



Conservation

Environmental Stewardship Division  
Environmental Approvals Branch

[www.gov.mb.ca/conservation/envapprovals](http://www.gov.mb.ca/conservation/envapprovals)

123 Main Street, Suite 160  
Winnipeg MB R3C 1A5  
CANADA

Fax: (204) 945-5229

November 1, 2004

Mr. Ernie Gilroy  
Chief Executive Officer  
Manitoba Floodway Expansion Authority  
200 – 155 Carlton Street  
Winnipeg MB R3C 3H8

Dear Mr. Gilroy:

**Re: Red River Floodway Expansion      File: 4967.00**

The Project Administration Team (PAT) for the Canada/Manitoba Cooperative Environmental Assessment of the Red River Floodway Expansion Project has completed its review of the August, 2004 Environmental Impact Statement (EIS) for the project. The PAT has also reviewed the public and technical comments on the EIS. Copies of the comments were forwarded to your staff on October 20, 2004.

From its review, the PAT has developed two guidance tables for additional information requirements that MFEA is required to address:

1. Table 1 contains information requirements to fully respond to the Guidelines for the Preparation of an Environmental Impact Statement, which were forwarded to you on February 5, 2004.
2. Table 2 contains information requirements to address public and technical comments on the EIS.

In reviewing the EIS, the PAT generally concurs with the assessment approach outlined in the EIS. Accordingly, many of the additional information items outlined in Table 1 address matters required by the Guidelines that were not described in the EIS, or not described in sufficient detail to address regulatory decision making needs.

One notable area where the PAT disagrees with the assessment approach involves summer operation of the existing and expanded floodway. The Guidelines require a description of all operating conditions of the expanded floodway, and the PAT considers summer operation to be within the scope of the project.

All public and technical comments received were considered by the PAT in developing our additional information requirements. Items in Table 2 are generally referenced to the originators of the comments, and the original comments should be consulted for context and background. Also enclosed are two written submissions from members of the PAT that are not referenced in Table 2. These comments should be reviewed and responded to if not covered in Tables 1 or 2.

Due to overlap in the comments and the time needed to fully reference all comments, we have not provided complete references for all information items.

The PAT will be providing a detailed summary of the disposition of all comments received at a future date. All comments received on the EIS are being placed in the public registry locations listed below, and on the Environmental Approvals Branch electronic registry at:

<http://www.gov.mb.ca/conservation/envapprovals/registries/redriverfloodway/index.html> .

The PAT would like to meet with MFEA staff and its consultants to review the additional information requirements and your expected response. Accordingly, a meeting has been arranged for 9 AM on November 9, 2004 at our office for this purpose.

Once we have received your response to this additional information request and the other supplementary information that you will be filing in November, we will have both information packages distributed for further public and technical review. We anticipate a review of approximately 20 working days, however, the nature, extent and timing of the filing will dictate the review period.

Yours truly,



Larry Strachan, P. Eng.  
Chair, Project Administration Team  
Floodway Expansion Cooperative  
Environmental Assessment

Enclosures

c. Public Registry Locations:

Main Registry, 123 Main Street, Winnipeg

Centennial Public Library, 251 Donald Street, Winnipeg

Legislative Library, 200 Vaughn Street, Winnipeg

Manitoba Eco-Network, 2<sup>nd</sup> Floor, 70 Albert Street, Winnipeg

Selkirk and St. Andrews Regional Library, 303 Main Street, Selkirk

Jake Epp Public Library, 255 Elmdale Street, Steinbach

Doug Peterson, Manitoba Floodway Expansion Authority

David MacMillan, KGS Group

George Rempel, TetrES Consultants

Cliff Lee, Manitoba Conservation – Red River Region

Brian Gillespie, Manitoba Conservation – Interlake Region

PAT Members:

Keith Grady, Infrastructure Canada

Beth Thomson, Department of Fisheries and Oceans

Jim Morrell, Transport Canada

Dan McNaughton, Canadian Environmental Assessment Agency

Gerry Tessier, Canadian Environmental Assessment Agency

Trent Hreno, Manitoba Conservation – Environmental Approvals

Bruce Webb, Manitoba Conservation – Environmental Approvals

Public Participants

**Table 1**

Red River Floodway Expansion      Client File: 4967.00

**Additional Information Required to Address EIS Guidelines Requirements**

<b>Guidelines Page</b>	<b>Guidelines Section</b>	<b>Item</b>
3, 4	2.3.1 and 2.3.2	The project's purpose, need and objectives should be clearly stated. Additional information is needed regarding alternatives that were considered and opportunities for enhancing environmental benefits. (also see p. 7, Section 5.2 and p. 16 and 17, sections 7 and 9) Information is needed on Kyoto Accord implications of the project.
5	2.3.2	Additional information is required regarding recycling and reuse of materials.
6	3	Additional information is needed on other approvals needed for the project.
7	5.1	Other components of Manitoba's existing flood control infrastructure should be included, such as City of Winnipeg dykes, valley ring dykes. The discussion should include how the infrastructure is managed as a provincial flood protection system.
7	5.3	Additional detail needed on maintenance, as well as on accidents, malfunctions and other risks.
8	5.3.1	More information needed on construction practices and staging areas.
8, 9	5.3.2	More detailed construction information is required. Information is needed to address bullets 1-7, 9.
9	5.3.3	Information needed on all operating conditions, including summer operation and operation for floods in excess of the design flood. Further information needed to

address bullets 3 to 6.

10	5.3.4	Additional information is needed on the future rehabilitation of project components.
10	6	A description is needed of deficiencies in available data and plans to collect additional data.
11, 12	6.2	More detailed information is required for each topic in this section.
13	6.3.1	Additional information is expected in supplemental material respecting vegetation.
13	6.3.2	Important ecological communities should be identified.
14	6.4.1	Additional information is needed regarding domestic, commercial and recreational fisheries, and the clam fishery. Commercial and recreational waterway use, including navigation, should also be provided.
15	6.5	Archaeological sites and culturally important sites in the study area should be described. A ranking of archaeological sites should be provided.
15	7	Additional information is needed regarding public health and safety.
15, 16	7	Effects should be described quantitatively and qualitatively. All listed criteria should be considered in describing and assessing effects.
16	7	Additional information is required on the compensation programs proposed to mitigate residual effects.
16	7	Deficiencies and how they will be addressed should be provided.
16	8	Additional information is needed for identifying and responding to unpredicted effects. (Adaptive management.)

18	10	Additional information is required with respect to indicators and methodologies in the sustainable development assessment.
18	12	Maps needed showing zones of effects on land and water use, and habitat areas.

## Table 2

Red River Floodway Expansion      Client File: 4967.00

### **Additional Information Required to Address Public and TAC Comments on the EIS**

A reference key is provided at the end of the table

#### **General**

1. An erratum should be provided addressing errors and discrepancies in the EIS, including those identified in public and technical comments.
2. All information identified for supplementary filing by MFEA should be provided.
3. All necessary applications for approvals must be submitted to regulatory agencies. Plans for obtaining these approvals should be described.

#### **Environmental Protection Plan (EPP)**

4. A listing of topics to be addressed in the EPP should be provided. Activities, monitoring, followup and responsibilities for each topic should be discussed. The parties responsible for developing the plan should be identified, and planned consultation should be outlined. (EC 16)
5. Elements to be included in EPP: mitigation plans for construction dewatering in case of high flows; development of monitoring and mitigation plans to address surface water intrusion; contingency plans to address groundwater blowouts. (GWM)

#### **Project Description (includes design, construction, operation and maintenance)**

6. Additional clarification is needed respecting floodway channel deepening. (EC 3)
7. Additional information should be provided concerning gate buoyancy. (EC 5)
8. Additional information is needed to address West Dyke design, construction and maintenance. (EC 8, TC)
9. Additional information is required respecting pesticide use and mitigation during project revegetation. (EC 11)
10. Additional information should be provided concerning environmental considerations for bridge design, construction and operation. (EC 15)
11. Clarification is needed respecting flood return periods and historic floods. (NRCan)

12. Additional information is needed on the results of the dam safety assessment. (NRCan)
13. Clarification is needed respecting upgrading at the inlet control structure – where the work is being carried out. (TC)
14. Clarification is required concerning temporary roads for construction access. (MW)
15. Information is needed respecting alterations to and the operation and maintenance of the Seine River Siphon. (TC)
16. Additional information is needed respecting water levels and their effects for all operational scenarios. (EC 9) Additional information is specifically required concerning gate operation during spring flood events.
17. Summer (emergency) operation - information is needed on the objectives, rules and environmental effects. Ranges of frequency, duration, and timing of gate operation must be described. The effects related to all project components must be considered. (EC 18, MAFRI, Ritchot)
18. Information on gate reliability is required, in view of the fact that redundant gates are not included as a project component.
19. Information is required concerning the effects of the project on the operation and maintenance of St. Andrews Lock and Dam. (PWGSC)
20. Commentary should be provided respecting the prevention of ice entering the floodway channel. (EC 4)
21. Additional information is needed on maintenance of all components of the project. (EC 7, NRCan)

### **Monitoring and Followup**

22. Clarification should be provided respecting laboratory detection limits. (EC 13, 14)
23. Additional information is required concerning responsibilities for followup. (EC 20)
24. Information is required concerning the development of pre and post construction monitoring for aquatic invertebrates. (WQM)

### **Physical and Aquatic Environment**

25. Additional information is needed respecting the acquisition and use of further information on migratory bird habitat. (EC 17, 19)



26. Information is needed on river and channel bank slumping and landslides. (NRCan)
27. Information on climate change is needed in the context of comments from Natural Resources Canada (Reviewer 1, section 5.8.3.3.2) and others. (NRCan, NRAC 18, MW)
28. Information is needed respecting clam habitat on the Red River.

### Effects

29. Information on health effects is needed in connection with floodway operation. (HC)
30. Information is needed respecting the effects of the project on navigation, including the effects on navigation at the floodway outlet that may impact the Red River channel. (TC)
31. Clarification is needed respecting river dredging as a project considered in the cumulative effects analysis and clarification on its potential effects. (TC)
32. Clarification is needed respecting construction traffic management related to railway works, and general traffic interactions. (TC, Springfield)
33. Information is needed respecting fish mortality associated with each project component, including the inlet control structure, outlet structure, low flow channel, Seine River Siphon, drop structures and drains.
34. Information is needed respecting the effects of drainage upgrading east of the floodway channel and upstream of the west dyke. Drainage upgrading would be considered to be cumulative effects projects. (Springfield)
35. Information is required respecting the effect of construction dewatering on fish habitat.
36. Information is needed respecting potential upgrading of City of Winnipeg infrastructure and its implications for the project. This should be addressed as a cumulative effect. Interactions between City infrastructure and water quality/health effects during floods and significant rainfall events should be included in this discussion.
37. Information is needed respecting traditional use of the west bank of the Red River downstream of the floodway outlet (in particular, with respect to medicinal plants in the area potentially affected by riprapping.)
38. Information is needed on project effects on traditional resource use. (Peguis)

39. Information is needed concerning the water quality impacts of nutrients and pesticides during channel revegetation. (WQM)
40. Information is needed on water quality impacts during the active operation mode of floodway operation. (WQM)
41. A rationale for conclusions on the water quality impacts of recreational use of the floodway channel is required. (WQM)
42. Information on the rationale for conclusions on ice jamming is required. The study referenced in the Executive Summary (p. 10) should be provided. (CFPNF, MW)
43. Clarification is required concerning effects boundaries. (MW)

### **Other**

44. Information is needed concerning the rationale for considering public issues as outside of scope for the environmental assessment. (Issues relating to operation of the project are within the scope of the assessment.) (CFPNF)
45. Information is needed linking public comments and MFEA actions and responses. (CFPNF)
46. Information is needed regarding public policy and the regulatory framework affecting the project. (MW)
47. Information on the 3-D model referenced in the Executive Summary should be provided. (MW)

### **Reference Key**

CFPNF – Coalition for Flood Protection North of the Floodway  
 EC – Environment Canada  
 GWM – Groundwater Management, Manitoba Water Stewardship  
 HC – Health Canada  
 MAFRI – Manitoba Agriculture, Food and Rural Initiatives  
 MW – Manitoba Wildlands  
 NRAC – North Ritchot Action Committee  
 NRCan – Natural Resources Canada  
 Peguis – Peguis First Nation  
 PWGSC – Public Works and Government Services Canada  
 Springfield – RM of Springfield  
 Ritchot – RM of Ritchot  
 TC – Transport Canada  
 WQM – Water Quality Management, Manitoba Water Stewardship

**Comments on the Proposed Floodway Expansion Project Environmental Impact  
Statement (August 2004)**

**Prepared by K. Grady, Infrastructure Canada**

**General**

- The document requires editing to correct errors and inconsistencies, such as different lengths for the West Dyke (1-8, 4-7, 4-130), depth of possible deepening of channel (1-7, 4-13, 4-15), number of bridge crossings (4-3, 4-4), width of widening of channel (1-7,4-13), water level above submerged gates (4-6, 4-39).
- Although the document states that information will be presented following the assessment approach outlined in Chapter 2, it is not always the case. In particular, conclusions reached should always be supported by an analysis of assessment findings and the systematic application of criteria specified for evaluating the significance of effects.
- Technical information can be difficult to find and access. A brief summary or interpretation of the supporting data in the Main Report would assist reviewers to evaluate whether the conclusions are reasonable.
- More maps and visual aids would help readers to understand the effects of natural and projected artificial flooding.

**Major**

- The EIS does not adequately consider environmental effects of operating the floodway gates. For purposes of the CEAA screening, the assessment must be given to effects of operating the floodway gates during construction and during the operational phase of the Project, during spring flood events and at any other time during the year. Consideration should be given to environmental effects that are caused by the operation of the floodway gates in the Red River upstream and downstream of the floodway gates, as well as in other locations such as the floodway channel and adjacent waterways/areas.

**Specific**

<b>Section Reference</b>	<b>Comment</b>
1.5, 1.5.3	Reference to the requirement for a federal review under the CEAA should be revised.
2.1/2.2	In respect of the consideration of spring flood scenarios, see Major above. A description should also be included of the response and anticipated effects of a flood event above the 1:700 year design.

2.10	In additional to the information provided on Red River flood protection infrastructure, a description should be provided of the flood protection (management) system, as requested in the Guidelines.
3.3	In a recent MFEA consultation meeting, the Peguis First nation representative noted concern about effects of rip- rapping on the collection of medicinal plants along the RR. This issue should be addressed in the EIS.
3.3.5	A more detailed explanation is required of the rationale for considering certain issues within and outside the scope of the EA. In particular, would the types of concerns listed under Effects Related to the Existing Floodway and Flood Management, which seem to be excluded, fall within the scope of this EA insofar that they relate to the Expansion Project?
3.17	Detail is required about how the proposed Groundwater Mitigation Fund will be set up and operated.
Chapter 4	The EIS does not provide a good description of floodproofing works and other improvements that have occurred since 1997. This will be useful in considering the effects of operations for the existing and expanded floodway.
4-14	The list of project components should include reference to ancillary works such as storage and staging areas, temporary roads and railroads, etc. The description of Operation and Maintenance is insufficient.  The statement that the operation of the Expansion project will not change from the Existing floodway is incorrect in respect of the plan to introduce new rules applying to summer operations.
4-14 see also 2.2.3 and 4.138, 5.3.3.3	It is not clear that various references to the Winnipeg flood improvements are consistent. What specifically do the improvements include? What are the implications for the Project if they do not proceed in a timely way?
4.4.5	Incomplete
4-139	If recreational facilities are part of the project, they must be identified and an assessment done of their environmental effects in accordance with CEAA.
4-144	Cost estimate is out of date.
5.2.2/5.3. 1.1	Statement regarding consideration of environmental effects of summer operations in the former is inconsistent with the later. of
5.3.4	The conclusion about decreased probability of using the floodway for summer operations appears to be inconsistent with EIS comments on climate change that imply a need for more rather than less frequent summer use.
5.3.5	Statement that "to the extent that flood mitigation was not fully effective during a flood event, MFEA I committed to ensuring that flood compensation will be provided to those adversely affected by incremental flooding caused by the Project", needs further explanation. Does this refer to the legislated compensation program? What role does MFEA have in delivery of that program? What will MFEA do to ensure this commitment is met? How will MFEA determine whether flood damage in a particular

	<p>instance is caused by the Project? Etc.</p> <p>More detail is required on the compensation program as CEAA requires that RA determine whether mitigation including compensation is adequate to reduce adverse effects of the project to insignificance. Specifically, a description of the program and how it would be applied should be included. Comparative reference to other similar programs would be helpful, as would consideration of limitations or concerns/criticisms that have been made in respect of the program.</p>
5.3.4	<p>Statements such as the following must be supported by an analysis or removed from the document: "In order to understand how the project can have no significant residual effect on the physical environment should be compared to other water resource projects such as a permanent high level dam or a continuous water diversion." It is not clear what the relevance of this comparison would be.</p>
Chapter 8	<p>As a general observation, I found this a confusing chapter. The conclusion reached from application of the criteria for evaluating the significance of socio-economic effects the Expansion Project seems at odds with the experience of the 1997 Flood, at the same time the EIS says floodway operations will not change following the expansion. A more detailed explanation of the assessment approach is required.</p>



Freshwater Institute

501 University Crescent  
Winnipeg, Manitoba  
R3T 2N6  
Tel: (204) 983-5163  
Fax: (204) 984-2402

Institut des eaux douces

501, croissant University  
Winnipeg (Manitoba)  
R3T 2N6  
Tél: (204) 983-5163  
Télééc: (204) 984-2402

Your file *Voire référence*

Our file *Notre référence*  
WI-03-1791

November 1, 2004

Mr. Larry Strachan, P. Eng  
Chair, Project Administration Team  
Manitoba Conservation  
123 Main Street, Suite 160  
Winnipeg MB R3C 1A5

Dear Mr. Strachan:

**Re: Supplemental Information Request for Red River Floodway  
Expansion Environmental Impact Statement**

Fisheries and Oceans Canada (DFO) has reviewed the Environmental Impact Statement (EIS) for the Red River Floodway Expansion Project (Project) received August 6, 2004 pursuant to the habitat protection provisions of the *Fisheries Act*. The information contained in the EIS is insufficient to determine the impacts of the proposed works on fish and fish habitat. Information needed to further the review of this project is listed in the attachment. Any additional technical or site specific information the proponent considers relevant to the proposal should also be provided.

DFO is pleased to provide the above to the Project Administration Team in partial fulfillment of our role under the *Canada-Manitoba Agreement on Environmental Assessment Cooperation*. I understand this letter will be forwarded to the proponent. If you have any questions, please contact me by telephone at 983-2380, fax at 984-2402, or e-mail at [ThomsonB@dfo-mpo.gc.ca](mailto:ThomsonB@dfo-mpo.gc.ca).

Sincerely,

Beth Thomson  
Impact Assessment Biologist  
Prairies Area  
Winnipeg District

cc: B. Hunt (DFO, Calgary)  
G. Hopky (DFO, Ottawa)  
D. McNaughton (CEAA, Winnipeg)  
K. Grady (IC, Ottawa)  
J. Morrell (TC, Winnipeg)  
J. O'Connor (MWS, Winnipeg)

## Supplemental Information Request by DFO for Red River Floodway Expansion Environmental Impact Statement

### GENERAL

According to DFO's *Fish Habitat Management Policy* a proponent must provide to DFO all information required to permit an assessment of the potential impact of the project on fish and fish habitat. This includes an adequate description of the existing environment from which potential effects can be measured and information on all phases of the project i.e. construction, operation, and maintenance. As well, information must be provided on all mitigation and/or compensation measures proposed to alleviate potential impacts and evidence that proposed mitigation and/or compensation measures will be effective, their effectiveness will be monitored and any deficiencies will be corrected. When sufficient information on fish and fish habitat is not already available proponents are responsible for conducting the studies required to obtain it. Wherever possible, adverse effects on fish and fish habitat are eliminated or minimized through relocation and redesign of a project. Where relocation and redesign are not possible then mitigation is employed. DFO's least preferred option is compensation, which involves replacing damaged habitat with newly created habitat or enhanced existing habitat, and it may not be considered for particularly valuable habitat.

As noted in the EIS several sections of the *Fisheries Act* potentially apply to this Project. They include but are not limited to the following:

- 20(1) - requires safe fish passage at obstruction in rivers;
- 22(1) - requires sufficient flow of water below an obstruction for safety of fish and their eggs;
- 32 – prohibits the destruction of fish by any means other than fishing;
- 35(1) – prohibits works or undertakings that may result in the harmful alteration, disruption, or destruction of fish habitat; and
- 36(3) – prohibits the deposit of deleterious substances of any type into waters frequented by fish.

### PROJECT DESCRIPTION

#### Construction

- The EIS refers to Construction Plan A and B. Please clarify the difference between these two plans.
- Construction plans are missing for certain components of the Project that may impact on fish and fish habitat. These include the proposed erosion control on the west bank of the Red River downstream of the floodway outlet, modifications to the Seine River syphon and overflow structure, recreational facilities, Floodway Outlet conduits, and Prairie Grove Road culvert replacement. Please provide.
- Describe construction practices that will directly affect fish and fish habitat such as dewatering and installation of temporary instream works.

#### Operation and Maintenance

- Describe operation for all project components that may impact fish and fish habitat.
- Describe maintenance for all project components (e.g. drain and channel maintenance; debris management at Seine River Syphon, Floodway Outlet conduits, and culverts; Inlet Control Structure gate desilting; Low Level Crossing surface) that may impact fish and fish habitat.

## **DESCRIPTION OF THE EXISTING ENVIRONMENT**

Describe deficiencies in available data pertaining to fish and fish habitat and plans to collect additional data.

### **Hydrology and Hydrogeology**

- Identify groundwater upwellings in local creeks, rivers and drains that could potentially be impacted by the Project.

### **Fish and Clam Habitat**

- The EIS states for the purpose of the environmental assessment only two components of aquatic habitat will be considered, bottom substrate and aquatic macrophytes. This is unsatisfactory. There are many other important components to fish habitat such as woody debris, riparian vegetation, groundwater upwellings, channel morphology, and inwater structure.
- Describe habitat used by commercially important clam species.
- Identify clams beds within the Red River and its tributaries that could potentially be impacted by the Project.
- Provide a habitat map for the existing Low Flow Channel indicating substrate, depth, width, vegetation cover, and channel morphology.
- Provide a detailed habitat map for the area of the Seine River to be impacted by the Prairie Grove Road culvert replacement.
- Provide detailed habitat maps of the areas to be impacted by the Project immediately downstream of the Floodway Outlet as well as along the west bank of the Red River
- Provide maps (plane view) or diagrams to show water levels on the Red River and its tributaries (including the Seine River upstream and downstream of the syphon) that occur under different operating scenarios. Include an effects assessment of fluctuating water levels on fish and fish habitat (e.g. stranding of eggs and fish; species composition; quality and quantity of spawning, rearing and feeding habitat; fish movements; energy inputs; health of riparian vegetation).
- Quantify the fish habitat that will be harmfully altered, disrupted, or destroyed by the various Project components. These components include but are not limited to the low flow channel, outlet control structure, drains entering the floodway channel, and drains affected by West dyke construction. Provide a table, and drawings if necessary, summarizing the habitat losses and referencing their description in the EIS, technical appendices, and supplemental information package(s).

### **Fish and Clam Populations**

- Information is needed on fish movements and migrations patterns. Provide an assessment of possible barriers to fish movement. Address the impact of the existing inlet control structure and gate operation on fish passage and fish populations.
- Identify international fish stocks.
- Information is needed on clam dispersal mechanisms.
- Provide an assessment of fish mortality associated with the inlet control structure, outlet structure, Seine River syphon, and drop structures.

### **Aquatic Species at Risk**

- Silver Chub (Schedule 1), Chestnut Lamprey (Schedule 3), and Bigmouth Buffalo (Schedule 3) are listed as Species of Special Concern in the federal ***Species at Risk Act (SARA)*** and can be found in the study area. Describe known movements and migration patterns and habitat use of these fish species.



- While Lake Sturgeon is currently not on Schedule 1 of **SARA** this species is likely to be designated as threatened in Manitoba in the future. It would be prudent of the proponent to consider this during the assessment.

### **Resource Use**

- Provide descriptions of the domestic and commercial fisheries as well as a more detailed description of the recreational fishery present in the study area.

### **ENVIRONMENTAL EFFECTS AND MITIGATION**

A more thorough analysis of impacts on fish and fish habitat needs to be provided. As well as a summary of the mitigation measures to be employed, with references to where they are described in the EIS and supplemental information package(s), and an explanation of how they will minimize adverse effects. Describe how the effectiveness of mitigation measures will be monitored and any deficiencies will be corrected.

Describe deficiencies in available data pertaining to fish and fish habitat and plans to collect additional data.

### **Hydrology and Hydrogeology**

- Describe potential impacts to groundwater upwellings in local creeks, rivers and drains.
- List expected flow and depth at several points along the Low Flow Channel under various operating scenarios.

### **Water Quality**

- The proponent proposes to use glyphosate as part of the revegetation plan. This chemical is quite toxic to fish. Discuss the impacts of its use to fish and fish food sources (e.g. invertebrates, algae, aquatic plants, benthos).
- Discuss the potential for mercury mobilization into fish bearing waters during construction.
- In a project of this magnitude there is the potential for highly concentrated sediment plumes to enter fish bearing waters. These plumes are known to persist downstream for several kilometers due to density differences. Describe the impacts to fish and fish habitat of such an event.
- The proponent states erosion control will be dealt with in more detail in subsequent Environmental Protection Plans (EPPs). EPPs should include erosion and sediment control plans developed by a Certified Professional in Erosion and Sediment Control, and a monitoring and accountability program to ensure the certified erosion and sediment control plan is implemented. Include plans for monitoring potential sediment releases during construction into fish bearing waters and a description of remedial measures should increases in sediment levels become evident. DFO would like to review the EPPs when they become available.

### **Fish and Clam Habitat**

- Describe the effects on fish and fish habitat of increasing agricultural drainage capacity as proposed in the Project.
- Discuss the effects of hardening the river banks and bottom as proposed in the Project on such factors as river morphology, invertebrates, riparian vegetation, etc.
- Describe more comprehensively the potential impacts of the Project on fish and clam habitat.

### **Fish and Clam Populations**

- Describe the potential impacts of the Project on fish movements and migrations patterns. Address the implications for domestic and international fish stocks.
- Describe the potential impacts of the Project on clam dispersal mechanisms.
- Describe the potential fish mortality associated with each project component, including the inlet control structure, outlet structure, low flow channel, Seine River syphon, drop structures and drains.
- Describe the potential impacts of the Project on fish and clam populations.

### **Aquatic Species at Risk**

- Describe potential impacts of the Project on Aquatic Species at Risk.
- To reiterate, while Lake Sturgeon is currently not on Schedule 1 of **SARA** this species is likely to be designated as threatened in Manitoba in the future. It would be prudent of the proponent to consider this during the assessment.

### **RESIDUAL EFFECTS**

In keeping with DFO's *Policy for the Management of Fish Habitat*, an Authorization under Section 35 (2) of the *Fisheries Act* will not be issued until acceptable measures to compensate for the habitat loss are developed and specific terms and conditions for the development of new habitat or enhancement of existing habitat are agreed upon. Please provide a plan for the achievement of no net loss of fish habitat following DFO's hierarchy of preferred compensation options as detailed in DFO's *Habitat Conservation and Protection Guidelines*. Include a description of the monitoring program used to determine if the compensatory habitat is functioning as intended and corrective measures should this not be the case.

Describe how unpredicted effects on fish and fish habitat will be identified and addressed.

### **REPORT FORMAT**

Maps or drawings should be in a common scale, in appropriate detail, and allow for direct overlay for ease of comparison between pre and post construction conditions.

Name	Organization	Address	City	Salutation
Dan Poersch	Rural Municipality of Tache	Box 100	Lorette MB R0A 0Y0	Mr. Poersch
Robert Poirier	Rural Municipality of St. Clements	Box 2 Group 35 RR #1	East Selkirk MB R0E 0M0	Mr. Poirier
Scott Spicer	Rural Municipality of St. Andrews	Box 130	Clandeboye MB R0C 0P0	Mr. Spicer
Janet Nylen	Rural Municipality of Springfield	Box 219	Oakbank MB R0E 1J0	Ms. Nylen
Randy Borsa	City of Selkirk	200 Eaton Avenue	Selkirk MB R1A 0W6	Mr. Borsa
Robert Duerksen	768 Association	RR1 Group 3 Box 8	St. Norbert MB R3V 1L2	Mr. Duerksen
Rob Stewart	North Ritchot Action Committee	Suite 261 35- 2855 Pembina Highway	Winnipeg MB R3T 2H5	Dr. Stewart
David Watson	Save Our Seine	P.O. Box 83 208 Provencher Boulevard	Winnipeg MB R2H 3B4	Mr. Watson
Earl C. Stevenson	Peguis Indian Band	300-286 Smith Street	Winnipeg MB R3C 1K4	Mr. Stevenson
Jack Jonasson	Coalition for Flood Protection North of the Floodway	Box 39 Group 360 RR#3	Winnipeg MB R3C 2E7	Mr. Jonasson
Lorna Hendrickson	Rivers West – Red River Corridor Inc.	201 – One Forks Market Road	Winnipeg MB R3C 4L9	Ms. Hendrickson
Gaile Whelan Enns	Manitoba Wildlands	412-63 Albert Street	Winnipeg MB R3B 1G4	Ms. Whelan Enns
Paul Clifton		852 Red River Drive	Howden MB R5A 1J4	Mr. Clifton
Art and Ursula Hawes		Box 4 Group 224 RR 2	Selkirk MB R1A 2A7	Mr. and Ms. Hawes
Bill and Gail Dueck		mersey@mts.net		Mr. and Ms. Dueck
Clark Myers		783 Adamdell Crescent	Winnipeg MB R2K 2B2	Mr. Myers
Bob and Penny Friesen		2942 Henderson Highway	East St. Paul MB R2E 0C6	Mr. and Ms. Friesen

John M. Kolodrupski		1670 Ste. Annes Road	Winnipeg MB R2N 4K7	Mr. Kolodrupski
Nick Carter		83 Athlone Drive	Winnipeg MB R3J 3K9	Mr. Carter
Peter and Darleen Armstrong		Box 217	St. Germaine MB R0G 2A0	Mr. and Ms. Armstrong
Kelly Dehn		46 Radium Cove	Winnipeg MB R2G 3K2	Mr. Dehn
Robert Wheeldon	Parkland Mews Falconry and Bird of Prey Education Centre	Box 321 Station St. Norbert	Winnipeg MB R3V 1L7	Mr. Wheeldon
Sharon Gurney	Lake Winnipeg Stewardship Board	160-123 Main Street	Winnipeg MB R3C 3E0	Ms. Gurney
Jennifer V. Lukovich		5P – 300 Roslyn Road	Winnipeg MB R3L 0H4	Ms. Lukovich
Judy Starink		RR3 Group 374 Box 137	Winnipeg MB R3C 2E7	Ms. Starink
Dan Benoit	Manitoba Metis Federation	300-150 Henry Avenue	Winnipeg MB R3B 0J7	Mr. Benoit
Paul Chief	Brokenhead Ojibway Nation		Scanterbury MB R0E 1W0	Mr. Chief
Mark Myrowich	Northern Plains Chapter International Erosion Control Association	Unit 3-325 Parkdale Road	St. Andrews MB R1A 3N9	Mr. Myrowich
Vic Lee	North American Stormwater and Erosion Control Association of Manitoba	Unit 3-325 Parkdale Road	St. Andrews MB R1A 3N9	Mr. Lee
Robert Starr	Ritchot Concerned Citizens Committee	844 Red River Drive	Howden MB R5A 1J4	Mr. Starr
Yves Sabourin	Rural Municipality of Ritchot	352 Main Street	St. Adolphe MB R5A 1B9	Mr. Sabourin
Allan Ciekiewicz		Box 201 RR#2	Dugald MB R0E 0K0	Mr. Ciekiewicz
Mark Miller		Box 22, Group	Dugald MB	Mr. Miller

		9, RR 2	R0E 0K0	
Lindy Clubb		Unit 4 - 910 Dorchester Avenue	Winnipeg MB R3M 0R8	Ms. Clubb
John Jonasson	Pollution Prevention Branch	160-123 Main Street	Winnipeg MB R3C 1A5	Mr. Jonasson
D. B. Stewart		95 Turnbull Drive	Winnipeg MB R3V 1X2	D. B. Stewart
John and Roxane Anderson		Box 23 Group 232 RR2	Selkirk MB R1A 2A7	Mr. and Ms. Anderson
Russ Krawetz		Box 11 Group 7 RR1	East Selkirk MB R0E 0M0	Mr. Krawetz
I. W. Reid		594 Weldon Street	Dugald MB R0E 0K0	I. W. Reid
E. Donaldson			Anola MB R0E 0A0	E. Donaldson
Sandra King		657 Dugald Road	Dugald MB R0E 0K0	Ms. King
Murray and Eleanor Gillespie		Box 189	Dugald MB R0E 0K0	Mr. and Ms. Gillespie
William and Arlene Reynolds		Box 179	Dugald MB R0E 0K0	Mr. and Ms. Reynolds
Geoffrey E. Nanton		2843 Wenzel Street	Winnipeg MB R2E 0K5	Mr. Nanton
Ken and Susan Edie		Box 39	Dugald MB R0E 0K0	Mr. and Ms. Edie
William J. Roberts		RR1 Box 672	Dugald MB R0E 0K0	Mr. Roberts
L. Jones		634 Pine Drive	Oakbank MB R0E 1J0	L. Jones
Brad Kirsch		631 Pine Drive	Oakbank MB R0E 1J0	Mr. Kirsch
Lloyd Wilde		619 Pine Drive	Oakbank MB R0E 1J0	Mr. Wilde
Edith Trush		591 Pine Drive	Oakbank MB R0E 1J0	Ms. Trush
Rick Grier		Box 43, 597 Pine Drive	Oakbank MB R0E 1J0	Mr. Grier
D. Harding		640 Pine Drive	Oakbank MB R0E 1J0	D. Harding
N. C. Christopherson		604 Pine Drive	Oakbank MB R0E 1J0	N. C. Christopherson

Jim Fast		623 Pine Drive	Oakbank MB R0E 1J0	Mr. Fast
L. Dobell		RR 2	Dugald MB R0E 0K0	L. Dobell
L. Grim		RR 2	Dugald MB R0E 0K0	L. Grim
Donald and Mary Hassman		605 Pine Drive	Oakbank MB R0E 1J0	Mr. and Ms. Hassman
Rosa and Robert Halabiski		586 Weldon Street	Dugald MB R0E 0K0	Mr. and Ms. Halabiski
Stan Dudych		579 Weldon Street	Dugald MB R0E 0K0	Mr. Dudych
Gail Tilling		Box 36, 585 Weldon Street	Dugald MB R0E 0K0	Ms. Tilling
Rick Reimer		Box 137, 591 Weldon Street	Dugald MB R0E 0K0	Mr. Reimer
Art Agnew		Box 124 B, RR 5	Winnipeg MB R2C 2Z2	Mr. Agnew
Mona H. Smyth		Box 6	Oakbank MB R0E 1J0	Ms. Smyth
Cliff and Agnes Thompson		Box 87	Dugald MB R0E 0K0	Mr. and Ms. Thompson
Don Reid		594 Weldon Street	Dugald MB R0E 0K0	Mr. Reid
Derek Jurkowski		Box 83	Dugald MB R0E 0K0	Mr. Jurkowski
Jo-Ann Pankiw		Box 135	Dugald MB R0E 0K0	Ms. Pankiw
Ken Mitchell		9 Dara Place	Dugald MB R0E 0K0	Mr. Mitchell
Wayne and Barb Lambert		2876 McGregor Farm Road	Springfield MB R2E 1E8	Mr. and Ms. Lambert
Carrie and Allan Rayner		2817 McGregor Farm Road	Springfield MB R2E 1E8	Mr. and Ms. Rayner
Marjorie Rayner		2825 McGregor Farm Road	Springfield MB R2E 1E8	Ms. Rayner
Walter and Ingrid Klassen		2866 McGregor Farm Road	Springfeild MB R2E 1E8	Mr. and Ms. Klassen
E. Rayner		2865 McGregor Farm Road	Springfield MB R2E 1E8	E. Rayner
Sheila and John Penny		2783 McGregor Farm Road	Springfield MB R2E 1E8	Mr. and Ms. Penny
Alf and Eva Loewen		2645 McGregor Farm Road	Springfield MB R2E 1E8	Mr. and Ms. Lowen
Dave O'Leary		2665 Wenzel	Winnipeg MB	Mr. O'Leary

		Street	R2E 0K5	
Dennis Rogocki		Box 105A RR 5	Winnipeg MB R2Z 2Z2	Mr. Rogocki
Roy Zelinsky		Box 107 Lorne Hill Road RR 5	Winnipeg MB R2C 2Z2	Mr. Zelinsky
Josephine Henry		Box 6 Group 540 RR 5	Winnipeg MB R2C 2Z2	Ms. Henry
Robert and Rhonda Poseluzney		Box 111 C RR 5	Winnipeg MB R2C 2Z3	Mr. and Ms. Poseluzney
E. Akins		Box 112 RR 5	Winnipeg MB R2C 2Z2	E. Akins
Donna Heinrichs		Box 34 Group 540 RR 5	Winnipeg MB R2C 2Z2	Ms. Heinrichs
Debbie Poseluzney		Box 16 Group 540 RR 5	Winnipeg MB R2C 2Z2	Ms. Poseluzney
Robert Ozouf		Box 111 RR 5	Winnipeg MB R2C 2Z2	Mr. Ozouf
Richard Johnson		Box 32 Group 540 RR5	Winnipeg MB R2C 2Z2	Mr. Johnson
Richard Coyle		Box 33 Group 540 RR5	Winnipeg MB R2C 2Z2	Mr. Coyle
Greg Guirya		Box 109A RR5	Winnipeg MB R2C 2Z2	Mr. Guirya
Mona Kroeker		Box 26 Group 540 RR5	Winnipeg MB R2C 2Z2	Ms. Kroeker
Dave Zilinsky		Box 108A RR5	Winnipeg MB R2C 2Z2	Mr. Zilinsky
Earle Edie and Cheryl Maxsom		62 Shier Drive	Winnipeg MB R3R 2H8	Mr. Edie and Ms. Maxsom
David and Lisa Edie		Box 13 Group 14 RR 1	Dugald MB R0E 0K0	Mr. and Ms. Edie
Irene and Abe Peters		27 Juniper Drive	Oakbank MB R0E 1J1	Mr. and Ms. Peters
Wally and Elsie McLeod		Box 74, 584 Main Street	Oakbank MB R0E 1J0	Mr. and Ms. McLeod
Audrey Bodnaruk		2935 McGregor Farm Road	Springfield MB R2E 1E8	Ms. Bodnaruk
D. Thody		Box 36 Group 529 RR5	Winnipeg MB R2C 2Z2	D. Thody