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12.0 GLOSSARY OF TERMS AND ACRONYMS

12.1 LIST OF TERMS

Aboriginal community:

A community where most of the residents are Aboriginal (i.e., Indian, Métis Inuit or other Aboriginal Peoples) and that has a separate form of government, provides some level of service to its residents, and has clear community boundaries.

Active labour force:

All persons 15 years of age and over, excluding institutional residents, who are either employed or unemployed.

Adverse effects:

Negative effects on the environment and people that may result from a proposed project.

Alluvial:

Pertaining to, contained in, or composed of, alluvium; relating to the deposits made by flowing water; washed away from one place and deposited in another; as, alluvial soil, mud, accumulations, deposits.

Amphibian:

A cold-blooded, smooth-skinned vertebrate of the class Amphibia, such as a frog or salamander, that characteristically hatches as an aquatic larva with gills. The larva then transforms into an adult having air-breathing lungs.

Aquifer:

A body of permeable rock underlain by impermeable material, that is capable of storing large quantities of water and that groundwater flows through.

Basal:

From the base (e.g., leaves that grow in a rosette at the base of a plant).

Best Management Practices:

Specific practices that are followed in order to prevent or minimize impacts to the environment.

Biome:

A major regional or global biotic community, such as a grassland or desert, characterized chiefly by the dominant forms of plant life and the prevailing climate.

Bird's Hill/Oakbank Aquifer:

Unconfined sand and gravel aquifer located to the east of the community of Bird's Hill that is a drinking water source for the town.

Botanical:

Relating to plant or plant life.

Breeding bird survey:

Standardized surveys conducted during the breeding season for a given area whereby observers record the number of birds seen or heard along a travel route.

Capital Region¹:

A geographical area currently defined by the provincial government as including sixteen municipalities including the Rural Municipalities of Cartier, East St. Paul, Headingley, Macdonald, Ritchot, Rockwood, Rosser, St. Andrews, St. Clements, St. Francois Xavier, Springfield, Taché, and West St. Paul, the Town of Stonewall, and the Cities of Selkirk and Winnipeg.

Clean Environment Commission (CEC):

Provincial body created by *The Manitoba Environment Act*. At the request of the Minister of Conservation, the CEC, amongst other related responsibilities, conducts public hearings concerning major projects that may affect the environment. The CEC writes a report about their findings and makes recommendations to the provincial government about the subject they have been asked to review. The final decision with respect to licensing a development is the responsibility of the Minister of Conservation. The CEC will hold public hearings on the Red River Floodway Expansion Project and these are expected to take place in fall, 2004.

Confluence:

The point of juncture of two or more streams (or other waterways).

Conservation:

Any various efforts to preserve or restore the earth's natural resources, including such measures as: the protection of wildlife; the maintenance of forest or wilderness areas; the control of air and water pollution and the prudent use of farmland, mineral deposits, and energy supplies.

Control structure

A type of structure designed to control the flow of water into or out of a natural water body (such as the Red River) or a man-made structure (such as the Floodway Channel) (e.g., Floodway Inlet control structure, Floodway Outlet control structure).

Cumulative effects:

The combined effects of several projects on the environment. Cumulative effects have to be considered as part of the environmental assessment process.

DAFOR scale:

Scale used to describe the relative abundance of species and or groups of species (in this study it was used for plants). D=dominant; A=Abundant; F=Frequent; O= Occasional; R= Rare

Dam:

A structure holding back water. It may be designed to control the flow and release of water.

Designated Trades Positions:

Designated trades are occupations that have formal apprenticeship programs that provide supervised training leading to certification as a fully-qualified Journeyman in the trade. Apprenticeships in the designated trades typically entail four or more years of in-class technical training and on-the-job work experience. Carpenters and electricians are examples of occupations in the designated trades.

Development Plans¹:

Development Plans (and their implementing zoning by-laws, along with building by-laws) provide the basic land development rules by which municipalities, developers and the public operate. Development plans are adopted as by-laws by municipalities and planning districts under *The Planning Act* in all of Manitoba except the City of Winnipeg. The City of Winnipeg's development plan (*Plan Winnipeg*) is adopted under *The City of Winnipeg Charter*. The provincial government must approve all Development Plans. All 16 municipalities in the Capital Region, including the City of Winnipeg, have development plans in place. Under current legislation, all development plans are subject to review every five years. Local authorities also amend their development plans from time to time, and all such amendments also require provincial approval.

Dewatering:

Removal of groundwater by pumping to reduce the pressure or flow rate.

Diversity:

Related to the number of different species or different features in a given location.

Drawdown:

Lowering of groundwater elevation or potentiometric surface as a result of removal of groundwater by pumping.

Dyke:

An embankment, usually constructed to prevent flooding of low lying areas and thus limit the extent of flooding.

East Dyke:

Dyke located to the east of the Floodway Inlet Control Structure, extending to PTH 59S Bridge. This is an upstream extension of the Floodway West Embankment, but differs in that the East Dyke was compacted at construction to serve as a water retaining structure.

East Embankment of the Floodway:

Spoil embankment located on the right (looking downstream) (east) side ("rural side") of the Floodway.

Ecodistrict:

Integrated map units characterized by relatively homogeneous physical landscape and climatic conditions. Subdivisions of an ecoregion.

Ecoregion:

An integrated map unit characterized by a unique combination of landscape physiography and ecoclimate. Subdivisions of an ecozone.

Ecosystem:

A functional unit consisting of all living organisms (plants, animals, microbes, etc.) in a given area, and all non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow. An ecosystem can be any size (e.g., a log, pond, forest) but always functions as a whole unit.

Ecozone:

Areas of the earth's surface representative of very generalized ecological units that consist of a distinctive assemblage of physical and biological characteristics.

Embankment Crest:

Semi-horizontal surface of the embankment (East and West).

Employment Rate:

The proportion of individuals in the active labour force that have a job. This includes all persons working for wages or salaries, all self-employed persons (with or without paid help) working in their own business, farm or professional practice, and all persons working without pay on a family farm or business during the reference week.

Endangered:

As defined by COSEWIC: a species facing imminent extirpation or extinction.

Environmental Impact Assessment (EIA):

An assessment by the provincial and/or federal governments of the effect that a project will have on the environment.

Environmental Impact Statement (EIS):

Under provincial and federal environmental laws, an EIS is a document that has to be produced by anyone who wants a license to build a major project that might affect the environment. An EIS has to provide detailed information about what effects, positive and negative, a proposed project would have on the environment and people.

Environmental Impact Statement (EIS) Guidelines:

EIS Guidelines are the February 5, 2004 Guidelines for the Preparation of an Environmental Impact Statement for the Red River Floodway Expansion Project issued by Manitoba Conservation. Draft Guidelines prepared by federal/provincial officials were made available in August 2003 and comments were invited until October 2003.

Environmental Protection Plan (EPP):

A 'user-friendly' guide for the contractor that includes: information such as a brief project description; updated construction schedule; summary identifying environmental sensitivities and mitigative actions; listing of all federal, provincial or municipal approvals, licenses, or permits that are required for the project; a description of general corporate practices and specific mitigating actions for the various construction activities; emergency response plans, training and information; and environmental/engineering monitoring plans and reporting protocols.

Ephemeral:

Short-term or temporary. Often refers to the extent in which water remains in a wetland.

Erosion:

Physical and chemical breaking down and transportation of geologic material.

Existing Floodway:

Existing channel constructed in mid-1960s.

Expanded Floodway:

Proposed Floodway configuration required to pass a 1 in 700 year flood.

Extinction:

Becoming extinct; the loss of a species throughout its entire range.

Extirpation:

Becoming extirpated; the loss of a species (native to Manitoba) from its Manitoba range. Extirpated species may still be found elsewhere in its range, or in captivity.

Flood Study Region:

The Flood Study Region includes all or portions of the Rural Municipalities of Morris, Da Salaberry, Hanover, Macdonald, Ritchot, Taché, Springfield, East St. Paul, West St. Paul, St. Clements and St. Andrews, and the City of Winnipeg, City of Selkirk, Town of Morris, Town of Niverville, Village of St. Pierre-Jolys, Brokenhead Ojibway Nation and Peguis First Nation.

Floodway Bench:

Semi-horizontal setback from the toe of the spoil embankment to the top of the Floodway Channel side slope.

Floodway Channel Side-Slopes:

Side-slopes of the Floodway Channel that range from 1v:3h to 1v:9h.

Floodway Entrance Weir:

Floodway channel crest at the Red River that was constructed as a raised clay invert to minimize the unnecessary usage of the Floodway, and to prevent river ice from entering the Floodway Channel.

Floodway Inlet Control Gates:

Hydraulic Gates in Floodway Inlet Control Structure.

Floodway Inlet Control Structure:

Concrete structure in the Red River downstream of the entrance to the Floodway Channel that houses two hydraulic gates that raise the water level in the river to facilitate diversion of excess floodwaters into the Floodway.

Floodway Outlet Structure:

Drop structure at the north end of the Floodway that dissipates excess energy of flood flow as it returns to the Red River downstream of Lockport.

Floodway Right-of-Way:

Existing land owned by the province that contains the Floodway and adjacent property.

Flow:

Motion characteristic of fluids (liquids or gases); any uninterrupted stream or discharge.

Footprint:

The surface area occupied by a structure or activity.

Foraging:

The act of locating, capturing and eating prey.

Freeboard:

The vertical distance between the normal maximum level of the water surface and the top of the sides of a dyke, dam, etc., which is provided so that waves and other movements of the water will not overtop the confining structure.

Future Projects:

Projects and activities included in a cumulative effects assessment for a proposed development. Future Projects have effects that overlap with those of the proposed development. Only projects and activities that are likely to proceed in the foreseeable future are considered to be future projects. Typically, these include projects and activities that have been approved, have been officially announced by the proponent, are in a government approvals process, or are directly associated with the Project. Uncertain or hypothetical projects are not usually included.

Groundwater:

The portion of sub-surface water that is below the water table, in the zone of saturation.

Grouting:

Injection of liquid cement or chemicals into the ground where they set and reduce permeability thus impeding the flow of water.

Grubbing:

To clear of vegetation, roots and stumps by digging.

Habitat:

The place where a plant or animal lives; often related to a function such as breeding, feeding, etc.

Hectare (ha):

A metric unit of square measure equal to 10,000 square metres or 2.471 acres.

Hydraulic barrier:

Pumping groundwater into an aquifer to prevent groundwater flow.

Ice jamming:

Melting ice becomes trapped in narrow reaches of the river resulting in flooding upstream.

Infrastructure:

The basic features needed for the operation or construction of a system or community (e.g. roads, utilities etc.).

Inundated:

Covered with water, especially floodwaters.

Invertebrate:

An organism, such as an insect or mollusk, lacking vertebrae.

Labour Force Participation:

Individuals in the potential labour force who are working or actively looking for work.

Loafing:

To spend time in idleness; to lounge or loiter about.

Low Flow Channel:

Central locally deepened section located at or near the centre of the Floodway Channel.

Manitoba Floodway Expansion Authority (MFEA):

Authority established by the Government of Manitoba with the responsibility to carry out the planning, construction and maintenance of the Red River Floodway Expansion.

Manitoba Transportation and Government Services:

A provincial department responsible for the provincial transportation system and services, and support services to other government departments and agencies.

Manitoba Protected Area Initiative:

A government program dedicated to building a network of protected areas that contains the tremendous biological diversity found in Manitoba's varied landscapes.

Mitigation:

Measures taken during the planning, design, construction and operation of works to reduce or avoid potential adverse effects.

Monitoring:

Any on-going process or program for measuring the actual effects of constructing or operating a development.

Municipalities¹:

There are currently 199 incorporated municipalities in Manitoba. They include Cities, Towns, Villages, Rural Municipalities and Local Government Districts. The operation rules for municipalities are primarily contained in The Municipal Act except for the City of Winnipeg, which is governed under The City of Winnipeg Charter. There are four types of municipality in the Flood Study Region: Cities (of which there are two, Selkirk and Winnipeg), Towns (of which there are two, Morris and Niverville), Villages (of which there is one, St. Pierre-Jolys) and Rural Municipalities (of which there are 11). The generic term municipality is often used to include any of these types of local jurisdictions.

Noxious vegetation:

Plants that are harmful to the existence of other plants; invasive weeds are considered noxious.

Overburden:

The soil (including organic material) or loose material that overlies bedrock.

Participant Assistance Program:

The Participant Assistance Program for the Floodway Expansion Project was announced by the Minister of Conservation in the Fall of 2003. The Program will provide financial assistance to groups or individuals participating in the environmental hearing process for the Project. Further details about the Program are available on the Manitoba Conservation Web site at: <http://www.gov.mb.ca/conservation>.

Passerine:

Any bird of the order Passeriformes, having feet with three toes pointing forward and one toe pointing backwards and includes warblers, sparrows and other songbirds.

Person-years:

A measure of the amount of work that could be available during a specific time period or for a specific type of work. One person-year approximates the amount of work that one worker could complete during twelve months of fulltime employment.

Piezometric level:

The level to which water in a confined aquifer rises in observation boreholes.

Point count stops:

A method used to conduct bird surveys whereby the observer stands in one spot and counts/records all birds seen or heard during a set period of time (e.g., three minutes).

Potamogetons:

A large genus of aquatic herbs found in quiet waters in temperate regions; leaves usually float on the water.

Project Administration Team (PAT):

Set up to oversee the joint federal and provincial review of the Floodway Expansion Project. The PAT is made up of senior representatives from the Canadian Environmental Assessment Agency and the Manitoba Department of Conservation that have an environmental assessment responsibility with respect to the Project.

Project Definition and Environmental Assessment:

Current phase of preliminary engineering.

Propagules:

Any of various vegetative portions of a plant such as a bud or other offshoot, that aid in the dispersal of the species and from which a new individual may develop.

Public Consultation and Involvement Program (PIP):

A plan developed by MFEA and the EA Study Team in response to Section 4 of the EIS Guidelines for the Floodway Expansion EIA. The PIP describes public consultation and involvement activities being carried out in 2004. It was provided to federal and provincial regulators in June 2004 (See Appendix 3A for a copy of the PIP Plan).

Raptor:

Any bird of prey (for this study, includes eagles, hawks, falcons, owls and osprey).

Rare:

Infrequently occurring in Manitoba; uncommon.

Reconnaissance:

An examination or survey of a region in reference to its general geological character (e.g., wildlife occurrence in Project area).

Red River Floodway or "Floodway":

Flood diversion channel that extends 46 km around the east side of Winnipeg to convey floodwaters.

Regulatory:

Pertaining to requirements.

Reptile:

Any of various cold-blooded, usually egg-laying vertebrates of the class Reptilia, such as a snake, lizard, crocodile, turtle, or dinosaur, having an external covering of scales or horny plates and breathing by means of lungs.

Reserve Land

Land that has been set aside by the federal government for the use and occupancy of a specific First Nation.

Residual Effects:

Effects of a project that are expected to remain after mitigation measures have been implemented.

Right-of-Way (RoW)

Area of land cleared and maintained to accommodate a structure such as a road or the Floodway Channel.

Riparian:

Along the banks of rivers and streams.

Riprap:

A layer of large stones, broken rock, boulders, or other suitable material generally placed in random fashion on the upstream and downstream faces of embankments, or other land surfaces to protect them from erosion or scour caused by current, waves, and/or ice action.

Runnel:

A narrow channel or course, as for water.

Saline Freshwater mixing zone:

Boundary between saline aquifer and freshwater aquifer.

Scat:

Animal droppings (feces).

Sedimentation:

Deposition of suspended solids in surface water.

Seed rain:

The deposition of seeds onto soil from surrounding plant communities.

Seine River Inverted Syphon:

Pipe that passes under the Floodway and conveys the riparian requirements of flow to the Seine River through Winnipeg.

Semi-aquatic plants:

Adapted for living or growing in or near water; not entirely aquatic.

Shoreline:

The narrow strip of land in immediate contact with the sea, lake or river.

Shorebird:

Any bird that frequents the shoreline between the ocean or large lakes and the land, particularly a bird of the suborder Charadrii, such as sandpipers, plovers or snipe.

Significance:

1) Significant negative impacts are those effects that are predicted to cause unacceptable environmental change and, therefore, require efforts to avoid, minimize, and/or remediate those effects; (e.g., long-term measurable reductions in population size and viability); 2) Significant positive impacts are those effects that would cause a beneficial environmental change that is measurable or obvious.

Socio-Economic Impact Assessment (SEIA):

A socio-economic impact assessment (SEIA) provides detailed information on what effects, both positive and negative, a proposed project may have on people, their lifestyles and their communities. An SEIA also provides ways to address effects that are likely to be adverse, from the point of view of an affected population, and to enhance those effects perceived to be positive. An SEIA is often part of the environmental impact assessment (EIA) for a proposed project.

Species:

A group of inter-breeding organisms that can produce fertile offspring.

Species at risk:

Plants or animals that are in danger of extinction or extirpation throughout all or a portion of their range.

Staging:

Resting and gathering of waterfowl such as geese and ducks on a water body prior to, or during fall migration.

State-of-Nature:

The water level that would be expected to occur in the absence of flood control works but with the level of urban development in place at the time i.e of the construction of these works. (i.e. conditions in Winnipeg about 1950).

Technical Advisory Committee (TAC):

Developed to review and provide advice on the Floodway Expansion Project to the Provincial Administration Team (PAT). The TAC is made up of representatives from federal and provincial departments that have an interest in the Project.

Terrestrial:

Living on or in the ground, or related to the ground.

Thatch:

Dead plant material covering soil.

Threatened species:

As defined by COSEWIC, a species likely to become endangered if limiting factors are not reversed.

Total suspended solids:

The material residue that is left in a sample of water after it is evaporated that does not pass through a filter.

Transect:

A long, continuous sample area.

Transmission line(s):

A structure consisting of a series of towers and wires used to carry electrical power, generally at high voltage.

Treaty Land Entitlement (TLE):

Refers to land owed to certain First Nations under the terms of the Treaties signed by the First Nations and Canada between 1871 and 1910. Each Treaty provided that Canada would provide reserve land to First Nations based on population size; however, not all First Nations received their full allocation of land. In 1997, the Manitoba Treaty Land Entitlement Agreement was signed by the TLE Committee of Manitoba

Inc. (representing 20 First Nations), Canada and Manitoba. This Framework Agreement is intended to fulfill Canada's outstanding debt of lands owed to the 20 TLE Committee member First Nations.

Unconfined Aquifer:

An aquifer that is not overlain by low-permeability materials. Recharge may permeate directly into this type of aquifer.

Understory:

An underlying layer of vegetation, especially the plants that grow beneath a forest's canopy.

Unemployment Rate:

The proportion of individuals in the active labour force that do not have a job. The classification of unemployed does not account for the underemployed, or those individuals working part time but desiring a full time position. As well, the classification does not include discouraged workers: those individuals who wish to work but have ceased looking because they do not believe they will find a job.

Vascular Plants:

Refers to plants with a vascular system as opposed to plants, such as algae, mosses, and liverworts, that lack a vascular system.

Waterbird:

A bird commonly associated with water, e.g., waterfowl, terns and gulls.

Waterfowl:

Ducks, geese and swans (game birds that frequent water).

Water level elevations:

The elevation of surface water levels in units of metres above sea level or feet above sea level.

Water regime:

A description of water body (i.e., lake or river) with respect to elevation, flow rate, velocity, daily fluctuations, seasonal variations, etc.

West Dyke:

Dyke that ties into high ground at the west side of the Red River Valley to prevent floodwaters from entering Winnipeg from the west around the Floodway Inlet Control Structure.

West Embankment of the (Existing) Floodway:

Spoil embankment located on the left (looking downstream) (west or north) side of the Floodway ("city side"), extending from the PTH 59S Bridge downstream to the Outlet (with gaps at various locations).

Wildlife habitat:

Any area providing food, shelter, cover, air and space, or any one of the aforementioned, to wildlife such as mammals, birds, reptiles, amphibians and/or invertebrates.

Wildlife Management Area (WMA):

The designation of Crown lands as wildlife Management Areas (WMA's) for the better management, conservation and enhancement of the wildlife resource in Manitoba.

12.2 LIST OF ACRONYMS

| | |
|-----------------|--|
| ASI: | Area of Special Interest |
| ASL: | Above Sea Level |
| C: | Celsius |
| CC: | Cutting Class |
| CCME: | Canadian Council of Ministers of the Environment |
| CDC: | Manitoba Conservation Data Centre |
| CEA: | Cumulative Effects Assessment |
| CEAA: | Canadian Environmental Assessment Agency |
| COSEWIC: | Committee on the Status of Endangered Wildlife in Canada |
| CWQI: | Canadian Water Quality Index |
| DO: | Dissolved Oxygen |
| EA: | Environmental Assessment |
| EAPF: | Environmental Act Proposal Form |
| EIA: | Environmental Impact Assessment |
| EIS: | Environmental Impact Statement |
| EMT: | Environmental Management Team |
| EPP: | Environmental Protection Plan |
| FEARO: | Federal Environmental Assessment Review Office |
| GHG: | greenhouse gas |
| GIS: | Geographic Information System |
| Ha: | hectares |
| IJC: | International Joint Commission |
| Km: | kilometres |
| LOEL: | Lowest Effect Level |
| m: | metres |
| MESA: | Manitoba Endangered Species Act |
| MFEA: | Manitoba Floodway Expansion Authority |
| MPA: | Master Project Agreement |
| MSQG: | Manitoba Sediment Quality Guideline |
| MWQSOG: | Manitoba Water Quality Standards, Objectives, and Guidelines |
| NTU: | Nephelometric Turbidity Units |
| OMOE: | Ontario Ministry of the Environment |
| PAH: | polynuclear aromatic hydrocarbons |
| PAT: | Project Administration Team |
| PEL: | Probable Effects Level |
| PIP: | Public Involvement Plan |
| RHA: | Regional Health Authority |
| RMs: | Rural Municipality(ies) |

| | |
|--------------|----------------------------------|
| RoW: | Right-of-Way |
| SARA: | Species at Risk Act |
| SEIA: | Socio-Economic Impact Assessment |
| SEL: | Severe Effects Level |
| TAC: | Technical Advisory Committee |
| TDS: | total dissolved solids |
| TK: | Traditional Knowledge |
| TKN: | total Kjeldahl nitrogen |
| TLE: | Treaty Land Entitlement |
| TN: | total nitrogen |
| TSS: | total suspended solids |
| WQ: | water quality |
| WQI: | Water Quality Index |

Note:

1. Definitions for Capital Region, Development Plan and Municipalities taken from: Regional Planning Advisory Committee. 2003. A Partnership for the Future: Putting the Pieces Together in the Manitoba Capital Region.