

ENVIRONMENT ACT PROPOSAL

PROPOSAL NAME: Agassiz Irrigation Association - Irrigation
Dugouts - Boyne River Phase I

CLIENT FILE NO. 3636.30

PROPONENT: Agassiz Irrigation Association

DATE OF APPLICATION: June 23, 1995

TYPE OF DEVELOPMENT: Water Development

CLASS OF DEVELOPMENT: Two

LOCATION: NW 22-6-5W and E 16-6-6W, R. M. of
Dufferin

CONTACT PERSON: Bruce Webb

Advertisement

A Proposal has been filed by the Agassiz Irrigation Association for the development of two irrigation dugouts in NW 22-6-5W and E 16-6-6W in the Rural Municipality of Dufferin west of Carman. The dugouts would be constructed on cultivated land and filled during the spring runoff period from the Boyne River. Each would store 100 to 125 cubic decametres (80 to 100 acre-feet) of water. Provision would be made in the filling of the dugouts to accomodate existing water users and instream requirements.

Comments and concerns were requested by August 2, 1995.

The proposal was advertised in the Carman Times on Monday, July 3, 1995. As a result of the public notice and the information circulation to TAC, several responses were received from government departments. There were two responses from the public.

List of Comments

Man. Envir. (South-Central Region)	The only concern involves monitoring reports - annual reports are required and
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none have been received for previous AIA projects.

Man. Envir. (Water Quality Management) Proposed minimum instream flow rates should be confirmed as being acceptable to the Fisheries Branch. The dugouts should be lined with 1 m of clay as anticipated in the proposal. The draft MOU between the AIA and Water Resources should be finalized

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prior to the issuance of further Environment Act or Water Rights Act licences for these projects.

Historic Resources No heritage resources have been recorded at the sites listed in Table 1 of the proposal. There is the potential for intact heritage resources to be present at Site S4/96 in 34-3-5W and Site B1/95 in NW 22-6-5W. The Branch's Impact Assessment Archaeologist will examine these locations in conjunction with the Phase 3 and 4 Agassiz Irrigation Association dugouts, and a copy of all findings will be forwarded as soon as the investigations are completed. Therefore, the Branch has no concerns with the proposal.

Highway Planning No concerns.

Rural Development No land use concerns.

Tourism Development No concerns.

Medical Officer of Health (Central) Concerns: long term impact of these dugouts on the quality of drinking water. Will fertilizers and pesticides be leached into groundwater? Will runoff from irrigated fields connect to existing waterways used for surface drinking water creating excessive exposures for nitrates, pesticides and algae toxins for communities using those sources? These contaminants are not easily remediated.

Natural Resources DNR approves of the proposal subject to the following: 1) Establishing an adequate

minimum instream flow (MIF) will be required to maintain spawning and fish in the river, and for downstream water users. It should be known whether the lower reach of the Morris River serves as seasonal fish habitat and if the proposed management of water in the river will have an adverse effect on this use. Departmental staff will work with the proponent to determine an adequate instream flow which mimics the temporal flows on the river. Final criteria and operating mechanisms may need to be adjusted. 2) It is unclear whether the new projects are intended to replace the existing withdrawals or if they will be in addition. 3) Where possible, the amount of bush clearing should be limited. Planting native trees and

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shrubs will greatly enhance the wildlife potential in this area. Note: Water Resources advises that the proposed projects require licensing under the Water Rights Act. Works located on provincial waterways require further review and authorization under the Water Resources Administration Act. (Received August 16, 1995)

Fisheries and Oceans

Many concerns are similar to those expressed with respect to the Phase 3 and 4 Development. General concerns: DFO's 1994 fish habitat inventory study included three reaches of the Boyne River and Morris River system. The upper reach was in the vicinity of the two proposed dugout sites. Habitat measurements indicated good fish habitat and riparian habitat conditions. The Proposal rates the habitat as marginal to poor, raising concern that the impact assessment does not adequately take into account the value of the existing fish and fish habitat resource. A second major concern is the suggested MIF for the Boyne River. The proposed value of 1.5 cfs is based on April and May releases from the Stephenfield Reservoir. This release is depleted by consumptive uses and existing

licensees are not required to pass an MIF. No effort has been made to compare the 1.5 cfs value to accepted methods of estimating MIF values, or to provide empirical data for comparison. A modified Tennant MIF calculation of 1.5 cfs represents a situation of "serious degradation". It is expected that an MIF calculated from the 50% of 80% exceedance flow as was done for the Agassiz Phases 1 to 4 projects, would yield an MIF higher than the proposed 1.5 cfs. DFO is concerned with the narrow interpretation of MIF and the cumulative effects of further development. Under the anticipated full development scenario, the entire spring flow volume over the MIF could be captured for irrigation in some years. The cumulative effect could result in serious adverse impacts on fish and fish habitat by greatly reducing the flows that support spring spawning and incubation and ensure channel maintenance. The proposal provides no consideration of the importance of flushing flows in its discussion of instream flow needs.

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Given the foregoing concerns, DFO recommends that this proposal not be licensed at this time. DFO looks forward to receiving any additional information or clarification that would address these issues. (Received August 14, 1995)

Indian and Northern Affairs Canada

The Department is not a Responsible Authority with respect to the proposal as defined in the Canadian Environmental Assessment Act. Therefore, an environmental assessment of the proposal will not be conducted. Further, there are no concerns as it appears that no First Nation or their lands will be adversely affected.

Rural Municipality of Dufferin

The R. M. of Dufferin wishes to make a representation for the proposal.

Bob and Dorothy Hudson

Concerns: 1. Who is paying for the construction? Taxpayers dollars should not be put into projects which benefit so few. These farmers should be paying the full cost. A cost-benefit analysis should be done. Extra herbicides and fertilizers used with irrigation are washed into groundwater, surface streams and lakes, and seriously affect water quality. 2. What will be the effect on groundwater? Some sites call for the storage to be within the stream itself and the creeks to be re-routed. (Is this the case with these two sites?) These holding ponds provide a greater risk for chemical runoff from the fields getting back into the waterway and subsequently polluting the groundwater. 3. Who is responsible if neighbours' wells are affected? Increased levels of phosphates and nitrates could occur in groundwater. 4. What filling time regulations are in place? The riparian rights of downstream users must be protected. The needs of users downstream near the Red River should be looked after before filling should be allowed.

Because of the above concerns, we request that a public hearing be held.

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Discussion

In view of the limited public interest in this proposal and the nature of the concerns, a public hearing is not recommended. Comments from both TAC members and the public were provided to the Applicant for a response. The attached response was received. (Natural Resources' concerns were not addressed due to the lateness of the DNR response.)

The response addresses most of the concerns identified during the initial review of the proposal. As with the Phases 3 and 4 project, the Applicant has no control over the

finalization of the Memorandum of Understanding with Water Resources. With respect to minimum flow rates, Natural Resources and DFO are not satisfied with proposed minimum instream flow values. The determination of appropriate values could be made following the construction of the proposed dugouts, but before their first year of operation in 1996. As the proposed dugouts are the first of a likely series on the Boyne River, any changes in the MIF should not affect the sizing of these dugouts. Rather, changes in the MIF would affect the number or sizes of later dugouts.

Recommendation

As remaining concerns can be addressed as licence conditions, 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, and that enforcement of the Licence be assigned to the South-Central Region. It is also recommended that DFO be included in the TAC circulation for the draft licence. A letter should be forwarded to the participants from the public review which denies the request for a hearing and provides the additional information supplied by PFRA on behalf of the Applicant.

Prepared by:
Bruce Webb
August 17, 1995

Draft Environment Act Licence

In accordance with The Manitoba Environment Act (C.C.S.M. c. E125) this Licence is issued to:

Agassiz Irrigation Association Incorporated: "the Licencee"

for the construction and operation of the Development being water storage dugouts and related intake and outlet works for irrigation water supply in NW 22-6-5W and E 16-6-6W in the Rural Municipality of Dufferin, subject to the following specifications, limits, terms and conditions:

Specifications, Limits, Terms and Conditions

1. The Licencee shall construct and operate the Development in accordance with The Environment Act Proposal dated June 19, 1995 and the supplementary information submitted to Manitoba Environment on August 16, 1995, except as otherwise required by this Licence.
2. The Licencee shall submit, for the approval of the Director, detailed construction plans prepared by a professional engineer for each site prior to beginning construction at each site.
3. The Licencee shall obtain authorization from the Manitoba Water Resources Branch for works undertaken on Provincial Waterways.
4. The Licencee shall not undertake construction activities at any site until that site has been examined by staff of the Historic Resources Branch. The Licencee shall follow the directions of the Historic Resources Branch respecting archaeological resources found at any site.
5. The Licencee shall not undertake construction activities which may result in siltation or sediment deposition on or immediately adjacent to waterways between April 1 and June 15 of any year.
6. The Licencee shall ensure that measures are taken during the construction of the Development to minimize the deposition of sediment in waterways.
7. The Licencee shall ensure that the clearing of native vegetation for the components of the Development is minimized and restricted to areas required for construction. Areas cleared of trees and shrubs shall be considered for re-planting with similar native species.

8. The Licencee shall plant dykes, stream banks and other areas disturbed by the construction of the Development with varieties of native or domestic grass and forb mixes. Species chosen shall be capable of rapid revegetation.
9. The Licencee shall submit "as built" drawings of each component of the Development to the Director following construction.

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10. The Licencee shall ensure that the capacity of pumps used to divert water into the Development does not exceed 0.63 m³/s at the B1 site in NW 22--6-5W and 0.082 m³/s at the B2 site in E 16-6-6W.
11. The Licencee shall ensure that minimum instream flows are maintained in the Boyne River below the diversion points of the Development at all times while water is being diverted into the Development. These minimum instream flows shall be determined by the Licencee in consultation with Manitoba Natural Resources and the Department of Fisheries and Oceans, and shall receive the written approval of the Director prior to the first filling of the Development.
12. The Licencee shall ensure that buried pipelines which are installed on cultivated land or land in its natural state are installed in accordance with the methodology illustrated in Figures 1 to 3, attached to this Licence.
13. The Licencee shall monitor instream flows, seepage from reservoirs, and land impacts as proposed. All data shall be forwarded to Manitoba Environment, Manitoba Natural Resources, the Prairie Farm Rehabilitation Administration and the Department of Fisheries and Oceans. Data required on an annual basis shall be submitted prior to March 1 of the following year.
14. The Licencee, shall, at the request of the Director, prepare and implement a remediation plan to address seepage from the Development if monitoring results indicate that seepage losses substantially exceed anticipated amounts.
15. The Licencee shall on a daily basis monitor streamflows, diversion rates and pumping durations when dugout filling is occurring. Dugout water levels and pumping rates and durations shall be monitored when water is being used from the dugouts. An annual report on this operating data for each dugout shall be provided to Manitoba Environment, Manitoba Natural Resources, the Prairie Farm Rehabilitation Administration and the Department of Fisheries and Oceans. This report shall be submitted prior to March 1 of the following year.
16. The Licencee shall ensure that all used oil products and other regulated hazardous wastes generated by the machinery used in the construction and operation of the Development are collected and disposed of in accordance with applicable Manitoba Environment and legislative requirements.

17. The Licencee shall ensure that fuel storage areas established for the construction and operation of the Development shall comply with the requirements of ***Manitoba Regulation 97/88R*** respecting ***Storage and Handling of Gasoline and Associated Products***.

Revocation

If, in the opinion of the Director, the Licencee has exceeded or is exceeding the limits, or has not complied or is not complying with the specifications, terms or conditions set out herein, the Director may revoke this Licence either temporarily or permanently.

Larry Strachan, P. Eng.
Director
Environment Act

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