

CAPITAL REGIONAL DISTRICT

2020 BUDGET

JDF Water Distribution

COMMISSION REVIEW

SEPTEMBER 2019

Service: 2.680 JDF Water Distribution

Commission: Juan De Fuca Water Distribution

DEFINITION:

To finance the administration, development, maintenance, and operational expenses, of the Juan de Fuca Water Distribution local service in the Western Communities of the Capital Regional District, as per the Water Distribution Local Service Area Establishment Bylaw No. 2538.

The establishment and operation of a Juan de Fuca water Distribution Commission is done by Bylaw No. 2540.

SERVICE DESCRIPTION:

Juan de Fuca Water Distribution Service provides retail water distribution system to participants within the Western Communities. The service administration and operation is provided by the Integrated Water Services Department.

PARTICIPATION:

City of Colwood	District of Metchosin
City of Langford	District of Sooke
Town of View Royal	District of Highlands
Juan de Fuca Electoral Area	

MAXIMUM LEVY:

The maximum amount that may be requisitioned is NIL.

MAXIMUM CAPITAL DEBT:

Authorized:	\$19,000,000 Pre - (Consolidated MFA Loan Authorizations - Juan de Fuca Water Distribution Facilities)
Borrowed:	\$17,500,000 Pre - (Consolidated amounts borrowed - Juan de Fuca Water Distribution Facilities)
Expired:	\$1,500,000

Authorized:	\$14,800,000 2015 - (MFA Bylaw No. 3981 Juan de Fuca Water Distribution Facilities)
Borrowed:	\$5,000,000
Remaining:	\$9,800,000

Authorized:	\$10,000,000 DCC - (MFA Bylaw No. 3164 Juan de Fuca Water Distribution Facilities Development-DCC)
Borrowed:	\$3,500,000 DCC - (MFA Bylaw No. 3164 Juan de Fuca Water Distribution Facilities Development-DCC)
Expired:	\$6,500,000

FUNDING:

Costs are recovered from Water Sales, and transfer from DCC reserves to service DCC debt.

Rate Base for 2020 Revenue Year

	<u>2018</u> <u>Applic</u>	<u>2019</u> <u>Applic</u>	<u>End of 2019</u> <u>for '20 Applic.</u>	<u>Change</u>	
Retail System					
Physical Plant	\$ 151,568,400	\$ 160,579,824	\$ 166,168,703	\$ 5,588,879	Note 1
Construction Work In Progress	6,715,207	1,593,750	1,019,107	(574,644)	Note 1
Cash Working Capital	709,617	741,992	826,902	84,911	
Inventory	<u>525,000</u>	<u>525,000</u>	<u>525,000</u>	<u>-</u>	
Total Retail Rate Base	\$ 159,518,224	\$ 163,440,566	\$ 168,539,712	\$ 5,099,146	

Note 1: Refer to the Schedule of Change in Physical Plant & Work in Progress for details.

Schedule of Change in Physical Plant & Work In Progress

Retail

Projected Asset Additions	Projected Assets Capitalized
Pipes	\$ 8,791,345
Meters	410,000
Reservoir Demolition	350,000
Pump Stations	195,024
Scada	150,000
Small Diameter Program Update	150,000
Bulk Water Station	140,000
Building improvements	121,284
Disaster Response Studies	100,000
Update procedures & Eng Specifications	100,000
Computer upgrades	85,000
Hydrants	70,000
Studies (Hydraulic model)	60,000
Building Modification	60,000
Reservoir rehabilitation and upgrades	53,326
Other Projects (minor projects under \$50k)	210,000
Total projected assets capitalized	\$ 11,045,979
Less: current years depreciation	\$ (4,479,038)
Less: change in prior year forecast addition estimates, & disposals.	(978,062)
Change in Physical Plant	\$ 5,588,879

Projected Construction Work In Progress (CWIP)

Reservoir rehabilitation and upgrades	\$ 443,043
Pump Stations	223,346
Generator for Pump Station	75,000
Other Projects (minor projects under \$50k)	277,718
Projected CWIP	\$ 1,019,107
Less Prior years projected CWIP	(1,593,750)
Change in CWIP	\$ (574,644)

Revenue Requirements for 2020 Year

	2018 Application	2019 Application	2020 Application	Change	
Retail					
Operations & maintenance	\$ 5,755,783	\$ 6,018,379	\$ 6,707,098	\$ 688,719	
Depreciation	4,336,976	4,269,223	4,532,773	263,550	
Return on rate base	<u>1,890,600</u>	<u>2,473,800</u>	<u>2,682,900</u>	<u>209,100</u>	Note 1
Subtotal of above	\$ 11,983,359	\$ 12,761,402	\$ 13,922,771	\$ 1,161,369	
Non-rate revenue	(174,500)	(174,500)	(174,500)	-	
DCC Repayment	<u>(251,136)</u>	<u>(239,785)</u>	<u>(228,160)</u>	<u>11,625</u>	
Total retail	\$ 11,557,723	\$ 12,347,117	\$ 13,520,111	\$ 1,172,994	

Note 1: Return on rate base is calculated with reference to the long term Canada bond rate & the average debt rate.

Change in Budget 2019 to 2020**Service: 2.680 Juan de Fuca Water Distribution****Total Expenditure****Comments****2019 Budget****18,592,435****Change in Labour:**

Labour charges	196,700	Labour charges (Salaries and overhead)
Additional ongoing labour charges:	90,000	10a-2 Water Infrastructure Resilience
	76,000	10a-5 Water Billing
	13,800	7a-1 Regional Coordination of Emergency Services
Total Change in Labour	<u>376,500</u>	

Other Changes:

Bulk Water Purchases	375,020	
Transfers to Capital Funds	376,662	
Principal & Interest Payments	96,505	
Corporate Allocations	77,574	
Contract for Services	150,000	10a-2 Water Infrastructure Resilience
Other	84,645	Minor budget changes
Total Other Changes	<u>1,160,406</u>	

2020 Budget**20,129,341****Overall 2019 Budget Performance**

(expected variance to budget and surplus treatment)

There is a one time favourable revenue variance of \$740,000 (4.0%) due to higher than budgeted water sales. This additional revenue will be used to offset bulk water purchase overages. The net surplus of \$454,000 will be transferred to the services' Water Capital Fund.

2020 Demand Estimate**Retail Demand**

<u>Years</u>	<u>Actual Demand cu.metre</u>	<u>Budgeted Demand cu.metre</u>
2014	8,164,289	7,840,000
2015	8,204,674	7,710,000
2016	8,622,990	7,710,000
2017	8,595,300	8,000,000
2018	8,853,800	8,200,000
2019	8,900,000*	8,600,000

2020 Demand Estimate**8,900,000*** *Projected consumption for 2019*

Summary of Retail Water Rates

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>
Retail (direct) water rate						
Unit cost per cu.m.	\$1.9129	\$1.9129	\$2.0739	\$2.1132	\$2.2159	\$0.1027

Retail Water Rate Increase Impact on Residential Water Bill

Average consumption per 2 month billing cycle: * 39.0 cubic meters (annual = 234.0 cu.m)

<u>Charge for Two Months Consumption</u>	<u>Year</u>	<u>Bi monthly Charge</u>	<u>Annual Charge</u>	<u>2019 Annual Change \$</u>
Average Consumption	2019	\$ 82.41	\$ 494.49	
	2020	\$ 86.42	\$ 518.52	\$ 24.03
Half Average Consumption	2019	\$ 41.21	\$ 247.24	
	2020	\$ 43.21	\$ 259.26	\$ 12.02
Twice Average Consumption	2019	\$ 164.83	\$ 988.98	
	2020	\$ 172.84	\$ 1,037.04	\$ 48.06

Schedule A
Asset Useful Life Assignments - PSAB

<u>Classes:</u>	<u>Code</u>	<u>Asset Categories</u>	<u>Useful Life, Years</u>
Land	LAND	Land & Rights of Way * (Note 1)	N/A
Building	BLDG	Building, Permanent	50
	BLOT	Building, Temporary/ Portable	20
	BLFX	Building fixture (<i>sprinklers</i>)	20
Equipment	BOAT	Boats & Marine Equipment	10
	COMP	Computer Equipment (<i>includes software</i>)	5
	ELEC	Electronic Equipment(<i>hydromet, weather stn eqpt</i>)	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 (<i>stop logs</i>)	20
	SHOP	Shop Equipment	10
	TELE	Telecommunication Eqpt (<i>radios, phone systems</i>)	10
	WEQP	Water Works Eqpt(<i>W. Quality lab, Wshed eqpt</i>)	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.

CAPITAL REGIONAL DISTRICT

Program Group: CRD-JDF Water Distribution	2020 BUDGET REQUEST						FUTURE PROJECTIONS			
	2019 BOARD BUDGET	2019 ESTIMATED ACTUAL	2020 CORE BUDGET	2020 ONGOING	2020 ONE-TIME	TOTAL (COL 4, 5 & 6)	2021	2022	2023	2024
SUMMARY OF PROGRAMS	2	3	4	5	6	7	8	9	10	11
1										
<u>OPERATING COSTS</u>										
ALLOCATION - OPERATIONS	3,987,025	4,084,185	4,184,586	103,800	-	4,288,386	4,373,606	4,459,253	4,549,546	4,638,933
OPERATING - OTHER COSTS	920,139	907,043	971,817	6,000	-	977,817	994,244	1,008,076	1,021,538	1,035,661
SALARIES AND WAGES	426,730	434,500	450,557	76,000	-	526,557	537,074	539,457	551,090	562,973
CONTRACT FOR SERVICES	383,282	385,040	390,916	150,000	-	540,916	562,358	574,252	586,248	598,595
ALLOCATION - CORPORATE OVERHEAD	301,203	301,203	373,423	-	-	373,423	441,925	513,018	523,300	533,787
TOTAL OPERATING EXPENDITURES	6,018,379	6,111,971	6,371,298	335,800	-	6,707,098	6,909,207	7,094,057	7,231,722	7,369,949
Percentage increase over prior year's board budget			5.86%			11.44%	3.01%	2.68%	1.94%	1.91%
BULK WATER PURCHASE	5,826,500	6,029,750	6,201,520	-	-	6,201,520	6,449,400	6,735,820	6,987,400	7,266,090
BULK WATER EXPENDITURES	5,826,500	6,029,750	6,201,520	-	-	6,201,520	6,449,400	6,735,820	6,987,400	7,266,090
			6.44%			6.44%				
<u>CAPITAL EXPENDITURES & TRANSFERS</u>										
TRANSFER TO WATER CAPITAL FUND	4,831,427	5,285,130	5,200,860	-	-	5,200,860	5,500,000	6,000,000	6,500,000	7,000,000
TRANSFER TO DEBT RESERVE FUND	11,650	11,650	56,050	-	-	56,050	70,050	36,050	19,050	5,050
TRANSFER TO EQUIPMENT REPLACEMENT FUND	251,116	251,116	213,945	-	-	213,945	218,652	223,462	228,378	233,402
TOTAL CAPITAL EXPENDITURES & TRANSFERS	5,094,193	5,547,896	5,470,855	-	-	5,470,855	5,788,702	6,259,512	6,747,428	7,238,452
<u>DEBT SERVICING</u>										
DEBT - INTEREST & PRINCIPAL	1,653,363	1,642,278	1,749,868	-	-	1,749,868	2,066,615	2,524,920	2,729,836	2,821,443
TOTAL DEBT EXPENDITURES	1,653,363	1,642,278	1,749,868	-	-	1,749,868	2,066,615	2,524,920	2,729,836	2,821,443
TOTAL EXPENDITURES	18,592,435	19,331,895	19,793,541	335,800	-	20,129,341	21,213,924	22,614,309	23,696,387	24,695,934
<u>SOURCES OF FUNDING</u>										
REVENUE - SALES	(18,173,520)	(18,807,480)	(19,385,831)	(335,800)	-	(19,721,631)	(20,964,433)	(22,404,163)	(23,516,837)	(24,516,384)
REVENUE - OTHER	(179,130)	(284,630)	(179,550)	-	-	(179,550)	(179,550)	(179,550)	(179,550)	(179,550)
TOTAL SOURCE OF FUNDING FROM OPERATIONS	(18,352,650)	(19,092,110)	(19,565,381)	(335,800)	-	(19,901,181)	(21,143,983)	(22,583,713)	(23,696,387)	(24,695,934)
<u>SOURCES OF OTHER FUNDING</u>										
TRANSFER FROM DCC RESERVES TO FUND DCC DEBT	(239,785)	(239,785)	(228,160)	-	-	(228,160)	(69,941)	(30,596)	-	-
TRANSFER FROM PRIOR YEAR	-	-	-	-	-	-	-	-	-	-
TRANSFER TO FOLLOWING YEAR										
TOTAL SOURCES OF ALL FUNDING	(18,592,435)	(19,331,895)	(19,793,541)	(335,800)	-	(20,129,341)	(21,213,924)	(22,614,309)	(23,696,387)	(24,695,934)
Percentage increase over prior year's board budget			6.46%			8.27%	5.39%	6.60%	4.78%	4.22%

CAPITAL REGIONAL DISTRICT
FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2020 to 2024

Service No.	2.680 JDF Water Distribution	Carry Forward from 2019	2020	2021	2022	2023	2024	TOTAL
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EXPENDITURE

Buildings	B	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	E	\$135,000	\$135,000	\$300,000	\$50,000	\$0	\$0	\$485,000
Land	L	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineered Structures	S	\$970,000	\$17,975,000	\$12,785,000	\$11,295,000	\$6,910,000	\$5,965,000	\$54,930,000
Vehicles	V	\$0	\$625,000	\$70,000	\$210,000	\$474,000	\$0	\$1,379,000
		\$1,105,000	\$18,735,000	\$13,155,000	\$11,555,000	\$7,384,000	\$5,965,000	\$56,794,000

SOURCE OF FUNDS

Capital Funds on Hand	Cap	\$1,105,000	\$8,690,000	\$4,465,000	\$5,215,000	\$5,490,000	\$5,790,000	\$29,650,000
Debenture Debt (New Debt Only)	Debt	\$0	\$5,100,000	\$6,500,000	\$3,100,000	\$1,400,000	\$0	\$16,100,000
Equipment Replacement Fund	ERF	\$0	\$425,000	\$70,000	\$210,000	\$474,000	\$0	\$1,179,000
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	\$0	\$4,520,000	\$2,120,000	\$3,030,000	\$20,000	\$175,000	\$9,865,000
Short Term Loans	STLoan	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$1,105,000	\$18,735,000	\$13,155,000	\$11,555,000	\$7,384,000	\$5,965,000	\$56,794,000

CAPITAL REGIONAL DISTRICT
FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2020 to 2024

Service No.	2.670/2.680							
	Regional Water Supply & JDF Water Distribution Combo	Carry Forward from 2019	2020	2021	2022	2023	2024	TOTAL

EXPENDITURE

Buildings	B	\$70,000	\$190,000	\$80,000	\$80,000	\$80,000	\$80,000	\$510,000
Equipment	E	\$450,000	\$1,315,000	\$655,000	\$365,000	\$365,000	\$365,000	\$3,065,000
Land	L	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineered Structures	S	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Vehicles	V	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$520,000	\$1,505,000	\$735,000	\$445,000	\$445,000	\$445,000	\$3,575,000

SOURCE OF FUNDS

Capital Funds on Hand	Cap	\$520,000	\$1,505,000	\$735,000	\$445,000	\$445,000	\$445,000	\$3,575,000
Debenture Debt (New Debt Only)	Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Replacement Fund	ERF	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		\$520,000	\$1,505,000	\$735,000	\$445,000	\$445,000	\$445,000	\$3,575,000

CAPITAL REGIONAL DISTRICT CAPITAL PLAN

CAPITAL BUDGET FORM
2020 & Forecast 2021 to 2024

Service #: 2.680
Service Name: JDF Water Distribution

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

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 2019	2020	2021	2022	2023	2024	5 - Year Total
INFRASTRUCTURE ENGINEERING AND OPERATIONS													
Planning													
16-01	Renewal	Reservoir Assessment	Conduct a condition assessment, water quality analysis of existing reservoirs.	\$200,000	S	WU	\$170,000	\$170,000	\$0	\$0	\$0	\$0	\$170,000
16-03	Renewal	Strategic Asset Management Plan	Combine past studies to plan out future capital expenditures.	\$150,000	S	WU	\$120,000	\$120,000	\$0	\$0	\$0	\$0	\$120,000
													\$0
Capital													
12-01	Renewal	Fire Flow Upgrade Program Phase 2 Volume/Flow Upgrade Program Review	Assess and update the fire flow upgrade program to inform future capital works.	\$150,000	S	WU	\$120,000	\$120,000	\$0	\$0	\$0	\$0	\$120,000
16-05	Renewal	Comprehensive Pump Station Upgrades (10 year Program)	Continue pump station condition assessments, plan and carry out upgrades.	\$5,000,000	S	WU	\$150,000	\$1,150,000	\$1,000,000	\$1,000,000	\$1,000,000	\$0	\$4,150,000
17-04	Replacement	SCADA Equipment Replacement Program	Replacement of SCADA equipment as outlined in Stantec's 2015 SCADA Master Plan report.	\$485,000	E	WU	\$135,000	\$135,000	\$300,000	\$50,000	\$0	\$0	\$485,000
18-02	Renewal	JDF Reservoir Upgrades	Reservoir improvements are required at Walfred, Peacock, and Helgesen Reservoirs. In 2018 a review of all three reservoirs will be conducted including implementing improvements to Walfred.	\$1,250,000	S	WU	\$210,000	\$450,000	\$500,000	\$0	\$0	\$0	\$950,000
18-03	Renewal	JDF Site Decommissioning Program	Decommissioning of facilities that are no longer in use based on preliminary work from Annual Provisional	\$1,050,000	S	WU	\$50,000	\$400,000	\$100,000	\$350,000	\$100,000	\$0	\$950,000
18-05	Replacement	Rocky Point Upgrades	Replacement of Rocky Point P.S., additional storage at Rocky Point Reservoir & water main upgrades.	\$2,500,000	S	WU	\$150,000	\$150,000	\$1,125,000	\$1,125,000	\$0	\$0	\$2,400,000
18-06	New	Disaster Response Plan for Water Supply and Distribution	Determine and supply response equipment for disaster response.	\$250,000	S	WU	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
19-06	Renewal	Corrosion Protection Program	Undertake a program to assess and prevent corrosion to existing steel pipe within the Juan du Fuca water system.	\$50,000	S	WU	\$0	\$10,000	\$5,000	\$5,000	\$5,000	\$5,000	\$30,000
19-09	New	Distribution System Seismic Resiliency Improvements	Determine and commence improvements to the distribution system to provide seismic resiliency.	\$1,700,000	S	WU	\$0	\$50,000	\$150,000	\$500,000	\$500,000	\$500,000	\$1,700,000
20-01	Replacement	Residential Service & Meter Replacement Program	Replacement of residential water meters as highlighted by the 2017 KWL Water Audit report.	\$5,500,000	S	WU	\$0	\$800,000	\$800,000	\$1,300,000	\$1,300,000	\$1,300,000	\$5,500,000
Sub-Total Page 1				\$18,285,000			\$1,105,000	\$3,605,000	\$4,030,000	\$4,380,000	\$2,955,000	\$1,855,000	\$16,825,000

20-03	Replacement	AC Pipe Replacement Program	Replacement of aging asbestos cement pipe as highlighted in the 2019 update report	\$15,000,000	S	WU	\$0	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$15,000,000
20-04	Replacement	William Head & VGH Meter Replacement	Replacement of the meter and chambers at William Head & VGH with the possibility of resilient connections.	\$700,000	S	WU	\$0	\$100,000	\$600,000	\$0	\$0	\$0	\$700,000
20-05	New	Electrical Isolation Audit	Inspection audit of facilities to ensure that there is sufficient electrical separation and isolation for safety.	\$50,000	S	WU	\$0	\$50,000	\$0	\$0	\$0	\$0	\$50,000
20-06	Replacement	Sun River Reservoir Replacement	Replace the existing concrete tank with a steel tank for increase capacity and resilience.	\$900,000	S	WU	\$0	\$900,000	\$0	\$0	\$0	\$0	\$900,000
20-07	Replacement	Goldstream AC Replacement	Replacement of aging asbestos cement pipe within Goldstream Rd, from VMP to Spencer.	\$5,000,000	S	WU	\$0	\$5,000,000	\$0	\$0	\$0	\$0	\$5,000,000
21-01	Replacement	Sooke Rd - 2,200m of 600m Pipe - VMP to Jacklin	Replacement of aged, large diameter water main from Jacklin Rd to VMP	\$2,400,000	S	WU	\$0	\$0	\$2,400,000	\$0	\$0	\$0	\$2,400,000
Sub-Total System Infrastructure Engineering and Operations				\$42,335,000			\$1,105,000	\$12,655,000	\$10,030,000	\$7,380,000	\$5,955,000	\$4,855,000	\$40,875,000
CUSTOMER AND TECHNICAL SERVICES													
16-06	Replacement	Vehicle & equipment replacement (funding from replacement fund)	Vehicle and equipment replacement.	\$1,395,000	V	ERF	\$0	\$425,000	\$70,000	\$210,000	\$474,000	\$0	\$1,179,000
20-09	New	Vehicle for the Meter Replacement Program	A new Service Van to be used for the meter replacement program	\$200,000	V	WU	\$0	\$200,000	\$0	\$0	\$0	\$0	\$200,000
Sub-Total Customer and Technical Services				\$1,595,000			\$0	\$625,000	\$70,000	\$210,000	\$474,000	\$0	\$1,379,000
ANNUAL PROVISIONAL ITEMS													
17-07	New	Site Decommissioning - General	Planning for decommissioning of unused sites.	\$50,000	S	WU	\$0	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000
17-09	Replacement	Emergency Major Main Replacement	Major main replacement under emergencies.	\$500,000	S	WU	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
17-12	Replacement	Large Meters/Meter Vaults Components Replacement	Replacement or repairs to components in large meters/vaults as required.	\$500,000	S	WU	\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
17-13	New	Site Security Upgrades	Upgrading and replacement of security systems for sites as required.	\$200,000	S	WU	\$0	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$200,000
17-15	Renewal	Distribution System Improvements	Unplanned distribution system improvements.	\$2,250,000	S	WU	\$0	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$2,250,000
17-16	New	Hydraulic Model Yearly Update	Annual hydraulic model update.	\$300,000	S	WU	\$0	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$300,000
20-08	Replacement	Hydrant & Flush Replacement, Upgrades and Additions	Upgrade, replacement or installation of flushes and fire hydrants.	\$875,000	S	WU	\$0	\$175,000	\$175,000	\$175,000	\$175,000	\$175,000	\$875,000
Sub-Total for Annual Provisional Items				\$4,675,000			\$0	\$935,000	\$935,000	\$935,000	\$935,000	\$935,000	\$4,675,000
DEVELOPMENT COST CHARGE (DCC)													
16-07	New	Update DCC Bylaw (Comprehensive Update in 2016)	Planned update of the DCC Bylaw.	\$255,000	S	Res	\$0	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$255,000
20-02	New	Bear Mountain Parkway Extension Supply Mains	Supply mains installed by the City of Langford.	\$2,000,000	S	Res	\$0	\$1,500,000	\$0	\$0	\$0	\$0	\$1,500,000
21-01	New	Sooke Henlyn Supply & Distribution Mains	Construction of water mains based upon development predictions from the Helgesen Pump Station westwards.	\$1,000,000	S	Res	\$0	\$0	\$1,000,000	\$0	\$0	\$0	\$1,000,000
23-01	New	Tank 4 and McCallum Pump Station (2020-2021) and Pump Station 7 and remaining Supply Main to Skirt Mtn Reservoir (2022)	Upgrades to complete the South Skirt Water System	\$7,110,000	S	Res	\$0	\$3,000,000	\$1,100,000	\$3,010,000	\$0	\$0	\$7,110,000
Sub-Total for Development Cost Charges (DCC)				\$10,365,000			\$0	\$4,520,000	\$2,120,000	\$3,030,000	\$20,000	\$175,000	\$9,865,000
GRAND TOTAL				\$58,970,000			\$1,105,000	\$18,735,000	\$13,155,000	\$11,555,000	\$7,384,000	\$5,965,000	\$56,794,000

CAPITAL REGIONAL DISTRICT CAPITAL PLAN

CAPITAL BUDGET FORM

2020 & Forecast 2021 to 2024

Service #:

2.670/2.680

Service Name:

Regional Water Supply & JDF Water Distribution Combo

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

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 2019	2020	2021	2022	2023	2024	5 - Year Total
SYSTEM REPLACEMENT AND UPGRADES THAT BENEFIT REGIONAL WATER SUPPLY AND JUAN DE FUCA DISTRIBUTION													\$0
16-01	Renewal	Upgrades to Buildings at 479 Island Highway	Maintenance and changes to buildings and office layouts.	\$510,000	B	WU	\$70,000	\$190,000	\$80,000	\$80,000	\$80,000	\$80,000	\$510,000
17-01	Renewal	Voice Radio Upgrade	Replacement of end of life voice radio system repeaters, office, vehicle and handheld radios.	\$640,000	E	WU	\$270,000	\$270,000	\$290,000	\$0	\$0	\$0	\$560,000
19-02	New	Island Highway Cell Phone Coverage	Increase cell phone coverage within 479 Island Highway, IWS offices.	\$70,000	E	WU	\$70,000	\$70,000	\$0	\$0	\$0	\$0	\$70,000
19-04	New	Legistar - Granicus Implementation	Implement Legistar - Granicus software at IWS.	\$30,000	E	WU	\$20,000	\$20,000	\$0	\$0	\$0	\$0	\$20,000
20-01	New	Portable Pump Station	Portable pump station to provide backup when a pump station is offline, in construction or to bypass a section of pipe.	\$500,000	E	WU	\$0	\$500,000	\$0	\$0	\$0	\$0	\$500,000
Sub-Total System Replacement and Upgrades That Benefit Regional Water Supply and Juan de Fuca Distribution				\$1,750,000			\$430,000	\$1,050,000	\$370,000	\$80,000	\$80,000	\$80,000	\$1,660,000
ANNUAL PROVISIONAL CAPITAL ITEMS													
16-04	New	Implementation of a Fleet Management Solution (software)	Development and implementation of a fleet management system.	\$150,000	E	WU	\$90,000	\$90,000	\$0	\$0	\$0	\$0	\$90,000
17-02	Replacement	SCADA Hardware Upgrading and Replacement	Upgrade and replacement of SCADA equipment as required.	\$210,000	E	WU	\$0	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$175,000
17-03	Replacement	Office Equipment, Upgrades and Replacements	Upgrade and replacement of office equipment as required.	\$270,000	E	WU	\$0	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000	\$225,000
17-04	Replacement	Computer Upgrades	Annual upgrade and replacement program for computers, copiers, printers, network equipment as required.	\$1,190,000	E	WU	\$0	\$170,000	\$170,000	\$170,000	\$170,000	\$170,000	\$850,000
17-05	New	Development of the Maintenance Management Systems	Develop maintenance management system.	\$215,000	E	WU	\$0	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
17-06	Replacement	Small Equipment & Tool Replacement (Water Operations)	Replacement of tools and small equipment for Water Operations as required.	\$440,000	E	WU	\$0	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$400,000
17-07	Replacement	Small Equipment & Tool Replacement (Corporate Fleet)	Replacement of tools and small equipment for Fleet as required.	\$100,000	E	wu	\$0	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000
Sub-Total for Annual Provisional Capital Items				\$ 2,575,000			\$ 90,000	\$ 455,000	\$ 365,000	\$ 365,000	\$ 365,000	\$ 365,000	\$1,915,000
GRAND TOTAL				\$4,325,000			\$520,000	\$1,505,000	\$735,000	\$445,000	\$445,000	\$445,000	\$3,575,000

Service: 2.680

JDF Water Distribution

Proj. No.	16-01	Capital Project Title	Reservoir Assessment	Capital Project Description	Conduct a condition assessment, water quality analysis of existing reservoirs.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale <i>Similar to the assessments in progress or that have been completed for other JDF assets, it is proposed to conduct a review of the existing storage reservoirs/tanks. This will include a higher level structural assessment, condition of materials, functionality and water quality aspects. The results of this review will advise the proposed Strategic Asset Management Plan for 2019 in order to arrive at a comprehensive plan for system upgrades with potential improvements constructed in 2020.</i>					
Proj. No.	16-03	Capital Project Title	Strategic Asset Management Plan	Capital Project Description	Combine past studies to plan out future capital expenditures.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale <i>Several studies have been completed and are in progress to assess the JDF assets and programs and the proposed Strategic Asset Management Plan will consolidate the findings of the previous studies in a comprehensive approach to identify and prioritizes future capital expenditures and programs.</i>					
Proj. No.	12-01	Capital Project Title	Fire Flow Upgrade Program Phase 2 Volume/Flow Upgrade Program Review	Capital Project Description	Assess and update the fire flow upgrade program to inform future capital works.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale <i>In order to meet Fire Underwriters Survey recommendations for fire protection, it is necessary to provide certain volumes of water storage. It is proposed to assess fire storage volume requirements for different parts of the system and determine any required upgrades. It is proposed to complete the study aspects in 2019, followed by subsequent years of reservoir construction starting in 2020 as required. This will be combined with a review of the 5-year accelerated fire flow pipe upgrade program to produce a comprehensive fire upgrade program (flow, volume and pressure). The results of this review will advise the Strategic Asset Management Plan proposed for 2019 in order to arrive at a comprehensive plan for system upgrades.</i>					
Proj. No.	16-05	Capital Project Title	Comprehensive Pump Station Upgrades (10 year Program)	Capital Project Description	Continue pump station condition assessments, plan and carry out upgrades.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale <i>A previous capital project was completed by Delcan Corp. in 2012 which assessed each existing pump station and identified building deficiencies. This study concluded that on average approximately \$1.0M per year for the next ten years is needed to upgrade existing pump stations. A review of system hydraulics, electrical/mechanical issues and backup power is due to be completed in 2019. Funds in 2020 are for completion of design of the Coppermine PS and upgrades to the Nicklaus PS to facilitate operation the Skirt Mountain Reservoir while McCallum and Pump Station 7 are being constructed.</i>					

Service: 2.680

JdF Water Distribution

Proj. No. 17-04	Capital Project Title SCADA Equipment Replacement Program	Capital Project Description Replacement of SCADA equipment as outlined in Stantec's 2015 SCADA Master Plan report.
Asset Class Equipment	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale A study of the existing SCADA equipment was completed by Stantec Consulting and they proposed short-term and long-term SCADA equipment replacements. It is proposed to replace the equipment based on priority and defined by deterioration and/or age.		
Proj. No. 18-02	Capital Project Title JdF Reservoir Upgrades	Capital Project Description Reservoir improvements are required at Walfred, Peacock, and Helgesen Reservoirs. In 2018 a review of all three reservoirs will be conducted including implementing improvements to Walfred.
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale Numerous deficiencies at the Walfred, Peacock and Helgesen reservoirs have been identified while operating the infrastructure. In 2019 planning and design of improvements at the Skirt, Peacock, Walfred and Helgesen reservoirs will be undertaken. Improvements like valve reconfiguration, site drainage and controls will be undertaken in 2021 at the Peacock, Helgesen and Skirt reservoirs		
Proj. No. 18-03	Capital Project Title JdF Site Decommissioning Program	Capital Project Description Decommissioning of facilities that are no longer in use based on preliminary work from Annual Provisional
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale Numerous pump station and PRV facilities have been made redundant or have been decommissioned within the JdF system. Sites have been identified as part of the annual provisional project and funds are required to complete decommission of the sites and then demolish them. The Townsview tank and pump station will be carried out first.		
Proj. No. 18-05	Capital Project Title Rocky Point Upgrades	Capital Project Description Replacement of Rocky Point P.S., additional storage at Rocky Point Reservoir & watermain upgrades.
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale Proposed work includes the design and construction of upgrades to the existing Rocky Point Pump Station, storage tank and associated water main upgrades. This work will improve the level of service to both the existing Metchosin water users and the expected increase in flow associated with the Spirit Bay Development in Beecher Bay. During the design stage in 2019 it is proposed to come up with a fair and equitable cost sharing agreement between the Beecher Bay First Nation and the Juan de Fuca service area for the proposed upgrades. Update - detailed design has been postponed to assess servicing requirements.		

Service: 2.680

JDF Water Distribution

Proj. No.	18-06	Capital Project Title	Disaster Response Plan for Water Supply and Distribution	Capital Project Description	Determine and supply response equipment for disaster response.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Proposed work includes developing a response plan to disasters to the Juan de Fuca water supply or distribution system. Funds are required to procure equipment and carry out works developed the in 2018 plan in conjunction with the Regional Water Supply disaster response Plan.				
Proj. No.	19-06	Capital Project Title	Corrosion Protection Program	Capital Project Description	Undertake a program to assess and prevent corrosion to existing steel pipe within the Juan du Fuca water system.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	There are numerous steel pipes within the Juan du Fuca water distribution system. Some are located in corrosive conditions or connected to dissimilar metals. Funds are required to undertake a program to assess and prevent corrosion to existing pipes.				
Proj. No.	19-09	Capital Project Title	Distribution System Seismic Resiliency Improvements	Capital Project Description	Determine and commence improvements to the distribution system to provide seismic resiliency.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Determine and commence improvements to the distribution system to provide resiliency.				
Proj. No.	20-01	Capital Project Title	Residential Meter Replacement Program	Capital Project Description	Replacement of residential water meters as highlighted by the 2017 KWL Water Audit report.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	A July 8, 2014 staff report analyzed the results of testing performed on existing residential meters and recommended a sustainable meter replacement program due to start in 2020 subject to available capital funding. A water audit was carried out in 2017 by KWL and it highlighted the need to replace 1,000 meters per year. Funding is required to determine priority areas of meter replacement and implement a replacement program.				

Service: 2.680

JDF Water Distribution

Proj. No.	20-03	Capital Project Title	AC Pipe Replacement Program	Capital Project Description	Replacement of aging asbestos cement pipe as highlighted in the 2019 update report.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	This item is the 2020 to 2025 program for replacement of the water mains identified in the Water Main Upgrading and Replacement Program Update in 2020. All mains were assessed for such criteria as age, pipe material, record of leaks and hydraulic adequacy, and a long-term replacement program was developed. Planned works for 2020 include 400 m on Strathmore Road, 85 m on Hockley Ave, 900 m on Walfred Road, and 760 m on Kaltasin Road.				
Proj. No.	20-04	Capital Project Title	William Head & VGH Meter Replacement	Capital Project Description	Replacement of the meter and chambers at William Head & VGH with the possibility of resilient connections.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Identified through Statement of Works, the William Head and Victoria General Hospital meters require replacement and redundancy to maintain service to the two facilities. In 2020 funds are required to complete design of the two new meters that will allow for construction of the meters while maintaining service. Construction is to occur in 2021.				
Proj. No.	20-05	Capital Project Title	Electrical Isolation Audit	Capital Project Description	Inspection audit of facilities to ensure that there is sufficient electrical separation and isolation for safety.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Identified through Statement of Works, numerous aging facilities with electrical services may pose safety hazards due to inadequate electrical separation from mechanical equipment. Funds are required in 2019 to conduct an audit of facilities and propose improvements if required.				
Proj. No.	20-06	Capital Project Title	Sun River Reservoir Rehabilitation	Capital Project Description	Replace the existing concrete tank with a steel tank for increase capacity and resilience.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	The Sun River reservoir is experiencing leakage through concrete form tie holes as a result of the original construction process. Funding is required to replace the existing concrete tank with a bolted steel tank.				

Service: 2.680

JDF Water Distribution

Proj. No.	20-07	Capital Project Title	Goldstream AC Replacement	Capital Project Description	Replacement of aging asbestos cement pipe within Goldstream Rd, from VMP to Spencer.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	The existing water main within Goldstream Rd, from VMP to Spencer Rd, is aging asbestos cement and identified as a risk for failure. Due to the numerous large connections to the RWS transmission main and complexity replacement of this water main cannot be carried out within the AC Replacement Program. Funds are required to design and construct replacement of the water main in 2020.				
Proj. No.	21-01	Capital Project Title	Sooke Rd - 2,200m of 600m Pipe - VMP to Jacklin	Capital Project Description	Replacement of aged, large diameter water main from Jacklin Rd to VMP
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	According to a corrosion assessment, a 2.2 kilometre section of an existing steel pipe along Sooke Road and Allendale Road (between Wishart to Jacklin) was unprotected and in need of replacement. In 2014, the design of both phases of the water main was completed by a consultant and construction of the main from Wishart to VMP was completed by CRD resources. The balance of the construction, from VMP to Jacklin Rd along Sooke Rd, is to occur in 2021.				
Proj. No.	16-06	Capital Project Title	Vehicle & equipment replacement (funding from replacement fund)	Capital Project Description	Vehicle and equipment replacement.
Asset Class	Vehicles	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	This is for the replacement of vehicles and equipment used by CRD Integrated Water Services for the day-to-day operation and maintenance of the Juan De Fuca distribution system. These replacements are funded from the Juan De Fuca Vehicle and Equipment Replacement Fund.				
Proj. No.	20-03	Capital Project Title	Vehicle for the Meter Replacement Program	Capital Project Description	A new Service Van to be used for the meter replacement program.
Asset Class	Vehicles	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	An additional vehicle is required to maintain delivery of the increased scope Meter Replacement Program. Funds will be used for procurement of a service van in 2020.				

Service: 2.680

JDF Water Distribution

Proj. No.	17-07	Capital Project Title	Site Decommissioning - General	Capital Project Description	Planning for decommissioning of unused sites.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	This is a provisional item to allow engineering and planning reviews of old facilities with a view to possible future site uses.				
Proj. No.	17-09	Capital Project Title	Emergency Major Main Replacement	Capital Project Description	Major main replacement under emergencies.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	This item is to fund the costs of responding to emergency major main breaks and conducting replacements.				
Proj. No.	17-12	Capital Project Title	Large Meters/Meter Vaults Replacement, Upgrades and Additions	Capital Project Description	Replacement or repairs to large meters/vaults as required.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	This is an annual provision for the replacement of obsolete and worn out large (greater than 2" diameter) meters, adding new meters and upgrading meter vaults.				
Proj. No.	17-13	Capital Project Title	Site Security Upgrades	Capital Project Description	Upgrading and replacement of security systems for sites as required.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	This is an annual allowance for upgrading and maintaining equipment, security and control systems at distribution facilities such as pump stations, PRV chambers and reservoirs. Items such as access hatches, fencing, etc., will be modified to provide a larger degree of security.				
Proj. No.	17-15	Capital Project Title	Distribution System Improvements	Capital Project Description	Unplanned distribution system improvements.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Historically, opportunities to complete work arise during the year which were not specifically identified and budgeted. This item typically relates to coordinating work programs (i.e. JDF water main replacements and municipal paving programs) with the municipalities or development and taking advantage of opportunities during the year that were not specifically identified.				

Service: 2.680 JDF Water Distribution		
Proj. No. 17-16	Capital Project Title Hydraulic Model Yearly Update	Capital Project Description Annual hydraulic model update.
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>This item is required to input the pipes installed that year into the hydraulic computer model, followed by calibration and testing in order to keep the model up to date for design and planning purposes.</i>		
Proj. No. 20-08	Capital Project Title Hydrant & Flush Replacement, Upgrades and Additions	Capital Project Description Upgrade, replacement or installation of flushes and fire hydrants.
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>This is an annual provision for replacing old and outdated hydrants, flushes and associated works and access, as well as adding new hydrants to the system where requested by the municipalities or fire departments.</i>		
Proj. No. 16-07	Capital Project Title Update DCC Bylaw (Comprehensive Update in 2016)	Capital Project Description Planned update of the DCC Bylaw.
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>This is a provisional item to cover questions that arise and referred to our consultants for advice. Every 5 years a comprehensive update is required and the previous DCC update was completed in 2017, with the next update scheduled for 2022 for \$175,000.</i>		
Proj. No. 20-02	Capital Project Title Bear Mountain Parkway Extension Supply Mains	Capital Project Description Supply mains installed by the City of Langford.
Asset Class Engineered Structures	Board Priority Area Other	Corporate Priority Area Drinking Water
Project Rationale <i>The City of Langford has installed DCC eligible supply water mains as part of their 2017 Bear Mountain Parkway extension road project to avoid future pavement restoration and traffic disruption. It is proposed to pay back the eligible costs in 2020.</i>		

Service: 2.680		JDF Water Distribution			
Proj. No.	21-01	Capital Project Title	Sooke Henlyn Supply & Distribution Mains	Capital Project Description	Construction of watermains based upon development predictions from the Helgesen Pump Station westwards.
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Proposed work includes the continued installation of the supply and distribution water mains connected to the Helgesen pump station which was previously constructed in 2011 as part of the DCC program. The supply and distribution water mains will continue west as development proceeds towards the proposed Henlyn Tank.				
Proj. No.	23-01	Capital Project Title	Tank 4 and McCallum Pump Station (2020-2021) and Pump Station 7 and remaining Supply Main to Skirt Mtn Reservoir (2022)	Capital Project Description	Upgrades to Complete the South Skirt Water System
Asset Class	Engineered Structures	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Design and construct Tank 4, Pump Station 7, McCallum Pump Station and remaining supply main to the Skirt Mountain Reservoir based upon development and demand.				

Service: 2.670/2.680

Regional Water Supply & JDF Water Distribution Combo

Proj. No. 16-01

Capital Project Title Upgrades to Buildings at 479 Island Highway

Capital Project Description Maintenance and changes to buildings and office layouts.

Asset Class Buildings

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale The budget includes the following funds to upgrade and renew the buildings at 479 Island Highway:

- Repairs, upgrades and changes to the buildings (provisional \$50,000)
- Painting of the buildings. (provisional \$10,000 annually)
- Repair and replacement of carpets, floors and walls. (provisional \$10,000 annually)
- Repair, refurbishment and replacement of equipment and property. (provisional \$10,000 annually)

Proj. No. 17-01

Capital Project Title Voice Radio Upgrade

Capital Project Description Replacement of end of life voice radio system repeaters, office, vehicle and handheld radios.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale Service Life and projected replacement:

- The service life of the mobile and portable units was forecast as 10 years at minimum, 15 years at maximum in 2005.
 - The present radio models used in the system have just been taken out of production by the manufacturer, there will be no new units available for purchase as of July 1, 2015.
 - Support for repairs and maintenance of the present radio will continue for the next 3 years at least.
- There are no pressing issues with equipment maintenance or repairs, present repair rates suggest we can maintain the system for the next few years, and perhaps reach a 12-15 year lifespan on the present equipment.

Mobile Radios: There are 100 Mobile radios in the system at present, all will need to be replaced.

Portable Radios: There are 90 Portable radios in the system at present all will need to be replaced.

Proj. No. 19-02

Capital Project Title Island Highway Cell Phone Coverage

Capital Project Description Increase cell phone coverage within 479 Island Highway, IWS offices.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale Cell phone coverage within 479 Island Highway, IWS Offices, is very poor. Funds are required to increase cell phone coverage.

Service: 2.670/2.680 Regional Water Supply & JDF Water Distribution Combo			
Proj. No. 19-04	Capital Project Title Legistar -Granicus Implementation	Capital Project Description Implement Legistar - Granicus software at IWS.	
Asset Class Equipment	Board Priority Area Other	Corporate Priority Area Drinking Water	
Project Rationale <i>The Legistar - Granicus software is a corporate standard for legislative agendas, approvals and publishing. Funds are required to implement this software at IWS.</i>			
Proj. No. 20-01	Capital Project Title Portable Pump Station	Capital Project Description Portable pump station to provide backup when a pump station is offline, in construction or to bypass a section of pipe.	
Asset Class Equipment	Board Priority Area Other	Corporate Priority Area Drinking Water	
Project Rationale <i>The RWS and JdF operation numerous water mains and pump stations. There are situations, when a pump station fails, construction of a pump station or bypassing a section of pipe, where a portable pump station is required to maintain the level of service. Funds will be used in 2020 to design and procure a portable pump station.</i>			
Proj. No. 16-04	Capital Project Title Implementation of a Fleet Management Solution (software)	Capital Project Description Development and implementation of a fleet management system.	
Asset Class Equipment	Board Priority Area Other	Corporate Priority Area Drinking Water	
Project Rationale <i>It is proposed that IT undertake an evaluation to determine if the present CRD ERP software meets the needs of Corporate Fleet Management. A fleet management needs document has been compiled and IT has been consulted on fleet requirements, the first indication is that the existing system are not able to meet the requirements in a cost effective manner. The next step is to provide funding for an in depth review by the CRD of the present systems' ability to provide a business solution for Fleet Management. This was a recommendation from the 2011 Fleet Management Working Group. Pending the outcome of the evaluation, provision has been made for the configuration changes of the SAP modules to meet the needs or the implementation of a fleet management software solution. Having an acceptable solution available will ensure that all aspects of fleet management is integrated to the existing systems, to do fleet planning and achieve regulatory compliance. At present not all data required for optimum fleet management is being captured and the systems that are in place are not linked together resulting in extensive staff hours to assemble reports, statistics and forecasts. i.e. provincial GHG reporting, vehicle replacement cycles, driver records etc.</i>			

Service: 2.670/2.680

Regional Water Supply & JDF Water Distribution Combo

Proj. No. 17-02

Capital Project Title SCADA Hardware Upgrading and Replacement

Capital Project Description Upgrade and replacement of SCADA equipment as required.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale The SCADA system needs continuous upgrading and repairs to keep it at present day standards. If the system is allowed to age, replacement components are more difficult to obtain, as well the utilization of the system becomes limited. Electronic components fail due to a variety of reasons and it is difficult to project their life expectancy. Provision includes budget for the replacement of radios that fail before the planned future upgrade of the radio system and an allowance for a study to evaluate the use of the Motorola versus the SCADA pack data handling devices. The outcome of this study will have an impact on the future radio replacements.

Proj. No. 17-03

Capital Project Title Office Equipment, Upgrades and Replacements

Capital Project Description Upgrade and replacement of office equipment as required.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale Funds will be used for the replacement and upgrading of office equipment and furniture, as required.

Proj. No. 17-04

Capital Project Title Computer Upgrades

Capital Project Description Annual upgrade and replacement program for computers, copiers, printers, network equipment as required.

Asset Class Equipment

Board Priority Area Other

Corporate Priority Area Drinking Water

Project Rationale This is an annual upgrading and replacement program of computers, photocopiers, network, monitoring and associated equipment, as required. This item has been increased from \$160,000 to \$175,000 annually to reflect actual costs.

Capital Budget

Network Switch Maintenance \$10,000

Additional Wireless Access Points and Maintenance \$15,000

Photocopier Replacement \$20,000

Additional Data Storage \$15,000

Replacement Computers \$75,000

Equipment Maintenance (contingency) \$23,000

Replace Access Control System - Gates/ Video Cameras \$12,000

Total Capital \$170,000

Service: 2.670/2.680		Regional Water Supply & JDF Water Distribution Combo			
Proj. No.	17-05	Capital Project Title	Development of the Maintenance Management Systems	Capital Project Description	Develop maintenance management system.
Asset Class	Equipment	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	The maintenance management system needs further development to meet user needs and to facilitate reporting. It is proposed that funds be approved for the following IT related projects:- <ul style="list-style-type: none">• Develop a dashboard to display information.• Investigate standardization of SAP mobile platform.				
Proj. No.	17-06	Capital Project Title	Small Equipment & Tool Replacement (Water Operations)	Capital Project Description	Replacement of tools and small equipment for Water Operations as required.
Asset Class	Equipment	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Funds will be used for replacement of a variety of Operations and Welding equipment such as cutting saws, portable generators, gas detectors, Hilti drills,plasma cutter, wire welder, etc.				
Proj. No.	17-07	Capital Project Title	Small Equipment & Tool Replacement (Corporate Fleet)	Capital Project Description	Replacement of tools and small equipment for Fleet as required.
Asset Class	Equipment	Board Priority Area	Other	Corporate Priority Area	Drinking Water
Project Rationale	Funds will be used for replacement of a variety of Fleet small equipment and tools as required. This includes provision to replace the Vehicle OBD reader for reading engine codes and the shop air compressor.				

2.680 Juan de Fuca Water Distribution
Summary Schedule
2020 - 2024 Financial Plan

Asset Profile

Juan de Fuca Water Distribution

Juan de Fuca assets include lands, office buildings, pump stations, pipe lines, meters, equipment, vehicles and other infrastructure.

Reserve/Fund Summary

	Actual	Estimate	Budget				
	2018	2019	2020	2021	2022	2023	2024
DCC Reserve Account	7,376,711	5,156,926	2,608,766	2,618,825	1,758,229	3,938,229	5,963,229
Equipment Replacement Fund	530,455	420,321	273,016	432,168	477,130	302,608	536,010
Total	7,984,769	5,654,852	2,959,389	3,128,602	2,312,970	4,318,450	6,576,854

2.680 Juan de Fuca Water Distribution
Development Cost Charges
2020 - 2024 Financial Plan

Development Cost Charges Reserve Schedule

Reserve Fund: Development Cost Charges for Juan de Fuca Water Distribution (Bylaw # 2758)

Fund: 1055 Fund Center: 101532

	Actual	Estimate	Budget				
	2018	2019	2020	2021	2022	2023	2024
Beginning Balance	5,618,263	7,376,711	5,156,926	2,608,766	2,618,825	1,758,229	3,938,229
Transfer to Cap Fund to fund DCC projects	(2,669,315)	(1,170,000)	(4,520,000)	(2,120,000)	(3,030,000)	(20,000)	(175,000)
Payment of P&I on LA 3164	(239,785)	(239,785)	(228,160)	(69,941)	(30,596)	-	-
Payment of DCC liability	(355,824)	(3,150,000)					
DCC's received From Member Municipalities	4,879,070	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000
Interest Income*	144,301	140,000					
Ending Balance \$	7,376,711	5,156,926	2,608,766	2,618,825	1,758,229	3,938,229	5,963,229

General Comments:

Development Cost Charges Reserve Funds for Juan de Fuca Water Distribution was adopted in year 2000 for the purpose of providing funds for the capital costs of water facilities in the service areas.

These Reserve funds are received from Member Municipalities as Development Cost Charges (DCC's) to provide for the capital costs attributable to water sytem capacity improvements projects specified in the DCC capital expenditure program. Municipalities collect these DCC charges through building permits that are issued to developers for subdivision development.

Future years DCC's received from member municipalities are difficult to predict, due to unknown development activity in the Municipalities, influenced by market conditions. Estimates based on recent annual collections of DCCs, and the cyclical nature of property development.

* 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.

**2.680 Juan de Fuca Water Distribution
Equipment Replacement Reserve
2020 - 2024 Financial Plan**

Equipment Replacement Reserve Schedule

Reserve Fund: Juan de Fuca Distribution Equipment Replacement Reserve (covered by CRD-ERF Bylaw)

Fund: 1022 Fund Center: 101630	Actual	Estimate	Budget				
	2018	2019	2020	2021	2022	2023	2024
Beginning Balance	994,702	530,455	420,321	273,016	432,168	477,130	302,608
Equipment purchases (Based on Capital Plan)	(761,869)	(425,000)	(425,000)	(70,000)	(210,000)	(474,000)	-
Transfer from Operating Budget	246,192	251,116	213,945	218,652	223,462	228,378	233,402
Proceeds on disposals	36,635	63,750	63,750	10,500	31,500	71,100	-
Interest Income*	14,795						
Ending Balance \$	530,455	420,321	273,016	432,168	477,130	302,608	536,010

General Comments:

Reserve Fund is used for the purpose of replacing fleet vehicles including heavy equipment and associated mobile components, as outlined in the capital plan. Proceeds from disposals are estimated at 15% of replacement equipment purchases. Note not all vehicles are sold within the year in which they are replaced.

* 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.