

# **CAPITAL REGIONAL DISTRICT**

## **2023 BUDGET**

### **Regional Water Supply**

#### **FINAL BUDGET**

MARCH 2023

Service: 2.670

**Regional Water Supply**

Commission: Regional Water Supply

**DEFINITION:**

To finance, install, operate and maintain a water supply local service in the Capital Regional District, as per the Water Supply Local Service Establishment Bylaw No. 2537.

The establishment and operation of a Regional Water Supply Commission is done by Bylaw No. 2539.

**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 Victoria  
District of Oak Bay  
District of Saanich  
Township of Esquimalt  
District of Central Saanich

Town of Sidney  
District of North Saanich  
Town of View Royal  
City of Colwood  
City of Langford

District of Metchosin  
District of Sooke  
Juan de Fuca Electoral Area  
District of Highlands

**MAXIMUM LEVY:**

No stated limit in establishment bylaw and no ability to requisition.

**MAXIMUM CAPITAL DEBT:**

Authorized: Pre Consolidated MFA Loan Authorizations - Regional Water Supply Water Works Facilities	\$137,700,000
Borrowed:	\$91,400,000
Remaining: Expired	<u>\$46,300,000</u>

Authorized: LA Bylaw No. 3451 - Regional Water Supply Land Acquisition	\$60,000,000
Borrowed:	\$60,000,000
Remaining:	<u>\$0</u>

Authorized: LA Bylaw No. 3902 - Regional Water Supply Water Works Facilities	2014	\$12,500,000
Borrowed:		\$9,500,000
Remaining: Expired		<u>\$3,000,000</u>

Authorized: LA Bylaw No. 4382 - Regional Water Supply Water Works Facilities	2021	\$46,000,000
Borrowed:		\$0
Remaining: Active		<u>\$46,000,000</u>

**FUNDING:**

Costs are recovered through the sale of bulk water.

**CAPITAL REGIONAL DISTRICT**

Program Group: CRD-Regional Water Supply

SUMMARY	2023 BUDGET REQUEST						FUTURE PROJECTIONS			
	2022 BOARD BUDGET 2	2022 ESTIMATED ACTUAL 3	2023 CORE BUDGET 4	2023 ONGOING 5	2023 ONE-TIME 6	TOTAL (COL 4, 5 & 6) 7	2024 8	2025 9	2026 10	2027 11
<b>GENERAL PROGRAM EXPENDITURES:</b>										
WATERSHED PROTECTION	5,690,703	5,444,247	5,792,432	-	150,000	5,942,432	5,908,280	6,026,443	6,146,979	6,269,911
WATER MANAGEMENT	6,272,411	6,325,911	6,683,286	-	-	6,683,286	6,815,529	6,951,848	7,090,923	7,232,778
WATER QUALITY	1,862,117	1,857,755	1,925,729	-	-	1,925,729	1,964,252	2,003,521	2,043,605	2,084,474
CROSS CONNECTION	754,239	728,934	770,923	-	-	770,923	786,607	802,440	818,594	835,085
DEMAND MANAGEMENT	705,184	730,690	726,084	-	-	726,084	740,848	755,773	770,985	786,518
INFRASTRUCTURE ENGINEERING	496,982	494,982	527,884	-	-	527,884	538,440	549,219	560,201	571,409
FLEET OPERATION & MAINTENANCE	(314,181)	(314,181)	(393,653)	-	-	(393,653)	(497,590)	(563,409)	(602,235)	(638,415)
CUSTOMER TECHNICAL SERVICES & GM SUPPORT *	581,912	620,158	604,677	-	-	604,677	617,406	630,401	643,631	657,177
<b>TOTAL OPERATING EXPENDITURES</b>	<b>16,049,367</b>	<b>15,888,496</b>	<b>16,637,362</b>	<b>-</b>	<b>150,000</b>	<b>16,787,362</b>	<b>16,873,772</b>	<b>17,156,236</b>	<b>17,472,682</b>	<b>17,798,937</b>
<i>Percentage increase over prior year's board budget</i>			3.66%			4.60%	0.51%	1.67%	1.84%	1.87%
<b>CONVEYANCE FEE FOR SERVICE TO FIRST NATIONS</b>	-	-	-	870,000	-	870,000	887,400	905,150	923,250	941,700
<b>AGRICULTURAL WATER RATE FUNDING</b>	1,700,000	1,700,000	1,750,000	-	-	1,750,000	1,800,000	1,850,000	1,900,000	1,950,000
			2.94%			2.94%	2.86%	2.78%	2.70%	2.63%
<b>CAPITAL EXPENDITURES &amp; TRANSFERS</b>										
TRANSFER TO WATER CAPITAL FUND	10,152,385	10,662,226	11,197,600	-	1,104,504	12,302,104	17,450,000	19,100,000	20,400,000	23,800,000
TRANSFER TO EQUIPMENT REPLACEMENT FUND	314,181	314,181	393,653	-	-	393,653	497,590	563,409	602,235	638,415
TRANSFER TO DEBT RESERVE FUND	30,410	-	121,700	-	-	121,700	166,630	237,630	299,530	125,630
<b>TOTAL CAPITAL EXPENDITURES &amp; TRANSFERS</b>	<b>10,496,976</b>	<b>10,976,407</b>	<b>11,712,953</b>	<b>-</b>	<b>1,104,504</b>	<b>12,817,457</b>	<b>18,114,220</b>	<b>19,901,039</b>	<b>21,301,765</b>	<b>24,564,045</b>
<b>DEBT SERVICING</b>										
DEBT - INTEREST & PRINCIPAL	8,292,927	8,292,927	7,690,985	-	-	7,690,985	3,800,836	4,811,482	6,690,276	8,760,522
<b>TOTAL DEBT EXPENDITURES</b>	<b>8,292,927</b>	<b>8,292,927</b>	<b>7,690,985</b>	<b>-</b>	<b>-</b>	<b>7,690,985</b>	<b>3,800,836</b>	<b>4,811,482</b>	<b>6,690,276</b>	<b>8,760,522</b>
<b>DEFICIT TRANSFERRED TO FOLLOWING YR</b>										
TRANSFER TO FOLLOWING YEAR DEFICIT CARRY FORWARD										
<b>TOTAL EXPENDITURES</b>	<b>36,539,270</b>	<b>36,857,830</b>	<b>37,791,300</b>	<b>870,000</b>	<b>1,254,504</b>	<b>39,915,804</b>	<b>41,476,228</b>	<b>44,623,907</b>	<b>48,287,973</b>	<b>54,015,204</b>
<b>SOURCES OF FUNDING</b>										
REVENUE - SALES	(35,926,800)	(36,256,740)	(37,087,540)	(870,000)	(150,000)	(38,107,540)	(40,727,538)	(43,804,217)	(47,406,383)	(53,307,514)
REVENUE - OTHER	(612,470)	(601,090)	(703,760)	-	(1,104,504)	(1,808,264)	(748,690)	(819,690)	(881,590)	(707,690)
<b>TOTAL SOURCE OF FUNDING FROM OPERATIONS</b>	<b>(36,539,270)</b>	<b>(36,857,830)</b>	<b>(37,791,300)</b>	<b>(870,000)</b>	<b>(1,254,504)</b>	<b>(39,915,804)</b>	<b>(41,476,228)</b>	<b>(44,623,907)</b>	<b>(48,287,973)</b>	<b>(54,015,204)</b>
TRANSFER FROM PRIOR YEAR	-	-	-	-	-	-	-	-	-	-
TRANSFER TO FOLLOWING YEAR SURPLUS CARRY FORWARD										
<b>TOTAL SOURCES OF FUNDING</b>	<b>(36,539,270)</b>	<b>(36,857,830)</b>	<b>(37,791,300)</b>	<b>(870,000)</b>	<b>(1,254,504)</b>	<b>(39,915,804)</b>	<b>(41,476,228)</b>	<b>(44,623,907)</b>	<b>(48,287,973)</b>	<b>(54,015,204)</b>
<i>Percentage increase over prior year's board budget</i>			3.43%			9.24%	3.91%	7.59%	8.21%	11.86%

**CAPITAL REGIONAL DISTRICT**  
**FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2023 to 2027**

<b>Service No.</b>	<b>2.670</b>							
	<b>Regional Water Supply</b>	<b>Carry Forward from 2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>TOTAL</b>

**EXPENDITURE**

Buildings	\$4,230,000	\$5,250,000	\$2,700,000	\$1,350,000	-	-	\$9,300,000
Equipment	\$5,020,000	\$13,545,000	\$1,660,000	\$1,360,000	\$1,715,000	\$1,090,000	\$19,370,000
Land	\$818,000	\$3,478,000	\$830,000	\$525,000	\$290,000	\$220,000	\$5,343,000
Engineered Structures	\$9,838,000	\$17,668,000	\$28,450,000	\$37,975,000	\$47,375,000	\$34,305,000	\$165,773,000
Vehicles	\$1,089,250	\$1,315,000	\$843,000	\$630,000	\$775,000	\$855,000	\$4,418,000
	<b>\$20,995,250</b>	<b>\$41,256,000</b>	<b>\$34,483,000</b>	<b>\$41,840,000</b>	<b>\$50,155,000</b>	<b>\$36,470,000</b>	<b>\$204,204,000</b>

**SOURCE OF FUNDS**

Capital Funds on Hand	\$17,570,000	\$27,256,000	\$11,340,000	\$16,710,000	\$18,390,000	\$19,615,000	\$93,311,000
Debenture Debt (New Debt Only)	-	\$9,600,000	\$14,100,000	\$21,200,000	\$27,390,000	\$10,000,000	\$82,290,000
Equipment Replacement Fund	\$885,250	\$995,000	\$843,000	\$630,000	\$775,000	\$855,000	\$4,098,000
Grants (Federal, Provincial)	\$40,000	\$40,000	\$7,200,000	\$2,300,000	\$3,600,000	\$6,000,000	\$19,140,000
Donations / Third Party Funding	\$2,500,000	\$3,365,000	\$1,000,000	\$1,000,000	-	-	\$5,365,000
Reserve Fund	-	-	-	-	-	-	-
	<b>\$20,995,250</b>	<b>\$41,256,000</b>	<b>\$34,483,000</b>	<b>\$41,840,000</b>	<b>\$50,155,000</b>	<b>\$36,470,000</b>	<b>\$204,204,000</b>

**CAPITAL REGIONAL DISTRICT**  
**FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2023 to 2027**

<b>Service No.</b>	<b>2.670/2.680</b>							
	<b>Regional Water Supply &amp; JDF Water Distribution Combo</b>	<b>Carry Forward from 2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>TOTAL</b>

**EXPENDITURE**

Buildings	\$0	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$400,000
Equipment	\$1,580,000	\$2,210,000	\$530,000	\$330,000	\$330,000	\$330,000	\$340,000	\$3,740,000
Land	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineered Structures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Vehicles	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<b>\$1,580,000</b>	<b>\$2,290,000</b>	<b>\$610,000</b>	<b>\$410,000</b>	<b>\$410,000</b>	<b>\$410,000</b>	<b>\$420,000</b>	<b>\$4,140,000</b>

**SOURCE OF FUNDS**

Capital Funds on Hand	\$1,580,000	\$2,290,000	\$610,000	\$410,000	\$410,000	\$420,000	\$420,000	\$4,140,000
Debenture Debt (New Debt Only)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment Replacement Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grants (Federal, Provincial)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Donations / Third Party Funding	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserve Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<b>\$1,580,000</b>	<b>\$2,290,000</b>	<b>\$610,000</b>	<b>\$410,000</b>	<b>\$410,000</b>	<b>\$410,000</b>	<b>\$420,000</b>	<b>\$4,140,000</b>

CAPITAL REGIONAL DISTRICT  
5 YEAR CAPITAL PLAN  
2023 - 2027

<p><b>Project Number</b> Project number format is "yy-##" "yy" is the last two digits of the year the project is planned to start. "##" is a numerical value. For example, 23-01 is a project planned to start in 2023.</p> <p>For projects in previous capital plans, use the same project numbers previously</p>	<p><b>Capital Project Description</b> 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 meets current energy standards with an expected service life of 35 years".</p>	<p><b>Carryforward from 2022</b> Input the carryforward amount from the 2022 capital plan that is remaining to be spent. Forecast this spending in 2023 to 2027.</p>	<p><b>Project Drivers</b> <b>Maintain Level of Service</b> = Project maintains existing or improved level of service. <b>Advance Board or Corporate Priority</b> = Project is a Board or Corporate priority. <b>Emergency</b> = Project is required for health or safety reasons. <b>Cost Benefit</b> = Project provide economic benefit to the organization.</p>
<p><b>Capital Expenditure Type</b> <b>Study</b> - Expenditure for feasibility and business case report. <b>New</b> - Expenditure for new asset only <b>Renewal</b> - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service <b>Replacement</b> - Expenditure replaces an existing asset</p>	<p><b>Total Project Budget</b> Provide the total project budget, even if it extends beyond the 5 years of this capital plan.</p>	<p><b>Funding Source Codes</b> Debt = Debenture Debt (new debt only) ERF = Equipment Replacement Fund Grant = Grants (Federal, Provincial) Cap = Capital Funds on Hand Other = Donations / Third Party Funding Res = Reserve Fund STLoan = Short Term Loans WU = Water Utility If there is more than one funding source, use additional rows for the project.</p>	<p><b>Long-term Planning</b> <b>Master Plan / Servicing Plan</b> = Plan that identifies new assets required to meet future needs. <b>Asset Management Plan / Sustainable Service Delivery Plan</b> = Integrated plan that identifies asset replacements based on level of service, criticality, condition, risk, replacement costs as well as external impacts. <b>Replacement Plan</b> = Plan that identifies asset replacements based primarily on asset age and/or asset material/type.</p>
<p><b>Capital Project Title</b> Input title of project. For example "Asset Name - Roof Replacement", "Main Water Pipe Replacement".</p>	<p><b>Asset Class</b> L - Land S - Engineering Structure B - Buildings V - Vehicles</p>	<p><b>Cost Estimate Class</b> Class A (±10-15%) = Estimate based on final drawings and specifications; used to evaluate tenders. Class B (±15-25%) = Estimate based on investigations, studies or preliminary design; used for budget planning. Class C (±25-40%) = Estimate based on limited site information; used for program planning. Class D (±50%) = Estimate based on little/no site information; used for long-term planning.</p>	

**Service #:** 2.670  
**Service Name:** Regional Water Supply

SECTION 1: PROJECT DESCRIPTION AND BUDGET													
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2022	2023	2024	2025	2026	2027	5 - Year Total
<b>WATERSHED PROTECTION</b>													
<b>Planning</b>													
17-01	Renewal	Historic Goldstream Powerhouse Building	Repairs of historic Goldstream Powerhouse building and work toward making the site accessible to the public	\$120,000	B	WU	-	\$20,000	-	\$50,000	-	-	\$70,000
<b>17-01</b>				<b>\$376,000</b>	<b>B</b>	<b>Grant</b>	-	-	-	<b>\$300,000</b>	-	-	\$300,000
18-10	Study	Species-at-Risk Wildlife Habitat	Assessments (office and field) and planning for managing wildlife habitat, in particular species-at-risk habitat, in the GVWSA.	\$185,000	L	WU	-	\$50,000	-	-	-	-	\$50,000
19-30	Study	Leech WSA Lakes/Tributaries Assessment	An assessment of the physical, chemical and biological parameters of the lakes in the Leech WSA	\$75,000	L	WU	\$38,000	\$38,000	-	-	-	-	\$38,000
20-05	Renewal	Leech WSA Terrestrial Ecosystem Mapping & Wetland Classification/Mapping	Classification and mapping of terrestrial ecosystems and wetlands and integration with Sooke and Goldstream data.	\$180,000	L	WU	\$180,000	\$180,000	-	-	-	-	\$180,000
20-06	Study	Addressing mining in Leech WSA (impacts, agreements)	Funding to support work to reduce the impact of mining claims in the Leech WSA	\$60,000	L	WU	-	\$10,000	\$10,000	\$10,000	\$10,000	-	\$40,000
20-27	Study	GVWSA Forest Resilience - wildfire/forest modelling and forest management field trials	Modelling forest and wildfire risk under climate change scenarios & forest/fuel management field trials.	\$625,000	L	WU	\$120,000	\$120,000	\$50,000	-	-	-	\$170,000
20-27					L	Other		\$365,000	-	-	-	-	\$365,000
20-28	Study	GVWSA Forest Resilience - Assessments of forest health and resilience	Field assessments to better understand current forest health and resilience.	\$230,000	L	WU	\$110,000	\$110,000	\$60,000	-	-	-	\$170,000
21-19	Study	Lakes Assessment Sooke and Goldstream WSAs	An assessment of the physical, chemical and biological parameters of the natural lakes in Sooke and Goldstream WSAs	\$75,000	L	WU	\$15,000	\$15,000	-	-	-	-	\$15,000
21-20	Study	West Leech Road	Plan followed by construction of a road to access the western portion of the Leech WSA.	\$320,000	L	WU	\$50,000	\$150,000	\$100,000	-	-	-	\$250,000
23-02	Renewal	GVWSA LiDAR Mapping	Detailed contour mapping of ground, vegetation and tree cover (3D scanning)	\$250,000	L	WU	-	\$200,000	\$50,000	-	-	-	\$250,000
22-04	Renewal	GVWSA Orthophotography	Annual contribution to capture of regional digital orthophotography for baseline mapping and monitoring.	\$95,000	L	WU	\$15,000	\$30,000	-	\$35,000	-	\$40,000	\$105,000
22-09	Study	GVWSA Powerlines Wildfire Risk Mitigation Plan	A detailed assessment, options and plan to reduce the risk of wildfire start from tree fall onto CRD powerlines in the GVWSA.	\$50,000	L	WU	\$40,000	\$40,000	-	-	-	-	\$40,000
22-10	New	GVWSA/RWS Educational Videos	Development of educational videos to address Regional Water Supply issues of interest to the public such as: wildfire risk and mitigation; climate change; water supply master plan update.	\$60,000	L	WU	\$30,000	\$30,000	\$30,000	-	-	-	\$60,000
23-05	Study	Spill Management Plan and Implementation	Review, assessment and re-development of a spill management plan for the GVWSA along with potential procurement of additional equipment or supplies.	\$50,000	L	WU	\$25,000	\$25,000	-	-	-	-	\$25,000
<b>24-03</b>	<b>Study</b>	<b>Biosecurity Risk Assessment &amp; Procedures</b>	<b>Assess GVWSA biosecurity risks and develop mitigating protocols/procedures</b>	<b>\$50,000</b>	L	WU	-	-	\$50,000	-	-	-	\$50,000



Service #: 2.670

Service Name: Regional Water Supply

**SECTION 1: PROJECT DESCRIPTION AND BUDGET**

Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2022	2023	2024	2025	2026	2027	5 - Year Total
<b>Capital</b>													
09-01	Renewal	Leech River Watershed Restoration	A 17 year project to restore the Leech WSA lands for water supply.	\$5,756,000	L	WU	\$125,000	\$325,000	\$200,000	\$200,000	-	-	\$725,000
16-01	Renewal	Replace Gatehouse at Goldstream Entrance	The GVWSA entry gatehouse at Goldstream is past end of life and is to be replaced with a purpose built structure with improved vehicle flow and security function	\$1,800,000	B	WU	\$1,280,000	\$1,280,000	-	-	-	-	\$1,280,000
16-06	Renewal	Goldstream IWS Field Office1	Renewal of Water Quality field office/lab and equipment storage and Watershed Protection office, yard, training space and equipment storage, replacing longstanding temporary facilities.	\$3,200,000	B	WU	\$450,000	\$950,000	\$1,700,000	-	-	-	\$2,650,000
16-06				\$5,000,000	B	Other	\$2,500,000	\$3,000,000	\$1,000,000	\$1,000,000	-	-	\$5,000,000
17-02	New	Leech River HydroMet System	Installation of a network of hydrometeorological stations to collect water quantity and quality information for the Leech WSA.	\$540,000	E	WU	\$40,000	\$80,000	-	-	-	-	\$80,000
18-05	New	GVWSA Forest Fuel Management/FireSmart Activities	Implementation of forest fuel management and FireSmart actions in strategic locations for wildfire risk management in the GVWSA.	\$850,000	L	WU	\$10,000	\$110,000	\$100,000	\$100,000	\$100,000	\$100,000	\$510,000
19-02	New	Whiskey Creek Bridge Replacement (Sooke WSA)	Replacement of the existing undersized bridge with a longer and higher concrete structure.	\$330,000	S	WU	-	\$30,000	\$300,000	-	-	-	\$330,000
19-19	New	Hydromet Upgrades Sooke and Goldstream	Install additional hydrology monitoring sites on Sooke Lake Reservoir inflow streams and increase instrumentation on meteorological stations in Sooke and Goldstream watersheds.	\$230,000	E	WU	-	\$60,000	-	-	-	-	\$60,000
20-01	Replacement	Kapoor Main Mile 1 Bridge and Asphalt Upgrade	Replacement of the existing undersized culvert with a large bridge as well as subsequent 500 m road asphalt replacement.	\$610,000	S	WU	\$390,000	\$440,000	\$160,000	-	-	-	\$600,000
20-29	Renewal	GVWSA Gravel Crushing	Production of gravel at existing quarries in Sooke and Goldstream WSAs.	\$650,000	S	WU	-	-	\$100,000	-	\$200,000	-	\$300,000
21-26	New	Road Deactivation/Rehabilitation in the GVWSA	Deactivate or rehabilitate unneeded roads in the Sooke and Goldstream WSAs.	\$520,000	L	WU	\$60,000	\$100,000	\$100,000	\$100,000	\$100,000	-	\$400,000
21-27	New	Autogate Installations on Primary Access Routes	Install autogates on the main access routes where the Sooke Hills Wilderness Trail and E&N rail line cross to improve security	\$850,000	S	WU	-	-	\$350,000	-	-	-	\$350,000
22-02	New	Muckpile Bridge Supply and Install (Deception)	Replacement of undersized culverts with bridge which will allow for fish and western toad migration.	\$340,000	S	WU	-	\$15,000	-	\$325,000	-	-	\$340,000
23-04	Renewal	17S/Sooke Main Bridge Replacement	Undersized bridge replacement	\$315,000	S	WU	-	-	\$15,000	-	\$300,000	-	\$315,000
22-11	New	Additional Boom Anchors for Sooke Lake Reservoir debris boom	The log boom protecting the Sooke Lake Reservoir Intake Tower from floating woody debris is inadequately anchored and requiring two additional anchors.	\$60,000	E	WU	\$30,000	\$50,000	-	-	-	-	\$50,000
23-10	New	Work platform for Sooke Lake Reservoir	A towable work platform for conducting stationary on-water work activities such as boom and intake tower maintenance and spill response.	\$30,000	E	WU	-	\$30,000	-	-	-	-	\$30,000
23-11	New	Purchase and deployment of Second Wildfire Camera for Leech WSA, and analytic software	A secondary wildfire camera to monitor for heat and smoke signatures in the Leech WSA during fire season.	\$100,000	E	WU	-	\$50,000	\$50,000	-	-	-	\$100,000
23-23	Replacement	Brushcutting head for Excavator	The existing brushcutting head from the excavator used in roadside maintenance has reached end of life and requires replacement.	\$30,000	V	WU	-	\$30,000	-	-	-	-	\$30,000
<b>WaterShed Protection Sub-Total</b>				<b>\$24,012,000</b>			<b>\$5,508,000</b>	<b>\$7,933,000</b>	<b>\$4,425,000</b>	<b>\$2,120,000</b>	<b>\$710,000</b>	<b>\$140,000</b>	<b>\$15,328,000</b>
<b>INFRASTRUCTURE ENGINEERING AND OPERATIONS</b>													
<b>Planning</b>													
16-10	New	Post Disaster Emergency Water Supply	Identify and procure emergency systems for post disaster preparedness.	\$2,250,000	S	WU	\$423,000	\$623,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,423,000
17-13	New	Asset Management Plan	Development of a plan to inform future areas of study and highlight critical infrastructure improvements.	\$400,000	S	WU	\$200,000	\$200,000	-	-	-	-	\$200,000
19-15	New	Hydraulic Capacity Assessment and Transient Pressure Analysis	Determine the existing level-of-service for the RWSC transmission system and conduct a transient pressure analysis	\$250,000	S	WU	\$100,000	\$100,000	-	-	-	-	\$100,000
20-08	Study	Regional Water DCC Program	Design of a Regional DCC Program	\$200,000	S	WU	\$50,000	\$50,000	-	-	-	-	\$50,000
20-10	Study	Condition & Vulnerability Assessment	Conduct a condition assessment of critical supply infrastructure and assess its possibility of risk.	\$200,000	S	WU	\$50,000	\$50,000	-	-	-	-	\$50,000
21-05	Study	Level of Service Agreement	From #19-15 & #20-11, develop level-of-service agreements for participating municipalities to address hydraulic capacity of infrastructure.	\$150,000	S	WU	\$150,000	\$150,000	-	-	-	-	\$150,000
23-12	Study	Project Delivery Strategy	Develop a strategy to deliver the identified projects from the 2022 RWS Master Plan.	\$200,000	S	WU	-	\$200,000	-	-	-	-	\$200,000
23-13	Study	Filtration Plant Planning & Design	Conduct a siting, conceptual design and detailed design for a filtration plant	\$16,300,000	S	WU	-	\$300,000	\$500,000	\$500,000	\$5,000,000	\$10,000,000	\$16,300,000
23-14	Study	Council Creek Crossing Hydrology Review	Conduct a hydrology review of the Council Creek crossing of water mains to ensure pipe resilience during high rainfall events.	\$100,000	S	WU	-	\$100,000	-	-	-	-	\$100,000
23-24	New	East-West Connector (Filtration Plant to District of Sooke)	Planning and Conceptual Design of the East- West Supply Main from the proposed filtration plant to the District of Sooke (identified in the 2022 Master Plan)	\$400,000	S	WU	-	-	-	-	\$200,000	\$200,000	\$400,000
23-25	New	Deep Northern Intake and Sooke Lake Pump Station	Planning and Design of the Deep Northern Intake and Sooke Lake Pump Station (identified in the 2022 Master Plan)	\$12,200,000	S	WU	-	\$600,000	\$600,000	\$3,000,000	\$4,000,000	\$4,000,000	\$12,200,000
23-26	New	Transmission Main - Sooke Lake Pump Station to Head Tank	Planning and Design of the Transmission Main from the Sooke Lake Pump Station to Head Tank (identified in the 2022 Master Plan)	\$3,400,000	S	WU	-	\$200,000	\$200,000	\$1,000,000	\$1,000,000	\$1,000,000	\$3,400,000
23-27	New	Gravity Main - Sooke Lake to Head Tank	Planning and Design of a Gravity Transmission Main (redundancy) from Sooke Lake to Head Tank (identified in the 2022 Master Plan)	\$1,400,000	S	WU	-	\$100,000	\$300,000	\$500,000	\$500,000	-	\$1,400,000
23-28	New	Goldstream Reservoir Connector	Planning and Design of the Goldstream Reservoir Connector transmission main	\$4,600,000	S	WU	-	\$100,000	\$500,000	\$2,000,000	\$2,000,000	-	\$4,600,000
<b>Capital</b>													
18-07	New	Replacement of UV System	Replacement of the UV system at the Goldstream Water Treatment Plant	\$8,730,000	E	WU	\$2,850,000	\$8,300,000	-	-	-	-	\$8,300,000
18-08	Replacement	Bulk Supply Meter Replacement Program	Planned replacement of aging bulk meter replacement based upon a condition assessment and water audit.	\$2,050,000	E	WU	\$600,000	\$600,000	-	\$200,000	\$200,000	\$150,000	\$1,150,000

Service #: 2.670

Service Name: Regional Water Supply

**SECTION 1: PROJECT DESCRIPTION AND BUDGET**

Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2022	2023	2024	2025	2026	2027	5 - Year Total
18-15	Renewal	Corrosion Protection Program	Study deficiencies in the current material protection and implement recommendations.	\$1,150,000	S	WU	-	\$150,000	\$150,000	\$150,000	\$150,000	-	\$600,000
18-18	Replacement	Main No.3 Segment Replacement	Replacement of segments of Main No. 3 based upon previous studies.	\$15,600,000	S	WU	\$800,000	\$800,000	\$4,900,000	\$4,900,000	\$4,900,000	-	\$15,500,000
19-05	Renewal	Repairs - Kapoor Shutdown	Repair items such as defects in the Kapoor tunnel, replacement of critical valves, intake exterior inspection and actuator replacement while the Kapoor tunnel is shutdown.	\$600,000	S	WU	\$375,000	\$375,000	-	\$100,000	-	-	\$475,000
19-23	New	Critical Spare Equipment Storage & Pipe Yard	Plan, design and construct a critical equipment storage building.	\$1,100,000	S	WU	\$200,000	\$200,000	\$1,000,000	-	-	-	\$1,200,000
20-16	Replacement	Cecelia Meter Replacement	Replacement of the Cecelia billing meter as well as its enclosure.	\$1,000,000	S	WU	\$50,000	\$450,000	-	-	-	-	\$450,000
20-17	Replacement	Decommission & Conceptual Design of the Smith Hill Site	Plan for decommission the conceptual design for the replacement of the Smith Hill reservoir site.	\$1,300,000	S	WU	\$300,000	\$300,000	\$1,000,000	-	-	-	\$1,300,000
21-06	Replacement	Sooke Lake Dam Spillway Hoist and Stop Log Replacement	Replacement of the sluice gate spillway hoist and stop logs at Sooke Lake Dam.	\$775,000	E	WU	\$260,000	\$510,000	\$250,000	-	-	-	\$760,000
21-09	New	Goldstream Water Chlorination Gas System Removal	Plan and construct provisions for removal of chlorination system	\$200,000	S	WU	\$100,000	\$100,000	-	-	-	-	\$100,000
21-10	Replacement	SCADA Masterplan and System Upgrades	Update the SCADA Master Plan in conjunction with the Juan de Fuca Water Distribution, Saanich Peninsula Water and Wastewater, and Core Area Wastewater Services.	\$2,150,000	E	WU	\$500,000	\$800,000	\$300,000	\$300,000	\$300,000	\$300,000	\$2,000,000
21-11	Replacement	RWS Supply Main No. 4 Upgrade	Upgrade vulnerable sections of the RWS Supply Main No. 4 and Main No. 1 to a resilient system to better able to withstand a seismic event. Vulnerable sections are Concrete Cylinder pipe material which is susceptible to failure during a seismic event. This is part of project partnered with the Saanich Peninsula Water system.	\$33,900,000	S	WU	\$1,500,000	\$3,300,000	\$4,500,000	\$11,400,000	\$13,500,000	\$1,200,000	\$33,900,000
21-11			DMAF Grant portion, grant submitted November 2021.	\$14,800,000	S	Grant	-	-	\$1,200,000	\$2,000,000	\$3,600,000	\$6,000,000	\$12,800,000
22-14	New	Sooke River Intake Feasibility	A feasibility study for an intake from Sooke River to replace the Main No. 15 salmon fishery contribution, for a variety of reasons.	\$50,000	S	WU	\$50,000	\$50,000	-	-	-	-	\$50,000
22-15	New	Microwave Radio Upgrades	To provide a high bandwidth communications backbone to the RWS system, a microwave communications system will be installed.	\$1,100,000	S	WU	\$200,000	\$400,000	\$200,000	\$200,000	\$200,000	-	\$1,000,000
22-16	Renewal	Goldstream WTP Drainage Improvements	Construct drainage improvements for the Goldstream Water Treatment Plant and assess	\$200,000	S	WU	\$100,000	\$100,000	-	-	-	-	\$100,000
22-17	New	Goldstream WTP Safety Improvements	Construct employee and public safety improvements such as a trail notification system if there was an ammonia spill.	\$200,000	E	WU	\$50,000	\$50,000	-	-	-	-	\$50,000
23-15	New	Mt Tolmie Reservoir Security	Conduct public consultation with conceptual designs for site security required at the Mt Tolmie Reservoir	\$60,000	S	WU	-	\$10,000	\$50,000	-	-	-	\$60,000
23-16	Renewal	Humpback Channel Assessment and Upgrades	Hydraulically assess the Humpback Overflow channel and conduct a condition assessment of the culverts at the Gatehouse.	\$200,000	S	WU	-	\$200,000	-	-	-	-	\$200,000
23-17	Replacement	Main No. 4 - Mt Newton to Highway 17	Replacement of a approximately 1.9km of the Main No. 4 concrete pipe from Mt Newton and Central Saanich Road south to where it crosses Highway 17. A Strategic Priorities Fund grant has been applied to fund a portion of the works.	\$2,800,000	S	WU	-	\$2,800,000	-	-	-	-	\$2,800,000
23-17				\$6,000,000	S	Grant	-	-	\$6,000,000	-	-	-	\$6,000,000
25-03	Renewal	Transmission Main Upgrade Program	Identify, conceptually design, detail design and construct transmission main upgrades.	\$30,000,000	S	WU	-	-	-	\$10,000,000	\$10,000,000	\$10,000,000	\$30,000,000
23-29	Renewal	Mt. Tolmie Control Valve Replacement	Supply and installation of the Mt. Tolmie Reservoir Control Valve	\$300,000	E	WU	-	\$300,000	-	-	-	-	\$300,000
													\$0
<b>Infrastructure Engineering and Operations Sub-Total</b>				<b>\$166,315,000</b>			<b>\$8,908,000</b>	<b>\$22,568,000</b>	<b>\$21,850,000</b>	<b>\$36,450,000</b>	<b>\$45,750,000</b>	<b>\$33,050,000</b>	<b>\$159,668,000</b>
<b>DAM SAFETY PROGRAM</b>													
<b>(Database)</b>													
16-16	Renewal	Implications from Goldstream Dam Safety Review	Conduct dam improvements at the Goldstream dams that resulted for the Dam Safety Review and routine inspections (refer to the Dam Safety Database).	\$825,000	S	WU	\$200,000	\$275,000	\$75,000	-	-	-	\$350,000
16-17	Renewal	Butchart Dam No. 5 Remediation Planning & Construction	Phase 1 Rehabilitation (grouting) of Butchart Dam No. 5 and planning for Phase 2.	\$3,550,000	S	WU	\$2,000,000	\$50,000	\$1,950,000	-	-	-	\$2,000,000
17-25	Renewal	Implications from Sooke Lake Dam Safety Review	Conduct dam improvements at the Sooke Lake Dam that resulted from the Dam Safety Review and routine inspections (refer to the Dam Safety Database)	\$1,210,000	S	WU	\$400,000	\$400,000	-	-	-	-	\$400,000
18-19	New	Sooke Lake Dam - Instrumentation System Improvements	Complete dam performance instrumentation system/surveillance improvements for the Sooke Lake Dam.	\$1,800,000	S	WU	\$850,000	\$950,000	\$600,000	-	-	-	\$1,550,000
18-20	New	Sooke Lake Dam - Breach Risk Reduction Measures	Implement measures to reduce Sooke Lake Dam breach implications in the unlikely event of dam failure (refer to the NHC Consulting study).	\$600,000	S	WU	\$500,000	\$250,000	\$250,000	-	-	-	\$500,000
19-07	New	Integrate Dam Performance and Hydromet to SCADA	Integrate the dam safety instrumentation/surveillance (i.e. piezometers and weirs) and HydroMet stations to report to WIO through the existing SCADA system.	\$1,300,000	E	WU	\$400,000	\$600,000	\$200,000	\$200,000	\$200,000	-	\$1,200,000
19-09	New	Cabin Pond Dams Decommissioning	The Cabin Pond Dams (x2) have been retired from drinking water service, plan to decommission.	\$100,000	S	WU	-	-	\$100,000	-	-	-	\$100,000
19-12	New	Goldstream Dams Instrumentation Improvements	Conduct dam safety instrumentation/surveillance improvements (refer to report from Thurber Engineering).	\$600,000	S	WU	\$75,000	\$175,000	\$400,000	-	-	-	\$575,000
19-13	New	Dam Safety Instrumentation	The existing dam safety instrumentation/surveillance equipment is getting older and will need to be replaced/rehabilitated (does not include pending SCADA effort).	\$300,000	E	WU	\$150,000	\$250,000	\$50,000	-	-	-	\$300,000
20-19	Replacement	Goldstream System High Level Outlet Valve Replacements	The Goldstream and Butchart high level outlet valves have been identified as requiring replacement.	\$300,000	S	WU	\$150,000	\$250,000	-	-	-	-	\$250,000
21-03	New	Deception Dam - Dam Safety Review 2021 & Improvements	Conduct a Dam Safety Review and improvements for the Deception Dam.	\$1,800,000	S	WU	\$175,000	\$375,000	\$200,000	\$100,000	\$500,000	\$500,000	\$1,675,000
21-04	New	Saddle Dam - Dam Safety Review 2021 & Improvements	Conduct a Dam Safety Review and improvements for the Saddle Dam.	\$800,000	S	WU	\$100,000	\$200,000	\$150,000	\$200,000	\$75,000	\$75,000	\$700,000
21-21	Replacement	Goldstream Dams - 4 Low Level Gate Improvements	Logistics planning in 2022, installation in 2023	\$150,000	S	WU	\$150,000	\$150,000	-	-	-	-	\$150,000
22-08	New	Deception Dam Surveillance Improvements	Replace and supplement the Dam Safety Instrumentation at Deception Dam.	\$450,000	S	WU	\$150,000	\$150,000	\$300,000	-	-	-	\$450,000



Service #: 2.670

Service Name: Regional Water Supply

**SECTION 1: PROJECT DESCRIPTION AND BUDGET**

Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2022	2023	2024	2025	2026	2027	5 - Year Total
23-07	Renewal	Sooke Lake Dam Spillway and Gates Retrofit	Detail and construct seismic retrofits for the existing structures initially focusing on the spillway and gates structures.	\$450,000	S	WU	-	\$150,000	\$300,000	-	-	-	\$450,000
23-08	Study	Regional Watershed Dams – Flood Forecasting System	Update the existing flood forecasting system (WD4Cast) to a modern version including Standard Operating Procedures and training for staff.	\$300,000	S	WU	-	\$150,000	\$150,000	-	-	-	\$300,000
23-09	Study	Sooke Lake Dam - Dam Safety Review 2023	Conduct a Dam Safety Review to meet regulatory requirement.	\$200,000	S	WU	-	\$200,000	-	-	-	-	\$200,000
23-18	Renewal	Sooke Lake Dam Spillway Channel Improvements	Construct bank protection for the Sooke Spillway Channel and clear the seepage weir blockage.	\$700,000	S	WU	-	\$200,000	\$500,000	-	-	-	\$700,000
23-19	Renewal	Charters Dam - Implications from Dam Safety Review	Carry out recommendations from the 2022 Dam Safety Review for Charters Dam	\$200,000	S	WU	-	\$100,000	\$100,000	-	-	-	\$200,000
25-01	Study	Goldstream Dam - Dam Safety Review 2025 & Addressing Implications	Conduct a Dam Safety Review to meet regulatory requirement.	\$200,000	S	WU	-	-	-	\$200,000	-	-	\$200,000
25-02	Study	Probable Maximum Flood and Inflow Design Flood Updates	Update the previous edition from 2015 (recommended 10 year review cycle).	\$150,000	S	WU	-	-	-	\$150,000	-	-	\$150,000
<b>Dam Safety Program Sub-Total</b>				<b>\$15,985,000</b>			<b>\$5,300,000</b>	<b>\$4,875,000</b>	<b>\$5,325,000</b>	<b>\$850,000</b>	<b>\$775,000</b>	<b>\$575,000</b>	<b>\$12,400,000</b>
<b>WATER QUALITY</b>													
20-04	New	Sooke Lake HyDi Model Development	Critical data collection, model building+calibration, model utilization for 3 different scenarios	\$520,000	E	WU	-	\$120,000	\$120,000	-	-	-	\$240,000
22-06	Study	Sooke Lake Food Web Study	Assess the aquatic food web structure and create an inventory of fish and invertebrate species and distribution in Sooke Lake Reservoir - to be used as indicators of stream health	\$100,000	S	WU	\$50,000	\$50,000	-	-	-	-	\$50,000
23-06	Study	GVDWS Nitrification Study	Investigate nitrification occurrence and potential impacts on drinking water quality	\$50,000	S	WU	-	\$50,000	-	-	-	-	\$50,000
24-02	Replacement	Boat Motor Replacement with Electric Outboards (Sooke and Goldstream Boats)	50hp and 15hp motor replacement due to age and water quality concerns, large electric outboards are already available from Torqeedo for instance	\$60,000	E	WU	\$60,000	\$60,000	-	-	-	-	\$60,000
24-04	Study	Sooke Lake Drawdown Study	Investigate drawdown effects on Sooke Lake water quality and ecosystem impacts with max drawdown and determine a safe max drawdown level for SOL.	\$100,000	S	WU	-	-	\$100,000	-	-	-	\$100,000
25-04	Replacement	4 x multi-parameter field analyzers (SL1000)	Replace 4 multi-parameter (total/free/mono/ammonia) field analyzers	\$20,000	E	WU	-	-	-	\$20,000	-	-	\$20,000
26-01	New	2 x Floating Water Quality Sensor Platforms	To support and confirm water quality data in SOL for Deep Norther Intake, install 2 floating sensor platforms	\$200,000	E	WU	-	-	-	-	\$200,000	-	\$200,000
27-01	Study	Drinking Water Safety Plan Update	Review and update existing DWSP spreadsheet and risk registry. Consider planned system expansions/upgrades.	\$80,000	S	WU	-	-	-	-	-	\$80,000	\$80,000
<b>Water Quality Sub-Total</b>				<b>\$1,130,000</b>			<b>\$110,000</b>	<b>\$280,000</b>	<b>\$220,000</b>	<b>\$20,000</b>	<b>\$200,000</b>	<b>\$80,000</b>	<b>\$800,000</b>
<b>ANNUAL PROVISIONAL</b>													
17-27	Replacement	Watershed Bridge and Culvert Replacement	Replacement of small culverts and bridges throughout the GVWSA.	\$1,000,000	S	WU	-	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
17-28	Replacement	Watershed Security Infrastructure Upgrade and Replacement	New, upgrade and replacement of security infrastructure in the GVWSA.	\$600,000	E	WU	-	\$150,000	\$150,000	\$100,000	\$100,000	\$100,000	\$600,000
17-29	Replacement	Water Supply Area Equipment Replacement	Hydrometeorological, fireweather and wildfire suppression equipment replacement.	\$575,000	E	WU	-	\$115,000	\$115,000	\$115,000	\$115,000	\$115,000	\$575,000
17-30	Replacement	Transmission Main Repairs	Emergency repairs to the transmission mains.	\$1,000,000	S	WU	-	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
17-31	Replacement	Transmission System Components Replacement	Replacement and repair of transmission components.	\$400,000	S	WU	-	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$400,000
17-33	Replacement	Disinfection Equipment Parts Replacement	Replacement of incidental equipment and parts associated with the disinfection system.	\$1,000,000	E	WU	-	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
17-34	Renewal	Supply System Computer Model Update	Annual update of the regional hydraulic model.	\$100,000	S	WU	-	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
19-16	Replacement	Dam Improvements	Items not covered by Dam Safety Reviews, but brought up in Dam Safety Inspections and Dam Safety Reviews and address item in the dam safety database/risk registry	\$1,500,000	S	WU	-	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,500,000
19-22	Replacement	SCADA Repairs & Equipment Replacement	Items not covered by the SCADA Replacement and SCADA Master Plan, but integral in maintaining the SCADA System and revenue meter system.	\$750,000	E	WU	-	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$750,000
21-15	Replacement	Corrosion Protection	Replace corrosion protection assets, such as coatings, for the transmission system when identified.	\$250,000	S	WU	-	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
21-16	Replacement	Valve Chamber Upgrades	Replace failing valves and appurtenances along the RWS supply system.	\$1,000,000	S	WU	-	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
21-17	Replacement	Water Quality Equipment Replacement	Replacement of water quality equipment for the water quality lab and water quality operations	\$250,000	E	WU	-	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
21-18	Renewal	LIMS support	Support for LIMS database	\$125,000	E	WU	-	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
23-20	Study	Land Exchange/Acquisition	Land surveys, appraisals to support decisions regarding land exchange to increase catchment area, buffer water supply areas and other possible land exchange and acquisition within the RWS system.	\$400,000	L	WU	-	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$400,000
<b>Annual Provisional Sub-Total</b>				<b>\$8,950,000</b>			<b>\$0</b>	<b>\$1,820,000</b>	<b>\$1,820,000</b>	<b>\$1,770,000</b>	<b>\$1,770,000</b>	<b>\$1,770,000</b>	<b>\$8,950,000</b>
<b>CUSTOMER AND TECHNICAL SERVICES</b>													
17-35	Replacement	Vehicle & Equipment Replacement (Funding from Replacement Fund)	This is for replacement of vehicles and equipment used by CRD Water Services for the day-to-day operation and maintenance of the supply system.	\$2,873,000	V	ERF	\$885,250	\$995,000	\$843,000	\$630,000	\$775,000	\$855,000	\$4,098,000
20-22	New	Vehicle for the Dam Safety Program	New Transit Van	\$100,000	V	WU	\$80,000	\$100,000	-	-	-	-	\$100,000
20-23	New	Vehicle for the CSE Support Program	New Transit Van	\$100,000	V	WU	\$62,000	\$100,000	-	-	-	-	\$100,000
21-30	New	Vehicle for Warehouse Operations	New pick up	\$90,000	V	WU	\$62,000	\$90,000	-	-	-	-	\$90,000
22-18	New	Electric Vehicle Charging Stations	7 Dual charging stations at 479 Island Hwy and 1 Dual charging station at the Watershed Protection FOC	\$80,000	E	WU	\$40,000	\$40,000	-	-	-	-	\$40,000
22-18					E	Grant	\$40,000	\$40,000	-	-	-	-	\$40,000

Service #: 2.670  
 Service Name: Regional Water Supply

SECTION 1: PROJECT DESCRIPTION AND BUDGET													
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2022	2023	2024	2025	2026	2027	5 - Year Total
23-21	New	EV Charging Stations Electrical Infrastructure	Electrical System upgrades at 479 Island Hwy to power up 44 charging stations	\$855,000	E	WU	-	\$680,000	-	-	\$175,000	-	\$855,000
23-22	New	Fuel Truck	Fuel tender truck	\$200,000	E	WU	-	\$200,000	-	-	-	-	\$200,000
23-30	New	Fleet Shop Hoist	Heavy Capacity Hoist for fleet maintenance	\$35,000	E	WU	-	\$35,000	-	-	-	-	\$35,000
23-31	New	Purchase of land	Purchasing of land near 479 for future office space	\$1,500,000	L	WU	-	\$1,500,000				-	\$1,500,000
Customer and Technical Services Sub-Total				\$5,833,000			\$1,169,250	\$3,780,000	\$843,000	\$630,000	\$950,000	\$855,000	\$7,058,000
<b>GRAND TOTAL</b>				<b>\$222,225,000</b>			<b>\$20,995,250</b>	<b>\$41,256,000</b>	<b>\$34,483,000</b>	<b>\$41,840,000</b>	<b>\$50,155,000</b>	<b>\$36,470,000</b>	<b>\$204,204,000</b>

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<b>Project Number</b>	17-01	<b>Capital Project Title</b>	Historic Goldstream Powerhouse Building	<b>Capital Project Description</b>	Repairs of historic Goldstream Powerhouse building and work toward making the site accessible to the public
<b>Project Rationale</b>	<p>Located near the Japan Gulch Treatment Plant and the Sooke Hills Wilderness Trail (Trans Canada Trail), is an 1897 brick hydroelectric powerplant that served Victoria (notably the streetcars) for approx. 60 years. The Powerhouse has its own Wikipedia entry: <a href="http://en.wikipedia.org/wiki/Lubbe_Powerhouse">http://en.wikipedia.org/wiki/Lubbe_Powerhouse</a> and has captured public interest as a unique structure in BC history. An engineering condition assessment including engineered drawings, site plan and approximate cost of repairs was conducted in 2017. A major repair in the masonry on the north side of the building was completed in 2018. Further masonry and major crack repair was completed on the south side in 2019 (\$10,000). A successful grant application (\$76,000) was used in 2022 to replace the roof membrane/envelope. <b>The approved 2023 funds are to implement basic public interpretation signage and in 2025 to plan and seek grant funding or sponsors for security gates and fencing working toward a goal to make the site available to the public from the nearby Sooke Hills Wilderness Trail.</b></p>				

<b>Project Number</b>	18-10	<b>Capital Project Title</b>	Species-at-Risk Wildlife Habitat	<b>Capital Project Description</b>	Assessments (office and field) and planning for managing wildlife habitat, in particular species-at-risk habitat, in the GVWSA.
<b>Project Rationale</b>	<p>An assessment (office and field) and conservation plan for managing wildlife habitat, in particular species-at-risk habitat, in the GVWSA. Funds in 2018 (\$35,000) will be used for compilation of existing knowledge of species, distribution, habitat, research. Funds in 2019 and 2020 (\$50,000 each) will be used to field verify species, critical habitat and movement corridors. Funds added in 2021 (\$25,000) are to develop a GVWSA specific conservation plan based on the office and field investigations. Funds added in 2023 are in anticipation of future habitat mapping required to address BC Species-at-Risk legislation (currently being developed).</p>				

<b>Project Number</b>	19-30	<b>Capital Project Title</b>	Leech WSA Lakes/Tributaries Assessment	<b>Capital Project Description</b>	An assessment of the physical, chemical and biological parameters of the lakes in the Leech WSA
<b>Project Rationale</b>	<p>To assess restoration of the Leech Water Supply Area and prepare for use of Leech River water to supplement Sooke Lake Reservoir, baseline monitoring of the hydrological, physical, chemical and biological parameters of the main Leech WSA source waterbodies will be conducted. The work will be undertaken in conjunction with the Water Quality division. (Action from the 2017 Strategic Plan for Regional Water Supply).</p>				

<b>Project Number</b>	20-05	<b>Capital Project Title</b>	Leech WSA Terrestrial Ecosystem Mapping & Wetland Classification/Mapping	<b>Capital Project Description</b>	Classification and mapping of terrestrial ecosystems and wetlands and integration with Sooke and Goldstream data.
<b>Project Rationale</b>	<p>The existing Leech WSA terrestrial ecosystem mapping received from the previous landowner is not consistent with that of Sooke and Goldstream WSAs. The project is to renew the ecosystem mapping to a standard that matches Sooke and Goldstream for consistent data and analysis. There has been no detailed mapping of Leech WSA wetlands. The project is to conduct detailed wetland mapping in the Leech WSA to a standard that matches Sooke and Goldstream for consistent data and analysis. The projects have been combined (ecosystem mapping (20-05) and wetland mapping (20-06) and moved forward from 2020 to 2021. The project has been further moved forward from 2021 to 2022. <b>The project has been further moved forward from 2022 to 2023. It is advantageous to wait for advances in technology and partners (BC) which may improve the product and/or reduce costs.</b></p>				

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**Project Number** 20-06 **Capital Project Title** Addressing mining in Leech WSA (impacts, agreements) **Capital Project Description** Funding to support work to reduce the impact of mining claims in the Leech WSA

**Project Rationale** Assessment and/or studies and/or funds to buy and cancel mining claims to mitigate impacts from mining activities and with the goal of reducing mining claims in the Leech Water Supply Area.

**Project Number** 20-27 **Capital Project Title** GVWSA Forest Resilience - wildfire/forest modelling and forest management field trials **Capital Project Description** Modelling forest and wildfire risk under climate change scenarios & forest/fuel management field trials.

**Project Rationale** Projects to: a). model impact of climate change on forests, forest fuel types, and associated wildfire behavior and probability and potential effects of management options; and b). trial forest and fuel management treatments that reduce wildfire risk, such as prescribed fire and stand diversification, in the Leech WSA prior to considering those treatment options in Sooke or Goldstream WSAs. **Planned additional funding is being moved forward in the plan. There have been a lack of internal and consulting resources to carry out the projects.**

**Project Number** 20-28 **Capital Project Title** GVWSA Forest Resilience - Assessments of forest health and resilience **Capital Project Description** Field assessments to better understand current forest health and resilience.

**Project Rationale** Field assessments to better understand current forest health and resilience including: increasing pine mortality, increase in bark beetle killed trees, existing advance regeneration in the understory, sedimentation sources from roads. The project funding for 2021 and 2022 is moved forward by one year to 2022 and 2023. **Planned additional funding is being moved forward in the plan. There have been a lack of internal and consulting resources to carry out the projects.**

**Project Number** 21-19 **Capital Project Title** Lakes Assessment Sooke and Goldstream WSAs **Capital Project Description** An assessment of the physical, chemical and biological parameters of the natural lakes in Sooke and Goldstream WSAs

**Project Rationale** Small lakes in the Sooke and Goldstream WSAs influence both watershed hydrology and water quality in downstream creeks and supply reservoirs. While basic water quality sampling has been undertaken in some of these water bodies, there is a need to map the bathymetry, calculate water volumes, and conduct more comprehensive sampling of the chemical and biological parameters and aquatic vegetation of these lakes. This will facilitate comparisons of these parameters with lakes in the Leech WSA and water quality in existing and future water supply lands.



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<b>Project Number</b>	21-20	<b>Capital Project Title</b>	West Leech Road	<b>Capital Project Description</b>	Plan followed by construction of a road to access the western portion of the Leech WSA.
<b>Project Rationale</b>	A large portion of the western Leech WSA currently has overgrown unassessed roads. Brushing, upgrade, re-surfacing and some new road construction is required to provide access to this area for wildfire response, security patrols and forest management. Funds to implement plans have been added for 2022-2024.				

<b>Project Number</b>	23-02	<b>Capital Project Title</b>	GVWSA LiDAR Mapping	<b>Capital Project Description</b>	Detailed contour mapping of ground, vegetation and tree cover (3D scanning)
<b>Project Rationale</b>	LiDAR (which stands for Light Detection and Ranging) uses light in the form of a pulsed laser to measure ranges (distances). LiDAR can be acquired when orthophotography or other data is collected from the air. LiDAR provides three-dimensional information about the forest stand structure which can be used by GIS (Geographic Information Systems). LiDAR data can be used to quantify forest structure, canopy biomass, and the size and configuration of forest openings to improve understanding of forest fuel loadings and watershed disturbance processes. <b>Initial project scoping has refined a required budget of \$250,000 rather than the previously planned \$120,000. The results will be used to plan forest fuel treatments across the GVWSA.</b>				

<b>Project Number</b>	22-04	<b>Capital Project Title</b>	GVWSA Orthophotography	<b>Capital Project Description</b>	Annual contribution to capture of regional digital orthophotography for baseline mapping and monitoring.
<b>Project Rationale</b>	Every two years CRD coordinates with municipalities and other levels of government to update aerial photography of the combined areas of interest in the region and develop an overall digital mosaic image. The images of the Greater Victoria Water Supply Area are used to monitor forest disturbances and adjacent land use activities and update spatial databases. To date these funds have come from Operating budgets, making it difficult to undertake other projects in the years when the photography is being flown. <b>The funding plan has been adjusted to provide funds every second year when it is needed rather than annually.</b>				

<b>Project Number</b>	22-09	<b>Capital Project Title</b>	GVWSA Powerlines Wildfire Risk Mitigation Plan	<b>Capital Project Description</b>	A detailed assessment, options and plan to reduce the risk of wildfire start from tree fall onto CRD powerlines in the GVWSA.
<b>Project Rationale</b>	A powerline that supplies Sooke Dam, the Head Tank, and associated infrastructure runs along the forested slopes on the east side of Sooke Lake Reservoir. Power interruption from tree fall is an ongoing concern. Tree fall on the powerline during the summer months could start a wildfire. While the forest along the line is actively managed to reduce tree fall hazard, concerns about fire starts has prompted a call to investigate the option of clearing a much wider area along the line. Funds will be used to carry out an assessment of the feasibility and impacts of this option.				



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<b>Project Number</b>	22-10	<b>Capital Project Title</b>	GVWSA/RWS Educational Videos	<b>Capital Project Description</b>	Development of educational videos to address Regional Water Supply issues of interest to the public such as: wildfire risk and mitigation; climate change; water supply master plan update.
<b>Project Rationale</b>	The Watershed Protection division provides educational tours of the GVWSA and Regional Water Supply infrastructure. During the COVID pandemic, operating funds dedicated to tours were instead used to develop educational videos to replace or supplement tours. Going forward, there is a desire to provide further educational material on specific topics of current public interest such as: climate change and regional water supply; GVWSA wildfire management; and the Master Plan update for regional water supply. The funding request is for development of one video per year for 2022 and 2023. <b>Given development of a corporate wide media strategy in 2022, approved funding has been moved forward to ensure additional videos are designed to fit with the strategy and new video branding templates.</b>				

<b>Project Number</b>	23-05	<b>Capital Project Title</b>	Spill Management Plan and Implementation	<b>Capital Project Description</b>	Review, assessment and re-development of a spill management plan for the GVWSA along with potential procurement of additional equipment or supplies.
<b>Project Rationale</b>	The existing spill preparedness plan to protect water quality and other resources in the GVWSA is more than 15 years old. An external review, assessment and re-development of a more comprehensive spill management plan for the GVWSA that considers improved materials, technology and strategies is required. Funding may allow for procurement of recommended spill supplies, or a separate funding request may follow in a subsequent year.				

<b>Project Number</b>	24-03	<b>Capital Project Title</b>	Biosecurity Risk Assessment & Procedures	<b>Capital Project Description</b>	Assess GVWSA biosecurity risks and develop mitigating protocols/procedures
<b>Project Rationale</b>	There has already been work done to identify and assess possible sources of biosecurity risk to the GVWSA in the forms of entry of pathogens, invasive plant and animal species, contaminated soils and materials. The project is intended to document the biosecurity assessment and prepare and work with staff to implement practical procedures to mitigate the highest risks.				

<b>Project Number</b>	09-01	<b>Capital Project Title</b>	Leech River Watershed Restoration	<b>Capital Project Description</b>	A 17 year project to restore the Leech WSA lands for water supply.
<b>Project Rationale</b>	A 17 year project to 2025 to restore the Leech WSA lands for water supply. An update of projects completed and planned was provided in June 2019 (RWSC Report #19-13). Funding allocated by end of 2025 will be \$5,517,000; however total capital expenditure in the Leech WSA is higher when separate projects to install major bridges is considered.				

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<b>Project Number</b>	16-01	<b>Capital Project Title</b>	Replace Gatehouse at Goldstream Entrance	<b>Capital Project Description</b>	The GVWSA entry gatehouse at Goldstream is past end of life and is to be replaced with a purpose built structure with improved vehicle flow and security function
<b>Project Rationale</b>	Enhanced security is required at the Goldstream entrance to the Water Supply Area. The existing gatehouse/first aid trailer has reached end of life and is unsuitable and located inside the secured area. A site design and purpose built facility with in/out roads, fencing and upgraded autogates (17-09) is planned requiring funding consistent with the project. The scope and scale of this project has increased since the current location is no longer considered feasible/advantageous for the upgrade. Preliminary design and cost estimates have been completed indicating the requested funding. The design and cost includes roadway changes and asphalt, automated gates, and the custom building.				

<b>Project Number</b>	16-06	<b>Capital Project Title</b>	Goldstream IWS Field Office1	<b>Capital Project Description</b>	Renewal of Water Quality field office/lab and equipment storage and Watershed Protection office, yard, training space and equipment storage, replacing longstanding temporary facilities.
<b>Project Rationale</b>	Watershed Protection staff (26 FTE and 8 seasonal auxiliaries) are currently located in 2 trailers and a house at the Goldstream Gate entrance to the water supply area, and in office space at the Integrated Water Services office in View Royal. The trailers were considered temporary office space since their implementation over 15 years ago. The trailers are old, prone to leaks and a concern for mold. Water Quality field staff are located in another old converted facility in the Goldstream area. In addition, there are insufficient facilities for training, equipment storage, emergency management and public education. The separation of staff between various Goldstream facilities and the View Royal location causes inefficiencies and organizational difficulties. The IWS office is also above capacity and moving Watershed Protection staff out will extend the existing office space. An initial investment in 2016 was used to develop a needs assessment for the building and surrounding Goldstream entrance area and cost estimates. Carry forward funds from 2020 will be used to develop a design with building and site construction planned for 2022 and 2023. The disposition of the IWS gravel pit in Goldstream is expected to largely fund the new building. <b>Given a rough construction cost estimate of \$7.5 million for the building and yard; an additional \$1.2 million was added to the budget (in addition to the approved \$500,000) in 2024. Budget design work in 2022 will provide more detailed cost estimates for construction to begin in 2023 and complete in 2024.</b>				

<b>Project Number</b>	17-02	<b>Capital Project Title</b>	Leech River HydroMet System	<b>Capital Project Description</b>	Installation of a network of hydrometeorological stations to collect water quantity and quality information for the Leech WSA.
<b>Project Rationale</b>	A 17 year \$ 5.756 M capital plan is being carried out to restore the Leech Water Supply Area (Project #09-01) to prepare for future water needs. Currently only one hydrological measuring station is capturing flow and turbidity measurements 3.8 km downstream of the future water intake on the Leech River. In order to understand and predict the effect of precipitation, storm events and various restoration management measures on Leech River water quality and quantity, a network of hydrological measuring stations is needed further upstream in the Leech River watershed. This capital project first funded a design study of the most effective and efficient monitoring system that could be implemented (\$10,000) prior to funding implementation beginning in 2018 (\$80,000). Additional funding requests of \$30,000 in 2020 (new total \$100,000) and \$10,000 in 2021 (new total \$25,000) to provide assistance in accessing and addressing safety issues at new weather and hydrology monitoring sites and installing the equipment. Funding requests reflect difficult terrain and access to reach monitoring locations. <b>An additional \$40,000 is requested to complete instrumentation of the Leech River system.</b>				

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<b>Project Number</b>	18-05	<b>Capital Project Title</b>	GVWSA Forest Fuel Management/FireSmart Activities	<b>Capital Project Description</b>	Implementation of forest fuel management and FireSmart actions in strategic locations for wildfire risk management in the GVWSA.
<b>Project Rationale</b>	Wildfire is the greatest threat to water quality in the GVWSA. In 2014 - 2018 CRD staff completed two new fuel reduction corridor projects. Funding to tender contract projects is required in order to complete priority fuel management projects over and above existing staff effort which will be focused on maintenance of existing fuel managed sites. A requested increase from \$75,000 to \$100,000 annually reflects costs experienced in the first year of tendering fuel management work. The need for fuel management to address priority areas will be ongoing and funding is required annually for the 5 year period.				

<b>Project Number</b>	19-02	<b>Capital Project Title</b>	Whiskey Creek Bridge Replacement (Sooke WSA)	<b>Capital Project Description</b>	Replacement of the existing undersized bridge with a longer and higher concrete structure.
<b>Project Rationale</b>	Whiskey Creek bridge is located on the Leechtown Main Road, one of the main access routes to Sooke Lake Dam and other critical IWS infrastructure. Whiskey Creek requires a larger bridge as it has been overtopped by storm events in the past and this poses water quality, environmental and safety risks. The project has been moved forward from 2022 to 2023 to allow higher priorities to be addressed first. <b>The bridge project is moved forward to 2024 with design work to begin in 2023.</b>				

<b>Project Number</b>	19-19	<b>Capital Project Title</b>	Hydromet Upgrades Sooke and Goldstream	<b>Capital Project Description</b>	Install additional hydrology monitoring sites on Sooke Lake Reservoir inflow streams and increase instrumentation on meteorological stations in Sooke and Goldstream watersheds.
<b>Project Rationale</b>	Only the main tributary inflows into Sooke Lake Reservoir are monitored. To better understand the hydrology of the Sooke watershed, additional hydrology monitoring sites are required. The existing meteorological stations in Sooke and Goldstream watersheds have only basic instrumentation and would benefit from additional sensors and upgrades to improve the quality of the meteorological data. The proposed funds for 2020 have been increased by \$20,000 to cover the costs associated with site preparation, addressing site safety issues and assistance with station installation. <b>Additional funding (\$60,000) is requested in 2023 to complete required upgrades of the Sooke and Goldstream hydromet network.</b>				

<b>Project Number</b>	20-01	<b>Capital Project Title</b>	Kapoor Main Mile 1 Bridge and Asphalt Upgrade	<b>Capital Project Description</b>	Replacement of the existing undersized culvert with a large bridge as well as subsequent 500 m road asphalt replacement.
<b>Project Rationale</b>	The existing culvert at Mile 1 on Kapoor Main is undersized, has evidence of buried organics in the fill material and has oversteepend, unstable banks. The culvert will be removed and a bridge installed to improve water carrying capacity at peak flows, fish passage and bank stability. The asphalt section uphill of the bridge will also be repaired or replaced as a component of the project. The project has been moved forward from 2021 to 2022 to allow higher priorities to be addressed first. The project has been phased to replace the bridge in 2022 and replace the asphalt in 2023 with an increased budget allowance. <b>The project was moved forward by an additional year to 2023 (bridge installation) and 2024 (replace asphalt section of road). The project budget has been increased to reflect expected cost.</b>				

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<b>Project Number</b>	20-29	<b>Capital Project Title</b>	GVWSA Gravel Crushing	<b>Capital Project Description</b>	Production of gravel at existing quarries in Sooke and Goldstream WSAs.
<b>Project Rationale</b>	Production of 19 mm road surfacing gravel from GVWSA quarries are required every few years to maintain roads. Gravel production needs are anticipated in 2023 and 2026. <b>The need for additional gravel crushing has been pushed forward by one year to 2024.</b>				

<b>Project Number</b>	21-26	<b>Capital Project Title</b>	Road Deactivation/Rehabilitation in the GVWSA	<b>Capital Project Description</b>	Deactivate or rehabilitate unneeded roads in the Sooke and Goldstream WSAs.
<b>Project Rationale</b>	A review was undertaken to identify roads in the Sooke and Goldstream WSAs that could be rehabilitated and removed from the road network without undue impact to operations, wildfire response and security. Funding is required over the 5 year period to make progress on the roads identified to be deactivated/rehabilitated.				

<b>Project Number</b>	21-27	<b>Capital Project Title</b>	Autogate Installations on Primary Access Routes	<b>Capital Project Description</b>	Install autogates on the main access routes where the Sooke Hills Wilderness Trail and E&N rail line cross to improve security
<b>Project Rationale</b>	Continued residential growth and corresponding increasing recreational pressure bring the public close to critical works (Goldstream Treatment Plant, and Ammonia Injection building). Recreational use of the Sooke Hills Wilderness Trail and Park also generate trespass into the GVWSA, and Drinking Water Protection Zone. One autogate is being installed in 2021, with three subsequent autogates to be installed during 2022 and 2023. The proposed autogates improve security by 24 hour recorded keycard access operation and improved location to increase security. <b>The third and fourth autogate are being deferred by an additional year to 2024 with an additional \$50,000 added to the project budget to allow for additional design and siting considerations; and provincial, Fortis Gas and Island Corridor Foundation to process approvals before the work can be tendered.</b>				

<b>Project Number</b>	22-02	<b>Capital Project Title</b>	Muckpile Bridge Supply and Install (Deception)	<b>Capital Project Description</b>	Replacement of undersized culverts with bridge which will allow for fish and western toad migration.
<b>Project Rationale</b>	Replacement of undersized culverts with a concrete deck L100 bridge which will also improve fish passage and western toad migration. <b>Addition of funding for design work ahead of construction.</b>				

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<b>Project Number</b>	23-04	<b>Capital Project Title</b>	17S/Sooke Main Bridge Replacement	<b>Capital Project Description</b>	Undersized bridge replacement
<b>Project Rationale</b> The current structure (3 concrete culverts side-by-side with a concrete deck) does not allow adequate room to pass potential storm debris. The most recent engineering inspection stated this recycled structure is in fair shape, with spalling of the concrete. The structure is planned to be replaced with a free span concrete bridge. The project has been moved forward from 2023 to 2025 to allow higher priorities to be addressed first. <b>Addition of funding for design work ahead of construction.</b>					

<b>Project Number</b>	22-11	<b>Capital Project Title</b>	Additional Boom Anchors for Sooke Lake Reservoir debris boom	<b>Capital Project Description</b>	The log boom protecting the Sooke Lake Reservoir Intake Tower from floating woody debris is inadequately anchored and requiring two additional anchors.
<b>Project Rationale</b> The debris boom on Sooke Lake Reservoir with the existing anchors has the capacity to strike the Intake Tower if the boom breaks. It is recommended to add two additional anchors to ensure that if the boom breaks it will not damage the Intake Tower. <b>An increased project budget (additional \$20,000) is required to design and install the anchors.</b>					

<b>Project Number</b>	23-10	<b>Capital Project Title</b>	Work platform for Sooke Lake Reservoir	<b>Capital Project Description</b>	A towable work platform for conducting stationary on-water work activities such as boom and intake tower maintenance and spill response.
<b>Project Rationale</b> This request is for a non-powered towable dock or barge that can be moved to various project sites as required. It allows workers to easily access work on the water from a stable platform, and can allow small equipment (pumps or generators) to be operated on appropriate spill containment, and to be left in place for extended periods of time.					

<b>Project Number</b>	23-11	<b>Capital Project Title</b>	Purchase and deployment of Second Wildfire Camera for Leech WSA, and analytic software	<b>Capital Project Description</b>	A secondary wildfire camera to monitor for heat and smoke signatures in the Leech WSA during fire season.
<b>Project Rationale</b> Rapid detection is key to taking action when fires are still small and controllable. An infrared camera network, supported by software to identify potential ignitions, can be monitored by staff and an after hours service to rapidly provide an alert to new fire starts. This allows response staff to arrive before the fire has a chance to dig in and start to spread quickly. There is an existing camera at Mount Healy that "sees" large portions of the Sooke WSA. The Leech WSA is the most remote and least visible area (to the public and staff) and there is a strong benefit to early detection. The camera may need to be supported with a tower and communications upgrades. <b>Funding in 2023 is earmarked for analytic software for both wildfire cameras and funding in 2024 is earmarked for purchase and deployment of the additional Leech camera.</b>					

<b>Project Number</b>	23-23	<b>Capital Project Title</b>	Brushcutting head for Excavator	<b>Capital Project Description</b>	The existing brushcutting head from the excavator used in roadside maintenance has reached end of life and requires replacement.
<b>Project Rationale</b> The existing brush cutting head for the excavator is past end of life and requires replacement. The old head will be disposed of and offset the cost of the new head.					



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**Project Number** 16-10 **Capital Project Title** Post Disaster Emergency Water Supply **Capital Project Description** Identify and procure emergency systems for post disaster preparedness.

**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 2016 and 2017 with the anticipated purchase of one or more emergency distribution systems in 2017. Initial investigation has highlighted areas, such as having hardened hydrants/standpipes that the CRD should be investing in. Additional funds are required to continue implementing these additional works and equipment.

**Project Number** 17-13 **Capital Project Title** Asset Management Plan **Capital Project Description** Development of a plan to inform future areas of study and highlight critical infrastructure improvements.

**Project Rationale** This plan will bring various components together from items 14-01, 16-07, 16-08, 16-09, 16-10 and 16-11 and form a strategic plan that will identify future study and construction requirements with capital replacement budgets and schedules.

**Project Number** 19-15 **Capital Project Title** Hydraulic Capacity Assessment and Transient Pressure Analysis **Capital Project Description** Determine the existing level-of-service for the RWSC transmission system and conduct a transient pressure analysis

**Project Rationale** The RWSC transmission is complex with all the connection points to it. Funding is required to determine the available pressures and flows throughout the transmission system and whether it is susceptible to transient pressure waves.

**Project Number** 20-08 **Capital Project Title** Regional Water DCC Program **Capital Project Description** Design of a Regional DCC Program

**Project Rationale** The municipalities are developing and growing and may result in upgrades to maintain the level of service due to development. Funds are required to design a Regional Water Development Cost Charge program.

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<b>Project Number</b>	20-10	<b>Capital Project Title</b>	Condition & Vulnerability Assessment	<b>Capital Project Description</b>	Conduct a condition assessment of critical supply infrastructure and assess its possibility of risk.
<b>Project Rationale</b>	The RWSC is a large system with infrastructure of various ages and condition. Funding is required to conduct a condition assessment of critical infrastructure, such as Humpback PRV, and assess their risk of failure and provide a high level timeline for replacement/renewal.				

<b>Project Number</b>	21-05	<b>Capital Project Title</b>	Level of Service Agreement	<b>Capital Project Description</b>	From #19-15 & #20-11, develop level-of-service agreements for participating municipalities to address hydraulic capacity of infrastructure.
<b>Project Rationale</b>	The RWSC supplies water directly and indirectly to 12 municipalities. Based upon Capital Projects #19-15 and #20-11, level-of-service agreements for participating municipalities will be developed to address hydraulic capacity of infrastructure.				

<b>Project Number</b>	18-07	<b>Capital Project Title</b>	Replacement of UV System	<b>Capital Project Description</b>	Replacement of the UV system at the Goldstream Water Treatment Plant
<b>Project Rationale</b>	Two 24" UV disinfection units that were decommissioned from the old Charters Creek plant are required to be installed at the JG plant along with electrical and control connections. Inlet and outlet valves are in place, but require 24" stainless steel piping to insert units into place. Funding is required to relocate existing UV disinfection units to the JG plant and provide electrical & control and piping connections. Construction has been spread over two years to correspond with construction over the winter period.				

<b>Project Number</b>	18-08	<b>Capital Project Title</b>	Bulk Supply Meter Replacement Program	<b>Capital Project Description</b>	Planned replacement of aging bulk meter replacement based upon a condition assessment and water audit.
<b>Project Rationale</b>	This item is to replace, upgrade and install new bulk water meters and related equipment that measure flow and volumes of water delivered to the wholesale customers. Many of the meter stations are in need of upgrading. Funding is required to replace the flow meter and appurtenances. Funding is required for Blue Ridge, Alderly, Holland and Maplewood replacements.				

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<b>Project Number</b>	18-15	<b>Capital Project Title</b>	Corrosion Protection Program	<b>Capital Project Description</b>	Study deficiencies in the current material protection and implement recommendations.
<b>Project Rationale</b> This item is to assess, design and implement cathodic protection for the various infrastructure, including steel pipes, that are susceptible to corrosion. The supply system has various implementations of cathodic protection ranging from interior/exterior coatings for pipe and passive anodes to impressed current systems with variable results and condition. Funding is required to retain a specialist to conduct a high level assessment of existing infrastructure with recommendations for additional investigation or areas that require immediate attention.					

<b>Project Number</b>	18-18	<b>Capital Project Title</b>	Main No.3 Segment Replacement	<b>Capital Project Description</b>	Replacement of segments of Main No. 3 based upon previous studies.
<b>Project Rationale</b> The existing Main No. 3 is approximately 70 years old. Some section of the 22 km main are steel pipe in known potentially corrosive soils. It is proposed to eventually replace a segment or Main #3 on Wale Road, Island Hwy. and Adams Place in Colwood and View Royal. Conceptual design and options analysis will start in 2023 with detailed design and construction commencing in 2024 to 2027. Funding is required to retain a consultant to undertake design and to construct a replacement to Main No. 3.					

<b>Project Number</b>	19-05	<b>Capital Project Title</b>	Repairs - Kapoor Shutdown	<b>Capital Project Description</b>	Repair items such as defects in the Kapoor tunnel, replacement of critical valves, intake exterior inspection and actuator replacement while the Kapoor tunnel is shutdown.
<b>Project Rationale</b> During the 2016 Kapoor Tunnel inspection numerous deficiencies were noted. Some of the repairs were made and inspected in 2017. Funds are required to complete remaining identified repairs as well as conduct other works, such as head tank valve maintenance, dive inspection of the Intake Tower, hydraulic actuator line replacement, that can only be conducted when the Kapoor Tunnel is offline.					

<b>Project Number</b>	19-23	<b>Capital Project Title</b>	Critical Spare Equipment Storage & Pipe Yard	<b>Capital Project Description</b>	Plan, design and construct a critical equipment storage building.
<b>Project Rationale</b> Additional and accessible storage is required at the pipe yard for critical spare equipment such as repair bands and clamps. Funds are required to plan, design and construct an equipment storage building accessible by loading vehicles.					

**Service:** **2.670** **Regional Water Supply**

<b>Project Number</b>	20-16	<b>Capital Project Title</b>	Cecelia Meter Replacement	<b>Capital Project Description</b>	Replacement of the Cecelia billing meter as well as its enclosure.
<b>Project Rationale</b>	The St Giles and Cecelia meters are aging and in hard to maintain locations. Funding is required to construct new meter sites and decommission and demolition the old sites.				

<b>Project Number</b>	20-17	<b>Capital Project Title</b>	Decommission & Conceptual Design of the Smith Hill Site	<b>Capital Project Description</b>	Plan for decommission the conceptual design for the replacement of the Smith Hill reservoir site.
<b>Project Rationale</b>	The Smith Hill reservoir has not been in operation for many years. Funds are required to plan for decommission the site in 2020 and then carry out decommissioning in 2023.				

<b>Project Number</b>	21-06	<b>Capital Project Title</b>	Sooke Lake Dam Spillway Hoist and Stop Log Replacement	<b>Capital Project Description</b>	Replacement of the sluice gate spillway hoist and stop logs at Sooke Lake Dam.
<b>Project Rationale</b>	The Sooke Lake Dam Spillway Hoist is at it's end of life and poses a risk of failure when required for use of lowering the high level gate barriers. Funds are required to replace the hoist.				

<b>Project Number</b>	21-09	<b>Capital Project Title</b>	Goldstream Water Chlorination Gas System Removal	<b>Capital Project Description</b>	Plan and construct provisions for removal of chlorination system
<b>Project Rationale</b>	The Goldstream Water Treatment Plant has undergone numerous upgrades and updates, both large and small since its initial construction. There are numerous vestigial mechanical and electrical assets that require planned removal. Funds are required to plan and remove unused assets that affect maintenance of the system.				

Service: **2.670** **Regional Water Supply**

**Project Number** 21-10 **Capital Project Title** SCADA Masterplan and System Upgrades **Capital Project Description** Update the SCADA Master Plan in conjunction with the Juan de Fuca Water Distribution, Saanich Peninsula Water and Wastewater, and Core Area Wastewater Services.

**Project Rationale** The SCADA and radio system utilized by the RWS comprises of components ranging from 2-25 years in age. A planned replacement of assets, to be coordinated with the Juan de Fuca Water Distribution and Saanich Peninsula Water & Wastewater Systems is required to create a more resilient and cohesive communications system

**Project Number** 21-11 **Capital Project Title** RWS Supply Main No. 4 Upgrade **Capital Project Description** Upgrade vulnerable sections of the RWS Supply Main No. 4 and Main No. 1 to a resilient system to better able to withstand a seismic event. Vulnerable sections are Concrete Cylinder pipe material which is susceptible to failure during a seismic event. This is part of project partnered with the Saanich Peninsula Water system.

**Project Rationale** Sections of RWS Supply Main No. 4 have been identified as being vulnerable due to age and material type during a seismic event and require replacement. To support replacement of the Goldstream section of Main No. 4, improvements to RWS Supply Main No. 1 are required, such as replacement of approximately 40 m of transmission Main #1 at Watkiss Way and upgrade of the Watkiss PRV, upgrade of the Millstream PRV, modifications to the Humpback PRV and construction of five new pressure control stations. This project is part of a project partnered with the Saanich Peninsula Water System to increase the resilience of the water system by replacing vulnerable sections of transmission mains. The budget breakdown of the works: Goldstream section of Main #4 \$21,975,000; Watkiss Way section of Main #1 \$950,000; Watkiss PRV \$1,250,000; Millstream PRV \$1,350,000; Humpback PRV improvements \$825,000; Five new PRVs \$9,050,000.

**Project Number** 22-14 **Capital Project Title** Sooke River Intake Feasibility **Capital Project Description** A feasibility study for an intake from Sooke River to replace the Main No. 15 salmon fishery contribution, for a variety of reasons.

**Project Rationale** The feasibility to construct an intake from Sooke River to replace the Main No. 15 salmon fishery contribution.

**Project Number** 22-15 **Capital Project Title** Microwave Radio Upgrades **Capital Project Description** To provide a high bandwidth communications backbone to the RWS system, a microwave communications system will be installed.

**Project Rationale** To provide a high bandwidth communications backbone to the RWS system, a microwave communications system will be installed. Supports current and future fire detection cameras.



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<b>Project Number</b>	22-16	<b>Capital Project Title</b>	Goldstream WTP Drainage Improvements	<b>Capital Project Description</b>	Construct drainage improvements for the Goldstream Water Treatment Plant and assess
<b>Project Rationale</b>	The Goldstream Water Treatment Plant is located near the Goldstream waterway, drainage improvements are required so that the Goldstream waterway is not impacted if there were to be a chlorine or ammonia spill.				

<b>Project Number</b>	22-17	<b>Capital Project Title</b>	Goldstream WTP Safety Improvements	<b>Capital Project Description</b>	Construct employee and public safety improvements such as a trail notification system if there was an ammonia spill.
<b>Project Rationale</b>	The Goldstream Water Treatment Plant is located near a public trail, safety improvements such as a notification system are required. Funds will be for design and construction.				

<b>Project Number</b>	16-16	<b>Capital Project Title</b>	Implications from Goldstream Dam Safety Review	<b>Capital Project Description</b>	Conduct dam improvements at the Goldstream dams that resulted for the Dam Safety Review and routine inspections (refer to the Dam Safety Database).
<b>Project Rationale</b>	The Goldstream Dams Dam Safety Review was initiated in 2015 and delivered in 2016 and the review provided recommendations for dam safety improvements for the 11 dams in the Goldstream Watershed. The dam deficiencies and related projects are identified in the Dam Safety Database.				

<b>Project Number</b>	16-17	<b>Capital Project Title</b>	Butchart Dam No. 5 Remediation Planning & Construction	<b>Capital Project Description</b>	Phase 1 Rehabilitation (grouting) of Butchart Dam No. 5 and planning for Phase 2.
<b>Project Rationale</b>	Butchart Dam #5 was observed to have a sinkhole on the downstream slope. The earthfill dam was founded on limestone in the about 1905 and seepage issues have occurred since that time. A geotechnical investigation was conducted in 2016, and remediation has been recommended by geotechnical consultant. It is proposed to complete detailed design of remediation in 2018 and construction of repairs in 2019. Phase 1 of the revised program is complete and the dam is now in the monitoring stage.				

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**Project Number** 17-25 **Capital Project Title** Implications from Sooke Lake Dam Safety Review **Capital Project Description** Conduct dam improvements at the Sooke Lake Dam that resulted from the Dam Safety Review and routine inspections (refer to the Dam Safety Database)

**Project Rationale** The 2016 Dam Safety Review Audit was completed and provided a list of recommended improvements. Upcoming capital work to be completed is identified in the dam safety database.

**Project Number** 18-19 **Capital Project Title** Sooke Lake Dam - Instrumentation System Improvements **Capital Project Description** Complete dam performance instrumentation system/surveillance improvements for the Sooke Lake Dam.

**Project Rationale** The 2016 Dam Safety Review identified and recommended various dam safety surveillance instrumentation improvements including piezometers, weirs, seismometers, etc. An Instrumentation system plan was completed and includes a prioritized list of improvement projects.

**Project Number** 18-20 **Capital Project Title** Sooke Lake Dam - Breach Risk Reduction Measures **Capital Project Description** Implement measures to reduce Sooke Lake Dam breach implications in the unlikely event of dam failure (refer to the NHC Consulting study).

**Project Rationale** A Dam Breach Assessment and Inundation Zone Mapping project was completed in 2017 by an engineering consultant and risk mitigation measures included structural and non-structural measures to lower risk should a dam breach occur. The measures are captured in the Dam Safety Database.

**Project Number** 19-07 **Capital Project Title** Integrate Dam Performance and Hydromet to SCADA **Capital Project Description** Integrate the dam safety instrumentation/surveillance (i.e. piezometers and weirs) and HydroMet stations to report to WIO through the existing SCADA system.

**Project Rationale** Based on capital project 18-19, dam performance piezometers and weirs and Hydromet/Dam Safety Instrumentation stations will be integrated through the SCADA system.

**Service:** **2.670** **Regional Water Supply**

**Project Number** 19-09 **Capital Project Title** Cabin Pond Dams Decommissioning **Capital Project Description** The Cabin Pond Dams (x2) have been retired from drinking water service, plan to decommission.

**Project Rationale** The two Cabin Pond Dams have been retired from drinking water service with no other interested owners. Funds are required to plan and implement decommissioning of the dams.

**Project Number** 19-12 **Capital Project Title** Goldstream Dams Instrumentation Improvements **Capital Project Description** Conduct dam safety instrumentation/surveillance improvements (refer to report from Thurber Engineering).

**Project Rationale** Thurber completed a study on the Goldstream Dam instrumentation and found numerous deficiencies with respect to dam safety. Funds are required to design and implement improvements to the Goldstream Dam instrumentation.

**Project Number** 19-13 **Capital Project Title** Dam Safety Instrumentation **Capital Project Description** The existing dam safety instrumentation/surveillance equipment is getting older and will need to be replaced/rehabilitated (does not include pending SCADA effort).

**Project Rationale** Aging Hydromet/Dam Safety Instrumentation stations maintained by Infrastructure Engineering require replacement so that ongoing monitoring within the watersheds can be maintained. Funds are required for upgrades and replacement of existing Hydromet Stations.

**Project Number** 20-19 **Capital Project Title** Goldstream System High Level Outlet Valve Replacements **Capital Project Description** The Goldstream and Butchart high level outlet valves have been identified as requiring replacement.

**Project Rationale** Through dam safety inspections and routine operations, the Goldstream and Butchart high level outlet valves have been identified as requiring replacement. Funds are required to design and replace the valves.

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**Project Number** 21-03 **Capital Project Title** Deception Dam - Dam Safety Review 2021 & Improvements **Capital Project Description** Conduct a Dam Safety Review and improvements for the Deception Dam.

**Project Rationale** Deception Dam has a consequence classification of "very high" and a dam safety review is required to be completed every ten years under the current B.C. Dam Safety Regulation. The last dam safety review was completed in 2011. The dam safety review is anticipated to be an "audit-style" assessment of the physical condition of the dam, operations, maintenance, surveillance, identification of dam safety deficiencies and recommendations for dam safety improvements. Project includes budget for subsequent year to complete recommended dam safety improvements.

**Project Number** 21-04 **Capital Project Title** Saddle Dam - Dam Safety Review 2021 & Improvements **Capital Project Description** Conduct a Dam Safety Review and improvements for the Saddle Dam.

**Project Rationale** Saddle Dam has a consequence classification of "very high" and a dam safety review is required to be completed every ten years under the current B.C. Dam Safety Regulation. The last dam safety review was completed in 2011. The dam safety review is anticipated to be an "audit-style" assessment of the physical condition of the dam, operations, maintenance, surveillance, identification of dam safety deficiencies and recommendations for dam safety improvements. Project includes budget for subsequent year to complete recommended dam safety improvements.

**Project Number** 21-21 **Capital Project Title** Goldstream Dams - 4 Low Level Gate Improvements **Capital Project Description** Logistics planning in 2022, installation in 2023

**Project Rationale** Several of the water control gates related to the Goldstream dams are in need of repair and possibly replacement.

**Project Number** 22-08 **Capital Project Title** Deception Dam Surveillance Improvements **Capital Project Description** Replace and supplement the Dam Safety Instrumentation at Deception Dam.

**Project Rationale** The latest engineering data review identified deficiencies with the existing piezometers and seepage weir. It is proposed to prepare a system improvement plan and thereafter complete repairs, improvmetn and install supplementary dam performance instrumentation.

**Project Number** 23-07 **Capital Project Title** Sooke Lake Dam Spillway and Gates Retrofit **Capital Project Description** Detail and construct seismic retrofits for the existing structures initially focusing on the spillway and gates structures.

**Project Rationale** The siesmic assessment completed in 2017 included recommendations for siesmic retrofits for Sooke Lake Dam including siesmic anchoring of the spillway, gate structure and the intake tower bridge.

**Service:** **2.670** **Regional Water Supply**

<b>Project Number</b>	23-08	<b>Capital Project Title</b>	Regional Watershed Dams – Flood Forecasting System	<b>Capital Project Description</b>	Update the existing flood forecasting system (WD4Cast) to a modern version including Standard Operating Procedures and training for staff.
<b>Project Rationale</b>	The 2016 Dam Safety Review included a recommendation to improve the flood forecasting system, which is becoming more important with Climate Change. This item will update the existing flood forecasting system from WD4Cast to a modern version including Standard Operating Procedures and training for staff.				

<b>Project Number</b>	23-09	<b>Capital Project Title</b>	Sooke Lake Dam - Dam Safety Review 2023	<b>Capital Project Description</b>	Conduct a Dam Safety Review to meet regulatory requirement.
<b>Project Rationale</b>	Sooke Lake Dam has a consequence classification of "extreme" and a dam safety review is required to be completed every seven years under the current B.C. Dam Safety Regulation. The last dam safety review was completed in 2016. The dam safety review is anticipated to be an "audit-style" assessment of the physical condition of the dam, operations, maintenance, surveillance, identification of dam safety deficiencies and recommendations for dam safety improvements. Project includes budget for subsequent years to complete recommended dam safety improvements.				

<b>Project Number</b>	25-01	<b>Capital Project Title</b>	Goldstream Dam - Dam Safety Review 2025 & Addressing Implications	<b>Capital Project Description</b>	Conduct a Dam Safety Review to meet regulatory requirement.
<b>Project Rationale</b>	The Goldstream Watershed Dams have a consequence classification of "low" to "high" and a dam safety review is required to be completed every ten years under the current B.C. Dam Safety Regulation. The last dam safety review was completed in 2015. The dam safety review is anticipated to be an "audit-style" assessment of the physical condition of the dam, operations, maintenance, surveillance, identification of dam safety deficiencies and recommendations for dam safety improvements. Project includes budget for subsequent years to complete recommended dam safety improvements.				

<b>Project Number</b>	25-02	<b>Capital Project Title</b>	Probable Maximum Flood and Inflow Design Flood Updates	<b>Capital Project Description</b>	Update the previous edition from 2015 (recommended 10 year review cycle).
<b>Project Rationale</b>	The various Dam Safety Reviews and Canadian Dam Safety Guideline recommend updating the reservoir inflow design flood and freeboard analysis every ten years.				



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<b>Project Number</b>	20-04	<b>Capital Project Title</b>	Sooke Lake HyDy Model Development	<b>Capital Project Description</b>	Critical data collection, model building+calibration, model utilization for 3 different scenarios
<b>Project Rationale</b>	This project consists of the following different phases: 2020/2021 Procurement/Rental of monitoring equipment to fill critical data gaps; 2022 Consulting contract to build the hydrodynamic lake model and calibrate it against existing data; 2022 Consulting contract to run the model for a North Basin intake scenario; 2023 Consulting Contract to run the model for investigating impacts of a diversion of Leech River water into Sooke Lake; 2024 Consulting Contract for investigating impacts of wind induced seiches in Sooke Lake.				

<b>Project Number</b>	22-06	<b>Capital Project Title</b>	Sooke Lake Food Web Study	<b>Capital Project Description</b>	Assess the aquatic food web structure and create an inventory of fish and invertebrate species and distribution in Sooke Lake Reservoir - to be used as indicators of stream health
<b>Project Rationale</b>	CRD has been using predominantly algal data as an indicator for stream health and condition assessment in the source waters. To gain a better understanding of the source water conditions and how they may change over time it is necessary to expand this indicator system for other trophic levels in the food web. Sooke Lake Reservoir is of particular interest as the primary and critical water source for the GVDWS and therefore a aquatic food web study will be commissioned on this lake.				

<b>Project Number</b>	23-06	<b>Capital Project Title</b>	GVDWS Nitrification Study	<b>Capital Project Description</b>	Investigate nitrification occurrence and potential impacts on drinking water quality
<b>Project Rationale</b>	With the operation of the upgraded Goldstream disinfection process (liquid NH3 and hypo) the volatility of the residual products and potential for nitrification in the distribution systems needs to be studied to assess any potential impacts to the drinking water quality.				

<b>Project Number</b>	24-02	<b>Capital Project Title</b>	Boat Motor Replacement with Electric Outboards (Sooke and Goldstream Boats)	<b>Capital Project Description</b>	50hp and 15hp motor replacement due to age and water quality concerns, large electric outboards are already available from Torqeedo for instance
<b>Project Rationale</b>	When the existing boat motors are due for replacement they shall be replaced with electric outboard motors to reduce emissions and to provide clean propulsion of CRD boats on the drinking water source lakes. This will reduce the risk of fuels spills and eliminate combustion exhausts entering the water.				

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<b>Project Number</b>	17-27	<b>Capital Project Title</b>	Watershed Bridge and Culvert Replacement	<b>Capital Project Description</b>	Replacement of small culverts and bridges throughout the GVWSA.
<b>Project Rationale</b>	This provides annual funding for the replacement of culverts and bridges that have reached end of life and/or are undersized given present knowledge of potential peak water flows and anticipated climate change effects. With the completion of peak flow modelling of all major structures in the Sooke and Goldstream WSAs in 2017, additional funds are required beginning in 2018 to upgrade identified structures to current standards. Costs of upgrades have increased significantly in the last 5 years.				

<b>Project Number</b>	17-28	<b>Capital Project Title</b>	Watershed Security Infrastructure Upgrade and Replacement	<b>Capital Project Description</b>	New, upgrade and replacement of security infrastructure in the GVWSA.
<b>Project Rationale</b>	The outer boundary of the Leech, Sooke and Goldstream Water Supply Areas is approximately 119 kilometers in length. Main access roads are gated and there are 11 kilometers of existing security fencing. A constant effort is needed to maintain a Closed Watershed Policy. Through monitoring, high incident areas are identified, security plans are developed, and security infrastructure (fencing, gates and signage) is installed or upgraded where required. The uplift in provisional funding requested in 2017 has been reduced given full integration of the Weeks Lake area within the GVWSA, completion of fencing and gates related to the Sooke Hills Wilderness Trail and with separate capital projects for autogates.				

<b>Project Number</b>	17-29	<b>Capital Project Title</b>	Water Supply Area Equipment Replacement	<b>Capital Project Description</b>	Hydrometeorological, fireweather and wildfire suppression equipment replacement.
<b>Project Rationale</b>	This provides annual funding for the replacement or upgrading of equipment for wildfire suppression and spill response, fire weather stations, hydro-meteorological monitoring and water quality sampling and monitoring equipment. Given an expansion of the hydrology and meteorology network of stations and sensors, an additional \$50,000 per year is added in 2020 and going forward. In 2021 and going forward, funding is reduced by \$20,000 as water quality equipment will be funded under a separate line item (21-17). <b>A revised level of funding is requested beginning in 2023 that reflects forecasted needs.</b>				

<b>Project Number</b>	17-30	<b>Capital Project Title</b>	Transmission Main Repairs	<b>Capital Project Description</b>	Emergency repairs to the transmission mains.
<b>Project Rationale</b>	Each year a visual inspection of this critical supply tunnel is carried out by CRD staff. This capital item allows for minor repairs that are discovered during these inspections. This also allows for annual funding for repair of emergency breaks on large diameter supply mains.				

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<b>Project Number</b>	17-31	<b>Capital Project Title</b>	Transmission System Components Replacement	<b>Capital Project Description</b>	Replacement and repair of transmission components.
<b>Project Rationale</b> This is an annual allowance for the capital costs for the replacement and repair of supply system components that fail under normal operation and maintenance during the year.					

<b>Project Number</b>	17-33	<b>Capital Project Title</b>	Disinfection Equipment Parts Replacement	<b>Capital Project Description</b>	Replacement of incidental equipment and parts associated with the disinfection system.
<b>Project Rationale</b> The annual work includes the replacement of the plastic gas feed piping that has become very brittle, installing air valves on the ammonia solution lines, installing and replacing shut off valves on the booster pumps supply piping, installing indicator stems on UV cooling water valves, relocating the UV cooling water feed pipes, improving the landscaping around the UV building to reduce dust and other minor upgrades.					

<b>Project Number</b>	17-34	<b>Capital Project Title</b>	Supply System Computer Model Update	<b>Capital Project Description</b>	Annual update of the regional hydraulic model.
<b>Project Rationale</b> This item is to allow for staff and consultant time each year to keep the hydraulic computer model current.					

<b>Project Number</b>	19-16	<b>Capital Project Title</b>	Dam Improvements	<b>Capital Project Description</b>	Items not covered by Dam Safety Reviews, but brought up in Dam Safety Inspections and Dam Safety Reviews and address items in the dam safety database/risk registry
<b>Project Rationale</b> Dam Safety Inspections are carried out throughout the year and result in minor improvements at each dam annually. These improvements are minor in nature and are typically not covered in the Dam Safety Review. Funds are required to carry out the dam safety improvements resulting from Dam Safety Inspections.					

<b>Project Number</b>	19-22	<b>Capital Project Title</b>	SCADA Repairs & Equipment Replacement	<b>Capital Project Description</b>	Items not covered by the SCADA Replacement and SCADA Master Plan, but integral in maintaining the SCADA System and revenue meter system.
<b>Project Rationale</b> This item is to allow for unplanned SCADA repairs and equipment replacement not covered by the capital projects SCADA Replacement.					

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<b>Project Number</b>	21-15	<b>Capital Project Title</b>	Corrosion Protection	<b>Capital Project Description</b>	Replace corrosion protection assets, such as coatings, for the transmission system when identified.
<b>Project Rationale</b> There are numerous assets with varying levels of corrosion protection throughout the RWS system. Funds are required to ensure that corrosion protection assets are replaced or rehabilitated when identified.					

<b>Project Number</b>	21-16	<b>Capital Project Title</b>	Valve Chamber Upgrades	<b>Capital Project Description</b>	Replace failing valves and appurtenances along the RWS supply system.
<b>Project Rationale</b> The RWS system has numerous isolation and air valves along the transmission system, usually in underground chambers. Funds are required for replacement of valves and chamber upgrades as they are identified.					

<b>Project Number</b>	21-17	<b>Capital Project Title</b>	Water Quality Equipment Replacement	<b>Capital Project Description</b>	Replacement of water quality equipment for the water quality lab and water quality operations
<b>Project Rationale</b> This provides annual funding for the replacement or upgrading of equipment for the water quality lab, sampling, and operations. Of this provisional budget, \$20,000 was previously included in item 17-29 (Water Supply Area annual provisional budget)					

<b>Project Number</b>	21-18	<b>Capital Project Title</b>	LIMS support	<b>Capital Project Description</b>	Support for LIMS database
<b>Project Rationale</b> Provides for support for the laboratory information management system					

<b>Project Number</b>	23-20	<b>Capital Project Title</b>	Land Exchange/Acquisition	<b>Capital Project Description</b>	Land surveys, appraisals to support decisions regarding land exchange to increase catchment area, buffer water supply areas and other possible land exchange and acquisition within the RWS system.
<b>Project Rationale</b> There are opportunities to increase the catchment and critical buffer areas of Sooke, Goldstream and the Leech WSA by purchase or land exchange with surrounding land owners. From time to time, the RWS System requires acquisition of lands for infrastructure purposes. Funds will be used when needed to undertake appraisals, legal surveys, and legal fees for work to develop agreements to purchase or exchange lands for the Regional Water Supply Area or System.					

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**Project Number** 17-35 **Capital Project Title** Vehicle & Equipment Replacement (Funding from Replacement Fund) **Capital Project Description** This is for replacement of vehicles and equipment used by CRD Water Services for the day-to-day operation and maintenance of the supply system.

**Project Rationale** This is for replacement of vehicles and equipment used by CRD Water Services for the day-to-day operation and maintenance of the supply system. The Equipment Replacement Fund is used to fund the expenditure. The requests have been adjusted to align with the pricing for electric vehicles.

**Project Number** 20-22 **Capital Project Title** Vehicle for the Dam Safety Program **Capital Project Description** New Transit Van

**Project Rationale** An additional pick up is required for the dam safety program. The request has been adjusted to align with the pricing for an electric Transit Van.

**Project Number** 20-23 **Capital Project Title** Vehicle for the CSE Support Program **Capital Project Description** New Transit Van

**Project Rationale** A new Transit van is required to support the Confined Space Entry Support program. The request has been adjusted to align with the pricing for an electric Transit Van.

**Project Number** 21-30 **Capital Project Title** Vehicle for Warehouse Operations **Capital Project Description** New pick up

**Project Rationale** For use of the warehouse worker to source supplies and materials in support of the remote sites. This warehouse worker will maintain wastewater stores and will travel and transport as required items between stores locations. A pickup truck will be required. The request has been aligned with the pricing for an electric Pick Up.

**Project Number** 22-18 **Capital Project Title** Electric Vehicle Charging Stations **Capital Project Description** 7 Dual charging stations at 479 Island Hwy and 1 Dual charging station at the Watershed Protection FOC

**Project Rationale** EV Charging Stations Are required at 479 Island Hwy and the Watershed Protection FOC in order to charge the EV's being purchased during 2021, 2022 and future budget periods. The installation costs per charger is reduced when more than one is installed at a time. There are grants available that will cover approx. 50% of all costs.

**Project Number** 23-21 **Capital Project Title** EV Charging Stations Electrical Infrastructure **Capital Project Description** Electrical System upgrades at 479 Island Hwy to power up 44 charging stations

**Project Rationale** In support of the CRD's Climate Action Strategy to reduce the corporate GHG emissions. The CRD Fleet of vehicles is one of the larger contributors to the generation of GHG's. Integrated Water Services identified 44 of the approx. 100 vehicles that operate out of the 479 Island location for replacement with Electrical Vehicles by 2030. In preparation for providing the proper charging network at 479 an Electric Vehicle Fleet Conversion Study was completed in 2021. The results of the study was to upgrade the electrical infrastructure to accommodate the power needs of 44 charging points. It is proposed that phase 1 is started in 2023 to upgrade the electrical distribution system and provide 17 charging points. The larger portion of the costs will be to upgrade the electrical system. Phase 2 to allow for a further 27 charging points can be planned to accommodate the balance of EV vehicles pending their purchasing and delivery.



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**Project Number** 23-22 **Capital Project Title** Fuel Truck **Capital Project Description** Fuel tender truck

**Project Rationale** At present the fueling of stationary emergency generators and equipment is done using a tidy tank. This requires several trips to the gas station. During the period when fuel was difficult to source it became apparent that Corporate Fleet needs to find a solution to the possibility that during an emergency fuel is available. The fuel truck will also be used during a watershed emergency to fuel equipment and vehicles.

**Project Number** 23-30 **Capital Project Title** Fleet Shop Hoist **Capital Project Description** Heavy Capacity Hoist for fleet maintenance

**Project Rationale** The new larger and heavier vehicles are proving to be a challenge for the two hoists presently used in the Fleet worksho at 479 Island Hwy. Currently our hoists are rated for 18,000 lbs. It is proposed to replace one of the hoists with a 24,000 lbs hoist in the centre bay.

**Project Number** 23-31 **Capital Project Title** Purchase of land **Capital Project Description** Purchasing of land near 479 for future office space

**Project Rationale** Purchasing of land near 479 for future office space

**Project Number** 23-12 **Capital Project Title** Project Delivery Strategy **Capital Project Description** Develop a strategy to deliver the identified projects from the 2022 RWS Master Plan.

**Project Rationale** Develop a strategy to deliver the identified projects from the 2022 RWS Master Plan. With over \$2 billion in planned spending over the next 30 years, including individual projects up to \$1 billion, a strategy is required on how to deliver the projects including project delivery models, assessment of consulting resources, contracting resources and internal staff resources.

**Project Number** 23-13 **Capital Project Title** Filtration Plant Planning & Design **Capital Project Description** Conduct a siting, conceptual design and detailed design for a filtration plant

**Project Rationale** Identified in the 2022 Master Plan, planning, design and future construction of a Filtration Plant is required. Initial steps will include confirming site requirements, overview of integration with other system components, review of current and future technologies and preliminary engineering studies such as geotechnical once a site is confirmed.

**Project Number** 23-14 **Capital Project Title** Council Creek Crossing Hydrology Review **Capital Project Description** Conduct a hydrology review of the Council Creek crossing of water mains to ensure pipe resilience during high rainfall events.

**Project Rationale** Council Creek runs through currently undersized culverts that need hydraulic assessment as well as hydrological confirmation of what flows they are expected to carry. If these culverts failed in an extreme storm event then supply mains may be affected negatively.

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**Project Number** 23-24 **Capital Project Title** East-West Connector (Filtration Plant to District of Sooke) **Capital Project Description** Planning and Conceptual Design of the East-West Supply Main from the proposed filtration plant to the District of Sooke

**Project Rationale** Identified in the 2022 Master Plan, planning and conceptual design of an East- West Supply Main from the proposed filtration plant to the District of Sooke to maintain level of service and to account for growth.

**Project Number** 23-25 **Capital Project Title** Deep Northern Intake and Sooke Lake Pump Station **Capital Project Description** Planning and Design of the Deep Northern Intake and Sooke Lake Pump Station (identified in the 2022 Master Plan)

**Project Rationale** Identified in the 2022 Master Plan, planning and design of the Deep Northern Intake and Sooke Lake Pump Station is required to provide water supply and transmission capability from currently inaccessible parts of Sooke Lake into the water supply and treatment systems.

**Project Number** 23-26 **Capital Project Title** Transmission Main - Sooke Lake Pump Station to Head Tank **Capital Project Description** Planning and Design of the Transmission Main from the Sooke Lake Pump Station to Head Tank (identified in the 2022 Master Plan)

**Project Rationale** Identified in the 2022 Master Plan, planning and design of a pumped transmission main from the future Sooke Lake Pump Station to the existing Head Tank.

**Project Number** 23-27 **Capital Project Title** Gravity Main - Sooke Lake to Head Tank **Capital Project Description** Planning and Design of a Gravity Transmission Main (redundancy) from Sooke Lake to Head Tank (identified in the 2022 Master Plan)

**Project Rationale** Identified in the 2022 Master Plan, planning and design of a gravity transmission main from Sooke Lake to the Head Tank to provide redundant water supply to the system.

**Project Number** 23-28 **Capital Project Title** Goldstream Reservoir Connector **Capital Project Description** Planning and Design of the Goldstream Reservoir Connector transmission main

**Project Rationale** Identified in the 2022 Master Plan, planning and design of a transmission main to connect the Goldstream Reservoir to the Sooke system to ensure transmission safety and reliability when using the Goldstream system to supplement flows to the Sooke system.

**Project Number** 23-15 **Capital Project Title** Mt Tolmie Reservoir Security **Capital Project Description** Conduct public consultation with conceptual designs for site security required at the Mt Tolmie Reservoir

**Project Rationale** The Mt. Tolmie Reservoir requires site security upgrades that will impact the public interface. Conceptual designs of the proposed site security and public consultation is required.

**Service:** **2.670** **Regional Water Supply**

**Project Number** 23-16 **Capital Project Title** Humpback Channel Assessment and Upgrades **Capital Project Description** Hydraulically assess the Humpback Overflow channel and conduct a condition assessment of the culverts at the Gatehouse.

**Project Rationale** Hydraulically assess the Humpback Overflow channel and conduct a condition assessment of the culverts at the Gatehouse. Recommendations from this assessment will inform future capital works to improve the flow path for overflows and additional stormwater entering the flow path and impacting downstream structures.

**Project Number** 23-17 **Capital Project Title** Main No. 4 - Mt Newton to Highway 17 **Capital Project Description** Replacement of a approximately 1.9km of the Main No. 4 concrete pipe from Mt Newton and Central Saanich Road south to where it crosses Highway 17.

**Project Rationale** Replacement of a approximately 1.9km of the Main No. 4 concrete pipe from Mt Newton and Central Saanich Road south to where it crosses Highway 17. A Strategic Priorities Fund grant has been applied to fund a portion of the works. Replacement of this pipe is required to improve the seismic resilience of the supply main.

**Project Number** 23-18 **Capital Project Title** Sooke Lake Dam Spillway Channel Improvements **Capital Project Description** Construct bank protection for the Sooke Spillway Channel and clear the seepage weir blockage.

**Project Rationale** The Sooke Lake Dam spillway channel requires upgrading to prevent erosion when the sluice gates are fully open. Concurrently, the seepage weir blockage will be removed.

**Project Number** 23-19 **Capital Project Title** Charters Dam - Implications from Dam Safety Review **Capital Project Description** Carry out recommendations from the 2022 Dam Safety Review for Charters Dam

**Project Rationale** The Dam Safety Review for Charters Dam was completed in 2022. Funding is required to carry out recommendations from the review.

**Project Number** 25-03 **Capital Project Title** Transmission Main Upgrade Program **Capital Project Description** Identify, conceptually design, detail design and construct transmission main upgrades.

**Project Rationale** Transmission mains that are nearing end of life due to long service require condition assessments and then design and construction of replacement mains where needed. This will be the start of an ongoing replacement program as transmission mains near end of life.

**Project Number** 23-29 **Capital Project Title** Mt. Tolmie Control Valve Replacement **Capital Project Description** Supply and installation of the Mt. Tolmie Reservoir Control Valve

**Project Rationale** The Mt. Tolmie Reservoir Control Valve is nearing end of life and is in need of replacement prior to failure.

CAPITAL REGIONAL DISTRICT  
5 YEAR CAPITAL PLAN  
2023 - 2027

<p><b>Project Number</b> Project number format is "yy-###" "yy" is the last two digits of the year the project is planned to start. "###" is a numerical value. For example, 23-01 is a project planned to start in 2023.</p> <p>For projects in previous capital plans, use the same project numbers previously assigned.</p>	<p><b>Capital Project Description</b> 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 meets current energy standards with an expected service life of 35 years".</p>	<p><b>Carryforward from 2022</b> Input the carryforward amount from the 2022 capital plan that is remaining to be spent. Forecast this spending in 2023 to 2027.</p>	<p><b>Project Drivers</b> Maintain Level of Service = Project maintains existing or improved level of service. Advance Board or Corporate Priority = Project is a Board or Corporate priority. Emergency = Project is required for health or safety reasons. Cost Benefit = Project provide economic benefit to the organization.</p>
<p><b>Capital Expenditure Type</b> 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</p>	<p><b>Total Project Budget</b> Provide the total project budget, even if it extends beyond the 5 years of this capital plan.</p>	<p><b>Funding Source Codes</b> Debt = Debenture Debt (new debt only) ERF = Equipment Replacement Fund Grant = Grants (Federal, Provincial) Cap = Capital Funds on Hand Other = Donations / Third Party Funding Res = Reserve Fund STLoan = Short Term Loans WU = Water Utility If there is more than one funding source, use additional rows for the project.</p>	<p><b>Long-term Planning</b> Master Plan / Servicing Plan = Plan that identifies new assets required to meet future needs. Asset Management Plan / Sustainable Service Delivery Plan = Integrated plan that identifies asset replacements based on level of service, criticality, condition, risk, replacement costs as well as external impacts. Replacement Plan = Plan that identifies asset replacements based primarily on asset age and/or asset material/type. Condition Assessment = Assessment that identifies asset replacements based on asset condition.</p>
<p><b>Capital Project Title</b> Input title of project. For example "Asset Name - Roof Replacement", "Main Water Pipe Replacement".</p>	<p><b>Asset Class</b> L - Land S - Engineering Structure B - Buildings V - Vehicles</p>	<p><b>Cost Estimate Class</b> Class A (±10-15%) = Estimate based on final drawings and specifications; used to evaluate tenders. Class B (±15-25%) = Estimate based on investigations, studies or preliminary design; used for budget planning. Class C (±25-40%) = Estimate based on limited site information; used for program planning. Class D (±50%) = Estimate based on little/no site information; used for long-term planning.</p>	

**Service #:** 2.670/2.680  
**Service Name:** Regional Water Supply & JDF Water Distribution Combo

SECTION 1: PROJECT DESCRIPTION AND BUDGET													
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2022	2023	2024	2025	2026	2027	5 - Year Total
<b>SYSTEM REPLACEMENT AND UPGRADES THAT BENEFIT REGIONAL WATER SUPPLY AND JUAN DE FUCA DISTRIBUTION</b>													
16-01	Renewal	Upgrades to Buildings at 479 Island Highway	Maintenance and changes to buildings and office layouts.	\$320,000	B	WU	\$0	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$400,000
17-01	Renewal	Voice Radio Upgrade	Replacement of end of life voice radio system repeaters, office, vehicle and handheld radios.	\$2,125,000	E	WU	\$1,000,000	\$1,300,000	\$200,000	\$0	\$0	\$0	\$1,500,000
20-01	New	Portable Pump Station	Portable pump station and generator to provide backup when a pump station is offline, in construction or to bypass a section of pipe.	\$750,000	E	WU	\$530,000	\$530,000	\$0	\$0	\$0	\$0	\$530,000
<b>Sub-Total System Replacement and Upgrades That Benefit Regional Water Supply and Juan de Fuca Distribution</b>				\$3,195,000			\$1,530,000	\$1,910,000	\$280,000	\$80,000	\$80,000	\$80,000	\$2,430,000
<b>ANNUAL PROVISIONAL CAPITAL ITEMS</b>													
17-03	Replacement	Office Equipment, Upgrades and Replacements	Upgrade and replacement of office equipment as required.	\$225,000	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.	\$850,000	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.	\$100,000	E	WU	\$50,000	\$70,000	\$20,000	\$20,000	\$20,000	\$20,000	\$160,000
17-06	Replacement	Small Equipment & Tool Replacement (Water Operations)	Replacement of tools and small equipment for Water Operations as required.	\$400,000	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.	\$75,000	E	WU	\$0	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000
													\$0
													\$0
<b>Sub-Total for Annual Provisional Capital Items</b>				\$1,650,000			\$50,000	\$380,000	\$330,000	\$330,000	\$330,000	\$340,000	\$1,710,000
<b>GRAND TOTAL</b>				<b>\$4,845,000</b>			<b>\$1,580,000</b>	<b>\$2,290,000</b>	<b>\$610,000</b>	<b>\$410,000</b>	<b>\$410,000</b>	<b>\$420,000</b>	<b>\$4,140,000</b>

**Service:** **2.670/2.680** **Regional Water Supply & JDF Water Distribution Combo**

<b>Project Number</b>	16-01	<b>Capital Project Title</b>	Upgrades to Buildings at 479 Island Highway	<b>Capital Project Description</b>	Maintenance and changes to buildings and office layouts.
<b>Project Rationale</b>	<p>The budget includes the following funds to upgrade and renew the buildings at 479 Island Highway:</p> <ul style="list-style-type: none"> <li>• Repairs, upgrades and changes to the buildings (provisional \$50,000)</li> <li>• Painting of the buildings. (provisional \$10,000 annually)</li> <li>• Repair and replacement of carpets, floors and walls. (provisional \$10,000 annually)</li> <li>• Repair, refurbishment and replacement of equipment and property. (provisional \$10,000 annually)</li> </ul>				

<b>Project Number</b>	17-01	<b>Capital Project Title</b>	Voice Radio Upgrade	<b>Capital Project Description</b>	Replacement of end of life voice radio system repeaters, office, vehicle and handheld radios.
<b>Project Rationale</b>	<p>Service Life and projected replacement:</p> <ul style="list-style-type: none"> <li>• The service life of the mobile and portable units was forecast as 10 years at minimum, 15 years at maximum in 2005.</li> <li>• 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.</li> <li>• Support for repairs and maintenance of the present radio will continue for the next 3 years at least.</li> <li>• 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</li> </ul>				

<b>Project Number</b>	20-01	<b>Capital Project Title</b>	Portable Pump Station	<b>Capital Project Description</b>	Portable pump station and generator to provide backup when a pump station is offline, in construction or to bypass a section of pipe.
<b>Project Rationale</b>	<p>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 <b>with a generator</b> is required to maintain the level of service. Funds will be used in 2020 to design and in 2021 to procure a portable pump station <b>and generator</b>.</p>				

<b>Project Number</b>	17-03	<b>Capital Project Title</b>	Office Equipment, Upgrades and Replacements	<b>Capital Project Description</b>	Upgrade and replacement of office equipment as required.
<b>Project Rationale</b>	<p>Funds will be used for the replacement and upgrading of office equipment and furniture, as required.</p>				



**Service:** 2.670/2.680 Regional Water Supply & JDF Water Distribution Combo

<b>Project Number</b>	17-04	<b>Capital Project Title</b>	Computer Upgrades	<b>Capital Project Description</b>	Annual upgrade and replacement program for computers, copiers, printers, network equipment as required.
<b>Project Rationale</b>	<p><i>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 \$170,000 annually to reflect actual costs.</i></p> <p><i>Capital Budget</i>  <i>Network Switch Maintenance \$10,000</i>  <i>Additional Wireless Access Points and Maintenance \$15,000</i>  <i>Photocopier Replacement \$20,000</i>  <i>Additional Data Storage \$15,000</i>  <i>Replacement Computers \$75,000</i>  <i>Equipment Maintenance (contingency) \$23,000</i>  <i>Replace Access Control System - Gates/ Video Cameras \$12,000</i>  <i>Total Capital \$170,000</i></p>				

<b>Project Number</b>	17-05	<b>Capital Project Title</b>	Development of the Maintenance Management Systems	<b>Capital Project Description</b>	Develop maintenance management system.
<b>Project Rationale</b>	<p><i>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 projects:- Develop and Asset onboarding process and a fault code reporting process for the CMMS.</i></p>				

<b>Project Number</b>	17-06	<b>Capital Project Title</b>	Small Equipment & Tool Replacement (Water Operations)	<b>Capital Project Description</b>	Replacement of tools and small equipment for Water Operations as required.
<b>Project Rationale</b>	<p><i>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.</i></p>				

<b>Project Number</b>	17-07	<b>Capital Project Title</b>	Small Equipment & Tool Replacement (Corporate Fleet)	<b>Capital Project Description</b>	Replacement of tools and small equipment for Fleet as required.
<b>Project Rationale</b>	<p><i>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.</i></p>				

**2.670 Regional Water Supply  
 Asset/ Reserve Schedule  
 2023 - 2027 Financial Plan**

**Asset Profile**

**Regional Water Supply**

System assets include the lands, dams and source water reservoirs within the water supply areas, intake and source conduits, two water treatment plants, pressure regulating facilities, nine supply mains, three balancing reservoirs and revenue water meters in the water transmission system.

**Equipment Replacement Reserve Schedule**

**Reserve Fund: 2.670 Regional Water Supply Equipment Replacement Reserve (covered by CRD-ERF Bylaw)**

**Fund: 1022 Fund Center: 101454**

	Actual	Budget				
	2022	2023	2024	2025	2026	2027
<b>Beginning Balance</b>	2,730,476	3,084,965	2,632,868	2,413,908	2,441,817	2,385,302
<b>Equipment purchases (Based on Capital Plan)</b>	-	(995,000)	(843,000)	(630,000)	(775,000)	(855,000)
Transfer of assets intracompany	-					
<b>Transfer from Operating Budget</b>	314,181	393,653	497,590	563,409	602,235	638,415
<b>Proceeds on disposals</b>	23,518	149,250	126,450	94,500	116,250	128,250
<b>Interest Income*</b>	16,790					
<b>Ending Balance \$</b>	<b>3,084,965</b>	<b>2,632,868</b>	<b>2,413,908</b>	<b>2,441,817</b>	<b>2,385,302</b>	<b>2,296,967</b>

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.