's capital rather than the capital itself."

terrestrial

living on land

territory

an area over which an animal or group of animals establishes jurisdiction

thinning

reducing the density of trees in a stand primarily to improve the growth and condition of residual trees and prevent mortality. The term describes treatments in immature even-aged stands that do not attempt to establish regeneration.

threatened species

a Federal-listed, protected species that is likely to become an endangered species in all or a significant portion of its range

tiering

incorporating by reference the general discussions of broad topics in environmental impact statements into narrower statements of environmental analysis by focusing on specific issues [40 CFR 1508.28]

tributary

a stream or river that flows into a larger stream, river, or lake, feeding it water

trust resource

a resource that the Government holds in trust for the people through law or administrative act [N.B. 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.]

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.

turbidity

refers to the extent to which light penetrates a body of water. Turbid waters are those that do not generally support net growth of photo-synthetic organisms

understory

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

uneven-aged

a stand having three or more age classes of trees with distinctly different ages

unfragmented habitat

large, unbroken blocks of a particular type of habitat

unit objective

desired conditions that must be accomplished to achieve a desired outcome [N.B. Objectives are the basis for determining management strategies, monitoring refuge accomplishments, and measuring their success. Objectives should be attainable, time-specific, and stated quantitatively or qualitatively (FWS Manual 602 FW 1.4).]

upland

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

urban runoff

water from rain, melted snow, or landscape irrigation flowing from city streets and domestic or commercial properties that may carry pollutants into a sewer system or water body

vernal pool

are 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. (source: Mitchell, J.C., A.R. Breisch, and K.A. Buhlmann. 2006. *Habitat Management Guidelines for Amphibians and Reptiles of the Northeastern U.S.* Partners in Amphibian and Reptile Conservation, Technical Publication HMG-3, Montgomery, Alabama, 108 pp)

vision statement

a concise statement of what the unit could achieve in the next 10 to 15 years

watchable wildlife program

[N.B. A watchable wildlife program is one that helps maintain viable populations of all native fish and wildlife species by building an active, well informed constituency for conservation. Watchable wildlife programs are tools for meeting wildlife conservation goals while at the same time fulfilling public demand for wildlife-dependent recreational activities (other than sport hunting, sport fishing, or trapping).]

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.

watershed-wide education networks

systems for sharing educational information, like curriculum development projects, student activities, and ongoing data gathering; a combination of telecommunications and real-life exchanges of information

well-protected

in CCP analysis, a rare species or community type is considered well protected if 75 percent or more of its occurrence sites are on dedicated open space

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. "Wetlands are 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."—Cowardin et al 1979

wilderness study areas

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 (cf. "recommended wilderness") [N.B. A wilderness study area must meet these criteria:

1. generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable;
2. has outstanding opportunities for solitude or a primitive and unconfined type of recreation;
3. has at least 5,000 contiguous, roadless acres, or sufficient size to make practicable its preservation and use in an unimpaired condition. (FWS Manual 610 FW 1.5 (draft)).]

wilderness

cf. “designated wilderness”

wildfire

a free-burning fire requiring a suppression response; all fire other than prescribed fire that occurs on wildlands [FWS Manual 621 FW 1.7]

wildland fire

every wildland fire is either a wildfire or a prescribed fire [FWS Manual 621 FW 1.3]

wildlife-dependent recreational use

a 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]

working landscape

the rural landscape created and used by traditional laborers [N.B. Agriculture, forestry, and fishing all contribute to the working landscape of a watershed (e.g., keeping fields open by mowing or by grazing livestock).]

Acronym Glossary

ACB	= Alliance for the Chesapeake Bay
ACJV	= Atlantic Coast Joint Venture
AHWP	= Annual Habitat Work Plan
ARPA	= Archaeological Resources Protection Act of 1960
BBS	= Breeding Bird Survey
BCR	= Bird Conservation Region
CCP	= Comprehensive Conservation Plan
CEQ	= Council on Environmental Quality
CERCCA	= Comprehensive Environmental Responsive Compensation and Liability Act
CFR	= Code of Federal Regulations
DAPTE	= Declining Amphibian Monitoring Program
DCR	= Department of Conservation and Recreation
DEQ	= Department of Environmental Quality
DO	= Dissolved Oxygen
EA	= Environmental Assessment
EPA	= U.S. Environmental Protection Agency
FMHA	= Farmers Home Administration
FONSI	= Finding of No Significant Impact
GIS	= Geographic information system
GPS	= Global positioning system
HMP	= Habitat Management Plan
IMP	= Inventory and Monitoring Plan
HUC	= Hydrologic Units
LWCF	= Land and Water Conservation Fund
MANEM	= Mid-Atlantic/New England/Maritimes region
MBCF	= Migratory Bird Conservation Fund
MBTA	= Migratory Bird Treaty Act
MSDS	= Material Safety Data Sheets
NAAMP	= North American Amphibian Monitoring Program
NABCI	= North American Bird Conservation Initiative
NAWCP	= North American Waterbird Conservation Plan
NAWMP	= North American Waterfowl Management Plan
NEPA	= National Environmental Policy Act of 1969
NHCR	= National-State Agency Herptile Conservation Report
NRCS	= Natural Resources Conservation Service
NVCS	= National Vegetation Clarification System
NWR	= National Wildlife Refuge
NWRS	= National Wildlife Refuge System

Glossary and Acronyms

PARC	= Partners in Amphibian and Reptile Conservation
PIF	= Partners in Flight
PSU	= Practical Salinity Units
RONs	= Refuge Operations Needs System
SAV	= Submerged Aquatic Vegetation
SCEP	= Student Career Experience Program
SCORP	= State Comprehensive Outdoor Recreation Plan
SHPO	= State Historic Preservation Office
SWG	= State Wildlife Grant programs
TNC	= The Nature Conservancy
USDA	= U.S. Department of Agriculture
USGS	= U.S. Geological Survey
UV	= Ultra violet
VA Tech	= Virginia Polytechnic Institute and State University
VA WAP	= Virginia Wildlife Action Plan
VCU	= Virginia Commonwealth University
VDGIF	= Virginia Department of Game and Inland Fisheries
VDNH	= Virginia Division of Natural Heritage
VDOT	= Virginia Department of Transportation
VHS	= Virginia Herpetological Society
VIMS	= Virginia Institute of Marine Science
VNHP	= Virginia Natural Heritage Program
VSO	= Virginia Society of Ornithology