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LYALL HARBOUR BOOT COVE WATER LOCAL SERVICE COMMITTEE

Notice of Meeting on **Thursday, November 8, 2018 at 1:30 p.m.**

Capital Regional District Headquarters

625 Fisgard Street, Room 488

Dan Thachuk (Chair)	Director Dave Howe	Michael Fry
John Money	Ian Rowe	Jill Sabre-Makofka

AGENDA

1. Approval of Agenda
2. Election of Chair
3. Adoption of Minutes of November 9, 2017
4. 2019 Operating and Capital Budget (staff report)
5. New Business
6. Adjournment

To ensure quorum, advise Sharon Orr 250.474.9622 or sorr@crd.bc.ca if you are unable to attend.



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**Minutes of a Meeting of the Lyall Harbour/Boot Cove Water Local Service Committee
Held November 9, 2017 at Capital Regional District Headquarters, 625 Fisgard Street,
Victoria, BC**

PRESENT: **Committee Members:** D. Thachuk (Chair), I Rowe, J. Money, M. Fry,
Staff: I. Jesney, Senior Manager, Infrastructure Engineering, M. McCrank, Senior
 Manager, Infrastructure Operations, D. Robson, Manager Saanich Peninsula and
 Gulf Islands Operations, D. Puskas, Manager Capital Projects, S. Mason,
 Manager, Water Engineering and Planning, D. Gosper, Project Engineer, Peggy
 Dayton, Senior Financial Advisor, S. Orr (recorder)

Absent: R. Lewis, Director D. Howe, Southern Gulf Islands Regional Director

The meeting was called to order at 1:37 p.m.

1 Approval of Agenda

The following item was added under New Business:

- Vacant Committee Position

MOVED by M. Fry, **SECONDED** by D. Thachuk,
 That the agenda be approved as amended.

CARRIED

2 Adoption of Minutes of November 18, 2016

MOVED by I. Row, **SECONDED** by M. Fry,

That the minutes of November 18, 2016 be adopted as previously circulated.

CARRIED

3 Dam Safety Discussion with John Baldwin (Province of BC)

The Chair introduced J. Baldwin, Dam Safety Officer for Vancouver Island, Ministry of
 Forests, Lands Natural Resource Operations and Rural Development. J. Baldwin gave a
 hand-out to the committee members which outlined dam safety regulations. He provided a
 summary of dam safety issues, regulations, emergency planning and disaster mitigation.

A discussion took place about water licenses and risk level on Saturna Island.

4 Verbal Updates

I. Jesney provided verbal updates on the traffic guards on the road adjacent to Money Lake
 and discussions the CRD has had with the Ministry of Transportation and Infrastructure and
 the toe drain project.

**Lyall Harbour/Boot Cove Water Local Services Committee
November 9, 2017**

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5 2018 Operating and Capital Budget

I. Jesney presented a written report and the 2018 Operating and Capital budget documents. The committee requested that they thank Director Howe for providing funding.

MOVED by J. Money, **SECONDED** by M. Fry,

That the Lyall Harbour Boot Cove Water Local Service Committee amend the budget to include \$32,384 from the Community Works Fund and that the grant money be applied to maximize its use on projects.

CARRIED

MOVED by I. Row, **SECONDED** by M. Fry,

That the Lyall Harbour Boot Cove Water Local Service Committee:

1. Approve the 2018 operating and capital budget as amended, and recommend that the actual surplus or deficit be balanced on the 2017 transfer to the Capital Reserve Fund; and,
2. Recommend that the Electoral Area Services Committee recommend that the CRD Board approve the 2018 operating and capital budget and the five year Financial Plan for the Lyall Harbour Boot Cove Water Service as presented.

CARRIED

6 New Business

Vacant Committee Position

J. Money has requested that the vacant spot on the committee be filled and inquired about what the process is. Staff reported they will report back to the committee.

Operators Position

D. Robson stated that the position for the on-island operator is to be posted and filled before year end.

Emergency Notification System

M.McCrank provided an update on the emergency notification system.

7 Adjournment

MOVED by J. Money, **SECONDED** by I. Rowe,

That the meeting be adjourned at 3:14 p.m.

CARRIED



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Agenda Item #4

**REPORT TO LYALL HARBOUR BOOT COVE WATER LOCAL SERVICE COMMITTEE
MEETING OF NOVEMBER 8, 2018**

SUBJECT 2019 OPERATING AND CAPITAL BUDGET

ISSUE

To present the 2019 operating and capital budget. In accordance with Bylaw No. 1875, "Lyll Harbour Boot Cove Water Local Services Committee Bylaw 1, 1990" the committee's approval of the annual budget is required.

BACKGROUND

The Capital Regional District (CRD) is required by legislation under the *Local Government Act* (LGA) to prepare a 5-year financial plan including Operating Budgets and Capital Expenditure Plans annually. CRD staff have therefore prepared the financial plan shown in Appendix A to this report for the Lyall Harbour Boot Cove Water Local Service.

The Operating Budget includes the regular annual costs to operate the service. The Capital Expenditure Plan shows the anticipated expenditures for capital additions. These may include purchases of new assets or infrastructure, upgrades or improvements to existing assets or asset review and study work that could potentially lead to future capital improvements.

In preparing the Operating Budget, CRD staff took into account:

1. Actual expenditures incurred between 2016 and 2018
2. Anticipated changes in level of service (if any)
3. Maximum allowable tax requisition
4. Annual cost per taxpayer and per SFE

Factors taken into consideration in the preparation of the Capital Expenditure Plan included:

1. Available funds on hand
2. Projects already in progress
3. Condition of existing assets and infrastructure
4. Regulatory, environmental, and health and safety factors

Adjustments for surpluses or deficits from 2018 may be made in January 2019. The CRD Board will give final approval to the budget and financial plan in March 2019.

The Financial Plan for the years 2020 – 2023 may be changed in future years.

BUDGET OVERVIEW

Operating Budget

It is anticipated that the 2018 operating expenses will be approximately \$41,050 over budget due to unanticipated repairs, corrective maintenance, and emergency response which include: leak detection/investigation on Boot Cove Road / Payne Road; filter media replacement; emergency

response to high turbidity; water treatment process modifications; communication equipment repairs; standpipe leak repair; and, water system leak repair.

In addition, the cost of a mechanical failure at the water treatment plant, resulting in a boil water advisory, and cost of repairs to the water storage tank damaged by a fallen tree are anticipated to be approximately \$110,000. It is anticipated that all of these costs will be recovered from an insurance claim less any deductible amounts.

It is anticipated that the 2018 operating revenue will be on budget.

This results in an operating deficit of \$41,050. In order to reduce the deficit, it is proposed that \$8,000 be transferred from the service's Operating Reserve Fund to fund the filter media replacement, and that the budgeted transfer of \$21,130 to the Capital Reserve Fund be reduced to \$6,000. This will result in an operating deficit \$17,920 to be carried forward to the 2019 budget.

The 2019 operating budget has been increased by 2.4% over the 2018 budget to account for inflation and increased labour charges.

Municipal Finance Authority (MFA) Debt

MFA debt servicing costs are incurred on debt of \$250,000 issued in 2009 at 4.13% interest and \$180,000 issued in 2010 at 4.50% interest. The annual debt servicing cost of \$39,900 will remain unchanged in 2019.

Operating Reserve Fund

The Operating Reserve Fund is used to undertake maintenance activities that typically do not occur on an annual basis. Typical maintenance activities include hydrant/standpipe maintenance, reservoir cleaning and water treatment filter media servicing. The operating reserve also funds the procurement of equipment and supplies that are not purchased on an annual basis. Additionally, the operating reserve could be used for emergency unplanned repairs should there be sufficient funds available.

It is proposed that transfers to the operating reserve increase from \$1,800 to \$4,000 to ensure future maintenance activities are funded. Future increases are also recommended to ensure an appropriate minimum balance be maintained in the Operating Reserve Fund.

Planned maintenance include the replacement of filter media in 2018 and reservoir cleaning and inspection which will now occur in 2023.

The Operating Reserve Fund balance at the end of 2018 is projected to be \$590.

Capital Reserve Fund

The Capital Reserve Fund is to be used to pay for capital expenditures that are not funded by other sources such as grants, operating budget or debt.

It is proposed that the budgeted transfer to the Capital Reserve Fund be increased to \$30,000 per year for 2019 and future years.

The capital reserve balance at the end of 2018 is projected to be \$21,964.

Capital Expenditure Plan

The 5-year plan includes \$957,616 of expenditures to be funded by a combination of the service's Capital Reserve Fund, Community Works Fund Grant and new debt following a public engagement and referendum process planned in 2020.

Capital Project Fund

As specific capital projects are approved, the funding revenues for them are transferred into the Capital Project Fund. Whenever possible, any funds remaining upon completion of a project are transferred back to the Capital Reserve Fund for use on future capital projects. The Building & Site improvements project was completed in 2018, \$4,039 under budget. This surplus will be transferred back the Capital Reserve Fund in 2018.

User Charge and Parcel Tax

The user charge and parcel tax fund the service. Typically the user charge funds the operational costs and the parcel tax funds the debt and Capital Reserve Fund contributions. Properties connected to the water system pay the annual user charge and all properties within the local service area are responsible for the parcel tax. The proposed 2019 user charge is \$731, an increase of \$145.93 (24.9%) over the 2018 rate. This increase is necessary in order to fund the deficit from 2018. Starting in 2020, the user charge will decrease to \$636.52, a decrease of \$94.47 (-12.9%) with only inflationary increases expected beyond 2020 through 2023.

The proposed 2019 parcel tax is \$720.90, an increase of \$53.65 (8.0%) over the 2018 rate. This will fund the recommended increase in the annual transfer to the Capital Reserve Fund. Historical user charge and parcel tax rates are included for information.

RECOMMENDATION

That the Lyall Harbour Boot Cove Water Local Service Committee:

1. Approve the 2019 operating and capital budget, and recommend that the actual surplus or deficit be carried forward to 2019 and balanced against the 2019 User Charge; and,
2. Recommend that the Electoral Area Services Committee recommend that the CRD Board approve the 2019 operating and capital budget and the five year Financial Plan for the Lyall Harbour Boot Cove Water Service as presented.

Submitted by	Matthew McCrank, M.Sc., P.Eng., Senior Manager, Infrastructure Operations
Submitted by	Ian Jesney, P.Eng. Senior Manager, Infrastructure Engineering
Submitted by	Rianna Lachance, BCom, CPA, CA, Senior Manager, Financial Services
Concurrence	Ted Robbins, B.Sc., C.Tech., General Manager, Integrated Water Services
Concurrence	Robert Lapham, MCIP, RPP, Chief Administrative Officer

MMc/IJ/RL:td

Attachment: Appendix A: 2019 Lyall Harbour Boot Cove Budget

CAPITAL REGIONAL DISTRICT

2019 Budget

Lyall Harbour Boot Cove Water (Saturna)

Committee Review

Service: 2.640 Lyall Harbour Boot Cove Water (Saturna)

Committee: Electoral Area Services

DEFINITION:

To provide and operate and maintain a domestic water supply and distribution system for the Saturna Island Water Supply and Distribution System Specified Area in the Lyall Harbour/Boot Cove district on Saturna Island. Bylaw No. 513 (November 22, 1978).

PARTICIPATION:

Specified Area #14 - G(764)

MAXIMUM LEVY: Greater of \$150,000 or \$6.90 / \$1,000 of actual assessed value of land and improvements, to a maximum of \$367,159

MAXIMUM CAPITAL DEBT:

AUTHORIZED:	LA Bylaw No. 3587 (Jan 14, 2009)	\$430,000
BORROWED:	SI Bylaw 3634 (Aug 12, 2009)	\$250,000
BORROWED:	SI Bylaw 3677 (Feb 10, 2010)	\$180,000
REMAINING:		<hr/> \$0

COMMITTEE:

Lyall Harbour/Boot Cove Water Committee established by Resolution - September 29, 1982
Lyall Harbour/Boot Cove Water Local Services Committee established by Bylaw No. 1875 (December 12, 1990)

FUNDING:

Any deficiencies after user charge and/or frontage tax or parcel tax to be levied on taxable school assessments, excluding property that is taxable for school purposes by Special Act.

User Charge: Annual charge per single family equivalency unit connected to the system.
Parcel Tax: Annual charge levied only on properties capable of being connected to the system.
Connection Charges: Actual Cost + 15% Admin Fee (Minimum Connection \$400 Bylaw No. 2137, April 28, 1993).

RESERVE FUND:

Bylaw No. 1785 (February 14, 1990)

Lyall Harbour Boot Cove Water (Saturna)	2018		BUDGET REQUEST				FUTURE PROJECTIONS			
	BOARD BUDGET	ESTIMATED ACTUAL	CORE BUDGET	2019 ONGOING	ONE-TIME	TOTAL	2020	2021	2022	2023
<u>OPERATING COSTS:</u>										
Repairs & Maintenance	4,910	12,910	5,010	-	-	5,010	5,110	5,210	5,320	15,430
Allocations	11,640	11,640	11,520	-	-	11,520	11,470	11,500	11,610	11,840
Water Testing	7,820	10,000	7,980	-	-	7,980	8,140	8,300	8,470	8,640
Electricity	4,900	3,800	4,000	-	-	4,000	4,080	4,160	4,240	4,320
Supplies	3,340	3,740	2,860	-	-	2,860	2,920	2,980	3,040	3,100
Labour Charges	99,920	168,550	104,710	-	-	104,710	106,800	108,940	111,120	113,340
Other Operating Expenses	9,380	82,320	9,270	-	-	9,270	9,460	9,650	9,840	10,030
TOTAL OPERATING COSTS	141,910	292,960	145,350	-	-	145,350	147,980	150,740	153,640	166,700
*Percentage Increase over prior year						2.4%	1.8%	1.9%	1.9%	8.5%
Transfer from Operating Reserve Fund	-	(8,000)	-	-	-	-	-	-	-	(10,000)
Insurance Recovery	-	(110,000)	-	-	-	-	-	-	-	-
NET OPERATING COSTS	141,910	174,960	145,350	-	-	145,350	147,980	150,740	153,640	156,700
*Percentage Increase over prior year						2.4%	1.8%	1.9%	1.9%	2.0%
DEBT/RESERVES										
Transfer to Operating Reserve Fund	1,800	1,800	4,000	-	-	4,000	4,080	4,160	4,240	4,320
Transfer to Capital Reserve Fund	21,130	6,000	30,000	-	-	30,000	30,000	30,000	30,000	30,000
MFA Debt Reserve Fund	-	-	-	-	-	-	100	3,010	5,650	200
MFA Debt Principal	21,470	21,470	21,470	-	-	21,470	21,470	22,010	38,200	68,570
MFA Debt Interest	18,430	18,430	18,430	-	-	18,430	18,510	21,440	38,690	38,860
TOTAL DEBT / RESERVES	62,830	47,700	73,900	-	-	73,900	74,160	80,620	116,780	141,950
TOTAL COSTS	204,740	222,660	219,250	-	-	219,250	222,140	231,360	270,420	298,650
<u>FUNDING SOURCES (REVENUE)</u>										
Estimated balance C/F from 2018 to 2019	-	(17,920)	17,920	-	-	17,920	-	-	-	-
User Charges	(93,610)	(93,610)	(117,690)	-	-	(117,690)	(102,480)	(105,320)	(108,300)	(111,440)
Other Revenue	(820)	(820)	(300)	-	-	(300)	(300)	(300)	(300)	(300)
TOTAL REVENUE	(94,430)	(112,350)	(100,070)	-	-	(100,070)	(102,780)	(105,620)	(108,600)	(111,740)
REQUISITION - PARCEL TAX	(110,310)	(110,310)	(119,180)	-	-	(119,180)	(119,360)	(125,740)	(161,820)	(186,910)
*Percentage increase over prior year										
User Charges			25.7%			25.7%	-12.9%	2.8%	2.8%	2.9%
Requisition			8.0%			8.0%	0.2%	5.3%	28.7%	15.5%
Combined			16.2%			16.2%	-6.3%	4.2%	16.9%	10.5%

AMENDED

Lyall Harbour/Boot Cove Reserves
Summary Schedule
2019 - 2023 Financial Plan

Reserve/Fund Summary

	2018 Estimate	Budget				
		2019	2020	2021	2022	2023
Operating Reserve Fund	590	4,590	8,670	12,830	17,070	11,390
Capital Reserve Fund	21,964	21,964	24,964	54,964	84,964	114,964
Total	44,931	63,932	71,012	105,172	139,412	163,732

AMENDED

Reserve Schedule

Reserve Fund: 2.640 Lyall Harbour Water Operating Reserve Fund (Bylaw No: 4144)

Reserve fund used for: unforeseen operational repairs and maintenance; infrequent maintenance activities such as reservoir cleaning and inspection, filter media replacement etc. Optimum minimum balance of \$13,000 (approximately 10%) of the annual operating budget.

Reserve Cash Flow

	Budget					
	2018	2019	2020	2021	2022	2023
Beginning Balance	6,646	590	4,590	8,670	12,830	17,070
Transfer from Operating Budget	1,800	4,000	4,080	4,160	4,240	4,320
Transfer to Operating Budget	(8,000)	-	-	-	-	(10,000)
Filter Media Replacement						Reservoir Cleaning and inspection
Interest Income	144	-	-	-	-	-
Ending Balance \$	590	4,590	8,670	12,830	17,070	11,390

AMENDED

Set level of transfers in order to avoid spikes in requisition resulting from unforeseen breakdowns in water infrastructure

Reserve Schedule

Reserve Fund: 2.640 Lyall Harbour Boot Cove Water (Saturna) Capital Reserve Fund - Bylaw 1785

Reserve Cash Flow

Fund: 1025 Fund Center: 101369

	Estimated	Budget				
	2018	2019	2020	2021	2022	2023
Beginning Balance	43,753	21,964	21,964	24,964	54,964	84,964
Transfer to Cap Fund	(32,378)	(30,000)	(27,000)	-	-	-
Unanticipated R&M	-	-	-	-	-	-
Transfer from Operating Budget	6,000	30,000	30,000	30,000	30,000	30,000
Transfer from Cap Fund	4,039	-	-	-	-	-
Interest Income*	55	-	-	-	-	-
Ending Balance \$	21,964	21,964	24,964	54,964	84,964	114,964

AMENDED

Assumptions/Background:

To fully fund capital expenditure plan

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.

CAPITAL REGIONAL DISTRICT CAPITAL PLAN

Service #: 2.640
Service Name: Lyall Harbour Boot Cove Water (Saturna)

CAPITAL BUDGET FORM
2019 & Forecast 2020 to 2023

Proj. No.
 The first two digits represent first year the project was in the capital plan.

Capital Exp. Type
Study - Expenditure for feasibility and business case report.
New - Expenditure for new asset only
Renewal - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service
Replacement - Expenditure replaces an existing asset

Funding Source Codes
 Debt = Debenture Debt (new debt only)
 ERF = Equipment Replacement Fund
 Grant = Grants (Federal, Provincial)
 Cap = Capital Funds on Hand
 Other = Donations / Third Party Funding

Funding Source Codes (cont)
 Res = Reserve Fund
 STLoan = Short Term Loans
 WU = Water Utility

Asset Class
 L - Land
 S - Engineering Structure
 B - Buildings
 V - Vehicles
 E - Equipment

Capital Project Title
 Input Title of Project. For example "Asset Name - Roof Replacement", "Main Water Pipe Replacement".

Capital Project Description
 Briefly describe project scope and service benefits.
 For example: "Full Roof Replacement of a 40 year old roof above the swimming pool area; The new roofing system is built current energy standards, designed to minimize maintenance and have an expected service life of 35 years".

Total Project Budget
 This column represents the total project budget not only within the 5-year window.

FIVE YEAR FINANCIAL PLAN

Proj. No.	Capital Exp.Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carry Forward from 2018	2019	2020	2021	2022	2023	5 - Year Total
17-01	Renewal	Dam Safety Improvements - Toe Berm - Ph 1	Design of a toe berm and drainage improvements based upon preliminary design carried out in 2016	\$45,000	E	Cap	\$10,000	\$15,000	\$0	\$0	\$0	\$0	\$15,000
18-01	Renewal	Dam Safety Improvements - Toe Berm - Ph 2	Construction of the toe berm and drainage improvements.	\$20,000	E	Cap	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$20,000
18-03	Study	Dam Safety Improvements - Seismic Design	Conduct a preliminary design study to inform detailed and construction cost estimates.	\$32,384	S	Grant	\$32,384	\$27,000	\$0	\$0	\$0	\$0	\$27,000
				\$7,616	S	Cap	\$7,616	\$7,616	\$0	\$0	\$0	\$0	\$7,616
18-05	New	Biological Filter Backwash Upgrade	Upgrade the backwash system so that unchlorinated water is used to backwash the biological filter.	\$30,000	E	Res	\$0	\$20,000	\$0	\$0	\$0	\$0	\$20,000
18-06	Renewal	Infrastructure Renewal	Renewal of infrastructure based upon the SAMP recommendations	\$100,000	S	Debt	\$0	\$0	\$0	\$20,000	\$20,000	\$20,000	\$60,000
18-07	Study	WTP Optimization Study	Since construction of the WTP, additional works and elimination of extra infrastructure can improve operation.	\$10,000	E	Debt	\$0	\$0	\$10,000	\$0	\$0	\$0	\$10,000
19-01	Replacement	Air Valve Replacement - Ph 2	Replace aging air valves that are a safety concern.	\$20,000	E	Debt	\$0	\$0	\$0	\$20,000	\$0	\$0	\$20,000
19-02	Replacement	PRV Bypass Assembly Replacement	Construct bypasses on the East Point, Narvaez and Boot Cove PRV stations to maintain system operation while the PRV's undergo maintenance.	\$8,000	E	Debt	\$0	\$0	\$0	\$8,000	\$0	\$0	\$8,000
19-03	Replacement	Standpipe and Valve Replacement	Replace the standpipe valves at 119 and 155 East Point Road that are seized and inoperable	\$8,000	E	Debt	\$0	\$0	\$0	\$8,000	\$0	\$0	\$8,000
19-04	New	Public Consultation & Referendum	Conduct public consultation to inform strategies for a referendum to borrow necessary future capital funds.	\$20,000	S	Res	\$0	\$0	\$20,000	\$0	\$0	\$0	\$20,000
19-05	New	Autoflush Installation	Install 3 autoflushes within the water distribution system to maintain distribution water quality.	\$15,000	E	Res	\$0	\$10,000	\$0	\$0	\$0	\$0	\$10,000
19-06	New	Seepage Pit Construction	Construct a new seepage pit to increase ground filtered water production.	\$45,000	E	Debt	\$0	\$0	\$0	\$0	\$45,000	\$0	\$45,000
20-01	Replacement	Chlorine Injection Pump	Install an additional chlorine injection pump to address dosing requirements related to fluctuating water demands.	\$7,000	E	Res	\$0	\$0	\$7,000	\$0	\$0	\$0	\$7,000
21-01	Replacement	Source Water Reliability Study	Study to determine vulnerability of the source water and its viability.	\$15,000	S	Debt	\$0	\$0	\$0	\$15,000	\$0	\$0	\$15,000
21-02	Renewal	Dam Safety Review	Conduct an audit type dam safety review.	\$50,000	S	Debt	\$0	\$0	\$0	\$50,000	\$0	\$0	\$50,000
22-01	New	Install Larger Supply Line to Tank	Construct a larger supply line to the tank to improve system reliability and operation.	\$150,000	S	Debt	\$0	\$0	\$0	\$150,000	\$0	\$0	\$150,000
22-02	Renewal	Money Lake Dam Seismic Upgrade	Seismic reinforcement of Money Lake Dam based upon the 2016 Dam Safety Review.	\$500,000	S	Debt	\$0	\$0	\$0	\$0	\$500,000	\$0	\$500,000
GRAND TOTAL				\$1,018,000			\$40,000	\$64,616	\$37,000	\$271,000	\$565,000	\$20,000	\$957,616

Service: 2.640

Lyall Harbour Boot Cove Water (Saturna)

Proj. No. 17-01	Capital Project Title Dam Safety Improvements - Toe Berm P	Capital Project Description Design of a toe berm and drainage improvements based upon preliminary design carried out in 2016
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>The 2012 Dam Safety Review recommended a number of improvements, which have been spread out over several years. This project includes Phase 1 (design) of installation of a gravel toe berm on the downstream side of the dam.</i>		
Proj. No. 18-01	Capital Project Title Dam Safety Improvements - Toe Berm P	Capital Project Description Construction of the toe berm and drainage improvements.
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>The 2012 Dam Safety Review recommended a number of improvements, which have been spread out over several years. This project includes Phase 2 (construction) of installation of a gravel toe berm on the downstream side of the dam.</i>		
Proj. No. 18-03	Capital Project Title Dam Safety Improvements - Seismic De	Capital Project Description Conduct a preliminary design study to inform detailed and construction cost estimates.
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>As a result of the soil investigation and seismic stability assessment completed in 2016, the consultant recommended that remedial work be completed to meet the Canadian Dam Safety Guideline. The next step in the process would be to complete a preliminary design study and the results of that study would include refined construction estimates and scope of work. This was detailed in a separate staff report for the Committee's consideration.</i>		
Proj. No. 18-05	Capital Project Title Biological Filter Backwash Upgrade	Capital Project Description Upgrade the backwash system so that unchlorinated water is used to backwash the biological filter.
Asset Class Equipment	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>Currently the biological filter uses chlorinated water to backwash. This kills the cultured biological growth that is used for treatment. Funds are required to carry out design in 2018 and then construction in 2019.</i>		
Proj. No. 18-06	Capital Project Title Infrastructure Renewal	Capital Project Description Renewal of infrastructure based upon the SAMP recommendations
Asset Class Equipment	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>A draft Strategic Asset Management Plan was prepared in 2017. Recommendations for infrastructure renewal, replacement and upgrades were made. Funding is required to carry out some of the recommended infrastructure renewals.</i>		

Service: 2.640

Lyall Harbour Boot Cove Water (Saturna)

Proj. No. 18-07

Capital Project Title WTP Optimization Study

Capital Project Description

Since construction of the WTP, additional works and elimination of extra infrastructure can improve operation.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale *Since the WTP was upgraded, a few proposed improvements are proposed including increasing the hydraulic capacity to the storage tank, eliminating the secondary valve, eliminating the chlorine contact chamber, filter backwash water supply, etc. it is propose to conduct a technical/operational study to determine what improvements could be made and estimate the costs.*

Proj. No. 19-01

Capital Project Title Air Valve Replacement - Ph 2

Capital Project Description

Replace aging air valves that are a safety concern.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale *The air valves are 35 years old and are corroded, giving rise to safety concerns.*

Proj. No. 19-02

Capital Project Title PRV Bypass Assembly Replacement

Capital Project Description

Construct bypasses on the East Point, Narvaez and Boot Cove PRV stations to maintain system operation while the PRV's undergo maintenance.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale *The inlet and outlet piping at the East Point, Narvaez and Boot Cove PRV stations are very corroded and there is no way to isolate the stations to replace or maintain the pressure reducing valves. It is proposed that new inlet and outlet piping be installed with 100mm gate valves and bypass piping so that customers are not without water when PRV's are being serviced.*

Proj. No. 19-03

Capital Project Title Standpipe and Valve Replacement

Capital Project Description

Replace the standpipe valves at 119 and 155 East Point Road that are seized and inoperable

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale *The standpipe valves at 119 and 155 East Point Road are seized and inoperable. Therefore, the operators cannot use them for flushing or draining of the mains. It is proposed the valves and corroded 50mm supply line to the standpipe be replaced. The scope of work and material pricing was re-evaluated in 2016. It was determined that the budget needed to be increased from \$5,000 to \$8,000 to accommodate the required works.*

Service: 2.640

Lyall Harbour Boot Cove Water (Saturna)

Proj. No. 19-04

Capital Project Title Public Consultation & Referendum

Capital Project Description Conduct public consultation to inform strategies for a referendum to borrow necessary future capital funds.

Asset Class Engineered Structures

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale *Future required projects to maintain public safety and level of service require funding in excess of current projected reserve balance. Future funding will be for improvements the Water Treatment Plant to increase reliability and optimize for improved operations, conducting a regulatory requirement for a dam safety review and construct a larger supply line to the storage tank. Funding is required to undertake public consultation to inform borrow strategies and conduct a referendum.*

Proj. No. 19-05

Capital Project Title Autoflush Installation

Capital Project Description Install 3 autoflushes within the water distribution system to maintain distribution water quality.

Asset Class Engineered Structures

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale *Three watermains require frequent flushing to maintain disinfectant residuals and water quality. Flushing requires operator time which can be utilized conducting other maintenance tasks. Funds are required to construct 3 autoflushes.*

Proj. No. 19-06

Capital Project Title Seepage Pit Construction

Capital Project Description Construct a new seepage pit to increase ground filtered water production.

Asset Class Engineered Structures

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale *There have been water quality issues at times when the turbidity in Money Lake increases and water is being directly drawn from the lake. The seepage pit downstream doesn't encounter the same water quality issues. To reduce water quality issues funds are required to construct another seepage pit.*

Service: 2.640

Lyall Harbour Boot Cove Water (Saturna)

Proj. No. 20-01

Capital Project Title Chlorine Injection Pump

Capital Project Description Install an additional chlorine injection pump to address dosing requirements related to fluctuating water demands.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale Install an additional chlorine injection pump to address dosing requirements related to fluctuating water demands.

Proj. No. 21-01

Capital Project Title Source Water Reliability Study

Capital Project Description Study to determine vulnerability of the source water and its viability.

Asset Class Engineered Structures

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale Study to determine the medium to long term vulnerability of the source water (Money Lake) and its viability as a water source (quantity and quality) for the LHBC system in light of pressures such as projected demand changes and climate change.

Proj. No. 21-02

Capital Project Title Dam Safety Review

Capital Project Description Conduct an audit type dam safety review.

Asset Class Engineered Structures

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale The Dam Safety Regulation (Water Sustainability Act) requires that dams with a "HIGH" failure consequence rating undergo a Dam Safety Review (DSR) at a frequency of every ten years. The previous DSR was conducted in 2011 and the proposed type for the 2021 DSR is a simpler "audit" type.

Proj. No. 22-01

Capital Project Title Install Larger Supply Line to Tank

Capital Project Description Construct a larger supply line to the tank to improve system reliability and operation.

Asset Class Engineered Structures

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale The supply line to the tank is undersized, installation of a larger supply line will improve operation. Funding is required to construct a larger supply line to the tank.

Proj. No. 22-02

Capital Project Title Money Lake Dam Seismic Upgrade

Capital Project Description Seismic reinforcement of Money Lake Dam based upon the 2016 Dam Safety Review.

Asset Class Engineered Structures

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale This is a continuation of project 18-03, where seismic reinforcement of the Money Lake Dam will commence. Funds are required to retain a contractor to undertake the works.

Lyll Harbour/Boot Cove

Capital Projects Fund

Year/Project#	Status	Capital Project Description	Total Budget	Expenditure Actuals	Remaining Funds	Funding Source-CRF*	Funding Source-CWF**	Return to CRF*	Return to CWF**
2017/CE.584	OPEN	Dam Safety Improvements - Toe Berm	45,000	28,991	16,009	45,000	-	-	-
2018/CE.661	CLOSED	Building & site improvements	10,000	5,961	4,039	10,000	-	4,039	-
		Totals	55,000	34,952	20,048	55,000	-	4,039	-

* CRF (Capital Reserve Fund)

** CWF (Community Works Fund)

Service: 2.640

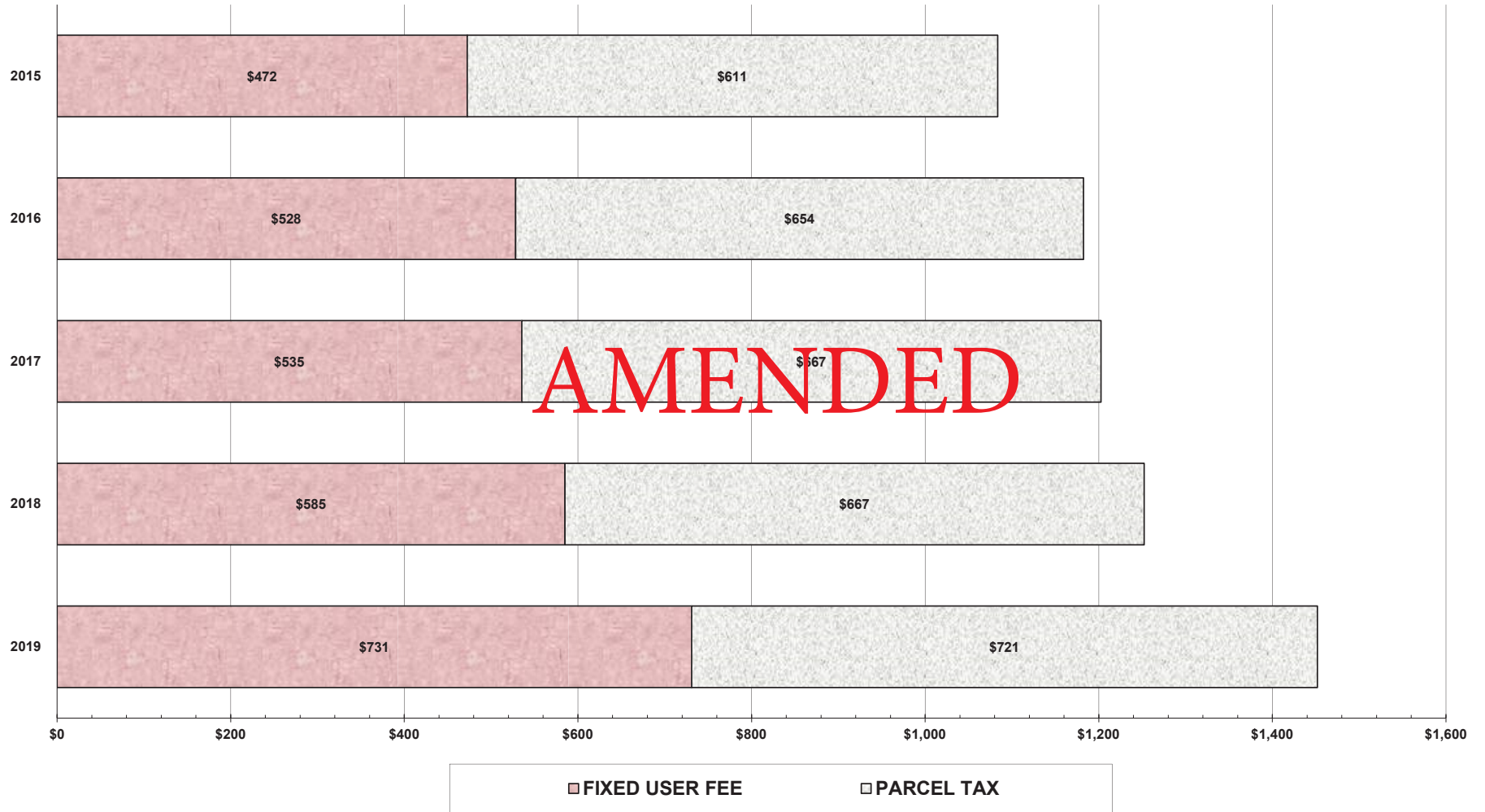
Lyall Harbour Boot Cove Water (Saturna)

Committee: Electoral Area Services

<u>Year</u>	<u>Taxable Folios</u>	<u>Parcel Tax</u>	<u>SFE's</u>	<u>User Charge</u>	<u>Tax & Charges</u>	<u>Bylaw</u>	<u>Assessments \$(000's)</u>
2011	170	\$560.00	158	\$325.00	\$885.00	3799	57,270
2012	171	\$560.00	159	\$375.00	\$935.00	3823	56,059
2013	171	\$560.00	159	\$390.31	\$950.31	3892	55,690
2014	171	\$600.00	159	\$461.14	\$1,061.14	3924	50,582
2015	171	\$611.11	159	\$472.48	\$1,083.59	3987	48,842
2016	174	\$654.18	159	\$528.24	\$1,182.42	4074	48,842
2017	174	\$667.25	160	\$535.34	\$1,202.59	4170	53,211
2018	174	\$667.25	160	\$585.06	\$1,252.31	4233	56,853
2019	174	\$720.90	161	\$30.99	\$1,451.90		

AMENDED

CAPITAL REGIONAL DISTRICT LYALL HARBOUR / BOOT COVE (SATURNA) WATER FUNDING ANALYSIS 2015-2019



**Lyall Harbour Boot Cove Water (Saturna Island)
November 8, 2018 Commission Meeting Amendments**

	2019 - Core	2020	2021	2022	2023
Net Operating Costs - As presented	145,350	147,980	150,740	153,640	156,700
Debt/Reserves - As presented	73,900	74,160	80,620	116,780	141,950
Amendments					
Reduce Transfer to CRF from proposed \$30,000 to \$8,040 for 2019	(21,960)	-	-	-	-
Reduce Transfer to ORF from proposed \$4,000 to \$0 for 2019 and \$2,500 for 2020-2023	(4,000)	(1,580)	(1,660)	(1,740)	(1,820)
Debt/Reserves - As amended	47,940	72,580	78,960	115,040	140,130
TOTAL COSTS - As amended	193,290	220,560	229,700	268,680	296,830
Estimated deficit carryforward from 2018 - As presented	17,920	-	-	-	-
User Charges - As presented	(117,690)	(102,480)	(105,320)	(108,300)	(111,440)
Amendment - Balance User Charge for Parcel Tax and Reserve Transfer adjs	17,090	1,580	1,660	1,740	1,820
User Charges - As amended	(100,600)	(100,900)	(103,660)	(106,560)	(109,620)
Other Revenue - As presented	(300)	(300)	(300)	(300)	(300)
Parcel Tax - As presented	(119,180)	(119,360)	(125,740)	(161,820)	(186,910)
Amendment - Adjust to keep Parcel Tax static for 2018/2019	8,870	-	-	-	-
Parcel Tax - As amended	(110,310)	(119,360)	(125,740)	(161,820)	(186,910)
TOTAL FUNDING - As amended	(193,290)	(220,560)	(229,700)	(268,680)	(296,830)

Lyall Harbour Boot Cove Water (Saturna)	BUDGET REQUEST						FUTURE PROJECTIONS			
	2018		2019				2020	2021	2022	2023
	BOARD BUDGET	ESTIMATED ACTUAL	CORE BUDGET	ONGOING	ONE-TIME	TOTAL				
<u>OPERATING COSTS:</u>										
Repairs & Maintenance	4,910	12,910	5,010	-	-	5,010	5,110	5,210	5,320	15,430
Allocations	11,640	11,640	11,520	-	-	11,520	11,470	11,500	11,610	11,840
Water Testing	7,820	10,000	7,980	-	-	7,980	8,140	8,300	8,470	8,640
Electricity	4,900	3,800	4,000	-	-	4,000	4,080	4,160	4,240	4,320
Supplies	3,340	3,740	2,860	-	-	2,860	2,920	2,980	3,040	3,100
Labour Charges	99,920	168,550	104,710	-	-	104,710	106,800	108,940	111,120	113,340
Other Operating Expenses	9,380	82,320	9,270	-	-	9,270	9,460	9,650	9,840	10,030
TOTAL OPERATING COSTS	141,910	292,960	145,350	-	-	145,350	147,980	150,740	153,640	166,700
*Percentage Increase over prior year						2.4%	1.8%	1.9%	1.9%	8.5%
Transfer from Operating Reserve Fund	-	(8,000)	-	-	-	-	-	-	-	(10,000)
Insurance Recovery	-	(110,000)	-	-	-	-	-	-	-	-
NET OPERATING COSTS	141,910	174,960	145,350	-	-	145,350	147,980	150,740	153,640	156,700
*Percentage Increase over prior year						2.4%	1.8%	1.9%	1.9%	2.0%
<u>DEBT/RESERVES</u>										
Transfer to Operating Reserve Fund	1,800	1,800	-	-	-	-	2,500	2,500	2,500	2,500
Transfer to Capital Reserve Fund	21,130	6,000	8,040	-	-	8,040	30,000	30,000	30,000	30,000
MFA Debt Reserve Fund	-	-	-	-	-	-	100	3,010	5,650	200
MFA Debt Principal	21,470	21,470	21,470	-	-	21,470	21,470	22,010	38,200	68,570
MFA Debt Interest	18,430	18,430	18,430	-	-	18,430	18,510	21,440	38,690	38,860
TOTAL DEBT / RESERVES	62,830	47,700	47,940	-	-	47,940	72,580	78,960	115,040	140,130
TOTAL COSTS	204,740	222,660	193,290	-	-	193,290	220,560	229,700	268,680	296,830
<u>FUNDING SOURCES (REVENUE)</u>										
Estimated balance C/F from 2018 to 2019	-	(17,920)	17,920	-	-	17,920	-	-	-	-
User Charges	(93,610)	(93,610)	(100,600)	-	-	(100,600)	(100,900)	(103,660)	(106,560)	(109,620)
Other Revenue	(820)	(820)	(300)	-	-	(300)	(300)	(300)	(300)	(300)
TOTAL REVENUE	(94,430)	(112,350)	(82,980)	-	-	(82,980)	(101,200)	(103,960)	(106,860)	(109,920)
REQUISITION - PARCEL TAX	(110,310)	(110,310)	(110,310)	-	-	(110,310)	(119,360)	(125,740)	(161,820)	(186,910)
*Percentage increase over prior year										
User Charges			7.5%			7.5%	0.3%	2.7%	2.8%	2.9%
Requisition			0.0%			0.0%	8.2%	5.3%	28.7%	15.5%
Combined			3.4%			3.4%	4.4%	4.1%	17.0%	10.5%

Lyall Harbour/Boot Cove Reserves
Summary Schedule
2019 - 2023 Financial Plan

Reserve/Fund Summary

	2018 Estimate	Budget				
		2019	2020	2021	2022	2023
Maintenance Reserve	590	590	3,090	5,590	8,090	590
Capital Reserve Fund	21,964	4	3,004	33,004	63,004	93,004
Total	22,553	594	6,094	38,594	71,094	93,594

Reserve Schedule

Reserve Fund: 2.640 Lyall Harbour Water Operating Reserve Fund (Bylaw No: 4144)

Reserve fund used for: unforeseen operational repairs and maintenance; infrequent maintenance activities such as reservoir cleaning and inspection, filter media replacement etc. Optimum minimum balance of \$13,000 (approximately 10%) of the annual operating budget.

Reserve Cash Flow

	2018	Budget				
		2019	2020	2021	2022	2023
Beginning Balance	6,646	590	590	3,090	5,590	8,090
Transfer from Operating Budget	1,800	-	2,500	2,500	2,500	2,500
Transfer to Operating Budget	(8,000)	-	-	-	-	(10,000)
	Filter Media Replacement					Reservoir Cleaning and inspection
Interest Income	144	-	-	-	-	-
Ending Balance \$	590	590	3,090	5,590	8,090	590

Set level of transfers in order to avoid spikes in requisition resulting from unforeseen breakdowns in water infrastructure

Reserve Schedule

Reserve Fund: 2.640 Lyall Harbour Boot Cove Water (Saturna) Capital Reserve Fund - Bylaw 1785

Reserve Cash Flow

Fund: 1025 Fund Center: 101369

	Estimated	Budget				
	2018	2019	2020	2021	2022	2023
Beginning Balance	43,753	21,964	4	3,004	33,004	63,004
Transfer to Cap Fund	(32,378)	(30,000)	(27,000)	-	-	-
Unanticipated R&M	-	-	-	-	-	-
Transfer from Operating Budget	6,000	8,040	30,000	30,000	30,000	30,000
Transfer from Cap Fund	4,039	-	-	-	-	-
Interest Income*	550	-	-	-	-	-
Ending Balance \$	21,964	4	3,004	33,004	63,004	93,004

Assumptions/Background:

To fully fund capital expenditure plan

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.

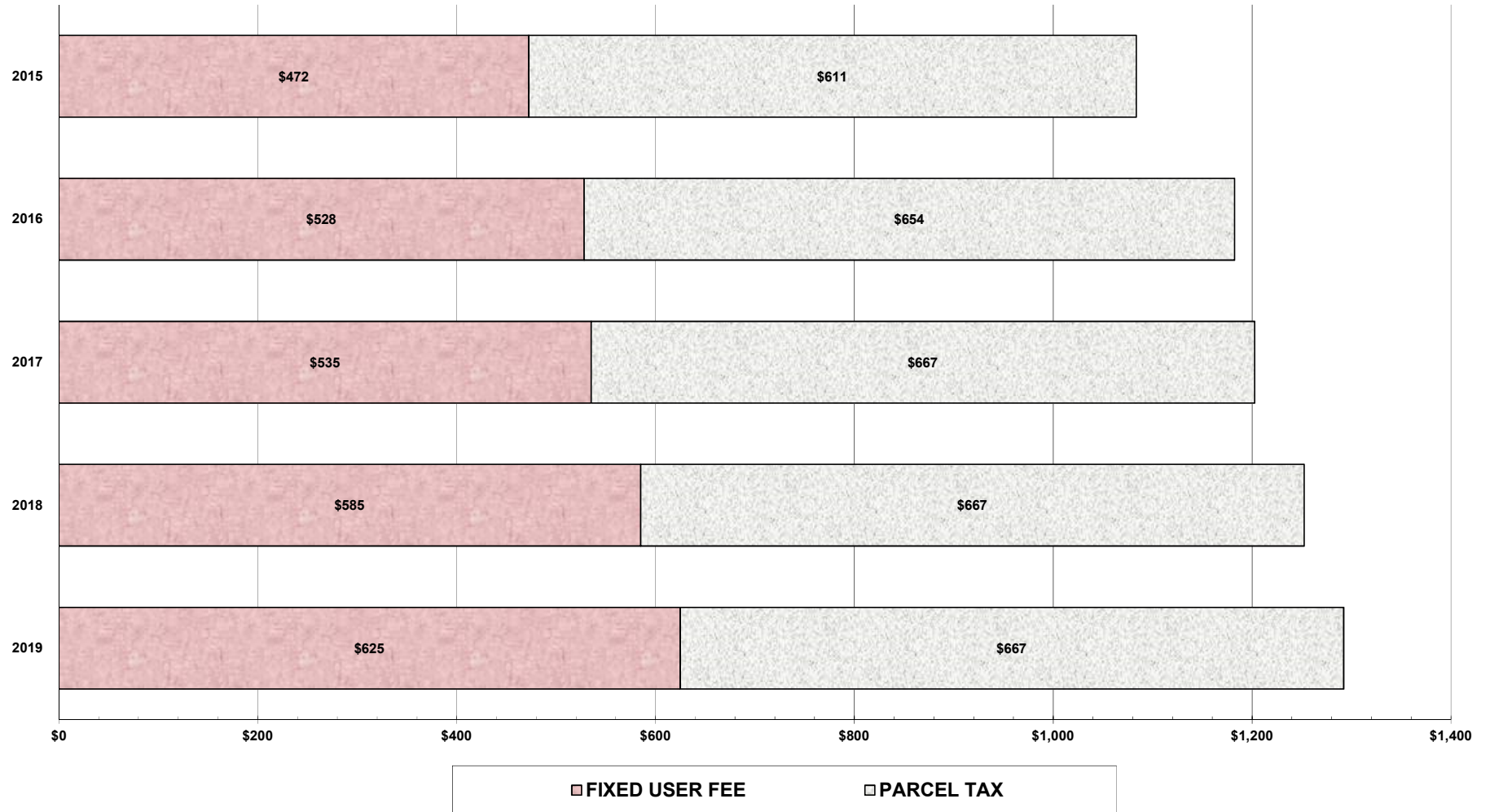
Service: 2.640

Lyall Harbour Boot Cove Water (Saturna)

Committee: Electoral Area Services

<u>Year</u>	<u>Taxable Folios</u>	<u>Parcel Tax</u>	<u>SFE's</u>	<u>User Charge</u>	<u>Tax & Charges</u>	<u>Bylaw</u>	<u>Assessments \$(000's)</u>
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CAPITAL REGIONAL DISTRICT LYALL HARBOUR / BOOT COVE (SATURNA) WATER FUNDING ANALYSIS 2015-2019



Actual Costs 2015-2018, Projected 2019
Prepared by CRD Finance
11/09/2018