



REPORT

To: Electoral Area Directors Committee

Report Number: ENV-EADC-005

From: Paulo Eichelberger, GM of Environmental Services

Date: October 15, 2020

Subject: Potable Water Stations Operational Update

RECOMMENDATION:

That the Electoral Area Directors Committee recommend that the Regional Board authorize the amendment of the Electoral Area B Potable Water Fees and Charges Bylaw 2409, 2020 to include a bottle fill water rate charge of \$3 per 18 Litre Bottle.

BACKGROUND/RATIONALE:

Station Operations to Date

1. **Boundary** - Expansion was completed during the summer of 2020. 40,000L capacity is available and in use at the tankloader site.
2. **Buick** -Annual maintenance (cleaning and disinfecting) of the storage tanks has been completed.
3. **Feye** -Awaiting final approval from Northern Health to install the carbon filter for the bottle fill. Estimated time of approval from Northern Health is 90 days.
4. **Prespatou** - Station operating normally, no issues.
5. **Rose Prairie**
 - a. The Granular Activated Carbon (GAC) Filter has been installed. Production pilot began Aug 19, 2020. Removal of hydrogen sulfide works and resulting treatment reduces turbidity to acceptable levels.
 - b. Filter media was exhausted much earlier than expected (within 3-4 weeks). As this system seems to work, but could result in high operations/maintenance costs, the consultant and filter provider reviewed options and will introduce different filter media into the GAC. The new media will be run in the GAC filter vessel during the week of October 11th, adding 3 weeks of pilot run time.
 - c. Outflow from reject pond has been improved to prevent the adjacent field from flooding.

Costs and Usage

The water systems have been operating consistently since 2019, allowing staff to compile baseline data on usage, costs and revenue. Table 1 summarizes usage through September 2020.

Table 1

Station	Year	Avg. Daily Volume	Total Volume (m3)	Total Transactions	Volume Bottle	# Transactions (Bottle)	Volume Bulk	# Transactions (Bulk)
Buick	2019	7	2,425	3,952	51	2,185	2,375	1,767
	2020	7	1,825	2,659	47	1,343	1,316	1,778
Boundary	2019	23	7,789	1,617	4	117	4,545	1,500
	2020	28	7,205	2,262	8	112	7,197	2,150
Feye	2019	4	656	633	6	251	644	382
	2020	2	464	687	11	481	453	206
Prespatou	2019	16	7,268	5,474	49	2,162	7,219	3,312
	2020	22	5,593	3,435	32	944	5,561	2,491
Rose Prairie	2019							
	2020							
TOTAL	2019		18,138	11,676	110	4,715	14,783	6,961
	2020		15,087	9,043	99	2,880	14,527	6,625
	2020 (Projected)		20,667	12,779	139	4,070	20,528	9,361

Key takeaways from Table 1:

Boundary and Prespatou sites are increasing in consumption, while Buick is stable and Feye is very low. Overall projected consumption is 14% higher than 2019 (20,667 m3 versus 18,138m3).

For operations, it is recommended that the cost for water be increased for the bottle fill to \$3 per 18L bottle to harmonize with similar purchases in nearby municipalities.

ALTERNATIVE OPTIONS:

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

STRATEGIC PLAN RELEVANCE:

- ☒ Organizational Effectiveness
- ☒ Responsive Service Delivery

FINANCIAL CONSIDERATION(S):

Table 2

Station	Year	Capital Exp. Incl. Legal	Operations (Fixed Contractor Costs)	Operations (Variable Electrical & Maintenance Costs)	Total Operation	Gross Revenue	Net Revenue
Buick	2019	\$879,123	\$118,052	\$7,946	\$125,998	\$3,437	-\$122,561
	2020	\$679	\$62,359	\$6,895	\$69,254	\$5,475	-\$63,779
Boundary	2019	\$664,364	\$57,013	\$8,690	\$65,703	\$11,730	-\$53,973
	2020	\$411,625	\$25,342	\$10,391	\$35,733	\$21,615	-\$14,118
Feye	2019	\$503,820	\$77,358	\$17,411	\$94,769	\$739	-\$94,030
	2020	\$283	\$41,139	\$6,585	\$47,724	\$1,392	-\$46,332
Prespatou	2019	\$633,083	\$138,398	\$15,515	\$153,913	\$8,552	-\$145,361
	2020	\$339	\$74,955	\$10,430	\$85,385	\$16,780	-\$68,605
Rose Prairie	2019	\$707,785	\$112,280	\$12,669	\$124,949	\$0	-\$124,949
	2020	\$147,764	\$49,997	\$38,682	\$88,679	\$0	-\$88,679

Key takeaways from Table 2:

- Remaining capital spend for 2020 will be \$585,690. Operational Costs net of revenue will be approximately \$400,000, bringing overall spends for 2020 to \$1,000,000.
- Given that Operating and Capital Reserves are \$0, it's recommended that transfer to each of these reserves be set at \$100,000 annually beginning in 2021.
- The overall budget for 2021 is estimated at \$1,085,000.

Overall costs for the function for 2020, excluding all administrative expenditures, are expected to be \$983,501. Assuming that the loan for the capital works has been paid down by PRA Reserves, the full theoretical budget for operations in 2021 should look like this:

Table 3

Category	Costs
Administrative Costs	\$160,000
Station Operational Costs	\$625,000
Transfer to Operational Reserve	\$150,000
Transfer to Capital Reserve	\$150,000
Total	\$1,085,000

Water Purveyors in Dawson Creek and Fort St. John are charging \$3-\$4 per 18L bottle. Compared to our pricing, one bottle of water from our sites costs \$0.05/bottle. If bottle fill is increased to \$3.00/ 18L bottle (166.67/m³) compared to \$0.05/18L bottle (\$3/m³), total potential projected annual in 2020 vs revenue would increase by \$23,731 as shown below:

Table 4

Volume (in m ³)	Bulk (in m3)	Bottle (in m3)	Total Revenue (\$3/m3)	Total Potential Revenue (\$3/m3 for bulk, \$3/ bottle for bottle fill)
2020 (projected)	20,528	139	\$62,001	\$84,732

COMMUNICATIONS CONSIDERATION(S):

None at this time.

OTHER CONSIDERATION(S):

Feye Spring sees very limited use. It is estimated to cost \$92,662 to operate the station in 2021 with a minimal revenue of \$1,392. Given the high operational costs and low use and low revenue, it may make sense to close this spring and store the treatment infrastructure for a future site.