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1.0 INTRODUCTION

1.1 BACKGROUND

The **Red River Floodway** Expansion Project (the Floodway Expansion, or the Project) involves a major expansion of the existing floodway protection system (the **Existing Floodway**), which includes the **Floodway Channel**[1], related inlet/outlet control works, **West Dyke**, and other **infrastructure** designed to divert flood waters around the City of Winnipeg (Figure 1.1-1). The Existing Floodway was constructed between 1962 and 1968 and is located on the east side of Winnipeg. It is aligned in a general south-north direction with a length of approximately 48 km (29.5 miles) from its inlet south of St. Norbert, to its outlet north of Lockport. The Project will expand the existing flood diversion hydraulic capacity, generally by widening the Floodway Channel and modifying associated bridges. Modifications will also be made to the inlet and outlet structures, and other infrastructure. These measures will increase the City of Winnipeg's reliable security against floods up to a magnitude of 1 in 700 years.

The **Manitoba Floodway Expansion Authority** (**MFEA**) has been undertaking all the necessary engineering, environmental, consultation and other related activities to obtain environmental authorizations to commence construction of the Project in the summer of 2005. The Government of Manitoba has established the MFEA and charged it with the responsibility to design and construct the Project and to own and maintain the Province's Floodway assets[2].

Funding for the Project's development is being provided through a cost sharing agreement between Manitoba and Canada.

Operation of the Floodway after the Floodway Expansion development will continue to be the responsibility of Manitoba Water Stewardship as it is an integral component of the overall Manitoba flood protection system.

Provincial and federal **regulatory** approvals are needed, after review of environmental impact assessment (**EIA or EA**) findings, before any construction activities can be undertaken. A formal provincial and federal environmental review process was initiated on July 28, 2003, when MFEA submitted an Environment Act Proposal Form for the Project to Manitoba Conservation. This has resulted, among other things, in review and finalization of **EIS Guidelines** issued February 5, 2004, setting out the information required from MFEA by government agencies (see Section 1.5 and Appendix 1A). MFEA has engaged the Tetr*ES*I InterGroup environmental assessment study team (EA Study Team) to conduct the EIA and prepare an **Environmental Impact Statement (EIS)** for the Project in response to the EIS Guidelines.

[1] Words shown in bold contain a definition that is described in greater detail in the Glossary found in Chapter 12.

[2] See Section 1.1.1 below on MFEA and Bill 31. Floodway assets (Existing Floodway and Floodway Expansion) after development of the Project will include the Inlet and Outlet Control Structures, the Floodway Channel, Bridges and the West Dyke. Some elements of the Project relating to infrastructure improvements (e.g., work related to utilities that cross the Floodway) deal with assets that will not be owned or maintained by MFEA.

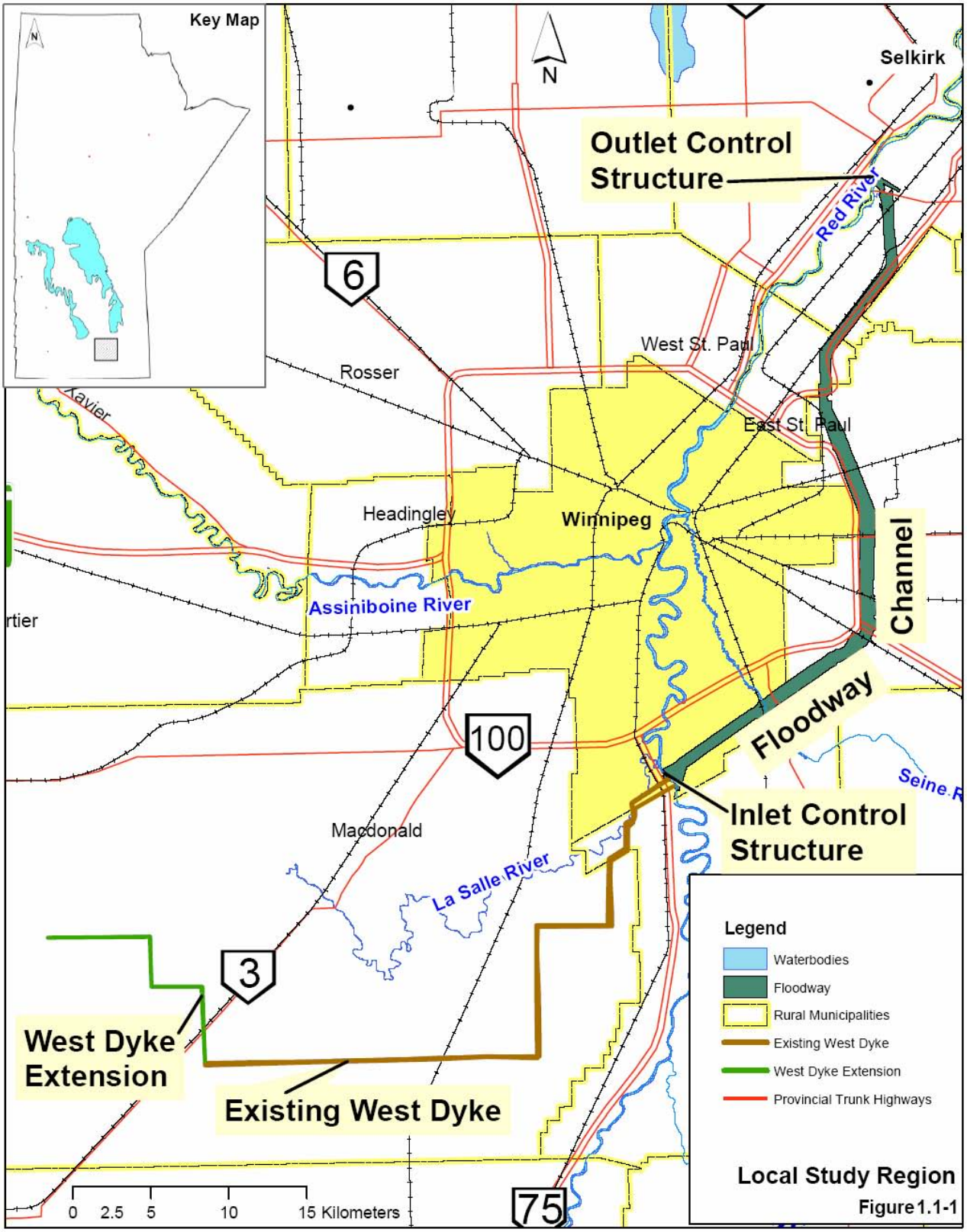


Figure 1.1-1
Local Study Region

1.1.1 Manitoba Floodway Expansion Authority

The *Floodway Authority Act* will establish the Floodway Authority as the Crown agent responsible for expanding the Floodway's capacity and obtaining all necessary approvals required for that purpose[3]. Until this legislation is proclaimed, authority is with the Manitoba Floodway Expansion Authority Inc., a share capital corporation with the Manitoba government as its sole shareholder. This arrangement facilitates administrative, financial and operational issues on an interim basis until the proposed legislation is proclaimed. Under the Act, The Manitoba Floodway Expansion Authority Inc. will cease to legally exist and will be replaced for all purposes by the Floodway Authority.

MFEA, as the proponent for the proposed Project, has overseen activities to prepare the Project for development, including[4]:

- ongoing project pre-design and engineering to expand flood protection;
- exploring potential recreational features along the floodway; and
- environmental assessment and licensing of the Project.

Mandate of Floodway Authority

The Floodway Authority's mandate is to:

a. expand the capacity of the floodway;
b. ensure that the expansion is carried out in a manner that provides increased benefits to the community;
c. enhance the benefits the floodway will provide to the community; and
d. maintain the land and structures that make up the floodway.

In carrying out its mandate, the Floodway Authority is to:

a. obtain all approvals required for the Floodway Expansion;
b. retain the services of persons to perform work on the Floodway Expansion and support training for persons working on the Floodway Expansion;
c. co-ordinate and supervise work on the Floodway Expansion; and
d. establish arrangements with the Department of Water Stewardship to co-ordinate the Floodway Expansion with the department's ongoing operation of the floodway.

The Department of Water Stewardship will continue to operate the Floodway in conjunction with other flood control works in the province.

[3] Bill 31, *The Floodway Authority Act* was passed and given Royal Assent in June 2004. During June 2004, Bill 23, *The Red River Floodway Act,* was also passed and given Royal Assent. At the time of writing, neither Act had been proclaimed.
[4] Appendix 1F describes MFEA's mandate, role and mission statement, vision statement and values.

1.2 PURPOSE OF THE DOCUMENT

This document constitutes the EIS for the proposed Project. In response to the EIS Guidelines, it provides an overview of Manitoba's flood protection system and describes the Project, the purpose of the Project, the process that has been undertaken to assess environmental effects of the Project, and the **significance** of **adverse residual effects** likely to be caused by the Project. It summarizes field investigations, literature reviews, and consultations with the public (communities and individuals), resource managers, regulatory officials and discipline practitioners. Consultation is an integral part of this EIS, the consideration of **mitigation** measures, and the interpretation of the importance of effects associated with the Project.

Prior public involvement was particularly important in the selection of alternative ways of carrying out the Project.

Chapter 1 provides background on the Project, the scope and intent of this assessment, the purpose of the Project, alternative means of Project development, and the regulatory context. Chapter 2 provides an overview of the assessment approach, including descriptions of the sources of information used in the assessment, and the methodology used to assess **cumulative effects** and the significance of adverse environmental effects after mitigation has been implemented (i.e., residual effects). Chapter 3 reviews the **public consultation and involvement** activities. Chapter 4 provides an overview of the Flood Protection System and more detailed description of the Project. Chapters 5 through 9 provide a comprehensive environmental assessment of the Project[5] separately for the each major environmental component identified in the EIS Guidelines, namely physical environment (Chapter 5), aquatic environment (Chapter 6), **terrestrial** environment (Chapter 7), socio-economic environment (Chapter 8) and heritage resources (Chapter 9). Chapter 10 provides an assessment of Project sustainability as requested in Section 10 of the EIS Guidelines, describing the Project's compatibility with Manitoba's Sustainable Development Principles and Guidelines Sustainability section.

This document includes the following appendices, which provide general supplementary material for the main body of text:

- Appendix 1: Introduction
- Appendix 2: Assessment Approach
- Appendix 3: Public Consultation and Involvement
- Appendix 4: Project Description and Evaluation of Alternatives
- Appendix 5: Physical Environment
- Appendix 6: Aquatic Environment
- Appendix 7: Terrestrial Environment
- Appendix 8: Socio-Economic Environment
- Appendix 9: Heritage Resources

[5] The assessment in each chapter includes for the relevant environmental component: approach and methodology, existing environment, effects and mitigation, residual effects and significance, and monitoring and follow-up.

1.3 INTENT AND SCOPE OF THE ASSESSMENT

The intent and scope of the environmental assessment is to describe for the public and provincial and federal regulatory agencies, the expected environmental effects related to the construction and operation of the Project and other matters as set out in the EIS Guidelines, including the factors set out in Section 2.3 of the EIS Guidelines. The EIS identifies significant adverse environmental effects that are likely to be caused by the Project after mitigation has been implemented (i.e., residual effects), as well as the need for any **monitoring** and follow-up program in respect of the Project. This information will enable decision-making by Manitoba and Canada as to whether the Project should be allowed to proceed and, if so, under what conditions.

The assessment approach for the Project utilizes scientific analysis and evaluation of environmental effects, along with local knowledge and available experience, and other public and interest group perspectives to assess potential effects as well as measures for avoidance or minimization of potential adverse environmental effects and enhancement of positive environmental effects.

The scope of the EIA as described in Chapter 2 includes an examination of the potential changes to the environment (i.e., the "existing or baseline environment" as it is expected to evolve in the future if the Project were not to occur) that may result from construction and operation of the Project in combination with other projects or activities that have been or will be carried out, and any change to the Project that may be caused by the environment, including consideration of effects related to:

- physical environment – land, water, and air;
- biological environment – including aquatic and terrestrial **species** and **habitat** (and the capacity of renewable resources);
- present and planned resource use, including land and water; and
- human health, socio-economic and cultural conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes by Aboriginal persons, or any structure, site or thing that is of historical, archaeological, paleontological or architectural significance that will be affected by any changes to the environment caused by the Project (EIS Guidelines, p. 4).

The study area for the EIA (i.e., the geographic scope of the investigations) includes those local areas directly impacted by the Project, and the zones within which there may be environmental effects that are regional or global in their nature. Spatial and temporal boundaries used in the EIS are defined. Potential environmental effects of the Project and their significance as identified in the EIS are in accordance with the EIS Guidelines, and as defined in the *Canadian Environmental Assessment Act.*

The intent of this assessment within each specific environment component identified in the EIS Guidelines is to address the EIS Guidelines, including:

- describe the policy and regulatory framework within which the Project will be planned, built, maintained and operated;

- provide a description of the proposed Project in sufficient detail to allow for a determination of potential linkages between the Project and the existing (or baseline) environment;
- identify alternatives means of carrying out the Project considered in the planning process and the criteria used and reasons for selecting the preferred alternative for the Project;
- provide sufficient information to understand and describe the existing or baseline environment without the Project (to the extent needed for the EIA), the effects of the Project on this baseline environment, mitigation measures to address these effects, residual effects remaining after mitigation, and the significance and likelihood of adverse residual effects; and
- describe monitoring and follow-up activities that will be undertaken during the construction and operation of the Project to determine actual effects, verify predictions, manage effects, and document the effectiveness of mitigation measures.

The intent is to provide the above information in sufficient detail to address the EIS Guidelines, demonstrate compliance with regulatory requirements for the Project, and address concerns raised by interested members of the public as identified through the consultation and public involvement program.

1.4 PROJECT DEFINITION

1.4.1 Purpose of the Project

The primary purpose of the proposed Red River Floodway Expansion Project is to increase flood protection for people in the Red River Valley through expansion of the Existing Floodway. The Project will greatly improve the situation in the Winnipeg area by providing protection from catastrophic floods much greater than the 1997 flood.

The Existing Floodway is a flood diversion channel that has been used 24 times since 1968 (including twice during summer) to safely pass flood flows around Winnipeg and thus avoid flooding in the City and area.

The Floodway was designed 45 years ago to provide Winnipeg with protection up to a then estimated flood magnitude that would be exceeded once in 160 years, based on statistical data on river floods that existed at the time. Since that time, changes including, analysis of over 40 more years of flood data, the occurrence of a series of relatively large floods (1966, 1974, 1979, 1996, and 1997), physical improvements to the Floodway Inlet, and the establishment of new operating rules to accommodate emergency operation, have contributed to a reassessment of the Existing Floodway's capacity.

The operating rules allow for emergency operation of the Existing Floodway that could potentially protect the City of Winnipeg to a flood of a 1 in 225 return period; however, this operating condition is not considered reliable for the Existing Floodway due to inadequate **freeboard** along the West Dyke and the need to submerge bridges crossing the floodway. The Floodway Expansion will greatly improve protection for the Winnipeg area from catastrophic floods materially greater than the 1997 flood (approximately 1 in 100 year return flood), and provide Winnipeg reliable security against floods of up to 1 in 700 year magnitude.

1.4.2 Scope of the Project – Design and Construction

A preliminary conceptual description for the Floodway Expansion Project was provided with the Environment Act Proposal Form submitted by MFEA in July 2003, and reflected in the EIS Guidelines. The Project scope focuses on expansion of the Existing Floodway to provide security against floods of up to 1 in 700 year magnitude. The design of the Project within this scope has continued to be refined and will further evolve and improve as the results of ongoing engineering studies become available. Issues identified in the environmental assessment and the public consultation processes have also contributed to refinement of the design.

While detailed engineering design is not finalized, enough information is available to describe the main components of the proposed Floodway Expansion Project and assess their effects.

1.4.2.1 Existing Floodway and Floodway Expansion Components

In the event of a flood, the Existing Floodway diverts floodwaters from the Red River around the City of Winnipeg using a system made up of an Inlet **Control Structure** and the Floodway Channel. Flooding from spring runoff, which occurs in approximately two out of three years, is controlled by raising the control gates at the Inlet Control Structure. This limits the amount of water that flows through the City of Winnipeg. The water upstream of the Control Structure is diverted into the entrance of the Floodway Channel, where it is routed around the City of Winnipeg. The water that flows through the Floodway Channel re-enters the Red River through an engineered outlet structure located north of Lockport.

The Floodway Expansion Project will allow more water to be diverted around Winnipeg under flood events, and will consist of upgrades and improvements to five key components of the existing flood control works, Floodway diversion system and related infrastructure. These five key upgrades and improvements are summarized below.

1.4.2.2 Channel Expansion

As a result of assessments made during the planning process to select a preferred alternative design, the existing 48 km (30 mile) Floodway Channel will generally be made wider rather than deeper to meet the Project scope. Approximately 21 million cubic metres (27 million cubic yards) of earth will be excavated. The exact enlargement will depend upon final design specifications and conditions encountered during construction. The width may increase by approximately 110 m (350 ft). The depth will generally not increase but selected reaches of the channel may be deepened by up to 0.6 m (2 ft), subject to final design. A number of bridges will be replaced or raised to improve hydraulic flow-through. The new channel design capacity will be approximately 3,960 m^3/s (140,000 cfs) of water **flow** when operated at its full capacity. The existing Floodway capacity is about 2,550 m^3/s (90,000 cfs), although this is not a reliable capacity for the reasons discussed in Section 1.4.1.

1.4.2.3 Bridges

Seven bridge crossings of the Floodway will be replaced and six bridge crossings will be rehabilitated, including raising the bridge girders where needed.

1.4.2.4 Upgrades to Inlet and Outlet Control Structures

Upgrades are planned as part of the Project for the Inlet Control Structure, including an enhanced fire protection system, installation of additional **riprap** and other erosion control measures to protect the embankments of the Control Structure. Upgrades to the inlet will not affect the capacity of the system to retain more water upstream on the Floodway system. The Outlet Control Structure and the channel that discharges water from the Existing Floodway back into the Red River will be widened to accommodate the increased channel capacity. Riverbank stability and erosion protection on the banks of the Red River north of the Floodway Outlet are also being investigated.

1.4.2.5 Services/Utilities

As a result of the Floodway Expansion activities, modifications will be made to existing railway and highway bridges, **transmission lines**, drainage structures, and other Floodway crossings such as the City of Winnipeg Aqueducts and the **Seine River syphon**.

1.4.2.6 West Dyke Enhancement

The West Dyke currently extends approximately 70 km (44 miles) from the **Floodway Inlet Control Structure** in a generally south westerly direction to tie into high ground at the west side of the Red River Valley. The West Dyke will be raised as part of the Project to increase the freeboard (height between the static water level and the top of the **dyke**) to protect the dyke from wind and wave action but not increase the design capacity to retain water upstream of the dyke. The western limit of the West Dyke will also be extended into higher ground.

1.4.3 Operation of the Project

The proposed Floodway Expansion is intended to operate in accordance with the Existing Floodway's current Operation Rules. Improvements in the design of the Floodway have been included to ensure that the present Operation Rules (discussed in Section 5.3) can be used safely. These improvements include the increase in freeboard of the West Dyke, improvement in erosion protection at the Floodway Inlet Control Structure.

The proposed Floodway Expansion continues to rely on the current original design concept that the Floodway Inlet Control Structure will control upstream water levels to a maximum design capacity level of El. 237.13 m ASL (El. 778 ft) at the Inlet Control Structure, while releasing up to about 2,265 m^3/s (80,000 cfs) into the City[6]. The Operation Rules are therefore intended to control, to the extent feasible, water levels both in the City and upstream of the Floodway. Floodway Expansion has been planned with the intent of providing maximum safety and minimum risk of damages to the flood protection system and the City.

It is only under extreme conditions, when river water levels in Winnipeg with the Existing Floodway threaten to overtop the Primary Dykes, that operations of the Existing Floodway can exceed the "**state-of-nature**" upstream of the Floodway Inlet. With the Existing Floodway, those conditions would occur

[6] Flows into the City as required not to exceed elevation 24.5 ft. at the James Avenue gauge, or to exceed anywhere along the Red River within the City of Winnipeg a level 2 ft. below the Flood Protection Level elevation 27.8 ft.

during a 4,815 m^3/s or more event. Legislation has been passed by the Province[7] to provide financial compensation for property owners to the extent that they are adversely affected by operation of the Floodway in the event of any extreme spring flooding situations that result in upstream water elevation above the state-of-nature.

Floodway operation is constrained even under **rare** flood events so as not to exceed the maximum design capacity level of El. 237.13 m ASL (El. 778 ft) at the Inlet Control Structure. When water rises to this maximum level, all additional flows must be passed through the City of Winnipeg (i.e., releases into the City then exceed 2,265 m^3/s (80,000 cfs)) and flooding will occur within Winnipeg.

The operating conditions are discussed in further detail in Section 5.3.

1.4.4 Alternatives to the Project

The conceptual definition of the proposed Floodway Expansion Project has been developed through a series of studies that began after the flood of 1997. A brief history follows of this study process and the alternatives to the Project that were considered in the earlier studies.

The flood of 1997 caused extensive damage in the Red River Valley, although the Floodway spared Winnipeg from catastrophic damages. Recognizing the devastating effects of the flood on both sides of the border, and the need for cross-border cooperation in addressing flood-related issues, USA President Bill Clinton, and Canadian Prime Minister Jean Chretien asked the International Joint Commission (**IJC**) to study the flood and its impacts. On June 12, 1997, the governments of Canada and the United States gave the IJC a reference under Article IX of the Boundary Waters Treaty of 1909 to examine and report on the causes and effects of damaging floods in the Red River, and to make recommendations on means to, mitigate and prevent harm from future flooding in the basin.

In September 1997, the IJC announced the appointment of the International Red River Basin Task Force to examine a range of alternatives to prevent or reduce future flood damage. The Task Force undertook and commissioned a series of studies and in 1999 commissioned a study of the flood risks in Winnipeg and possible means to reduce those risks.

The results of this study was reported to the IJC Task Force in 1999, and in early 2000 (Flood Protection for Winnipeg; KGS 1999 Part I and II, and Part III), included these conclusions:

- Winnipeg is at risk to major floods of the magnitude of the 1997 event, or larger;
- there are many existing vulnerabilities to floods that should be improved;
- the potential damages in Winnipeg due to floods exceeding the 1997 magnitude would be as much as $17 Billion for a 1 in 1000 year flood; and
- the preferred options to provide a major increase in flood protection for Winnipeg are (a) the Ste. Agathe Detention Structure and (b) the Floodway Expansion.

[7] Bill 23, *The Red River Floodway Act*, passed and given Royal Assent in June 2004. At the time of writing, the Act has not been proclaimed.

In the selection process that led to these two preferred options, KGS Group investigated a wide range of alternatives that included:

- Channel improvements to the Red River in Winnipeg and the river reach north of Winnipeg to increase the discharge capability of the river.
- Diversion of the eastern tributaries of the Red River (including the Roseau River, Rat River, Joubert Creek, Cook's Creek, etc.) around the City to re-enter the Red River north of the existing Floodway Outlet.
- A detention structure on the Red River upstream of Winnipeg near Ste. Agathe where some of the flood waters of the Red River would be detained temporarily during an extreme flood to reduce the outflow through the Winnipeg area, at the cost of additional incremental flooding upstream.
- Raising of the Primary Dykes in Winnipeg on a permanent basis to permit more flow to safely pass through the river during a flood.
- Installation of a massive pumping plant at the inlet to the Floodway to mobilize the large discharge capacity of the Floodway at high water levels, without actually having to raise the water level upstream of the Floodway Inlet above the "state-of-nature" level.
- Increase the freeboard on the West Dyke and modify the Operation Rules to permit more frequent and higher water levels upstream of the Floodway Inlet.
- Remove a portion of the **East Embankment of the Floodway** to permit more efficient entrance of flood waters into the Floodway, thereby increasing its discharge capacity.
- Removal of the Outlet Control Structure on the Floodway.
- Removal of the entrance weir at the inlet to the Floodway.
- Raise the bridges along the Floodway Channel to increase the hydraulic capacity at high water levels.
- Construct a "twin Floodway" adjacent to the existing channel to increase the discharge capacity of the diversion. The possibility of extending this channel north of the current outlet location was also considered.
- Construct a separate new Floodway Channel to the west of Winnipeg.
- Increase the capacity of the Portage Diversion, thereby reducing the potential for the Assiniboine River to exacerbate flood levels in Winnipeg.
- Increase the height of the Shellmouth Dam to develop more storage capacity that could further reduce the contribution of flood from the Assiniboine River.
- Expand the existing Floodway to increase its discharge capacity, and continue with the existing Operation Rules.

Not all the options listed above were analyzed rigorously because cursory review was adequate to show that some were clearly uneconomic, had only minor hydraulic benefits, or had environmental impacts that would be unmanageable or almost certainly unacceptable.

At the request of the IJC, the option of developing storage reservoirs upstream in the Red River watershed was not investigated, since the IJC Task Force was evaluating this option separately. In their report of November 2000, the IJC stated that "*it would be difficult if not impossible to develop enough economically and environmentally acceptable large reservoir storage that alone would reduce*

substantially the flood peaks for major floods." On the subject of "micro-storage" development, they concluded that it "*has some potential to reduce flood peaks, perhaps significantly for more frequent local floods, but reliance solely on micro-storage for major flood events would be impracticable and costly*."

Subject to the above reports the Province of Manitoba retained KGS Group to carry out a further study of the two preferred options that had emerged from the studies commissioned by the IJC.

That study was carried out by KGS Group in association with two other consulting firms, InterGroup Consultants (for socio-economic assessments) and North/South Consultants (for aquatic and terrestrial environmental expertise). It culminated in a report in November 2001 that described the costs and impacts of both schemes, without selecting a preferred option.

The report listed comparisons between the two options from various perspectives, such as economics, socio-economic impacts, legal, operational risks, management of extreme floods, schedule of implementation, etc. One of the biggest downsides to the Ste. Agathe Detention Structure was the fact that it would require an international agreement with the United States and an agreement with Roseau River First Nation. While these may be achievable, they would take additional time over and above environmental licensing and construction of either option. The Floodway Expansion project does not require these agreements. Without additional flood protection, Winnipeg's flood damage risk has been determined to be up to $75 million per year.

A series of consultations with the public were held regarding the project alternatives. These included four public meetings of the **Clean Environment Commission (CEC)** in January of 2002 to receive input regarding the project and its comparison to the alternative that was being considered at the time. The meetings were held in Selkirk, Winnipeg, Ste. Agathe, and Morris. Over 1,000 people attended these meetings and there were more than 100 submissions by stakeholders. A report summarizing the public discussions was provided by the CEC in February 2002.

An all parties committee of the legislature met in March and April of 2002. This committee received technical information from KGS on their November 2001 report and a briefing by the Chairman of the CEC on their report of the public meeting. The government and opposition committee members agreed that the Floodway expansion option would be pursued.

A Value Engineering process was carried out in August 2002, involving a group of 28 Canadian and International experts. The experts met for a week to examine and discuss the Project concept. The group agreed that the expansion scheme was well developed. Some improvements were suggested and accepted, for consideration in ongoing **Project definition**.

Based on the above studies and consultations, the Manitoba Government subsequently chose the Floodway Expansion as the preferred flood protection alternative. This lead to the allocation of funds for the project through the legislature and on December 8, 2003, signing of a Canada-Manitoba Cost-Sharing Agreement for $240 million to begin work on the Floodway Expansion Project within current overall scope presented in this proposal.

The planning process for the Project has continued to examine alternative means of carrying out the Project within its defined scope. Chapter 4 reviews this planning process to date, the alternative means examined, and the basis for selecting the preferred means as set out for assessment in this EIS.

1.5 REGULATORY FRAMEWORK

Before the Project can be built, both federal and provincial regulatory requirements will need to be met and the necessary approvals obtained. The relevant regulatory framework for the Project is outlined in this section in response to Section 3 of the EIS Guidelines for the Project.

In broad terms, federal and provincial regulatory requirements for the Project are coordinated through a cooperative assessment process which respects each government's relevant legislation. Under this cooperative process, a joint **Project Administration Team (PAT)** and a **Technical Advisory Committee (TAC)** are comprised of representatives from federal and provincial departments with an interest in the Project (Figure 1.5-1). Infrastructure Canada will be contributing federal funds to the Project and therefore has a decision-making role in the Project under *CEAA*. Manitoba's requirements for environmental review and licensing are set out in *The Environment Act (Manitoba*). Canada's requirements are set out in the *Canadian Environmental Assessment Act (CEAA)* and are triggered by the need for authorizations under the *Fisheries Act* and permits under the *Navigable Waters Protection Act (NWPA)*.

The Project will be reviewed under the provisions of *"The Canada-Manitoba Agreement on Environmental Assessment Cooperation*", signed by the two governments in May of 2000. Canada and Manitoba have agreed that, when an environmental assessment of a project is required by Canada pursuant to *CEAA* and an environmental assessment is required by Manitoba pursuant to *The Environment Act (Manitoba*), a cooperative environmental assessment will be undertaken to generate the type and quality of information and conclusions on environmental effects required by all federal and provincial parties making regulatory decisions.

The Project requires a screening level environmental assessment under *CEAA*. The Project is a Class 3 Water Development, as defined in the *Classes of Development Regulation 164/88,* under *The Manitoba Environment Act.*

The Manitoba Minister of Conservation has determined that there will be public hearings for the Floodway Expansion Project which will be conducted by the Clean Environment Commission in accordance with Section 6(5) of *The Environment Act (Manitoba*). The hearings will be conducted in order for the Commission to review the EIS and supporting documentation within the scope of the EIS Guidelines, to address issues raised in the environmental assessment process (based on the public's input and the EIS), and to provide advice and recommendations to the Minister in a report to be prepared subsequent to the hearings. Terms of Reference and the mandate for the Hearings were provided by the Minister of Conservation in September 2003 (see Appendix 1B).

The federal government participates in the overall environmental review process for this project through the joint PAT and TAC. In addition, the lead federal Responsible Authority (Infrastructure Canada) will

prepare a Screening Report for the Project that will be made available for public review and comment before any final *CEAA* determination is made.

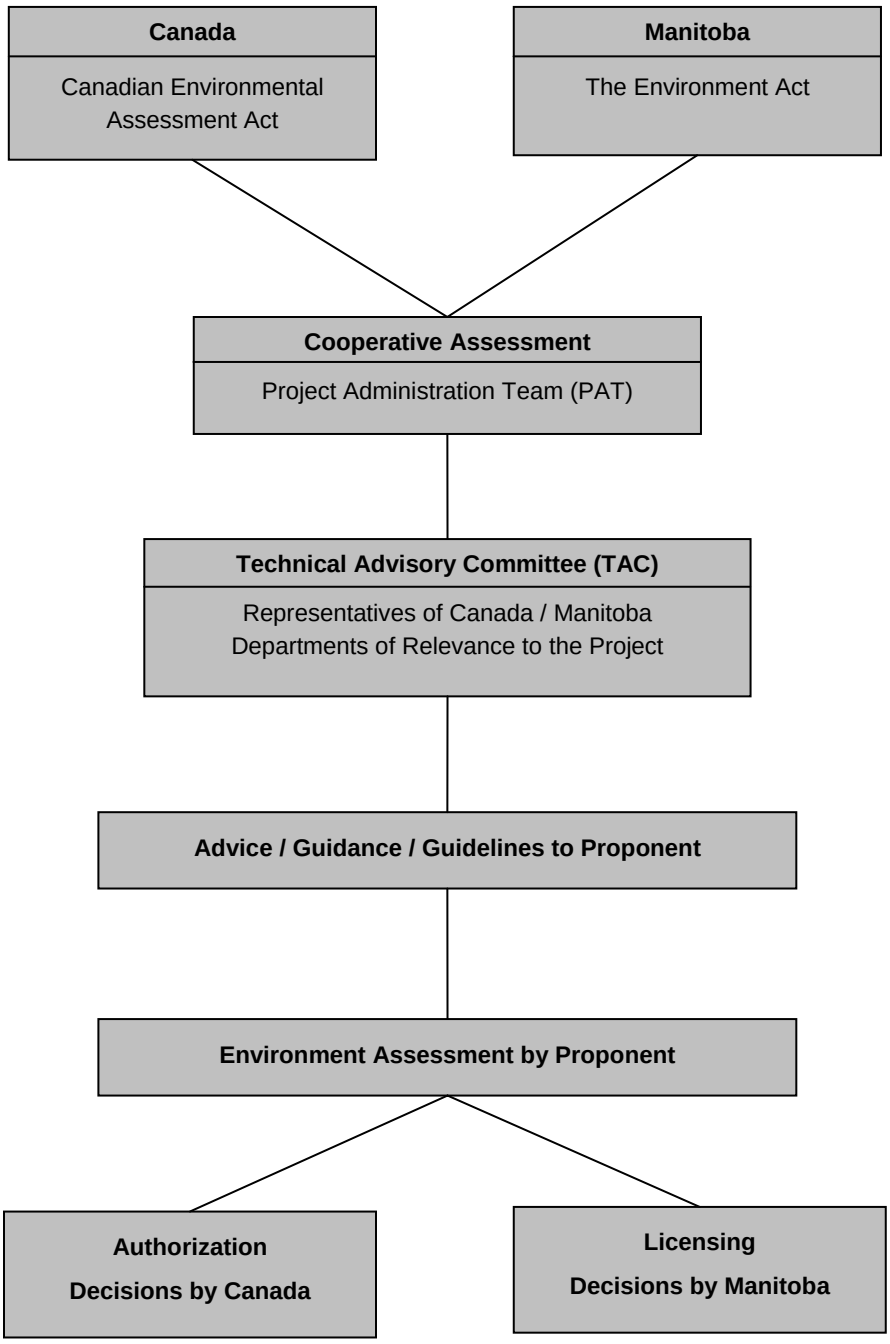


Figure 1.5-1
Federal/Provincial Regulatory Framework

An overview of the expected regulatory activities is provided in Figure 1.5-2. Additional description of the cooperative review activities is provided in Section 1.5.2.

1.5.1 Canada-Manitoba Environmental Assessment

MFEA approached Manitoba Conservation early in the conceptual stage of the Project. *"The Canada-Manitoba Agreement on Environmental Assessment Cooperation"* provides that the Lead Party in a cooperative environmental assessment process will establish and chair a PAT with membership representing the federal responsible authority(ies) and representatives of Manitoba Conservation. The PAT is then responsible for managing the cooperative environmental assessment. Manitoba is the lead party for the Project. The PAT representatives are shown in Appendix 1C.

A TAC consisting of both provincial and federal officials was developed, and a meeting with the MFEA study team subsequently occurred on January 29, 2004. A listing of the individual TAC representatives is provided in Appendix 1D. The TAC is responsible for the technical environmental review of the project and the EIS. The TAC meetings involved the provision of background information and progress updates to TAC representatives with respect to the environmental assessment and scheduling issues.

On July 28, 2003, the Manitoba Floodway Expansion Management Authority (later named MFEA) submitted an *Environment Act* Proposal Form (**EAPF**) for the Project to Manitoba Conservation. This document was received by Manitoba Conservation and placed on the appropriate Public Registry file system that has been established to accommodate public access to environmental assessment information about the Project.

In August 2003, the PAT released for public comment draft *"Guidelines For The Preparation of an Environmental Impact Statement for the Red River Floodway Expansion Projec*t", in accordance with the provisions of "*The Canada-Manitoba Agreement on Environmental Assessment Cooperation*". Manitoba Conservation also placed an advertisement in local newspapers inviting interested parties to provide their comments and concerns about the project and the draft guidelines during a 90-day review period. After review of public comments by PAT, the final *"Guidelines for the Preparation of an Environmental Impact Statement for the Red River Floodway Expansion Project*" was then released by Manitoba Conservation on February 5, 2004 (Appendix 1A). All these documents were placed in the Public Registry.

1.5.2 Cooperative Regulatory Review Activities

After the EIS has been submitted for review by the regulatory authorities (Figure 1.5-2), it will be placed in the provincial public registries and the federal registry, it will be made available for public review and comment, and distributed to the TAC for detailed review. After an initial 60-day public review period for the EIS submissions, as a result of the public and TAC reviews, the PAT may request certain clarification or supplementary information from MFEA which will be provided as soon as possible.

Once the PAT is satisfied that the EIS is acceptable it will be released to the CEC to proceed with public hearings on the proposed Project. Manitoba Conservation has also decided to institute a **Participant Assistance Program**.

1.5.3 Participant Assistance

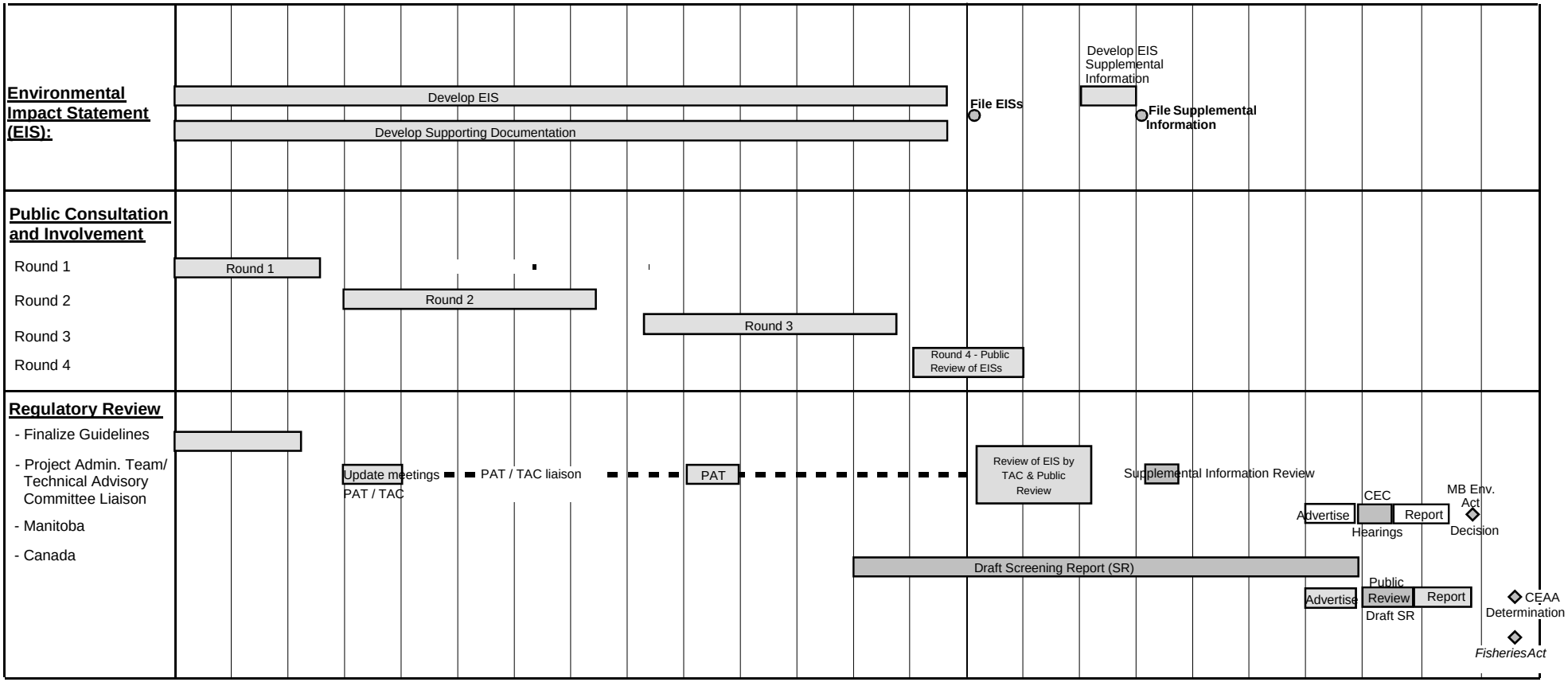
The Manitoba Minister of Conservation established a Participant Assistance Program under the Manitoba *Environment Act*'s *Participant Assistance Regulation* to provide initially up to $100,000 in total funding to

groups or individuals participating in the CEC environmental hearing process for the Floodway Expansion Project. The Program was advertised in August 2003 and applications were received by a Participant Assistance Committee of the CEC. The total amount of participant funding available was subsequently increased to $300,000. The latest information on the Participant Assistance Program is provided for on the CEC website at: www.cecmanitoba.ca.

After completion of the hearings, the CEC will release its report to the Manitoba Minister of Conservation. The Manitoba Minister of Conservation will make a decision regarding licensing of the Floodway Expansion Project. Independent of this action, the federal authorities will need to apply the provisions of *CEAA* and make a decision regarding the issuance of federal approvals such as *Fisheries Act* authorization for alteration of fish habitat and permits under *The Navigable Waters Protection Ac*t. During this decision-making process both governments expect to undertake appropriate consultation.

1.5.4 Manitoba and Federal Legislation

A listing and detailed description of the provincial and federal legislation that is applicable to this Project is provided in Appendix 1E. Project assessment by regulatory authorities will also involve the review of available fisheries, forestry and wildlife-related provincial guidance documents, as well as a review of the draft Manitoba Water Quality Standards, Objectives, and Guidelines.



Note: This above is illustrative of the steps involved in the review, the final regulatory schedule will be determined by regulators.

Figure 1.5-2
Potential Regulatory Review Process

1.6 EFFECT OF THE GUIDELINES ON EIS ORGANIZATION AND CONTENT

The *EIS Guidelines* are, for the most part, directly reflected in the structure and content of the EIS. However, certain generic aspects (e.g., those described under "intent" in Section 2.3.1 of the *Guideline*s) are not separately and explicitly addressed, but have more broadly influenced EIS development and presentation. EIS treatment of several such generic aspects is addressed in Chapter 1 as well as Chapter 2. Chapter 3 (Public Consultation and Involvement), Chapters 5 through 9 (assessments of specific environments), and Chapter 10 (assessment of Project sustainability) address specific sections of the EIS Guidelines. Chapter 11 provides references, while Chapter 12 provides a glossary of key terms used in the EIS.

The assessment and characterization of potential environmental effects of the Project have considered scientific analysis of **ecosystem** effects, along with local knowledge and available experience, in determining the significance of potential effects associated with development of the Project. Chapter 6 addresses this approach for the aquatic environment. Chapter 7 provides a brief overview of this approach for the terrestrial environment.

MFEA is guided by the principles of sustainable development and practices environmental stewardship in its activities.

The concepts of sustainable development have been considered throughout the assessment of environmental impacts associated with the proposed Project and in the development of mitigation programs as required in the EIS Guidelines. The proposed Project is consistent with Manitoba's Water Policies regarding water quality, **conservation**, use and allocation, water supply, and education. Chapter 10 responds specifically to the Guidelines' direction (Section 10) to provide an assessment of the balance between the environmental/ecological, social, economic, cultural and human health benefits and opportunities and impacts of the Project, and to explain indicators and methods used in this assessment.