## SUMMARY OF COMMENTS/RECOMMENDATIONS

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| **PROPONENT:** | **G3 Regional Water Co-operative Inc.** |
| **PROPOSAL NAME:** | **G3 Regional Water Co-operative Inc. Water Supply project** |
| **CLASS OF DEVELOPMENT:** | **Two** |
| **TYPE OF DEVELOPMENT:** | **Water Development and Control** |
| **CLIENT FILE NO.:** | **5360.00** |

### OVERVIEW:

The Proposal was received on August 29, 2008. It was dated August 26, 2008. The advertisement of the proposal was as follows:

"A Proposal has been filed by the Manitoba Water Services Board on behalf of the G3 Regional Water Co-operative Inc. to construct a water supply system to provide potable water to the Towns of Grandview and Gilbert Plains and the Rural Municipality of Gilbert Plains. Water for the system would be supplied from the R.M. of Gilbert Plains' water treatment plant in NW 26-26-23W, which would be upgraded and expanded to provide a total capacity of 20 litres/second for community, rural and livestock use. The water treatment plants currently serving the Towns of Grandview and Gilbert Plains would be decommissioned. Treated water would be distributed through pipelines located in road allowances. Construction would occur in 2009 depending on funding availability."

The Proposal was advertised in the Grandview Exponent on Tuesday, September 16, 2008. It was placed in the Main, Millenium Public Library, Eco-Network and Dauphin Public Library public registries. The Proposal was distributed to TAC members on September 4, 2008. The closing date for comments from members of the public and TAC members was October 10, 2008.

### COMMENTS FROM THE PUBLIC:

No public comments were received.

### COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

**Parks and Natural Areas** No comments

**Sustainable Resource Management Branch** No concerns.

**Manitoba Water Stewardship**

- *The Water Rights Act* indicates that no person shall control water or construct, establish or maintain any "water control works" unless he or she holds a valid licence to do so. "Water control works" are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, OR changes or may change the location or direction of flow of water, including but not limited to water in a water body, by any means, including drainage. If the proposal in question advocates any of these activities, application for a Water Rights Licence to Construct Water Control Works is required.

- The proponent needs to be informed that if the proposal in question advocates any construction activities, erosion and sediment control measures should be implemented until all of the sites have stabilized.

- The *Environment* Act Proposal indicates that the pipeline will cross a number of intermittent and permanent water courses, including the Valley River and Silver Creek. The proponent indicates that all water courses containing water will be directionally drilled and the entry and exit points for the drill will be outside of the riparian zones. The proponent should be advised that:

    - The Manitoba Water Services Board's Guidelines for Water Course Crossings identifies a 15-metre setback distance for drilling near riparian zones.

    - Any other crossings may be open cut trench and must adhere to the Department of Fisheries and Oceans Canada's operational statements.

- Based on regional experience, the Department prefers that, at minimum, those crossings with a defined channel and potential to carry water during spring runoff be directional drilled. This is due to the difficulty in stabilizing the sites when open cut trenching is used and the ongoing erosion and sedimentation which results. If there is any intention or need to change from directional drilling to open cut on the larger water courses (Valley River and Silver Creek), the proponent should consult with the Regional Fisheries Manager (Contact given).

- The reject waste stream will be directed to Sulphur Spring Creek. Sulphur Spring Creek is a tributary to the Valley River which has a number of important recreational and commercial fish species. Valley River is also a tributary to Dauphin Lake. Minimizing any impacts to water quality in the Valley River and ultimately Dauphin

Lake as a result of increased nutrient loading or decreased water quality from feeder streams is important. Sulphur Spring Creek is already a highly altered and impacted creek.

- The Department requests information to be provided for the following:
    - Is there any irrigation use or important wetland habitat in the downstream waterways that might be impacted from this increase in TDS and other reject water constituents?

- As recommended in the report by W. L. Gibbons and Associates and discussed in the 2002 report by PFRA, long-term groundwater monitoring is a necessary requirement for this project, particularly since the aquifer boundaries have not been established, and recharge may be limited by the overlying tills. Groundwater development in similar highly confined aquifers on the Prairies has in some cases resulted in significant drawdown and lead to lowering of the estimates of the long-term sustainable yield of the aquifers. As discussed in the Gibbons report, the only way to firmly establish the sustainability of groundwater supplies is through long-term monitoring of pumping impacts. The Gibbons report suggests using an existing well as a monitoring point and installation of a second monitoring well. Gibbons also recommends that these wells be equipped with continuous water level recorders.

- The Department recommends for an *Environment Act* Licence to include the following:
    - The proponent shall apply for a Water Rights Licence. A contact person is (Contact given).
    - Project drawings and specifications shall be submitted to Manitoba Water Stewardship's Office of Drinking Water. Approval shall be obtained from Manitoba Water Stewardship's Office of Drinking Water prior to commencing construction. Engineering assessments of the water systems of the Town of Grandview, Town of Gilbert Plains and RM of Gilbert Plains should be conducted according to the schedule specified in their respective Operating Licences, or as specified in the extension granted from Manitoba Water Stewardship's Office of Drinking Water.
    - A water quality monitoring program shall be developed and conducted to evaluate both the impact of the reject water on the receiving stream, as well as the impact of the hydraulic load on the receiving wetland.
        - For three years, an annual report shall be submitted by March 31st, for review, to Manitoba Water Stewardship's Water Quality Management Section.
    - The proponent shall develop and conduct a long-term groundwater monitoring program. Monitoring from the beginning of the development

of the aquifer will allow sustainability estimates to be developed and applied to any future expansion of this project or other projects that may arise in the future.

- For five years, an annual report shall be submitted by March 31st, for review, to Manitoba Water Stewardship's Groundwater Management Section.

  - Furthermore, this requirement to conduct a long-term groundwater monitoring program is not usually a condition of a Water Rights Licence, the Department strongly recommends to include a requirement to conduct a long-term groundwater monitoring program in an *Environment Act* Licence.

Disposition:

Some comments can be addressed through licence conditions. Other comments will be noted to the proponent. The proponent was asked to provide additional information as requested.

**Historic Resources Branch** The Historic Resources Branch has no concerns with regard to this project's potential to impact heritage resources.

If at any time however, significant heritage resources are recorded in association with these lands during development, the Historic Resources Branch may require that an acceptable heritage resource management strategy be implemented by the developer to mitigate the affects of development on the heritage resources.

Disposition:

Comments can be addressed via licence conditions.

**Highway Planning and Design Branch**

The proposed development is located adjacent to Provincial Road 274 and PR 366. As such the proponent should be informed that any new, modified or relocated access connections onto PR 274 and PR 366 will require a permit from Manitoba Infrastructure and Transportation (MIT) (including changed use in access). A permit will also be required for any construction (above or below ground level) within 38.1 m (125 ft) or for any plantings within 15.2 m (50 ft) from the edge of right-of-way of PR 274 and PR 366.

A water line agreement will be required from MIT prior to placing any water supply lines within the right-of-way. MIT prefers that an underground agreement be obtained prior to tendering any proposed installation. Detailed design drawings will be required to be submitted for department's review.

If additional information or clarifications on these requirements are required, the applicant should contact (Contacts given).

Disposition:
Comments were forwarded to the proponent for information and can be addressed via licence conditions.

**Canadian Environmental Assessment Agency** I have undertaken a survey of federal departments with respect to determining interest in the project noted above. I can confirm that the project information provided has been distributed to all federal departments with a potential interest. I am enclosing copies of the relevant responses for your file.

Based on the responses to the federal survey, I am unable to determine if the application of the *Canadian Environmental Assessment Act* will be required for this project. Transport Canada (TC) has indicated that they have insufficient information on which to determine whether an environmental assessment (EA) under the Act is triggered by their department, as outlined below:

TC requested the following information:
1. Details regarding the location of any proposed works in, on, over, under, through or across any navigable waterways; including a latitude and longitude or map illustrating the location.
2. Characteristics of the waterways (include depth, width, length, natural and man-made obstruction etc.)
3. A description of all proposed works affecting any navigable waterway (including temporary works). Preliminary design details should be provided if available.
4. Details regarding proposed construction methods (e.g. use of cofferdams, temporary bridges, etc.)
5. Proposed construction schedule

Should the navigability of a waterway be in question or unknown, a navigability assessment request should be submitted to the Transport Canada-Navigable Waters Protection Program in the region for a determination. The proponent is also reminded that complete applications for all works in navigable waters must be submitted as early as practical for review and approval prior to the commencement of any works.

Fisheries and Oceans Canada (DFO) and Health Canada can provide specialist advice if requested, and DFO wishes to participate in the provincial review.

Disposition:
TC's information request was forwarded to the proponent by the Agency. TC, DFO and CEAA will be included on the TAC for the project.

**Environment Canada**

The Environment Act proposal stated in section 2.8.2, page 13, that "A comparison of water quality of the reject water and sulphurspring Creek shows that the membrane reject will result in an increase in ion concentrations in the receiving water…". The proposal did not specify any mitigation measures to address this increase in ion concentration in the reject water. Some water supply projects have used settling ponds to reduce or eliminate such loading from reject water before its discharge to a receiving water body.

Section 36(3) of the *Fisheries Act* states that:

> *"Unless authorized by federal regulation, no person shall deposit or permit the deposit of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water".*

The proponent further indicates that the final disposal of the chlorine solution used to disinfect the reservoirs and pipelines will occur provided the chlorine residuals are less than 0.1 mg/L. Please be aware that chlorinated wastewater is listed in schedule 1 of CEPA 1999; list of Toxic Substances, chlorine has also been determined to be toxic to fish and other aquatic species at very low concentrations. Therefore, EC recommends that chlorinated water used to disinfect reservoirs and pipelines should not be directed to surface waters unless the residual chlorine is non-detectable and non-deleterious at the point of discharge.

Disposition:

Comments can be addressed via licence conditions.

**ADDITIONAL INFORMATION:**

Additional information addressing TAC comments was requested from the proponent on September 3, 2008:

- Water use numbers for "agricultural and livestock water use", as best as possible (page 7 indicates peak usage in RM of Gilbert Plains is in winter months due to cattle being confined and on the water system)
- Discussion of water conservation measures
- Addressing the high per capita consumption in the Town of Grandview due to distribution system losses (e.g. Will this be remedied? How?)
- Addressing bulk loading being much higher in the Town of Grandview versus the RM and Town of Gilbert Plains
- Does EA Licence No. 2597 need to be rescinded, since the new licence will be covering the same system? Also, will the G3 Regional Water Co-op be taking over the Sugarloaf Co-op or will it remain independent?

The response was received on September 8, 2008:

1) Agriculture and livestock water use
    - According to the 2004 Stantec study on the Town of Grandview, bulk water use averages approximately 9000 L/d. In conversation with the Town of Grandview, about 50% or 4500 L/d is used by rural users and most of these rural users are using the bulk fill for residential use.
    - The Town of Gilbert Plains reported bulk water use of approximately 4500 L/d and that most of this use is from Town residents as a rural bulk fill station outside of town is available for agriculture use.
    - The RM of Gilbert Plains identified approximately 7 higher water use operations in the municipality. These high water users consume on average approximately 20,000 L/d. During winter periods water use increases approximately 45,000 L/d.
    - The RM of Grandview has a separate water supply, treatment and rural water distribution system which is not part of this proposal.

2) Water Conservation Issues
    - Water conservation measures include metering and pricing of water. Future measures will include distributing information in water bill mailings pertaining to available devices to reduce water conservation. Public awareness reports as required by the Drinking Water Safety Regulation on water quality and the water supply system will be distributed annually.
    - Leak detection will consist of reconciling on a quarterly basis the volume of water pumped and charged to ratepayers. Since these services are metered, abnormalities can be identified and rectified.

3) Town of Grandview Distribution Losses
    - The Town of Grandview recognizes significant water leakage in the Town's distribution system. The Town will implement watermain replacement on a yearly basis as funding permits. Since the Town will purchase water from the G3 Regional Water Co-operative and sell to Town residents, watermain replacement will be vital to reduce revenue losses.

4) Grandview Bulk Loading
    - Bulk loading in the Town of Grandview is not high. The Town of Grandview water demand is high most likely due to a leaky distribution system

5) EA Licence No. 2597 and Sugarloaf System
    - EA Licence No. 2597 should be rescinded as the proponent will have changed as well as the rate of reject discharge. The Sugarloaf system will remain independent from the G3 and therefore the licences associated with Sugarloaf will not be rescinded.

Additional information addressing TAC comments was requested from the proponent on October 15, 2008:

> Is there any irrigation use or important wetland habitat in the downstream waterways that might be impacted from this increase in TDS and other reject water constituents?

The response was received on October 15, 2008:

> I have not observed any irrigated farmland near the project area nor would I expect any negative impacts if there were any irrigation projects. The groundwater supplies are considered good water quality. The TDS was sampled in 2005 by the Office of Drinking Water as 581 mg/L. The major constituents are Sulphate, Carbon, Calcium, and Magnesium. Other minerals of lesser concentrations are Potassium, Sodium, Iron, Chloride and Silicon. The USEPA has protected sensitive wetlands from desalination projects where brackish groundwater or sea water is being treated for potable water. The salinity of these water sources are from 1000 – 35,000 mg/L. The sodium content of the Gilbert Plains groundwater source is 13.5 mg/L. Given the flow and concentration, negative impacts to wetland vegetation are not anticipated.

## PUBLIC HEARING:

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

## RECOMMENDATION:

All provincial comments received on the Proposal can be addressed as licence conditions, or have been forwarded to the Applicant's representative for information. Information needed to complete the federal assessment process has been requested and will be provided directly to the interested department. Therefore, it is recommended that the Development be licenced 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 Western Region.

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