APPENDIX I: Glossary

Acid - A substance that yields positively charged Hydrogen ions when in solution.

Acidic - Solutions (including soil moisture and water vapor) which have a pH value less than 7 (neutral).

Acidophilic vegetation (acidophile) - Vegetation adapted to living in acidic conditions.

Activism - The doctrine or policy of taking positive, direct action to achieve an end, especially a political or social end.

Adjacent wetlands - Wetlands that border, are contiguous to, or neighbor another body of water and have a hydrological connection to that body of water.

Advocacy - The act of advocating, or speaking, or writing in support of something.

Aerobic - A condition in which molecular oxygen is a part of the environment and freely available to organisms.

Alkali (Base) - A substance which yields negatively charged hydroxide or carbonate ions when in solution.

Alkaline (Basic) - Solutions (including soil moisture and water vapor) which have a pH value greater than 7 (neutral).

Alluvium - Alluvium, or alluvial soil, is soil composed primarily of eroded material, such as sand, silt, or clay, that has been deposited on the bottom of water bodies or on land by rivers and streams overflowing their banks. For example, an alluvial river swamp is a depressional area along the floodplain of a river or creek that is continuously or almost continuously flooded.

Anaerobic - A condition in which molecular oxygen is absent (or effectively so) from the environment.

Aquifer - A geologic formation that is capable of yielding a significant amount of ground water to a well or spring.

Benthic - Being in or on substrate, usually refers to bottom-dwelling organisms in lakes.

Biodiversity - The sum of all species of plants and animals. An ecosystem is considered healthy when it supports the most diverse numbers and types of species it is capable of supporting.

Bog - A peatland which is for all practical purposes isolated from ground or surface water (only significant water inputs are directly from rain) and dominated by mosses (*Sphagnum* spp.), sedges, shrubs, and evergreen trees such as black spruce and tamarack.

Buttressed - The swollen or enlarged bases of trees developed in response to wet conditions or prolonged inundation.

Calcareous - Containing calcium carbonate, calcium, or lime that typically causes an alkaline condition.

Concentric - A series of circles, each progressively smaller, nested inside one another.

Detritus - Any non-living plant or animal material or debris.

Drained, effectively - A condition where ground or surface water has been removed by artificial means to the point that an area no longer meets the wetland hydrology criterion.

Drawdown – Process of partially or completely dewatering a wetland with pumps or other mechanical devices. The purpose of a drawdown is to manage vegetation and wildlife.

Drift line - An accumulation of water-carried debris along a topographical contour of the land surface or on vegetation that provides direct evidence of prior inundation and often indicates the directional flow of flood waters.

Ecological integrity - A term used to describe intact ecosystems that are diverse, productive, and otherwise function normally.

Ecoregion - An ecological region that has broad similarities to other regions with respect to soil, topography, and dominant vegetation.

Ecosystem - A community of plants and animals and the physical environment they inhabit, e.g., wetlands, rivers, upland. The ecosystem reflects the interaction among soil, climate, vegetation, and animal life.

Emergent aquatic plants - Rooted plants growing in shallow water with a portion of their stems and leaves growing above the water surface.

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

Environmental impact statement (EIS) - Written reports prepared to assess the environmental impacts of, and alternatives to, actions that may significantly affect the environment. The EIS is required by the National Environmental Policy Act.

Erosion - The process by which soil particles are detached and transported by water, ice, wind, and gravity down slope or to some downstream point.

Eutrophication - Process by which a body of water becomes highly productive either due to natural causes or excessive inputs of pollution rich in dissolved nutrients.

Evapotranspiration - Conversion of liquid water to vapor both by evaporation and by transpiration of the water by plants growing thereon.

Facultative Plant Species (FAC) - Plant species that are estimated to occur in wetlands approximately 34-66% of the time.

Facultative Upland Plant Species (FACU) - Plant species that are estimated to occur in wetlands approximately 1-33% of the time.

Facultative Wetland Plant Species (FACW) - Plant species that are estimated to occur in wetlands approximately 67-99% of the time.

Fen - A type of peatland that receives mineral-rich inputs of ground or surface water and is dominated by sedges and other grass-like vegetation.

Field tiles (Drainage Tiles) - Perforated plastic or clay pipes that are buried under the surface of the ground to facilitate drainage.

Flooded - A condition in which the soil surface is temporarily covered with water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high tides, or any combination of sources.

Floodplain - That part of a lake or river basin lying between the shoreline and the uplands subject to submergence during a high water stage.

Flora - Plant life.

Function - Any biological, chemical, or ecological process that a wetland performs, such as nutrient removal, wildlife habitat support, and sediment trapping.

Gleyed - Distinctive blueish-gray soil color which develops under conditions of poor drainage, resulting in reduction of iron and other elements.

Ground water - Water that seeps below the surface of the ground and fills interconnected pores in soil and cracks in rocks.

Habitat - The environment in which the requirements of a specific plant or animal are met.

Headwaters - For regulatory (Section 404) purposes, the point on a non-tidal stream above which the average annual flow is less than five cubic feet per second.

Herb - Nonwoody (herbaceous) plants including grasses and grass-like plants, forbs, ferns, fern allies, and nonwoody vines. For the purposes of wetland delineation, seedlings of woody plants that are less than three feet in height are also considered herbs.

Hummock - A mound standing above the soil level of the immediate area, usually overgrown with vegetation.

Hydric soil - A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the root zone.

Hydrologic regime - The sum total of water that occurs in an area on average during a given period.

Hydrology - The science dealing with the properties, distribution, and circulation of water.

Hydroperiod - The duration of a particular flooding event. The period during which surface water remains on a wetland.

Hydrophyte or hydrophytic vegetation - Literally, water-loving vegetation. Any macrophyte that grows in water, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content; plants typically found in wetlands and other aquatic habitats.

Indicator - An event, entity, or condition that typically characterizes a prescribed environment or situation; indicators determine or aid in determining whether or not certain circumstances exist or criteria are satisfied.

Infiltration - The downward movement of water from the atmosphere into soil and rock formations.

Interdunal swale - A type of wetland usually dominated by grass-like vegetation that occurs between sand dunes and beach ridges along the Great Lakes shoreline.

Inundation - A condition in which water from any source temporarily or permanently covers a land surface.

Invasive - Specie that tends to spread.

Macrophyte - Any plant species that can be readily observed without the aid of optical magnification, including all vascular plant species or bryophytes (e.g. *Sphagnum* spp.), as well as large algae (e.g. *Chara* spp., and *Fucus* spp.).

Marl - A mixture of clay and the carbonates of calcium and magnesium, from precipitation, shells, and limestone. Common substrate underlying wetlands in the Great Lakes basin, especially in the north.

Marsh - A frequently or continually inundated wetland characterized by emergent herbaceous vegetation adapted to saturated soil conditions.

Mineral soil - Any soil consisting primarily of mineral (sand, silt, and clay) material, rather than organic matter.

Mitigation - Mitigation includes avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts. Compensatory mitigation covers creation, restoration, or enhancement of adverse impacts to wetlands.

Mitigation banking - An offsite wetland area created to mitigate for a number of independent wetland development conversions. Under mitigation banking, a developer need not produce the compensatory wetland values but instead can purchase them from another entity that has produced and banked them for this purpose.

Mottles - Spots or blotches of different color or shades of color interspersed within the dominant matrix color in a soil layer.

Muck - Dark colored, finely textured, well-decomposed organic soil material.

Mud flats - The bare flat bottoms of lakes and wetlands exposed by a drop in water level. A mud bar is exposed by accretion of sediments.

Nonhydric soil - A soil that has developed under predominantly aerobic conditions.

Nonpoint source pollution - A diffuse form of pollution that is carried to waterbodies, particularly during rain events. Nonpoint source pollution is typically associated with land use activities such as agriculture, construction, and forestry.

Nonwetland - Any area that has sufficiently dry conditions that hydrophytic vegetation, hydric soils, and/or wetland hydrology are lacking, including former wetlands that have been effectively drained (synonymous with Upland).

Normal circumstances - Refers to the soil, vegetation, hydrology, and climate conditions (in other words, environmental conditions) that are usually present.

Nutrient - Any mineral, compound, or element that promotes biological growth or development.

Obligate Upland Plant Species (UPL) - Plant species that are estimated to occur in wetlands less than 1% of the time.

Obligate Wetland Species (OBL) - Plant species that are estimated to occur in wetlands more than 99% of the time.

Oligotrophic - Lacking in plant nutrients and having an abundance of dissolved oxygen.

Organic soils - Soils whose properties are dominated by organic materials; commonly contain more than 50 percent organic matter by volume and at least 20 percent by weight.

Oxidation-reduction - A complex of biochemical reactions that influence the valence state of elements and their ions. Long periods of soil saturation during the growing season tend to elicit anaerobic conditions that shift the overall process to a reducing condition.

Oxidized root channels - Iron oxide concretions (orange or red-brown in color) that form along the length of a root channel in wetland conditions. Oxidized rhizospheres serve as a common field indicator of wetland hydrology in mineral soils.

Palustrine wetlands - A wetland not a part of a main lake and not subject to the main lake's intensive wave or current affects.

Peat - A low-density, slightly decomposed fibrous organic soil composed largely of plant material.

Peatland - A generic term used to refer to peat accumulating wetlands, such as fens and bogs.

Perched - Wetland system in which soils do not allow water to pass through them to the ground water.

Perennial (plant) - Living for more than one year.

Permeability - The quality of the soil that enables water to move downward through the profile, measured as the number of inches per hour that water moves downward through the saturated soil.

Piezometer - A shallow well used to measure ground water fluctuations.

Plant community - The various plant species that share a single habitat or environment.

Propagules - The structure of an organism involved in dispersal and reproduction, as in seeds or spores of plants.

Rhizosphere - The zone of a soil in which interactions between living plant roots and micro-organisms occur; root zone.

Riparian - Adjacent to a body of water; a person who resides on a shoreline property.

Sapling - Woody vegetation between 0.4 and 5.0 inches in diameter at breast height and greater than or equal to 20 feet in height, not including woody vines.

Sapropel - A gaseous product of decomposition from organically rich bottom sediments. Sapropel is formed under anaerobic conditions and has the fetid odor of hydrogen sulfide. It is common in marshes.

Saturated - A condition in which virtually all voids (pores) between soil particles are temporarily or permanently filled with water.

Sedimentation - The process of nutrients and sediments entering waterbodies and wetlands.

Shrub - Woody vegetation usually greater than 3 feet but less than 20 feet tall, including multi-stemmed, bushy shrubs and small trees and saplings.

Soil horizon - A layer of soil or soil material approximately parallel to the land surface and differing from adjacent layers in physical, chemical, and biological properties or characteristics (e.g., color, structure, and texture).

Staff gauge - A fixed point in a body of water from which measurements of the surface water level are taken.

Stewardship (land) - To care for and manage natural land in a way that maintains its ecological integrity for the benefit of present and future generations.

Submergent vegetation - Plants that have their stems and leaves below the water surface. They may have some flowering parts above.

Substrate - The surface beneath a wetland in which organisms grow or to which organisms are attached.

Swamp - A forested wetland.

"Takings" - The unconstitutional denial of an individual's rights to use his or her property. Refers to the Fifth Amendment of the U.S. Constitution and similar provisions in other constitutions, which prohibit governments from "taking" private property for public use unless they pay just compensation.

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

Transpiration - The process in plants by which water is released into the gaseous environment (atmosphere).

Tree - A woody plant 5 inches or greater in diameter at breast height and 20 feet or taller.

Upland - Any area that does not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soil, and/or hydrologic characteristics associated with wetlands.

Values - Those aspects of wetlands that are deemed worthy, desirable, or useful to humans. Wetland values emanate from their functions. Perceived wetland values arise from their functional ecologic process but are determined by human perceptions, the location of a particular wetland, the human population pressures on it, and the extent of the resource. See also "Function."

Vernal pool - Shallow, intermittently flooded wet meadow, generally dry for most of the summer and fall.

Water table - The depth or level below which the ground is saturated with water.

Watershed - The region drained by or contributing water to a stream, lake, or other body of water.

Wetland boundary - The point on the ground at which a shift from wetland to upland occurs.

Wetland delineation - The process by which the boundaries of a particular wetland are defined.

Wetland determination - The process by which an area is identified as a wetland or non-wetland.

Wetland hydrology - In general terms, inundation or prolonged soil saturation for a duration sufficient to support wetland vegetation or foster the development of hydric soils (approximately 14 days or more during the growing season in the temperate zone).

Wetland indicator status - One of five categories which provide an estimate of the percentage of time a particular plant species would occur in a wetland. Indicator statuses include Obligate Wetland, Facultative Wetland, Facultative, Facultative Upland, and Obligate Upland and are defined elsewhere in this glossary.

Zone of influence - The area contiguous to a ditch, channel, or other drainage structure that is directly drained by it.

Zooplankton – Animal microorganisms, such as small crustaceans, rotifers, and protozoans floating in the water. They graze on phytoplankton and each other.