

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** Central Manitoba Resource Management  
**Limited**  
**PROPOSAL NAME:** WM Ventures/Northern Potato Irrigation  
**Project**  
**CLASS OF DEVELOPMENT:** Two  
**TYPE OF DEVELOPMENT:** Water Development and Control  
**CLIENT FILE NO.:** 4941.00

### **OVERVIEW:**

The Proposal was received on April 28, 2003. It was dated April 25, 2003. The advertisement of the proposal was as follows:

"A Proposal has been filed by Central Manitoba Resource Management Ltd. (a holding company formed by Central Manitoba Irrigators Association Inc.) to irrigate up to 413 ha (1020 acres) annually in rotation on a land base of 1235 ha (3060 acres). Most of the land is located east of PR 242 on the south side of the Assiniboine River. One parcel is located on the north side of the river. Approximately 730 dam<sup>3</sup> (590 acre-feet) of water would be applied annually, using water obtained from the Assiniboine River. The project would be constructed in the spring and early summer of 2003, with operation commencing following construction."

The Proposal was advertised in the Treherne Times on Monday, May 19, 2003. It was placed in the Main, Centennial, Eco-Network and Portage la Prairie City Library public registries, as well as in the office of the R. M. of South Norfolk as a registry location. It was distributed to TAC members on May 12, 2003. The closing date for comments from members of the public and TAC members was June 3, 2003.

### **COMMENTS FROM THE PUBLIC:**

**La Salle Redboine Conservation District** - Our main concern with this project are those stemming to responsible management of light soils.

Potato production is a low residue crop and with many producers removing shelterbelts and tree lines in favour of irrigation pivots, soil becomes readily transportable. Please consider the significant impact that soil erosion can have on your landscape, when implementing your environmental management plan.

We are also concerned with the potential destabilization that may result from removing vegetation along the Assiniboine River, these soils are also very light and readily eroded leading to sedimentation problems, property loss and declining water quality. Perhaps a river bank management plan to minimize negative impacts should be considered as part of this process. (i.e. revegetation, rip-rap placement etc.)

Disposition:

Erosion prevention has been addressed in the planning of the project through the preparation of soil management plans for each land parcel and crop. Riparian protection can be addressed through licence conditions.

**COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

**Manitoba Conservation - Sustainable Resource Management** - The proponent should use a native grass mix with a cover crop such as Canadian Wild Rye when seeding the cleared areas near the Assiniboine River. The seeding should be done as soon as possible to prevent colonization by undesirable species such as purple loosestrife and the sites monitored to confirm that such species do not become established.

Best Management Practices should be developed to minimize or avoid runoff of sediments and nutrients to adjacent surface water.

If water is drained back to the Assiniboine River at the end of the irrigation season, it must be done at a rate that will not cause sediment erosion.

If fertigation is used, fertilized water must not be allowed to drain to the Assiniboine River or to other surface bodies of water.

Disposition:

These comments can be addressed as licence conditions.

**Historic Resources Branch** - No concerns.

**Mines Branch** - No concerns.

**Highway Planning and Design** - No concerns.

**Soils and Crops Branch** - On behalf of Manitoba Agriculture and Food, I have reviewed the above Environment Act Proposal. Previously I had reviewed two documents referred to in the proposal – "WM Ventures Irrigation Project Land-Use and Agronomic Assessment (January 2003)", and "Northern Potato Irrigation Project Land-Use and Agronomic Assessment (March 2003)" and provided comments to the author, Tone Ag Consulting. These comments are referenced in Appendix C of the proposal with the Tone Ag Consulting responses to these comments.

I would like to provide the following comments on the proposal:

1. **Section 2.2 Land Description and Use** - It is indicated that the land under consideration is outlined in Table 1 and depicted in Figure 2. However, further references is made to land that will be irrigated on an annual basis in Table 2 and 3. There are some inconsistencies in that Table 1 and Figure 2 (as well as Table 4, 6, 7 and Figures 1, 3, 5) identify 16 parcels of land while Tables 2 and 3 identify 26

parcels of land which were identified in the original two Tone Ag Consulting documents.

I would assume that only the 16 parcels are under consideration for this proposal (identified in Table 1/Figure 2 etc.) and that the residual parcels in Tables 2 and 3 are NOT under consideration. This would remove some concerns with these latter parcels that were identified in the review of the initial two Tone Ag Consulting documents.

2. Section 2.7 Previous Studies - I would suggest that reference 1 in the table as well as reference 1 in Section 7 References is incorrect. The title of the documents originally reviewed was "WM Ventures Land-Use and Agronomic Assessment" by Tone Ag Consulting, January 2003.
3. Section 3.4.1 Soil Types - The parentheses "(or none)" should be deleted in line 2 of paragraph 2. If the reference is to the Potential Environmental Impact (PEI) rating of Manitoba Agriculture and Food, the proper term is simply "Minimal".
4. Section 3.4.2 - Soil Conservation Plan - It should be noted that "The Best Management Practices Manual (PMPM)" referred to here and elsewhere (Sections 3.7, 3.9, 4.3, and 7) is merely a DRAFT, which, from MAF's perspectives, still requires considerable refinement.
5. Section 4.1.3 Salinity - This section discusses the saline phases of 2 soil series (Rathwell (RWLxxxxs) and Newhorst (NUH xxxx)). It would appear that for the parcels of land under consideration, only areas of the later, Newhorst Series saline phase have been identified specifically on fields WMV03 and HK-01. Fields that contained areas of the Rathwell series saline phase were identified in the previous Tone Ag Consulting report for WM Ventures but it appears that these fields are not part of this proposal (WMV05, WMV14, WMV15) as would be the case for field (HK-02) from the Northern Potatoes report which contains Newhorst Series saline phase soil.

The proposal suggests that baseline salinity levels be determined for certain fields including WMV01, WMV02, WMV03 and NP01. I would suggest that this is particularly important for field WMV03 and NP01 (subject to subsequent comments) and I would refer to comments provided by Manitoba Agriculture and Food to the two Tone Ag Consulting Reports (Appendix C) which stated "Soils such as the RWLxxxxs and NUHxxxxs which have an increased risk for further salinization should not be considered as land that is sustainable for irrigated potato production".

Consequently, it is recommended that saline areas be identified and mapped and excluded from the irrigated portions of the fields if practical or seeded to a perennial deep rooted crop such as alfalfa and not merely an annual crop like wheat under which the risk of increased salinization under irrigation would remain a significant concern.

6. 4.1.4 Certification of Irrigability - I concur with the recommendation that "field WMV01E (NE1-9-9W) is not recommended for potato production". This field is dominated by clay textured (94%), imperfectly to poorly drained (52%) soils. The clay texture is a negative consideration from a practical stand point of producing potatoes. Further, I would suggest that this field is not suitable for irrigated potato production because of the non-suitability of these soils for irrigated production. Note: the General Irrigation rating is fair to poor and the Suitability for Irrigated Potatoes is class 5 (not suitable).

With regard to field HK01 (NW35-5-9W) I would refer to the comments provided in the top paragraph of page 3 (Appendix C) of my letter to Tone Ag Consulting in the response to the review of the Northern Potato Irrigation Project Land Use and Agronomic Assessment Report. Based on the texture, drainage and salt affected nature of the soil in this parcel with a corresponding General Irrigation rating of fair to poor and a Suitability for Irrigated Potato Production classes 4 and 5, it was recommended that this field not be considered as part of an irrigation development project.

I recognize that for both of the above fields, "further investigation" is recommended. In the comments I referred to in the previous paragraph, it was also stated that "investigations will NOT change the texture of the soil" and pointed out further concerns with drainage and salinity, which would apply to both of the above fields.

7. 5.1.2 Soil Monitoring - Field 2 of the Northern Potato Irrigation Project is referred to. However, it is assumed (as per comment 1) that this field is not a part of the proposal. It would be of concern if it was included in the proposal from the perspective of the significant area of saline soil identified.

Disposition:

These comments were forwarded to the Proponent for information. Clarification was requested concerning item 1, and additional commentary was requested on items 5, 6 and 7.

**Manitoba Health - Assiniboine and Brandon Regional Health Authorities - Medical Officer of Health** - Monitoring of groundwater and surface water is addressed in the documents. Monitoring of domestic wells should be included in the proposal as well.

Disposition:

Domestic well monitoring can be addressed as a licence condition.

**Canadian Environmental Assessment Agency** - DFO has notified us that additional information is required prior to determining whether an environmental assessment under the Canadian Environmental Assessment Act will be required with respect to the project. In accordance with the Canada-Manitoba Agreement on Environmental Assessment Cooperation, please contact the DFO representative noted on the attached response as soon as possible to coordinate the collection of this information. In the interim, please

ensure coordination of the assessment activities with DFO, until a firm determination can be made. DFO, Environment Canada, Parks Canada and Prairie Farm Rehabilitation Administration would be able to offer specialist advice. DFO would like to participate in the provincial review.

**Fisheries and Oceans** - Detailed comments provided in PDF format. Summary:

1. Clarification required concerning water withdrawal volumes.
2. Additional information requested on how minimum instream flows will be monitored. In the absence of established instream flow needs, DFO recommends that water withdrawals do not exceed 10% of instantaneous flow at the site of withdrawal.
3. More detail requested on plans to prevent sedimentation and erosion during construction of river access points.
4. Details are needed on sediment and erosion control measures taken until vegetation is established.
5. If pumpsite access points are bermed, will they be removed annually? How will berms affect refueling and maintenance access?
6. A reclamation plan is needed for abandonment of pumpsites.
7. Clarification is needed concerning permanent and temporary waterlines. A map would be beneficial in determining locations of potential erosion or sediment release.
8. Clarification is requested concerning the use of berms at the start of permanent pipeline sections.
9. Intake screens are planned to protect 100 mm northern pike. DFO recommends that an approach velocity of 0.038 m/s be used, equating to protection for 25 mm fish and a 2.5 mm maximum design opening.
10. Approach velocities were calculated using total screen area. The Freshwater Intake End-of-Pipe Fish Screen Guideline (DFO, 1995) states that the open screen area must be used when calculating approach velocity.
11. A more detailed description of what erosion and sedimentation prevention measures will be implemented is needed for situations in which pipeline water is discharged on the ground.
12. The report does not say whether Coast Guard approval under the Navigable Waters Protection Act has been sought.

**Disposition:**

Most of these comments can be addressed through licence conditions. The comments were forwarded to the proponent's consultants so that a direct response could be provided to DFO for the purposes of the federal assessment process.

**Environment Canada** - Environment Canada has received the above proposal from the Canadian Environmental Assessment Agency for review. Environment Canada has an interest in the project, but we are not requesting to participate in the provincial review under the Canada-Manitoba Agreement on Environmental Assessment Cooperation at this time. We would, however, like to provide some comments for your consideration in

licencing this and similar future projects, as related to our mandate to promote environmentally-sound and environmentally-sustainable practices.

We note that the proposed method of irrigation will involve the use of spray guns or pivots. While there may be economic benefits from using this technology, it represents an inefficient use of water. Maximizing the efficiency of irrigation will likely become an important consideration in the future if predicted climatic changes result in lower water levels in the prairies. The Assiniboine River is already under considerable stress, and this can be expected to increase due to future irrigation projects resulting from the new Simplot potato processing plant, as well as other agricultural and industrial developments. We, therefore, recommend that the province consider requesting this and other future proponents to provide additional information in areas such as:

- a) alternative methods of irrigation, such as drip irrigation, and the environmental considerations associated with these alternatives
- b) the cumulative effects of projects with respect to other future irrigation projects that can reasonably be expected to occur as a result of the expansion of the potato industry in Manitoba, as well as other foreseeable developments along the Assiniboine, such as the Maple Leaf Meats expansion in Brandon.

Disposition:

It is difficult to apply regulatory pressure on producers to encourage the adoption of water conserving technology when previous projects in the area for the same licensee have not had this requirement. It appears preferable to continue to encourage the consideration of best available technology in the planning of projects, since there is an economic incentive for producers to conserve water. This is particularly significant for this project, as the pumping height requirement between the river and most of the parcels proposed for irrigation is larger than is usual in Manitoba. With respect to cumulative impacts, water withdrawal impacts are considered in the water rights licencing process and necessary instream flows are being determined through the ongoing instream flow needs initiative being undertaken by Manitoba Conservation and the Department of Fisheries and Oceans.

**ADDITIONAL INFORMATION:**

Information to address the concerns identified in the preliminary review of the Proposal was requested on June 4, 2003. With respect to the comments by Manitoba Agriculture and Food, confirmation was received that Figure 1 in the Environment Act Proposal was an accurate representation of the project area. Discussions concerning the suitability of two of the land parcels are continuing. Pending resolution of this matter, the parcels should be excluded from a draft licence.

**PUBLIC HEARING:**

No requests were received for a public hearing. Accordingly, a public hearing is not recommended.

**RECOMMENDATION:**

All comments received on the Proposal which require action have been addressed in the additional information or can be addressed as licence conditions. Therefore, it is recommended that the Development be licensed under The Environment Act subject to the limits, terms and conditions as described on the attached Draft Environment Act Licence. It is further recommended that enforcement of the Licence be assigned to the Red River Region.

**PREPARED BY:**

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