Comox Valley
REGIONAL DISTRICT

Union Bay
Improvement District

UNION BAY IMPROVEMENT DISTRICT CONVERSION STUDY

Final Draft Report
September 2020

URBAN SYSTEMS

312 – 645 Fort Street

Victoria, BC V8W 1G2

T: 250.220.7060

Project # 3023.0012.01

Union Bay Improvement District Conversion Study

September 4, 2020

Project # 3023.0012.01

Contact:
Dan Huang, RPP, MCIP
Senior Planner / Principal
URBAN SYSTEMS
312 – 645 Fort Street,
Victoria, BC V8W 1G2
T: 250.220.7060
E : dhuang@urbansystems.ca
W: www.urbansystems.ca

Table of Contents

APPENDICES

1.0 INTRODUCTION

Union Bay is a small waterfront community with a population of approximately 1,200 people, located 10 km south of the City of Courtenay in Electoral Area A of the Comox Valley Regional District. As an unincorporated area, the community receives its local services from a number of agencies including, but not limited to, the Comox Valley Regional District (CVRD), Ministry of Transportation and Infrastructure (MOTI), and Union Bay Improvement District (UBID).

The Union Bay Improvement District (UBID) is a local authority incorporated under the *Local Government Act,* which provides water supply, fire protection, and streetlighting services to the approximately 800 ratepayers (on 690 properties) within its boundary. Over the years, community concerns regarding service delivery and decision making has led to interest from residents to consider other governance options. In 2004, the Province funded an incorporation study for Union Bay, which was turned down by the community in a 2006 referendum. In 2016, a petition to dissolve UBID garnered 425 signatures. As such, in early 2020, UBID and the Comox Valley Regional District (CVRD) initiated this study in order to examine the potential conversion of UBID services to the CVRD. The study follows provincial guidelines and best practices for Improvement District conversion, and received grant assistance from the Ministry of Municipal Affairs and Housing (MAH).

1.1. HISTORY OF UNION BAY IMPROVEMENT DISTRICT

An overview and history of Union Bay is provided in the report "Clean and Safe Water for Union Bay", August 2017 by J.S. Mattison, with additional details provided throughout this report. Beginning with the initial damming of Langley Lake in 1908 to supply water to the coal washer, the Union Bay Water Association was formed in 1953. In 1960, the water association bought the water system for $1 and Langley Lake source for $1,000 from the Canadian Collieries (Dunsmuir) Limited. In that same year, the Union Bay Waterworks became the Union Bay Improvement District, which was incorporated by provincial Letters Patent on March 18, 1960 as the authority responsible for providing waterworks to the residents and property owners of Union Bay. Fire protection and street lighting service were added to UBID responsibilities in 1972.[1]

UBID's boundary extends from Spindrift Drive in the north to the Buckley Bay Ferry Terminal to the south. Today, there are 690 properties within the boundary and 793 UBID ratepayers. The land uses within the community can generally be described as country and rural residential, with some small supporting commercial and institutional uses. However, there is a large development within UBID called Union Bay Estates which has approved zoning (Kensington Comprehensive Development Zone) over its approximately 350 acre site for a mixture of nearly 3,000 units of single family residential, multi-family residential, retirement housing, commercial and retail uses.

[1] *Mattison, J.S., "Clean and Safe Water for Union Bay – Final Report", Ministry of Community, Sport and Cultural Development, August 2017.*

1.2. KEY ISSUES

As outlined in the Terms of Reference for this study, UBID faces a number of ongoing governance challenges, including: three resignations at the Board in July 2016 resulting in the loss of quorum, suspension (and then reinstatement) of a Board Trustee, the resignation of the Board Chair elected in April 2019, the resignation of the new Board Chair again in April 2020, and currently the requirement to extend the terms of two Board members in order to maintain quorum.

In addition to governance challenges, there are potential service delivery issues related to the capacity of UBID staff to address increasing demands due to growth and development, as well as increasing regulations and service level requirements for water and fire service delivery. There have been a number of staff transitions in recent years, including the UBID Chief Administrative Officer recently retiring in July 2020.

Finally, with respect to finances, as an improvement district UBID was not able to access senior government grant funding for its most recent water treatment plant project estimated at a capital cost of $4.2 million. The entire amount is therefore being funded and financed by the ratepayers. As a small community there is concern over the potential burden of infrastructure debt for both new and aging assets.

1.3. STUDY OBJECTIVES

The UBID Conversion Study is a joint initiative between the CVRD and UBID to review the existing governance and administration framework for service delivery by UBID, compile stakeholder views on how the current services are being provided, and examine two governance options as follows:

Option A. Convert UBID's services to CVRD services, or

Option B. Improve governance and service delivery in Union Bay while maintaining UBID's structure as an improvement district.

A key policy principle of the conversion process is that consideration must be given to the opinion of local residents, as well as all interests in the community, in order to determine the future of governance within UBID. Both the study content and public consultation process follow industry best practices outlined in the *Improvement District Conversion Guide (2004)* published by the Ministry of Municipal affairs and Housing.

Following the completion of this study, the UBID Board of Trustees will review the report and feedback from the residents, in order to determine which governance option to move forward with (i.e. conversion to the Regional District or remain as an Improvement District). Depending on the level of community support, additional elector assent may be obtained by UBID and/or CVRD, which could include a referendum.

2.0 BACKGROUND REVIEW

2.1. GOVERNANCE AND REPRESENTATION

UBID is governed by a Board of Trustees that are elected by the eligible landowners of the Improvement District for staggered three-year terms. There are typically five trustees on the Board at a given time. However, due to a Trustee resignation in April 2020, there are currently four Trustees; and due to the ongoing COVID-19 pandemic, two of the four Trustees are currently beyond their elected term but are staying on to maintain quorum.

Elections are conducted after the Annual General Meeting (AGM), which is held between January 1 and April 30 each year. The AGM was anticipated in April 2020; however, it was postponed due to the declaration of a Provincial State of Emergency, and is now scheduled for September 10, 2020. As of the writing of this report, nominations for the three vacating Trustee positions have closed, with three candidate names being put forward. Therefore, the new Trustees are to be acclaimed, and no election will be necessary.

The Board generally meets each month as a Committee of the Whole (COW) and as a Regular Board, at the Union Bay Community Hall. The policy of the UBID Board is that all meetings will be open to the public (notwithstanding the current COVID-19 situation), unless the issues being dealt with specifically necessitate public exclusion. The Board has a Closed Meetings Policy that guides matters to be dealt with in an in-camera meeting. The members of the Board are volunteers and are paid a small remuneration – Board Trustees receive $1,000 and the Chair receives $2,000, plus associated Trustee expenses.

The Board of Trustees are required to hire a corporate administrator for record keeping and a financial administrator for managing funds, and they may hire other staff as needed. The UBID Board of Trustees is responsible for ensuring that UBID meets the financial obligations necessary to provide services to property owners.

2.2. UBID SERVICES AND OPERATIONS

The following section includes a summary of the UBID service delivery, operations and maintenance, and assets based on reviews of available engineering reports and background data that was provided by UBID[2], as well as communications with UBID staff. This section provides the basis for identifying gaps in the existing information, and determining any further studies that are critical to understanding assets and liabilities moving forward, which are further elaborated on in Section 3 of this report.

2.2.1. WATER

UBID is responsible for potable water supply and distribution to the area within its legislated service boundary. Currently, the water distribution system serves 690 properties

[2] *Information that was available from the UBID and used to generate this summary includes: a) Water system inventory tables from 2006 for the UBID water system; b) A 2009 Water System Capital Plan Update prepared by McElhanney Engineering Consulting Services; c) Clean Safe Water for Union Bay – Final Report, dated August 2017; d) UBID Water Treatment Plant Backgrounder – December 2019; and e) Various pieces of correspondence and historical background information on the Langley Lake Dam.*

and 793 ratepayers, extending from Spindrift Drive in the north to Buckley Bay Ferry Terminal.

Improvements to the water system in recent years have included a universal water metering program in 2004 and the development of a satellite re-chlorination station. In May 2020, UBID officially commissioned its new $4.2 million water treatment plant, providing high-quality potable water to Union Bay residents which meets all Island Health regulations.

Maintenance is ongoing in order to provide the best service to customers. However, like many water systems across the province, much of UBID's water infrastructure is aging. According to UBID staff, service failures are occurring fairly regularly especially in specific locations (e.g. Kilmarnock subdivision). There are currently 4 staff in UBID Public Works (1 full time and 3 part time) who operate and maintain the water system.

The various water system components are discussed below with information gaps and other considerations noted in the following section.

2.2.1.1. WATER SOURCE, LICENCE AND STORAGE

UBID derives its water from spring-fed Langley Lake. UBID has legal title and ownership of approximately 100 acres, including the lakebed (78 acres) and the shoreline setback (20 acres). A new deep water intake was installed in 1999. There is a main raw water distribution line extending from the lake across the Inland Island Highway to the new water treatment plant, a distance of over 3 kilometres.

UBID holds conditional Water Licenses (112815 and 12817) that authorize water storage in Langley Lake and construction and operation of works within UBID boundaries. These licenses cumulatively authorize the use of 178 million imperial gallons of water per year at a rate not to exceed 1,828,000 imperial gallons per day. This equates to 809,204 cubic metres per year at a constant average draw of 25.7 litres per second.[3]

Due to the peat bottom of Langley Lake, turbidity levels fluctuate and there is a high organic content in the lake and source water, creating colour concerns. Based on testing conducted between 2012 and 2014, the lake reportedly has low pH levels and elevated colour, turbidity and total organic carbon, with occasional spikes in iron and manganese. The water quality at the source has been the cause of recent water treatment upgrades mandated by Island Health.

[3] *Mattison, J.S., "Clean and Safe Water for Union Bay – Final Report", Ministry of Community, Sport and Cultural Development, August 2017.*

2.2.1.2. LANGLEY LAKE DAM

In 1908, Langley Lake was dammed in order to provide water for coal washing operations in Union Bay. In 1912, the dam was breached which flooded a number of homes and the colliery yards downstream. The dam was immediately rebuilt and was later refurbished in 1970s, and is still in operation today.

Over the past decade, there have been a number of high-level assessments to review the condition and safety of the over 100-year old dam. In 2009, the "Langley Lake Dam Review and Inspection" was undertaken by McElhanney Engineering, and found the dam to be in "good to very good condition with no appreciable defects noted regarding the overall stability of the dam."[4] It recommended conducing a Dam Safety Review every ten years, as well as a more detailed topographic survey, geotechnical investigation and a full stability assessment including earthquake analysis.

A dam safety audit was conducted in 2015, in accordance with the Ministry of Forests Lands and Natural Resource Operations (FLNRO) and Ministry of Environment (MOE) Dam Safety Audit Program. The safety audit established that the dam is classified with a Failure Probability Rating of "small" and a Failure Consequence Rating of "significant", both of which are second lowest on the scale. The dam has an overall risk level rating of "no concern", and the report indicated the dam should be included in a regular audit program to identify any changes to its normal operations. Regular maintenance of the dam in recent years, including regularly removing vegetation and debris, has been effective in mitigating potential risks resulting in an overall reduction in the provincial risk classification.

UBID staff have reported that the dam, access road, and surrounding vegetation requires continual maintenance and routine site inspections. In addition a number of required upgrades to the Langley Lake Dam have been identified by UBID staff and in various reports, including: decommissioning of the old intake gate valve, potential seepage resulting from the construction of the new intake, seismic review and potential upgrades, as well as inundation mapping of the downstream area to the ocean[5].

Beyond the 2009 and 2015 reports, there have been no detailed condition assessments or structural analysis of the dam. Given the unique nature of this asset and the potential upgrades required, the unknown liability of the Langley Lake Dam (even though it currently has a relatively low risk rating) is something that should be continually reviewed and monitored in the future.

[4] Langley Lake Dam Review and Inspection, McElhanney, July 2009.
[5] 2015 Dam Safety Audit and personal communication with UBID staff.

2.2.1.3. WATER TREATMENT

In 2017, water filtration was deemed as the highest priority for UBID, in response to a mandate from Island Health in 2014 to meet provincial drinking water requirements. In May 2020, a new $4.2 million water treatment facility (located on McLeod Road at Musgrave Road) was commissioned and is now fully operational. As a result, the boil water advisory has been lifted. Water treatment consists of filtration through a Dissolved Air Floatation (DAF) process and disinfection through chlorination. The facility also includes a new treated water reservoir, settling pond, and standby power.

The treatment plant has a design capacity of 14 litres per second (l/s), with the potential to double the capacity to 28 l/s to accommodate future growth, however this would require additional capital investment in the form of a second DAF system, building and supporting infrastructure. At the time of writing, the plant was treating approximately 12 litres per second (peak flow) to service the current 793 ratepayers. Based on discussion with UBID staff, there is additional treatment capacity of approximately 100 new development units, although this could potentially be increased through additional changes to operating parameters. With the potential plant expansion essentially doubling this capacity, the Langley Lake Water Treatment Plant could theoretically service approximately 1800 to 2000 development units.

As part of the Master Development Agreement for the development of Union Bay Estates, the 1.62 hectare (4.0 acre) site for the water treatment plant was provided to UBID for $1, pending construction of the facility. According to a recent title search, this land has now been transferred to UBID ownership.

2.2.1.4. WATER DISTRIBUTION

The UBID water system includes distribution system piping, fire hydrants, treated water storage reservoirs, re-chlorination stations, pressure reducing valves and other system valves and fittings.

The main treated water storage reservoir was constructed at the same time as the treatment plant and is located on the site of the water treatment plant, on McLeod Road at Musgrave Road, with a capacity of approximately 1,730 cubic metres. From the reservoir, water is gravity fed to two lower pressure zones, while an electric booster pump feeds water back to a few properties (17) at higher elevation. The electric booster pumps are not sufficient for providing fire flows to those higher elevation

properties. Additionally, there is a balancing reservoir at McKay Road which supports peak demand and fire flows for the south end of the system. This reservoir was constructed in the 1990s and has a capacity of 360 cubic meters.

The treatment plant site not only has the ability to accommodate additional water treatment capacity as discussed above, but the facility can also accommodate a second treated water storage reservoir of similar size (i.e. 1,700 cubic metres).

Our asset review of the water distribution system is based on the 2009 water system inventory by McElhanney (see Appendix A). Based on this information, UBID has approximately 30 km of watermains, and a number of valves, fire hydrants and pressure reducing stations that serve different pressure zones within the service area. It should be noted that the length of the water distribution system above is not aligned with anecdotal information from UBID staff, who believe that there are 40km of watermains. Additional research and field investigation would need to be undertaken in order to clarify the discrepancy in the future.

Much of the water distribution system was constructed in the 1970s and consists of Asbestos Cement (AC) piping. AC watermains were commonly used throughout British Columbia in the 1970s, and they do not pose a health hazard for water system users. Based on the 2009 inventory, Figure 1 and Figure 2 represent the size and material properties of the system.

Figure 1 - UBID Watermain Size

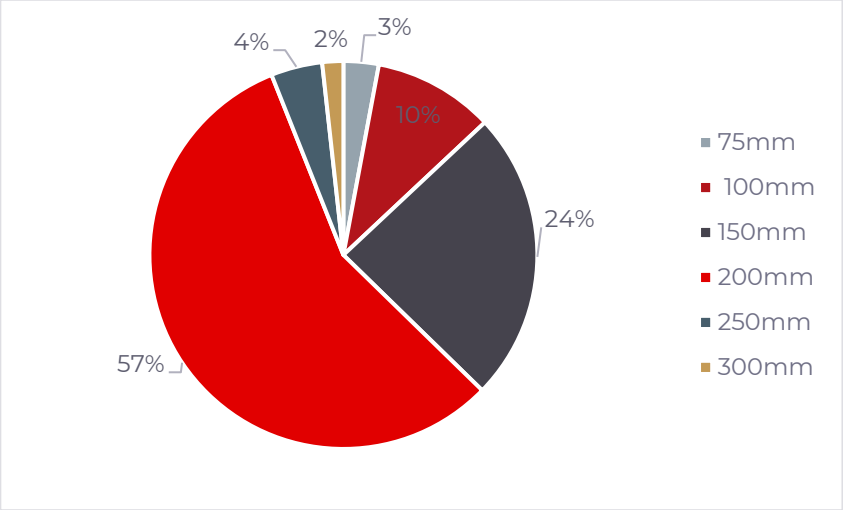
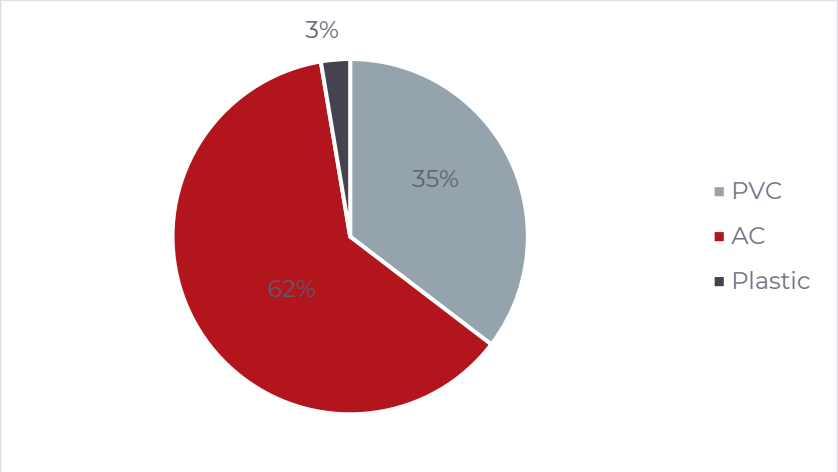
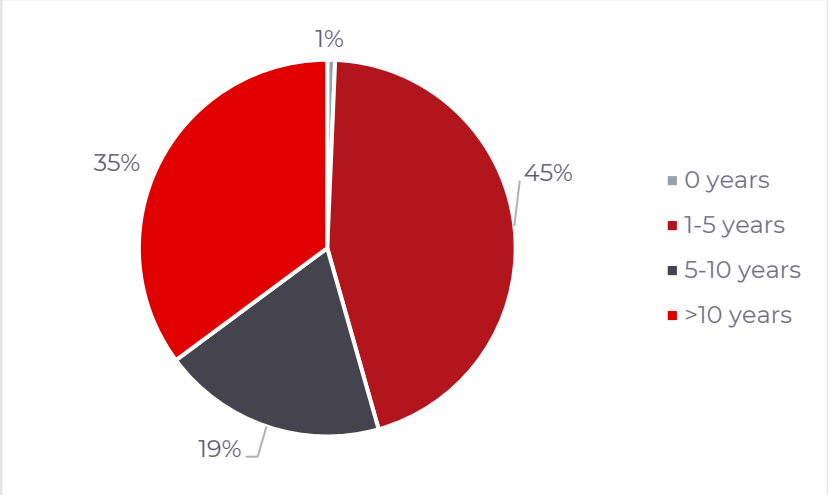


Figure 2 - UBID Watermain Material



Based on the installation dates provided, Figure 3 represents the expected remaining life of the watermain infrastructure based on industry standard service lives of the mains. Approximately 35% of the distribution mains are noted as having over 10 years remaining, which generally represents the PVC mains, while the remaining AC mains are all noted to be approaching the end of their theoretical service life within the next 10 years.

Figure 3 - Watermain Replacement Forecast



Now that the water treatment plant has been constructed, UBID staff acknowledge that their next priority is to gradually replace the AC mains with PVC mains over time. Pipe replacement of the water distribution system had been a secondary priority to water treatment in recent years, given the directives and mandate from Island Health. It has been noted by UBID operations staff that the AC mains are failing on a regular basis (monthly), which points to a poor condition of the mains regardless of their service life. Regular service failures are caused by the AC pipe cracking and service lines that are

splitting. Based on the information provided, there has been little to no mainline AC pipe replacement since 2003.

2.2.2. FIRE PROTECTION

Fire protection services are also the responsibility of the Union Bay Improvement District and are provided by Union Bay Fire Rescue (UBFR). The Fire Department was formed in 1935 and the current Fire Hall was built by the volunteer fire fighters in 1955. The 65-year old building is aging and has narrow garage bays.

The Fire Department currently has 18 volunteers, as well as the Fire Chief and Deputy Chief. In the past year, Union Bay Fire Rescue introduced a paid-on-call volunteer system and stipend. This was well-received and has played a role in increasing the number of volunteers, which has grown by approximately 40%. Currently, all the volunteers, the Chief and the Deputy Chief, the training officer, and the secretary receive some financial compensation. Union Bay Fire Rescue is a member of the Volunteer Firefighters Association of BC, which also includes a number of volunteer departments within the CVRD.

There are currently two engines that are owned by UBID, as well as two duty trucks, as follows:

- Engine 25 (1995) (main);
- Engine 24 (1990) (backup);
- Duty truck (2005); and
- Duty truck (2019).

The 1995 engine is under its last year to be accepted under the Underwriters Laboratories of Canada (ULC) accreditation, as fire underwriters will generally not permit the main engine to surpass 20 years. However, the underwriters have allowed UBID to use the truck for up to 25 years because the truck has passed its annual flow tests. In the future, this may have a financial impact on UBID residents, as it will affect their insurance premium directly. UBID has been actively setting aside capital reserve funds for a future engine replacement as well as for a new fire station (current reserves are approximately $1.46 million).

Other equipment upgrades include the addition of another duty truck (2019), upgrades to the rescue unit (2008) and upgrades to the forestry trailer (2007) including pumps, hoses, tools, and coveralls for small forestry interface fires.

There are 79 fire hydrants in the improvement district. The majority of hydrants and their appurtenances were installed in the 1960s. Fire flow availability has purportedly been improved since 2003. It was estimated that the reduction in peak demand through the

implementation of a water metering system has increased fire flow availability. The documents provided discuss fire flows and fire storage at a system level but there is little information on the overall level of service the system provides. It was noted in the *2009 Capital Plan Update* that there were a number of locations where residential fire flows could not be met and upgrades and additional storage was recommended to increase flows and available fire storage.

As previously noted, the electric booster pump at the McLeod Road reservoir is insufficient for providing fire flows to higher elevations. The low flows in the North end of the system are also impacting fire fighting capabilities. A minimum of 100 l/s should be the planning target for fire flows. The balancing reservoir at McKay Road supports peak demand and fire flows for the south end of the system. Built in the 1990s, the balancing reservoir at McKay Road has a capacity of 360 cubic metres.

Finally, the Master Development Agreement with Union Bay Estates has set aside a 1-hectare parcel to the north of Washer Road to be donated to UBID for the construction of a new Union Bay Fire Hall. The service level of required fire protection for future buildings (especially commercial multi-family uses) is to be negotiated between UBID and the developer of Union Bay Estates.

2.2.3. STREET LIGHTING

UBID currently maintains street lighting within the regulations and Letters Patent of the Union Bay Improvement District, with operations and maintenance being provided by BC Hydro. Currently, there are 145 street lights within the improvement district on BC Hydro poles. These are owned, operated and maintained by BC Hydro, and the cost of the installation, on-going maintenance and electricity use is funded through UBID ratepayers.

This type of street lighting service is typical within rural communities, and relies on BC Hydro continuing to meet their design and maintenance standards for long-term operations, maintenance, and asset replacement.

2.3. *ADMINISTRATION, FINANCE AND STAFFING*

The Union Bay Improvement District administration offices are located at 5579B Island Hwy South, within leased commercial space. All public inquiries with respect to UBID administration and finances are handled through this office.

Currently, UBID collects revenues through property taxes, parcel taxes and tolls. The UBID Board of Trustees is responsible for ensuring that the improvement district meets the financial obligations necessary to provide service to property owners.

The Board of Trustees is responsible for overseeing management in the performance of its accounting and financial reporting responsibilities to provide service to property owners and ratepayers. The Board is authorized to levy taxes, tolls and other charges, to invest money, to borrow and to expend money as required.

2.3.1. REVENUES, EXPENDITURES AND RESERVE CONTRIBUTIONS

The majority of UBID's revenues are derived from water tolls, parcel taxes and property taxes, with some additional revenues derived from hydrant maintenance, interest and rental income, penalties, and donations.[6] Total estimated revenues for 2020 is approximately $1.37 million, as shown in Table 1 below:

Table 1 – UBID Revenues (based on 2020 Budget)

Revenue Category	Amount
Water Tolls & Metering	$562,140
Parcel Tax – Water	$269,129
Property Taxes – Fire Rescue	$459,031
Property Taxes – Street Lights	$37,000
Interest Income	$22,000
Other Revenues	$17,393
Capital Expenditure Charges	$0
TOTAL REVENUES (2020 Budget)	**$1,366,693**

For water services, residents of UBID pay a fixed parcel tax ($390 per year), as well as variable water tolls. Water tolls are charged for both residential and commercial properties. The billing cycle is every two months, six times per year. A $90.00 (bi-monthly) base rate is applied to both residential and commercial uses. Residents are charged excess rates based on usage above the base rate (see Table 2 – Residential Water Toll below), whereas commercial properties are charged a water usage rate based on consumption ($90.00 base rate, plus $1.30/$m^3$).

[6] *UBID. 2020 Approved Budget.*

Table 2 – Residential Water Toll

Residential	Volume	Rate
Base Rate	Up to 20m³	$90.00 (bi-monthly)
Excess Rate 1	21m³ - 50m³	$1.11/m³
Excess Rate 2	51m³ - 75m³	$1.51/m³
Excess Rate 3	76m³ - 100m³	$2.00/m³
Excess Rate Over 3	101m³ +	$3.00/m³

Expenditures are summarized in Table 3 below, according to the following categories:

Table 3 – UBID Expenditure Categories (based on 2020 Budget) [7]

Expenditure Category	Amount
Administrative Costs	$337,586
Materials and Supplies	$47,718
Payroll Expenses	$740,574
Vehicle Costs	$32,247
Capital Reserve Fund Contribution – Water	$62,637
Capital Reserve Fund Contribution – Fire	$145,627
TOTAL EXPENDITURES (2020 Budget)	**$1,366,389**

In summary, the following revenues and expenditures are generated in UBID. The remainder funds the Public Works Reserve Funds Contribution and the Fire Department Reserve Funds Contribution (see Table 4 below).

[7] *UBID. 2020 Approved Budget.*

Table 4 – Summary of Revenues and Expenditures[8]

	Revenues	Expenditures	Reserve Funds Contribution
Administration and Public Works	$ 862,662	$ 800,025	$ 62,637
Fire Rescue	$ 467,031	$ 321,100	$ 145,628
Street Lights	$ 37,000	$ 37,000	
TOTALS	**$ 1,366,692**	**$ 1,158,124**	**$ 208,265**

2.3.2. SUMMARY OF TANGIBLE CAPITAL ASSETS

In 2009, the Public Sector Accounting Board (PSAB) developed PS 3150, which requires local governments in British Columbia to amortize (i.e. depreciate) their tangible capital assets (TCA). This is the first step towards a more comprehensive asset management program, which is encouraged by the Province and supported by organizations such as the Union of BC Municipalities (UBCM), Government Finance Officers Association of BC (GFOABC) and Asset Management BC (AMBC). As identified in its 2019 audited financial statements, the net book value of tangible capital assets for UBID is provided in Table 5 below.

Table 5 – Capital Assets Summary

Category	Amount
Tangible Capital Assets (TCA) Net Book Value[9]	
- Waterworks	$ 7.44 Million
- Fire Protection	$ 0.26 Million
- TOTAL	$ 7.70 Million
Replacement Value (TBD)[10]	$ 40 Million to $50 Million

Although the TCA value of approximately $7.7 million ($7.44 million for water and $0.26 million for fire) is an interesting metric, it provides only the depreciated value of the assets, many of which are nearing or beyond their theoretical life expectancy (e.g. AC watermains). A more important metric is determining the replacement value of all assets, as part of asset renewal. While a detailed replacement valuation was outside the scope of this exercise, a high-level estimate places the replacement value at around $40 million to $50 million, or approximately 6 to 7 times the net book value.

[8] *UBID. 2020 Approved Budget.*
[9] *UBID 2019 Consolidated Financial Statements*
[10] *Replacement Value includes a high-level estimate for water treatment plant, water distribution system, fire station, and fire equipment, but does not include the Langley Lake Dam.*

Annually, UBID has been allocating additional funds towards capital renewal for both water and fire services – $62,637 and $145,628 in 2020 respectively. In addition to capital renewal funds, UBID collects Capital Expenditure Charges (CECs) from developers to assist in upgrading the capacity of the water system to accommodate growth. Currently, CEC charges are levied at $8,900 per single family lot, $7,040 per multi-family unit, $2.42 per square foot of commercial development, and $45,485 per hectare of industrial development. The CEC Bylaw was last updated in 2014 (reviews are recommended every 5 years). See Appendix E more information.

As of 2019, the Reserve Fund balances for the Union Bay Improvement District are shown as follows:

Table 6 – Reserve Funds[11]

Category	Amount
Water Capital	
- Capital Expenditure Charge (CEC) Fund	$300,023
- Water Restricted Renewal Fund	$525,146
Fire Capital	
- Fire Restricted Renewal Fund	$1,456,608
TOTAL Statutory Reserve Funds	**$2,281,777**
Other Non-Statutory Reserve Funds	$129,071

2.3.3. STAFFING LEVELS

As of the writing of this report, UBID currently employs the following staff members in a number of service areas and departments:

- Administration – until recently there was 1 full-time and 2 part-time staff (i.e. approximately 2.2 FTE). With the recent retirement of the Chief Administrative Officer in July 2020, currently the Deputy CAO is essentially working full-time, with 1 part-time staff plus additional contracted support as required.
- Public Works – 1 full-time Waterworks Superintendent and 3 part-time water operators (i.e. approximately 2.8 FTE). With the commissioning of the new water treatment plant in May 2020, staffing levels and other expenses are expected to increase in accordance with the increased service levels.
- Fire Service – 1 part-time Fire Chief and 1 part-time Deputy Fire Chief (i.e. approximately 1.5 FTE), as well as 18 paid-on-call volunteer firefighters.

[11] *UBID 2019 Consolidated Financial Statements*

3.0 OVERVIEW OF KEY ISSUES

Based on our review of the available background information as well as site visits and discussions with UBID and CVRD staff, a number of issues, challenges and key considerations have been highlighted and summarized below. They will help to formulate the options comparison in Section 4, as well provide additional perspectives for the public in order to make an informed decision.

3.1. *GOVERNANCE AND REPRESENTATION*

A number of challenges that were noted with respect to the current UBID governance structure which has led to this study. Frequent Board resignations and staff turnover are a challenge to consistent governance and decision making. In addition, concerns from the community with respect to Board transparency and accountability has led to an erosion of public trust and participation in UBID governance.

On the other hand, as an improvement district, UBID is relatively nimble and could potentially be more locally accountable than a Regional District. Moreover, in our discussions with UBID staff, there appears to be a strong sense of place and community pride associated to local asset ownership and the provision of local services throughout Union Bay.

The UBID Board is currently operating with only four of five Trustees in place, with two of those positions having their terms extended in order to maintain quorum. Nominations for three trustee positions – two positions for a three-year term and one position for a two-year term – recently closed, with three names being put forward. As such the three nominees will be acclaimed as UBID Trustees with no election required. Administration and Finance.

Earlier this year, UBID administration staff were operating at approximately 2.2 FTEs, with 1 full-time and 2 part-time staff. With the recent retirement of the Chief Administrative Officer in July 2020, the Deputy CAO has assumed additional responsibilities, as well as brought on contract support as required.

Financially, UBID is managing its fiscal responsibility reasonably well, with annual transfers to capital reserves for both the water system and fire system improvements (total capital reserves are approximately $0.825 million and $1.45 million respectively). UBID recently contributed approximately $0.7 million from its reserves towards the water treatment plant, with the remaining capital cost of the $4.2 million project to be funded through a long-term debenture from RBC. The annual financing cost of the debt is recovered through a parcel tax, which increased from $345 to $390 in 2020.

One of the biggest fiscal challenges of improvement districts throughout British Columbia is the lack of direct access to senior government infrastructure grant funding. While there are some infrastructure grant programs that a regional district can apply to on behalf of an improvement district, the lack of direct senior government grant funding will continue to be a challenge for UBID in making capital improvements to its water system in the future.

3.2. *WATER SERVICES*

UBID owns and operates a significant water system that services the local Union Bay community. Like many historical water systems throughout the province, UBID's water distribution system is aging and will require ongoing maintenance, repair and asset renewal. In May 2020, UBID opened its new water treatment facility that has effectively addressed ongoing water quality issues in the community, ending a longstanding boil water advisory. UBID water services staff currently operate with approximately 2.8 FTEs with 1 full-time Waterworks Superintendent and 3 part-time water operators. Additional costs to operate the water treatment plant are expected for the remainder of 2020 and beyond, estimated at approximately $276,000 per year in operating costs (inclusive of wages, benefits, chemicals, utilities, alarm monitoring, and office expenses).

For over a century, the source of water for Union Bay comes from Langley Lake. UBID is in a rather unique position in that it owns the bed of the lake as well as the Langley Lake Dam, originally constructed in 1908 before being rebuilt in 1912 and refurbished in the 1970s. The Langley Lake Dam will continue to be an ongoing risk to be monitored and maintained. While there has been a previous dam review (2009) and audit (2015) undertaken on the Langley Lake Dam, which resulted in a relatively low risk rating, a more comprehensive dam assessment and long-term improvement strategy would help to mitigate potential risks to the water system and the community in the future.

As noted earlier in the report, much of the AC watermains are near the end of their useful life, with frequent main breaks. This has highlighted a potential difference in the level of service tolerance between UBID and CVRD, with CVRD indicating their lower risk tolerance. This means that the CVRD would likely take a more aggressive watermain replacement strategy, which would require higher capital reserve funds, and therefore potentially higher water tolls in order to fund sustainable service delivery of the water system.

3.3. *FIRE PROTECTION*

Union Bay Fire Rescue has been providing fire protection services to the community since 1935. The volunteer detachment currently operates with approximately 1.5 FTEs, including 1 part-time Fire Chief, 1 part-time Deputy Fire Chief, and 18 paid-on-call volunteer firefighters.

The UBID Fire Hall was constructed in 1955, and the building is at the end of its useful life due to its age, condition and narrow bay doors. While land for a new fire hall site has been provided within the development agreement for Union Bay Estates, the capital costs for a new fire hall will need to be taken into account, likely through long-term borrowing (which would require elector assent).

In addition to the new fire hall, the main fire engine is nearing the end of its useful life in terms of insurance standards through the Underwriters Laboratories of Canada (ULC). Although the engine still meets the fire underwriter's requirements (i.e. NFPA standards), this may have an impact on insurance premiums for individual homeowners at some point in the near future. UBID has approximately $1.46 million in its fire capital reserve fund to contribute towards a new fire engine and/or new fire hall.

UBID currently maintains a water model, which has identified a few areas in the community where fire protection is limited (e.g. at higher elevations and towards the ends of the system). The current system pressures should be compared against the regulations of the CVRD to see if there are other areas of improvement required to maintain fire protection standards.

3.4. *STREET LIGHTING*

Based on our review, it was identified that there are 145 street lights within UBID that are located on BC Hydro poles. All street lights are owned, operated and maintained by BC Hydro, with UBID ratepayers funding the annual cost of maintenance and electricity. This service essentially operates as flow-through funding and, other than the future cost of hydro, should not be a significant issue moving forward.

As with other unincorporated areas within the province, UBID (or the CVRD) does not set the level of standards for street lighting that is provided by BC Hydro. We understand that the Union Bay Estates development may be proposing a higher level of street lighting standards. This issue could be addressed separately, either through a separate local service area for street lighting through the CVRD or through private ownership and maintenance of the street lights (i.e. through a strata corporation).

3.5. *INFORMATION GAP ASSESSMENT AND FURTHER STUDIES*

Throughout our review, a number of additional pieces of information were identified that would aid in the future management of Union Bay services, regardless of either option (i.e. improvement district conversion or remain as UBID). These additional studies include, but are not limited to, the following:

- Water System Inventory – there continues to be a discrepancy between the 2009 water system inventory (which identified approximately 30km of watermains) and other background studies and anecdotal information (which identified approximately 40km of watermains). As a first step, a detailed inventory of all water system infrastructure should be undertaken, which will identify the location, type, age, size and condition (if known) of each component of the water system.
- Asset Management Planning – the water system inventory identified above will ideally be done in GIS (Geographic Information System), and will form the basis of a long-term Asset Management Plan. The plan will identify expected useful life, replacement costs and risk assessment in order to determine the annual investments required for sustainable service delivery, as well as review and update corporate asset management policies and procedures as appropriate.
- Review of Langley Lake Dam Policies and Procedures – includes a review of existing dam policies and procedures including the Emergency Plan, OMS (operational, maintenance and surveillance) Plan, and annual inspection plan. This will identify any missing policies and procedures, as well create an annual dam maintenance schedule and budget in order to formalize dam operations and maintenance as required.

- Langley Lake Dam Detailed Condition Assessment – as recommended in the 2009 dam review, a physical assessment of the dam by a qualified professional (including geotechnical assessment) should be conducted in order to identify current condition, risk assessment and potential upgrades required to maintain the integrity of the dam structure.

In addition to the information gaps identified above, there are a number of other studies which would help in the long-term planning of UBID infrastructure, including the following:

- Water Master Plan – this comprehensive study would provide an overview of the entire water system from "source to tap" and identify future growth potential relative to future water demands and capacity, including water license capacity, treatment plant capacity, and distribution capacity and potential expansion opportunities.
- Capital Expenditure Charges (CEC) review – the provincial best practices guide for Development Cost Charges, which are the same as CECs, recommends that they be reviewed every 5 years or as demand warrants. Given that the current CEC Bylaws is from 2014 and the impacts from the Union Bay Estates development could be significant, a major review of the CEC Bylaw is warranted.
- Long-Term Fire Hall and Equipment Plan – given that both the Fire Hall and Main Engine are nearing the end of their useful lifespans, it would be prudent to develop a 5-year and 10-year capital plan for their respective rebuilding and replacement. This would provide both the conceptual design and financial information required for the community to make an informed decision, which will likely require elector assent for potential borrowing.
- Watershed Protection Plan – even though Langley Lake, the lake bed and a buffer are owned by UBID much of the watershed is held by private owners and utilized for industrial logging purposes. A watershed protection plan is vital to the ongoing, long term protection of source water quality and quantity. While a private lands watershed protection plan has been prepared by Island Timberlands / Mosaic Forest Management, a process initiated by local government (UBID or CVRD) would help to coordinate the management of public and private lands for overall watershed health.

4.0 OPTION COMPARISON

The following section identifies the implications and considerations associated with a potential change of governance for the Union Bay Improvement District. As per the scope of this project, the governance options examined through this study are limited to the following:

Option A. Convert UBID's services to CVRD services.

a. Conversion of UBID *Letters of Patent* to the CVRD. The Union Bay Improvement District would dissolve, and all asset and liabilities would transfer to the CVRD.

b. Water supply, fire protection and street lighting would convert to a regional district service as Local Service Areas. Responsibility and costs for the service remains with the same, being those within the participating area.

c. Governance decisions would rest with the CVRD through the Electoral Area Services Commission (EASC), with representation from the Electoral Area "A" Director as elected by the electoral area residents.

d. CVRD would be responsible for ongoing operations, maintenance and capital upgrades of the services, funded through annual user fees/charges and government grants, as applicable.

Option B. Improve governance and service delivery in Union Bay while maintaining UBID's structure as an improvement district.

a. UBID would continue to function as an Improvement District.

b. UBID would continue to provide water supply, fire protection, and street lighting to ratepayers.

c. Governance decisions would remain the responsibility of UBID Board of Trustees, as elected by ratepayers.

d. Funding would continue through annual user fees, taxes and tolls as set by the Board of Trustees. As per current provincial policy, UBID would not be eligible for direct senior government grants.

A more detailed overview and comparison of options is provided in the following tables:

4.1. *GOVERNANCE AND REPRESENTATION*

	Option A – Conversion to CVRD Local Service Area	Option B – Remain an Improvement District
Governance Structure	The CVRD board would determine all policies and procedures related to services for each local service area. Currently, the CVRD Regional Board uses its Electoral Areas Services Committee (EASC) to consider policy matters for its other existing water, fore and street lighting service areas.	UBID Board of Trustees, which is currently comprised of 4 (out of 5) volunteer trustees elected each year at the Annual General Meeting. Three nominees have recently been acclaimed as UBID Trustees, which will bring the Board back to 5 Trustees.
Service Provision	Service provision would be converted to the CVRD through a transfer of *Letters Patent* and the creation of Local Service Areas for: - water supply, - fire protection, and - street lighting. In a regional district, each local service operates independently and have stand-alone budgets including revenues, requisition expenditures and reserves. Any funds, assets and liabilities related to each of the three UBID services would be transferred wholly and individually into the respective CVRD local service. Assets or funds cannot be transferred from one service area to another without electoral assent.	Union Bay Improvement District (UBID) continues to provide services to the local area through *Letters Patent* for: - water supply, - fire protection, and - street lighting.
Representation	Potential for involvement through Regional District Committees and Commissions: - Local Community Commissions - Commissions	UBID Board of Trustees are elected by the community.

- Select & Standing Committees
- Advisory Committees

4.1.1. REGIONAL DISTRICT COMMISSIONS AND ADVISORY COMMITTEES

Regional districts may establish committees and commissions to provide advice or undertake work on behalf of the regional district board. These formally established bodies may be advisory in nature, or in some cases may be delegated the responsibility for the operation and administration of services. A regional district board can delegate some of its authority to a committee or commission. These do not have any direct approval, ownership, or authority over matters that are referred to it. Costs associated with any additional committees or commissions are the responsibility of the ratepayers of that specific local service area.

If conversion of UBID to the CVRD occurs, it may be appropriate to request input and advice from former UBID Trustees to aid in the transition. This could be in the form of an interim committee of through interview and regular dialogue.

4.2. *KEY ASSETS*

	Option A – Conversion to CVRD Local Service Area	Option B – Remain an Improvement District
Water Licenses	Existing water licenses (Langley Lake, Sable River, Washer Creek) would transfer to the CVRD, for the benefit of the specific local service area (i.e. Union Bay community).	Existing water licenses (Langley Lake, Sable River, Washer Creek) would remain with UBID.
Infrastructure Assets	Existing infrastructure ownership would transfer to the CVRD, including: • Langley Lake Dam (and land) • Langley Lake Water Treatment Plant (and land) • Water Distribution System (including pipes, valves, reservoirs, and fire hydrants) • Union Bay Fire Hall (and land) • Union Bay Fire Rescue equipment and apparatus • All other UBID equipment, land and office supplies	Existing infrastructure and land ownership would remain with UBID.
	Future fire hall land dedication from Union Bay Estates would transfer to CVRD.	Future fire hall land dedication from Union Bay Estates would remain with UBID.
	Current administration building is under lease, which would be terminated (administrative functions moved to CVRD).	Existing lease agreements for administration building would remain with UBID.
Future Capital Considerations	Future capital requirements would be the responsibility of the CVRD with all assets and costs remaining with the ratepayers of each Local Service Area (water, fire, street lighting).	Future capital requirements would continue to be the responsibility of UBID.
	Infrastructure planning (water system inventory, asset management planning, and detailed dam review	Infrastructure planning (water system inventory, asset management planning, and detailed dam review and assessment) would

	and assessment) would be the responsibility of the CVRD.	continue to be the responsibility of UBID.

4.3. *HUMAN RESOURCES AND ADMINISTRATION*

	Option A – Conversion to CVRD Local Service Area	Option B – Remain an Improvement District
Water Service	The CVRD Engineering Services Department oversees four water systems within the Comox Valley. Current staffing includes the GM of Engineering, Senior Manager of Water & Wastewater, Manager of Water Services plus staff of the Water Services Department. Given the capacity of existing CVRD water staff and the relatively stand-alone nature of Union Bay water service, it is anticipated that UBID water staff would become employees of the CVRD. Currently, UBID is in the process of negotiating its first union collective agreement. This would need to be taken into consideration as part of the transition.	Currently, Public Works staff consists of 1 full-time public works superintendent and 3 part-time water operators (approximately 2.8 FTE). Staff would remain employees of UBID. Due to the commissioning of the new water treatment plant, additional staff hours may be required in the future to provide the additional level of service.
Fire Service	The part-time Fire Chief and part-time Deputy Fire Chief (approximately 1.5 FTE) would become employees of the CVRD. Each fire department within the CVRD sets their own operations, service levels and paid-on call volunteer firefighter rate payment structure. They are each provided an annual operational grant from the CVRD and are not directly administered by the CVRD. Ideally, the operational grant is provided by the CVRD to a Fire Department Association, which would need to be established for Union Bay Fire Rescue. This non-profit association in turn provides the required bookkeeping and accounting services to manage the financial administration of the local fire service. In the case	All Union Bay Fire Rescue employees and volunteers would remain as part of UBID.

	where a Fire Department Association does not exist (e.g. Fanny Bay VFD), there is some flexibility in how the administration is funded.	
Street Lighting	Administration of the street lighting local service area is anticipated to be handled by existing CVRD staff, with no additional resources required.	UBID administration will continue to maintain the street lighting service with BC Hydro.
General Administration	Given the amount of water connections in UBID (793 ratepayers and 690 parcels), and the compatibility of the utility billing systems (i.e. VADIM), it is anticipated that CVRD may not fully need the level of existing administrative and financial support, but potentially the equivalent of 0.5 FTE. Accordingly, the positions not required would terminate with appropriate compensation.	Currently, Administration staff consists of 1 full-time Deputy CAO and 1 part-time administration / finance assistant, plus contract support given the recent retirement of the CAO in July 2020.

4.4. *FINANCE AND LEGAL*

	Option A – Conversion to CVRD Local Service Area	Option B – Remain an Improvement District
Annual Expenditures	A detailed review of the 2020 Approved Budget was undertaken, and considered the following: Expenditure reductions include: • Trustee remuneration, expenses, Directors and Officers liability insurance no longer required • Reduction in Administration salaries, expenses, and benefits • Commercial lease space no longer required for administrative office • Utilities, janitorial and other expenses associated with the administrative office no longer required • Audit, insurance, and legal costs reduced due to economies of scale with CVRD Expenditure transfers include: • All administrative support for fire protection would be provided through a newly established fire protection service area, with costs for day-to-day operations to be covered by way of an annual operating grant from the CVRD to the volunteer fire association. New expenditures include: • Potential salary /wage adjustment for transferred UBID staff, depending on negotiations and existing collective bargaining agreement • CVRD support services for each potential new local service area	2020 Approved Budget = $1,158,124 consisting of: • Admin / Public Works = $800,025 • Fire Rescue = $321,100 • Street Lighting = $37,000 Additional transfer to capital reserves in 2020 includes • Water capital = $62,637 • Fire capital = $145,628 With the commissioning of the new water treatment plant in May 2020, the estimated annual cost of operating the plant is $276,000. This increased cost would apply to both Option A and Option B.

Annual Expenditures (continued)	have been currently estimated as follows: ○ Water = $35,000 ○ Fire = $14,000 ○ Street Lighting = $500 Summary – Based on a review of the UBID 2020 Budget for potential expenditure impacts (See Appendix D), the act of conversion to CVRD local services is projected to be cost neutral if not slightly lower in costs. However, differences in levels of service at the CVRD may require additional capital reserve contributions, thus potentially impacting tolls and taxes.	
Annual Revenues	All existing revenue sources would remain the same under the CVRD, but would be requisitioned and collected into each distinct local service areas for Union Bay Water, Union Bay Fire, and Union Bay Street Lighting.	Water revenues ($862,662 in 2020) are derived from: • Water Tolls (and penalties) • Parcel Taxes (and penalties) • Connection Fees • Capital Expenditure Charges • Hydrant Maintenance • Interest Income • Other Revenues Fire revenues ($467,031 in 2020) are derived from: • Property Taxes • Interest Income • Other Revenues Street lighting revenues ($37,000 in 2020) are derived from: • Property Taxes
Capital Reserves	Water and Fire Restricted Renewal Funds will go into newly created capital	As per the 2019 Consolidated Financial Statements:

	reserve fund accounts for their respective local service areas, and cannot be transferred to fund other CVRD service areas. The other non-statutory reserve funds comprise the following and should be divided according to their respective local service area: • Public Works Operational Equipment Fund ($21,156) – water • Fire Department Operational Equipment Fund ($224) – water • Information Technology Equipment Fund ($1,578) – divided equally between water and fire • Operational Contingency Emergency Fund ($106,113) – divided two-thirds to water and one-third to fire Capital Expenditure Charges (CECs) are levied on developers to support infrastructure upgrades due to growth. Within the CVRD, these are known as Development Cost Charges (DCCs) and should be transferred accordingly.	• Water Restricted Renewal Fund = $525,146 • Fire Restricted Renewal Fund = $1,456,608 • Other Non-Statutory Reserves = $129,071 • Water Capital Expenditure Charges Reserve = $300,023
Grant Eligibility	CVRD is eligible for all senior government infrastructure grants afforded to regional districts and municipalities.	UBID is not directly eligible to apply for most senior government infrastructure grants, but regional districts can apply for some grants on behalf of improvement districts (if it aligns with their capital priorities)
Debt Financing	CVRD will assume any debentures and debt financing for the water treatment plant, to be assigned to property owners within the water local service area via parcel tax. If the construction loan has not been converted to a long-term debenture, the CVRD may want to explore financing through the Municipal Finance Authority (MFA)	UBID currently holds a construction loan with RBC in the amount of $3.5 million for the water treatment plant. The debt is unsecured and bears interest at bank prime rate per annum. It is expected that this construction loan will be converted to a long-term debenture (e.g. 20 or 25 years) with RBC, but at time of

	which may be able to provide lower interest rates through its long-term borrowing program for regional districts and municipalities.	writing this report it had not yet been converted.
Other Potential Liabilities	In 2019, UBID entered into a two-year lease for its administration offices, with an annual payment of $22,387 in 2020. Depending on the timing of conversion, there may be a penalty should the lease be terminated early.	
	If decommissioning of current water treatment plant has not been completed by UBID prior to conversion, then this liability would transfer to CVRD and the ratepayers of the new water local service area.	According to the 2019 consolidated financial statements, UBID has committed to "decommission and remove the current water treatment plant and restore and remediate the location to standards that permit to use it for residential purposes. The work is planned to start later in fall of 2020 and the cost is not yet determinable." The current (old) treatment plant is located at 451 McLeod Road on approximately 0.125 hectares of land leased from 34083 Yukon Inc.
	A review of potential for outstanding commitments for additional water supply is valid under both options.	Although there is potential to expand the water treatment plant to 28 lps, a review of all potential development as well as outstanding commitments for additional water supply is warranted. This can be considered as part of a Water Master Plan.

5.0 PARTNER, STAKEHOLDER AND COMMUNITY ENGAGEMENT

A number of engagement methods were utilized throughout the UBID Conversion Study process in order to collect and analyze background information and guide the study. The project included monthly working group meetings, interviews with UBID and CVRD staff and elected officials, as well as site visits to various capital facilities.

The engagement process provided several opportunities for feedback on the requirements and conditions necessary to enable a conversion, as well as opportunities for meaningful engagement from the UBID Board. Public consultation and engagement are critical components to the process, as it will be the ratepayers who will be impacted the most by any decision regarding the future governance of the Union Bay Improvement District.

5.1. ADVISORY WORKING GROUP

The UBID Conversion Study Advisory Working Group was established at the onset of the project, and were held each month between February and August, 2020. It included representative of the following stakeholders:

- UBID Board Chair;
- 2 additional UBID Trustees;
- Electoral 'A' Director;
- UBID Administrator;
- CVRD Deputy CAO; and
- Ministry of Municipal Affairs and Housing staff.

5.2. LOCAL GOVERNMENT STAFF

Communications and engagement with the CVRD and UBID staff were conducted on an ongoing basis, as well as at key junction points of the study. One-on-one sessions with individual staff members or departments, as well as discussions between UBID and CVRD staff were organized to gather critical information concerning the existing UBID and CVRD systems.

The following critical discussions focused on the financial administration of the services, their operations and maintenance, as well as the changes needed for the CVRD to take on the operation of fire protection, water supply, and street lighting:

- CVRD Engineering Services (April 23, 2020)
- CVRD Financial Services (May 7 and May 27, 2020)
- CVRD Fire Services (May 7, 2020)
- CVRD Engineering Services / UBID Public Works (June 11, 2020)
- CVRD Fire Services / Union Bay Fire Rescue (June 9, 2020).
- Langley Lake Water Treatment Plant Tour with UBID and CVRD staff (July 16, 2020)

5.3. UBID BOARD OF TRUSTEES

Engagement with the UBID Board of Trustees played an important role in providing an understanding of issues of public interest and concern. Each of the four UBID Trustees was engaged in a one-on-one telephone interview between June 9 and June 12, 2020, which sought to identify the following:

- Current challenges that UBID faces in providing services through the Improvement District structure;
- Opportunities and benefits to converting services to the CVRD;
- Challenges and drawbacks to converting services to the CVRD; and
- Potential improvements to the current UBID governance structure.

5.4. K'ÓMOKS FIRST NATION

The CVRD has a regular monthly meeting with the K'ómoks First Nation (KFN) Chief and Council to discuss a variety of topics and projects of mutual interest. These meetings are not meant to constitute consultation, rather the meetings enable a dialogue on projects and interests that are shared on a nation-to-government basis. The UBID Conversion Study has been discussed at a high level with KFN. At the time of writing this report, no specific issues had been identified.

5.5. UBID RESIDENTS AND RATEPAYERS

A key component of this project has been keeping UBID residents and ratepayers informed throughout the process. This has been challenging in 2020 during the COVID-19 pandemic, as face-to-face communication has been limited. To date, the community has been kept informed of the project through various means, including:

- Project Newsletters (March 2020 and May 2020);
- A third newsletter (September 2020) will accompany this Draft Report and provide a summary of the report findings;
- Website Updates (UBID and CVRD); and
- E-mail and telephone correspondence in response to community inquiries

A series of public open houses (both virtual and in-person) are anticipated in the Fall of 2020 to present the Draft Report, discuss the option considerations, and identify any additional information required by the ratepayers in order to make an informed decision with respect to UBID conversion. We will continue to follow the advice of the Provincial Health Officer in order to safely engage with the community as part of this process.

THIS PAGE INTENTIONALLY LEFT BLANK

6.0 SUMMARY AND NEXT STEPS

The information presented in this report for the Union Bay Improvement District Conversion Study has been identified based on our background research, discussions with the various stakeholders from the Comox Valley Regional District (CVRD) and Union Bay Improvement District (UBID), as well as site and field visits. The report outlines the key issues and challenges with respect to the current situation, and presents two options for consideration by the ratepayers of UBID – conversion of UBID to CVRD local service areas, or remain as an Improvement District.

While the report is intended to provide a neutral analysis of the potential options, there a number of key summary observations outlined which may help the residents and elected officials of UBID and CVRD in making an informed decision.

- Regardless of the option the assets and liabilities will remain with the community ratepayers, either as an improvement district or regional district local service. For the latter, although all assets and liabilities would transfer to the Comox Valley Regional District, they would remain with the specific local service established for the Union Bay community for water, fire protection, and street lighting.
- Based on the available information and assumptions in the study, conversion to a Regional District local service is estimated to be cost neutral (with a potential small cost savings depending on labour costs). This is based on the CVRD support service costs of approximately 4 – 5% of expenditures for water and fire protection, with nominal support service costs for street lighting.
- Conversion to a Regional District local service would mean the dissolution of the UBID Board of Trustees, but local representation would still be through the Electoral Area Director for Area “A”.
- Conversion to a Regional District local service would provide access to a larger pool of expertise (e.g. engineering, planning, finance and administration), access to senior government grants, and financing through Municipal Finance Authority (MFA).
- Conversion of the Fire Service would involve the provision of an annual operating grant from the CVRD to the Union Bay Volunteer Firefighters Association, who would then operate the fire services contract with the Regional District, for administration, bookkeeping services, insurance and utilities, and volunteer firefighter remuneration. The Union Bay Fire Chief and Deputy Fire Chief would become employees of the CVRD.
- Although the analysis was based on the UBID 2020 budget, there will be additional costs under either option including additional operating costs for the new water treatment plant (commissioned in May 2020) and additional labour costs due to the new union collective agreement (currently under negotiation).
- Costs for watermain replacement could increase under the conversion option, due to the CVRD’s higher level of service for watermain repair. However, with either option it is recommended that additional asset management practices be incorporated into the organization, in order to support sustainable service delivery.

This report provides the basis for discussion with UBID residents and ratepayers, as they look to make an informed decision on the future of the Union Bay Improvement District. While there is additional information that could have further assisted in our analysis as well as the potential for more in-depth discussion on specific topic areas, the report provides a comprehensive and unbiased view of the components and impacts of both options.

As part of the study completion, the anticipated next steps in the process are as follows:

- Release of Draft Report and Newsletter #3 (September 2020);
- UBID Annual General Meeting (September 10, 2020);
- Public Engagement (virtual and in-person) on the Draft Report (Fall 2020);
- Compile community feedback and prepare Final Report (Fall 2020);
- Presentation of Final Report to UBID Board and CVRD Board (TBD);
- Referendum, if required (TBD).

URBAN SYSTEMS

APPENDIX A

Water System Inventory Tables

February 2009

Drawing No. 1

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Kilmarnock Drive		37	150mm	A.C. CL 150	1975	60	26	$125	$4,625	$9,974	$0	$195	$28	$6,635	$167
		130	150mm	A.C. CL 150	1975	60	26	$125	$16,250	$35,045	$0	$686	$99	$23,311	$587
		387	150mm	A.C. CL 150	1975	60	26	$125	$48,375	$104,325	$0	$2,041	$295	$69,396	$1,746
		197	150mm	A.C. CL 150	1975	60	26	$125	$24,625	$53,106	$0	$1,039	$150	$35,325	$889
	Valve		150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
			150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
			150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
	Blow-off		150mm		1975	60	26	$1,200	$1,200	$2,588	$0	$51	$7	$1,721	$43
	Hydrant		150mm		1975	50	26	$3,500	$3,500	$7,548	$0	$148	$36	$5,021	$112
			150mm		1975	60	26	$3,500	$3,500	$7,548	$0	$148	$21	$5,021	$126
Inverness Road		286	150mm	A.C. CL 150	1976	60	27	$125	$35,750	$79,411	$0	$1,453	$225	$47,935	$1,228
	Valve		150mm		1976	60	27	$916	$916	$2,035	$0	$37	$6	$1,228	$31
			150mm		1976	60	27	$916	$916	$2,035	$0	$37	$6	$1,228	$31
			150mm		1976	60	27	$916	$916	$2,035	$0	$37	$6	$1,228	$31
Arran Road		407	150mm	A.C. CL 150	1976	60	27	$125	$50,875	$113,008	$0	$2,067	$320	$68,215	$1,748
	Valve		150mm		1976	60	27	$916	$916	$2,035	$0	$37	$6	$1,228	$31
Montrose Drive		77	150mm	A.C. CL 150	1976	60	27	$125	$9,625	$21,380	$0	$391	$60	$12,906	$331
		547	150mm	A.C. CL 151	1976	60	27	$125	$68,375	$151,881	$0	$2,778	$430	$91,680	$2,349
	Valve		150mm		1976	60	27	$916	$916	$2,035	$0	$37	$6	$1,228	$31
			150mm		1976	60	27	$916	$916	$2,035	$0	$37	$6	$1,228	$31
	Hydrant		150mm		1976	50	27	$3,500	$3,500	$7,775	$0	$142	$37	$4,693	$105
			150mm		1976	60	27	$3,500	$3,500	$7,775	$0	$142	$22	$4,693	$120
	Blow-off		150mm		1976	60	27	$1,200	$1,200	$2,666	$0	$49	$8	$1,609	$41

Drawing No. 2

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Kilmarnock Drive		52	150mm	A.C. CL 149	1975	60	26	$125	$6,500	$14,018	$0	$274	$40	$9,324	$235
		239	150mm	A.C. CL 150	1975	60	26	$125	$29,875	$64,428	$0	$1,260	$182	$42,857	$1,078
		81	150mm	A.C. CL 151	1975	60	26	$125	$10,125	$21,835	$0	$427	$62	$14,525	$365
		105	150mm	A.C. CL 152	1975	60	26	$125	$13,125	$28,305	$0	$554	$80	$18,828	$474
		249	150mm	A.C. CL 150	1975	60	26	$125	$31,125	$67,124	$0	$1,313	$190	$44,650	$1,123
	Valve		150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
	Hydrant		150mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
			150mm		1975	60	26	$3,500	$3,500	$7,548	$0	$148	$21	$5,021	$126
			150mm		1975	60	26	$3,500	$3,500	$7,548	$0	$148	$21	$5,021	$126
									$102,168	$218,398	$0	$4,400	$629	$149,612	$3,772

Drawing No. 3

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
S.R.W.		100	150mm	PVC	1975	100	66	$125	$12,500	$87,936	$0	$183	$34	$6,221	$149
Hutchingson Road		522	150mm	A.C.	1975	60	26	$125	$65,250	$140,718	$0	$2,753	$398	$93,603	$2,355
	Hydrant		150mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
			150mm		1975	60	26	$3,500	$3,500	$7,548	$0	$148	$21	$5,021	$126
Lot A Plan 45614		154	150mm	A.C.	1975	60	26	$125	$19,250	$41,514	$0	$812	$117	$27,615	$695
David Road		103	150mm	A.C.	1975	60	26	$125	$12,875	$27,766	$0	$543	$79	$18,470	$465
		82	150mm	A.C.	1975	60	26	$125	$10,250	$22,105	$0	$432	$63	$14,704	$370
	Valve		150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
	Hydrant		150mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
	Blow - off		150mm		1975	60	26	$1,200	$1,200	$2,588	$0	$51	$7	$1,721	$43
									$132,741	$343,384	$0	$5,436	$778	$184,813	$4,658

Drawing No. 4

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
S.R.W. 56419		127	150mm	A.C.	1997	60	48	$125	$15,875	$65,599	$0	$349	$186	$4,187	$163
Spence Road		278	150mm	A.C.	1975	60	26	$125	$34,750	$74,942	$0	$1,466	$212	$49,850	$1,254
		235	150mm	PVC	1997	100	88	$125	$29,375	$395,962	$0	$274	$152	$3,289	$122
	Valve		150mm		1997	60	48	$916	$3,500	$14,463	$0	$77	$41	$923	$36
	Hydrant		150mm		1997	50	38	$3,500	$1,200	$3,690	$0	$34	$18	$411	$17
	Blow - off		150mm		1997	60	48	$1,200	$1,200	$4,959	$0	$26	$14	$316	$12
Glover Road		176	150mm	A.C.	1975	60	26	$125	$22,000	$47,445	$0	$928	$134	$31,560	$794
	Valve		150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
Beaufort Road		358	100mm	A.C.	1975	60	26	$105	$37,590	$81,066	$0	$1,586	$229	$53,924	$1,357
		297	200mm	PVC	1978	100	69	$150	$44,550	$342,465	$0	$612	$131	$18,973	$481
	Hydrant		200mm		1978	50	19	3500	$3,500	$6,137	$0	$201	$29	$6,230	$172
									$194,768	$1,039,703	$0	$8,693	$1,161	$170,978	$4,441

Drawing No. 5

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Beaufort Road		281	200mm	PVC	1978	100	69	$150	$42,150	$324,016	$0	$579	$124	$17,951	$455
		260	200mm	PVC	1978	100	69	$150	$39,000	$299,801	$0	$536	$115	$16,609	$421
		297	200mm	PVC	1979	100	70	$150	$44,550	$352,739	$0	$599	$135	$17,981	$464
		306	100mm	A.C.	1975	60	26	$105	$32,130	$69,291	$0	$1,356	$196	$46,092	$1,160
		483	100mm	A.C.	1975	60	26	$105	$50,715	$109,372	$0	$2,140	$309	$72,753	$1,830
	Valve		200mm		1979	60	30	$1,283	$1,283	$3,114	$0	$47	$9	$1,406	$38
	Hydrant		200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
			200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
			200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
									$220,328	$1,176,748	$0	$5,359	$876	$191,451	$4,885

Drawing No. 6

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Island Highway		445	200mm	A.C.	1979	60	30	$150	$66,750	$162,020	$0	$2,439	$458	$73,159	$1,980
		257	200mm	A.C.	1979	60	30	$150	$38,550	$93,571	$0	$1,408	$265	$42,251	$1,144
	Hydrant		200mm		1979	50	20	$3,500	$3,500	$6,321	$0	$191	$30	$5,735	$161
			200mm	A.C.	1979	60	30	$3,500	$3,500	$8,495	$0	$128	$24	$3,836	$104
			200mm	A.C.	1979	60	30	$3,500	$3,500	$8,495	$0	$128	$24	$3,836	$104
			200mm	A.C.	1979	60	30	$3,500	$3,500	$8,495	$0	$128	$24	$3,836	$104
Tappin Street		83	200mm	A.C.	1980	60	31	$150	$12,450	$31,126	$0	$440	$88	$12,756	$352
		470	200mm	A.C.	1980	60	31	$150	$70,500	$176,256	$0	$2,491	$498	$72,235	$1,992
	Hydrant		200mm		1980	50	21	$3,500	$3,500	$6,511	$0	$182	$31	$5,286	$151
									$205,750	$491,297	$0	$7,535	$1,443	$222,581	$5,892

Drawing No. 7

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Island Highway		189	200mm	A.C.	1975	60	26	$150	$28,350	$61,139	$0	$1,196	$173	$40,669	$1,023
		289	200mm	A.C.	1974	60	25	$150	$43,350	$90,765	$0	$1,902	$257	$66,561	$1,645
		226	200mm	A.C.	1977	60	28	$150	$33,900	$77,561	$0	$1,328	$219	$42,497	$1,109
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			200mm		1977	60	28	$1,283	$1,283	$2,935	$0	$50	$8	$1,608	$42
	Hydrant		200mm		1974	50	15	$3,500	$3,500	$5,453	$0	$253	$26	$8,844	$227
Tappin Street		409	200mm	A.C.	1978	60	29	$150	$61,350	$144,575	$0	$2,320	$409	$71,913	$1,911
	Valve		200mm		1978	60	29	$1,283	$1,283	$3,023	$0	$49	$9	$1,504	$40
	Hydrant		200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
			200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
S.R.W.		84	200mm	A.C.	1978	60	29	$150	$12,600	$29,693	$0	$476	$84	$14,769	$392
	Hydrant		200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
									[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Drawing No. 8

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Island Highway		302	75mm	Plastic	1974	100	65	$105	$31,710	$216,579	$0	$474	$83	$16,594	$391
		366	75mm	Plastic	1974	100	65	$105	$38,430	$262,476	$0	$575	$101	$20,111	$474
		134	150mm	A.C.	1974	60	25	$125	$16,750	$35,071	$0	$735	$99	$25,719	$636
		140	200mm	A.C.	1974	60	25	$150	$21,000	$43,969	$0	$921	$124	$32,244	$797
	Valve		200mm		1977	60	28	$1,283	$1,283	$2,935	$0	$50	$8	$1,608	$42
			200mm		1973	60	24	$1,283	$1,283	$2,608	$0	$59	$7	$2,110	$51
			75mm		1974	60	25	$791	$791	$1,656	$0	$35	$5	$1,215	$30
	Hydrant		200mm		1974	50	15	$3,500	$3,500	$5,453	$0	$253	$26	$8,844	$227
			200mm		1974	50	15	$3,500	$3,500	$5,453	$0	$253	$26	$8,844	$227
First Street		265	200mm	A.C.	1973	60	24	$150	$39,750	$80,804	$0	$1,816	$229	$65,366	$1,587
Between 1st & High		71	200mm	A.C.	1973	60	24	$150	$10,650	$21,649	$0	$486	$61	$17,513	$425
High Street		131	200mm	A.C.	1974	60	25	$150	$19,650	$41,143	$0	$862	$116	$30,171	$746
	Hydrant		200mm		1974	50	15	$3,500	$3,500	$5,453	$0	$253	$26	$8,844	$227
Richard Street		59	200mm	A.C.	1974	60	25	$150	$8,850	$18,530	$0	$388	$52	$13,589	$336
		9	75mm	PVC	1974	100	65	$105	$945	$6,454	$0	$14	$2	$495	$12
Market Street		77	75mm	PVC	1998	60	49	$105	$8,085	$34,412	$0	$173	$97	$1,908	$76
	Valve		75mm		1998	60	49	$791	$791	$3,367	$0	$17	$10	$187	$7
	Blow - off		75mm		1998	60	49	$1,200	$1,200	$5,107	$0	$26	$14	$283	$11
2nd Street		64	100mm	A.C.	1974	60	25	$105	$6,720	$14,070	$0	$295	$40	$10,318	$255
Nelson Street		91	100mm	A.C.	1974	60	25	$105	$9,555	$20,006	$0	$419	$57	$14,671	$363
		99	250mm	PVC	2002	100	93	$210	$20,790	$324,875	$0	$176	$124	$1,230	$51
	Valve		100mm		2002	60	53	$791	$791	$3,789	$0	$15	$11	$108	$5
			250mm		2002	100	93	$1,798	$1,798	$28,096	$0	$15	$11	$106	$4
			250mm		2002	100	93	$1,798	$1,798	$28,096	$0	$15	$11	$106	$4
	Hydrant														
Third Street		187	100mm	A.C.	1974	60	25	$105	$19,635	$41,111	$0	$861	$116	$30,148	$745
	Valve		100mm		1974	60	25	$791	$791	$1,656	$0	$35	$5	$1,215	$30
Horne Street		207	200mm	A.C.	1978	60	29	$150	$31,050	$73,171	$0	$1,174	$207	$36,396	$967
	Valve		200mm		1978	60	29	$1,283	$1,283	$3,023	$0	$49	$9	$1,504	$40
	Hydrant		200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
McLeod Road		244	200mm	A.C.	1964	60	15	$150	$36,600	$57,022	$0	$2,643	$161	$118,913	$2,481
	Hydrant		200mm		1964	50	5	$3,500	$3,500	$4,057	$0	$734	$19	$33,043	$715
			200mm		1964	50	5	$3,500	$3,500	$4,057	$0	$734	$19	$33,043	$715
									[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Drawing No. 9

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
McLeod Road		199	200mm	A.C.	1964	60	15	$150	$29,850	$46,505	$0	$2,155	$132	$96,982	$2,024
		200	200mm	PVC CL. 160	1978	100	69	$150	$30,000	$230,616	$0	$412	$88	$12,776	$324
	Hydrant		200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
Nelson Street		355	250mm	PVC	2002	100	93	$210	$74,550	$1,164,956	$0	$630	$446	$4,410	$184
	Valve				2002	100	93	$1,798	$1,798	$28,096	$0	$15	$11	$106	$4
Douglas Street		72	100mm	A.C.	1974	60	25	$105	$7,560	$15,829	$0	$332	$45	$11,608	$287
		110	250mm	PVC	2002	100	93	$210	$23,100	$360,972	$0	$195	$138	$1,366	$57
	Blow - off		100mm		1974	60	25	$1,200	$1,200	$2,513	$0	$53	$7	$1,843	$46
Fourth Street		258	150mm	A.C.	1974	60	25	$125	$32,250	$67,524	$0	$1,415	$191	$49,518	$1,224
	Valve		150mm		2002	60	53	$916	$916	$4,388	$0	$18	$12	$125	$5
	Hydrant		150mm		1974	50	15	$3,500	$3,500	$5,453	$0	$253	$26	$8,844	$227
Fifth Street		255	150mm	PVC CL. 160	2002	100	93	$125	$31,875	$498,095	$0	$269	$191	$1,886	$79
	Valve		150mm		2002	100	93	$916	$916	$14,314	$0	$8	$5	$54	$2
			150mm		2002	100	93	$916	$916	$14,314	$0	$8	$5	$54	$2
	Hydrant		150mm		2002	50	43	$3,500	$3,500	$12,476	$0	$87	$60	$611	$28
Sixth Street		255	150mm	PVC CL. 160	2002	100	93	$125	$31,875	$498,095	$0	$269	$191	$1,886	$79
	Valve		150mm		2002	100	93	$916	$916	$14,314	$0	$8	$5	$54	$2
			150mm		2002	100	93	$916	$916	$14,314	$0	$8	$5	$54	$2
	Hydrant		150mm		2002	50	43	$3,500	$3,500	$12,476	$0	$87	$60	$611	$28
Seventh Street		115	250mm	PVC	2002	100	93	$210	$24,150	$377,380	$0	$204	$145	$1,429	$59
		43	150mm	PVC	2002	100	93	$125	$5,375	$83,992	$0	$45	$32	$318	$13
		93	150mm	PVC CL. 160	2002	100	93	$125	$11,625	$181,658	$0	$98	$70	$688	$29
	Valve		150mm		2002	100	93	$916	$916	$14,314	$0	$8	$5	$54	$2
Eighth Street		143	250mm	PVC	2002	100	93	$210	$30,030	$469,264	$0	$254	$180	$1,776	$74
		13	250mm	PVC	2002	100	93	$210	$2,730	$42,660	$0	$23	$16	$161	$7
									$367,464	$4,189,666	$0	$7,055	$2,087	$203,448	$4,959

Drawing No. 10

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
McLeod Road		217	250	PVC	1997	100	88	$210	$45,570	$614,264	$0	$425	$235	$5,103	$190
		152	250	PVC	1997	100	88	$210	$31,920	$430,268	$0	$298	$165	$3,574	$133
		61	250	PVC	1997	100	88	$210	$12,810	$172,673	$0	$120	$66	$1,434	$53
		460	100mm	PVC	1997	100	88	$105	$48,300	$651,063	$0	$451	$249	$5,409	$201
		229	200mm	PVC	1997	100	88	$150	$34,350	$463,023	$0	$321	$177	$3,847	$143
		214	200mm	PVC CL. 160	1978	100	69	$150	$32,100	$246,759	$0	$441	$95	$13,671	$346
		325	200mm	PVC CL. 160	1978	100	69	$150	$48,750	$374,751	$0	$670	$144	$20,762	$526
		322	100mm	PVC	1997	100	88	$105	$33,810	$455,744	$0	$316	$175	$3,786	$141
	Valve		250mm		1997	100	88	$1,798	$1,798	$24,236	$0	$17	$9	$201	$7
			200mm		1997	100	88	$1,283	$1,283	$17,294	$0	$12	$7	$144	$5
			200mm		1978	100	69	$1,283	$1,283	$9,863	$0	$18	$4	$546	$14
	Hydrant		200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
			200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
	Reservoir			Pressure reducing Station and gas chlorinator	1978	50	30	$400,000	$400,000	$970,905	$0	$14,614	$4,638	$453,019	$9,976
Road		192	150mm	PVC	1997	100	88	$125	$24,000	$323,509	$0	$224	$124	$2,688	$100
	Valve		150mm		1997	101	89	$916	$916	$12,718	$0	$8	$5	$101	$4
Green Ave		18	100mm	AC	1978	60	29	105	$1,890	$4,454	$0	$71	$13	$2,215	$59
		400	100mm	AC	1978	60	29	105	$42,000	$98,976	$0	$1,588	$280	$49,232	$1,308
	Valve		100mm		1978	60	29	791	$791	$1,864	$0	$30	$5	$927	$25
			100mm		1978	60	29	791	$791	$1,864	$0	$30	$5	$927	$25
	Hydrant		100mm		1978	50	19	791	$791	$1,387	$0	$45	$7	$1,408	$39
	Blow - off		100mm		1978	60	29	1200	$1,200	$2,828	$0	$45	$8	$1,407	$37
Lot 6/7 To Lot 11		196	50mm	plastic	1978	100	69	791	$155,036	$1,191,794	$0	$2,130	$457	$66,027	$1,673
									$826,389	$6,082,511	$0	$22,274	$6,026	$240,887	$16,249

Drawing No. 11

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
McLeod Road		24	100mm	PVC	1978	100	69	$105	$2,520	$19,372	$0	$35	$7	$1,073	$27
		280	200mm	PVC CL. 160	1978	100	69	$150	$42,000	$322,863	$0	$577	$124	$17,887	$453
		198	38mm	Plastic	1978	100	69	$105	$20,790	$159,817	$0	$286	$61	$8,854	$224
		291	200mm	PVC CL. 160	1978	100	69	$150	$43,650	$335,547	$0	$600	$129	$18,590	$471
	Valve		200mm		1978	100	69	$1,283	$1,283	$9,863	$0	$18	$4	$546	$14
	Hydrant		200mm		1978	50	19	$3,500	$3,500	$6,137	$0	$201	$29	$6,230	$172
	Blow - off		100mm		1978	100	69	$1,200	$1,200	$9,225	$0	$16	$4	$511	$13
									$114,643	$903,323	$0	$1,732	$358	$53,697	$1,374

Drawing No. 12

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
McLeod Road		459	200mm	PVC CL. 160	1978	100	69	$150	$68,850	$529,264	$0	$946	$203	$29,322	$743
		87	200mm	PVC CL. 159	1978	100	69	$150	$13,050	$100,318	$0	$179	$38	$5,558	$141
		395	200mm	PVC CL. 160	1978	100	69	$150	$59,250	$455,467	$0	$814	$175	$25,234	$639
	Valve		200mm		1978	100	69	$1,283	$1,283	$9,863	$0	$18	$4	$546	$14
									$142,433	$1,094,912	$0	$1,957	$420	$60,659	$1,537

Drawing No. 13

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
		406	200mm	PVC CL. 160	1978	100	69	$150	$60,900	$468,151	$0	$837	$179	$25,936	$657
		8	200mm	PVC CL. 161	1978	100	69	$150	$1,200	$9,225	$0	$16	$4	$511	$13
		112	200mm	PVC CL. 162	1978	100	69	$150	$16,800	$129,145	$0	$231	$49	$7,155	$181
	Valve		200mm		1978	100	69	$1,283	$1,283	$9,863	$0	$18	$4	$546	$14
									$80,183	$616,353	$0	$1,102	$236	$34,149	$865

Drawing No. 14

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
		218	200mm	PVC CL. 160	1978	100	69	$150	$32,700	$251,372	$0	$449	$96	$13,926	$353
		194	200mm	PVC CL. 160	1978	100	69	$150	$29,100	$223,698	$0	$400	$86	$12,393	$314
		63	200mm	PVC CL. 160	1978	100	69	$150	$9,450	$72,644	$0	$130	$28	$4,025	$102
		517	300mm	PVC CL. 160	1998	100	89	$245	$126,665	$1,758,610	$0	$1,159	$674	$12,746	$485
	Valve		200mm		1978	100	69	$1,283	$1,283	$9,863	$0	$18	$4	$546	$14
			200mm		1978	100	69	$1,283	$1,283	$9,863	$0	$18	$4	$546	$14
			300mm		1998	100	89	$2,333	$2,333	$32,391	$0	$21	$12	$235	$9
	Outlet Works		N/A		N/A	60	50	$0	$0	$0	$0	$0	$0		$0
									$202,814	$2,368,440	$0	$2,194	$904	$44,210	$1,291

Drawing No. 15

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
		127	200mm	A.C.	1974	60	25	$150	$19,050	$39,886	$0	$836	$113	$29,250	$723
		34	200mm	AC	1974	60	25	$150	$5,100	$10,678	$0	$224	$30	$7,831	$194
		113	75mm	Plastic	1975	100	66	$105	$11,865	$83,469	$0	$174	$32	$5,905	$142
		236	200mm	AC	1975	60	26	$150	$35,400	$76,343	$0	$1,494	$216	$50,783	$1,278
		232	200mm	A.C. CL 150	1975	60	26	$150	$34,800	$75,049	$0	$1,468	$212	$49,922	$1,256
	Valve		200mm	A.C. CL 151	1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm	A.C. CL 152	1975	60	26	$3,500	$3,500	$7,548	$0	$148	$21	$5,021	$126
			200mm	A.C. CL 153	1975	60	26	$3,500	$3,500	$7,548	$0	$148	$21	$5,021	$126
									$114,498	$303,289	$0	$4,844	$853	$156,572	$3,891

Drawing No. 16

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
S.R.W. 56690		170	200mm	AC	1975	60	26	$150	$25,500	$54,993	$0	$1,076	$156	$36,581	$920
		69	200mm	AC	1975	60	26	$150	$10,350	$22,321	$0	$437	$63	$14,847	$374
Garvin Road		487	200mm	A.C. CL 150	1975	60	26	$150	$73,050	$157,539	$0	$3,082	$446	$104,793	$2,637
		234	200mm	A.C. CL 150	1975	60	26	$150	$35,100	$75,696	$0	$1,481	$214	$50,352	$1,267
		119	20mm	Service to Lot 1 26567	1975	100	66	$105	$12,495	$87,901	$0	$183	$34	$6,218	$149
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
			200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
Callis Road		83	200mm	AC	1975	60	26	$150	$12,450	$26,850	$0	$525	$76	$17,860	$449
									$178,511	$442,066	$0	$7,367	$1,067	$250,476	$6,310

Drawing No. 17

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Harwood Road		553	200mm	A.C. CL 150	1975	60	26	$150	$82,950	$178,889	$0	$3,500	$506	$118,995	$2,994
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
									$86,450	$184,505	$0	$3,737	$533	$127,067	$3,204

Drawing No. 18

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Muschamp Road		348	200mm	A.C. CL. 150	1975	60	26	$150	$52,200	$112,574	$0	$2,202	$318	$74,883	$1,884
		292	200mm	A.C. CL. 150	1975	60	26	$150	$43,800	$94,459	$0	$1,848	$267	$62,833	$1,581
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
			200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
			200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
									$110,349	$232,183	$0	$4,926	$889	$167,483	$4,256

Drawing No. 19

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Island Highway		314	200mm	A.C. CL. 150	1975	60	26	$150	$47,100	$101,575	$0	$1,987	$287	$67,567	$1,700
		325	200mm	A.C. CL. 150	1975	60	26	$150	$48,750	$105,134	$0	$2,057	$297	$69,934	$1,760
		387	200mm	A.C. CL. 150	1975	60	26	$150	$58,050	$125,190	$0	$2,449	$354	$83,275	$2,095
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
			200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
									[illegible]	[illegible]	$0	[illegible]	[illegible]	[illegible]	[illegible]

Drawing No. 20

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Island Highway		114	200mm	A.C. CL. 150	1975	60	26	$150	$17,100	$36,878	$0	$721	$104	$24,531	$617
		294	200mm	A.C. CL. 150	1975	60	26	$150	$44,100	$95,106	$0	$1,861	$269	$63,263	$1,592
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
Rayne Road		119	200mm	A.C. CL. 150	1975	60	26	$150	$17,850	$38,495	$0	$753	$109	$25,606	$644
		73	150mm	A.C. CL. 150	1975	60	26	$125	$9,125	$19,679	$0	$385	$56	$13,090	$329
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
	Blow - off		150mm		1975	60	26	$1,200	$1,200	$2,588	$0	$51	$7	$1,721	$43
Walker Frontage Rd		314	200mm	A.C. CL. 150	1975	60	26	$150	$47,100	$101,575	$0	$1,987	$287	$67,567	$1,700
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
Mystery Beach Road		280	150mm	A.C. CL. 150	1975	60	26	$125	$35,000	$75,481	$0	$1,477	$213	$50,209	$1,263
	Valve		150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
									$184,823	$384,077	$0	$7,965	$1,150	$270,507	$5,628

Drawing No. 21

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Country Aire Road		37	200mm	PVC CL. 150	1995	100	86	$150	$5,550	$70,517	$0	$54	$27	$755	$27
		187	200mm	PVC CL. 150	1995	100	86	$150	$28,050	$356,397	$0	$272	$137	$3,814	$136
		174	200mm	PVC CL. 150	1995	100	86	$150	$26,100	$331,621	$0	$253	$127	$3,549	$126
		297	200mm	PVC CL. 150	1995	100	86	$150	$44,550	$566,042	$0	$433	$217	$6,057	$216
	Valve		200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
			200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
			200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
	Hydrant		200mm		1995	50	36	$3,500	$3,500	$10,144	$0	$106	$48	$1,482	$57
			200mm		1995	50	36	$3,500	$3,500	$10,144	$0	$106	$48	$1,482	$57
			200mm		1995	50	36	$3,500	$3,500	$10,144	$0	$106	$48	$1,482	$57
			200mm		1995	50	36	$3,500	$3,500	$10,144	$0	$106	$48	$1,482	$57
	Blow - off		200mm		1995	100	86	$1,200	$1,200	$15,247	$0	$12	$6	$163	$6
									$123,289	$1,425,305	$0	$1,485	$728	$20,758	$759

Drawing No. 22

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Country Aire Road		72	200mm	PVC CL. 150	1995	100	86	$150	$10,800	$137,222	$0	$105	$53	$1,468	$52
		297	200mm	PVC CL. 150	1995	100	86	$150	$44,550	$566,042	$0	$433	$217	$6,057	$216
	Valve		200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
McKay Road		338	200mm	PVC CL. 150	1995	100	86	$150	$50,700	$644,183	$0	$492	$247	$6,893	$246
		193	200mm	PVC CL. 150	1995	100	86	$150	$28,950	$367,832	$0	$281	$141	$3,936	$140
	Valve		200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
			200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
			200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
			200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
	Reservoir				1995	60	46	$400,000	$400,000	$1,558,017	$0	$9,236	$4,406	$129,307	$4,830
									$541,415	$3,354,805	$0	$10,610	$5,095	$148,534	$5,515

Drawing No. 23

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
McKay Road		193	200mm	PVC	1995	100	86	$150	$28,950	$367,832	$0	$281	$141	$3,936	$140
		185	200mm	PVC	1995	100	86	$150	$27,750	$352,585	$0	$269	$135	$3,773	$134
		164	200mm	A.C. CL. 150	1975	60	26	$150	$24,600	$53,052	$0	$1,038	$150	$35,290	$888
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			200mm		1995	100	86	$1,283	$1,283	$16,302	$0	$12	$6	$174	$6
	Hydrant		200mm		1995	50	36	$3,500	$3,500	$10,144	$0	$106	$48	$1,482	$57
Mystery Beach Road		308	200mm	A.C. CL. 150	1975	60	26	$150	$46,200	$99,635	$0	$1,949	$282	$66,276	$1,667
		307	200mm	A.C. CL. 150	1975	60	26	$150	$46,050	$99,311	$0	$1,943	$281	$66,060	$1,662
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
			200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
			200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
Walker Frontage Rd		294	200mm	A.C. CL. 150	1975	60	26	$150	$44,100	$95,106	$0	$1,861	$269	$63,263	$1,592
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
									$241,585	$1,127,500	$0	$8,628	$1,451	$279,903	$7,175

Drawing No. 24

ROAD NAME	APPERTENANCES	LENGTH OF PIPE (m)	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Walker Frontage Rd		306	200mm	A.C. CL. 150	1975	60	26	$150	$45,900	$98,988	$0	$1,937	$280	$65,845	$1,657
		390	38mm	Poly	1975	100	66	$105	$40,950	$288,078	$0	$599	$110	$20,378	$489
		218	200mm	A.C. CL. 150	1975	60	26	$150	$32,700	$70,521	$0	$1,380	$199	$46,909	$1,180
	Valve		200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
			38mm		1975	60	26	$791	$791	$1,706	$0	$33	$5	$1,135	$29
			200mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
	Hydrant		200mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
Buckley Bay Road		336	150mm	A.C. CL. 150	1975	60	26	$125	$42,000	$90,577	$0	$1,772	$256	$60,251	$1,516
	Hydrant		150mm		1975	61	27	$3,500	$3,500	$7,775	$0	$142	$21	$4,835	$121
Emerton/Highway		38	150mm	A.C. CL. 150	1975	60	26	$125	$4,750	$10,244	$0	$200	$29	$6,814	$171
	Blow - off		150mm		1975	60	26	$1,200	$1,200	$2,588	$0	$51	$7	$1,721	$43
Emerton Road		187	100mm	A.C. CL. 150	1975	60	26	$105	$19,635	$42,345	$0	$828	$120	$28,167	$709
	Blow - off		100mm		1975	61	27	$1,200	$1,200	$2,666	$0	$49	$7	$1,658	$42
	Valve		100mm		1975	62	28	$791	$791	$1,810	$0	$31	$5	$1,054	$26
	Hydrant		100mm		1975	63	29	$3,500	$3,500	$8,248	$0	$132	$20	$4,500	$112
McKay Road		26	200mm	A.C. CL. 150	1975	60	26	$150	$3,900	$8,411	$0	$165	$24	$5,595	$141
	Valve		100mm		1975	60	26	$1,283	$1,283	$2,767	$0	$54	$8	$1,841	$46
									$208,186	$547,371	$0	$7,719	$1,134	$262,455	$6,595

Drawing No. 25

ROAD NAME	APPERTENANCES	LENGTH OF PIPE	PIPE SIZE	PIPE MATERIAL	DATE INSTALLED	EXPECTED SERVICE LIFE (years)	REMAINING LIFE (years)	Unit Rate	2008 Replacement Cost	Future Replacement Cost	Actual Reserves	Annual Contribution Required	Annual Contribution if started in the First Year	Annual Contribution x Years should have contributed	"Catch-up" Contribution
Buckley Bay Road		312	150mm	A.C. CL. 150	1975	60	26	$125	$39,000	$84,107	$0	$1,645	$238	$55,947	$1,408
		135	150mm	A.C. CL. 150	1975	60	26	$125	$16,875	$36,392	$0	$712	$103	$24,208	$609
	Hydrant		150mm		1975	61	27	$3,500	$3,500	$7,775	$0	$142	$21	$4,835	$121
			150mm		1975	62	28	$3,500	$3,500	$8,008	$0	$137	$20	$4,662	$117
	Valve		150mm		1975	63	29	$916	$916	$2,159	$0	$35	$5	$1,178	$29
Buckley Bay Ferry Rd		161	150mm	A.C. CL. 150	1975	60	26	$125	$20,125	$43,401	$0	$849	$123	$28,870	$726
		82	38mm	PVC Service	1975	100	66	$105	$8,610	$60,570	$0	$126	$23	$4,285	$103
	Valve		150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
			150mm		1975	60	26	$916	$916	$1,975	$0	$39	$6	$1,314	$33
	Blow - off		150mm		1975	60	26	$1,200	$1,200	$2,588	$0	$51	$7	$1,721	$43
	Hydrant		150mm		1975	50	16	$3,500	$3,500	$5,616	$0	$237	$27	$8,072	$211
									[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grand Totals									**$5,564,489**	**$29,653,859**	**$0**	**$167,858**	**$34,953**	**$5,226,174**	**$132,904**

NOTES:

-Cost recovery formulae based on "Capital Funding Envelope" spreadsheet provided by the UBID
-McLeod Rd Reservoir replacement cost assumed to be $400,000 as increased capacity is likely required to meet current fire flow/storage requirements
-McKay Rd Reservoir replacement cost also assumed to be $400,000 as increased capacity is likely required to meet current fire flow/storage requirements
-Langley Lake dam and outlet works not included in cost calculations. It has been assumed that a regional source will be recommended, cost estimates to be updated pending the outcome of regional water supply study.
-Unknown pipe materials assumed to be asbestos concrete
-Unknown year of construction assumed to be 1975

URBAN SYSTEMS

APPENDIX B

UBID Treatment Plant Background and Site Plan

December 2019

UBID
WATER TREATMENT PLANT PROJECT

BACKGROUNDER

December 2019

Reservoir Construction

CONSTRUCTION UNDERWAY FOR NEW WATER TREATMENT PLANT

The Union Bay Improvement District is on track to have a new new water treatment plant ready to address current water quality issues and meet provincial requirements in spring 2020.

In the Spring of 2019, the Union Bay Improvement District announced that it was ready to move forward with a Request for Proposals (RFP) to find a contractor to build the facility. Since then, much more progress has been made.

In March, detailed design for the project was completed and submitted to Island Health for review/approval. With that approval secured, the RFP was posted, and successfully awarded to Ridgeline Contracting, a local Comox Valley company.

Clearing of the site was completed in March 2019 and construction is now underway. It's expected work will be complete in May 2020. The water treatment plant project includes installation of a new filtration system, construction of a new facility and reservoir, and installation of the new water main and connections.

The new water treatment plant is currently estimated to cost $4.5 to $5.5 million. UBID has contributed $700,000 from reserves and borrowed $3.5 million, amortized over 25 years to make up the balance. Land owners will be responsible for the cost of borrowing through their parcel taxes. Current parcel taxes are $345 annually and will increase $45 annually in 2020 for a total cost of $390.

The Union Bay Improvement District's most critical service is to provide clean, safe and reliable water to our residents and trustees have placed moving to a system that can do so as their top priority.

Once complete, the new plant will eliminate the need for turbidity-related boil water notices, remove the risk of viruses, parasites and bacteria in our drinking water, and deliver clean, safe and reliable water to our residents.

BOIL WATER NOTICES

Until the new water treatment system is operating, boil water notices may still be required in the service area. The UBID anticipates one will occur this fall/winter - dependent on turbidity in the water which generally increases with high water inflows (storms and rain) when cloudiness in water interferes with the treatment process. For more information about turbidity and boil water notices, or to sign up for email notifications about boil water notices, visit the UBID website at www.union-bay.ca

Nelson Rd. PRV Station

THE NEED FOR A NEW WATER SYSTEM

There's a long history when it comes to water supply infrastructure in Union Bay, and it's time for a new chapter.

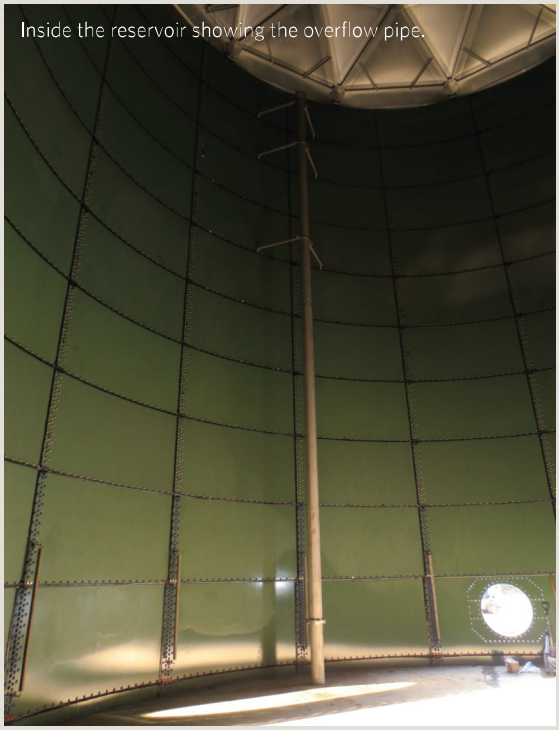
While water supply and distribution in Union Bay dates back to the early 1900s, the existing water system was purchased from Canadian Collieries by Union Bay Waterworks in 1960. The Union Bay Improvement District (UBID) was incorporated shortly thereafter and has operated the water system for 59 years.

Today, the UBID water system provides drinking water to approximately 690 properties from Spindrift Drive in the north to the Buckley Bay Ferry Terminal in the south, comprising approximately 40km of main line pipe. Water is drawn from Langley Lake and the sole water treatment process UBID currently performs is chlorination.

Times have changed though—including the regulations around water treatment standards. As a result, the current system is not compliant with the provincial surface water quality treatment objectives guideline, issued in 2007.

- The current guideline requires inactivation of viruses, protection against parasites, two treatment processes, less than or equal to 1 nephelometric turbidity unit (NTU), and no detectable E. Coli, fecal coliform and total coliform in the treated water. UBID is currently meeting two of these.
- Island Health amended UBID's Permit to Operate a water service in 2014 requiring that a new water filtration plant be constructed and commissioned by August 31, 2018. That deadline has been extended twice.
- Island Health has mandated that the water treatment plant be constructed and is working collaboratively with UBID to review and approve project design.

Doing nothing is not an option: failing to improve treatment will mean ongoing boil water notices and limits on future development of our community.



Inside the reservoir showing the overflow pipe.

TIMELINE

MARCH 6, 2019
RFP to identify a contractor to undertake construction of the new plant and reservoir closed

MARCH/APRIL 2019
Proposals from interested contractors reviewed

APRIL/MAY 2019
Construction contract to successful bidder awarded

MAY/JUNE 2019
Construction of the new water treatment plant begins

MAY 2020
Construction of the new plant complete

UBID
WATER TREATMENT PLANT PROJECT

5579B. South Island Hwy
Union Bay, BC

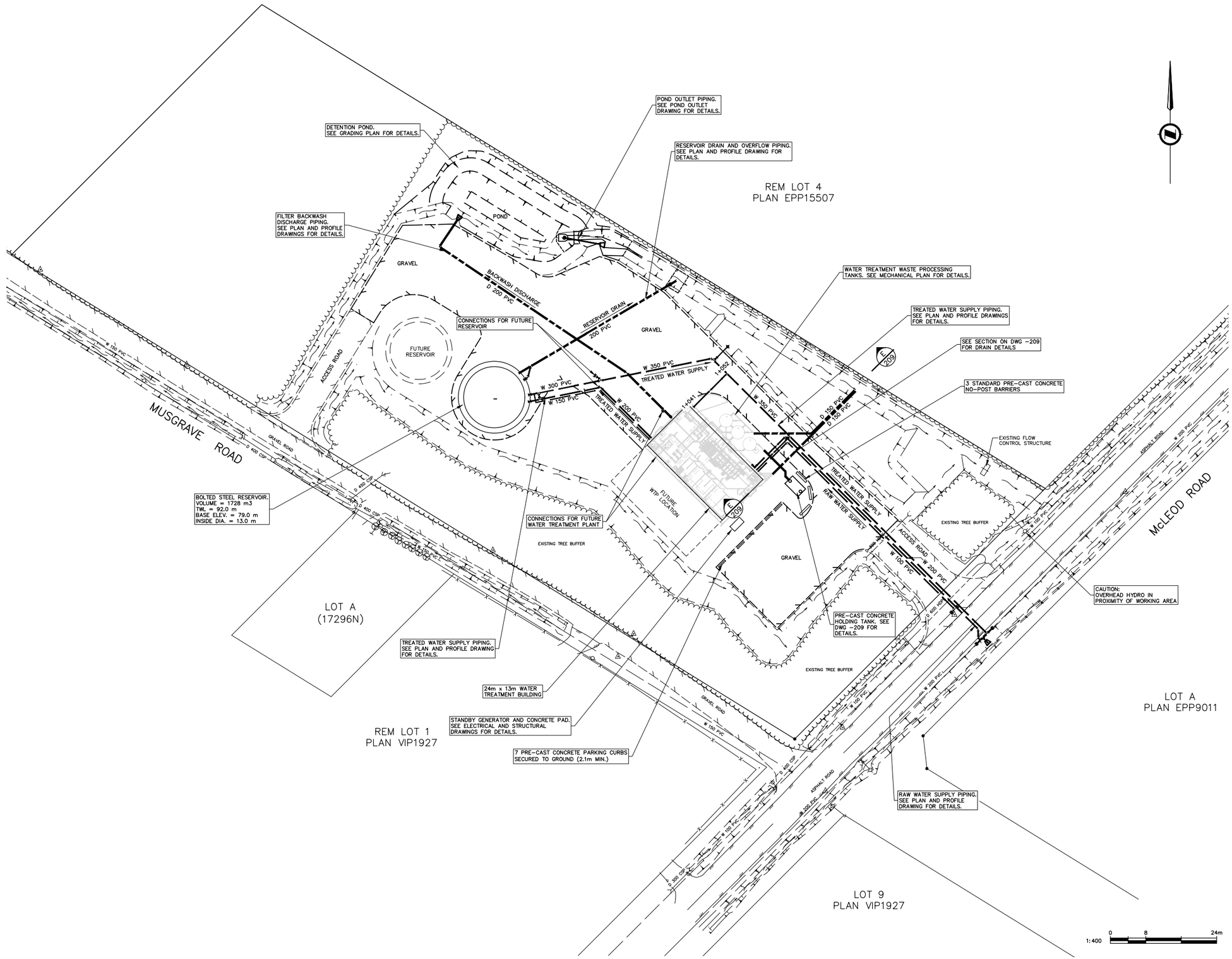
P.O. Box 70
Union Bay, BC V0R 3B0

250.335.2511

250.335.1178

union-bay.ca

admin@union-bay.ca



File: 1595-C2-Sheets.dwg Plot Time: Feb 13, 2019 - 9:24am User: chearn

KOERS
& ASSOCIATES
ENGINEERING LTD.
Consulting Engineers
P.O. Box 790, 194 Memorial Ave. Ph: 250-248-3151
Parksville, BC V9P 2G8 www.koers-eng.com Fax: 250-248-5362

RECORD OF REVISIONS

REV	DATE	BY	ENG	DESCRIPTION
1	17DEC18	RC	KD	FOR TENDER
2	13FEB19	CACH	KD	ADDENDUM #1

NOT FOR CONSTRUCTION

C	17DEC18	RC	KD	FOR TENDER
B	23NOV18	RC	KD	APPROVAL
A	16NOV18	RC	KD	95% REVIEW
ISS	DATE	BY	ENG	DESCRIPTION

RECORD OF ISSUE

SEAL

PROJECT NO.	1595
DRAWN	RC
DESIGNED	KD/RC
CHECKED	MP
APPROVED	KD
DATE	AUGUST 2018
SCALE	1:400

CLIENT

UNION BAY IMPROVEMENT DISTRICT

PROJECT

LANGLEY LAKE WATER TREATMENT PLANT AND RESERVOIR

TITLE

SITE PLAN

DRAWING No.	REV.	SHEET
1595-202	2	2/28

APPENDIX C

UBID 2019 Consolidated Financial Statements

Union Bay Improvement District
Consolidated Financial Statements
December 31, 2019

Union Bay Improvement District
Contents
For the year ended December 31, 2019

Management's Responsibility

To the Board of Trustees of Union Bay Improvement District:

Management is responsible for the preparation and presentation of the accompanying consolidated financial statements, including responsibility for significant accounting judgments and estimates in accordance with Canadian Public Sector Accounting Standards. This responsibility includes selecting appropriate accounting principles and methods, and making decisions affecting the measurement of transactions in which objective judgment is required.

In discharging its responsibilities for the integrity and fairness of the consolidated financial statements, management designs and maintains the necessary accounting systems and related internal controls to provide reasonable assurance that transactions are authorized, assets are safeguarded and financial records are properly maintained to provide reliable information for the preparation of consolidated financial statements.

The Board of Trustees is composed entirely of Trustees who are neither management nor employees of the District. The Board is responsible for overseeing management in the performance of its financial reporting responsibilities. The Board fulfils these responsibilities by reviewing the financial information prepared by management and discussing relevant matters with management and external auditors.

MNP LLP, an independent firm of Chartered Professional Accountants, is appointed by the Board of Trustees to audit the consolidated financial statements and report directly to them; their report follows. The external auditors have full and free access to, and meet periodically with, both the Board and management to discuss their audit findings.

July 16, 2020

Administrator

Independent Auditor's Report

To the Board of Trustees of Union Bay Improvement District:

Opinion

We have audited the consolidated financial statements of the Union Bay Improvement District (the "District"), which comprise the consolidated statement of financial position as at December 31, 2019, and the consolidated statements of operations and accumulated surplus, including related schedules, change in net financial assets and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the District as at December 31, 2019, and the results of its consolidated operations and its consolidated cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the District in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the District's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the District or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the District's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the District's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the District to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Nanaimo, British Columbia

July 16, 2020

MNP LLP

Chartered Professional Accountants

Union Bay Improvement District
Consolidated Statement of Financial Position
As at December 31, 2019

	2019	2018
Financial Assets		
Cash	**1,113,524**	879,607
Investments	**1,495,697**	2,127,905
Accounts receivable (Note 3)	**339,150**	155,991
Land held for sale	**-**	255,947
	2,948,371	3,419,450
Financial Liabilities		
Accounts payable and accrued liabilities *(Note 4)*	**853,324**	244,477
Deferred revenue	**226,281**	108,698
Construction loan *(Note 6)*	**1,564,933**	-
	2,644,538	353,175
Net Financial Assets	**303,833**	3,066,275
Commitments (Note 11)		
Subsequent event (Note 12)		
Non-Financial Assets		
Prepaid expenses and deposits	**8,618**	8,618
Inventory	**11,310**	13,331
Tangible capital assets *(Note 5) (Schedule 1) (Schedule 2)*	**7,702,487**	4,464,228
	7,722,415	4,486,177
Accumulated Surplus *(Note 7)*	**8,026,248**	7,552,452

Approved on behalf of the Board of Trustees

Trustee

Trustee

The accompanying notes are an integral part of these consolidated financial statements

Union Bay Improvement District
Consolidated Statement of Operations and Accumulated Surplus
For the year ended December 31, 2019

	2019 Budget (Note 10)	***2019***	*2018*
Revenues			
Fire protection and street lighting taxes *(Note 8)*	**489,691**	**489,691**	453,161
Water toll revenues	**445,000**	**390,835**	384,309
Parcel taxes	**242,535**	**244,244**	244,488
Investment income	**17,000**	**27,319**	28,445
Other income	**12,000**	**3,060**	14,253
Capital expenditure charges	**5,000**	**26,700**	8,900
Connection and services fees	**15,000**	**15,234**	5,013
Contributed tangible capital assets	**-**	**-**	44,714
Gain on sale of tangible capital assets	**-**	**253,829**	-
	1,226,226	**1,450,912**	1,183,283
Expenses			
Amortization	**161,018**	**161,018**	154,136
Audit and accounting fees	**21,000**	**24,282**	30,741
Commercial leases	**18,705**	**25,221**	13,683
Insurance	**29,400**	**31,248**	30,124
Legal	**23,625**	**11,717**	3,748
Occupancy	**3,150**	**1,150**	8,044
Office	**37,170**	**16,189**	22,143
Professional fees	**49,350**	**28,124**	3,751
Repairs and maintenance	**40,320**	**69,267**	60,893
Travel and training	**25,725**	**16,368**	19,630
Utilities and communications	**57,750**	**77,872**	70,390
Vehicle	**32,550**	**28,436**	22,828
Wages and benefits	**448,739**	**486,224**	383,716
	948,502	**977,116**	823,827
Annual surplus	**277,724**	**473,796**	359,456
Accumulated surplus, beginning of year	**7,552,452**	**7,552,452**	7,192,996
Accumulated surplus, end of year	**7,830,176**	**8,026,248**	7,552,452

The accompanying notes are an integral part of these consolidated financial statements

Union Bay Improvement District
Consolidated Statement of Change in Net Financial Assets
For the year ended December 31, 2019

	2019 Budget (Note 10)	***2019***	*2018*
Annual surplus	**277,724**	**473,796**	359,456
Acquisition of tangible capital assets	**-**	**(3,399,277)**	(604,691)
Land transferred to land held for sale	**-**	**-**	255,947
Amortization	**161,018**	**161,018**	154,136
	438,742	**(2,764,463)**	164,848
Increase in prepaid expenses and deposits	**-**	**-**	(162)
Decrease in inventory	**-**	**2,021**	524
	-	**2,021**	362
Change in net financial assets	**438,742**	**(2,762,442)**	165,210
Net financial assets, beginning of year	**3,066,275**	**3,066,275**	2,901,065
Net financial assets, end of year	**3,505,017**	**303,833**	3,066,275

The accompanying notes are an integral part of these consolidated financial statements

Union Bay Improvement District
Consolidated Statement of Cash Flows
For the year ended December 31, 2019

	2019	*2018*
Cash provided by (used for) the following activities		
Operating activities		
Annual surplus	**473,796**	359,456
Amortization	**161,018**	154,136
Contributed tangible capital assets	**-**	(44,714)
Gain on sale of tangible capital assets	**(253,829)**	-
	380,985	468,878
Changes in non-cash operating balance		
Accounts receivable	**(183,159)**	(27,259)
Prepaid expenses and deposits	**-**	(162)
Inventory	**2,021**	524
Accounts payable and accrued liabilities	**608,847**	210,065
Deferred revenue	**117,583**	(1,448)
	545,292	181,720
Net cash provided by operating activities	**926,277**	650,598
Capital activities		
Proceeds on sale of tangible capital assets	**509,776**	-
Acquisition of tangible capital assets	**(3,399,277)**	(559,977)
Net cash provided by capital activities	**(2,889,501)**	(559,977)
Financing activities		
Net redemption of investments	**632,208**	105,841
Construction loan draws	**1,564,933**	-
Net cash provided by financing activities	**2,197,141**	105,841
Increase in cash resources	**233,917**	196,462
Cash resources, beginning of year	**879,607**	683,145
Cash resources, end of year	**1,113,524**	879,607

The accompanying notes are an integral part of these consolidated financial statements

1. Incorporation and operations

The Union Bay Improvement District (the "District") was incorporated in 1960 and is subject to the provisions contained in the Local Government Act, a statute of the provincial government. The principal activities of the District are to provide water service, street lighting and fire protection to the residents of the Union Bay Improvement District and to maintain and repair all wells, water lines and fire protection equipment associated with those services.

2. Significant accounting policies

Basis of presentation

The consolidated financial statements have been prepared in accordance with the recommendations of the Public Sector Accounting Board of CPA Canada. In accordance with these recommendations, the District has implemented the consolidation of all funds. The consolidated financial statements reflect the removal of internal transactions and balances.

Revenue recognition

Sale of service revenue for water tolls are recognized on a bi-monthly basis once service has been provided. Parcel taxes are recognized upon issuance of tax notices for the fiscal year. Fire protection and street lighting taxes consist of funds received from the Province and are recognized in the year they are levied. Connection and service fees, interest and other income is recognized as revenue as earned on an accrual basis and collection is assured. Rent is recognized monthly in accordance with the lease agreements. Capital expenditure charge (CEC) fees are recorded as revenue when amounts are determinable, and collectability is assured. Assets contributed by developers are recognized as revenue when ownership transfers to the District.

Government transfers are recognized as revenues when the transfer is authorized and any eligibility criteria are met, except to the extent that transfer stipulations give rise to an obligation that meets the definition of a liability. Transfers are recognized as deferred revenue when transfer stipulations give rise to a liability. Transfer revenue is recognized in the statement of operations as the stipulation liabilities are settled.

Inventory

Inventory of supplies are recorded at the lower of cost and replacement cost. Cost is determined using the specific identification method.

Investments

Investments consist of various term deposits and are valued at cost.

Measurement uncertainty

The preparation of financial statements in conformity with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period.

Accounts receivable are stated after evaluation as to their collectability and an appropriate allowance for doubtful accounts is provided where considered necessary. Provisions are made for slow moving and obsolete inventory. Amortization is based on the estimated useful lives of tangible capital assets. Liabilities for contaminated sites are estimated based on the best information available regarding potentially contaminated sites that the District is responsible for.

These estimates and assumptions are reviewed periodically and, as adjustments become necessary, they are reported in annual surplus in the periods in which they become known

2. Significant accounting policies (*continued from previous page)*

Tangible capital assets

Tangible capital assets are recorded at cost which includes all amounts that are directly attributable to acquisition, construction, development or betterment of the asset. The cost, less residual value, of the tangible capital assets are amortized on a straight-line basis over their estimated useful lives as follows:

	Rate
Buildings	20 years
Fire protection equipment	10 years
Office equipment and maintenance equipment	5 years
Vehicles	20 years
Waterworks system	20 to 100 years

Tangible capital assets received as contributions are recorded at their fair value at the date of receipt. Amortization is not taken until the asset is in use. Land is not amortized.

Interest capitalization

The District capitalizes interest costs associated with the acquisition and construction of tangible capital assets.

Fund accounting

In order to ensure observance of limitations and restrictions placed on the use of resources available to the District, the accounts are maintained on a fund accounting basis. Accordingly, resources are classified for accounting and reporting purposes into funds. These funds are held in accordance with the objectives specified by the contributors or in accordance with the directives issued by the Board of Trustees.

Five types of funds are maintained: Operating Fund, Capital Fund, Operating - Restricted Reserve Fund, Water - Capital Expenditure Charge Reserve Fund and Restricted Renewal Fund.

The Operating Fund is used to account for all revenues and expenses related to general and ancillary operations of the District.

The Capital Fund is used to account for all tangible capital assets of the District and to present the flow of funds related to their acquisition and disposal, unexpended capital resources and debt commitments. The fund is segregated into Capital Fund – Water and Capital Fund – Fire.

The Operating – Restricted Reserve Fund consists of funds established by the Board of the District to be used for expenditures related to operations that occur less frequently than once per year. The fund is segregated into four funds – Public Works Operational Equipment Fund, Fire Department Operational Equipment Fund, Information Technology Equipment Fund, and Operational Contingency – Emergency Fund.

The Water - Capital Expenditure Charge Reserve Fund consists of funds established by the Board of the District to be used for expenditures related to the upgrading, replacement or renewal of existing Waterworks tangible capital assets. These funds and interest earned thereon must only be invested and disbursed by bylaw passed by the Board of Trustees of the District.

The Restricted Renewal Fund consist of funds established by the Board of the District, by bylaw, to be used for expenditures related to the upgrading, replacement or renewal of existing Waterworks tangible capital assets or for the replacement or renewal of existing Fire Protection capital assets. These funds, and interest earned thereon, must only be invested and disbursed by bylaw passed by the Board of Trustees of the District. The fund is segregated into the Water – Restricted Renewal Fund and the Fire - Restricted Renewal Fund.

Liability for contaminated sites

A liability for remediation of a contaminated site is recognized at the best estimate of the amount required to remediate the contaminated site when contamination exceeding an environmental standard exists, the District is either directly responsible or accepts responsibility, it is expected that future economic benefits will be given up, and a reasonable estimate of the amount is determinable. The best estimate of the liability includes all costs directly attributable to remediation activities and is reduced by expected net recoveries based on information available at December 31, 2019.

2. Significant accounting policies (*continued from previous page)*

At each financial reporting date, the District reviews the carrying amount of the liability. Any revisions required to the amount previously recognized is accounted for in the period revisions are made. The District continues to recognize the liability until it is settled or otherwise extinguished. Disbursements made to settle the liability are deducted from the reported liability when they are made. As at December 31, 2019 the District has not recorded any liability for contaminated sites as no sites exist.

3**. Accounts receivable**

	2019	*2018*
Trade receivables	**400**	407
Water tolls receivable	**93,552**	75,346
Parcel tax receivable	**83,136**	40,084
GST receivable	**155,107**	33,199
Accrued interest receivable	**6,955**	6,955
	339,150	155,991

4. Accounts payable and accrued liabilities

	2019	*2018*
Trade payables and accrued liabilities	**769,926**	201,101
Wages payable	**72,194**	36,476
Government remittances	**11,204**	6,900
	853,324	244,477

5. Tangible capital assets

	Cost	***Accumulated amortization***	***2019 Net book value***	*2018 Net book value*
Land	**44,714**	**-**	**44,714**	44,714
Buildings	**75,362**	**57,014**	**18,348**	15,237
Fire protection equipment	**454,979**	**390,683**	**64,296**	77,084
Office equipment	**119,087**	**65,347**	**53,740**	63,738
Vehicles	**566,644**	**354,652**	**211,992**	222,980
Waterworks system	**11,032,156**	**3,722,759**	**7,309,397**	4,039,271
Maintenance equipment	**46,563**	**46,563**	**-**	1,204
	12,339,505	**4,637,018**	**7,702,487**	4,464,228

See Schedules 1 and 2 for more information.

6. Construction loan

Construction loan consists of a multi-draw demand loan with a maximum credit facility of $3,500,000 from the Royal Bank of Canada for the purpose of financing the construction of a water treatment plant. The debt is unsecured and bears interest at bank prime rate per annum. The prime rate at year end was 3.95%. The District is in the draw period of this credit facility and is required to pay interest only monthly. After the draw period the loan may remain at variable rate or be converted to a fixed rate term loan and will require monthly blended payments. Fixed rate will be determined at the date of conversion. The loan is repayable in full on the last day of a one-year term from conversion date if variable interest rate selected; or the last day of a term from conversion date if fixed interest rate selected.

Interest of $5,560 was capitalized during 2019 as part of the water treatment plant.

7. Accumulated surplus

The District segregates its accumulated surplus into the following categories.

	2019	*2018*
Fund balances		
Operating Fund	**(522,155)**	448,252
Water - Capital Expenditure Charge Reserve Fund	**300,023**	270,839
Water – Restricted Renewal Fund	**525,146**	963,735
Fire – Restricted Renewal Fund	**1,456,608**	1,276,327
Equity in Statutory Reserves (Schedule 4)	**2,281,777**	2,510,901
Public Works Operational Equipment Fund	**21,156**	21,156
Fire Department Operational Equipment Fund	**224**	224
Information Technology Equipment Fund	**1,578**	1,578
Operational Contingency – Emergency Fund	**106,113**	106,113
Equity in Non-Statutory Reserves (Schedule 4)	**129,071**	129,071
Tangible capital assets		
Capital Fund - Water	**5,878,132**	4,186,943
Capital Fund - Fire	**259,423**	277,285
Equity in tangible capital assets	**6,137,555**	4,464,228
	8,026,248	7,552,452

8. Fire protection and street lighting taxes

	2019	*2018*
Fire protection tax revenue	**449,691**	423,460
Street lighting tax revenue	**40,000**	29,701
	489,691	453,161

9. Financial instruments

The District as part of its operations carries a number of financial instruments. The District's financial instruments consist of cash, investments, accounts receivable, accounts payable and accrued liabilities and construction loan. It is management's opinion that the District is not exposed to significant interest, currency or credit risks arising from these financial instruments.

10. Reconciliation of 2019 budget

The District's budget figures come from the annual budget passed by board motion on October 18, 2018. The budget sets out the proposed expenditures (including debt principal repayments, transfers to reserves and tangible asset acquisitions) and the proposed funding sources for them (including debt issues and transfers from reserves and accumulated surplus). However, for financial reporting purposes the District follows public sector accounting standards and reports the revenues and expenses, so the following adjustments must be made to the budgeted figures to reconcile them to the District's 2019 budget:

Budgeted 2019 surplus reported on Consolidated Statement of Operations	$ 277,724
Add: amortization	161,018
Deduct: Transfers to capital reserves	(438,742)
Budgeted surplus (deficit) approved by Trustees	-

11. Commitments

The District has entered into contracts to construct a new water treatment plant in the amount of $4,242,266. The estimated cost of completion for this contract is $1,528,662 with completion expected in 2020.

In 2019 the District has entered the operating commercial rental property lease for two years. The annual payment for the next year is $22,387.

The District has commitment to decommission and remove the current water treatment plant and restore and remediate the location to standards that permit to use it for residential purposes. The work is planned to start later in fall of 2020 and the cost is not yet determinable.

12. Subsequent event

In March 2020, the COVID-19 outbreak has caused governments worldwide to enact emergency measures to combat the spread of the virus. These measures, which include the implementation of travel restrictions, self-imposed quarantine periods and social distancing, could have a significant impact on the District and many other businesses worldwide. At this time, it is not possible to reliably estimate the length and severity of the impact the COVID-19 outbreak may have on the District’s financial results for 2020.

Union Bay Improvement District
Schedule of Tangible Capital Assets - Waterworks
For the year ended December 31, 2019

Schedule 1

	Land	Buildings	Office equipment	Vehicles	Waterworks system (note 1)	Maintenance equipment	Totals 2019	Totals 2018
Cost								
Balance, beginning of year	**44,714**	**7,314**	**104,247**	**62,487**	**7,655,024**	**46,563**	**7,920,349**	7,624,491
Add:								
Additions during the year	**-**	**-**	**5,652**	**-**	**3,377,132**	**-**	**3,382,784**	551,805
Adjustment	**-**	**-**	**-**	**-**	**-**	**-**	**-**	(255,947)
Balance, end of year	**44,714**	**7,314**	**109,899**	**62,487**	**11,032,156**	**46,563**	**11,303,133**	7,920,349
Accumulated amortization								
Balance, beginning of year	**-**	**7,062**	**41,684**	**23,548**	**3,615,753**	**45,359**	**3,733,406**	3,612,880
Add:								
Amortization	**-**	**56**	**15,274**	**3,124**	**107,006**	**1,204**	**126,664**	120,526
Balance, end of year	**-**	**7,118**	**56,958**	**26,672**	**3,722,759**	**46,563**	**3,860,070**	3,733,406
Net book value of tangible capital assets	**44,714**	**196**	**52,941**	**35,815**	**7,309,397**	**-**	**7,443,063**	4,186,943

Note 1 - Included in additions to the waterworks system is $3,377,132 (2018 - $535,982) for work conducted toward a new water treatment plant. As this is work in progress, no amortization has been taken as of December 31, 2019.

Schedule 2

	Buildings	Fire protection equipment	Office equipment	Vehicles	Totals 2019	Totals 2018
Cost						
Balance, beginning of year	**62,797**	**451,412**	**9,188**	**496,482**	**1,019,879**	966,993
Add:						
Additions during the year	**5,251**	**3,567**		**7,675**	**16,493**	52,886
Balance, end of year	**68,048**	**454,979**	**9,188**	**504,157**	**1,036,372**	1,019,879
Accumulated amortization						
Balance, beginning of year	**47,812**	**374,328**	**8,013**	**312,441**	**742,594**	708,984
Add:						
Amortization	**2,084**	**16,355**	**376**	**15,539**	**34,354**	33,610
Balance, end of year	**49,896**	**390,683**	**8,389**	**327,980**	**776,948**	742,594
Net book value of tangible capital assets	**18,152**	**64,296**	**799**	**176,177**	**259,424**	277,285

	Land	Waterworks System	Maintenance Equipment						
Net book value of tangible capital assets - schedule 1	**44,714**	**7,309,397**	**-**	**196**	**-**	**52,941**	**35,815**	**7,443,063**	4,186,943
Total net book value of tangible capital assets	**44,714**	**7,309,397**	**-**	**18,348**	**64,296**	**53,740**	**211,992**	**7,702,487**	4,464,228

Union Bay Improvement District
Schedule of Operations and Changes in Fund Balances
For the year ended December 31, 2019

Schedule 3

	Operating Fund	Water - Capital Fund - Unrestricted	Fire - Capital Fund - Unrestricted	Operating - Restricted Reserve Fund	Water - Capital Expenditure Charge Reserve Fund	Water - Restricted Renewal Fund	Fire - Restricted Renewal Fund	Totals *2019*	*2018*
Revenue									
Fire protection and street lighting taxes	**489,691**	**-**	**-**	**-**	**-**	**-**	**-**	**489,691**	453,161
Water toll revenues	**390,835**	**-**	**-**	**-**	**-**	**-**	**-**	**390,835**	384,309
Parcel taxes	**244,244**	**-**	**-**	**-**	**-**	**-**	**-**	**244,244**	244,488
Investment income	**5,393**	**-**	**-**	**-**	**2,484**	**10,149**	**9,293**	**27,319**	28,445
Other income	**3,060**	**-**	**-**	**-**	**-**	**-**	**-**	**3,060**	14,253
Capital expenditure charges	**-**	**-**	**-**	**-**	**26,700**	**-**	**-**	**26,700**	8,900
Connection and services fees	**15,234**	**-**	**-**	**-**	**-**	**-**	**-**	**15,234**	5,013
Contributed tangible capital assets	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	44,714
Gain on sale of tangible capital assets	**253,829**	**-**	**-**	**-**	**-**	**-**	**-**	**253,829**	-
	1,402,286	**-**	**-**	**-**	**29,184**	**10,149**	**9,293**	**1,450,912**	1,183,283
Expenses									
Amortization	**-**	**126,664**	**34,354**	**-**	**-**	**-**	**-**	**161,018**	154,136
Audit and accounting fees	**24,282**	**-**	**-**	**-**	**-**	**-**	**-**	**24,282**	30,741
Commercial leases	**25,221**	**-**	**-**	**-**	**-**	**-**	**-**	**25,221**	13,683
Insurance	**31,248**	**-**	**-**	**-**	**-**	**-**	**-**	**31,248**	30,124
Legal	**11,717**	**-**	**-**	**-**	**-**	**-**	**-**	**11,717**	3,748
Occupancy	**1,150**	**-**	**-**	**-**	**-**	**-**	**-**	**1,150**	8,044
Office	**16,189**	**-**	**-**	**-**	**-**	**-**	**-**	**16,189**	22,143
Professional fees	**28,124**	**-**	**-**	**-**	**-**	**-**	**-**	**28,124**	3,751
Repairs and maintenance	**69,267**	**-**	**-**	**-**	**-**	**-**	**-**	**69,267**	60,893
Travel and training	**16,368**	**-**	**-**	**-**	**-**	**-**	**-**	**16,368**	19,630
Utilities and communications	**77,872**	**-**	**-**	**-**	**-**	**-**	**-**	**77,872**	70,390
Vehicle	**28,436**	**-**	**-**	**-**	**-**	**-**	**-**	**28,436**	22,828
Wages and benefits	**486,224**	**-**	**-**	**-**	**-**	**-**	**-**	**486,224**	383,716
	816,098	**126,664**	**34,354**	**-**	**-**	**-**	**-**	**977,116**	823,827
Annual surplus (deficit)	**586,188**	**(126,664)**	**(34,354)**	**-**	**29,184**	**10,149**	**9,293**	**473,796**	359,456
Fund balance									
Balance, beginning of year	**448,252**	**4,186,943**	**277,285**	**129,071**	**270,839**	**963,735**	**1,276,327**	**7,552,452**	7,192,996
Acquisition of tangible capital assets	**(1,117,853)**	**1,817,853**	**16,492**	**-**	**-**	**(700,000)**	**(16,492)**	**-**	-
Transfers in (out)	**(438,742)**	**-**	**-**	**-**	**-**	**251,262**	**187,480**	**-**	-
Balance, end of year	**(522,155)**	**5,878,132**	**259,423**	**129,071**	**300,023**	**525,146**	**1,456,608**	**8,026,248**	7,552,452

Union Bay Improvement District
Schedule of Reserve Funds
For the year ended December 31, 2019

Schedule 4

	Non Statutory Reserves				Totals	
	Public Works Operational Equipment Fund	**Fire Department Operational Equipment Fund**	**Information Technology Equipment Fund**	**Operational Contingency (Emergency) Fund**	***2019***	*2018*
Balance, beginning of year	**21,156**	**224**	**1,578**	**106,113**	**129,071**	151,251
Annual surplus	**-**	**-**	**-**	**-**	**-**	1,820
Transfers out	**-**	**-**	**-**	**-**	**-**	(24,000)
Balance, end of year	**21,156**	**224**	**1,578**	**106,113**	**129,071**	129,071

	Statutory Reserves			Totals	
	Water - Capital Expenditure Charge Reserve Fund	**Water - Restricted Renewal Fund**	**Fire - Restricted Renewal Fund**	***2019***	*2018*
Balance, beginning of year	**270,839**	**963,735**	**1,276,327**	**2,510,901**	2,539,897
Annual surplus and contributions	**29,184**	**261,411**	**196,773**	**487,368**	501,561
Transfers out	**-**	**(700,000)**	**(16,492)**	**(716,492)**	(530,557)
Balance, end of year	**300,023**	**525,146**	**1,456,608**	**2,281,777**	2,510,901

URBAN SYSTEMS

APPENDIX D

UBID Approved 2020 Budget and Potential Conversion Impacts

Union Bay Improvement District
2020 Approved Budget

	Admin & Public Works	Fire Rescue	Street Lights	Totals
REVENUE				
Water Tolls & Metering	562,140.00	-	-	562,140.00
Water Tolls & Metering Penalty	3,000.00	-	-	3,000.00
Connection/Disconnection Fees	-	-	-	-
Hydrant Maintenance	5,392.58	-	-	5,392.58
Miscellaneous Revenue	-	-	-	-
Capital Expenditure Charges	-	-	-	-
Interest Income	15,000.00	7,000.00	-	22,000.00
Rental Income	5,000.00	-	-	5,000.00
Parcel Tax	-	-	-	-
Parcel Tax Penalty	269,129.16	-	-	269,129.16
Donations/Fundraising	3,000.00	1,000.00	-	4,000.00
Property Taxes	-	459,030.64	37,000.00	496,030.64
Streetlighting Cost Share	-	-	-	-
TOTAL REVENUE	**862,661.74**	**467,030.64**	**37,000.00**	**1,366,692.38**
				-
EXPENDITURES				-
				-
Advertising and Promotions	4,571.00	4,200.00	-	8,771.00
Legal	11,000.00	2,625.00	-	13,625.00
Audit and Accounting	10,500.00	10,500.00	-	21,000.00
Insurance	18,000.00	14,700.00	-	32,700.00
Information Technology Costs	6,769.16	2,100.00	-	8,869.16
Office Expences	5,238.44	4,200.00	-	9,438.44
Postage and Courier Costs	4,095.32	525.00	-	4,620.32
Occupancy Expense	5,584.90	1,050.00	-	6,634.90
Bad Debt Expense	638.18	0.00	-	638.18
Loan Payments and Charges	209,129.16	0.00	-	209,129.16
Commercial Lease Costs	19,122.61	2,205.00	-	21,327.61
Bank S/Cs and Interest Costs	201.82	630.00	-	831.82
Principle Loan Payments	0.00	0.00	-	-
Adjustment Write-Offs	0.00	0.00	-	-
Total Administration Costs	**294,850.58**	**42,735.00**	**0.00**	**337,585.58**
Materials and Supplies	38,792.85	8925.00	-	
Total Materials and Supplies	**38,792.85**	**8,925.00**	**-**	**47,717.85**
				-
Subcontractors	25,000.00	4,200.00	-	29,200.00
Professional Fees	15,000.00	-	-	15,000.00
Communications	5,658.66	5,250.00	-	10,908.66
Utilities	16,380.00	7,087.50	37,000.00	60,467.50
Repairs and Maintenance	8,320.56	7,350.00	-	15,670.56
Hydrant Maintenance	-	6,720.00	-	6,720.00
Dues, Memberships & Licenses	2,090.18	6,300.00	-	8,390.18
Travel & Training	8,400.00	17,325.00	-	25,725.00
	-	-	-	-
Remuneration - Administration	151,300.23	50,433.41	-	201,733.63
Remuneration - Trustees	3,200.00	3,200.00	-	6,400.00
Remuneration - Waterworks	179,415.25	-	-	179,415.25
Remuneration - Fire Department	-	119,000.56	-	119,000.56
Remuneration - FF Honorarium	-	3,000.00	-	3,000.00
EI Expense	6,998.40	1,329.70	-	8,328.10
CPP Expense	12,597.12	2,925.33	-	15,522.45
WCB Expense	4,199.04	1,329.70	-	5,528.74
Employee Benefits	14,696.64	14,866.74	-	29,563.38
Total Payroll Expense	**453,256.08**	**250,317.93**	**37,000.00**	**740,574.01**
				-
Vehicle - Fuel	6,825.00	2,925.33	-	9,750.33
Vehicles - Insurance	3,150.00	1,329.70	-	4,479.70
Vehicles - Repair and Maintenance	3,150.00	14,866.74	-	18,016.74
Total Vehicle Costs	**13,125.00**	**19,121.77**	**-**	32,246.77
				-
TOTAL EXPENDITURES	**800,024.51**	**321,099.70**	**37,000.00**	**1,158,124.21**

PW Capital Reserve Funds Contributions	**62,637.23**
FD Capital Reserve Funds Contributions	**145,627.71**

Union Bay Improvement District
Potential Conversion Impacts to Expenditures

Expenditure Remains the Same	
Expenditure Decreases	
Expenditure Eliminated	
Expenditure To Be Determined	

	Admin & Public Works	Fire Rescue	Streetlights	Totals
EXPENDITURES				
Advertising and Promotions	$4,571.00	$4,200.00		$8,771.00
Legal	$11,000.00	$2,625.00		$13,625.00
Audit and Accounting	$10,500.00	$10,500.00		$21,000.00
Insurance	$18,000.00	$14,700.00		$32,700.00
Information Technology Costs	$6,769.16	$2,100.00		$8,869.16
Office Expenses	$5,238.44	$4,200.00		$9,438.44
Postage and Courier Costs	$4,095.32	$525.00		$4,620.32
Occupancy Expense (Janitorial)	$5,584.90	$1,050.00		$6,634.90
Bad Debt Expense	$638.18	$0.00		$638.18
Loan Payments and Charges	$209,129.16	$0.00		$209,129.16
Commercial Lease Costs	$19,122.61	$2,205.00		$21,327.61
Bank Service Charges and Interest Costs	$201.82	$630.00		$831.82
Principle Loan Payments	$0.00	$0.00		$0.00
Adjustment Write-offs	$0.00	$0.00		$0.00
TOTAL ADMINISTRATION COSTS	**$294,850.59**	**$42,735.00**	**$0.00**	**$337,585.59**
Materials and Supplies	$38,792.85	$8,925.00		$47,717.85
TOTAL MATERIALS AND SUPPLIES	**$38,792.85**	**$8,925.00**	**$0.00**	**$47,717.85**
Subcontractors	$25,000.00	$4,200.00		$29,200.00
Professional Fees	$15,000.00	$0.00		$15,000.00
Communications	$5,658.66	$5,250.00		$10,908.66
Utilities	$16,380.00	$7,087.50	$37,000.00	$60,467.50
Repairs and Maintenance	$8,320.56	$7,350.00		$15,670.56
Hydrant Maintenance		$6,720.00		$6,720.00
Dues, Membeships and Licenses	$2,090.18	$6,300.00		$8,390.18
Travel and Training	$8,400.00	$17,325.00		$25,725.00
Total Other Expense	**$80,849.40**	**$54,232.50**	**$37,000.00**	**$172,081.90**
Remuneration - Administration	$151,300.23	$50,433.41		$201,733.64
Remuneration - Trustees	$3,200.00	$3,200.00		$6,400.00
Remuneration - Waterworks	$179,415.25			$179,415.25
Remuneration - Fire Department	-	$119,000.56		$119,000.56
Remuneration - FF Honorarium	-	$3,000.00		$3,000.00
EI Expense	$6,998.40	$1,329.70		$8,328.10
CPP Expense	$12,597.12	$2,925.33		$15,522.45
WCB Expense	$4,199.04	$1,329.70		$5,528.74
Employee Benefits	$14,696.64	$14,866.74		$29,563.38
Total Payroll Expense	**$372,406.68**	**$196,085.44**	**$0.00**	**$568,492.12**
Vehicle - Fuel	$6,825.00	$2,925.33		$9,750.33
Vehicle - Insurance	$3,150.00	$1,329.70		$4,479.70
Vehicle - Repairs and Maintenance	$3,150.00	$14,866.74		$18,016.74
Total Vehicle Costs	**$13,125.00**	**$19,121.77**	**$0.00**	**$32,246.77**
TOTAL EXPENDITURES	**$800,024.52**	**$321,099.71**	**$37,000.00**	**$1,158,124.23**

PW Capital Reserve Funds Contributions*	**$62,637.23**
FD Capital Reserve Funds Contributions*	**$145,627.71**
Total	**$208,264.94**

*Note: Future capital reserve funds contributions should be increased for sustainable service delivery, especially for waterworks capital.

URBAN SYSTEMS

APPENDIX E

UBID 2020 Tolls, Taxes and Related Charges

UNION BAY IMPROVEMENT DISTRICT
2020 TOLLS, TAXES AND RELATED CHARGES
(Approved by the UBID Board of Trustees: October 17 & December 19, 2019)

WATER TOLLS

Residential Rates		
Base Rate	Up to $20m^3$	$90.00 – Bi - Monthly
Excess Rate 1	$21m^3 – 50m^3$	$1.11/m^3$
Excess Rate 2	$51m^3 – 75m^3$	$1.51/m^3$
Excess Rate 3	$76m^3 – 100m^3$	$2.00/m^3$
Excess Rate Over 3	$101m^3 +$	$3.00/m^3$
Commercial Rates		
Base Rate		$90.00 - Bi - Monthly
Water Usage Rate		$1.30/m^3$

PARCEL TAXES — $390 / YEAR

- Semi-Annual Payment Dates
  - Thursday, March 5th, 2020
  - Thursday, August 27th, 2020
  - 10% late payment penalty on fees outstanding immediately after each due date.
- Affect properties classed as 'A' properties
  - Properties have paid capital expenditure charges and may be connected to the water system
- May affect parcels not connected to water
- Parcel Tax revenue is utilized for renewal & replacement (maintenance of infrastructure)
- Parcel Tax rates are based on an engineered review to meet the needs of the system.

CAPITAL EXPENDITURE CHARGES

Apply to new subdivisions and properties classed as 'B' properties - payable on application for water supply or prior to subdivision approval.

A. Residential	
1) Each parcel of land for a connection to the waterworks	$8,900.00
2) Each and every manufactured home pad or space built or provided for in a manufactured home park	$8,900.00
3) Each and every newly developed lot in a subdivision	$8,900.00
4) Each and every unit in a proposed multiple occupancy building	$7,040.00
5) Each and every trailer pad or space built or provided for in the manufactured home park or trailer court	$8,900.00
B. Commercial / Institutional (per 1,000 sq. ft. of floor space)	$2,420.00
C. Industrial (per hectare)	$45,485

CONNECTION FEES (COST-PLUS)

- Applicants for new water service connections are required to pay the full actual costs for installing water service to their property.
  - A **$500 deposit** is required at the time the application is made towards the actual costs of parts, labour and equipment rental charges (if necessary) not to exceed $2,000 for ¾" connection. (Larger connections may exceed $2,000.)

SUBDIVISION FEES

- $500 for first three lots, $100 for each additional lot
- All subdivision development must conform to UBID Standards and Engineering Specifications.

APPENDIX F

Community Engagement

Union Bay Improvement District Conversion Study

Newsletter #1

March 2020

The Comox Valley Regional District (CVRD) has initiated a study of alternate governance options for the Union Bay Improvement District (UBID), specifically the potential conversion of existing UBID services (water, fire protection, and street lighting) to the CVRD. Urban Systems, a consulting firm with offices in Victoria and Courtenay, has been commissioned to undertake a technical, unbiased review of the options and engage stakeholders and the public in the process. The study has been funded in part by the Ministry of Municipal Affairs and Housing.

The purpose of this study is to understand and communicate the financial implications, benefits and challenges, and the potential public concerns associated to a change of governance of UBID services to the current ratepayers, as well as to identify opportunities to enhance services under the current governance structure.

The study will include a detailed background review of existing services and a comprehensive analysis of two potential options for the CVRD and UBID to possibly move forward with:

Option A: Convert UBID's services to CVRD services.

Option B: Outline and make recommendations to improve UBID's governance and service delivery if UBID does not convert its services to CVRD.

The study will be conducted over the next six months based on the milestones dates to the right.

In addition to the technical analysis, public engagement and consultation will be a critical component to the study, as it is the ratepayers who will decide the path forward through the elector assent process.

For more information, please e-mail: UBIDgovernance@urbansystems.ca

March - April

BACKGROUND REVIEW AND STAKEHOLDER ENGAGEMENT

April - May

ANALYSIS OF GOVERNANCE OPTIONS

June

DRAFT REPORT

June - July

PUBLIC OPEN HOUSE AND COMMUNITY ENGAGEMENT

August

FINAL REPORT

URBAN SYSTEMS

Union Bay Improvement District

Comox Valley Regional District

comoxvalleyrd.ca

Union Bay Improvement District Conversion Study

Newsletter #2

May 2020

The Union Bay Improvement District Conversion Study is currently underway and is being conducted by Urban Systems. The Conversion Study explores the implications of the potential conversion of existing UBID services (water, fire protection, and street lighting) to the Comox Valley Regional District (CVRD).

At this time, Urban Systems has completed a background review of the current services in Union Bay, a community engagement plan, as well as a review of the existing engineering reports. Due to COVID-19, revisions to the community engagement process are necessary and are currently under discussion.

Stakeholder engagement sessions are currently underway via teleconference. Communicating with key stakeholders will allow Urban Systems to gain a fulsome understanding of the implications of a potential service conversion to inform the Analysis of Governance Options. The stakeholder engagement sessions include consultation with the following parties:

- **UBID Trustees and staff**
- **Electoral 'A' Director**
- **Ministry of Municipal Affairs and Housing**
- **UBID and CVRD staff including:**
  - Water service operators
  - Fire service operators
  - BC Hydro
  - Financial personnel
  - Administration personnel

Although the public engagement component of the project must be adapted to the current situation, consultation remains a critical component to the study. The ratepayers of Union Bay are ultimately responsible to decide the pathway forward through the elector assent process. It remains a top priority for all stakeholders to ensure that the community is meaningfully engaged throughout the process.

For more information, please e-mail: UBIDgovernance@urbansystems.ca

March - April

BACKGROUND REVIEW AND STAKEHOLDER ENGAGEMENT ✓

April - May

ANALYSIS OF GOVERNANCE OPTIONS

June

DRAFT REPORT

June - July

PUBLIC OPEN HOUSE AND COMMUNITY ENGAGEMENT

August

FINAL REPORT

✓ = Completed

URBAN SYSTEMS

Union Bay Improvement District

Comox Valley Regional District

comoxvalleyrd.ca

Union Bay Improvement District Conversion Study

Newsletter #3
September 2020

The Union Bay Improvement District (UBID) Conversion Study was initiated in the spring of 2020, to explore the implications of the potential conversion of existing UBID services (specifically water, fire protection, and street lighting) to the Comox Valley Regional District (CVRD). Urban Systems, a consulting firm with offices in Victoria and Courtenay, has been commissioned to undertake a technical, unbiased review of the options and engage stakeholders and the public in the process. The study has been funded in part by the Ministry of Municipal Affairs and Housing (the Ministry).

The purpose of this study is to understand and communicate the financial implications, benefits and challenges, and the potential public concerns associated to a change of governance of UBID services, as well as to identify opportunities to enhance services under the current governance structure. The study includes a detailed review of existing services provided by UBID, as well as a comprehensive analysis of two potential options for the ratepayers of Union Bay to consider:

Option A – Convert UBID's services to CVRD local area services (for water, fire protection and street lighting).

Option B – Remain as an Improvement District, with recommendations to enhance UBID's current governance.

Throughout the study, an Advisory Working Group comprised of staff and elected officials from UBID, staff and elected officials from CVRD, and Ministry staff provided support and guidance to the consulting team. The initiative began in March 2020 with initial background review and analysis, and a Final Draft Report is now available for public review (see timeline).

This is the third in a series of newsletters to keep the community informed throughout the process. A public open house (both virtual and in-person) is being planned in the fall to provide additional information and to gauge residents' desire in moving forward with either option, which may include a community vote (i.e. referendum).

March – April 2020

BACKGROUND REVIEW AND STAKEHOLDER ENGAGEMENT ✓

May – July 2020

ANALYSIS OF GOVERNANCE OPTIONS ✓

Aug – Sept 2020

DRAFT REPORT ✓

Fall 2020

PUBLIC OPEN HOUSE AND COMMUNITY ENGAGEMENT

Fall 2020

FINAL REPORT

✓ = Completed

Union Bay Improvement District

Comox Valley Regional District

URBAN SYSTEMS

BACKGROUND

The Union Bay Improvement District (UBID) is a local authority under the provincial *Local Government Act*, which provides local services to 690 properties and nearly 800 ratepayers in the Union Bay community. Although UBID was officially incorporated in 1960, water service has been provided to the community for over 100 year since the initial damming of Langley Lake in 1908 to supply water to the coal washer. Fire protection and street lighting services were added to UBID's responsibilities in 1972.

In recent years, there have been a number of challenges to UBID's governance model including multiple Board Trustee resignations resulting in a loss of quorum. Staff transitions have added to the challenges, including the recent retirement of the Chief Administrative Office in July 2020. On the service delivery side, there are increasing demands due to future development plans, as well as increasing regulations and service level requirements for both water and fire services. In May 2020, UBID commissioned its new $4.2 million water treatment plant which was mandated by Island Health in order to meet provincial drinking water regulations.

On the financial side, as an improvement district UBID is not eligible to receive senior government grant funding as is other local governments (i.e. municipalities and regional districts). Therefore, the entire amount of the new treatment plant is being funded and financed by the ratepayers through capital reserve and borrowing. This holds true for any new water capital including asset renewal and refurbishment.

COMPARISON OF POTENTIAL IMPACTS

The UBID Conversion Study outlines in detail the comparison of potential impacts between conversion to a regional district local service and remaining as an improvement district. The report highlights these impacts in a number of categories including: governance and representation; key assets; human resources and administration; and finance and legal. The report only highlights the impacts under both options, and remains neutral on the "pros and cons" of each.

Although a detailed financial analysis was not part of the scope of the study, a number of key observations were made based on discussions with UBID and CVRD staff, and experience with other similar studies. Using UBID's 2020 budget of expenditures, a high-level review (see table) indicates that most expenditures with either remain the same or decrease, with a few budget items being eliminated (e.g. Trustee remuneration, administration office lease). Finally, expenditures related to labour are still to be determined as UBID finalized its union contract negotiations; however, these costs would be born by either UBID or CVRD once they are finalized.

Union Bay Improvement District

Comox Valley Regional District

URBAN SYSTEMS

Union Bay Improvement District
Potential Conversion Impacts to Expenditures (based on 2020 Budget)

Expenditure Remains the Same	
Expenditure Decreases	
Expenditure Eliminated	
Expenditure To Be Determined	

	Admin & Public Works	Fire Rescue	Streetlights	Totals
EXPENDITURES				
Advertising and Promotions	$4,571.00	$4,200.00		$8,771.00
Legal	$11,000.00	$2,625.00		$13,625.00
Audit and Accounting	$10,500.00	$10,500.00		$21,000.00
Insurance	$18,000.00	$14,700.00		$32,700.00
Information Technology Costs	$6,769.16	$2,100.00		$8,869.16
Office Expenses	$5,238.44	$4,200.00		$9,438.44
Postage and Courier Costs	$4,095.32	$525.00		$4,620.32
Occupancy Expense (Janitorial)	$5,584.90	$1,050.00		$6,634.90
Bad Debt Expense	$638.18	$0.00		$638.18
Loan Payments and Charges	$209,129.16	$0.00		$209,129.16
Commercial Lease Costs	$19,122.61	$2,205.00		$21,327.61
Bank Service Charges and Interest Costs	$201.82	$630.00		$831.82
Principle Loan Payments	$0.00	$0.00		$0.00
Adjustment Write-offs	$0.00	$0.00		$0.00
TOTAL ADMINISTRATION COSTS	**$294,850.59**	**$42,735.00**	**$0.00**	**$337,585.59**
Materials and Supplies	$38,792.85	$8,925.00		$47,717.85
TOTAL MATERIALS AND SUPPLIES	**$38,792.85**	**$8,925.00**	**$0.00**	**$47,717.85**
Subcontractors	$25,000.00	$4,200.00		$29,200.00
Professional Fees	$15,000.00	$0.00		$15,000.00
Communications	$5,658.66	$5,250.00		$10,908.66
Utilities	$16,380.00	$7,087.50	$37,000.00	$60,467.50
Repairs and Maintenance	$8,320.56	$7,350.00		$15,670.56
Hydrant Maintenance		$6,720.00		$6,720.00
Dues, Membeships and Licenses	$2,090.18	$6,300.00		$8,390.18
Travel and Training	$8,400.00	$17,325.00		$25,725.00
Total Other Expense	**$80,849.40**	**$54,232.50**	**$37,000.00**	**$172,081.90**
Remuneration - Administration	$151,300.23	$50,433.41		$201,733.64
Remuneration - Trustees	$3,200.00	$3,200.00		$6,400.00
Remuneration - Waterworks	$179,415.25			$179,415.25
Remuneration - Fire Department	-	$119,000.56		$119,000.56
Remuneration - FF Honorarium	-	$3,000.00		$3,000.00
EI Expense	$6,998.40	$1,329.70		$8,328.10
CPP Expense	$12,597.12	$2,925.33		$15,522.45
WCB Expense	$4,199.04	$1,329.70		$5,528.74
Employee Benefits	$14,696.64	$14,866.74		$29,563.38
Total Payroll Expense	**$372,406.68**	**$196,085.44**	**$0.00**	**$568,492.12**
Vehicle - Fuel	$6,825.00	$2,925.33		$9,750.33
Vehicle - Insurance	$3,150.00	$1,329.70		$4,479.70
Vehicle - Repairs and Maintenance	$3,150.00	$14,866.74		$18,016.74
Total Vehicle Costs	**$13,125.00**	**$19,121.77**	**$0.00**	**$32,246.77**
TOTAL EXPENDITURES	**$800,024.52**	**$321,099.71**	**$37,000.00**	**$1,158,124.23**

PW Capital Reserve Funds Contributions*	**$62,637.23**
FD Capital Reserve Funds Contributions*	**$145,627.71**
Total	**$208,264.94**

*Note: Future capital reserve funds contributions should be increased for sustainable service delivery, especially for waterworks capital.

Union Bay Improvement District

Comox Valley Regional District

URBAN SYSTEMS

KEY SUMMARY OBSERVATIONS

While the report is intended to provide a neutral analysis of the potential options, there a number of key summary observations outlined which may help the residents and elected officials of UBID and CVRD in making an informed decision.

- Regardless of the option the assets and liabilities will remain with the community ratepayers, either as an improvement district or regional district local service. For the latter, although all assets and liabilities would transfer to the Comox Valley Regional District, they would remain with the specific local service established for the Union Bay community for water, fire protection, and street lighting.
- Based on the available information and assumptions in the study, conversion to a Regional District local service is estimated to be cost neutral (with a potential small cost savings depending on labour costs). This is based on the CVRD support service costs of approximately 4 – 5% of expenditures for water and fire protection, with nominal support service costs for street lighting.
- Conversion to a Regional District local service would mean the dissolution of the UBID Board of Trustees, but local representation would still be through the Electoral Area Director for Area "A".
- Conversion to a Regional District local service would provide access to a larger pool of expertise (e.g. engineering, planning, finance and administration), access to senior government grants, and financing through Municipal Finance Authority (MFA).
- Conversion of the Fire Service would involve the provision of an annual operating grant from the CVRD to the Union Bay Volunteer Firefighters Association, who would then operate the fire services contract with the Regional District, for administration, bookkeeping services, insurance and utilities, and volunteer firefighter remuneration. The Union Bay Fire Chief and Deputy Fire Chief would become employees of the CVRD.
- Although the analysis was based on the UBID 2020 budget, there will be additional costs under either option including additional operating costs for the new water treatment plant (commissioned in May 2020) and additional labour costs due to the new union collective agreement (currently under negotiation).
- Costs for watermain replacement could increase under the conversion option, due to the CVRD's higher level of service for watermain repair. However, with either option it is recommended that additional asset management practices be incorporated into the organization, in order to support sustainable service delivery.

NEXT STEPS

This newsletter and Draft Report will be used to inform the community at the upcoming Public Open House (both virtual and in-person) in Fall 2020. Based on the feedback from residents and ratepayers, the Final Report will be presented to both UBID and CVRD Boards to determine next steps, which may include a community vote through a referendum.

For more information, please refer to the UBID website (www.union-bay.ca) under "UBID Governance Review" or e-mail your questions to : UBIDgovernance@urbansystems.ca

Union Bay Improvement District

Comox Valley Regional District

URBAN SYSTEMS