

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** Central Manitoba Irrigators Association  
Inc.  
**PROPOSAL NAME:** Whitemud Watershed Phase I Irrigation  
Project  
**CLASS OF DEVELOPMENT:** Two  
**TYPE OF DEVELOPMENT:** Water Development and Control  
**CLIENT FILE NO.:** 4170.00

### **OVERVIEW:**

The Proposal was received on May 13, 1996. It was dated May 9, 1996. The advertisement of the proposal was as follows:

“A Proposal has been filed by the Central Manitoba Irrigators Association for the construction and operation of 12 irrigation reservoirs in the Whitemud River Watershed. The reservoirs would be located on and near the following streams:

- Rat Creek and tributaries: A 40 acre-foot dugout in NW 7-11-9W and three in-channel reservoirs of 50 to 60 acre-feet in NE 12-11-9W, NE 32-13-8W or SW 33-13-8W and SW 19-11-8W.
- Beaver Creek: A 50 acre-foot dugout and a total of 50 acre-feet in three in-channel reservoirs in E 25-12-10W and NE 24-12-10W and an 80 acre-foot dugout in NE 33-12-9W.
- Image Creek: An 80 acre-foot dugout in NW 18-11-9W.
- Bagot Drain: An 80 acre-foot dugout in NE 14-12-9W.
- Squirrel Creek: A 300 acre-foot dugout in SE 18-13-10W.

All reservoirs would be constructed in August to October of 1996 and filled during the spring runoff period each year starting in 1997. Instream flows would be maintained for downstream water users and fisheries purposes during reservoir filling operations.”

The Proposal was advertised in the Portage Herald on Tuesday, May 28, 1996. It was placed in the Main, Centennial, Eco-Network and Portage Plains Regional Library public registries. It was also distributed to TAC members on May 22, 1996. The closing date for comments from members of the public and TAC members was June 21, 1996.

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

No public responses were received.

**COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

**Manitoba Environment - South-Central Region** The proponent must ensure the proposed dugouts are to be used for irrigation purposes only, and not a means of sewage, livestock waste or chemical disposal.

Disposition:

This recommendation can be included as a licence condition.

**Manitoba Environment - Water Quality Management** The concern from a water quality perspective is that proper allocation is determined in order to sustain the integrity of the stream, i.e. habitat and associated aquatic life. Table 2 is ambiguous. The totals at the bottom of each creek don't match with what is in the table. An explanation is needed for this discrepancy. The proposed construction schedule is okay but the licence should specify that no construction occurs between April 1 - June 15 in case identified timelines cannot be met. It was indicated that pumps will be operated intermittently or at a reduced volume when low flow rates in the stream are below pumping capacity. How will minimum instream flow (MIF) requirements factor in this reduced or intermittent rate? Will reduced or intermittent pumping rates be determined so as to ensure MIF rates are maintained? What will occur when flows will not accommodate MIF and dugout filling? Natural Resources Fisheries will be better able to address concerns related to fish and how far upstream spawning occurs. It was mentioned that refueling of tractors operating pumps will be done at least 100 m from the waterway. Will this be a licence condition? There may not be much incentive to move a tractor 100 m for refueling.

Disposition:

Although the calculation method for the totals in Table 2 is not immediately clear, the totals accurately reflect cumulative allocations for the main stem and each tributary of each main watercourse in the Proposal. Alternative methods of calculation for MIFs at key points in the watershed are still being discussed by PFRA (representing the Proponent), DNR and DFO. It is proposed that a licence condition specify that MIFs at key locations be approved prior to the operation of the Development. This would allow construction of the reservoirs to begin while the issues relating to MIFs are being resolved. Since maintenance of agreed MIFs is of critical importance, a licence condition should require the passing of MIFs at key locations at all times when flows permit - MIF requirements would have priority over pumping requirements. Fuel handling and storage requirements should be addressed as licence conditions.

**Manitoba Environment - Terrestrial Quality Management** Will a vegetation survey be conducted in the riparian areas, particularly where instream reservoirs are proposed? When seeding down disturbed areas, the establishment of purple loosestrife should be prevented. Vegetation in the riparian areas can adapt to short duration spring flooding, but not to long term inundation. Riparian habitat could be lost, with negative effects on the wildlife that inhabit it. Additional information is needed to address these concerns before a proper assessment can be done.

Disposition:

All offstream reservoirs are located on cultivated land. For the instream reservoirs,

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an examination of the air photos provided in the Proposal indicates that riparian vegetation (and presumably wildlife habitat) will be lost at each site. The Proposal indicates that all land affected by the instream reservoirs is periodically flooded under current conditions, and it states that estimates of clearing requirements will be provided later in detailed plans for each site. It is proposed that a licence condition require that vegetation types in areas proposed for clearing be identified on the plans. To facilitate approval of the plans, the proponent should arrange for a vegetation and wildlife habitat assessment of each instream reservoir location. This assessment should be done as soon as possible. A similar assessment was conducted previously for some Agassiz Irrigation Association sites. The concern about purple loosestrife can be addressed as a licence condition.

**Historic Resources Branch** There are potential concerns in three areas: Sites BC3, RC1 and RC2. Heritage resources have been previously recorded in the vicinity of RC2 in SW of SW 19-11-8W. The objects were on the surface of a cultivated field and relate to an Aboriginal campsite dating prior to 1700 AD. There is potential for additional material to be located in uncultivated areas along Rat Creek. The Branch's Impact Assessment Archaeologist will perform a site reconnaissance at each property. Depending on crop cover, the site evaluations may not be completed until the fall of 1996. A copy of the findings will be forwarded once the field investigations are completed.

Disposition:

Heritage resources at the three sites of interest can be addressed as a licence condition.

**Mines Branch** No concerns.

**Highway Planning and Design** No specific concerns about the proposal, but the proponent should be aware of the following Statutory Regulations under the Highways

Protection Act and/or the Highways and Transportation Department Act. Permits may be required for developments such as:

- new, modified or relocated access to a Provincial Trunk Highway (PTH) or Provincial Road (PR);
- any change in land use and placing any structures on, under or above ground within PTH or PR control lines;
- discharging of water or other liquid materials into a ditch alongside a PTH or PR; and
- placing any trees or plantings within PTH or PR control lines.

If there are any specific questions regarding these regulations, the proponent is encouraged to call the Regional Technical Services Engineer in Portage la Prairie at (204) 239-3912.

Disposition:

This information will be forwarded to the Proponent.

**Rural Development - Community Economic Development** For sites in the RM of

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North Norfolk, the proposed sites are designated Agricultural in the NORMAC Development Plan and are zoned "A80" Agricultural in the North Norfolk Zoning By-law. Sites within the RM of Portage la Prairie are designated Agricultural Area in the Development Plan and are zoned "A80" Agricultural in the Zoning By-law. There is no Development Plan or Zoning By-law in the RM of Westbourne. Our office has no concerns with the application.

**Medical Officer of Health** Health concerns with this project are general in nature. Can there be reasonable restrictions placed on irrigation so that future degradation to groundwater quality (increased salinity) can be avoided? Also, are there possibilities of nitrate laden runoff from the irrigated fields getting back into the watershed drainage system and affecting algae growth in other downstream water supplies?

Disposition:

A monitoring program for groundwater quality and soil is proposed. This program can be specifically adopted as a licence condition.

**Natural Resources (1)** MNR requests a meeting with the proponent to deal with some specifics of the project. Aspects of the instream development and mitigation methods to protect fish must be discussed. MNR will respond to the project proposal once these matters are clarified.

Disposition:

Staff of Manitoba Environment, Manitoba Natural Resources, PFRA and the Applicant met to discuss fisheries related matters. Additional information was provided to MNR for review. Following this review, MNR provided additional comments:

**Natural Resources (2)** The Department is in general agreement with the proposal. Consultation between the proponent, DFO and MNR (Fisheries, Western Region) should take place so that mitigation and/or compensation for possible fish habitat losses can be incorporated. Consultation should also take place to ensure that the proposed instream structures adequately accommodate fish passage, and to develop an agreement on pump screening requirements.

Although the Department is in general agreement with the “50 of 80” rule for maximum water appropriation, it is suggested that the proponent provide additional documentation in the form of annual hydrographs at various exceedence levels which show the impact of existing withdrawals in combination with proposed withdrawals in comparison with “natural” conditions. Supporting data tables should also be available. Minimum instream flow provisions should be re-examined and the Tessman modification should be adopted for minimum suggested flows. The proponent should adhere to construction practices in keeping with provincial stream crossing guidelines and vegetation removed should be kept to a minimum.

A number of issues will be addressed through the Water Rights licensing process: the hydraulic impact of the weirs will have to be assessed, MIF requirements, water withdrawal monitoring and field application monitoring. The impoundment on Rat Creek at RC1 may have to be drawn down by a specified date so that mowing of the vegetation can take place.

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PFRA is conducting a monitoring program on potential seepage problems in connection with the AIA projects. If any potential problems are identified in the PFRA study these projects should be re-examined in that context.

Disposition:

These comments can either be addressed as licence conditions or they will be addressed through the Water Rights licensing process. Fish habitat, fish passage and pump screening concerns can be addressed in the detailed design of each site where these considerations apply. Currently, fish are directly affected by the Proposal only at the RC1 site. Fish passage facilities are proposed at this site. As discussed above, the matter of minimum instream flows requires additional discussion. This issue can be resolved after construction, but prior to the first filling of the off-channel storage facilities.

**Canadian Environmental Assessment Agency** Application of the Canadian Environmental Assessment Act with respect to this project will not be required. Agriculture Canada has no commitment at this time, however this could change.

**Fisheries and Oceans** The proponent has not provided an assessment of the combined impact of all proposed reservoirs on downstream flows, and a phased development approach makes it difficult to assess the cumulative impacts of the various dugouts on the streams. The Whitemud Watershed Phase 1 Irrigation Project and the Aspenheim Colony proposal should be considered together in setting minimum instream flows (MIF) at the confluence of the Beaver Creek and Westbourne Drain. It is recognized that these waterways may not support significant fish habitat in the vicinity of the proposed dugouts and instream structures at the present time. However, there are real opportunities for fish habitat restoration and enhancement in Beaver and Rat Creek through the addition of rock riffle areas. Simply providing fish passage over the drop structures near Woodside and Katrime would allow fish access to the upper reaches of Squirrel Creek. The current assessment does not adequately take into account existing and potential fish and fish habitat in Beaver, Rat and Squirrel Creeks. Also, there may be downstream impacts from diverting or impounding runoff that is important for sustaining spawning and nursery habitat for fish in the lower reaches of these streams. MIF for the streams were derived using the same method developed previously for Agassiz Irrigation Association dugouts. This method of estimating MIF fails to account for streamflow fluctuations and seasonal variability. The modified Tennant method of comparing the MIF to average spring flow would be preferable, particularly if only those months with reliable flow (March to June) were included.

Withdrawals should always accommodate a MIF, regardless of available pumping capacity. Intakes should be screened in accordance with DFO's 1995 guidelines. Consultation would be needed with DFO and DNR to determine the species and life stages to be protected. Calculated MIFs are based on simulated rather than recorded data. This reduces the accuracy of the calculations. A more thorough analysis of cumulative impacts to fisheries resources should be undertaken, and a monitoring program should be a licence condition.

Disposition:

Concerns regarding the determination of MIF were discussed at the meeting requested

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by MNR and can be resolved by additional discussions. Downstream habitat is a consideration in the selection of a methodology for the calculation of the MIF for each stream or tributary affected by the Development. Licence conditions can provide for the maintenance of the MIFs which are agreed upon, and screening and monitoring requirements can also be addressed through licence conditions. With respect to future fish habitat improvements in reaches of the affected streams which are not currently accessible to fish, a licence condition may specify that pump screening and fish passage facilities may be required in the future to accommodate habitat improvements which may be undertaken by others. No such improvements are anticipated in the foreseeable future.

**PUBLIC HEARING:**

As no public concerns were identified, a public hearing is not recommended.

**RECOMMENDATION:**

All identified concerns 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 South-Central Region. The approval of plans should remain with Environmental Approvals. Plans should be reviewed for approval with department staff, DNR staff and DFO staff as appropriate. A meeting should occur between the Proponent, South-Central Region staff and Approvals staff to review the finalized licence and clarify to the Proponent which branch of the Department is responsible for each term.

**PREPARED BY:**

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July 31, 1996

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