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**Appendix H.  
Glossary****Affect / Effect**

To affect (a verb) is to bring about a change; the effect (usually a noun) is the result.

**Allopatric**

Occurring in different places; describing geographically separated populations.

**Autecology**

The ecology of individual organisms or species; idioecology.

**Barrier**

Any feature that restricts movement of individuals from one place to another.

**Biodiversity**

Biodiversity is the total variety of life and its processes. Biodiversity exists at three different levels: the total variety represented by all species of plants and animals; the variety of different genes within each species; and the variety of different habitats and ecosystems in which these species exist.

**Biogeography**

The science that studies the geographic distribution of organisms.

**Biological Opinion**

Document stating the opinion of the Fish and Wildlife Service or the National Marine Fisheries Service on whether or not a Federal action is likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat.

**Biota**

The plants and animals of an area.

**Biotic Community**

Biological community or association, ecological community; an assemblage of species living in a prescribed area or physical habitat.

**Buffer**

Buffers are multi-use transition areas designed and managed to protect core reserves and critical corridors from the destructive impacts of human activities. They are designed with consideration for the specific ecological features to be protected and the specific activities that threaten them. These lands may be owned and managed through a wide variety of public and/or private programs.

**Candidate Species**

Plant and animal taxa for which the FWS has on file sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species.

**Carrying Capacity**

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

**Characteristic species**

A species which is almost always present in examples of a particular community, usually at higher frequency than other species, but which is usually not dominant.

**Charette**

The term charette is derived from French architectural school jargon. The students had to have their final project designs ready when a little cart (charette) came for them. Hence charette began to be applied to the process of producing a design by a tight deadline. In conservation terminology it has come to be used for a workshop designed to produce consensus maps of a specific geographic area within a short timeframe.

**Congeneric**

Belonging to the same genus; congener.

**Conservation**

The use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to [the] Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transportation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regular taking.

**Conspecific**

Belonging to the same species.

**Consultation**

A process that determines whether a proposed Federal action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat; begins with a Federal agency's written request and submittal of a complete initiation package; and concludes with the issuance of a biological opinion and incidental take statement.

**Controlled Propagation**

The rearing or propagation of a plant or animal under a controlled environment.

**Core**

Core reserves are extensive wilderness areas and wildlands managed to permit ecological processes to function as naturally as possible. They are generally chosen for their relatively natural condition, representation of regional species and/or ecosystems, and/or rich biodiversity. Some management may be necessary to compensate for such impacts as alteration of regional fire regimes or exotic plant invasion. And some strategic core areas may require extensive ecological restoration. Parts of core areas may be open to appropriately managed scientific research, educational programs, and non-motorized recreation, but extremely sensitive places may need to be closed to virtually all human use.

**Corridor**

Ecological corridors are landscape linkages designed to permit large-scale and long-term ecological processes to continue operating within fragmented ecosystems. They may be designed to facilitate movements of animals (for seasonal migration, breeding, foraging, or other purposes), plant propagules (via seed dispersal, movement of pollen or pollinators, or other mechanisms), and/or essential abiotic resources, such as water or nutrients. Long-term genetic implications are usually a fundamental consideration in corridor planning. Appropriate design and management of a corridor depends upon the ecological purposes it is intended to serve.

Primary corridors are the essential uninterrupted connections that integrate the landscape at the regional level. In most landscape situations, such corridors will be miles wide and structured so that a central spine managed like a core reserve is sheltered by strips of primary buffer within broader areas of secondary buffer. Primary corridors should generally be oriented along riparian systems or wildlife movement routes.

**Create**

The creation of natural community analogs on massively disturbed land where it is impossible or unfeasible to restore an historic natural community. Historic natural communities are used as general models, and only species which are within their historic ranges are used to construct these natural community analogs (*e.g.* the restoration of tropical hardwood hammocks on fill pads surrounding buildings along the Tamiami Trail).

**Critical Habitat**

The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section four of the Endangered Species Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

**Cryptorchidism**

Failure of one or both of the testes to descend into the scrotum.

**Demography**

The statistical study of a population with reference to its size, density, distribution, and vital statistics.

**Dispersal**

The movement of organisms away from a location, such as their point of origin.

**Dominant Species**

Species which have the highest average relative cover values of all species found in the community.

**Easement**

An interest in the land of another that provides the easement holder specified rights without actual ownership.

**Ecology**

The branch of science that studies the distribution and abundance of organisms, and the relationship between organisms and their environment.

**Ecosystem**

Dynamic and interrelating complex of plant and animal communities and their associated non-living environment.

**Ecotone**

The boundary or transitional zone between adjacent communities or biomes; tension zone.

**Ecotype**

A genetically differentiated subpopulation restricted to a certain habitat.

**Endemic**

Native to, and restricted to, a particular geographical region.

**Environment**

The complex of climatic, soil, and biotic factors acting upon organisms.

**Estuary**

A semi-enclosed coastal water body which has free connection to the open sea and within which seawater is measurably diluted with freshwater.

**ESA**

The Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq.*

**Eutrophication**

The process of nutrient enrichment in a water body. Eutrophication often results from nitrogen and phosphorous inputs from human activities such as sewage disposal and runoff from uplands. Such input stimulates algal blooms and bacteria growth, which contribute to depletion of oxygen in the water, anoxic conditions, and eventually leads to fish kills.

**Evapotranspiration**

The total water loss from the soil, including transpiration from the surface of plants and direct evaporation.

**Exotic Species**

Any introduced plant, animal, or protist species that is not native to the area and may be considered a nuisance.

**Extinction**

Dying out, usually global, of a species for any reason.

**Extirpate**

The removal, elimination, or disappearance of a taxon from a part of its range.

**Federally Endangered**

Any species which is in danger of extinction throughout all or a significant portion of its range.

**Federally Threatened**

Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

**Florida Endangered**

As designated by the GFC, a species, subspecies, or isolated population which is so few or depleted in number or so restricted in range or habitat due to any man-made or natural factors that it is in imminent danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.

**Florida Species of Special Concern**

As designated by the Commission, a species, subspecies, or isolated population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. The species may already meet certain criteria for designation as a threatened species but for which conclusive data are limited or lacking; may occupy such an unusually vital and essential ecological niche that should it decline significantly in numbers or distribution other species would be adversely affected to a significant degree; or has not sufficiently recovered from past population depletion.

**Florida Threatened**

As designated by the GFC, a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is declining in an area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

**FNAI Global Rank:**

- G1: Critically Imperiled Globally, Extreme Rarity
- T1: G1 rank equivalent for subspecies or varieties
- G2: Imperiled Globally, Rare
- T2: G2 rank equivalent for subspecies or varieties
- G3: Very Rare and Local throughout Range
- T3: G3 rank equivalent for subspecies or varieties

**FNAI State Rank:**

- S1: Critically imperiled in Florida, extreme rarity
- S2: Imperiled in Florida, rare
- S3: Very rare and local throughout range

**FWS Species of Management Concern**

This is a category assigned to species that also includes some of the species formerly designated as FWS Category 2 candidates. Former C2 candidates were those species for which information in the possession of the FWS indicated that proposing to list as endangered or threatened was possibly appropriate, but for which sufficient data were not available to support proposed rules.

On February 28, 1996 (61 FR 7596) the FWS indicated that it would no longer include such species in future notices of review, and would restrict the meaning of the term "candidate" to those species for which it had sufficient information to support listing proposals, or which had already been proposed for listing. This made the term candidate identical to Category 1 species in the previous review notices.

**Geographic Information System (GIS)**

A computerized system of organizing and analyzing any spatial array of data and information.

**Greenway**

A greenway is a corridor that serves both ecological and recreational functions. It can include terrestrial and/or properly buffered aquatic systems. A well-designed regional greenway system links non-motorized community transportation and recreation trails through secondary corridors to long-distance routes embedded in the buffers of primary ecological corridors and cores.

**Habitat**

The natural environment of an organism.

**Habitat Conservation Plan**

A comprehensive planning document that is a mandatory component of an incidental take permit pursuant to section 10(a)(2) of ESA.

**Historical Range**

The known general distribution of the species or subspecies as reported in the current scientific literature.

**Holotype**

In taxonomy, the single specimen designated or indicated as the type specimen of a nominal species by the original author at the time of publication or the single specimen when no type was specified but only one specimen was present.

**Home Range**

The area enclosing most of an individual's activities.

**Hybridization**

Crossing of individuals of different populations, races, or sometimes species.

**Hydric**

Wet.

**Hydrology**

The scientific studies of the properties, distribution and effects of water in the atmosphere, on the earth's surface, and in soil and rocks.

**Hydropattern**

A description of water movement change, *i.e.*, depth, timing, flow, and location of surface waters.

**Hydroperiod**

A measure of the fluctuation and change of water levels and flows over time. The length of time an area is inundated.

**Indicator Species**

A species which, in the context of the surrounding landscape or in comparison with related communities, seems to be most indicative of the particular community.

**Interspecific**

Refers to individuals of different species.

**Intraspecific**

Refers to individuals within a species.

**Intrinsic Rate of Increase**

The potential rate of growth of a population in an infinite environment, designated by  $r$ ; calculated as  $r = b - d$ , where  $b$  is the instantaneous birth rate and  $d$  is the instantaneous death rate; Malthusian parameter.

**Introduction**

A plant or animal moved from one place to another by man.

**Jeopardy**

An action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.

**Lacustrine**

Referring to a lake or a ponded body of water larger than 8 ha (20 ac).

**Landscape**

An areal entity that is a composite of all the characteristics that distinguish a certain area on the earth's surface from other areas.

**Limiting Factor**

An environmental factor that limits a population's abundance or distribution.

**Listed Species**

Any species of fish, wildlife or plant which has been determined to be endangered or threatened under section 4 of ESA.

**Littoral Zone**

The shore zone from the high water mark to a depth where light is barely sufficient for rooted aquatic plants to grow.

**Management**

Any intentional or planned activity which has an effect on an existing natural community which has been degraded in some way. Management which attempts to restore natural community functions, structures and/or composition is termed restorative management. Restorative management includes both in-kind restoration and not-in-kind restoration.

**Marginal Habitat**

Habitats with few species due to adverse physical or other conditions.

**Marl**

A clay, sand, limestone mixture of varying proportions that is soft and crumbly and usually contains shell fragments.

**Meiofauna**

The smaller, invertebrate, fauna of the sea bottoms.

**Mesic**

Moderately moist or requiring moderate amounts of moisture, as in plants.

**Metapopulation**

A small number of relatively isolated populations that may occasionally exchange individuals; a group of conspecific populations coexisting in time but not in space.

**Migration**

In genetics, gene flow between populations; often used more generally for broad-scale movement of organisms with or without gene flow.

**Mitigation**

Compensation required for the alteration of natural resources or habitat pivotal to the survival or well-being of listed species.

**Model**

A conceptual or mathematical simulation of reality (*e.g.*, biological) for purposes of describing, analyzing, or understanding nature.

**Mosaic**

The occurrence of two types of genetically homozygous tissue in a heterozygote as the result of a mitotic chromosomal exchange.

**Native**

The term "native plant" may be defined several ways. The broadest definition would say native plants are plants that were indigenous to the landscape before European settlers arrived on the North American continent. If this definition was applied to just Florida, then it would say native plants are those plants that were indigenous to Florida before the arrival of European settlers. This definition may be extended even further to say that native plants are those plants that occur naturally and are not present due to ANY type of human activity including Native American activities before the arrival of European settlers. From Florida Native Plant Society.

**Niche**

The ecological role of a species in a community; conceptualized as the multi-dimensional space, of which the coordinates are the various parameters representing the condition of existence of the species, to which it is restricted by the presence of competitor species.

**Null Hypothesis**

A statistical hypothesis to be tested to see if an observed difference is due to chance alone as opposed to a systematic cause.

**Oligotrophic**

Said of plants that will grow on poor soil, of any organism that requires little food, and of those that are restricted to a narrow range of nutrients.

**Oolitic**

Composed principally of granules of calcium carbonate.

**Overburden**

Soil and debris removed from the surface of a site to be mined.

**Palustrine**

Referring to a ponded body of water smaller than 8 ha (20 ac).

**Paradigm**

Distinctive pattern of major assumptions, concepts, and propositions in a substantive area.

**Periphyton**

The surface population of submerged objects or substrates.

**Physiography**

The description of surface features of the earth such as bodies of air, water, and land.

**Plan**

A predetermined course of action.

**Polygynous**

A mating system of one male to multiple females.

**Population**

A group of fish or wildlife in the same taxon below the subspecific level, in common spatial arrangement that interbreed when mature.

**Recovery**

Improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of ESA; the process by which species' ecosystems are restored so they can support self-sustaining and self-regulating populations of the listed species as persistent members of native biotic communities.

**Recreate**

The restoration of a natural community on land which has been massively disturbed through mining, farming or other agricultural activities, road-building, *etc.*, so that the site no longer has any resemblance to the original natural community which once occupied the landscape. Re-creation may include both in-kind restoration and not-in-kind restoration. This type of restoration can be used to expand, add buffers to, or connect existing preserves.

**Reintroduction**

A plant or animal moved to a location where it occurred historically.

**Reserve**

Nature preserve, national park, refuge, natural reserve, or other conservation land. A tract of land set aside to preserve it in its natural condition.

**Restoration**

Management actions to return a vegetative community or ecosystem to its original, natural condition.

**Risk Assessment**

A tool to estimate the probability of extinction (or persistence) for a particular species.

**Secondary Corridors**

Secondary corridors knit the landscape together at the subregional level and tie into local greenways. They may cross low-traffic roads, narrow to only a few hundred yards at landscape bottlenecks, and/or incorporate mostly lands managed like buffers.

**Section 4**

The section of the Endangered Species Act of 1973, as amended, outlining procedures and criteria for: (1) identifying and listing threatened and endangered species; (2) identifying, designating, and revising critical habitat; (3) developing and revising recovery plans; and (4) monitoring species removed from the list of threatened and endangered species.

**Section 7**

The outlining procedures for interagency cooperation to conserve Federally listed species and designated habitat.

**Section 9**

The section of the Endangered Species Act of 1973, as amended, that prohibits the taking of endangered species of fish and wildlife as well as most threatened fish and wildlife species.

**Section 10**

The section of the Endangered Species Act of 1973, as amended, providing exceptions to the section 9 prohibitions. The exceptions most relevant to section 7 consultations are takings allowed by two kinds of permits issued by the FWS of NMFS: scientific take permits and incidental permits. The FWS can issue permits to take listed species for scientific purposes, or to enhance the propagation or survival of listed species. The FWS can also issue permits to take listed species incidental to otherwise legal activity.

**Slough**

A swamp, bog, or marsh, especially one that is part of a flow way, inlet, or backwater.

**Species**

Any subspecies of fish or wildlife or plants, and any distinct population segment of any species or vertebrate fish or wildlife which interbreeds when mature.

**Species Abundance**

In ecology, the relative distribution of the number of individuals of each species in a community.

**Species Diversity**

Either the absolute number of species, or in ecology a measure that incorporates both the number of species and their relative abundance.

**Stochastic**

Random or expected by chance.

**Strand**

Land bordering a body of water: Beach.

**Subgenus**

A taxon immediately below genus, the members of which are thought to be associated by genetic rather than geographical factors.

**Subspecies**

A group of interbreeding natural populations differing taxonomically and with respect to gene pool characteristics, and often isolated geographically, from other such groups within a biological species.

**Subpopulation**

Groups of territories within easy dispersal distance of one another (or a single territory) that are relatively isolated from one another within a defined dispersal distance.

**Succession**

An orderly process of biotic community development involving changes in species structure and community processes with time.

**Sympatric**

Occurring in the same place; refers to areas where species distributions overlap.

**Synecology**

An old term for the branch of ecology that deals with the study of groups of organisms associated together as a unit.

**Synonymy**

A chronological list or record of the scientific names applied to a species and its subdivisions.

**Systematics**

The study of the genetic and historical evolutionary relationships of organisms.

**Take**

To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

**Taxonomy**

The naming of organisms and their assignment to taxa.

**Translocation**

The deliberate introduction or reintroduction of a species from another area by human intervention.

**Trophic Level**

Position in the food chain based on numbers of energy transfer steps (*e.g.*, producer, herbivore, carnivore).

**Vagility**

The ability to move from place to place.

**Variety**

A rank in the hierarchy of botanical classification; the principal category between species and form; an ambiguous term often used for any variant group within a species.

**Vegetation Type**

A plant community with distinguishable characteristics.

**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 (Cowardin *et al.*, 1979). In saltwater areas, the separation between wetland and deepwater coincides with the elevation of the extreme low water of spring tide. In other areas, the separation is at a depth of two m (6.6 feet) below low water. This is the maximum depth in which emergent plants normally grow (Fraye and Hefner, 1991).

**Wrack**

Seaweed and other marine life which is cast up on the shore.

**Xeric**

Pertaining to or having dry or desert-like conditions.

**Zoning**

Land-use zoning; the demarcation of a planning area by ordinance into zones and the establishment of regulations to govern their use.