

## ENVIRONMENT ACT PROPOSAL

**PROPOSAL NAME:** Agassiz Irrigation Association - Irrigation  
Dugouts - Phases 3 and 4

**CLIENT FILE NO.** 3636.20

**PROPONENT:** Agassiz Irrigation Association

**DATE OF APPLICATION:** May 19, 1995

**TYPE OF DEVELOPMENT:** Water Development

**CLASS OF DEVELOPMENT:** Two

**LOCATION:** Various locations, R. M. of Rhineland and  
R. M. of Stanley

**CONTACT PERSON:** Bruce Webb

### Advertisement

A Proposal has been filed by the Agassiz Irrigation Association for the development of 13 irrigation dugouts and the expansion of two existing dugouts. All dugouts would be located in the rural municipalities of Stanley and Rhineland as follows:

<b>Drain</b>	<b>Location</b>	<b>Volume (acre-feet)</b>	<b>Area (acres)</b>
Hespler	SE 30-2-4W	50	8
	NW 29-2-4W	25	5
	SW 32-2-3W	300	36
North Rosenheim	undecided	30	-
	SW 31-1 4W	40	7
	SE 32-1-4W	100	12.5
South Rosenheim	NE 27-1-4W	40	7
	NE 27-1-4W	50	9
North Buffalo	NW 30-1-2W	40	6
	SW 30-1-2W	100	12
	SW 10-1-4W	95	14 (Expansion)
	SW 8-1-2W	150	18 (Expansion)
	SE 29-1-2W	80	11
Buffalo	SW 1-1-4W	60	10
	SE 2-2-3W	40	6.5

This is the third and fourth phase of the Association's program to capture spring runoff from intermittent streams for irrigation use. Construction would be completed in 1995 and 1996. Provision would be made in the filling of the dugouts to accommodate existing water users and instream requirements.

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Comments and concerns were requested by June 30, 1995.

The proposal was advertised in the Altona Red River Valley Echo and in the Winkler Times on Tuesday, June 6, 1995. As a result of the public notice and the information circulation to TAC, several responses were received from government departments. Two responses were also received from members of the public.

### **List of Comments**

Man. Envir. (South-Central Region)	No objections.
Man. Envir. (Water Quality Management)	Proposed minimum instream flows should be confirmed as acceptable to Fisheries Branch. Sites S6 and S8b should be moved so that the existing stream channels do not have to be relocated. The lack of sufficient clay material at a number of sites is a concern. Seepage losses at these sites of 10% combined with uncontrollable evaporative losses will likely be significant. Where clay is not available, synthetic liners should be considered. The draft MOU between the AIA and the Water Resources Branch should be finalized prior to the issuance of further Environment Act or Water Rights Act licences.
Historic Resources	Concerns to heritage resources are addressed in the proposal. The proposal discusses an assessment of various locations by a Branch field archaeologist. This assessment will be done in the summer of 1995, and the proponent will be advised of the sites requiring further assessment. A copy of the findings will be forwarded to Manitoba Environment. Therefore, the Branch has no concerns with the proposal.

Highway Planning and Design

The Department has concerns with three proposed sites: EA8/96 - SW 10-1-4W: This site is extremely close to PTH 32. Expansion should only be allowed to take place on the east side of the existing dugout. S14/96 - SE 2-2-3W and S11b/95&96 - SE 26-1-3W: Both of these sites are adjacent to PR 306, which will likely require future upgrading. The dugouts should be located outside of the PR's 38.1 m (125 foot) control limits.

Rural Development

No land use concerns.

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Medical Officer of Health - Portage

Does this water use indirectly affect surface drinking supplies and their growing problem with algae blooms? (Is nutrient rich return water diverted into any water supply reservoir downstream?) Are the dugouts to be fenced? How would land management be monitored to avoid salts, pesticides and fertilizers being leached into the groundwater?

Natural Resources (Rec'd July 11, 1995)

Natural Resources approves of the proposal subject to the following concerns and conditions being addressed. 1. Establishing an adequate minimum instream flow (MIF) rate will be required for maintaining the fisheries in the streams affected by the development as well as those downstream. Other mitigative measures besides culverts through the dugouts should be applied to maintain the necessary flow. Departmental staff would be prepared to meet with the proponent to discuss this. 2. Time-monitoring and time-limiting should be considered for the water storage period upstream of a weir to discourage the growth of unwanted vegetation and minimize maintenance requirements for existing drains. 3. Where possible, bush clearing should be limited to maintain riparian habitat. The projects proposed are subject to review and licensing under the Water Rights Act. Where works are located on

provincial waterways, further review and authorization is required under the Water Resources Administration Act.

Fisheries and Oceans (Rec'd July 19, 1995) DFO has a number of concerns about the proposal. Since conducting past assessments of Agassiz proposals, DFO funded a fish habitat inventory study in the southern tributaries of the Red River. The study was conducted in October and November of 1994, and included three reaches of Buffalo Creek. Habitat measurements at all locations indicated good fish habitat conditions. The fish habitat that may be impacted by past and proposed irrigation development is of greater value than that described in the present proposal. Therefore, the current impact assessment may not adequately take into account the value of the existing fish and fish habitat resource, nor the cumulative effect of

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previous and proposed developments.

A second major concern is with the derivation of an MIF value for sub-basins outside the Buffalo Creek drainage. The value of 0.35 m<sup>3</sup>/s used for Buffalo Creek was transferred to the other sub-basins in the absence of empirical flow data or other statistical verification. Flows could be quite different on streams in other sub-basins. Also, no information has been provided to substantiate that the calculated MIF for Buffalo Creek has any biological validity. The modified Tennant method of comparing the MIF to average spring flow is an improvement over the normal Tennant method, but would likely be more realistic if spring flow only included those months with reliable flow, i.e. March to June. This would likely indicate that 0.35 m<sup>3</sup>/s represented poor habitat at best using the Tennant's guideline.

DFO is concerned about the incremental approach to development taken by the proponent. Although each level of development may be considered sustainable when considered independently, full development could have serious cumulative impacts on downstream flows and the important fisheries resources of the Red River. A more thorough evaluation of the cumulative impacts of the proponent's past, current and future development should be conducted.

Specific comments: there should be an unequivocal commitment to ensuring that withdrawals always accommodate a MIF, regardless of whether pumping capacity would allow a higher rate. Instream flows are considered part of the 50% of 80% exceedance volume, and are shared with other non-AIA uses. There should be assurance that the other uses will not be allocated flow up to the remaining amount, such that there would be no volume available for instream needs. MIF should be a reserve independent of other uses. The Hespeler Drain is identified as having a large 80%/2 volume at Site S15, but is listed elsewhere as having a smaller volume. The comment on

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page 24 regarding sufficient volume for downstream uses may warrant reconsideration. DFO recommends that this proposal not be licensed at this time.

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, the Department will not be undertaking an environmental assessment. The proposal will be forwarded to the Roseau River Tribal Council for information.

John Klassen

The proposed dugout on SW 32-2-3W (Site S15) is 10 m from the writer's property. The

following are some concerns: seepage onto adjoining land, salt being driven up by groundwater due to the dugout, changes in the direction of overflows from the Hespeler (Drain) causing new areas of erosion, and a drop in land values due to damages from the dugout. Strongly objects to the proposed dugout.

John Doell

The writer has lived on SW 32-2-3W all his life. In the spring of 1979, the water ran over the road on the west side of the quarter and down on the south side of the Hespeler dyke. With high future runoff, the proposed reservoir could cause the water to back up and come further south toward the writer's yard. Salinity and groundwater levels are also concerns. The land does not look productive immediately around other similar reservoirs that have been made. Concerned about the effect of the reservoir on own property as well as on neighbouring properties. Would there be compensation if salinity increased in the future? Erosion and flooding effects from a large runoff would be devastating and costly. An alternative site for the reservoir could be a piece of crown property on the north side of the dyke. There would be no runoff problems there and seepage would be towards the dyke.

## **Discussion**

There are no concerns over this proposal which would require a public hearing. TAC and public concerns were forwarded to PFRA for review and comment on behalf of the applicant. The attached response was provided to the Department on July 27, 1995.

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The major concerns involve the determination of an acceptable minimum instream flow (MIF) and the concerns of landowners over the S15 site in SW 32-2-3W. The response addresses the MIF concerns in detail, and proposes to defer construction at the S15 site until the land use issues have been resolved.

The following comments apply to the remaining TAC comments. (Approvals comments in parentheses.)

*Water Quality Management:* PFRA has indicated that the S6 and S8 sites were chosen to take advantage of available clay for dyke construction. Therefore, the designers would prefer to relocate the stream channels as was done on two previously licensed sites. The cost of synthetic liners to prevent seepage losses is considered to be prohibitive. As a result, seepage losses will be minimized through the use of clay available at each site. (Note: seepage losses can be monitored as a matter of course and reports on remedial measures could be required as a licence condition.) With respect to the draft MOU between the AIA and the Water Resources Branch, the AIA is eager to finalize the agreement. However, the timing of the finalization will depend on the resolution of issues affecting other water users by Water Resources.

*Historic Resources:* The need for site assessments is recognized by the Applicant and can be addressed as a licence condition.

*Highways and Transportation:* The Applicant has been made aware of concerns with respect to a number of the proposed sites. Compliance with the requests of Highways and Transportation can be ensured when final plans for these sites are reviewed.

*Health:* (The proposal would not affect surface drinking water supplies. The only community using surface water downstream of the project area is Plum Coulee, which also uses a dugout filled during spring runoff. Individual farms obtain water from regional pipelines or haul it from communities. Safety is not a major concern at any proposed sites. The sites are not near communities and are much less accessible than farmyard dugouts for small children. Monitoring of land impacts was required as a licence condition for previous phases of the development. Monitoring would be continued in this phase.)

*Natural Resources:* The Applicant is willing to meet with DNR staff to discuss the Department's recommendations. The results of these discussions could be incorporated in the final design of the works.

## **Recommendation**

As all concerns have been addressed in the additional information provided or 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. The draft licence and the Applicant's discussion regarding the DFO comments should be provided to DFO for review and comment. Members of the public who commented on the proposal should be informed of the planned action on the S15 site. It is recommended that enforcement of a finalized licence be assigned to the South-Central Region.

Prepared by:  
Bruce Webb  
August 1, 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 fifteen water storage dugouts and related intake and outlet works for irrigation water supply in various locations on the Hespeler, North Rosenheim, South Rosenheim, and Buffalo drains and Buffalo Creek in the rural municipalities of Rhineland and Stanley, 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 May 17, 1995 and the supplementary information submitted to Manitoba Environment on July 27, 1995, except as otherwise required by this Licence.
2. The Licencee shall ensure that no construction occurs at the S15 site in SW 32-2-3W unless specific written authorization has been received from the Director. The Licencee shall provide, at the time of application for approval to construct a dugout and related works at this site, letters from affected landowners indicating their agreement with proposed design details.
3. The Licencee shall submit, for the approval of the Director, detailed construction plans for each site prior to beginning construction at each site.
4. The Licencee shall consult with regional staff of Manitoba Natural Resources in the design of the engineered works of the Development. Design features included as a result of these consultations shall be noted on the detailed construction plans.
5. The Licencee shall incorporate recommendations of Manitoba Highways and Transportation in the design of works at the E8A site in SW 10-1-4W, the S14 site in SE 2-2-3W and the S11b site in SE 26-1-3W.
6. 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.
7. The Licencee shall obtain authorization from the Manitoba Water Resources Branch for works undertaken on Provincial Waterways.

8. The Licencee shall not undertake construction activities which result in siltation or sediment deposition on or immediately adjacent to waterways between April 1 and June 15 of any year.

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9. The Licencee shall ensure that measures are taken during the construction of the Development to minimize the deposition of sediment in waterways.
10. The Licencee shall plant dykes 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.
11. The Licencee shall ensure that the capacity of pumps used to divert water into the Development does not exceed 0.75 m<sup>3</sup>/s at each site.
12. The Licencee shall ensure that minimum instream flows are maintained in each waterway below the diversion points of the Development at all times while water is being diverted into the Development. These minimum instream flows (including allowances for domestic use as noted) shall be:
  - Hespeler Drain: 0.36 m<sup>3</sup>/s below the S15 site in SW 32-2-3W
  - Rosenheim Drain: 0.18 m<sup>3</sup>/s (including 0.05 m<sup>3</sup>/s domestic) in NE 5-2-3W
  - Buffalo Drain: 0.09 m<sup>3</sup>/s (including 0.05 m<sup>3</sup>/s domestic) in SE 2-2-3W
  - Buffalo Creek: 0.19 m<sup>3</sup>/s below the S11F site in SE 29-1-2W

Prior written approval from the Director shall be required to reduce these flows.

13. 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.
14. 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 Fisheries and Oceans Canada.
15. 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.
16. 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 Fisheries and Oceans Canada.

17. 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.
18. 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***.

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### **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.

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Larry Strachan, P. Eng.  
Director  
Environment Act

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