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SAANICH PENINSULA WATER COMMISSION

Notice of Meeting on **Thursday, October 4, 2018 at 8:30 a.m.**

Saanich Peninsula Treatment Plant Meeting Room, 9055 Mainwaring Road, North Saanich, BC

M. Williams (Chair)	P. Wainwright (Vice-Chair)	R. Barnhart	M. Doehnel
Z. King	M. Lougher-Goodey	C. Stock	M. Thompson
M. Underwood	M. Weisenberger	R. Windsor	

AGENDA

1. Approval of Agenda
2. Adoption of Minutes of June 21, 2018 1
3. Chair's Remarks
4. Presentations/Delegations
   - No one has registered to speak
5. 2019 Capital and Operating Budget (Report #SPWC2018-07) 4
6. Disaster Mitigation and Adaptation Fund – Grant Application Update
7. Post Disaster Water Supply Plan Update
8. Water Watch 25
9. New Business
10. Adjournment

Distribution:

Staff/Town Halls, etc.

R. Lapham	T. Robbins	B. Barnett, Central Saanich
L. Hutcheson	I. Jesney	P. Robins, Central Saanich
N. Chan	M. McCrank	R. Buchan, North Saanich
A. Orr	D. Robson	E. Toupin, North Saanich
B. Semmens	D. Puskas	R. Humble, Sidney
G. Harris	S. Orr	T. Tanton, Sidney
	Commission file	

To ensure a quorum, advise Tanya at 250.474-9606 if you or your alternate cannot attend.

IWSS-928280410-6257

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Item 2

MINUTES OF A MEETING OF THE SAANICH PENINSULA WATER COMMISSION
Held June 21, 2018 in the Saanich Peninsula Treatment Plant Meeting Room, 9055 Mainwaring Road, North Saanich, BC

PRESENT M. Williams (Chair), C. Stock, R. Barnhart, M. Doehnel, M. Lougher-Goodey, M. Underwood, P. Wainwright (Vice-Chair), M. Weisenberger

STAFF: T. Robbins, General Manager, Integrated Water Services; M. McCrank, Senior Manager, Infrastructure Operations; I. Jesney, Senior Manager, Infrastructure Engineering; G. Harris, S. Orr (recorder)

ABSENT: M. Thompson, R. Windsor, Z. King,

The meeting was called to order at 8:35 a.m.

1. APPROVAL OF AGENDA

MOVED by Commissioner Lougher-Goodey, **SECONDED** by Commissioner Stock,

That the Saanich Peninsula Water Commission approve the agenda.

CARRIED

2. ADOPTION OF MINUTES

MOVED by Commissioner Lougher-Goodey, **SECONDED** by Commissioner Stock,

That the Saanich Peninsula Water Commission adopt the minutes of the March 15, 2018.

CARRIED

3. CHAIR'S REMARKS

The Chair had no remarks.

4. PRESENTATIONS/DELEGATIONS

There were no presentations/delegations.

5. SAANICH PENINSULA WATER DEVELOPMENT COST CHARGE UPDATE

I. Jesney spoke to the report and stated that further to Commission direction from their meeting held March 15, 2018, staff have finalized the 2018 Development Cost Charges Water Update and prepared draft bylaw amendments.

MOVED by Commissioner Wainwright, **SECONDED** by Commissioner Lougher-Goodey,

That the Saanich Peninsula Water Commission:

1. That Bylaw No. 4251, "Saanich Peninsula Water and Wastewater Development Cost Charges Bylaw No. 1, 2004, Amendment Bylaw No. 2, 2018", be introduced and given first and second reading, and,

2. That Bylaw No. 4251, "Saanich Peninsula Water and Wastewater Development Cost Charges Bylaw No. 1, 2004, Amendment Bylaw No. 2, 2018", be given third reading.

CARRIED

6. WATER AUDIT FOR THE SAANICH PENINSULA WATER SERVICE

T. Robbins spoke to the report stating that a water audit of the Saanich Peninsula Water service was successfully completed in July 2017. He stated that the results of the audit show that the water system is conveying water to municipal customers with a high-level of efficiency and that significant metering and unauthorized consumption issues identified in the report have been or are being addressed. He stated that the recommendations regarding system design, meter replacement and municipal data will be implemented by staff.

MOVED by Commissioner Lougher-Goodey, **SECONDED** by Commissioner Stock,

That the Saanich Peninsula Water Commission receive the staff report for information.

CARRIED

7. PROJECTS AND INITIATIVES UPDATE

I. Jesney provided an update of the ongoing projects and initiatives as identified in the staff report.

MOVED by Commissioner Stock, **SECONDED** by Commissioner Wainwright,

That the Saanich Peninsula Water Commission receive the staff report for information.

CARRIED

8. WATER WATCH

MOVED by Commissioner Lougher-Goodey, **SECONDED** by Commissioner Stock,

That the Saanich Peninsula Water Commission receive the report for information.

CARRIED

9. NEW BUSINESS

Disaster Mitigation and Adaptation Fund

T. Robbins stated that Infrastructure Canada introduced a grant program for large scale regional projects supporting changes to existing public infrastructure and new public infrastructure aimed at reducing economic impacts triggered by natural hazards. He stated that staff would like to apply for a grant to address upgrades to the Saanich Peninsula Water system, specifically in terms of the post disaster water supply to mitigate risks to public health and safety. He stated that the grant supports the 2018 Regional Water Supply strategic plan.

MOVED by Commissioner Lougher-Goodey, **SECONDED** by Commissioner Stock,

That the Saanich Peninsula Water Commission endorse a grant application under the Infrastructure Canada Disaster Mitigation Adaptation Fund to address Saanich Peninsula water system seismic resiliency projects as identified in the Post Disaster Water Supply Strategy and the Regional Water Supply's Strategic Plan.

CARRIED

10. ADJOURNMENT

MOVED by Commissioner Lougher-Goodey, **SECONDED** by Commissioner Stock,

That the Saanich Peninsula Water Commission meeting be adjourned at 9:14 a.m.

CARRIED

CHAIR SECRETARY

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REPORT TO SAANICH PENINSULA WATER COMMISSION
MEETING OF THURSDAY, OCTOBER 4, 2018

SUBJECT SAANICH PENINSULA WATER SERVICE - 2019 OPERATING AND CAPITAL BUDGET

ISSUE

This report provides an overview of the 2019 Saanich Peninsula Water Service operating and capital budget, highlighting the changes from the 2018 budget and the proposed 2019 budget figures. The report generally follows the sequence of information provided in the attached draft budget document (Appendix A).

BACKGROUND

The draft 2019 Saanich Peninsula Water Service budget has been prepared for the Saanich Peninsula Water Commission's (Commission) consideration. The Commission will make budget recommendations to the CRD Board. As in previous years, the draft 2019 budget has been prepared considering the CRD Board's 2019 service planning and financial expectations, which include identifying opportunities to realign or reallocate resources and seek potential synergies or efficiencies between departments and services, reviewing of service levels and adjustments related to regulatory compliance, and undertaking infrastructure improvements to maintain service levels across the service area. The following sets out the key components of the budget.

2018 Year-end Financial Projections

The actual 2018 operating expense is projected to be $64,190 under budget. The actual bulk water purchase expense is estimated to be higher than budget by $132,880, due to the projected higher than budget demand volume at year end 2018. This corresponds with water sales revenue that is estimated to be $192,255 higher than budget. The net revenue surplus is projected to be $59,375 after the bulk water purchase expense is deducted. To balance the budget at year end, the proposed transfer to the capital reserve fund has been increased by $124,315 to $574,315.

Operating Budget

An increase in the 2019 operating expense in the amount of $80,244 is planned and results primarily from non-discretionary expense adjustments such as wage/salary increases, departmental support service allocations, and other operating expense increases such as electricity costs.

The bulk water purchase expense, based on the proposed 2019 Regional Water Supply wholesale water rate and the 2019 Saanich Peninsula Water budget demand volume, has been set at $4,403,750.

Capital Budget

The planned transfer to the capital reserve fund in 2019 is $470,000. At year-end 2018, the capital reserve fund balance is estimated to be $3,721,492, which is available to fund major capital projects. The planned transfer to the equipment replacement fund in 2019 is $50,000. At year-end 2018, the equipment replacement fund balance is estimated to be $1,668,230, which is available to fund minor capital and operating machinery and equipment replacements. The value of the five-

year (2019-2023) capital plan is currently $3,320,000, including a budget allowance for post-disaster water supply equipment and infrastructure improvements. With the current reserve fund balance, and the planned contributions over the next five years, based on the current capital plan, there will be sufficient funding in reserves for the five-year capital plan, while maintaining a positive balance for unplanned expenditures, without the need for borrowing. The service currently does not carry any debt.

The Development Cost Charge (DCC) program represents $630,000 of the capital plan, and reflects the projects included in the 2018 DCC program update. At year-end 2018, the DCC reserve fund balance is estimated to be $1,688,517. There are no new projects planned in 2019 under the DCC program.

Water Demand

Total water demand across the Saanich Peninsula Water Service area continues to exceed the annual budgeted demand figure as a result of extended periods of warm dry weather through the spring and summer, but also due to the continued rate of development and growth. The total 2018 year end demand is projected to be 6,500,000 cubic metres which is higher than the 2018 budgeted demand of 6,300,000 cubic metres. The recommended 2019 water rate has been calculated using a budget demand of 6,500,000 cubic metres.

2019 Water Rates

The 2019 CRD Regional Water Supply wholesale water rate of $0.6775 per cubic metre, a 1.97% increase over the 2018 rate, has been approved by the Regional Water Supply Commission. The 2019 agricultural rate of $0.2105 per cubic metre will also be recommended.

The recommended Saanich Peninsula Bulk Rate is $0.9815 per cubic metre, a 2.0% increase over the 2018 rate. The increase in annual bulk water cost for the average household using 235 cubic metres per year would be $4.55.

The Agricultural Research Station Rate has been set at $1.0167 per cubic metre.

The Saanich Peninsula Water rate and Regional Water Supply rate history and projection is attached (Appendix B). The rates may be adjusted in the future to reflect actual revenue and expenditure circumstances and water demand volumes.

RECOMMENDATION

That the Saanich Peninsula Water Commission recommend that the Capital Regional District Board:

1. Approve the 2019 operating and capital budget;

2. Approve the 2019 Saanich Peninsula bulk water rate of $0.9815 per cubic metre, and the Agricultural Research Station water rate of $1.0167 per cubic metre, adjusted if necessary by any changes in the CRD Regional Water Supply wholesale water rate;

3. Balance the 2018 actual revenue and expense on the transfer to capital reserve fund; and

4. Amend the Bulk Water Rates Bylaw accordingly.

Submitted by:	Ted Robbins, BSc, CTech, General Manager, Integrated Water Services
Concurrence:	Ben Semmens, BCom, CPA, CMA, Senior Financial Advisor, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer, Financial Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

TR:td

Attachments: 2

Appendix A: Draft Budget Document
Appendix B: Saanich Peninsula Water rate and Regional Water Supply Rate History and Projection

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CAPITAL REGIONAL DISTRICT

2019 BUDGET

Saanich Peninsula Water Supply

COMMISSION REVIEW

SEPTEMBER 2018

Service: 2.610 Saanich Peninsula Water Supply **Commission: Saanich Peninsula Water**

DEFINITION:

To purchase water and to acquire, design, construct, reconstruct, purchase, maintain and operate facilities and to acquire property easements, licences and authorities for the supply of water to Central Saanich, North Saanich, and Sidney, for distribution by the municipalities. Letters Patent, December 22, 1976; revised Sept. 27, 1984. Amended SLP April 27, 1978 and March 19, 1986.

SERVICE DESCRIPTION:

This service provides for the purchase of bulk water for supply to Central Saanich, North Saanich, and Sidney, for distribution within their municipalities. Included in the program is the responsibility to provide design, construction, operation and maintenance, licenses, and water quality monitoring to the service area.

PARTICIPATION:

Central Saanich /North Saanich/ Sidney

MAXIMUM LEVY:

MAXIMUM CAPITAL DEBT:

As established by Inspector of Municipalities.

COMMISSION:

Saanich Peninsula Water Commission established by Letters Patent to advise the Board with respect to this function.

FUNDING:

Water rates and debt cost allocation to be established by bylaw, charged to the individual municipalities.

Bulk Water Rate
To cover 100% of operating costs, billed monthly to each municipality.

Requisition
To cover 100% of debt costs by formula: levy of $0.115 / $1,000 of total hospital assessments for all members plus 1/3 of balance on each of members: number of connections, specified area school assessments and population.

CAPITAL DEBT:

All Bylaws have expired.

Item 5 Appendix A

CAPITAL REGIONAL DISTRICT

Program Group: CRD-Saanich Peninsula Water Supply

SUMMARY	2018 BOARD BUDGET	2018 ESTIMATED ACTUAL	2019 BUDGET REQUEST: CORE BUDGET	2019 BUDGET REQUEST: ONGOING	2019 BUDGET REQUEST: ONE-TIME	2019 BUDGET REQUEST: TOTAL (COL 4, 5 & 6)	FUTURE PROJECTIONS: 2020	2021	2022	2023
1	2	3	4	5	6	7	8	9	10	11
OPERATING EXPENDITURES:										
ALLOCATION - OPERATIONS	965,535	898,305	1,007,848	-	-	1,007,848	1,028,005	1,048,565	1,069,536	1,090,927
UTILITIES	195,620	215,600	206,207	-	-	206,207	210,331	214,538	218,829	223,205
OPERATING - OTHER COSTS	154,610	137,670	170,751	-	-	170,751	174,167	177,651	181,204	184,828
ALLOCATION - CORPORATE OVERHEAD	65,710	65,710	76,912	-	-	76,912	89,219	102,665	117,283	119,628
TOTAL OPERATING EXPENDITURES	1,381,475	1,317,285	1,461,719	-	-	1,461,719	1,501,723	1,543,419	1,586,852	1,618,588
*Percentage increase over prior year board budget			5.81%			5.81%	2.74%	2.78%	2.81%	2.00%
TOTAL BULK WATER EXPENDITURES	4,185,720	4,318,600	4,403,750	-	-	4,403,750	4,511,000	4,637,750	4,783,350	4,919,200
CAPITAL EXPENDITURES & TRANSFERS										
TRANSFER TO CAPITAL RESERVE FUND	450,000	574,315	470,000	-	-	470,000	600,000	650,000	700,000	750,000
TRANSFER TO EQUIPMENT REPLACEMENT FUND	50,000	50,000	50,000	-	-	50,000	50,000	50,000	50,000	50,000
TOTAL CAPITAL EXPENDITURES & TRANSFERS	500,000	624,315	520,000	-	-	520,000	650,000	700,000	750,000	800,000
DEBT SERVICING										
DEBT-INTEREST & PRINCIPAL	-	-	-	-	-	-	-	-	-	-
TOTAL DEBT SERVICING EXPENDITURES	-	-	-	-	-	-	-	-	-	-
TOTAL EXPENDITURES	6,067,195	6,260,200	6,385,469	-	-	6,385,469	6,662,723	6,881,169	7,120,202	7,337,788
SOURCES OF FUNDING-OPERATIONS										
REVENUE -WATER SALES	(6,061,395)	(6,253,650)	(6,379,669)	-	-	(6,379,669)	(6,656,923)	(6,875,369)	(7,114,402)	(7,331,988)
REVENUE -OTHER	(5,800)	(6,550)	(5,800)	-	-	(5,800)	(5,800)	(5,800)	(5,800)	(5,800)
TOTAL SOURCES OF FUNDING FROM OPERATIONS	(6,067,195)	(6,260,200)	(6,385,469)	-	-	(6,385,469)	(6,662,723)	(6,881,169)	(7,120,202)	(7,337,788)
SOURCES OF FUNDING-REQUISITION										
PROPERTY TAX REQUSITION FOR DEBT	-	-	-	-	-	-	-	-	-	-
TOTAL REQUSITION	-	-	-	-	-	-	-	-	-	-
TRANSFER FROM PRIOR YEAR	-	-	-	-	-	-	-	-	-	-
TRANSFER TO FOLLOWING YEAR										
TOTAL CARRY FORWARD (SURPLUS)/ DEFICIT	-	-	-	-	-	-	-	-	-	-
TOTAL SOURCES OF ALL FUNDING	(6,067,195)	(6,260,200)	(6,385,469)	-	-	(6,385,469)	(6,662,723)	(6,881,169)	(7,120,202)	(7,337,788)
Percentage increase over prior year's board budget			5.25%			5.25%	4.34%	3.28%	3.47%	3.06%

SAANICH PENINSULA WATER SUPPLY

2019 Demand Estimate

Retail Demand

Years	Actual Demand cu.metre	Budgeted Demand cu.metre
2014	6,260,207	6,600,000
2015	6,695,312	6,270,000
2016	6,870,557	6,270,000
2017	6,549,588	6,270,000
2018	6,500,000*	6,300,000

2019 Demand Estimate **6,500,000**

** Projected consumption for 2018*

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Item 5 Appendix A

SAANICH PENINSULA WATER SUPPLY

Summary of Supply Water Rates to Participating Municipalities

	2015	2016	2017	2018	2019	Change	% change
Retail (direct) water rate							
Sannich Peninsula Retail cost per cu.m.	$0.8898	$0.9073	$0.9111	$0.9621	$0.9815	$0.0194	2.0%
Agricultural Research Station cost per cu.m.	$0.9250	$0.9425	$0.9463	$0.9973	$1.0167	$0.0194	1.9%

Summary of Bulk Water Purchase Rates from Regional Water Supply

	2015	2016	2017	2018	2019	Change	% change
CRD Bulk water purchase cost per cu.m.	$0.6254	$0.6375	$0.6375	$0.6644	$0.6775	$0.0131	2.0%

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Item 5 Appendix A

SAANICH PENINSULA WATER SUPPLY

Summary of Supply Water Rates to Participating Municipalities

	2015	2016	2017	2018	2019	Change	% change
Retail (direct) water rate							
Unit cost per cu.m.	$0.8898	$0.9073	$0.9111	$0.9621	$0.9815	$0.0194	2.0%

Retail Water Rate Increase
Impact on Participating Municipalities Water Bill

Average consumption: 235.0 cubic meters

Charge for Twelve Months Consumption	Year	Annual charge	2016 Annual Change $
Average Consumption	2018	$ 226.10	
	2019	$ 230.65	$ 4.55
Half Average Consumption	2018	$ 113.05	
	2019	$ 115.33	$ 2.28
Twice Average Consumption	2018	$ 452.20	
	2019	$ 461.31	$ 9.12

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Schedule A
Asset Useful Life Assignments - PSAB

Classes:	Code	Asset Categories	Useful Life, Years
Land	LAND	Land & Rights of Way * (Note 1)	N/A
Building	BLDG	Building, Permanent	50
	BLOT	Building, Temporary/ Portable	20
	BLFX	Building fixture (*sprinklers)*	20
Equipment	BOAT	Boats & Marine Equipment	10
	COMP	Computer Equipment (*includes software*)	5
	ELEC	Electronic Equipment(*hydromet, weather stn eqpt)*	5
	FIRE	Fire & Safety Equipment	10
	GENT	Generator	20
	HYDR	Hydrants and Standpipes	20
	HYDY	Hydrology	10
	MTRS	Meters	20
	OFFE	Office Equipment	5
	OFFF	Office Furniture	10
	SCDA	SCADA Equipment	10
	SCRN	Intake Screens/Membranes *(stop logs)*	20
	SHOP	Shop Equipment	10
	TELE	Telecommunication Eqpt (*radios, phone systems*)	10
	WEQP	Water Works Eqpt(*W.Quality lab, Wshed eqpt)*	10
	NEW GRP	Weather stn & communication tower	15
Vehicle	VEHC	Vehicles	8
Engineering	BRDG	Bridge	50
Structure	CANL	Canal	50
	DAMS	Dam Structures	100
	PIPE	Pipelines, includes Vaults, Kiosks, Valve chambers	75
	PIPF	Pipelines, fittings	20
	PLPV	Parking lot paved	40
	PSEQ	Pump Station Equipment	20
	PSHS	Pump Station Housing	50
	PRVS	Valves, Flushes & PRV's	20
	RDGR	Roads gravel	20
	RDPV	Roads paved	40
	RESS	Reservoirs (steel & concrete)	50
	REST	Reservoirs (tower/tank)	35
	TANK	Storage tank	40
	TELP	Telephone and Power Lines	50
	TUNN	Tunnel, Culvert and Diversions	50
	WATP	Water Treatment Plant	25
	WELL	Wet well/ Well	50
Other Assets	CSTU	Capital Management Studies	5
	FENC	Fences	15
	LIMP	Land & Yard Improvements	20

Note 1: Land is not depreciated so a useful life assignment is not applicable.

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Item 5 Appendix A

CAPITAL REGIONAL DISTRICT **SCHEDULE B**

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2019 to 2023

Service No.	2.610 Saanich Peninsula Water Supply	Carry Forward from 2018	2019	2020	2021	2022	2023	TOTAL
EXPENDITURE								
Buildings	B	$125,000	$125,000	$0	$0	$0	$0	$125,000
Equipment	E	$0	$50,000	$120,000	$0	$0	$0	$170,000
Land	L	$0	$0	$0	$0	$0	$0	$0
Engineered Structures	S	$885,000	$1,340,000	$855,000	$210,000	$360,000	$260,000	$3,025,000
Vehicles	V	$0	$0	$0	$0	$0	$0	$0
		$1,010,000	**$1,515,000**	**$975,000**	**$210,000**	**$360,000**	**$260,000**	**$3,320,000**
SOURCE OF FUNDS								
Capital Funds on Hand	Cap	$0	$0	$0	$0	$0	$0	$0
Debenture Debt (New Debt Only)	Debt	$0	$0	$0	$0	$0	$0	$0
Equipment Replacement Fund	ERF	$0	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
Grants (Federal, Provincial)	Grant	$0	$0	$0	$0	$0	$0	$0
Donations / Third Party Funding	Other	$0	$0	$0	$0	$0	$0	$0
Reserve Fund	Res	$1,010,000	$1,465,000	$925,000	$160,000	$310,000	$210,000	$3,070,000
Short Term Loans	STLoan	$0	$0	$0	$0	$0	$0	$0
		$1,010,000	**$1,515,000**	**$975,000**	**$210,000**	**$360,000**	**$260,000**	**$3,320,000**

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CAPITAL REGIONAL DISTRICT CAPITAL PLAN

CAPITAL BUDGET FORM
2019 & Forecast 2020 to 2023

Service #: 2.610
Service Name: Saanich Peninsula Water Supply

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 (con't)
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
SYSTEM UPGRADES AND REPLACEMENTS													
Planning													
19-02	**New**	**Strategic Asset Management Plan Update**	**Update the asset management plan with recent study information (post disaster emergency water supply, Elk Lake Main Removals, ...)**	**$100,000**	**S**	**Res**	$0	**$100,000**	$0	$0	$0	$0	$100,000
Capital													
16-02	Replacement	Air Valve Replacement Phase 5	Replacement of non-functioning air valves and renewal so that they can be safely maintained.	$150,000	B	Res	$125,000	$125,000	$0	$0	$0	$0	$125,000
16-05	Renewal	Dean Park Upper Reservoir Rehabilitation	Rehabilitation of the leaking Dean Park Upper Reservoir.	$485,000	S	Res	$350,000	$350,000	$0	$0	$0	$0	$350,000
17-01	New	Reservoir Seismic Isolation Valves	Assessment, design and installation of seismic isolation valves at 7 of the reservoirs, and installation of restrained hydrants at reservoirs where possible.	**$500,000**	S	Res	$350,000	$350,000	**$100,000**	$0	$0	$0	$450,000
18-01	New	Remote Read Bulk Meters	Upgradebulk meter sites to have remote read equipment to reduce costs associated with confined space entry required.	$150,000	S	Res	$150,000	$150,000	$0	$0	$0	$0	$150,000
18-02	New	Site Security Assessment & Improvements	Assess the security of facilties and make improvements for the public and operators	$205,000	S	Res	$35,000	$170,000	$0	$0	$0	$0	$170,000
18-04	New	Post Disaster Emergency Water Supply	Identify and procure emergency systems for post disaster preparedeness	$750,000	S	Res	$0	$150,000	$150,000	$150,000	$150,000	$150,000	$750,000
19-01	**Renewal**	**Corrosion Protection Program**	**Carry out an investigation and monitoring program in conjunction with other services to prevent infrastructure failure due to corrosion**	**$90,000**	**S**	**Res**	$0	**$20,000**	**$40,000**	**$10,000**	**$10,000**	**$10,000**	$90,000
19-03	**Renewal**	**Lowe Pump Station Meter Replacement & Complete Meter Inventory**	**As recommendmended in the 2017 KWL Water Audit, the Lowe Pump Station meter is to be replaced with a mag meter and completion of the meter inventory.**	**$50,000**	**E**	**Res**	$0	**$50,000**	$0	$0	$0	$0	$50,000
20-01	**Replacement**	**Elk Lake Main Removals**	**Undertake removals from outlined in 2018 Elk Lake Main Decommissioning Study**	**$85,000**	**S**	**Res**	$0	$0	**$85,000**	$0	$0	$0	$85,000
20-03	**Renewal**	**Lochside PRV, Martindale & Tsawout Meter Replacement**	**As recommended in the 2017 KWL Water Audit, replace the Lochside PRV, Martindale and Tsawout flow meters.**	**$120,000**	**E**	**Res**	$0	$0	**$120,000**	$0	$0	$0	$120,000
Sub-Total System Upgrades & Replacements				**$2,685,000**			**$1,010,000**	**$1,465,000**	**$495,000**	**$160,000**	**$160,000**	**$160,000**	**$2,440,000**
ANNUAL PROVISIONAL ITEMS													
17-02	Renewal	Provisional Equipment Replacements	Funds to conduct emergency and unplanned repairs outside of normal Operations.	$250,000	S	ERF	$0	$50,000	$50,000	$50,000	$50,000	$50,000	$250,000
DEVELOPMENT COST CHARGE (DCC) PROGRAM													
20-02	**New**	**Hamsterly Pump Station Backup Power Generator**	**Addition of a backup power generator at the Hamsterly Pump Station**	**$430,000**	**S**	**Res**	$0	$0	**$430,000**	$0	$0	$0	$430,000
22-01	**New**	**Water Strategic Plan Update**	**Update the strategic plan to inform future works and identify hydraulic deficiencies.**	**$150,000**	**S**	**Res**	$0	$0	$0	$0	**$150,000**	$0	$150,000
23-01	**New**	**DCC Program Update**	**5-year update of the DCC program.**	**$50,000**	**S**	**Res**	$0	$0	$0	$0	$0	**$50,000**	$50,000
Sub-Total Development Cost Charge				**$630,000**			**$0**	**$0**	**$430,000**	**$0**	**$150,000**	**$50,000**	**$630,000**
		GRAND TOTAL		**$3,565,000**			**$1,010,000**	**$1,515,000**	**$975,000**	**$210,000**	**$360,000**	**$260,000**	**$3,320,000**

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Service: **2.610** **Saanich Peninsula Water Supply**

Proj. No.	19-02	**Capital Project Title**	Strategic Asset Management Plan	**Capital Project Description**	Update the asset management plan with recent study information.
Asset Class	Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water
Project Rationale	*Update the strategic asset management plan based upon recent studies such as the DCC Program Update, Post Disaster Response Plan, and Site Security Assessment. The update will inform future capital works.*				

Proj. No.	16-02	**Capital Project Title**	Air Valve Replacement Phase 5	**Capital Project Description**	Replacement of non-functioning air valves and renewal so that they can be safely maintained.
Asset Class	Buildings	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water
Project Rationale	*A review of the existing air valves was undertaken in 2010 after a safety incident occurred involving an air valve that could not be properly isolated in order to complete the required maintenance. A number of safety issues regarding confined space have also been identified and most of the existing air valves have deteriorated to the point that failures are likely in the near future.*				

Proj. No.	16-05	**Capital Project Title**	Dean Park Upper Reservoir Rehabilitatic	**Capital Project Description**	Rehabilitation of the leaking Dean Park Upper Reservoir.
Asset Class	Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water
Project Rationale	*The Upper Dean Park storage tank has been identified as leaking and an initial engineering assessment indicated that the tank can remain in service, but remedial work should be completed. Detailed design is complete and remedial works will take place late 2016 and early 2017.*				

Proj. No.	17-01	**Capital Project Title**	Reservoir Seismic Isolation Valves	**Capital Project Description**	Assessment, design and installation of seismic isolation valves at 7 of the reservoirs, and installation of restrained hydrants at reservoirs where possible.
Asset Class	Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water

Service: **2.610** **Saanich Peninsula Water Supply**

Project Rationale *The Commission has indicated a desire to include seismic valves on each of the 8 Sannich Peninsula Water System reservoirs. At present, the Dean Park Middle Reservoir is the only reservoir equipped with a seismic valve In summary a seismic valve is simple actuated system to shut the outlet valve(s) automatically if a seismic event (of a specific magnitude) is experienced. Each site is unique and installation complexity and associated costs will vary. The first task in this project will be to further define the proposed solution and budget for each site. The resulting detailed project will be reviewed in conjuction with the Strategic Asset Management Plan for the system to confirm affordability and value prior to initiating construction works.*

Proj. No.	18-01	**Capital Project Title**	Remote Read Bulk Meters	**Capital Project Description**	Upgradebulk meter sites to have remote read equipment to reduce costs associated with confined space entry required.
Asset Class	Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water

Project Rationale *Several of the bulk meters used for billing are in confined spaces and require costly confined space entry to read and maintain. To reduce costs associated with the monthly meter readings it is proposed to replace the meters with meters that have remote read heads. Funds are required to design and install remote read meters.*

Proj. No.	18-02	**Capital Project Title**	Site Security Assessment & Improvemer	**Capital Project Description**	Assess the security of facilties and make improvements for the public and operators
Asset Class	Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water

Project Rationale *The Saanich Peninsula Water system is comprised of various pump stations, pressure control stations, meter facilities and storage tanks. The facilities have varying levels of security with no consistent intent. A site security assessment is proposed to secure all facilities so that operators can safely maintain the sites and keep the public and infrastructure safe. Funding is required to assess all facilities and conduct improvements to secure them.*

	18-04	**Capital Project Title**	Post Disaster Emergency Water Supply	**Capital Project Description**	Identify and procure emergency systems for post disaster preparedeness
	Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water

Service: 2.610 Saanich Peninsula Water Supply

Project Rationale	*In the event of a disaster, it is proposed to have in place the ability to source, treat (if required) and distribute drinking water during the initial and sustained response and recovery phases to the public. This item will see the study of the issue in 2017 and 2018 with the anticipated purchase of one or more emergency distribution systems in 2018 and beyond.Initial investigation has highlighted areas, such as having hardened hydrants/standpipes that the CRD should be investing in. Additional funds are required to start implementing these additional works.*				
19-01	**Capital Project Title**	Corrosion Protection Program	**Capital Project Description**	Carry out an investigation and monitoring program in conjunction with other services to prevent infrastructure failure due to corrosion	
Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water	
Project Rationale	*The Saanich Peninsula Water System comprises of many material types including steel. An investigation and monitoring program will be developed to prevent infrastructure failure due to corrosion. Funds are required to retain a qualified corrosion specialist to assess and aid in developing a monitoring program.*				
19-03	**Capital Project Title**	Lowe Pump Station Meter Replacement	**Capital Project Description**	As recommendmended in the 2017 KWL Water Audit, the Lowe Pump Station meter is to be replaced with a mag meter and completion of the meter inventory.	
Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water	
Project Rationale	*KWL carried out a water audit of the Saanich Peninsula Water system in 2017 and recommended that the meter inventory be completed and the Lowe Pump Station meter be replaced. Funds are required to replace the Lowe Pump Station meter and complete the meter inventory.*				
20-01	**Capital Project Title**	Elk Lake Main Removals	**Capital Project Description**	Undertake removals from outlined in 2018 Elk Lake Main Decommissioning Study	
Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water	
Project Rationale	*Staff produced the 2018 Elk Lake Main Decommissioning Study to highlight regions of the abandoned main requiring capital works to reduce risk to public safety if the abandoned infrastructure failed. Funds are required to demolish or properly decommission abandoned and unused infrastructure.*				
20-03	**Capital Project Title**	Lochside PRV, Martindale & Tsawout Me	**Capital Project Description**	As recommended in the 2017 KWL Water Audit, replace the Lochside PRV, Martindale and Tsawout flow meters.	
Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water	

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Service: **2.610** **Saanich Peninsula Water Supply**

Project Rationale *KWL carried out a water audit of the Saanich Peninsula Water system in 2017 and recommended that the meters be replaced at the Lochside PRV, Martindale meter station and Tsawout meter station. Funds are required to replace the meters and complete any associated upgrades at the stations.*

Proj. No.	17-02	**Capital Project Title**	Provisional Equipment Replacements	**Capital Project Description**	Funds to conduct emergency and unplanned repairs outside of normal Operations.
Asset Class	Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water

Project Rationale *Replace various system equipment that may fail during the year that is not specifically identified and funded through the operating and capital budgets.*

Proj. No.	20-02	**Capital Project Title**	Hamsterly Pump Station Backup Power	**Capital Project Description**	Addition of a backup power generator at the Hamsterly Pump Station
Asset Class	Engineered Structures	**Board Priority Area**	Other	**Corporate Priority Area**	Drinking Water

Project Rationale *From the 2018 DCC Update, KWL identified that the addition of backup power at the Hamsterly Pump Station. Funds are required to design and construct backup power for the Hamsterly Pump Station.*

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2.610 Saanich Peninsula Water
Summary Schedule
2019 - 2023 Financial Plan

Asset Profile

Saanich Peninsula Water

One of the 16 CRD drinking water systems across the region, Saanich Peninsula Water Supply obtains treated drinking water from the Regional Water Supply System and is responsible for the bulk trunk water supply systems for Central Saanich, Sidney & North Saanich. Assets include land, 46 kilometres of water supply mains, nine balancing reservoirs, nine pumping stations, two pressure reducing stations, nine supply meters and two rechlorination stations.

Reserve/Fund Summary

	Estimate	Budget				
	2018	2019	2020	2021	2022	2023
DCC Reserve Account	1,688,517	1,838,517	1,558,517	1,708,517	1,708,517	1,808,517
Equipment Replacement Fund	1,668,230	1,668,230	1,668,230	1,668,230	1,668,230	1,668,230
Capital Reserve	3,721,492	3,736,492	3,841,492	4,331,492	4,871,492	5,461,492
Total	**7,078,240**	**7,243,240**	**7,068,240**	**7,708,240**	**8,248,240**	**8,938,240**

2.610 Saanich Peninsula Water
Development Cost Charges
2019 - 2023 Financial Plan

Development Cost Charges Reserve Schedule

Reserve Fund: Saanich Peninsula Water Development Cost Charges (Bylaw # 3208)

Fund: 1009 Fund Center: 101353- DCC Water System only	**Estimate**	**Budget**				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**
Beginning Balance	1,468,517	1,688,517	1,838,517	1,558,517	1,708,517	1,708,517
Transfers from Reserve based on DCC-capital plan		-	(430,000)	-	(150,000)	(50,000)
DCC's received from Member Municipalities	200,000	150,000	150,000	150,000	150,000	150,000
Interest Income*	20,000					
Ending Balance $	**1,688,517**	**1,838,517**	**1,558,517**	**1,708,517**	**1,708,517**	**1,808,517**

General Comments:
Saanich Peninsula Water Development Cost charges (DCC's) was adopted in 2005 for the purpose of providing funds to assist with the capital costs of providing, constructing, altering or expanding the Districts water & wastewater systems that services the Member Municipalites.

The above cash flow only reflects DCC Reserve information for Water System only (Wastewater's information will be provided in the Wastewater budgets). These Reserve funds are received from member municipalities as Development Cost Charges (DCC's) to provide for the capital costs of water capacity system improvements within the service areas.

Future years DCC's are difficult to predict, due to unknown development activity in the Municipalities, influenced by market conditions. A conservative estimate of $150,000 per year has been used, based on historical annual collections of DCCs.

* 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.

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2.610 Saanich Peninsula Water
Equipment Replacement Reserve Schedule
2019 - 2023 Financial Plan

Equipment Replacement Reserve Schedule

Reserve Fund: Saanich Peninsula Water-Equipment Replacement Reserve (covered by CRD-ERF Bylaw)

Fund: 1022 Fund Center: 101452	**Estimate**	**Budget**				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**
Beginning Balance	1,648,230	1,668,230	1,668,230	1,668,230	1,668,230	1,668,230
Equipment purchases (Based on Capital Plan)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)
Transfer from Operating Budget	50,000	50,000	50,000	50,000	50,000	50,000
Interest Income*	20,000					
Ending Balance $	**1,668,230**	**1,668,230**	**1,668,230**	**1,668,230**	**1,668,230**	**1,668,230**

General Comments: The fund is used to replace water system infrastructure throughout the system as failing components are identified and not funded through operating budgets.

* 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.

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2.610 Saanich Peninsula Water
Capital Reserve Fund
2019 - 2023 Financial Plan

Capital Reserve Fund Schedule

Reserve Fund: Saanich Peninsula Water Capital Reserve Fund (Bylaw #1397)

Fund: 1009 Fund Center: 102159	**Estimate**	**Budget**				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**
Beginning Balance	5,104,492	3,721,492	3,736,492	3,841,492	4,331,492	4,871,492
Transfers from Reserve based on capital plan	(2,055,000)	(455,000)	(495,000)	(160,000)	(160,000)	(160,000)
Transfer from Operating Budget	574,000	470,000	600,000	650,000	700,000	750,000
Interest Income*	98,000					
Ending Balance $	**3,721,492**	**3,736,492**	**3,841,492**	**4,331,492**	**4,871,492**	**5,461,492**

General Comments:
Saanich Peninsula Water Capital Reserve Fund was adopted in 1985 for the purpose of capital payments including planning, engineering and legal cots for providing, latering or expanding water system infrastructure realted to the Saanich Peninsula Water Supply System.

The fund is used for the purpose of funding the Service Capital infrastructure related directly or indirectly to water facilities, (excluding DCC) capital expenditures.

* 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.

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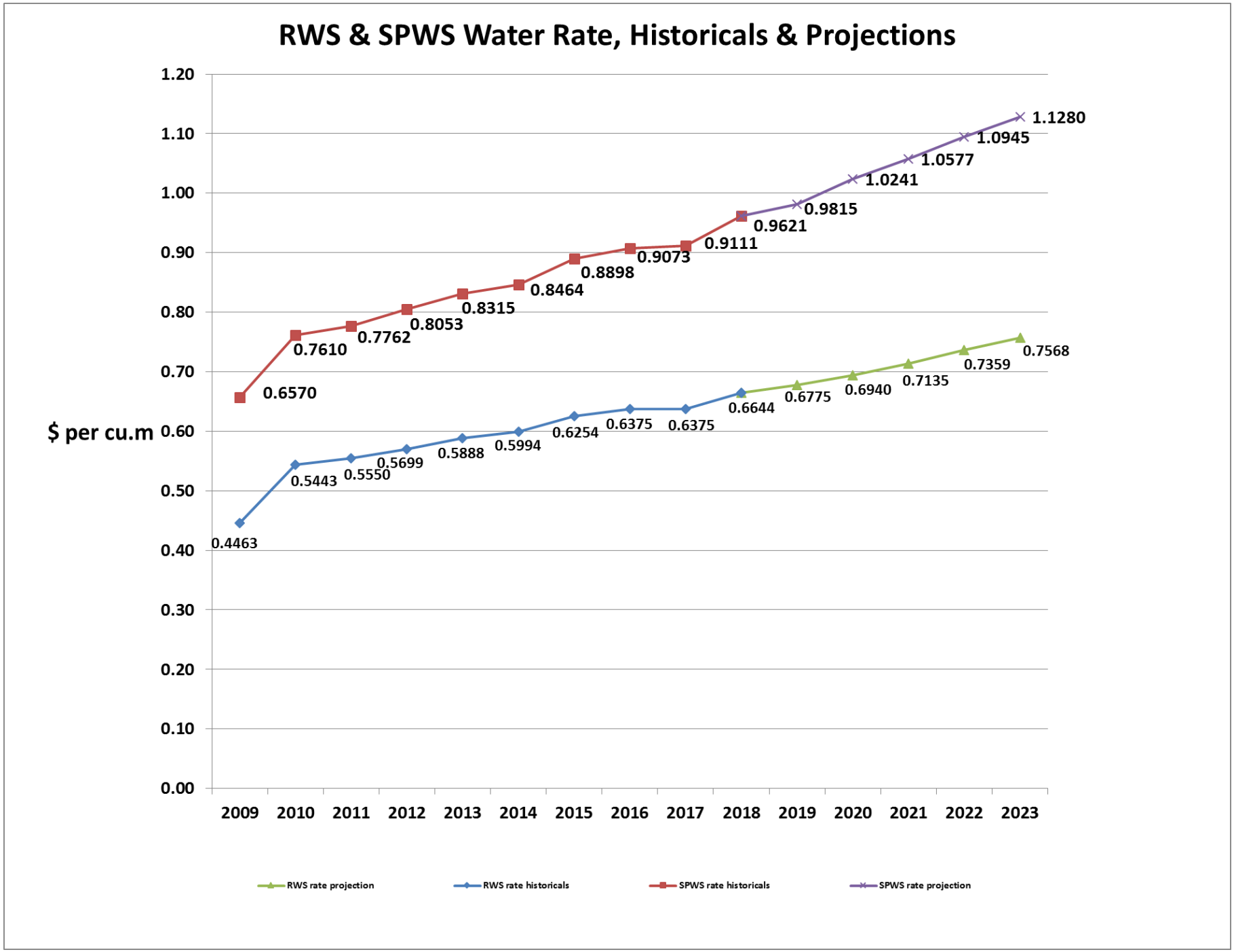
Item 5 Appendix B



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File No. 902-03

CAPITAL REGIONAL DISTRICT - INTEGRATED WATER SERVICES

Water Watch

Issued September 24, 2018

Water Supply System Summary:

1. Useable Volume in Storage:

Reservoir	September 30 5 Year Ave		September 30/17		September 23/18		% Existing Full Storage
	ML	MIG	ML	MIG	ML	MIG	
Sooke	65,170	14,337	66,009	14,522	64,092	14,100	69.1%
Goldstream	6,427	1,414	6,265	1,378	4,558	1,003	46.4%
Total	71,597	15,751	72,274	15,900	68,650	15,103	66.9%

2. Average Daily Demand:

For the month of September	150.5 MLD	33.11 MIGD
For week ending September 23, 2018	127.3 MLD	28.01 MIGD
Max. day September 2018, to date:	207.7 MLD	45.69 MIGD

3. Average 5 Year Daily Demand for September

Average (2013 - 2017)	141.4 MLD [1]	31.11 MIGD [2]

[1]MLD = Million Litres Per Day [2]MIGD = Million Imperial Gallons Per Day

4. Rainfall September:

Average (1914 - 2017):	63.8 mm
Actual Rainfall to Date	87.7 mm (137% of monthly average)

5. Rainfall: Sep 1- Sep 23

Average (1914 - 2017):	43.0 mm
2018	87.7 mm (204% of average)

6. Water Conservation Action Required:

CRD's Stage 1 Water Conservation Bylaw is now in effect through to September 30.
Visit www.crd.bc.ca/water for scheduling information.

If you require further information, please contact:

Ted Robbins, B.Sc., C.Tech
General Manager, CRD - Integrated Water Services
or
Glenn Harris, Ph D., RPBio
Senior Manager - Environmental Protection

Capital Regional District Integrated Water Services
479 Island Highway
Victoria, BC V9B 1H7
(250) 474-9600

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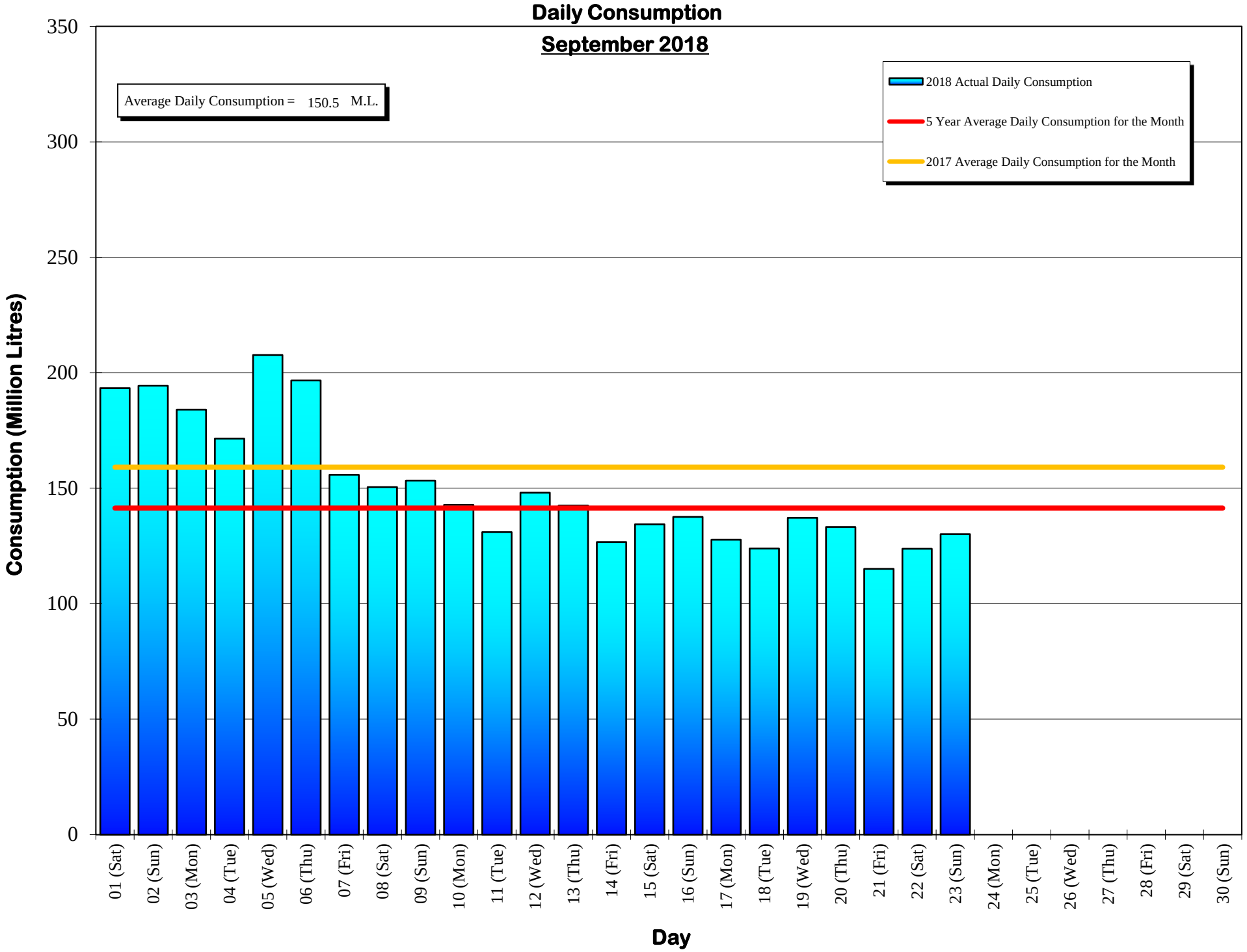

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Daily Consumptions: - September 2018

Date	Total Consumption (ML)		(MIG)	Air Temperature @ Japan Gulch High (°C)	Low (°C)	Weather Conditions	Precipitation @ Sooke Res.: 12:00am to 12:00am Rainfall (mm)	Snowfall (mm)	Total Precip.
01 (Sat)	193.4		42.5	22	11	Sunny / P. Cloudy	0.0	0.0	0.0
02 (Sun)	194.4		42.8	22	10	Sunny	0.0	0.0	0.0
03 (Mon)	184.0		40.5	20	11	Sunny	0.0	0.0	0.0
04 (Tue)	171.5		37.7	23	9	Sunny	0.0	0.0	0.0
05 (Wed)	207.7	<=Max	45.7	27	10	Sunny	0.0	0.0	0.0
06 (Thu)	196.7		43.3	28	12	Sunny	0.0	0.0	0.0
07 (Fri)	155.8		34.3	20	13	Cloudy / Showers	1.8	0.0	1.8
08 (Sat)	150.5		33.1	16	12	Cloudy / Showers	4.3	0.0	4.3
09 (Sun)	153.3		33.7	16	12	Cloudy / Rain	13.0	0.0	13.0
10 (Mon)	142.8		31.4	18	11	Cloudy / Showers	3.8	0.0	3.8
11 (Tue)	131.0		28.8	17	12	Cloudy / Showers	2.6	0.0	2.6
12 (Wed)	148.1		32.6	16	10	Cloudy / Showers / P. Sunny	9.1	0.0	9.1
13 (Thu)	142.5		31.4	19	11	Sunny / P. Cloudy	0.0	0.0	0.0
14 (Fri)	126.7		27.9	18	9	Cloudy / Showers / P. Sunny	0.8	0.0	0.8
15 (Sat)	134.4		29.6	16	10	Cloudy / Showers	5.6	0.0	5.6
16 (Sun)	137.6		30.3	14	8	Cloudy / Showers / P. Sunny	10.4	0.0	10.4
17 (Mon)	127.7		28.1	15	6	Sunny / P. Cloudy	0.0	0.0	0.0
18 (Tue)	123.9		27.3	17	6	Sunny / P. Cloudy	0.0	0.0	0.0
19 (Wed)	137.2		30.2	19	7	Sunny / P. Cloudy / Showers	0.3	0.0	0.3
20 (Thu)	133.2		29.3	16	10	Cloudy / Rain / P. Sunny	19.3	0.0	19.3
21 (Fri)	115.1	<=Min	25.3	16	12	Cloudy / Showers / P. Sunny	12.9	0.0	12.9
22 (Sat)	123.8		27.2	18	10	Cloudy / Showers / P. Sunny	3.8	0.0	3.8
23 (Sun)	130.1		28.6	15	9	Sunny / P. Cloudy	0.0	0.0	0.0
24 (Mon)									
25 (Tue)									
26 (Wed)									
27 (Thu)									
28 (Fri)									
29 (Sat)									
30 (Sun)									
TOTAL	3461.4 ML		761.49 MIG				87.7	0	87.7
MAX	207.7		45.69	28	13		19.3	0	19.3
AVE	**150.5**		33.11	18.6	10.0		3.8	0	3.8
MIN	115.1		25.33	14	6		0.0	0	0.0

ML = Million Litres MIG = Million Imperial Gallons

Average Rainfall for September (1914-2017)	63.8	mm
Actual Rainfall: September	87.7	mm
% of Average	137%	
Average Rainfall (1914-2017): Sept 01 - Sep 23	43.0	mm
Actual Rainfall (2018): Sept 01 - Sep 23	87.7	mm
% of Average	204%	

Number days with precip. 0.2 or more
13

Note: 10% of snow depth applied to rainfall figures for snow to water equivalent.

Water spilled at Sooke Reservoir to date = 0.00 Billion Imperial Gallons
= 0.00 Billion Litres

SOOKE LAKE RESERVOIR STORAGE SUMMARY
2017 / 2018

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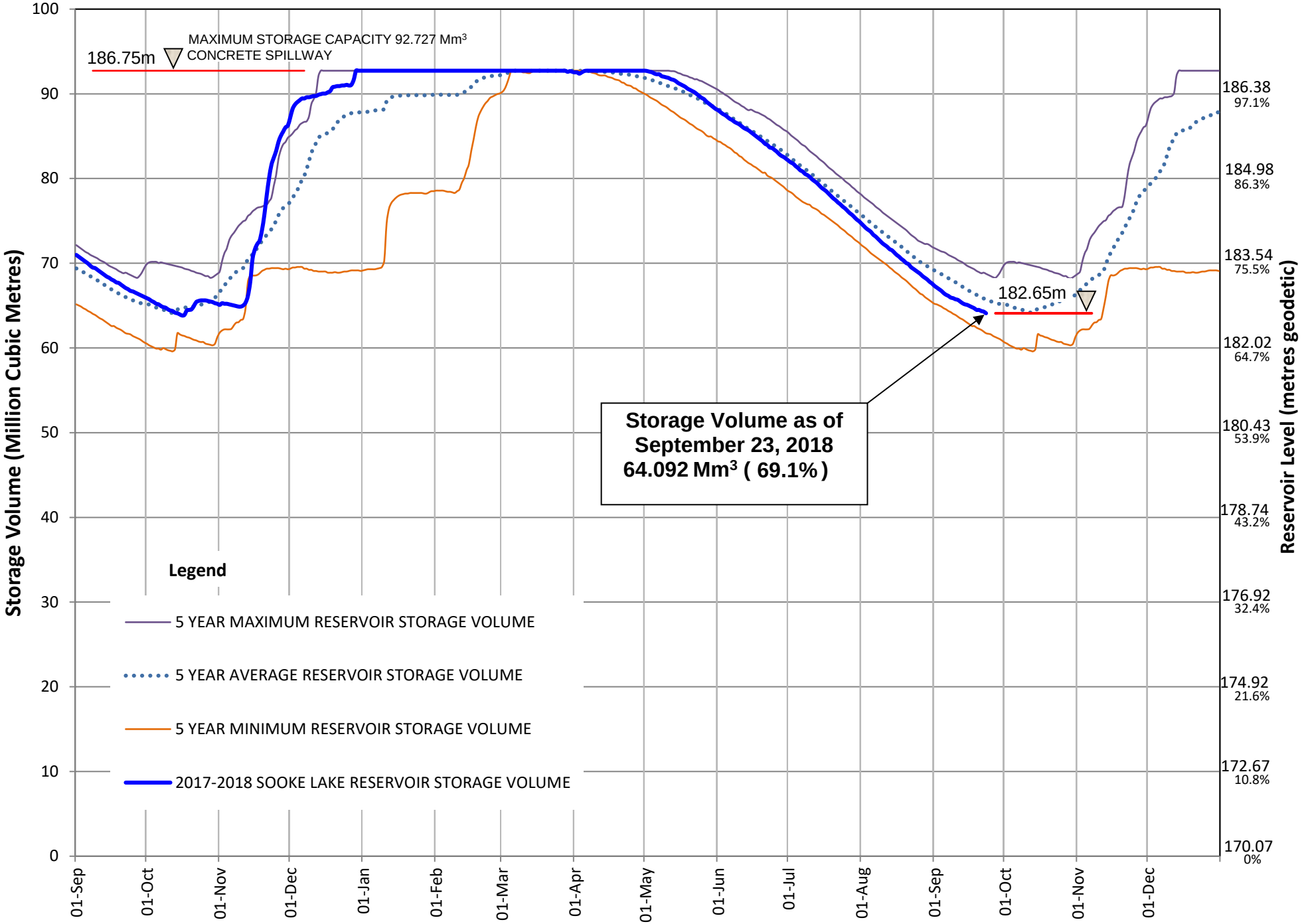

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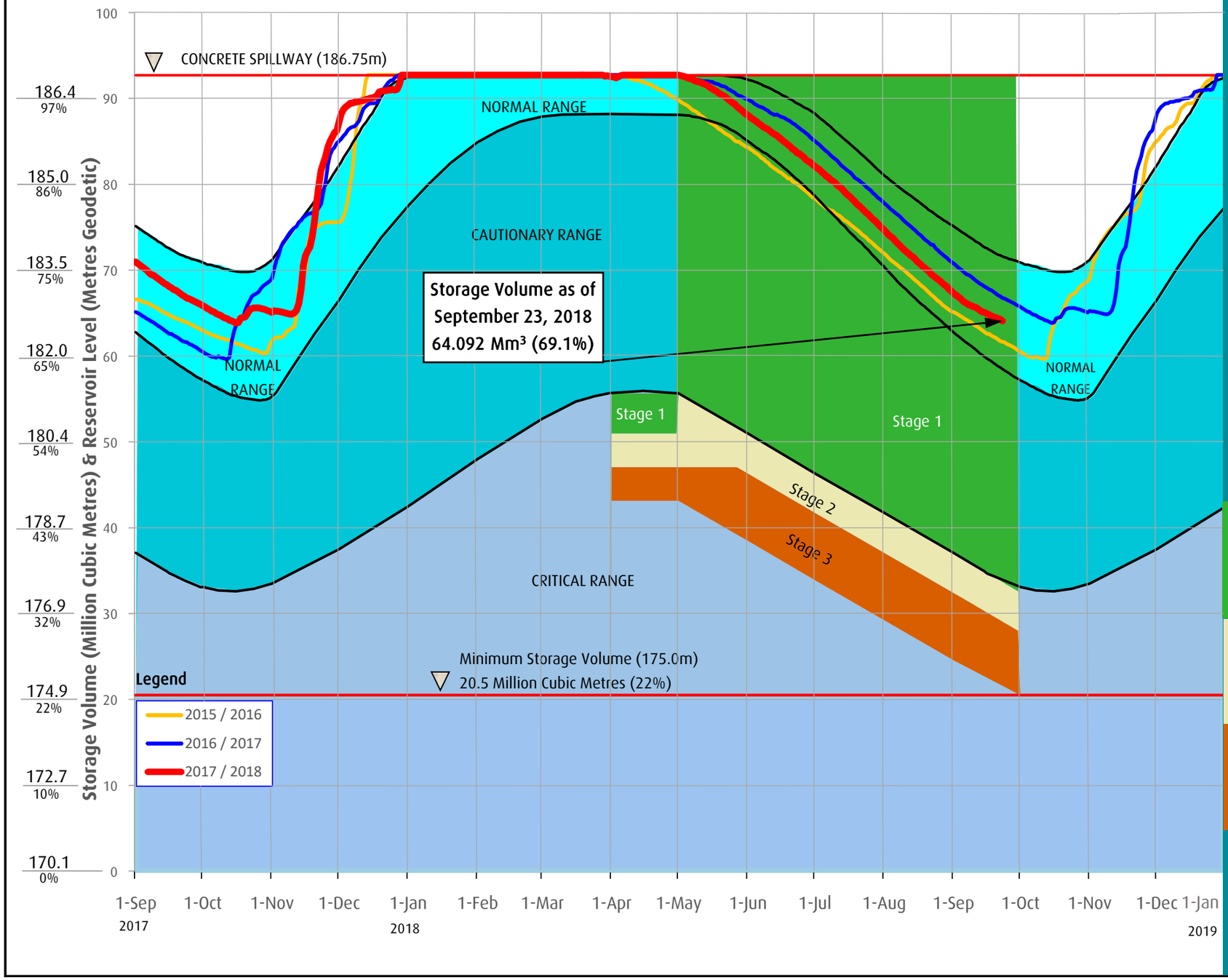
Sooke Lake Reservoir Storage Level
Water Supply Management Plan



FAQs

How are water restriction stages determined?

Several factors are considered when determining water use restriction stages, including,

1. Time of year and typical seasonal water demand trends;
2. Precipitation and temperature conditions and forecasts;
3. Storage levels and storage volumes of water reservoirs (Sooke Lake Reservoir and the Goldstream Reservoirs) and draw down rates;
4. Stream flows and inflows into Sooke Lake Reservoir;
5. Water usage, recent consumption and trends; and customer compliance with restriction;
6. Water supply system performance.

The Regional Water Supply Commision will consider the above factors in making a determination to implement stage 2 or 3 restrictions, under the Water Conservation Bylaw.

At any time of the year and regardless of the water use restriction storage, customers are encouraged to limit discretionary water use in order to maximize the amount of water in the Regional Water Supply System Reservoirs available for nondiscretionary potable water use.

Stage 1 is normally initiated every year from May 1 to September 30 to manage outdoor use during the summer months. During this time, lawn watering is permitted twice a week at different times for even and odd numbered addresses.

Stage 2 Is initiated when it is determined that there is an acute water supply shortage. During this time, lawn water is permitted once a week at different times for even and odd numbered addresses.

Stage 3 Is initiated when it is determined that there is a severe water supply shortage. During this time, lawn watering is not permitted. Other outdoor water use activities are restricted as well.

For more information, visit www.crd.bc.ca/drinkingwater

CRD
Making a difference...together