

## SECTION 15 GLOSSARY OF TERMS, ACRONYMS AND ABBREVIATIONS, AND CONVERSION TABLES

### GLOSSARY OF TERMS

#### A

**Acre-foot**—The quantity of water required to cover 1 acre to a depth of 1 foot. Equal to 43,560 cubic feet (1,233.5 cubic meters).

**Affected environment**—Existing biological, physical, social, and economic conditions of an area subject to change, both directly and indirectly, as a result of a proposed human action.

**Air quality**—Measure of the health-related and visual characteristics of the air, often derived from quantitative measurements of the concentrations of specific injurious or contaminating substances.

**Anthropogenic**—Human-created.

**Aquatic**—Living or growing in or on the water.

**Aquifer**—An underground geologic formation in which water can be stored.

**Authorization**—An act by the Congress of the United States which authorizes use of public funds to carry out a prescribed action.

#### B

**Back Pumping**—The process of pumping water in a manner where the water is pumped from a site to a location of source. (e.g. from lake to contributory river).

**Benthic**—Bottom of rivers, lakes, or oceans; organisms that live on the bottom of water bodies.

**Best Management Practice**—(BMP) The best available technology or process that is practical and achieves the desired goal or objective.

**Biodiversity**—The number of different species inhabiting a specific area or region.

**Biological opinion**—Document issued under the authority of the Endangered Species Act stating the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service (NMFS) finding as to whether a Federal action is likely to jeopardize the continued existence of a threatened or endangered species or result in the destruction or adverse modification of critical habitat. This document may include:

**Critical habitat**—A description of the specific areas with physical or biological features essential to the conservation of a listed species and which may require special management considerations or protection. These areas have been legally designated via Federal Register notices.

**Jeopardy opinion**—The U.S. Fish and Wildlife Service or NMFS opinion that an action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat. The finding includes reasonable and prudent alternatives, if any.

**No jeopardy opinion**—U.S. Fish and Wildlife Service or NMFS finding that an action is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat.

## C

**Candidate species**—Plant or animal species not yet officially listed as threatened or endangered, but which is undergoing status review by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service.

**Catch**—At a recreational fishery, refers to the number of fish captured.

**Channel**—Natural or artificial watercourse, with a definite bed and banks to confine and conduct continuously or periodically flowing water.

**Coastal Ridge**—Area of land bordering the coast whose topography is elevated higher than land further inland.

**Confined aquifer**—An aquifer bounded above and below by impermeable or confining layers of distinctly lower permeability than the aquifer itself.

**Conjunctive use**—The planned use of groundwater in conjunction with surface water in overall management to optimize water resources.

**Conveyance capacity**—The rate at which water can be transported by a canal, aqueduct, or ditch. In this document, conveyance capacity is generally measured in cubic feet per second (cfs).

**Cooperating agency**—This is defined as an agency that meets the following criteria: (1) is included in 40 CFR Chapter V, Council on Environmental Quality (CEQ) Rules and Regulations, Appendix 1 - Federal and Federal-State agency National Environmental Policy Act (NEPA) contacts; and/or (2) has study-area-wide jurisdiction by law or special expertise on environmental quality issues; (3) has been invited by the lead agency to participate as a cooperating agency; and (4) has made a commitment of resources (staff and/or funds), for regular attendance at meetings, participation in workgroups, in actual preparation of portions of the programmatic environmental impact statement (PEIS), and in providing review and comment on activities associated with the PEIS as it progresses. The role of the cooperating agency is documented in a formal memorandum of agreement with the lead agency.

**Cubic feet per second**—A measure of the volume rate of water movement. As a rate of streamflow, a cubic foot of water passing a reference section in 1 second of time. One cubic foot per second equals 0.0283 meter /second (7.48 gallons per minute). One cubic foot per second flowing for 24 hours produces approximately 2 acre-feet.

## D

**Density**—The mass of a substance per unit of volume of that substance; i.e., the density of water changes with changes in temperature.

**Dissolved oxygen (D.O.)**—A commonly employed measure of water quality.

**Dry Season**—Hydrologically, for south Florida, two months associated with a lower incident of rainfall, December through April.

## E

**Ecosystem**—A functional group of animal and plant species that operate in a unique setting that is mostly self-contained.

**Endangered species**—Any species or subspecies of bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion of its range. Federally endangered species are officially designated by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service and published in the Federal Register.

**Enhancement**—Measures which develop or improve the quality or quantity of existing conditions or resources beyond a condition or level that would have occurred without an action; i.e., beyond compensation.

**Environmental consequences**—The impacts to the Affected Environment that are expected from implementation of a given alternative.

**Environmental Impact Statement (EIS)**—An analysis required by the National Environmental Policy Act for all major federal actions, which evaluates the environmental risks of alternative actions.

**Estuary**—A water passage where the tide meets a river current; an arm of the sea at the lower end of a river.

**Evaporation**—The change of a substance from the solid or liquid phase to the gaseous (vapor) phase.

**Evapotranspiration (ET)**—Water evaporated from plant and soil surfaces or transpired by plant tissues.

**Exotic species**—Introduced species not native to the place where they are found.

**Extirpated species**—A species which has become extinct in a given area.

## F

**Fallowed land**—Cultivated land that lies idle during a growing season.

**Feasibility study**—The second phase of a project. The purpose is to describe and evaluate alternative plans and fully describe recommended project.

**Flow**—The volume of water passing a given point per unit of time.

***Instream flow requirements***—Amount of water flowing through a stream course needed to sustain instream values.

***Minimum flow***—Lowest flow in a specified period of time.

***Peak flow***—Maximum instantaneous flow in a specified period of time.

## G

**Groundwater**—Water stored underground in pore spaces between rocks and in other alluvial materials and in fractures of hard rock occurring in the saturated zone.

**Groundwater level**—Refers to the water level in a well, and is defined as a measure of the hydraulic head in the aquifer system.

**Groundwater pumping**—Quantity of water extracted from groundwater storage.

**Groundwater seepage**—Groundwater flow in response to a hydraulic gradient.

**Groundwater table**—The upper surface of the zone of saturation, except where the surface is formed by an impermeable body.

## H

**Habitat**—Area where a plant or animal lives.

**Heterogeneity**—Unlike, dissimilar, not uniform

**Hydrologic condition**—The state of an area pertaining to the amount and form of water present. For example, saturated ground (water table at surface), lake stage, river flow rate.

**Hydrologic response**—An observed decrease or increase of water in a particular area.

**Hydroperiod**—For non-tidal wetlands, the average annual duration of flooding is called the *hydroperiod*, which is based only on the presence of surface water and not its depth.

**Hydropattern**—A less frequently used but nonetheless important term that refers to depth as well as hydroperiod is *hydropattern*. Hydropatterns are best understood by a graphic depiction of water level (above as well as below the ground) through annual cycles.

## I

**Indicator species**—Organism, species, or community which indicates presence of certain environmental conditions.

**Irrigation water**—Water made available from the project which is used primarily in the production of agricultural crops or livestock, including domestic use incidental thereto, and the watering of livestock. Irrigation water also includes water used for domestic uses such as the watering of landscaping or pasture for animals (e.g., horses) which are kept for personal enjoyment.

## J

**Juvenile**—Young fish older than 1 year but not having reached reproductive age.

## L

**Land classification**—An economic classification of variations in land reflecting its ability to sustain long-term agricultural production.

**Limnology**—Scientific study of the physical characteristics and biology of lakes, streams, and ponds.

**Littoral zone**—The shore of land surrounding a water body that is characterized by periodic inundation or partial saturation by water level. Typically defined by species of vegetation found.

## M

**Marl**—Soil comprised of clays, carbonates and shell remains.

**Marsh**—An area of low-lying wetland.

**Mercury**—Heavy metal that is toxic to most organisms when converted into a byproduct of inorganic-organic reaction. Distributed into the environment mostly as residual particles from industrial processes.

**Mitigation**—One or all of the following: (1) Avoiding an impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying an impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating an impact over time by preservation and maintenance operations during the life of an action; and (5) compensating for an impact by replacing or providing substitute resources or environments.

**Model**—A tool used to mathematically represent a process which could be based upon empirical or mathematical functions. Models can be computer programs, spreadsheets, or statistical analyses.

**Muck lands**—Fertile soil containing putrid vegetative matter.

## N

**Nonconsumptive water use**—Water uses including swimming, boating, waterskiing, fishing, maintenance of stream-related fish and wildlife habitat, hydropower generation, and other uses that do not substantially deplete water supplies.

## O

**Oxygen demand**—The biological or chemical demand of dissolved oxygen in water. Required by biological processes for respiration.

## P

**Peat**—Soil rich in humus or organic (exerts of oxygen demand) and is highly porous.

**Percolation**—In the context of this report, the downward movement of water through the soil or alluvium to the ground-water table.

**Phosphorus**—Element or nutrient required for energy production in living organisms. Distributed into the environment mostly as phosphates by agricultural runoff (fertilizer) and life cycles. Frequently the limiting factor for growth of microbes and plants.

**Physiographic**—The genesis and evolution of land forms.

**Programmatic environmental impact statement**—An environmental impact statement prepared prior to a Federal agency's decision regarding a major program, plan, or policy. It is usually broad in scope and followed by subsequent more narrowly focused National Environmental Policy Act compliance documents such as site-specific environmental assessments and environmental impact statements.

**Proposed action**—Plan that a Federal agency intends to implement or undertake and which is the subject of an environmental analysis. Usually, but not always, the proposed action is the agency's preferred alternative for a project. The proposed action and all reasonable alternatives are evaluated against the no action alternative.

**Public involvement**—Process of obtaining citizen input into each stage of the development of planning documents. Required as a major input into any EIS.

## R

**Recharge**—The processes of water filling the voids in an aquifer, which causes the piezometric head or water table to rise in elevation.

**Reconnaissance study**—The first phase of a project. It has four phases (1) to define problem, (2) asses sponsor's level of interest and support, (3) decide to progress to feasibility phase based on Federal interest, (4) estimate time and money to complete feasibility study.

**Record of Decision**—Concise, public, legal document which identifies and publicly and officially discloses the responsible official's decision on the alternative selected for implementation. It is prepared following completion of an Environmental Impact Statement.

**Release**—For this report, release is an intentional opening up of water control structures to allow stored water to flow out for 2 reasons. First, to lower water stage to acceptable levels. Second, to make available water for water supply demand (e.g., ecological, agricultural, or urban).

**Release zone**—Zone representing water level differentiation determining manner of release to be performed (e.g. gates wide-open, pulse release to simulate a storm).

**Reservoir**—Artificially impounded body of water.

**Reservoir storage capacity**—Reservoir capacity normally usable for storage and regulation of reservoir inflows to meet established reservoir operating requirements.

*Flood control storage capacity*—Reservoir capacity reserved for the purpose of regulating flood inflows to reduce flood damage downstream.

**Riparian**—Areas along or adjacent to a river or stream bank whose waters provide soil moisture significantly in excess of that otherwise available through local precipitation.

## S

**Scoping**—The process of defining the scope of a study, primarily with respect to the issues, geographic area, and alternatives to be considered. The term is typically used in association with environmental documents prepared under the National Environmental Policy Act.

**Seepage**—Water that escapes control through levees, canals or other holding or conveyance systems.

**Semi-confined Aquifer**—A condition where the movement of groundwater is restricted sufficiently to cause differences in head between different depth zones of the aquifer during periods of heavy pumping, but during periods of minimal pumping the water levels recover to a level coincident with the water table.

**Slough**—A depression associated with swamps and marshlands as part of a bayou, inlet or backwater.

**Spillway**—Overflow structure of a dam.

**Stream**—Natural water course.

*Ephemeral stream*—Flows briefly only in direct response to precipitation.

*Intermittent or seasonal stream*—Stream on or in contact with the groundwater table that flows only at certain times of the year when the groundwater table is high.

*Perennial stream*—Flows continuously throughout the year.

**Subsidence**—A local mass movement that principally involves the gradual downward settling or sinking of the earth's surface with little or no horizontal motion. It may be due to natural geologic processes or mass activity such as removal of subsurface solids, liquids, or gases, ground water extraction, and wetting of some types of moisture-deficient loose or porous deposits.

**Surficial aquifer**—An aquifer that is closest to the surface and is unconfined. The water level of a surficial aquifer is typically associated with the groundwater table of an area.

## T

**Tailwater**—Water immediately downstream of a water control structure.

**Threatened species**—Legal status afforded to plant or animals species that are likely to become endangered within the foreseeable future throughout all or a significant portion of their range, as determined by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service.

**Tide**—Water with relatively high salinity levels and is influenced by earth's diurnal tide cycle.

**Tiering**—Procedure which allows an agency to avoid duplication of paperwork through incorporation by reference of the general discussions and relevant specific discussions from an environmental impact statement (EIS) of broader scope into a subsequent EIS of narrower scope.

**Total supply**—Total water supply available to area (surface water plus groundwater).

**Tributary**—A stream feeding into a larger stream, canal or waterbody.

## W

**Wastewater reuse**—Utilization of water whose source contains contaminants from man-made activities. For example, runoff from developed areas and sewage. Treatment levels are typically associated with deactivation of microbial activity and nutrient removal.

**Water budget**—An account of all water inflows, outflows and change in storage for a prespecified period of time.

**Watershed**—A region or area bounded peripherally by a water parting and draining ultimately to a particular watercourse or body of water.

**Wetland**—A zone periodically or continuously submerged or having high soil moisture, which has aquatic and/or riparian vegetation components, and is maintained by water supplies significantly in excess of those otherwise available through local precipitation.

**Wet season**—Hydrologically, for south Florida the months associated with a higher than average incident of rainfall, May through October.

**Wildlife corridor**—A relatively wide pathway used by animals to transverse from one habitat arena to another.

**Wildlife habitat**—An area that provides a water supply and vegetative habitat for wildlife.

**Willing sellers**—A term used to describe individuals who would be interested in selling real estate holdings.

**GLOSSARY OF ABBREVIATIONS AND ACRONYMS**

C	Canal
C&SF	Central and Southern Florida
Co.	County
Corps	U.S. Army Corps of Engineers
I-95	Interstate 95
L	Levee
mgd	Million gallons per day
mg/l	Milligrams per liter
NGVD	National Geodetic Vertical Datum
PEIS	Programmatic Environmental Impact Statement
ppb	Parts per billion
S	Structure
SFWMD	South Florida Water Management District
SR	State Route
USACE	U.S. Army Corps of Engineers
°F	degrees Fahrenheit

## CONVERSION TABLES

### U.S. CUSTOMARY TO METRIC

Multiply	By	To Obtain
inches (in)	25.4	millimeters
inches (ft)	2.54	centimeters
feet (ft)	0.3048	meters
miles (mi)	1.609	kilometers
square feet (ft )	0.0929	square kilometers
acres (ac)	0.4047	hectares
square miles (mi )	2.590	square kilometers
gallons (gal)	3.785	liters
cubic feet (ft )	0.02832	cubic meters
acre-feet (af)	1,233.0	cubic meters
pounds (lb)	0.4536	kilograms
tons (ton)	0.9072	metric tons

Temperature in degrees Fahrenheit (°F) can be converted to degrees Celsius (°C) as follows:

$$^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$$

### OTHER USEFUL CONVERSION FACTORS

Multiply	By	To Obtain
acre-feet (af)	43,560	cubic-feet
acre-feet (af)	325,851	gallons
cubic feet per second (cfs)	1.9835	acre-feet per day
cubic feet per second (cfs)	724.0	acre-feet per year
million gallons per day (mgd)	1.55	cfs per day
square miles	640	acres