

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Border Valley Water Cooperative Ltd.
PROPOSAL NAME: Water Treatment Facilities and Backwash Pipeline
CLASS OF DEVELOPMENT: One
TYPE OF DEVELOPMENT: Waste Disposal - Water Treatment Plants (Wastewater)
CLIENT FILE NO.: 4452.00

OVERVIEW:

The Proposal was received on July 5, 1999. It was dated June 30, 1999. The advertisement of the proposal was as follows:

“A Proposal has been filed by PFRA on behalf of the Border Valley Water Cooperative Ltd. for the construction and operation of new water treatment facilities in the Cooperative’s existing pumphouse in SW 18-1-3W. The equipment would be used to reduce iron and manganese concentrations in the treated water. It would consist of a conventional manganese greensand filter system with potassium permanganate oxidizer. Backwash water from the plant would be discharged through a buried pipeline to Buffalo Creek. Backwash water volumes are estimated to be 9,000 litres per day, five days per week. The new equipment is proposed to be installed when funding becomes available.”

The Proposal was advertised in the Altona Red River Valley Echo on Monday, July 26, 1999. It was placed in the Environment, Centennial and South Central Regional Library (Morden) public registries. The Proposal was distributed to TAC members on July 21, 1999. The closing date for comments from members of the public and TAC members was August 20, 1999.

COMMENTS FROM THE PUBLIC:

No public comments were received.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Environment - South-Central Region - No concerns.

Manitoba Environment - Water Quality Management - There is some concern with directing discharge of backwash water directly to Buffalo Creek in a pipeline versus having a holding cell to allow collection of treatment flocculant and to allow chlorine residual to volatilize before water would be decanted from this cell and into a downstream waterway. The pipeline will undoubtedly transport the water to Buffalo Creek quickly and will not provide much time for exposure to the air. Since the pipeline mouth will enter the creek from underground this backwash water will have an even

greater impact in winter with ice and snow cover. Although the volumes of backwash water do not appear to be very large, according to the proposal, this water will be treated water and consequently will have been chlorinated.

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The proposal states that the pipeline will not be disinfected using concentrated chlorine so a chlorine concentration above 0.1 mg/L will not be released into water bodies. There will have to be consideration to the chlorine concentrations in the backwash water and the aquatic guideline values is 0.011 mg/L.

Data provided with the proposal is rather dated (1983) and does not have an arsenic value. I'm not sure how effective the treatment is for binding iron, manganese and arsenic over the long term, but there is some concern that treatment sediment could build up near the discharge point in the creek and elevated arsenic values begin leaching from the backwash sediment.

Disposition:

These comments identify two concerns with respect to the disposal of backwash water in Buffalo Creek. One concern involves the quality of the backwash effluent water due to the concentration of materials removed by the treatment process, and the other involves the addition of chlorinated water to Buffalo Creek. With respect to the materials removed by the treatment process, iron, manganese and possibly arsenic will be involved. These constituents will be suspended in the backwash water, and would not produce a thick sludge as with a conventional lime soda ash plant. Monitoring for residues in the vicinity of the discharge location is adequate to protect against excessive concentrations. High spring flows in the creek could potentially remove any annual sediment accumulations in the vicinity of the discharge point. With respect to chlorine residuals, again, monitoring at the discharge point will be sufficient to indicate whether chlorine in the small daily quantity of backwash water is being adequately reduced in the creek. Chlorine reduction in the creek would occur even if no flow was occurring. Accordingly, these concerns may be addressed through standard licence conditions.

Historic Resources Branch - No concerns.

Highway Planning Branch - The proposed development is located adjacent to PR 243. Any new, modified or relocated access connection onto the PR may require a permit. A permit may also be required for any construction within 38.1 m or for any plantings within 15.2 m from the edge of the right-of-way. The regional Technical Services Engineer is the department's contact person for these permits.

Disposition:

This information will be forwarded to the Proponent's consultant.

Community Economic Development Services - No concerns.

Medical Officer of Health - Portage la Prairie - No health concerns. Health supports the provision of better quality potable water for the patrons of the development.

Natural Resources - This project could negatively affect fish habitat quality in Buffalo Creek. Precipitated iron and manganese in the water treatment sludge would enter the creek. Past experience has shown that these sludges cause a low fish habitat quality sediment to be deposited in receiving streams. In addition, the backwash effluent chlorine concentrations may exceed water quality guidelines for the maintenance of

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aquatic life. It is proposed that the proponent use an effluent storage dugout rather than a backwash disposal pipeline. Construction activities near water should not occur between April 1 and June 15 to avoid spring spawning activities and should follow DNR stream crossing guidelines. Construction should not take place during the wildlife breeding and rearing season. (May through July.) Equipment use in riparian areas should be kept to a minimum and disturbed areas should be seeded with native species. The DNR regional wildlife manager should be kept informed of work progress.

Disposition:

As discussed above, monitoring is sufficient to address the comment concerning sludge and chlorine. All comments can be addressed through licence conditions.

Canadian Environmental Assessment Agency - PFRA has provided notification that an environmental assessment under The Canadian Environmental Assessment Act will be conducted. Environment Canada and Fisheries and Oceans have offered to provide specialist advice in accordance with subsection 12(3) of the Act.

Department of Fisheries and Oceans - The project has the potential to impact on fish habitat. The proposal is not likely to have a negative impact on fish and fish habitat with the implementation of the following mitigation measures: no instream activity should be conducted in the period April 1 to June 15 in any year; disturbed banks of Buffalo Creek should be stabilized and revegetated immediately following construction; the deposit of deleterious substances into water frequented by fish is prohibited. Refueling and maintenance of construction equipment should be conducted at least 100 m from Buffalo Creek. All instream works should be conducted during low water flows and should be postponed during high precipitation events.

Disposition:

These comments can be addressed as licence conditions.

PUBLIC HEARING:

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

RECOMMENDATION:

All comments received on the Proposal 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.

PREPARED BY:

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