PEACE RIVER REGIONAL DISTRICT

REPORT

To: Electoral Area Directors Committee Report Number: ENV-EADC-003

From: Paulo Eichelberger, GM of Environmental Services Date: June 8, 2020

Subject: Charlie Lake Reclaimed Water Facility Design

RECOMMENDATION:

That the Electoral Area Directors Committee recommend that the Regional Board authorize compilation and issuance of a Request for Proposal (RFP) for qualified professionals to design a water reclaim system at the Charlie Lake Waste Water Treatment Facility, based on the recently updated 2017 feasibility study.

BACKGROUND/RATIONALE:

The PRRD operates a Trucked Waste Receiving and Wastewater Treatment Facility (Facility) which serves rural customers from the rural electoral areas as well as the Charlie Lake Sewage Service Area. A recent assessment of the Facility outlined various opportunities of reclaiming the treated effluent at the site for use in several different non-potable, low exposure[1] options which include:

- Equipment process water – operating the screen and centrifuge.
- Wash-down water – onsite cleaning of equipment.
- Composting Site Operations – for use with amending biosolids into acceptable composting material.
- Onsite dust control and site irrigation.
- Selling for offsite non-potable use on industrial sites for hydraulic fracturing; oil/gas well drilling; dust control; hydrostatic testing; soil compaction and equipment washing.

Given that the PRRD has applied for grant funding[2] to aid in constructing a reclaimed water facility at the Charlie Lake site, it is recommended to move forward with design of the facility in summer of 2020. This will ensure that a design is completed and "shovel-ready" in advance of issuing a construction tender.

ALTERNATIVE OPTIONS:

1. That the Electoral Area Directors Committee provide further direction.

STRATEGIC PLAN RELEVANCE:

☒ Not Applicable to Strategic Plan.

[1] "Exposure" refers to the chance of public contact with reclaimed water under the Municipal Wastewater Regulation (MWR). Onsite works have "low exposure" due to restricted access to the public and low risk to receiving environment.

[2] Canada-British Columbia Investing in Canada Infrastructure Program-Green Infrastructure grant was applied to Feb 26, 2020. Successful applicants will receive notification September 2020.

FINANCIAL CONSIDERATION(S):

Per the attached feasibility study, Class D cost estimates are as follows:

- Table 5.1.3 -For low-exposure onsite works as described above = $474,000 (including 15% engineering or $47,600).
- Table 5.2.3 – For moderate exposure offsite works (specifically crop irrigation and agricultural uses) = $940,935 (including 15% engineering or $94,400).

The additional cost for the moderate exposure option reflects added infrastructure in the form of a new truck fill station and civil works attached to the temporary lagoon currently onsite in order to meet a higher standard of reclaimed water quality than low-exposure works.

COMMUNICATIONS CONSIDERATION(S):

None at this time.

OTHER CONSIDERATION(S):

Offsite crop irrigation or other agricultural uses are classified as having "moderate exposure," as public contact to the water is restricted, users are educated to the risks of using reclaimed water and additional water quality requirements are required to be met to maintain low risk to the environment.

Attachments:

1. 2017 Reclaimed Water Use Feasibility Study
2. 2020 Memorandum Updated on Reclaimed Water Use Feasibility