

Environment Act Licence

Loi sur l'environnement Licence

Manitoba
Conservation
Conservation
Manitoba



Licence No./Licence n° 2691
Issue Date/Date de délivrance July 8, 2005

IN ACCORDANCE WITH THE MANITOBA ENVIRONMENT ACT (C.C.S.M. c. E125)
THIS LICENCE IS ISSUED PURSUANT TO SECTION 12(1) TO:

THE MANITOBA DEPARTMENT OF WATER STEWARDSHIP (“the Department”) AND THE MANITOBA FLOODWAY AUTHORITY (“the Authority”); “the Licencees”

for the construction, maintenance and operation of the Development being the Red River Floodway, as described in Clause 1 of this Licence, in accordance with the Proposal filed under The Environment Act dated July 28, 2003, the Environmental Impact Statement dated August, 2004, Supplementary Information dated November, 2004, and the Manitoba Clean Environment Commission June, 2005 Report on Public Hearing, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

“approved” means approved by the Director in writing;

“artificial flooding” means water levels on the Red River that exceed water levels that would occur on the river without the presence of the Development and other associated flood control and City of Winnipeg infrastructure works, and occur:

- a) during spring operation of the Development, as defined in The Red River Floodway Act; and
- b) during non spring operation of the Development pursuant to Rule 4 of the Development’s rules of operation;

“as constructed plans” means engineering drawings complete with all dimensions which indicate all features of the Development as it has actually been built;

“Director” means an employee so designated pursuant to The Environment Act;

****A COPY OF THE LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES****

“Environmental Impact Statement” (“EIS”) means the document submitted by the Manitoba Floodway Authority respecting the Development dated August, 2004;

“Environmental Management Plan” (“EMP”) means a framework plan describing the integration of environmental mitigation and monitoring measures during all phases of the Development, including construction, inactive operation and active operation;

“Environmental Protection Plan” (“EPP”) means a detailed plan that includes but is not limited to a description of environmental sensitivities and mitigative actions related to project activities.

“Fuel storage area” means an area where bulk fuel is stored in above ground or underground petroleum storage tanks, and does not include fuel stored in tank trucks or portable tanks;

“Hearing” means the public hearing conducted by the Clean Environment Commission pursuant to the Development between February 14, 2005 and March 10, 2005;

“Joint clause” means a clause of this Licence that applies jointly to the Authority and the Department; and

“Minister” means the member of the Executive Council charged by the Lieutenant Governor in Council with the administration of The Environment Act.

SCOPE OF PROJECT

1. The Development includes but is not limited to the following components:
 - a) Red River Floodway Channel, having an expanded capacity of 3,964 m³/s (140,000 cfs);
 - b) Inlet Control Structure, on the Red River near St. Norbert;
 - c) Outlet Structure, on the Red River Floodway Channel near Lockport;
 - d) West Dyke, extending from the Inlet Control Structure south and west;
 - e) Six highway bridge crossings on the Red River Floodway Channel, including St. Mary’s Road, PTH 59 South, Trans Canada Highway, PTH 15, PTH 59 North and PTH 44;
 - f) Six railway bridges crossing the Red River Floodway Channel, including CNR Emerson, CNR Sprague, Greater Winnipeg Water District, CNR Redditt, CPR Keewatin and CEMR Pine Falls;
 - g) Appurtenant structures, including all drainage outlet drop structures, the Seine River Syphon Structure, Seine River Grande Pointe Diversion Outlet Structure, drainage structures through the West Dyke, and utility crossings, including electrical transmission towers, gas pipeline crossings and water utility crossings serving the City of Winnipeg and the Rural Municipality of East St. Paul.

Major components of the Development are shown in Figure 1 attached to this Licence.

2. For all components of the Development described in Clause 1 of this Licence, the Authority and its successors shall be responsible for construction and maintenance activities, and the Department shall be responsible for operational activities.

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencees in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

3. In addition to any of the following specifications, limits, terms and conditions specified in this Licence, the Licencees shall, upon the request of the Director:
 - a) sample, monitor, analyze or investigate specific areas of concern regarding any segment, component or aspect the Development, including but not limited to water levels, water flows, water quality, pollutants, and socioeconomic effects related to the environmental effects of the Development, for such duration and at such frequencies as may be specified; and
 - b) provide the Director, within such time as may be specified, with such reports, drawings, specifications, data, analysis, descriptions of sampling and analytical procedures being used, and such other information as may from time to time be requested.
4. The Licencees shall submit all information required to be provided to the Director under this Licence, in writing, in such form (including number of copies) and of such content as may be required by the Director.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Construction and Maintenance:

5. The Authority shall, not less than two weeks prior to beginning construction of each component of the Development, provide notification to the Environment Officer responsible for the administration of this Licence of the intended starting date of construction and the name of the contractor(s) responsible for the construction.

6. The Authority shall collect and dispose of all used oil products and other regulated hazardous wastes generated by the machinery used in the construction and maintenance of the Development in accordance with applicable legislative and policy requirements of Manitoba Conservation.
7. The Authority shall establish any fuel storage areas required for the construction and maintenance of the Development:
 - a) a minimum distance of 100 metres from any waterbody; and
 - b) in compliance with the requirements of *Manitoba Regulation 188/2001*, or any future amendment thereof, respecting *Storage and Handling of Petroleum Products and Allied Products*.
8. The Authority shall, during construction and maintenance of the Development, immediately report fuel spills in excess of 100 litres to Manitoba Conservation's Emergency Response line at (204) 944-4888.
9. The Authority shall dispose of construction debris from the Development at a waste disposal ground operating under the authority of a permit issued pursuant to *Manitoba Regulation 150/91* respecting *Waste Disposal Grounds*, or any future amendment thereof, or a Licence issued pursuant to The Environment Act.
10. The Authority shall design, construct and maintain the Development to minimize additional groundwater leakage into the channel of the Development resulting from the expansion of the channel. Groundwater leakage before, during and after construction of the Development shall be monitored and reported to the Director in accordance with the requirements of Clause 25 of this Licence. Appropriate remedial action measures to address excessive groundwater leakage shall be identified and set out in a report to the Director in accordance with Clause 3 of this Licence, and approved remedial action shall be taken in accordance with the Director's instructions.
11. The Authority shall, within six months of the completion of construction of the Development, provide to the Director copies of as constructed plans for all components of the Development. Three paper copies and 12 electronic copies of the plans on compact disks shall be provided.

Respecting Operation:

12. The Department shall operate the Development in accordance with the rules of operation in Attachment 1 of this Licence.

13. The Department shall vary the rules of operation in Attachment 1 of this Licence only :
 - a) by filing a notice of alteration pursuant to Section 14 of The Environment Act;
or
 - b) under emergency conditions in accordance with the provisions of The Water Resources Administration Act.
14. Following a variation in the rules of operation due to emergency conditions, the Department shall, within one month of the variation, submit a report to the Director describing the reason for the variation and its impacts on the environment, including all affected water levels. In the event that a second occurrence of a variation occurs at any time as a result of similar emergency conditions, the Department shall file a proposal for an alteration in the rules of operation in accordance with Section 12 of The Environment Act. This proposal shall be filed within two months of the date of the second variation.
15. The Department shall conduct a public review of the rules of operation of the Development not less than once every five years, commencing with the date of this Licence. A report detailing the process to be followed in this review shall be provided to the Director for approval within one year of the date of this Licence.
16. The Department shall, during flood events causing artificial flooding, supply, deliver and remove sandbags on behalf of affected municipalities to residents, farmsteads and business structures likely to be affected by artificial flooding. These activities shall be undertaken at no cost to the affected municipalities.
17. The Department shall, each year in which a probable event of artificial flooding occurs during spring operation of the Development, commission an independent third party review of the report prepared by the Department pursuant to the Red River Floodway Act subsequent to every operation of the Development. The independent review of the report shall be completed and provided to the Director within one month of the completion of the Department's report.
18. The Department shall employ qualified staff for the operation of the Development. This shall include primary and backup staff for all forecasting and operating positions. A report listing staff members and their qualifications shall be provided to the Director by March 31 of each year.

Respecting an Environmental Management Plan and Environmental Protection Plans:

19. The Licensees shall provide, for the approval of the Director, within six months of the date of this Licence, an Environmental Management Plan (EMP) for the construction, maintenance and operation of the Development. The EMP shall include a discussion of plans for environmental inspections, monitoring and

follow-up, plans for reporting, relevant references and a description of public input into its development.

20. The Licencees shall provide, for the approval of the Director, a set of subject specific Environmental Protection Plans (EPPs) for all project phases addressing subjects including but not necessarily limited to:
- a) water quality and quantity protection;
 - b) sediment and erosion control;
 - c) fish and fish habitat;
 - d) the physical environment, including climate, air quality, noise, soils, vegetation, wildlife and wildlife habitat, and species at risk;
 - e) transportation infrastructure and utilities;
 - f) health;
 - g) heritage resources; and
 - h) accidents and malfunctions.

These EPPs shall normally be approved by the Director prior to construction on any component of the Development listed in Clause 1 of this Licence that involves the above listed subjects. For construction in 2005 only, the Director may approve site specific Construction Phase Environmental Protection Plans (CPEPPs) prior to the completion of the EPPs, provided that the CPEPPs address all relevant subject areas. Three paper copies and 12 electronic copies of the EPPs on compact disks shall be provided to the Director.

21. The Authority shall develop Construction Phase Environmental Protection Plans (CPEPPs) for each construction contract of the Development. The CPEPPs shall be based on the EPPs and shall provide specific direction to project managers and contractors respecting all aspects of environmental protection applicable to each contract site. Two copies of each CPEPP shall be provided to the Director at the time of tendering each contract. CPEPPs prepared in 2005 prior to the completion of the EPPs require the approval of the Director prior to the commencement of construction on each contract.
22. The Department shall, within two years of the date of this Licence, develop an Operation Phase Environmental Protection Plan (OPEPP) for all operating scenarios of the Development. The OPEPP shall be based on the EPPs and shall provide specific direction to operators of the Development respecting all aspects of environmental protection applicable to operation of the Development. Three paper copies and 12 electronic copies of the OPEPP on compact disks shall be provided to the Director.
23. The Licencees shall not include activities in the EPPs that are incompatible with any Manitoba groundwater quality protection policies.
24. The Licencees shall not use untreated surface water to create a hydraulic barrier to groundwater movement in an aquifer.

Respecting Monitoring and Follow-up:

25. The Licencees shall develop and implement a comprehensive groundwater monitoring program for all phases of the Development. The program shall consider baseline information obtained before the initiation of construction of the Development. A report summarizing groundwater monitoring plans shall be provided within six months of the date of this Licence to the Director for approval. The report shall describe the locations, parameters, frequency and duration of monitoring, and the public and technical input leading to the selection of these aspects of the plans.
26. The Licencees shall include groundwater in the vicinity of the Inlet Control Structure of the Development in the monitoring program required by Clause 25 of this Licence.
27. The Licencees shall provide, by March 31 of each year, a report to the Director on all water quality monitoring undertaken in connection with the Development during the previous calendar year. Copies of the report shall be provided to interested municipalities and members of the public, and placed and maintained on the Licencees' respective websites.
28. The Licencees shall undertake a monitoring plan for the Inlet Control Structure and the embankments of the Development in accordance with the most recent guidelines of the Canadian Dam Association. Reports prepared pursuant to this monitoring plan shall be provided to the Director, the public liaison committee discussed in Clause 34 of this Licence, and placed and maintained on the Licencees' respective websites.
29. The Licencees shall undertake a riverbank monitoring program for the Development in accordance with proposals in the Environmental Impact Statement and at the Hearing. Reports prepared pursuant to the monitoring program shall be provided to the Director, and placed and maintained on the Licencees' respective websites.

Respecting Further Studies:

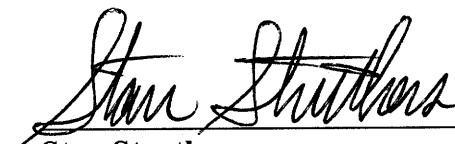
30. The Licencees shall undertake a comprehensive baseline study of groundwater quality and quantity along the full length of the channel of the Development. A report on this study shall be provided to the Director, and placed and maintained on the Licencees' respective websites.
31. The Licencees shall, within two years of the date of this Licence, provide to the Director a health risk assessment with respect to groundwater contamination for the Development. This assessment shall be placed and maintained on the Licencees' respective websites.

32. The Licencees shall, within six months of the date of this Licence, provide to the Director for approval a proposal for the adjudication of claims regarding groundwater issues related to the Development.
33. The Licencees shall, within six months of the date of this Licence, provide to the Director for approval a proposal for a peer review team to undertake hydrogeological reviews of:
 - a) baseline groundwater information, modeling and data and analysis gaps in connection with the Development;
 - b) all groundwater monitoring programs proposed in connection with all phases of the Development;
 - c) the health risk assessment with respect to groundwater contamination discussed in Clause 31 of this Licence;
 - d) measures to prevent increased groundwater loss into the channel of the Development discussed in Clause 10 of this Licence; and
 - e) all groundwater mitigation measures in connection with the Development, as discussed in Clauses 19, 20, 21 and 22 of this Licence, including measures to prevent contamination of the Birds Hill and Carbonate aquifers.
34. The Licencees shall, within four months of the date of this Licence, provide to the Director for approval a proposal to establish a public liaison committee for all phases of the Development. The proposal shall address terms of reference, membership, and administration.
35. The Authority shall, within six months of the date of this Licence, provide to the Director for approval a geotechnical assessment of the foundation conditions of the Inlet Control Structure of the Development.
36. The Authority shall, within one year of the date of this Licence, provide to the Director for approval an assessment of the potential for the jamming of the gates of the Inlet Control Structure. The assessment shall be undertaken based on the geotechnical assessment required in Clause 35 of this Licence.
37. The Authority shall, within six months of the date of this Licence, provide to the Director a report on its response to the report "Summary of Observations and Advice by a Panel of External Experts" concerning a workshop on issues involving the Inlet Control Structure and West Dyke convened on October 13 – 14, 2004. The report shall describe the status of implementation of the observations and advice of the experts' report, and shall be placed and maintained on the Authority's website.
38. The Authority shall, within one year of the date of this Licence, provide to the Director a report on the status of implementation of the dam safety provisions of the report contained in Appendix C of the Preliminary Engineering Report for the Development. The report shall be placed and maintained on the Authority's website.

39. The Authority shall, within one year of the date of this Licence, provide to the Director a Project Dam Safety Review for the Development prepared in accordance with the most recent guidelines of the Canadian Dam Association. The review shall be placed and maintained on the Authority's website.
40. The Authority shall undertake repairs and upgrades identified in the review required by Clause 39 of this Licence. A report on these repairs and upgrades shall be provided by March 31 of each year for the previous calendar year to the Director, and placed and maintained on the Authority's website.
41. The Department shall, within one year of the date of this Licence, provide a report to the Director respecting compensation for individuals, businesses and organizations affected by artificial flooding due to operation of the Development pursuant to Rule 4 of the rules of operation of the Development. The report shall describe in detail the implementation and administration of the chosen method of compensation. This report shall be placed and maintained on the Department's website.
42. The Licencees shall, not less than five years after the date of this Licence and not less than every five years thereafter, review all clauses of this Licence directed at the Licencees jointly, and identify whether either the Authority or the Department should be separately responsible for any particular joint clause. A report on this review shall be provided to the Director within one month of its completion.

REVIEW AND REVOCATION

- A. If, in the opinion of the Minister, the Licencees have exceeded or are exceeding or have or are failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Minister may, temporarily or permanently, revoke this Licence.
- B. If construction of the development has not commenced within three years of the date of this Licence, the Licence is revoked.
- C. If, in the opinion of the Minister, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Minister may require the filing of a new proposal pursuant to Section 12 of The Environment Act.


Stan Struthers
Minister
Environment Act

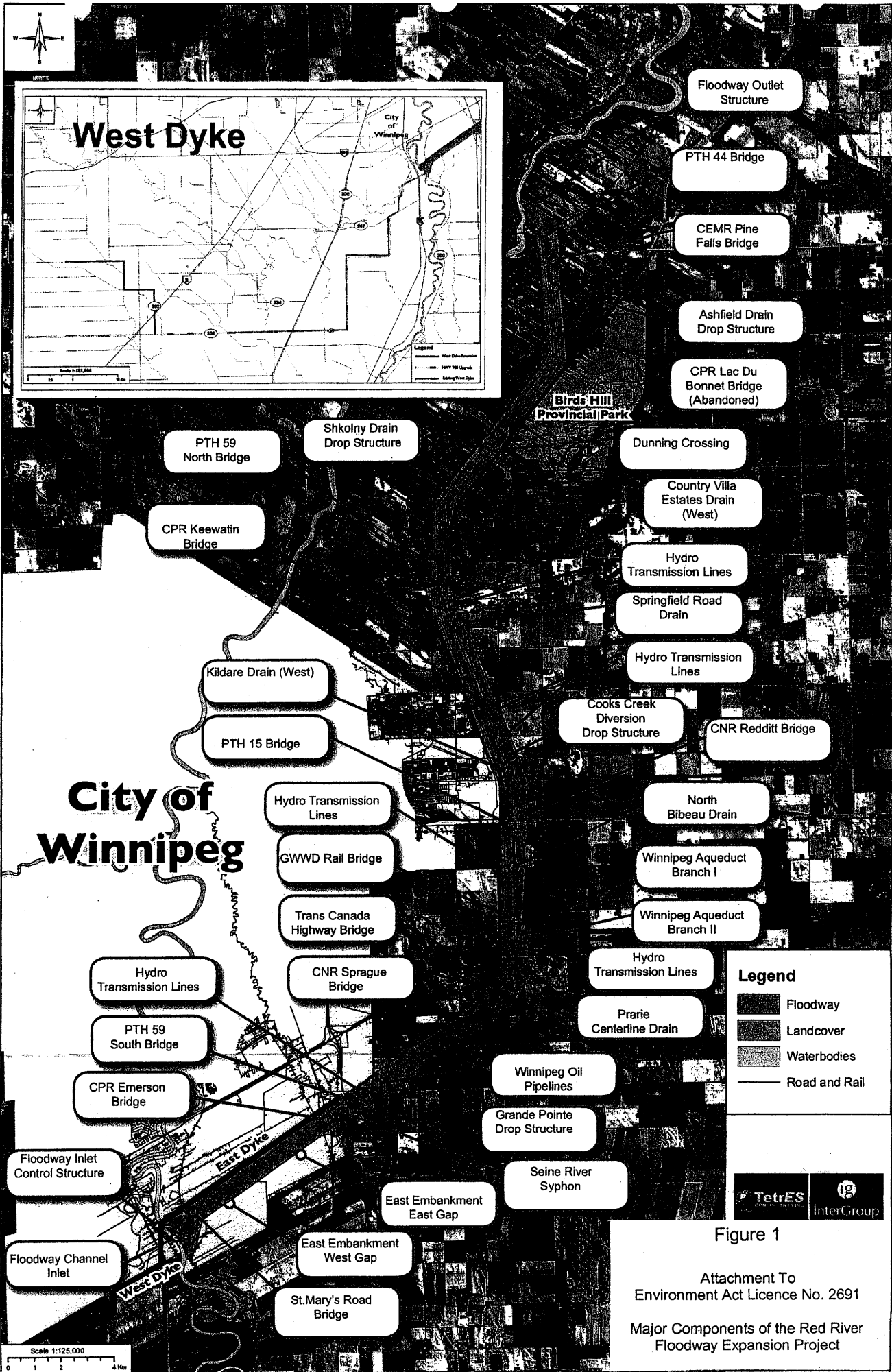


Figure 1

Attachment To
 Environment Act Licence No. 2691
 Major Components of the Red River
 Floodway Expansion Project

Attachment 1
To Environment Act Licence No. 2691

Rules of Operation – Red River Floodway Control Structure

Source: Red River Floodway Operation Report Spring 2005, Manitoba Water Stewardship, June, 2005.

Rule 1 - Normal Operation:

Maintain “natural”¹ water levels on the Red River at the entrance to the Floodway channel, until the water surface elevation at James Avenue reaches 24.5 feet (7.46 metres), or the river level anywhere along the Red River within the City of Winnipeg reaches two feet below the Flood Protection Level of 27.83 feet (8.48 m).

Rule 2 - Major Flood Operation:

Once the river levels within Winnipeg reach the limits described in Rule 1, the level in Winnipeg should be held constant while levels south of the Control Structure continue to rise. Furthermore if forecasts indicate that levels at the entrance to the Floodway channel will rise more than two feet (0.6 metres) above natural, the City of Winnipeg must proceed with emergency raising of the dikes and temporary protection measures on the sewer systems in accordance with the flood level forecasts within Winnipeg. The levels in Winnipeg should be permitted to rise as construction proceeds, but not so as to encroach on the freeboard of the dikes or compromise the emergency measures undertaken for protecting the sewer systems. At the same time the Province should consider the possibility of an emergency increase in the height of the Floodway embankments and the West Dike. At no time will the water level at the Floodway channel's entrance be allowed to rise to a level that infringes on the allowable freeboard on the Floodway west embankment (Winnipeg side) and the West Dike.

Rule 3 - Extreme Flood Operation:

For extreme floods, where the water level at the Floodway channel's entrance reaches the maximum level that can be held by the Floodway west embankment and the West Dike, the river level must not be permitted to exceed that level. All additional flows must be passed through Winnipeg.

Initial Gate Operation with Ice:

The Floodway gates should not be operated until ice on the river is flowing freely, unless flooding in Winnipeg is imminent.

Final drop of Gates:

To minimize bank slumping along the river in Winnipeg and at the same time reduce the probability of sewer backup problems, final gate operations, once the level at the entrance to the Floodway Channel recedes to elevation 752 feet (229 metres), shall be carried out in consultation with the City of Winnipeg.

Operation of Horn:

The horn at the Floodway Structure shall only be operated once, before the first gate operation of the year. The horn should be sounded a half-hour before the first gate operation to alert residents that the Floodway Structure is being put into operation. For

¹ The term “natural” refers to the level that would have occurred in the absence of the flood control works, with the level of urban development in place at the time of the construction of these works.

ongoing information a 1-800 number should be established that would provide current information of gate operations, potential impacts on water levels, and forecasts for the next few days. The information should also be included on the existing Water Stewardship internet site.

Rule 4 - Emergency Operation to Reduce Sewer Backup in Winnipeg

4(1) This rule defines the circumstances under which the Minister of Water Stewardship ("the Minister") may determine that emergency operation of the Floodway is necessary to prevent widespread basement flooding and resulting risk to health and damage to property within the City of Winnipeg.

4(2) This rule applies after the spring crest from snowmelt runoff at Winnipeg, whenever high river levels substantially impair the capacity of Winnipeg's combined sewer system.

4(3) As long as the Department of Water Stewardship ("the Department") forecasts that river levels for the next 10 days will be below 14 feet James Avenue Pumping Station Datum (JAPSD), the Department will not operate the Floodway Control Structure.

4(4) When the Department forecasts that river levels for the next 10 days are expected to rise to 14 feet JAPSD or higher, the Department will prepare a report that describes:

- (a) The basis of the Department's river level forecasts and its risk assessment;
- (b) The risk of basement flooding in Winnipeg, including the following factors:
 - (i) The predicted peak river level in the next 10 days;
 - (ii) The length of time the Department forecasts the river level will be at 14 feet JAPSD or higher;
 - (iii) The risk of an intense rainfall event in Winnipeg in the next 10 days;
- (c) The benefits and costs of Floodway operation, including:
 - (i) The extent of basement flooding and damage to property expected from various combinations of intense rainfall events and high river levels;
 - (ii) The risk to the health of Winnipeg residents from sewer back-up;
 - (iii) Economic loss and damage caused by artificial flooding south of the Inlet Control Structure;
 - (iv) Impacts of operation on fish and wildlife and their habitat and on water quality;

- (v) The risks and potential costs of riverbank instability that may be caused by artificial river level changes, both upstream and downstream of the Inlet Control Structure;
 - (vi) During construction of the Floodway expansion, costs and risks associated with any resulting delays of that construction, including the potential average annual expected damages associated with an additional period of risk of a flood event that would exceed the current capacity of the Floodway;
 - (vii) Such other benefits and costs of operation of which the Department is aware at the time of the preparation of the report, excluding benefits associated with recreational or tourism activities or facilities; and
- (d) measures that may be taken to mitigate the costs and impacts of the operation under consideration, including:
- (i) minimizing the rate at which river levels are changed both upstream and downstream of the Floodway Inlet Control Structure;
 - (ii) providing means to assure fish passage.

4(5) The Department will present a draft of the report prepared under rule 4(4) to the Floodway Operation Review Committee and provide an opportunity for the Committee to provide input, before finalizing the report and making recommendations respecting Floodway operation.

4(6) The Department will not recommend operation of the Floodway unless the expected benefits of doing so clearly and substantially outweigh the expected costs.

4(7) The Department will present its report and recommendations to the Minister, who, subject to rule 4(8), will make a decision respecting Floodway operation based on his consideration of the report.

4(8) The Department will not operate the Floodway control structure under this rule:

- (a) to raise river levels immediately upstream of the control structure to an elevation higher than 760 feet above sea level;
- (b) to achieve a river level of less than 9 feet JAPSD; or
- (c) except in circumstances of extreme urgency, to lower river levels more than one foot per day.

4(9) The Department will issue a news release announcing a decision to operate the Floodway at least 24 hours before commencing operation.

4(10) The Department will ensure every reasonable effort is made to personally notify landowners who may be directly affected by flooding due to Floodway operation in advance of the operation.

4(11) The Department will sound the horn at the Floodway Inlet Control Structure one-half hour before operation commences.

4(12) The Department will maintain a program of compensation for damages suffered by landowners arising from flooding caused by Floodway operation under this rule.