

# ***Graham Lake Improvement District***

3567 East Road, Denman Island, BC V0R 1T0 Tel: 778-932-0324  
www.grahamlakewater.com ~ manager@glid.ca

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## **GRAHAM LAKE IMPROVEMENT DISTRICT ANNUAL GENERAL MEETING MARCH 18, 2020**

### **REPORTS**

1. Operators Report
2. Manager's Report
3. Financial Report
4. Chair's Report

# GRAHAM LAKE IMPROVEMENT DISTRICT 2019 OPERATORS REPORT



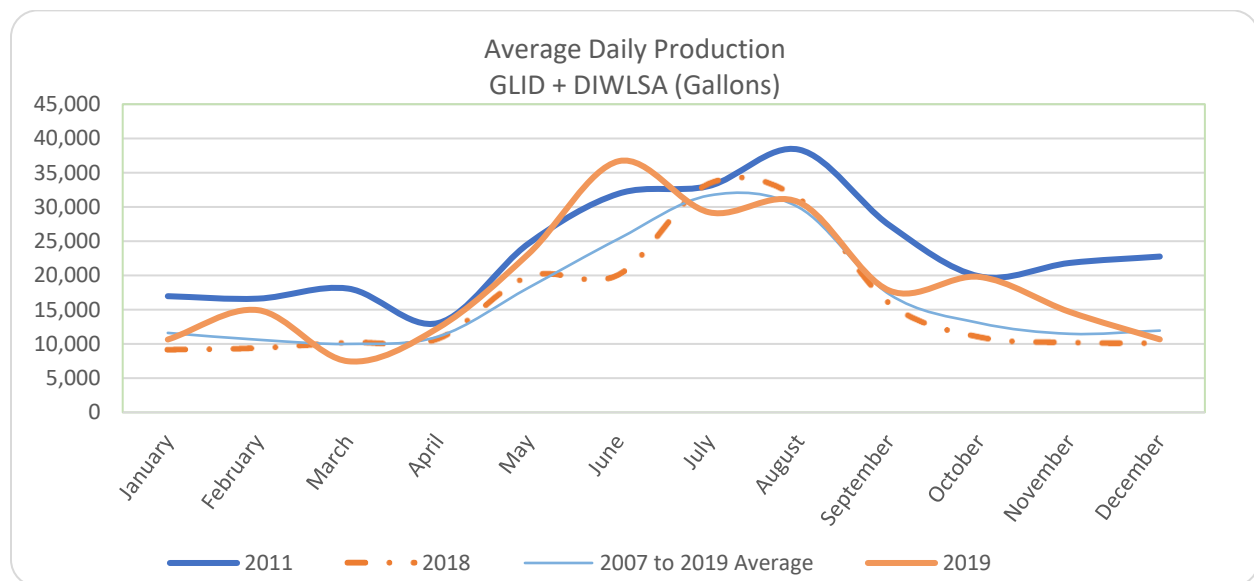
3567 EAST ROAD,  
DENMAN ISLAND, BC, V0R 1T0,  
250 335 2811  
[WWW.GRAHAMLAKEWATER.COM](http://WWW.GRAHAMLAKEWATER.COM)  
Enrico Wauri - Operator  
Craig Williams – Operator

## 2019 – The Year in Review

2019 can be characterized as having been a relatively calm year from the Operators' perspectives. Water demand / treatment volumes were up over previous years. An algae event elevated summer lake water turbidity, necessitating a boil water notice and keeping the operators busy backwashing filters. The absence of bulk water filling relieved the operators of numerous visits to the pump house to maintain consistent disinfectant residual levels. This contributed to more stable THM levels throughout the system. Several maintenance tasks were deferred to 2020 while we search for solutions to some mechanical issues in the pump house.

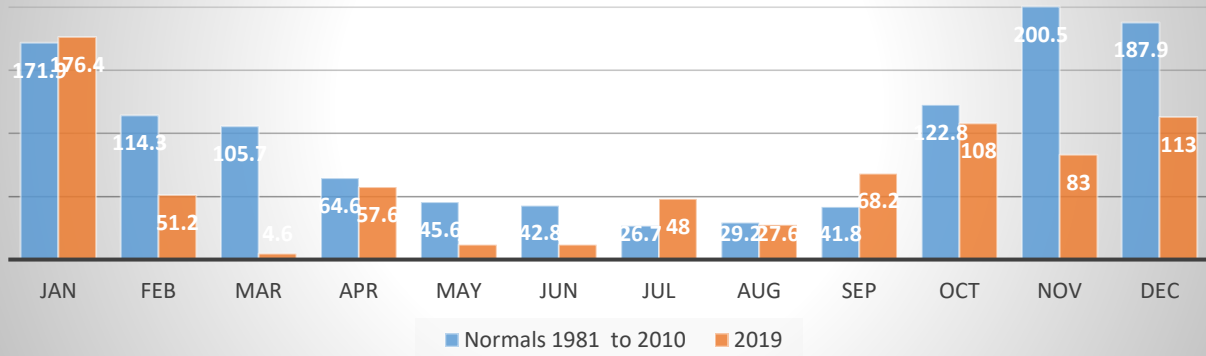
## 2019 Treated Water Production

Graham Lake Improvement District (GLID) treated 6.9 million gallons of water in 2019 which represents an increase of approximately 19% over the volume of water treated in 2018. This is 33% above the 2007-2019 average annual production and 20% less than the annual production that occurred in 2011 (the maximum annual amount on record). It should be noted that since 2011 we have added 20+ household to the system.



In 2019, an exceptionally dry February and March lead to an atypical early season increase in irrigation demand and a peak daily demand in late May and early June. In other years, peak usage has typically occurred in August.

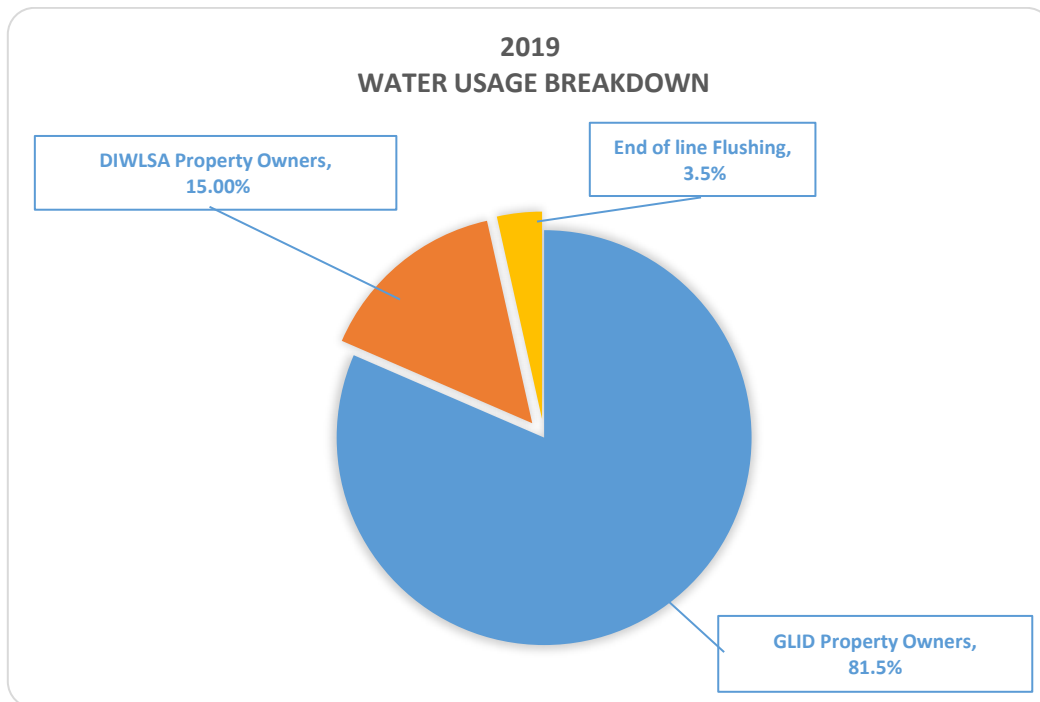
Precipitation Environment Canada - Comox A  
(mm)



Additionally, we experienced three significant customer side leaks during the year. Two were small but progressively grew to approximately 8 gallons per minute and were difficult to locate. The third leak developed instantaneously and was quickly discovered on our remote monitoring system, although heavy rains made locating the leak difficult.

Of the 6.9 million gallons produced, approximately:

- 81.5% was consumed by GLID property owners
- 15% was consumed by DIWLSA users
- the remaining 3.5% was flushed at the south end of the DIWLSA line to help prevent stagnation and improve disinfection residuals.



The 6.9 million gallons of treated water produced in 2019 represents approximately 45% of GLID + CVRD's annual aggregate allowable withdrawal against our water licenses of 15.4 million gallons.

## Water Safety and Quality

### Bacteria Sampling

Schedule B of the Drinking Water Protection Regulation requires that we submit 4 water samples per month to VIHA for bacteriological analysis. Each week, two samples of treated water are taken from our sampling points at 4356 East Road, and 5326 East Road and delivered to the VIHA office in Courtenay.

103 drinking water samples were submitted to VIHA in 2019 and all were found to be free of coliform bacteria.

### Algae

In mid June, algae growth in the lake began to accelerate leading to water quality complaints by mid July, followed by a boil water notice in mid August, with property owners around the lake experiencing similar water quality issues.

In June and July, two water samples were sent to the laboratory for identification and classification of the algae. The results indicated that we were not dealing with a blue-green algae bloom, despite some blue-green algae being present.

Some Blue-Green algae produce cyanotoxins which can be harmful to humans. It is possible that blue-green algae blooms could occur in Graham Lake, so we have been consulting with VIHA to develop a practical protocol for blue-green algae monitoring.

### THMs

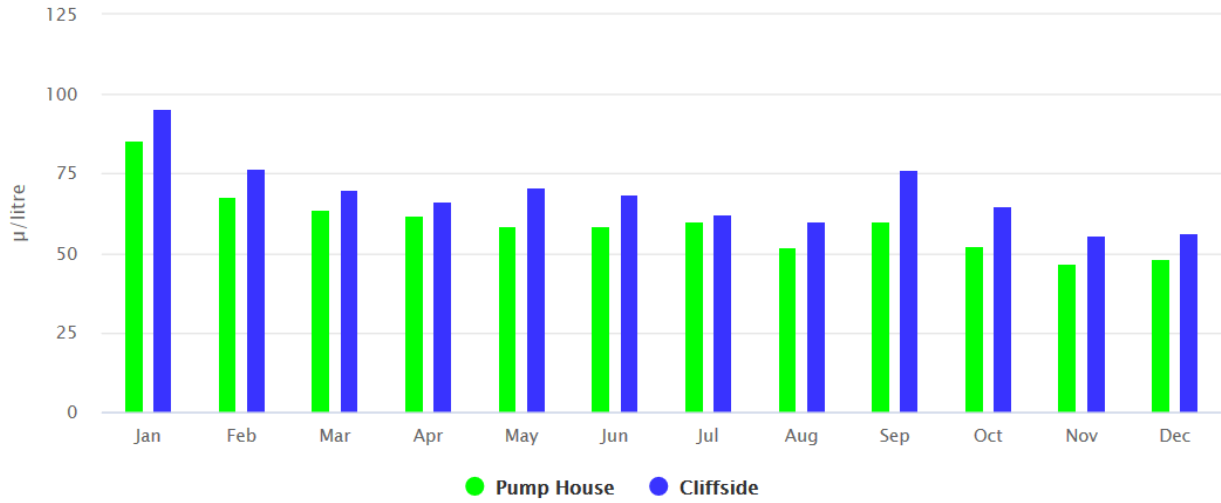
Trihalomethanes (THMs) are disinfection by-products that can be created when organic materials in raw water are exposed to chlorine in our water treatment plant. Monthly samples are taken from both the pump house and the CVRD's sampling hydrant at 5326 East Road (Cliffside). The maximum acceptable concentration for THMs in drinking water is 100 µg/L based on a running annual average of samples taken at the point in the distribution system with the highest potential THM levels. Our running annual averages are well below the 100 µg/L guideline and are as follows:

- 59.7 µg/l      3567 East Rd (Pump House)
- 68.6 µg/l      5326 East Road (Cliffside)

# Trihalomethanes (THM)



2019



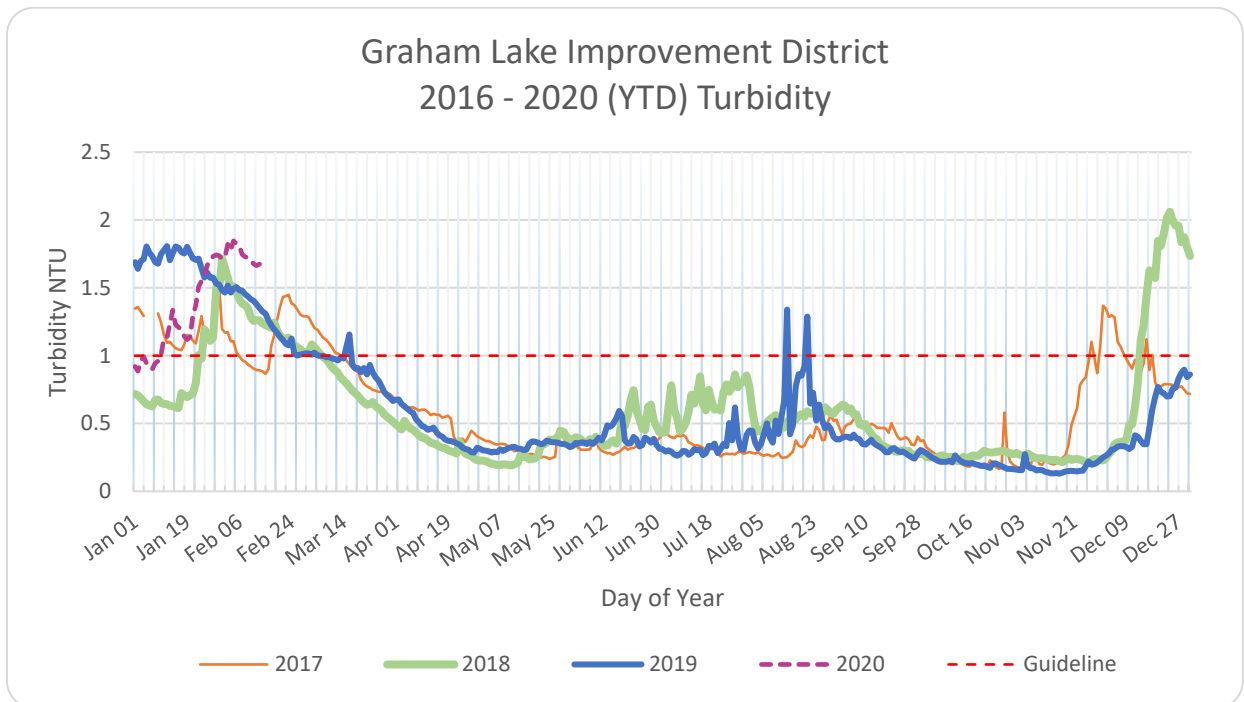
Highcharts.com

## Turbidity

*“High turbidity can interfere with the disinfection of drinking water by causing ultraviolet light and/or chlorination processes to become ineffective in destroying pathogens. Turbidity events can also be linked to an increase of disease-causing micro-organisms in the source water. The turbidity objective for drinking water from surface water supplies is less than 1.0 NTU.” – VIHA*

Turbidity exceeding 1.0 NTU is common for the Graham Lake Improvement District during the fall and winter months. Although we see some algae related turbidity in the summer months, 2019 was the first year on record where summer turbidity exceeded the 1 NTU guideline. On August 14<sup>th</sup>, 2019, we issued a boil water notice which lasted until August 27<sup>th</sup>, 2019.

In 2019 our turbidity exceeded 1 NTU for 68 days with an average annual daily turbidity of 0.6 NTU.



# APPENDICIES

## Vancouver Island Health Authority Links

- [VIHA Inspection and water testing range reports](#)
- VIHA Water test results [\(GLID\)](#) [\(DIWLSA\)](#)

## Water Licenses

### GRAHAM LAKE IMPROVEMENT DISTRICT WATER LICENSES

License	Issued	Purpose	Precedence Date	G/Year	M <sup>3</sup> /Year
C67571	1988 Mar 31	Waterworks	1970 Mar 19	10,950,000	49,780
C67572	1988 Mar 31	Waterworks	1985 Feb 21	1,095,000	4,978
C67573	1988 Mar 31	Storage	1983 Mar 25	10,310,462	46,872

### COMOX VALLEY REGIONAL DISTRICT (DIWLSA Addition)

C124755	2009 Nov 17	Waterworks	2009 Apr 17	3,376,528	15,350
<b>Total Available Withdrawals</b>				<b>15,421,528</b>	<b>70,108</b>



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## MANAGER'S REPORT

Presented at the March 18, 2020 Annual General Meeting

This has been my first full year as Manager of GLID since the last AGM, and I am happy to report that your GLID team has accomplished much in the past 12 months.

The following are the matters that I have been involved in to varying degrees. Some of them I had sole conduct of. On other matters, I was in the fortunate position of working together with the dedicated and talented people- your selfless neighbours- that make up the GLID team.

- Organized the Trustees Meetings held in 2019 on March 27, June 27, October 2, and November 13, including drafting all Resolutions and Bylaws, and finalizing the Minutes
- Researched and provided advice to the Board of Trustees on the issues involved in, and the procedures for conversion to, a local service area of CVRD
- Organized the Conversion Information Meetings held on February 23 and January 14, 2020.
- Co-ordinated with the Ministry of Municipal Affairs and Housing on various matters such as acceptance of the new Trustees Elections Procedures Policy and filing Bylaws and annual reports
- Researched and provided advice to the Board of Trustees on the possibility of obtaining registered charitable status for GLID
- Researched and provided advice to the Board of Trustees on the extent and status of easements and right of ways around the pump-house
- Researched and provided advice to the Board of Trustees on the status of the hydrants, which formed the basis for a Hydrant Policy that was enacted
- Assisted in the preparation of an Operation, Maintenance and Surveillance manual and a Dam Emergency Plan for the Graham Lake dam
- Reviewed working arrangement and contracts with various service providers such as Madrone Environmental and WSP
- Revised and negotiated an updated water services agreement with the Comox Valley Regional District for the DIWLSA properties for the year 2020
- Ensured the GLID website was updated throughout the year to show all new bylaws, resolutions and notices
- Prepared various GLID contracts such as bookkeeping services agreement and operator services agreement
- Continued reviewing bulk water issues as they developed throughout the year and prepared a draft of a bulk water contract for the CVRD

I would like to take this opportunity to thank our GLID team for making my job so much easier due to all the assistance and encouragement that they have provided throughout the year.

Alec Szibbo  
Manager

March 18, 2020

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## **GRAHAM LAKE IMPROVEMENT DISTRICT**

### **2019 Financial Report**

For the fiscal year ending December 31, 2019, Graham Lake Improvement District collected revenues in line with the amount budgeted - \$124,000 vs. \$125,000 - and incurred operational expenses significantly lower than what was budgeted – approximately \$68,700 vs \$92,100.

The single largest area of saving was in Operator and Relief Operator Wages - \$17,700 actual vs. \$30,100 budgeted. This savings is a result of not having to react to the demands of bulk water supply, deferred equipment upgrades and the increased use of remote monitoring – all of which have resulted in reductions in the need for direct Operator interventions. Other savings against budget were achieved in Legal and Financial Services – approximately \$2,900 actual vs. \$6,200 budgeted.

Mid-way through 2019, GLID transitioned its bookkeeping to QuickBooks On-line. This has allowed GLID's management team to have more timely access to financial information and made preparation of Quarterly and Year-end Financial statements easier and more efficient.

During the year GLID Trustees directed our external Chartered Professional Accounting (CPA) firm - Robbins & Co. – to prepare a restatement of GLID's 2018 Financial Statements. This was done so as to properly reflect expenses associated with achieving Surface Water Treatment Objectives - mandated by Vancouver Island Health Authority - that were undertaken during 2018 as having been paid for from the Capital Asset Renewal Reserve Fund.

GLID's budget for 2020 was prepared and presented at the Trustees Meeting in October 2019, and as of the writing of this report appears to be reasonable.

March 23, 2020

31-Dec-19  
As of: 16-Mar-2020

**GRAHAM LAKE IMPROVEMENT DISTRICT  
2019 Budget vs. Actual**

Note 1

**REVENUE**

2019 BUDGET RESTATED*	2019 Actual	Variance 2019 Budget vs. Actual
\$33,500	\$33,500	\$-
\$12,500	\$11,500	\$(1,000)
<b>\$46,000</b>	<b>\$45,000</b>	<b>\$(1,000)</b>
\$57,600	\$59,400	\$1,800
\$20,700	\$18,900	\$(1,800)
<b>\$78,300</b>	<b>\$78,300</b>	<b>\$-</b>
\$500	\$460	\$(40)
\$200	\$241	\$41
\$-	\$-	\$-
\$-	\$-	\$-
<b>\$700</b>	<b>\$701</b>	<b>\$1</b>
<b>\$125,000</b>	<b>\$124,001</b>	<b>\$(999)</b>

<b>Taxes</b>	
310	GLID Property Taxes
	DIWLSA Allocation to Tax Contribution
	<b>Sub total - Taxes</b>
<b>Tolls</b>	
305	GLID Tolls
315	DIWLSA Allocation to Toll Contribution
	<b>Sub total - Tolls</b>
<b>Other Revenue</b>	
311	Late Payment Interest and Penalties
312	Bank Interest
313	Transfer from Prior Years Operating Surplus
314	Transfer from Renewal Reserve Fund
	<b>Sub total - Other Revenue</b>

**TOTAL REVENUE**

**EXPENSES**

\$8,700	\$7,473	\$1,227
\$30,100	\$17,700	\$12,400
\$6,300	\$5,409	\$892
\$12,200	\$10,301	\$1,899
\$2,300	\$1,401	\$899
\$800	\$1,450	\$(650)
\$600	\$549	\$51
\$8,300	\$7,700	\$600
\$-	\$430	\$(430)
<b>\$69,300</b>	<b>\$52,413</b>	<b>\$16,887</b>
\$2,500	\$3,314	\$(814)
\$1,200	\$444	\$756
\$7,600	\$8,322	\$(722)
\$2,000	\$-	\$2,000
\$200	\$263	\$(63)
\$6,200	\$2,894	\$3,306
\$500	\$-	\$500
\$2,600	\$1,042	\$1,558
<b>\$22,800</b>	<b>\$16,279</b>	<b>\$6,521</b>
<b>\$92,100</b>	<b>\$68,692</b>	<b>\$23,408</b>

<b>Operating Expenses</b>	
400	Utilities & Propane
402	Operator & Relief Operator Wages
403	Water Tests & Supplies
407	Chemicals - treatment (UV bulbs, reagents)
408	Dechlorination Pucks
409	Water Intake Inspection & Repair
410	Pumphouse Supplies
427	Repairs & Maintenance
TBD	Dam Maintenance
	<b>Sub total - Operating Expenses</b>
<b>Administrative Expenses</b>	
415	Notices, Office (One Call Now, software, bookkeeping)
417	Permits, Water Licenses & Lease Fees
420	Insurance
422	Operator Professional Development, Training
432	Bank Charges
435	Legal & Financial Services
445	Association Dues (BCWWA)
425	Miscellaneous
	<b>Sub total - Administrative Expenses</b>

**Subtotal - Operating + Administrative Expenses**

**Non-Recurring Expenses**

\$2,000	\$-	\$2,000
<b>\$2,000</b>	<b>\$-</b>	<b>\$2,000</b>

411	Dam ERCP (Emergency Response Plan)
	<b>Sub total - Non-recurring Expenses</b>

**Contingency on Expenses**

\$7,500	\$-	\$7,500
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	<b>Sub total - Contingency on Expenses</b>
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**TOTAL EXPENSES (excluding Capital Expenses)**

<b>\$101,600</b>	<b>\$68,692</b>	<b>\$32,908</b>
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**Capital Expenses Out of Tax Revenue**

\$9,500	\$-	\$9,500
\$-	\$2,535	\$(2,535)
\$4,000	\$12,510	\$(8,510)
<b>\$13,500</b>	<b>\$15,045</b>	<b>\$(1,545)</b>

	Capital Acquisitions - Pumphouse Equipment
	Surface Water Treatment Objectives Upgrade Project - Study - Phase 1
	Surface Water Treatment Objectives Upgrade Project - Pilot Project
	<b>Sub total - Capital Expenses Out of Tax Revenue</b>

**TRANSFERS**

\$23,400	\$40,265	\$16,865
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245	To/(From) Capital Asset Renewal Reserve Fund
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Note 2

\* all amounts include GST

Note 1: The information in the 2019 Budget Restated column shows the amounts from the original budget approved for 2019 reformatted to align more closely with the reporting format provided in the Improvement District Manual (2012). A worksheet reconciling the original and restated 2019 budgets is available upon request.

Note 2: The actual amount of the 2019 contribution to GLID's Capital Asset Renewal Reserve will be established after the external accounting firm has finalized GLID 2019 financial statements.

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## **GRAHAM LAKE IMPROVEMENT DISTRICT ANNUAL GENERAL MEETING MARCH 18, 2020**

### **REPORT FROM THE TRUSTEES**

The information in this report is a summary of the key initiatives undertaken by the Graham Lake Improvement District (GLID) in 2019 and is presented as part of the 2020 Annual General Meeting (AGM).

### **2019 – BALANCING CURRENT AND LONGER-TERM OBJECTIVES**

**A. ONGOING EVOLUTION OF THE GLID TEAM** – Few things in life remain constant for very long, and the composition of the GLID team is no exception. After taking on the role of Treasurer in 2018, Anne Page stepped away from the role in the summer of 2019. Peter Jackson filled in briefly as the Acting Treasurer and managed the orderly transition to Colleen Forest when she took on the role of Treasurer. The property owners are grateful for the help and support that Anne provided – including her help in transitioning the role to other GLID team members. Likewise, property owners are grateful for the support that Peter provided during the period when he served as Acting Treasurer. Peter and Colleen have done a good job of converting GLID’s accounting system to the QuickBooks Online platform – something that improves the quality and consistency of our financial management processes and reporting.

**B. STRONG OPERATIONS THROUGHOUT 2019** - 2019 was another year of strong performance by Craig Williams (Relief Operator) and Enrico Wauri (Operator). Together they did a good job of maintaining and operating GLID’s water treatment plant and our water distribution pipeline system and connections. They both played important roles in the overall management and operation of the pilot test systems that were part of GLID’s overall water treatment system upgrade project. Craig and Enrico are resourceful, committed and innovative – and can be counted on to deliver high quality service while at the same time managing the on-going costs of operations and equipment.

**C. TEAMING WITH OTHERS IN THE PURSUIT OF LONG-TERM SOLUTIONS** – Throughout 2019 the Trustees, Manager and Operators continued to work on important initiatives aimed at achieving GLID’s long-term objectives. A number of these initiatives involved working and teaming with other parties, including:

- GLID worked diligently throughout 2019 to exchange ideas and information with VIHA around our plans and efforts to upgrade our water treatment system – in order to be compliant with the Surface Water Treatment Objectives (SWTO). We made VIHA aware of the challenges that

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GLID faces as we work on upgrading the water treatment system, especially the financial challenge that GLID must address. We spent considerable time and energy engaging with VIHA to identify any new/emerging water treatment technologies that might be suitable for use with source water from Graham Lake. To-date, no new options have been identified (beyond those set out in the *Water Treatment System Options Assessment* report).

- GLID continued to work closely with the Comox Valley Regional District (CVRD) and the engineering firm WSP/Opus to identify and pilot test different options for upgrading GLID's water treatment system. This work was performed as part of GLID's efforts to become compliant with VIHA's mandatory SWTO. WSP finalized two reports in November 2019; the *Water Treatment System Options Assessment*; and the *Pilot Plant Study*. Both reports are available on the GLID website.
- GLID engaged Madrone Environmental Services to explore options for addressing wastewater byproducts associated with one of the water treatment options that was pilot tested by GLID in 2019 (ion exchange filtration). Madrone completed its analysis and finalized its findings in a report that was completed in December 2019. Based on the finding in Madrone's report the GLID Trustees decided not to pursue the ion exchange water treatment option (recognizing that there may be a need to revisit this decision at some point in the future).
- GLID also engaged with CVRD as they finalized the Conversion Study in December 2019. The Conversion Study was initiated at GLID's request in 2017 and was conducted by consultants retained by CVRD. The objective of the Conversion Study was to identify alternative governance models whereby the residents of GLID and the Denman Island Local Water Service Area (DIWLSA) could receive safe and reliable water from an upgraded water treatment system. The final version of the report – *Conversion Study – Phase 1* – is available on the GLID website.

**D. CONTINUING TO STRENGTHENING OUR FINANCIAL POSITION** – In 2019 contributions from GLID property owners – from the tax portion of the annual water bills – combined with funds from the water/service-related fees from CVRD – brought the total balance in GLID's Capital Works Renewal Reserve Fund to approximately \$303,000 (up from \$268,000 at the end of 2018). Funds in GLID's Capital Asset Renewal Reserve play an important role in GLID's risk management strategy. The funds act as 'a first line of defence' in the event that a significant undesirable event occurs – such as failure of a portion of the pipeline. Similarly, at some time in the future, a portion of the Capital Asset Renewal Reserve can be applied against the costs of a water treatment plant upgrade project.

**E. ENHANCED RISK MANAGEMENT** – In early 2019 the Trustees and Manager conducted a market scan to identify options available when it came time to renew GLID's liability insurance coverage. GLID selected CapriCMW - a Kelowna-based insurance brokerage that specializes in insuring small water treatment systems. For a small increase in the annual premium GLID was able to obtain more than double the liability insurance coverage than was available from the previous broker.

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## **AS IN PREVIOUS YEARS – 2019 BROUGHT ITS OWN UNIQUE CHALLENGES**

**A. BULK WATER** - In July 2018 GLID informed the local bulk water hauler that it required the hauler to have commercial liability insurance in place in order to protect and safeguard the financial interests of GLID's property owners. At the same time the hauler was informed that GLID would continue to require indemnification from the hauler. The hauler elected not to continue the practice of indemnifying GLID (something the hauler had routinely done for several years). After repeated attempts were made to find a mutually acceptable solution to the matter, an impasse was reached. As a result, GLID discontinued its practice of selling bulk water to the hauler. The hauler was informed that it could re-instate the long-standing bulk water sales arrangement by taking the appropriate steps to indemnify GLID. The hauler did not make any such arrangement.

CVRD explored a number of different options aimed at resolving the bulk water challenge – culminating in a town hall-style public meeting held at the Denman Island Fire & Rescue hall on June 26, 2019. The meeting was well attended – and numerous parties shared ideas and exchanged points-of-view. A number of property owners on the Island elected to replace the services formerly provided by the local bulk water hauler with those of a bulk water hauler based in Courtenay. The GLID Trustees continue to monitor this issue.

**B. HYDRANT POLICY** – Over the years there have been numerous interpretations of *'who owns the 5 hydrants on GLID's water distribution system'* and *'what standards must the hydrants comply with'*. At the request of the Trustees GLID's Manager conducted an extensive review of the relevant Acts, Regulations and policies from the perspective of an improvement district. A draft Hydrant Policy was developed that clarified the ownership of the hydrants as well as the responsibilities for maintaining them. GLID consulted with CVRD and Denman Island Fire and Rescue on the draft policy. The draft was updated and a final version of the Hydrant Policy was passed by a majority of Trustees in October 2019. A copy of the Resolution #46 – Hydrant Policy Adoption is available on the GLID website.

**C. 'SMELLY WATER'** – During the June/August 2019 timeframe the water in Graham Lake was characterized as having a strong and unpleasant odor and taste. As noted in the 2019 Operators report, the odor and taste were also experienced by property owners surrounding Graham Lake – the experience was not unique to GLID. One factor that may have contributed to the change to in the characteristics of the Graham Lake water was the increase in levels of blue-green algae. Water samples and analysis showed a rapid and significant increase in the blue-green algae present in the lake. It is thought that the increased presence of blue-green algae was responsible for the degradation of water quality in August 2019 that resulted in a boil water advisory.

GLID's current treatment facility is designed to oxidize (kill) microorganism. Unfortunately, oxidization does not significantly impact the chemical compounds that cause the unpleasant color, odor and taste we experienced during the summer of 2019. The Operators and Trustees will be monitoring this issue as we move into the summer of 2020.

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## **2020 – REMAIN FOCUSED ON HIGH PRIORITY INITIATIVES**

**CHANGING OF THE GUARD** - After 3 terms and 9 years as a GLID Trustee, Chris Page decided that he would wrap up his final term as a Trustee at the AGM on March 18, 2020. Chris made numerous contributions to GLID since he took on the role of Trustee in 2011. We thank him for everything that he's done on behalf of GLID property owners and we wish him all the best in the future.

The Trustees notified GLID property owners of the soon-to-be-vacant Trustee role (effective March 18 2020) and solicited nominations for that Trustee role. In response to the notification and request for nominations, a single nomination was received – namely Alec Szibbo, GLID's Manager. Alec recused himself from his role as GLID's Returning Officer and the Trustees appointed Colleen Forest – GLID's Treasurer to serve as the Acting Returning Officer. After the period for nominations had expired the Returning Officer informed the Trustees that Alec Szibbo was the only property owner nominated for the Trustee role. As a result of the fact that there was only a single candidate, there will not be a vote and Alec will be elected by acclamation at the 2020 AGM. At the appropriate point during the AGM Alec Szibbo will be recognized as GLID's third Trustee – joining Trustees Peter Jackson and Blake Hanna.

**A BUSY YEAR AHEAD** – The Trustees, Manager, Operators and Treasurer all remain committed to moving forward with our high priority initiatives that we're working on and the new initiatives that are likely to emerge in the near future. We value and appreciate the help and support that we get from property owners - especially those who volunteer on behalf of all property owners. We look forward to receiving feedback and suggestions from all GLID property owners.