

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Mayfair Farms (Portage) Ltd. and Jamor Farms Ltd.

PROPOSAL NAME: Mayfair Farm and Jamor Farm Irrigation Project

CLASS OF DEVELOPMENT: Two

TYPE OF DEVELOPMENT: Water Development and Control

CLIENT FILE NO.: 5195.00

OVERVIEW:

The Proposal was received on May 31, 2006. It was dated May 26, 2006. The advertisement of the proposal was as follows:

“A Proposal has been filed by the Prairie Farm Rehabilitation Association on behalf of Mayfair Farm and Jamor Farm to irrigate up to 206 ha (509 acres) annually in crop rotations including cole, beans, carrots, potatoes, and wheat on a land base of approximately 212 ha (523 acres). The project land is located approximately 2 km (1.2 miles) south of Portage la Prairie, Manitoba, along Provincial Road 331. Approximately 380 dam³ (310 acre-feet) of water would be applied annually, using water obtained from the Assiniboine River.”

The Proposal was advertised in the Central Plains Herald Leader on Saturday, June 24, 2006. It was placed in the Main, Winnipeg Public Library, Eco-Network and Portage la Prairie City Library public registries. It was distributed to TAC members on June 20, 2006. The closing date for comments from members of the public and TAC members was July 24, 2006.

COMMENTS FROM THE PUBLIC:

No public comments were received.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Conservation – Sustainable Resource Management A search of the Manitoba Conservation Data Centre (CDC) database resulted in one plant species occurrence for the area outlined in this proposal. *Cyperus schweinitzii* (Schweinitz's Flatsedge, G5 S2) is widespread, abundant and secure throughout its global range, but is

rare and may be vulnerable to extirpation in Manitoba. There are also the two fish species of concern in the Assiniboine River that the proponent's consultant has already identified. Both *Macrhybopsis storeriana* (silver chub) and *Ichthyomyzon castaneus* (chestnut lamprey) are listed as species of special concern under the federal Species at Risk Act. Proper screening of the intake as indicated in the proposal should minimize the impact of the proposed irrigation system on these species. Further information on the provincial (SRank) ranking systems can be found on Manitoba Conservation's website at <http://web2.gov.mb.ca/conservation/cdc/info.php>.

It is the responsibility of the proponent to inspect the site prior to and during construction to determine if the plant species (or other listed species) may be impacted. The proponent needs to be aware that if rare or endangered species are present, removal or destruction of individuals or their habitat may be in contravention of Subsection 10(1) "Prohibition" of the Endangered Species Act (Manitoba). In addition, the federal Species at Risk Act prohibits any activities that kill or otherwise harm COSEWIC listed plant or animal species and prohibits destruction of habitat for these species. If species of concern are present, the proponent must contact the Biodiversity Conservation Section of the Wildlife and Ecosystem Protection Branch (Nicole Firlotte, 945-6998) to discuss possible mitigation options.

Note: Since many areas of the province have never been thoroughly surveyed, the absence of data in the CDC database in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present. The information should therefore not be regarded as a final statement on the occurrence of any species of concern nor can it substitute for on-site surveys for species that will be impacted by the development. All proponents who conduct biological surveys in conjunction with their developments are asked to share that data with the Biodiversity Conservation Section. This will provide important updates to the CDC database.

Fuel storage: While the irrigation system will use electric pumps to draw water from the Assiniboine River and distribute it to the fields, fuels will be used by farm machinery during the seeding, cultivation and harvesting of the crops. There is no mention in the proposal of how they intend to store the necessary fuels. A simple statement acknowledging the expected use of fuels and that they will conform to existing regulations in their storage would be sufficient.

Monitoring wells and groundwater impacts: The proposal indicates that they will install monitoring wells between the irrigated fields and the Assiniboine River to monitor groundwater flowing from the project area and discharging to the river. Monitoring wells to monitor groundwater impacts from the project should be installed before the project begins and groundwater samples analyzed to establish the pre-existing concentrations of target parameters in the groundwater. The monitoring well installations should include a background well installed upgradient of the project so that background concentrations of the target parameters can be measured for comparison.

Surface water monitoring: The proposal makes no provision for monitoring of surface water runoff from the irrigation project. Given that runoff water from irrigated fields will

drain into the adjacent Assiniboine River there should be some provision for surface water sampling.

Target parameters for water quality monitoring: The proposal suggests that groundwater downgradient of the project be tested for bacteriological and pesticide/herbicide parameters. Since they will be using fertilizers it would be prudent to extend the list of target parameters for water quality monitoring to include nitrates, nitrites and phosphates. Surface water runoff from the irrigated fields should be tested for the same suite of parameters as the groundwater samples.

Responsibility for monitoring: The proposal indicates in Section 7.1 that unspecified provincial agencies ought to conduct the groundwater monitoring. As noted above, the proposal does not propose surface water sampling. I would suggest that the proponent be made responsible for collecting surface and groundwater samples, submit the samples for analysis to an approved laboratory and forward results to a person at Water Stewardship who would then distribute the results to other interested provincial agencies.

Disposition:

These comments can be addressed through licence conditions. Standard methods and protocols have been developed for several of these items.

Manitoba Water Stewardship This proposal does address the majority of our concerns related to water quality however, due to the risk of increased runoff following irrigation, nutrient management should include phosphorus in addition to nitrogen. Reducing the application of unnecessary phosphorus is crucial because excessive phosphorus can build up in the soil and potentially runoff into surface water. Manitoba is proposing to include phosphorus as a nutrient by which fertilizer application through manure, inorganic fertilizer, or municipal waste sludge to agricultural lands may be limited. The Province of Manitoba is committed to reducing nutrient contributions to Lake Winnipeg to 1970s levels.

The implication for the Mayfair Farm and Jamor Farm irrigation project is that fertigation will be required to meet phosphorus requirements. All of the identified land included in the fertigation rotation should have a soil-test phosphorus concentration of less than 60 ppm (Olsen sodium bicarbonate extraction). If soil tests reveal that phosphorus concentrations are above 60 ppm, then fertilizer should be applied based on residual soil-test phosphorus concentrations. Fertilizer application should not occur on lands with a soil-test phosphorus concentration of greater than 180 ppm.

It is mentioned that there are 32 wells near the project area. It is not clear whether any baseline water quality data was collected.

The proposal recommended surface water and groundwater monitoring. It is unclear how the monitoring will be conducted. However, monitoring of nitrates in groundwater is very important with respect to drinking water.

The proposed activities should not degrade the groundwater and surface water qualities on adjacent properties and make these unsuitable for use as drinking water sources. The consultant should identify such activities and recommend appropriate mitigation measures if required.

There is a discrepancy in the amount of additional acre/ft of water that is requested. Page 9, 2.4.1 of the report indicates that each farm is currently allocated 60 ac-ft/year, for a total of 120 ac-ft/year. The request is for an increase of 160 ac-ft/year, for a new total allocation of 280 ac-ft/year. Page 9, 2.4.2 of the report indicates that the application is for an additional 160 ac-ft/year for a total of 310 ac-ft/year.

Our consultations with the proponent indicate that if they require a total of 300 ac-ft/year to adequately irrigate, and they already have 120 ac-ft/year allocated to them, then they would require an additional 180 ac-ft/year.

Fisheries Branch has reviewed this proposal for increased water withdrawal from two sites in the Assiniboine River near Portage La Prairie (an existing and proposed new site). The proposed period of withdrawal is the end of April through to the middle of September and will be direct application to the field with an estimated increase in annual water demand of 160 acre-fee/year over the current 60 ac-ft /year each proponent is licenced for (120 ac-ft/year combined).

It is our understanding through correspondence between PFRA and DFO that the proponent was going to install and start using the new screen by the end of April. There appears to be a misalignment in approval process, if the proponent can proceed with a project prior to receiving an EAL. Particularly as we have identified the following concerns.

The first concern we have is it is our understanding that most irrigation withdrawals occur outside of spring spawning timing windows, are in the headwaters where fisheries issues are generally minimal and when withdrawing during the spring freshet are done at the onset to avoid entrainment/impingement of larval fish and eggs and the withdrawal is to an offsite reservoir. This application is from the mainstem of the Assiniboine River, takes place during spring and summer spawning timing windows and the water is directly applied to the field.

On April 4th, 2006, Water Stewardship contacted Jodine Macduff (PFRA) with the following concerns as part of the pre-screening review process pursuant to an Environment Act Licence application:

- We note that the proposed withdrawal time is end of April through to the middle of September. This is a very time sensitive period due to the potential to impinge/entrain spring spawning fish eggs and larvae. Given our experience entrainment and impingement of larval fish and eggs does occur and we would not want withdrawals to occur during this window (April 1 - June 15) unless they can be mitigated for and there is a monitoring program to evaluate effectiveness or potential foregone production.

- Similarly, because this is the Assiniboine River there are also a number of summer spawning fish species-channel catfish (recreationally significant); silver chub and bigmouth buffalo (listed under COSEWIC) and; the flathead chub (northern refugia for this population - Dr. Ken Stewart)- that if withdrawals are to occur from June 15th to June 30th we would possibly want to see more stringent end of pipe screening to mitigate for impingement / entrainment of fish eggs and larvae and a monitoring program to evaluate effectiveness.

The EAP indicates adherence to the end of pipe screen requirements for withdrawals prior to July 1st however, these screening requirements are for the protection of fish 25mm and larger, which does not address our above concerns (e.g. walleye eggs are ~1.5-2.1 mm and fry are 5.8-8.7 mm). The proposal also indicates a monitoring plan but this is to determine the effectiveness of this new screen design in meeting the Screening Guidelines. They will include visual inspection for impingement but again this does not address impingement/entrainment of larval fish and eggs.

Disposition:

Most of these comments can be addressed through licence conditions. The issue of intake screening for spring and early withdrawals on the Assiniboine River is the subject of ongoing discussions between federal and provincial fisheries staff. Licence terms addressing this issue must be inclusive enough to accommodate more stringent design requirements in the future.

Historic Resources Branch No concerns.

Mines Branch No concerns.

Highway Planning and Design Branch This department has no major concerns, but wishes that the proponent be informed of the following:

- Water line agreements are required from this department for any buried waterline crossing or placement in provincial road/highway right-of-way.
- If affected, all ditches, slopes and disturbed areas within our right-of-way on PR 331 should be restored to an acceptable condition, and
- It is assumed that if there are any additional flows to the highway ditch caused by the irrigation systems, it will not affect the hydraulic capacity of the existing culverts. However, it should be noted that any increased capacity that may be required would be the responsibility of the applicant.

Two department contacts are provided for the above items.

Disposition:

These comments were forwarded to the proponent for information.

Canadian Environmental Assessment Agency A survey of five federal departments (Fisheries and Oceans Canada – DFO, Environment Canada – EC, Prairie Farm Rehabilitation Administration – PFRA, Transport Canada – TC, Indian and Northern Affairs Canada – INAC) was undertaken with respect to determining interest in the project noted above. I can confirm that the project information that was provided has been reviewed by all federal departments with a potential interest. I have attached the relevant responses for your project file.

Based on the responses to the survey, application of the Canadian Environmental Assessment Act is not likely to be required for this project.

Please note that DFO, TC, PFRA and EC would be able to offer specialist information with respect to the project review, if requested. DFO has indicated that a letter of advice is to follow. It will be forwarded to your office as soon as it has been received. In addition, DFO and PFRA have determined that they have an interest in the project and would like to participate in the provincial review, pursuant to Clause 59 of the Canada-Manitoba Agreement on Environmental Assessment Cooperation. I would therefore ask that you include representatives from both of these departments on your Technical Advisory Committee.

Fisheries and Oceans Canada
project.

DFO provided a Letter of Advice for the

ADDITIONAL INFORMATION:

No additional information was required to address Technical Advisory Committee comments.

PUBLIC HEARING:

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

RECOMMENDATION:

All comments received on the Proposal 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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April 26, 2007

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