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References: Glossary

A

Abundance. Relative representation of a species in a given area or ecosystem.

Action alternative. An alternative that proposes a different management action or actions to address the purpose, need, and objectives of the plan; one that proposes changes to the current management. Alternatives B, C, and D are the action alternatives in this planning process. See also: “no-action alternative.”

Active lethal surveillance. Lethal removal of deer within the park for the purposes of assessing disease prevalence. This action also may minimize the likelihood of CWD becoming established, minimize the likelihood of amplification and spread if the disease is introduced, and may promote elimination of CWD.

Adaptive management. The rigorous application of management, research, and monitoring to gain information and experience necessary to assess and modify management activities. A process that uses feedback from research and the period evaluation of management actions and the conditions they produce to either reinforce the viability of objectives, strategies, and actions prescribed in a plan or to modify strategies and actions in order to more effectively accomplish management objectives.

Affected environment. A description of the existing environment that may be affected by the proposed action.

Amplification. Increased prevalence of disease through a target population or a region.

B

Biobullet. A single dose, biodegradable projectile comprised of an outer methylcellulose casing containing a solid, semi-solid, or liquid product (usually a vaccine or chemical contraceptive), propelled by a compressed-air gun.

Biodiversity. The number and variety of organisms found within a specified geographic region.

Blight. Any of numerous plant diseases that result in sudden and conspicuous wilting and dying of affected parts, especially young growing tissues.

Bluetongue virus. An insect-transmitted, viral disease of ruminant animals, including white-tailed deer, which causes inflammation, swelling, and hemorrhage of the mucous membranes of the mouth, nose, and tongue.

Browse line. A visible delineation at approximately 6 feet below which most or all vegetation has been uniformly browsed.

C

Carrying capacity. The maximum number of organisms that can be supported in a given area or habitat.

Cervids. All members of the Cervidae family and hybrids, including deer, elk, and moose.

Chemical reproductive control. The induction of contraception by injecting an animal with a compound that produces an immune response that precludes pregnancy.

Chemical reproductive control agent. A contraceptive agent that causes an animal to produce antibodies against some protein or peptide involved in reproduction. The antibodies hinder or prevent some aspect of the reproductive process.

Chronic wasting disease (CWD). A slowly progressive, infectious, self-propagating neurological disease of captive and free-ranging deer, elk, and moose. CWD belongs to the transmissible spongiform encephalopathy (TSE) group of diseases and is characterized by accumulations of abnormal prion proteins in neural and lymphoid tissue.

Confirmed. Two positive official tests are needed for a confirmed CWD diagnosis.

Containment. To keep CWD from spreading outside of an area.

Containment zone. Defined by the Commonwealth of Pennsylvania as a buffer zone around the 5-mile radius surveillance area established when 2 or more CWD-positive cases are documented. The buffer area would have a radius at least as large as the surveillance zone radius. State priorities within the containment zone are to contain the disease and reduce the prevalence rate.

Contractor. For the purposes of this plan, a contractor is a fully-insured business entity, nonprofit group, or other governmental agency engaged in wildlife management activities that include trapping, immobilization, and lethal removal through sharpshooting and chemical euthanasia. The contractor must possess all necessary permits and be able to pass any needed security clearances.

Contraceptive. A product that terminates pregnancy.

Cull. To remove from the population using lethal methods.

Cultural landscape. A geographic area (including both cultural and natural resources and the wildlife therein) associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

Cumulative impacts. Those impacts on the environment that result from the incremental effect of the action when added to the past, present, and reasonable foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

CWD Response Plan. The park's plan for addressing CWD, which includes disease surveillance (detection) actions as well as short-term actions to assess disease prevalence and distribution, minimize the likelihood of spread to surrounding communities and amplification within local deer populations, and if possible, promote elimination of CWD.

D

Deer population. The group of deer living within Valley Forge National Historical Park that have common characteristics and interbreed among themselves.

Demographic. Referring to the intrinsic factors that contribute to a population's growth or decline: birth, death, immigration, and emigration. The sex ratio of the breeding population and the age structure (the proportion of the population found in each age class) are also considered demographic factors because they contribute to birth and death rates.

Depredation. Damage or loss.

Direct reduction. Lethal removal of deer; includes both sharpshooting and capture/euthanasia.

Dispersal. One-way and permanent movement of animals from an area of birth to another.

E

Earthwork. An embankment or other construction made of earth, especially one used as a field fortification during the Revolutionary or Civil Wars.

Ecosystem. An ecological system; the interaction of living organisms and the nonliving environment, producing an exchange of materials and energy between the living and nonliving.

Elimination (aka eradication). To remove CWD from a target area or population and prevent its reintroduction.

Endemic. Native to or confined to a particular region.

Enhanced targeted surveillance. Actions that improve the probability of detecting animals exhibiting clinical signs consistent with CWD, and subsequently taking samples for CWD testing from these animals.

Environment. The sum total of all biological, chemical, and physical factors to which organisms are exposed; the surroundings of a plant or animal.

Environmental assessment (EA). A concise public document, prepared in compliance with NEPA, that briefly discusses the purposes and need for an action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an environmental impact statement or finding of no significant impact.

Environmental consequences. Environmental effects of project alternatives, including the proposed action, any adverse environmental effects which cannot be avoided, the relationship between short term uses of the human environment, and any irreversible or irretrievable commitments of resources which would be involved if the proposal should be implemented.

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

Epizootic hemorrhagic disease (EHD). An insect-borne viral disease of ruminants that causes widespread hemorrhages in mucous membranes, skin, and visceral organs.

Established. When the disease becomes enzootic or when the disease is sustained in a population over a period of time.

Ethnographic resource. Any site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it.

Euthanasia. Ending the life of an animal by humane means.

Exclosure. An area enclosed by a barrier, such as a fence, to protect vegetation and prevent browsing by animals.

Exotic species (on nonnative invasive species). Any introduced plant, animal, or protist species that is not native to the area and may be considered a nuisance; also called nonnative, invasive, or alien species.

Exposure. Contact between the target population and the disease agent. For purposes of this plan, the target population is white-tailed deer.

F

Forest regeneration. For the purposes of this plan, the regrowth of forest species and renewal of forest tree cover such that the natural forest sustains itself without human intervention.

H

Habitat. The environment in which a plant or animal lives (includes vegetation, soil, water, and other factors).

Herbaceous plants. Non-woody plants; includes grasses, wildflowers, and sedges and rushes (grass-like plants).

Herbivore. An animal that eats a diet consisting primarily of plant material.

Home range. The geographic area in which an animal normally lives.

I

Impairment. As used in NPS *Management Policies 2006*, “impairment” means an adverse impact on one or more park resources or values that interferes with the integrity of the park’s resources or values, or the opportunities that otherwise would exist for the enjoyment of them, by the present or a future generation. Impairment may occur from visitor activities, NPS activities in managing a park, or activities undertaken by concessioners, contractors, and others operating in a park. As used here, the impairment of park resources and values has the same meaning as the phrase “derogation of the values and purposes for which these various areas have been established,” as used in the General Authorities Act.

Infrared. The range of invisible radiation wavelength just longer than the red in the visible spectrum.

Irretrievable. A term that applies to the loss of production, harvest, and consumptive or nonconsumptive use of natural resources. For example, recreation experiences are lost irretrievably when an area is closed to human use. The loss is irretrievable, but the action is not irreversible. Reopening the area would allow a resumption of the experience.

Irreversible. A term that describes the loss of future options. Applies primarily to the effects of use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity that are renewable only over long periods of time.

L

Lethal control. The purposeful authorized killing of (an) animal(s) to achieve park management objectives.

Leuprolide. A reproductive control agent that prevents secondary hormone secretion, which stops the formation of eggs and ovulation. Leuprolide is a GnRH agonist.

M

Maintenance. To keep CWD below a certain level of prevalence.

Managed hunt. A special/managed hunt is one in which the government entity allows a certain number of citizen hunters to take a certain number of deer pursuant to specific requirements. Sometimes these hunts include firearm proficiency tests, hunting in specific areas or stands, and taking specific cohorts. Typically, these hunts take place during the state's sport hunting season and last for several days.

Monitoring. A process of collecting information to evaluate if an objective and/or anticipated or assumed results of a management plan are being realized (effectiveness monitoring) or if implementation is proceeding as planned (implementation monitoring).

N

National Environmental Policy Act of 1969 (NEPA), as amended. A law that requires all federal agencies to examine the environmental impacts of their actions, incorporate environmental information, and utilize public participation in the planning and implementation of all actions. Federal agencies must integrate NEPA with other planning requirements and prepare appropriate NEPA documents to facilitate better environmental decision making. NEPA requires federal agencies to review and comment on federal agency environmental plans/documents when the agency has jurisdiction by law or special expertise with respect to any environmental impacts involved.

Naturally regenerating and sustainable forest. A forest community that has the ability to maintain plant and animal diversity and density by natural (non-human facilitated) tree replacement.

No-action alternative. The alternative in which baseline conditions and trends are projected into the future without any substantive changes in management. Alternative A is the no-action alternative in this planning process.

O

Opportunistic surveillance. Taking diagnostic samples for CWD testing from cervids found dead or removed through a lethal management action. Cause of death may be culling, disease, trauma (hit by car), or undetermined.

P

Paired plots. Used for purposes of vegetative monitoring comparison; includes both fenced (deer excluded) and unfenced areas of land.

Palatability. The property of being acceptable to the taste or sufficiently agreeable in flavor to be eaten.

Paleontological resources. A resource related to the forms of life existing in prehistoric or geologic times, such as fossils of plants, animals, and other organisms.

Parasitism. A symbiotic relationship in which one species, the parasite, benefits at the expense of the other, the host.

Penetrating captive bolt gun. A gun with a steel bolt that is powered by either compressed air or a blank cartridge. When fired, the bolt is driven into the animal's brain and renders it instantly unconscious without causing pain.

Pericardial. Around or surrounding the heart.

Physiographic province. A geographic region in which climate and geology have given rise to an array of landforms different from those of surrounding regions.

Population (or species population). A group of individual plants or animals that have common characteristics and interbreed among themselves and not with other similar groups.

Population dynamics. All the elements of change by which a particular population exists such as mortality, reproduction, and movement.

Pregnancy rate. Percentage of does sampled that were pregnant.

Prevalence. The number of disease cases in a population at a designated time without distinction between old and new cases. It is represented by the number of diseased animals divided by the number of susceptible animals (target population) or the total number of cases of a disease in a given location at a specific time.

Prevention. To maintain a population or an area free from CWD (generally approached by minimizing the risk factors for disease exposure or amplification).

Prion. Proteinaceous infectious particle; a microscopic particle similar to a virus but lacking nucleic acid, thought to be the infectious agent for certain degenerative diseases of the nervous system such as CWD.

Productivity. Number of fawns born minus those killed through all sources of mortality at a given population size.

R

Radial distance. A straight-line distance measured along a radius.

Record of decision (ROD). A concise public record of decision prepared by a federal agency, pursuant to NEPA, that contains a statement of the decision, identification of all alternatives, a statement as to whether all practical means to avoid or minimize environmental harm from the alternative selected have been adopted (and if not, why they were not), and a summary of monitoring and enforcement where applicable for any mitigation.

Regulated (traditional) hunting. Killing, trapping, or capture of animals as allowed by law.

Reproductive control. A method or methods used to limit the numbers of animals in a population by decreasing the reproductive success of the animals, such as contraception or sterilization.

Reproductive rate. Number of fetuses per doe.

Response (to CWD). Response to CWD includes disease surveillance (detection) actions as well as short-term actions to assess disease prevalence and distribution, minimize the likelihood of spread to surrounding communities and amplification within local deer populations, and if possible, promote elimination of CWD.

Rut. An annually recurring condition or period of sexual excitement and reproductive activity in deer; the breeding season.

S

Sapling. A young tree, generally not over 4 inches in diameter at breast height.

Scoping. An early and open process for determining the extent and variety of issues to be addressed and for identifying the significant issues related to a proposed action.

Seedling. A young plant grown from seed; a young tree before it becomes a sapling.

Sex ratio. The proportion of males to females (or vice versa) in a population. A sex ratio of 50:50 would mean an equal number of does and bucks in a deer population.

Sharpshooting. The authorized shooting of animals by specially trained professionals using appropriate weapons for means of effective and efficient lethal control.

Species diversity. The variety of different species present in a given area; species diversity takes into account both species richness and the relative abundance of a species.

Species richness. The number of species present in a community.

Spotlight survey. A method used to estimate deer numbers in an area by shining spotlights at night and counting the number of deer observed. This technique provides an estimate of deer numbers but not density.

Spreading. When the 5 mile radius surveillance areas established around individual positive CWD cases eventually expands beyond 20 miles from the index case.

Subcutaneous. Under the skin.

Surveillance. Activities related to the detection and monitoring of a disease.

Surveillance area. Defined by the Commonwealth of Pennsylvania as a 5-mile radius established around the first CWD-positive case within which intensive CWD surveillance occurs.

T

Target population. For the purposes of this plan, white-tailed deer.

Targeted surveillance. Lethal removal of deer that exhibit clinical signs consistent with CWD.

Transmissible spongiform encephalopathies (TSEs). A group of diseases characterized by accumulations of abnormal prion proteins in neural and lymphoid tissues, which cause distinctive lesions in the brain and result in death.

U

Ungulate. A hoofed, typically herbivorous, animal; includes horses, cows, deer, elk, and bison.

V

Vaccine. A suspension of killed or attenuated microorganisms that, when introduced into the body, stimulates an immune response against that microorganism.

Vascular plant. A plant that contains a specialized conducting system consisting of phloem (food-conducting tissue) and xylem (water-conducting tissue). Ferns, trees, and flowering plants are all vascular plants.

Viable white-tailed deer population. A population of deer that allows the forest to naturally regenerate, while maintaining a healthy deer population in the park.

W

Woody plants. Plants containing wood fibers, such as trees and shrubs.

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