

Community Need



2021 Summary

Water

Strategy

Target Outcome

We envisage a sustainable and resilient water supply

Strategic Context

Strategies

- [Regional Water Supply Strategic Plan](#)
- [Regional Growth Strategy](#)
- [Special Task Force on First Nations Relations](#)
- [Statement of Reconciliation](#)

Trends, risks and issues

- **Security and patrols:** there have been an increased number of security incursions/recreational pressure into the Greater Victoria Water Supply Area (GVWSA) from Sooke Hills Wilderness Regional Park and from the rapidly developing residential area around Langford and Goldstream. This is putting additional pressure on the Watershed team.
- **Climate Action:** the most significant risks for water services relate to climate and environmental changes. Predicted trends of drier, hotter summers will impact the water services in a number of ways:
 - Demand for water, including for local agricultural activities, will continue to increase which will in turn increase the risk of water shortages; addressing this challenge will require a continued focus on water conservation effort, watershed protection, ongoing monitoring and awareness of the need for good governance of the water service
 - Water quality may be affected due to increased biological growth in the source water and distribution system; expecting to see increasing pressure to include filtration as a step in the RWS treatment process
 - In the GVWSA, increasing periods of elevated wildfire risk, peak flows from winter storms, drought stress on trees which could lead to increased mortality and forest pests/diseases
 - Increased risk of power outages
- **Infrastructure Vulnerability, resiliency, and Emergency Preparedness:** we are seeing increases in operation and maintenance demand from a growing region combined with aging infrastructure. An

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updated Water Management Plan for water supply will identify a strategy to address supply (quantity) and critical delivery infrastructure (redundancy) needs

Services

Core Services Levels	
Service	Levels
Regional Water Supply (RWS), Juan de Fuca (JdF) Water Distribution, Saanich Peninsula Water and Small Water Systems in the Electoral Areas Wholesale water supply to the 370,000 consumers in Greater Victoria and residents in three municipalities on the Saanich Peninsula, water distribution system within Langford, Sooke, View Royal, Colwood, East Sooke, Metchosin and Highlands and the small water systems in the Electoral Areas supported through following key service areas:	
Water Systems Operations and Maintenance Water treatment, supply and distribution system operation and monitoring. System and facility maintenance, consumables management and preventative maintenance	<ul style="list-style-type: none"> • Water treatment • Supply and distribution system operation • System monitoring • Customer service • System and facility maintenance • Consumables management • Component preventative maintenance
Emergency Response/System Failure Water main breaks	<ul style="list-style-type: none"> • 24/7 emergency response to water main breaks and other system emergencies
Infrastructure Planning Strategic asset management for all services/systems including modeling and capacity analysis,	<ul style="list-style-type: none"> • Asset management and capital planning • Adjust plans for 15 water services • System expansion and growth planning

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vulnerability assessment, infrastructure renewal plans.	
Capital Project Delivery and Works Project design, procurement and delivery of capital projects annually on time/budget. Main installations, dam upgrades, equipment replacement and capital projects support	<ul style="list-style-type: none"> • Capital program delivery • Water main installations and equipment replacement • Dam maintenance and upgrade projects • Capital project support
Engineering Services Development referrals, survey and mapping, engineering support to utility operations, and dam safety inspections and administration.	<ul style="list-style-type: none"> • Engineering support of utility operations for the 15 water services.
Watershed Protection Forest land management of the 20,550 hectares of the Greater Victoria Water Supply Area to ensure high-quality source drinking water for the Regional Water Supply System through following service areas:	
Wildfire, Security & Emergency Response: Watershed security, and wildfire and spill preparedness, prevention and response	<ul style="list-style-type: none"> • 24/7 watershed emergency duty officer standby • Security/wildfire patrols (weekends and holidays; daily during elevated fire conditions) • Wildfire detection air patrol during high and extreme fire hazard
Watershed Operations Silviculture, forest health and forest fuel management; invasive plant management; vegetation management and road maintenance, upgrades and rehabilitation	<ul style="list-style-type: none"> • Winter/summer road maintenance • Culvert and bridge upgrades to accommodate higher peak flows to higher standards and changing climate • Fuel management treatment and fire smarting maintenance • Brushing around facilities, dams, for tree release • Danger tree assessment and removal along roads and powerlines • Invasive plant management
Resource Planning Wildlife management, ecological inventories and analyses, risk assessment and management, and GIS and data management	<ul style="list-style-type: none"> • Development of a comprehensive hydrology monitoring program • Annual forest health survey • Partnering in climate change and other research in the GVWSA

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	<ul style="list-style-type: none"> • Management of beaver, Canada geese and bullfrogs • Public tours of the Water Supply Area and facilities
Environmental Protection Regulatory and non-regulatory services and a support role across the organization that focuses on enhanced integration of drinking water quality protection programs and integration of communication initiatives.	
Water Quality Monitoring, assessment, reporting and technical advice to meet water quality regulatory requirements	<ul style="list-style-type: none"> • Source water and distribution system monitoring, assessment and reporting • Physical, chemical and biological analytical services, assessment and reporting
Demand Management Research and data to inform capital planning, water conservation, and communications and education	<ul style="list-style-type: none"> • Accurate data • Per capita targets (residential and ICI)
Cross Connection Control Oversight, monitoring and reporting of potential sources of contamination that may flow in a reverse direction into the Regional Water Supply	<ul style="list-style-type: none"> • Contamination prevention through facility inspections, testing and education for backflow prevention devices • Monitor and track (>28,000) backflow prevention devices
Communications & Environmental Education Public education and engagement in the region to promote sustainable behavior through campaigns, initiatives and services	<ul style="list-style-type: none"> • Increased public awareness of CRD messages and subsequent behavior changes (declining trend in per capita and per sector water use)
Support Services	
Support Services The core services listed rely on the support of several corporate and support divisions to effectively operate on a daily basis. These services are reported on in the Accountability Community Need Summary.	<ul style="list-style-type: none"> • Services include Human Resources & Corporate Safety, Corporate Communications, Asset Management, Financial Services, Information Technology & GIS, Information Services, Legislative Services, Facility Management, Fleet Management, Legal Services, Risk & Insurance and Real Estate Services.

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Initiatives					
Ref	Initiative	Description	Year(s)	Status	2021 impacts
10a-1	Post-Disaster Water Supply Plan	Implement approved Post-Disaster Water Supply Plan, including undertaking seismic resiliency study of critical water supply infrastructure	2020-2022	In progress (5 resilient supply hydrants installed by year end 2020; 5 hydrants installed and distribution trailers acquired in 2019)	
10a-3	RWSSP Update	Update Regional Water Supply Strategic Plan	2022-2023	In progress (progress report in Oct 2020)	
10d-1	Future Water Supply + Infrastructure	Conduct population & land use studies & estimate growth-related water demand & future water supply & infrastructure needs	2020-2022	In progress (50% complete)	
10a-4	Cross Connection Control (CCC) Inspector*	CCC Program: convert a current temporary CCC Inspector position to permanent to meet the requirements by Island Health and protect the public health	2021	Completed	1.0 ^{Converted}
10d-2	Leech River Water Quality Operations*	Water Quality Operations Program: This multi-year initiative is to collect and analyze water quality data from the Leech River Watershed, the future water supply for the Greater Victoria Drinking Water System	2021	In progress (Field sampling began in 2020 and will continue for approximately five years)	0.4 ^{Ongoing}

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10a-0.1	Watershed Security Position	Create new shift position to respond to security issues and wildfire.	2021	NEW	1.0 ongoing
10a-2.1	Water Infrastructure Resilience	Review infrastructure redundancy & improvements, renew/replace infrastructure to avoid infrastructure deficits & ensure reliable, safe service delivery & resilience	2020-2021	NEW additional request for 2021	1.0 ongoing
10d-3	Watershed Hydrology Monitoring*	Expand and increase watershed hydrology monitoring in the Greater Victoria Water Supply Area	2020-2021	NEW additional request for 2021	

*New – Initiatives not in the 2019-2022 Corporate Plan

Initiative approved in prior years which have now been delivered or absorbed in Core Services:

- 10a-5 – Water Billing
- 10a-7 – Salt Spring Island + Southern Gulf Islands Water Operations
- 10b-1 – Water Conservation through Demand Management
- 10c-1 – Agricultural Water Subsidy
- 10d-4 – SSI Watershed Protection

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Business Model

Funding

Who contributes

Water Supply and Distribution:

- Regional Water Supply: All Municipalities, JDF EA, First Nations (via Distribution Systems)
- Saanich Peninsula Water Supply: Municipalities (Central Saanich, North Saanich, Sidney)
- JDF Water Distribution: Langford, Colwood, View Royal, Metchosin, Highlands, Sooke, JDF EA
- Local Water Service Areas in the Electoral Areas

Environmental Protection

- Water Quality Service: Allocation from Integrated Water Services and Local Service Areas (LSA) from municipalities of RWS area, JDF and various local service areas, Sidney, North Saanich, Central Saanich and Peninsula First Nations
- Demand Management, Cross Connection Control Services: water rate from all Municipalities and Electoral Areas
- Communications and Environmental Education: all Municipalities and Electoral Areas

Support Services

- Varies per service

Funding Sources

- **Regional Water Supply:** Bulk water sales revenue
- JdF Water Distribution System: Retail water sales revenue in West Shore Municipalities
- **Saanich Peninsula Water:** Wholesale water sales revenue
- **Environmental Protection services:** water rate and requisition

Reporting Structure

[Regional Water Supply Commission](#) – [Water Advisory Committee](#) – [Saanich Peninsula Water Commission](#) – [JDF Water Distribution Commission](#)

– [Various LSA Commissions](#) (Port Renfrew, Lyall Harbour/Boot Cove, Magic Lake Estates, Skana, Beddis, Cedar Lane, Cedars of Tuam, Fernwood, Fulford, Highland, Sticks Allison, Surfside Park, Wilderness Mountain)

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Community Need Key Performance Indicator (KPI)

Discussion

Link to Target Outcome

The following KPIs link to the CRD's goals of safe, sustainable and resilient water resources for the Capital Region. These KPIs are being established with new performance targets that will be reported in future service plans.

- Compliance with Island Health, provincial and federal regulatory requirements and operational certificates
- Water quality samples analyzed from source reservoirs (raw water) and transmission/distribution systems (treated water)
- Peak day per capita water use and average day per capita water use
- Operating cost per megaliter of drinking water treated and supplied/distributed
- Energy use per megalitre of drinking water treated and supplied/distributed
- Delivery of annual capital program
- Volume of raw water released from RWS watersheds to rivers to support fish habitat
- Number of water quality complaints
- Number of leak repairs annually per kilometer of pipe (distribution systems)
- Number of water main failures annually per kilometer of pipe (distribution systems)