

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Under the Hill Farms Ltd.
PROPOSAL NAME: Under the Hill Farms Ltd. Irrigation Project

CLASS OF DEVELOPMENT: Two
TYPE OF DEVELOPMENT: Water Development and Control
CLIENT FILE NO.: 4323.00

OVERVIEW:

The Proposal was received on January 8, 1998. It was dated January 1, 1998. The environmental assessment and licensing process was not started until the receipt of the report "Under the Hill Farms Ltd. Environment Act Proposal Irrigation Project – 1998" in April, 1998. The advertisement of the proposal was as follows:

"A Proposal has been filed by Under The Hills Farms Ltd. for the construction and operation of an irrigation system in the Rural Municipality of South Cypress. The system would provide an average of approximately 410 cubic decametres (330 acre-feet) of water, and a maximum of 630 cubic decametres (510 acre-feet.) The water would be used to irrigate approximately 350 hectares (875 acres) annually, using five or six centre pivot units and two or three travelling guns. Water for the project would be obtained as follows:

- Assiniboine River: diversion sites in NW 2-8-14W and NW 3-8-14W
- Herman's Slough (diversion point in SW 21-7-13W)
- East Slough (diversion point in NW 26-7-13W)
- Anderson Slough (diversion point in SW 8-7-13W)
- North Dugout (E 6-8-13W)

Herman's Slough, the East Slough and the North Dugout are partially or completely recharged by groundwater. Construction of the system would be completed in 1998."

The Proposal was advertised in the Glenboro Gazette on Tuesday, May 5, 1998. It was placed in the Main, Centennial, Eco-Network and Western Manitoba Regional Library (Brandon) public registries. It was distributed to TAC members on April 28, 1998. The closing date for comments from members of the public and TAC members was May 29, 1998.

COMMENTS FROM THE PUBLIC:

Dave Dobson (Ducks Unlimited Canada) All wetlands involved in the project will be impacted by the withdrawal of water; waterfowl use will be impacted depending on the time of withdrawal and extent of withdrawal. If basins are pumped dry, waterfowl initiating nests in response to early spring water levels will be stranded and lost.

The proposed use of Anderson's Slough will impact this wetland severely and should be

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eliminated from the Proposal. The lower water levels will dramatically decrease the waterfowl capabilities of this wetland. Although pumping from this wetland is proposed to occur only in wet years, we do not believe the ability to refill is there and is evident by the overgrown condition of the marsh as shown in the report. By removing water in wet years, the levels in following years will be lower and waterfowl nesting potential will be adversely affected. The drought frequency on this wetland will be increased.

In general, we think the water level manipulation of Herman's Slough and East Slough can be managed to limit impact and with the noted removal of cattle and other disturbances perhaps even improved slightly. However, large fluctuations in water levels can cause a negative on waterfowl, especially during the nesting season (late April – late July). We would like to review in detail what the target water levels are for these sloughs during this period, as well as review the water refill and withdrawal schedules to minimize any possible impacts.

Disposition:

These comments will be reviewed with the Proponent. Ducks Unlimited made these comments directly to PFRA, and requested a meeting to discuss the concerns in detail. Following the meeting between Ducks Unlimited and the Proponent, the Proponent will be requested to address the concerns in additional information which is provided for the project. An interim limit on pumping from Anderson Slough to address this concern can be specified as a licence condition to prevent degradation to the slough while more detailed information is being developed.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Environment – Park-West Region Two concerns identified with respect to public health issues. One is that Glenboro is 5 km from Anderson Slough and 8 km from the Assiniboine River pump site. Pumping of Anderson Slough may impact wells in Glenboro. This source is proposed to be used once every three years and not at all in extremely dry years. A better definition of “extremely dry years” should be provided. The second concern involves residents in close proximity to the lands to be irrigated. There is concern that the groundwater may become contaminated by pesticides, etc. The cost of pesticide analysis is expensive and should not be borne by the affected residents. Water testing should be done before development and again after to ensure the groundwater is not being adversely affected by the operation.

Disposition:

There are strong indications that the Hermans and East sloughs are connected to the groundwater system, but not the Anderson Slough. The Proposal outlines monitoring to be undertaken for the sloughs and in nearby domestic wells. Additional monitoring may be required if the final project configuration involves additional groundwater use. Therefore, groundwater level impact monitoring can be addressed through licence conditions. Pesticide contamination is also addressed in the Proposal. Monitoring through the Manitoba Crop Diversification Centre is already underway, and this is proposed to continue. Therefore, this concern can also be addressed through licence conditions.

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Manitoba Environment - Water Quality Management There is not any perceived surface water quality problems to the Assiniboine River from this project. According to presented information, withdrawal volumes and rates should be well within estimated usable withdrawal volumes as determined by the Water Resources Branch. As stated in the report, precautions against backflow from irrigation lines to the Assiniboine River will be required if fertigation techniques are used. As indicated, Assiniboine River water has lower mineral values and will not likely degrade the slough water with higher salts. However, there will be more suspended sediment that can settle out in the sloughs and cause increased in-filling. Nutrient data (phosphorus and nitrogen) was not given for the Assiniboine River or the sloughs. Nutrients, especially phosphorus, may be higher in the river water. This could create future algae problems in the sloughs.

It is not clear what is meant by the statement on page 37 concerning the Province's obligation to establish a warning system to alert users on the river of major contamination. The best assurance is what has been indicated in the report – a scheduled testing program in the operational plan of the proponent.

A very positive approach has been identified with respect to incorporating Best Management Plans and practices. Presumably, records will be kept of data collected and they would be available on request.

Manitoba Environment – Environmental Land Use Approvals Two of the three sloughs (Herman's Slough and East Slough) appear to be connected to the Assiniboine Delta Aquifer. As a result, there is a possibility that surface water diverted from the river into the sloughs could enter the aquifer under some conditions. This possibility is a concern as it conflicts with the Department's position with respect to groundwater quality protection. Approval of this project on the basis of the existing information could lead to a degradation of aquifer water quality, and it could establish an undesirable precedent for other locations.

Supplemental pumping from the Assiniboine River to the sloughs is not expected to occur every year, and PFRA feels that it is likely that more surface water from the river would reach the aquifer through infiltration from irrigated fields than through infiltration from the sloughs. While this may be the case from a total volume perspective, the recharge from the relatively small area of a slough would appear to be of greater environmental concern than the relatively small infiltration over an extensive area of agricultural land.

The Proponent or PFRA may wish to give further consideration to increased groundwater use in place of Assiniboine River use for supplementing the sloughs. As well, additional assessment work may be undertaken to quantify the extent of downward seepage through the sloughs and the conditions under which downward seepage may occur. Approval of each element of the project as proposed should occur only if it can be reliably demonstrated that seepage into the aquifer will not occur at that location under any combination of groundwater level and slough water level circumstances.

Disposition:

In an on-site meeting with the Proponent, PFRA and ELUA staff, PFRA agreed to undertake further studies into downward seepage potential from the two sloughs of concern.

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Historic Resources Branch No concerns.

Mines Branch No concerns.

Community Economic Development Branch (Brandon) No objections. The applicant should be encouraged to consult with the municipality to obtain any required approvals, including approval to install irrigation lines across or along road allowances. Issues relating to long term sustainability of the proposed sources and the potential impacts of nitrate and agricultural chemicals on the aquifer should be considered by appropriate personnel.

Disposition:

With respect to municipal consultation, the Proponent is working closely with the R.M. of South Cypress in the routing of pipelines. Sustainability issues are being addressed by the appropriate agencies.

Highway Planning and Design The pump intake site on the Assiniboine River is close to PTH 5 and will cross the highway. The Proponent may require a water line agreement prior to placing any water supply line within the highway right-of-way. The Proponent is expected to meet or exceed standards when working adjacent to a provincial road or highway. For example: highway control standards, waterline crossings on PTHs and PRs must be sleeved, all rights-of-way must be returned to an acceptable condition.

Project details will have to be reviewed in due course as part of the normal highway crossing approval process.

Disposition:

The Proponent has already initiated discussions with the Department concerning the proposed pipeline crossing at PTH 5. All noted concerns have been brought to the Proponent's attention for discussion with the Department.

Medical Officer of Health - South Westman Regional Health Authority Comments: Minimize the risk of contamination by fuel or chemical spills during construction, ensure appropriate waste disposal as per existing environmental regulations. Dust, noise, gaseous and particulate emissions during construction may be a concern. Appropriate nutrient and pesticide monitoring is critical to protection of water quality. Please ensure water protection through appropriate management plans and groundwater monitoring wells.

Disposition:

These comments can be addressed as licence conditions where appropriate. Waste disposal should not be a concern as no demolition is required to construct the project. Construction emissions will not be a concern as the project will be constructed in a relatively isolated agricultural area.

Natural Resources A minimum instream flow value should be set for withdrawals from the Assiniboine River. Whenever possible, withdrawals of water from the Assiniboine River should be restricted to March and April so as to not disturb the

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most active periods of fish reproduction activities. Pumps and fuel should be located at least 100 m from the Assiniboine River. The project requires a Water Rights Licence. Some changes to the project may be necessary to meet requirements under this act. A more thorough investigation of the wetland areas should be conducted in the summer months to ensure that impacts can be more adequately assessed. The wetland wildlife will be impacted by the annual water withdrawal. If a detailed examination of the wetlands shows endangered plants or wildlife to be present then some mitigative measures may need to be incorporated at a later date. The minimum drawdown levels on the wetlands should be adhered to. The landowner should work with the Manitoba Habitat Heritage Corporation in Killarney in developing a program to prevent regular access by cattle to Herman's Slough. Regional DNR parks staff should be contacted to minimize noise impacts on nearby Spruce Woods Provincial Park.

Disposition:

Discussions respecting an appropriate method for addressing a minimum instream flow on the Assiniboine River are continuing between Environment and Natural Resources staff. This matter will be addressed as an interim measure through licence

conditions by both departments. The licences would also allow for a revised MIF in the future if necessary.

The suggestion to concentrate withdrawals from the Assiniboine River in March and April implies that the project should maximize the use of water from the sloughs and minimize the summer withdrawal of water from the river. Due to Environment's concern about using surface water to supplement the sloughs, this recommendation will not be incorporated in licence conditions.

The Proponent is already working with staff of the Water Licensing Section of Water Resources to obtain the necessary Water Rights Licence. DNR comments were provided to the Proponent for information and action. A number of the remaining comments will be considered in the design of the project. Other comments can be addressed as licence conditions where appropriate.

Canadian Environmental Assessment Agency An environmental assessment under The Canadian Environmental Assessment Act with respect to this project will be conducted by PFRA. Environment Canada, the Canadian Coast Guard and Natural Resources Canada have offered to provide specialist advice in accordance with section 12(3) of the Act. Fisheries and Oceans is unable to make a determination at this time and is requesting additional information.

Fisheries and Oceans DFO has concluded that it has an interest in the project pursuant to the fish habitat protection provisions of the Fisheries Act. The project would appear to be part of the irrigation development supported by the Central Manitoba Irrigation Association (CMIA). There is no indication of whether this project is the first of a series of proposals in this area of the watershed. It would be helpful if the Proponent or CMIA could provide more details regarding the full scope of irrigation development proposed in its area, especially those projects contemplating using the Assiniboine River as a water supply.

With respect to the water withdrawal intakes, two intakes are proposed for installation on .../6

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the Assiniboine River, but there are no details provided regarding the exact location of the intake and pumphouse structures. DFO notes that the Proponent is aware of fish screening requirements for intakes. However, application of DFO's Freshwater Intake End-of-Pipe Fish Screen Guideline (1995) will only protect fish down to 25 mm fork length. The proposed withdrawals in the spring, especially May through June, will coincide with the period of larval drift following the spring spawning and incubation period. DFO is concerned about the potential for the intakes to entrain larval fish which will generally be smaller than 25 mm during the early stages post-hatch. DFO also has concerns with the plan to construct the intake during June, 1998. The following mitigation measures are suggested to address the foregoing concerns:

1. Instream construction should not commence until after June 15. Efforts should be made to minimize the duration of instream work. All debris and temporary structures should be removed upon completion of the work.
2. The Assiniboine River intakes should be designed in consultation with DFO and DNR fisheries staff. In addition to design considerations, operational measures may be required to minimize the potential entrainment of larval fish. Measures could include appropriate siting of the intake, pumping at specific times of the day when drift is reduced, and completing spring pumping prior to May 15 to the extent possible each year.
3. Diesel operated pumps should be located at least 100 m from the river, and have appropriate measures in place to contain accidental spills. The refueling and servicing of equipment during intake construction and operation should take place at least 100 m from the river and other water bodies.

DFO also has concerns about the proposal to withdraw water from the Assiniboine River both directly during the irrigation season and during spring to top up some of the sloughs. The project description proposes the use of two licensing clauses that would enable water withdrawals from the Assiniboine River to be licensed prior to the completion of instream flow needs analyses. As CMIA is aware, a biologically based IFN recommendation has not been determined for the Assiniboine River and such an assessment will likely take several years. Furthermore, it would likely prove difficult to restrict water withdrawals to a lower flow than originally licensed and for which infrastructure has been developed should subsequent IFN analysis point to the need for a higher level of instream protection. It is our understanding that Manitoba Fisheries Branch and Manitoba Water Resources Branch are taking the lead to pursue the required longer term studies. In the meantime, it is our expectation that the Instream Flow Needs Group, of which DFO is a member, will undertake to determine an appropriate interim arrangement for irrigation licences on the Assiniboine River system.

Until the foregoing information deficiencies and concerns are addressed, DFO is unable to determine whether it has a Section 35(2) trigger with respect to the project. If one or more aspects of the project requires Authorization pursuant to Section 35(2) of the Fisheries Act, DFO would become an RA pursuant to the CEEA.

Disposition:

The Proponent is proceeding with assessment and licensing for this project independently from the Central Manitoba Irrigators Association. Therefore, it is unlikely that any comments respecting future development in the area can be made by the Proponent. With respect to the Assiniboine River pump intake, the suggested mitigation measures can be incorporated as licence conditions. As indicated in the comments,

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instream flow needs can be addressed on an interim basis by the regulatory agencies.

PUBLIC HEARING:

As the public concerns which were identified are to be addressed through licence conditions and direct discussion between the interested organization and the Proponent, a public hearing is not recommended.

RECOMMENDATION:

A number of the concerns identified require additional information which can be made available at the detailed design stage. Since all concerns can be addressed directly as licence conditions or through the provision of additional information as a licence condition, 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 Park-West Region.

PREPARED BY:

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