Salt Spring Island
Water Service Optimization Study

December 2019 – *December 2020*

Prepared by the
INNOVA Strategy Group

EXECUTIVE SUMMARY

Like most Canadian communities, including those in British Columbia, water utilities struggle to provide safe and reliable drinking water. Challenges range from inadequate supply to aging infrastructure. Recognizing that Salt Spring Island is not exempt from these challenges, the agencies involved with on-Island regulation and governance of water (Capital Regional District, North Salt Spring Waterworks District, Islands Trust, Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR), Ministry of Health (MoH), Ministry of Municipal Affairs & Housing) are working together to improve delivery and develop a plan for sustainable supply, maintenance, and delivery in the future.

For the past 100 years, various Salt Spring Island water systems have been installed and improved with limited coordination between systems. The North Salt Spring Waterworks District (NSSWD) is the largest system and provides water to more than 50% of the Island population. NSSWD also provides operations and maintenance services to six other systems on a fee-for-service basis. The Capital Regional District (CRD) manages five systems; operating and maintaining two of them. There are also a number of private systems and individual wells that are operated independently, totalling approximately one-third of Island water use.

The ***Salt Spring Island Water Service Optimization Study*** was commissioned by the Ministry of Municipal Affairs & Housing in collaboration with the CRD and the NSSWD following a November 2019 competitive Request for Proposals. The genesis of the study followed the failed 2017 referendum for municipal incorporation by Salt Spring residents, prompting the NSSWD to request that the Ministry of Municipal Affairs and Housing allow it access to grants and gas tax funding through means other than incorporation. While access was not granted, it was recognized that changes are required and as such the Ministry of Municipal Affairs & Housing directed the NSSWD to work with the CRD to find a solution that would improve water service delivery Island wide and provide NSSWD access to infrastructure grants.

The ***Salt Spring Island Water Service Optimization Study***, completed by Innova Strategy Group, includes an assessment and detailed examination of the challenges in operating multiple water distribution and treatment systems on an unincorporated island electoral area.

This review has determined there are both strengths and areas in need of improvement. The report provides recommendations on potential future governance in consideration of overall efficiencies, public health, long-term funding, and the basis for decision-making to support Salt Spring Island into the future.

CURRENT STATE SERVICE MODEL – SUMMARIZED STRENGTHS AND WEAKNESSES

Strengths	Weaknesses
NSSWD is a well-run system with dedicated and skilled staff	Complex and varied governance structures restrict the ability to achieve efficiencies
CRD provides a high level of service for the region it serves	Perceived inadequate water supply to meet existing and future demand
CRD provides many ancillary support services that are difficult to replicate in smaller water districts	Inadequate capital funding, particularly with access to grants for NSSWD
CRD has the ability to draw upon professional CRD expertise in Victoria	Inability to meet drinking water guidelines at all times (note, this is common to most utilities)
NSSWD provides excellent on-Island connections to contractors and other service providers	Complex water treatment system designs that are difficult to maintain
Community interest in water issues is high	Difficulty in attracting qualified staff to Island
	Aging infrastructure and future challenges with asset management
	Coordination of services
	Ratepayers pay a premium for the services provided
	Inadequate fire flows to support standard structural firefighting response.

PRIMARY FINDINGS

OPERATIONS AND MAINTENANCE

1. **NSSWD is a well-run system with dedicated and skilled staff, but without government grants and some internal inefficiencies, there are higher than average premiums for the services provided.**

   NSSWD is an expert in water system operations and maintenance on the Island and is generally viewed favourably by Island residents. NSSWD operates using primarily on-Island resources, capacity and contractors resulting in best value to the residents. NSSWD is considered a trusted partner of the CRD (and some private systems), providing fee-for-service operations and maintenance. Although MoH requires a registered Level 4 Environmental Operator Certification Program (EOCP) Water Treatment Operator, no NSSWD operators currently hold this designation. However, an operator can work at a level below with facility classification as long as it can be determined that an operator is working toward the required certification. Although NSSWD provides reliable service, it is somewhat inefficient in a number of areas. Further, NSSWD's inability to qualify for infrastructure grants is a significant factor in the need to charge ratepayers a premium for the services provided. Rates have increased significantly over the past few years because of implementation of a capital construction surcharge to save money for future infrastructure updates and to pay for borrowing $7.9M in 2019 for the St Mary Lake Treatment Plant, two-thirds of which could have been funded through federal/provincial grants if

NSSWD was eligible. The CRD is eligible for grants and has accessed grants to offset capital replacement/upgrade costs but the lack of available grants for NSSWD capital projects significantly restricts its ability to deliver capital projects to NSSWD ratepayers cost effectively.

2. **The CRD on Salt Spring Island relies heavily on CRD Victoria resources, which cannot always provide timely emergency response.**

   The CRD currently operates two systems, but relies heavily on its Victoria resources, which cannot provide timely emergency response at all times. There are only three certified water operators on the Island. Overall, CRD on-Island water operations are difficult to maintain due to the small size of the operation.

3. **Except for small defined areas, the water systems on Salt Spring Island do not provide adequate fire flows to support standard structural firefighting response.**

   Inadequate flows are due to the general (under) sizing of water mains along with overall poor system hydraulics.

ASSET MANAGEMENT

1. **Salt Spring Island water systems have major challenges with asset management.**

   Most systems have not had the appropriate level of study to determine “time to failure” of the assets. CRD recently completed its asset inventory and is working on a long-term financial plan. NSSWD is scheduled to have a baseline asset register in place in 2020, which could be considered as a start for a strategic assessment management plan. Currently no systems have a long-term financial plan for replacement of aging infrastructure and ongoing improvements to system hydraulics, although all parties understand the importance of this. At this time there are no identified plans to fund required or future replacement or upgrades putting their individual systems at risk of inevitable failure. Any financial plan will require Board involvement.

2. **NSSWD and other private systems are not currently eligible for Provincial and Federal grants.**

   CRD systems can and have accessed grants to offset capital replacement/upgrade costs, however, NSSWD and other private systems are not currently eligible for the Provincial and Federal Infrastructure grants (CRD, which is eligible, has provided small grants to NWSSD in the past). The lack of available Provincial and Federal grants for NSSWD significantly restricts its ability to cost effectively deliver capital projects to the NSSWD ratepayers.

ADMINISTRATION AND LEADERSHIP

1. **More training on contemporary management practices is required.**

   NSSWD has knowledgeable and educated administration and leadership staff, however, there are a number of areas of opportunity for the utility. Generally speaking, there are knowledge gaps in terms of understanding of contemporary labour relations, human resources, and occupational health and safety practices. Due to the small size of the organization, it is difficult to have in-house expertise in all areas, so the NSSWD relies on consultants for support in those areas. Further, a compensation review may be required in order to ensure compensation is commensurate with other water systems of

similar size, while considering cost of living, ability to secure housing, and other talent attraction challenges associated to smaller, remote locations.

2. **There is a disconnect between CRD leadership and Salt Spring priorities, which results in confusion and in some cases, mismanagement of operational and safety issues.**

CRD administration and leadership is broken into two components: Integrated Water Services (IWS) through Infrastructure Operations and through Saanich Peninsula & Gulf Island Operations. IWS is a large organization within CRD, which maintains multiple regional and sub-regional water and liquid waste services for member municipalities and local water and waste services in the Juan de Fuca, Salt Spring and southern Gulf Islands Electoral Area. Because of its size, it is difficult to allocate and prioritize capacity, and in Innova Strategy Group's opinion, may not be able to pivot, in a cost-effective manner, to work on smaller systems such as those on Salt Spring Island.

Figure 1-NSSWD St. Mary Lake Treatment Plant piping

CRD on-Island support is provided by the Salt Spring Island Administration office, which provides on-Island resources for the general CRD services provided on the Island. Although not a core part of this review, it would seem this office delivers valued local government services, is led competently by the manager, and provides valued administrative support to the Commissions. Retention of Engineering staff has negatively impacted projects on the Island overall, including some challenges with contract management.

EXISTING GOVERNANCE

1. **Multiple governing bodies result in inefficiencies, lower value to residents, and potential risk to the overall health of the Island water resources.**

There are several different entities that provide regulation, services, and/or general advice on water issues: NSSWD, CRD, CRD Electoral District, Improvement Districts, Private Systems, and the Islands Trust. The CRD owns five drinking water systems, but the NSSWD operates three of those. Collectively, decisions are not always made in a collaborative manner resulting in inefficiencies, lesser value to residents, and risk to the overall health of the Island water resources. Most importantly, there would seem to be a number of lost opportunities to provide collaborative service delivery that would benefit all parties.

NSSWD is governed by a five- person Board elected by the ratepayers. CRD operates five systems that each has a separate Commission, which provides advisory services to the Board. The CRD Electoral

Area director advocates for Salt Spring water issues. Private systems have Boards/Commissions that govern the finances and operations of their individual utilities. Overall, there are more than 50 "Commission" appointments on the Island. The Islands Trust's primary responsibility within water resources is coordination - sharing information with other jurisdictions—and does not have any jurisdiction/service authority to implement any of its strategies and actions. Provincial Ministries have active involvement and concerns with water issues on Salt Spring Island, primarily the Ministry of Municipal Affairs & Housing and the Ministry of Health.

In the past, NSSWD has asked the Province for additional powers or a special Act allowing the District to access all grants and the Province declined. Discussion with the Province has indicated there is no interest in allowing water districts to access Federal and Provincial infrastructure grants. Although this would resolve some of the challenges with NSSWD, it does not resolve many of the challenges and opportunities identified within this report, including economies of scale and a single governance body.

BEST PRACTICES

1. **There is no one single solution for coordinating water resources.**

   Effectively managing small to mid-sized water systems in B.C. is particularly challenging for many regional districts. There are many examples of governance and control challenges that remain unresolved and/or create conflict within communities.

   A review of regional districts did not find any single solution for coordinating water resources however, some operate relatively efficiently when they have a small number of water systems to manage. Most struggle with operating and maintaining independent systems in a manner that is understood and supported by the system ratepayers. Ratepayers for small systems typically expect extremely low rates without any consideration for full life cycle management.

   Incorporated municipal and amalgamated regional district water systems operate and maintain water systems at the highest level due to their ability to coordinate, manage and govern through a single group of elected officials. Although the elected body may not always agree on issues such as wastewater treatment, water conservation, and watershed management, the decisions are based on streamlined processes involving a democratically elected group of representatives. Geographically separated areas benefit the most from adopting a model that replicates local government governance, operations and maintenance.

ANALYSIS

The current governance structure and diffused approach to water management on Salt Spring Island has led to significantly increased costs overall to the residents and businesses on the island. There are many verified examples of inefficiencies that have resulted from not working collaboratively. At a minimum, it is estimated that the lack of coordination, lack of grants, and overall inefficiencies has resulted in significant additional costs to Salt Spring Island ratepayers. Although the individual costs may vary between residents and businesses on the Island, these increased costs inevitably detract from using overall "taxation" for possibly more important functions.

Figure 1-1 NSSWD St. Mary Lake Treatment Plant pumps

From a financial perspective, a key and fundamental barrier to future financial viability is NSSWD's inability to access Federal and Provincial grants. A secondary barrier are the inefficiencies with the current NSSWD and CRD operating models.

Every referenced Salt Spring Island governance report/analysis from the last 10 years recommended the same approach: **Salt Spring Island would benefit from a consolidated, efficiently operated on-Island water utility that is governed by residents of Salt Spring Island.**

Based on all analysis of findings including literature review, interviews, evaluation of best practices and the ratepayer survey, almost all agreed that any governance and operational model must include the following components:

1. All high-level water decisions for Salt Spring Island must be made by residents of the Island through a single governing body
2. Water systems should be operated and maintained on Salt Spring Island utilizing on-Island staff whenever practicable.
3. Existing NSSWD and CRD staff should be utilized as the core for operations and maintenance
4. Water functions should be amalgamated and streamlined to realize efficiencies
5. All residents should have access to Federal and Provincial grants
6. Open and transparent communications
7. Strong asset management and financial long-term planning
8. Any new governance model should operate similarly to a municipal water utility

OPTIONS

A number of options and variables were considered through the process with the baseline being to continue with the existing governance of water systems and all Boards and Commissions to be retained.

Based on above, four options are considered possible:

Option	Description
Option #1	Enhance the existing governance through improvements to existing NSSWD and CRD operations, maintenance and planning. In a collaborative manner, NSSWD to operate all water systems and CRD to manage capital construction. All Boards and Commissions to be retained.
Option #2	CRD to operate all water systems within its current structural alignment. Salt Spring Island water decisions provided by the CRD Board and the NSSWD would convert to a CRD Service Area.
Option #3	Create an independent CRD Salt Spring Island department through a legally binding mechanism that reports to a single elected Salt Spring Island Commission and that would only operate and manage drinking water systems. It is the recommendation of Innova Strategy Group that a Salt Spring Island Water Utility department be created with the Commission providing governance oversight for specific services. **Note:** Should Option #3 be considered an additional opportunity would be to include all water management (surface water, ground water, storm water, waste water) within the portfolio. This path may prove to be difficult as some of these services are regional or may rest with other authorities such as Ministry of Transportation and Infrastructure, Islands Trust etc., however, the opportunity to further coordinate water resources should be considered.
Option #4	Establish a contribution service, where water delivery on Salt Spring is fully privatized (to a society or other body reporting to ratepayers) and CRD uses its taxation authority to collect to fund the service based on its operational and capital budgets.

PREFERRED OPTION

Option #3 – **Consolidating CRD and NSSWD** is the preferred governance solution that will ensure the strongest financial future for Salt Spring Island. This option consolidates all CRD and NSSWD systems into a single governed body representing the majority of Salt Spring Island water systems.

An independent CRD department using on-Island resources and governed by an elected Salt Spring Island Waterworks Commission has the potential to resolve a number of issues inherent with the current model. This option recognizes the strengths of both CRD and NSSWD. CRD has considerable depth with support services in Victoria such as financial services, human resources, occupational health and safety, water quality, planning, engineering in both Victoria and on island, etc., CRD also has contemporary policies and procedures

to ensure that risks are mitigated. NSSWD operates its system relatively efficiently and effectively, utilizing a model of on-Island governance and operations.

The Option #3 solution would create key advantages when balanced against the current model:

1. Reduced operating costs
2. Significantly reduced capital costs
3. Increased collaboration across the Island
4. Increased environmental protection through linkages to this single governing body
5. Increased water conservation measures and better coordination across the island
6. Increased ability for the Islands Trust to make land use decisions based on Island-wide water inventories
7. Increased ability to obtain support from Provincial and Federal agencies

NEXT STEPS

Through discussions and a survey with stakeholders, the Option #3 concept was notionally supported however, the path to achieving this new governance is political and requires agreement from elected officials with NSSWD, CRD and other small systems. It also requires elector approval by NSSWD ratepayers. Acceptance of Option #3 will be contingent on a number of conditions in order to satisfy concerns with all interested parties.

Suggested steps required to change to governance Option #3 include:

1. Development of an agreement in principle
2. Communication and public consultation with residents
3. Review of public comments; changes to agreement, if warranted
4. Produce CRD bylaws to create new governance model
5. Approval of change to new governance (by CRD Board and NSSWD ratepayers)
6. Creation of CRD “Salt Spring Island Water” Utility
7. Dissolution of NSSWD and other commissions

Figure 1-2 NSSWD Storage Tanks

The successful implementation of Option #3 may garner interest in furthering this collaborative model in consideration of other on-Island services, such as fire, parks and recreation, etc., It is likely unwise to consider these options at this time, however, in the coming years a similar or combined collaborative model should be evaluated.

CONCLUSION

Salt Spring Island residents are passionate about their water and passionate about their community. They have a strong desire to govern the water issues on the Island collectively and understand the challenges with prior governance. They want to enjoy equitable costs for services provided, access to government grants, accountability for work performed, reduced bureaucracy, and control of their destiny. Residents desire a high level of communication and detailed analysis of costs to ensure that they understand the high value for the service provided. The Capital Regional District, Provincial Ministries, and Island Trustees also want Salt Spring Island to be successful and to ensure that decisions are made in the best interest of the community.

With this in mind, Innova Strategy Group recommends **that all agencies move forward on the collaborative governance model that utilizes the strengths of CRD, the strengths of NSSWD, the strengths of provincial government agencies and the strength of the Salt Spring Island community.**

ADDITONAL COMMENTS
Interviews, analysis and options were completed from December, 2019 to March 2020. It is important to recognize that this reports findings and comments are based on this evaluation period and that both CRD and NSSWD have made a number of operational changes, as recommended in this report, since March. Both agencies should be commended on their early and strong attention to areas of concern and the resulting changes have greatly benefitted the two organizations.

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1. METHODOLOGY

1.1 ISSUE BACKGROUND

Salt Spring Island water service delivery is carried out by multiple agencies, including the Capital Regional District (CRD), the North Salt Spring Waterworks District (NSSWD), other smaller improvement districts, and private utilities. Multiple agencies make it difficult to achieve economies of scale and a coordinated approach to water service delivery.

Currently the NSSWD owns and operates two water treatment and distribution systems that provide water to approximately 5,500 people. The CRD owns five different water systems, two of which it operates and three others that are operated by NSSWD under contract. Two other water improvement districts (Scott Point and Mt. Belcher) and one private water utility (Erskine Water Society) contract with NSSWD to operate its water systems. Harbour View Improvement District is operated by residents of that District.

Water licenses for all the water systems and any well connections with more than one user are issued through the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR). Island Health regulates the quality of drinking water for sources where there is more than one user through water source approvals and water system construction and operating permits.

A number of different reports, studies and programs have been initiated by various groups and agencies to try to improve coordination of water resource management and/or service delivery on the Island. These include the *Salt Spring Alliance Governance Working Group Report (2018)*, the *Positively Forward Improving Capital Regional District Service Delivery on Salt Spring Island (2018*), the *SSIWPA Integrated Freshwater Management Program (2016- present)*, the *Provincial/CRD joint Salt Spring Island Governance Study (2013)* and the *Salt Spring Island Incorporation Study (2016).* While the electors of Salt Spring conclusively decided against municipal incorporation in 2017, to date none of the other reports or studies have been adopted by a local service provider as a blueprint for change.

The Island is grappling with water shortages (especially in summer} and the NSSWD has a moratorium on connections to its system. Moving forward, there is recognition by both the CRD and NSSWD that better integration of water service delivery and management would benefit all residents on Salt Spring.

After a meeting between representatives from Islands Trust, CRD, NSSWD and Municipal Affairs and Housing (MAH), it was suggested that the Island-wide issue of water source protection and watershed management could be dealt with through a CRD *'Drinking Water & Watershed Protection* Service.' The Regional District of Nanaimo and Cowichan Valley Regional District have similar services in place.

1.2 TERMS OF REFERENCE

In 2019, NSSWD and CRD agreed that a study to look at ways to improve coordination between the public water service providers on the Island would be beneficial. The proposed *Water Service Optimization Study* would examine:

- The existing governance and administration framework for service delivery by the various public water service providers on Salt Spring (i.e. how each service provider makes decisions about services and operates its water system);
- Stakeholder views on how water is managed and provided to ratepayers by the public water service providers;

- Shared goals for water service optimization;
- At least two different options for NSSWD and the CRD to improve water service delivery on Salt Spring. Two of the options must include:
  - Option A - improve integration and coordination of service delivery on Salt Spring while maintaining NSSWD status as an independent public water service provider
  - Option B - create a consolidated CRD Salt Spring Water Commission and centralize operation and administration of Salt Spring water service on island (this option would include conversion of NSSWD to a CRD service);
- The potential benefits and challenges of each option; and
- Recommended next steps for each of the options presented if the CRD and NSSWD were to decide to proceed with one of the options.

A Request for Proposals (RFP) for the "Water Service Optimization Study" was released in September of 2019 and a number of proposals were received. Innova Strategy Group was the successful proponent and was awarded the contract in October of 2019.

It should be noted that the Terms of Reference specifically excluded a review of hydraulic data monitoring, water quality analysis, and management of watersheds. These important issues to be dealt with separately.

1.3 QUESTIONS FOR CONSIDERATION

Which authorities should be delegated from the CRD Board to the Commission?

1. What decisions will still need to be made by the Board?
2. Who should be members on the Commission?
3. How should membership be decided (e.g. election, appointed, combination)?
4. How will decisions get made (e.g. voting strength)?
5. How will funding be allocated?
6. If some of the other improvement districts do not want to convert, how could they participate with the Commission?
7. How would new applications to join the Commission get handled?
8. What decisions would get made by the Commission and what would get made by senior management?
9. What management and staff would be needed to administer and operate the systems on Salt Spring separate from the other CRD owned and operated systems on Vancouver Island (including a proposed organizational chart)?
10. How will the Commission work with existing services (e.g. wastewater treatment; potential new drinking water and watershed protection service)?

The detailed Terms of Reference requirements and an accounting of objectives met for the *Salt Spring Island Water Service Optimization Study* is found in the Appendices.

1.4 OBJECTIVES AND APPROACH

The review objectives were developed with the understanding that Salt Spring Island is faced with significant current and future challenges with managing the water distribution and treatment systems along with a unified approach to water management. There are significant local interests, political context and community energy that has and will continue to influence decisions regarding future governance arrangements. It is critical that all Salt Spring Island residents and businesses understand the long-term challenges with effectively maintaining existing systems in the years to come.

This review is intended to provide a high-level objective analysis and consideration of the issues involved with optimizing water service on Salt Spring Island. This information should assist with making evidence-based decisions on the future governance and operations of water systems on the Island. Although these decisions may be politically challenging, in the absence of data and/or options, the community cannot effectively understand the overall options for long-term success.

Innova Strategy Group utilized the following approach to accomplish the objectives of the study:

1. **Verified the Process** – reviewed and verified the approach details, background information, stakeholder numbers and lists, schedule, contact information and established a communication plan and messaging.
2. **Set Expectations** – launched stakeholder communications articulating purpose, process and timing for Boards, Commissions, staff and appropriate agencies.
3. **Researched Background Materials** – reviewed specific relevant information/data that enhanced the process and interactions with stakeholders (strategic plans, operational plans, budgets, departmental plans, reviews/audits, staff surveys, studies, etc.)
4. **Engaged & Consulted** – engaged, listened, consulted and documented stakeholder input to ensure a broad perspective was considered:
    - Interviews – Over 50 confidential individual and group interviews were conducted with service group/stakeholders to understand needs, regulatory obligations, core service responsibilities and opportunities for achieving optimal governance. Those interviewed represented various interests and included the following agencies:
        - NSSWD Elected Officials (5)
        - NSSWD staff (6)
        - CRD Elected Official (1)
        - CRD staff (9)
        - Improvement Districts (7)
        - Islands Trust Elected Officials (2)
        - Islands Trust staff (1)
        - Ministry of Municipal Affairs and Housing (3)
        - Ministry of Forests, Lands, Natural Resource Operations and Rural Development (1)
        - Island Health (1)
        - Small water system commission members (12)

- Salt Spring Island Watershed Protection Alliance (1)

- Stakeholder Survey – Created a confidential survey to collect individual perspectives from a broad target group (elected officials, staff, ratepayers, etc.,)

5. **Communicated** – created a communication framework/plan for introducing, understanding and asking questions about the final report. Next Steps for consideration:

   a. Innova to share findings of DRAFT report with CRD and NSSWD Board with Q&A. Subsequent revisions to be made if needed.
   b. Staff reports and Board decision on recommendations within the report
   c. Public/stakeholder/ratepayer engagement strategy to be established. A plan may be helpful to guide this.
   d. To be determined based on decision of Board.

6. **Developed the Draft Report** – develop the draft Water Service Optimization Study report:
   - Background: overview of the purpose of the study and report contents; stakeholder analysis; data collection; and methodologies.
   - Research Results: summary of stakeholder consultations; shared service optimization goals identified by key stakeholders; evaluation criteria used to decide on options based on service optimization goals; and summary of service model research.
   - Findings: detailed description of each recommended option: overview of the risks and benefits of each option; and associated analysis of available data and identification of data 'gaps'.
   - Conclusions and Next Steps: clear summary of report findings and limitations, or other conclusions; and proposed next steps for each of the recommended options if implementation were to proceed.
   - Appendices: technical or aggregated data (as necessary).
   - Final Report – develop the final report with a concise list of options for long-term success.

2. BACKGROUND

2.1 ABOUT THE ISLAND

Salt Spring Island was originally incorporated in 1873, a decision that was reversed in 1883. Since that time, Salt Spring Island has been an unincorporated community, with a "rural area" governance system. In its present form, this system involves service delivery by a number of bodies, including the Province, the Capital Regional District (CRD), the Islands Trust, and improvement districts.

Salt Spring Island has a permanent population of approximately 10,700 (2016 Census) residents who live on this 194 square kilometre island. There are many municipalities in B.C. that have similar populations to Salt Spring Island, but have been either incorporated for many years or, in some cases, have recently chosen to incorporate or amalgamate with others. There are 162 existing municipalities in B.C., ranging in population from 125 people (Zeballos) to 603,502 people (Vancouver). Salt Spring Island's population is currently larger than more than 100 other B.C. municipalities.

Salt Spring Island enjoys a Mediterranean climate and attracts a high number of retirees along with ownership by a significant number of part time residents (approximately 18% of ownership). Salt Spring Island's popularity has resulted in increased property values resulting in a level of unaffordability for many.

2.1.1 Salt Spring Island Economy

Over the past 100 years, Salt Spring Island's economy has changed from an agricultural / fishing employment base to predominantly tourism and small business. Many businesses on Salt Spring Island are home based and there are a significant number of Island employees who support the large retiree population.

In 2016, total employment on the Island was 5,210 with a reported 235 unemployed and 3,370 available to work who did not work. 1,895 were employed full time and 3,810 worked part year or part time. Sectors with the most employees were:

- Management occupations 785
- Business, finance and administration 550
- Natural and applied sciences and related 335
- Health 325
- Education, law and social, community and government services 580
- Occupations in art, culture, recreation and sport 470
- Sales and service 1,155
- Trades, transport and equipment operators and related 625
- Natural resources, agriculture and related production occupations 275
- Manufacturing and utilities 105

The place of work status for the employed labour force aged 15 years and over in private households:

- Worked at home 1,210
- Worked outside Canada 40
- No fixed workplace address 900
- Worked at usual place 2,895

Providing affordable housing for employees on Salt Spring Island continues to be a challenge and this issue is a primary barrier to expansion of current employment on the Island.

2.1.2 Salt Spring Island Demographics

Salt Spring Island's population is not distributed typical to urban centres with relatively equal age groups across the spectrum. The predominant age group is 50-70 years.

Total Population: **10,640 (2016 Census)**
Total Area: **194 square kilometres**

- 6,050 private dwellings
- Average household size = 2.1
- Under 20 years old 1250 residents
- Working Age (20-64) 6115 residents
- Retirement Age (65 +) 3260 residents

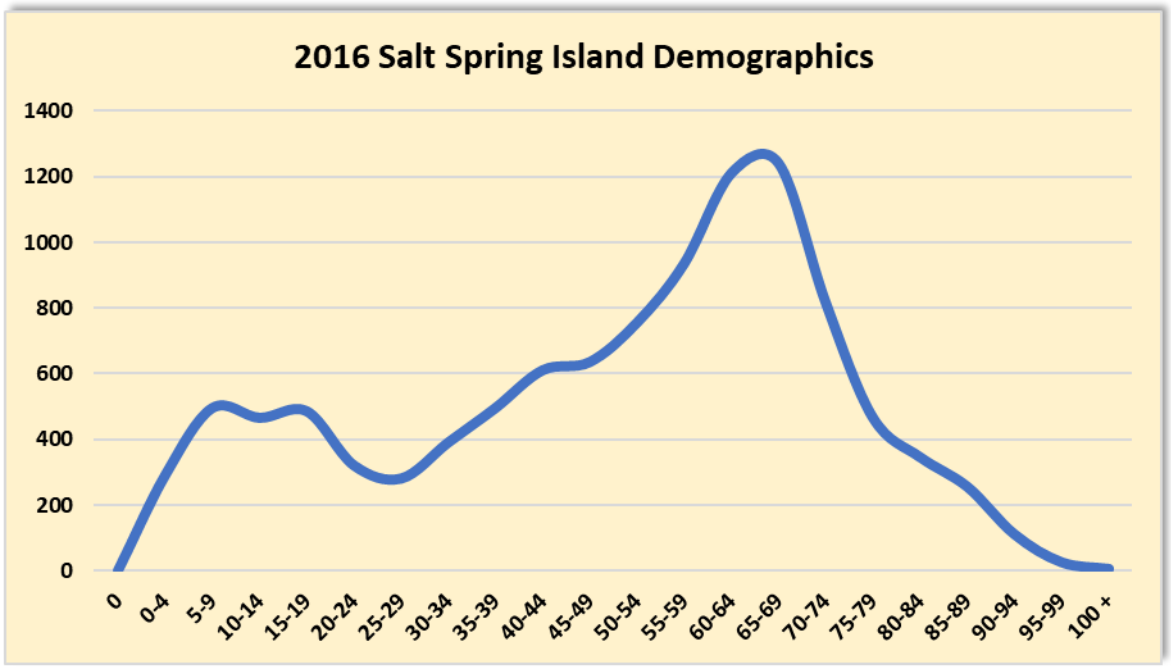


Figure 2-1 2016 Salt Spring Island Demographics

2.1.3 Current Governance System

On Salt Spring Island, governance and service delivery is provided by multiple government agencies and organizations, including the Federal government, the Provincial government, the Capital Regional District (CRD), the Islands Trust, and various improvement districts:

Federal Government – In addition to providing national funding programs, the Federal government has local authorities on Salt Spring Island, primarily related to harbours and the ocean. To fund these services, the Federal government charges taxes and fees.

Province of BC – The Provincial government plays a central role in providing provincial services, such as health care and education, as well as certain local services provided to the whole of Salt Spring Island (SSI). Among the most prominent local services are policing and roads. To fund these services, the Provincial government uses income tax, as well as various property taxes, such as the provincial rural tax, police tax, school tax, and hospital tax. The key Ministries that provide advice and regulate water issues on Salt Spring Island include the Ministry of Municipal Affairs and Housing (MAH), the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR), and the Ministry of Health (MoH). MAH has an active interest in ensuring that all local government jurisdictions provide best value to the community and meet the expectations of the Province.

Capital Regional District – Salt Spring Island is a member of the Capital Regional District (CRD), where it is designated as the Salt Spring Island Electoral Area (Electoral Area 'F'). The CRD is primarily an urban regional district, with 13 municipalities and three electoral areas located on and around the southern tip of Vancouver Island.

For Salt Spring Island, CRD representation is provided through a single electoral area director who sits on the CRD Board. The CRD Board has 24 directors and the Salt Spring Island Electoral Area Director is one of three electoral area directors. The Salt Spring Island Electoral Area Director has a weighted vote of three; the overall CRD votes cast is 86. It is rare for the Board to decline a request from the SSI CRD Director. They have little reason to do so since SSI pays for its own services and those services do not impact the budgets of other parts of the region. As with all regional districts, the CRD is only required to deliver a limited number of functions on a regional basis. Since Salt Spring Island is an electoral area, the CRD is the local government organization responsible for the provision of most local services to area residents.

The Salt Spring Island Electoral Area Director is elected every four years as part of local government elections and sits on numerous committees and commissions at both the regional and local level:

- Capital Region Housing Corporation Board
- Capital Regional District Hospital Board
- CRD Electoral Areas Committee
- CRD Parks and Environment Committee
- CRD Hospitals and Housing Committee
- Salt Spring Island Community Economic Development Commission
- Salt Spring Island water service commissions
- Ganges Sewer Local Services Commission

- Maliview Sewer Service
- Salt Spring Island Liquid Waste Disposal Local Service Commission
- Salt Spring Island Transit and Transportation Commission
- Salt Spring Island Parks and Recreation Advisory Commission
- Salt Spring Island Electoral Area Emergency Program Advisory Commission.

The majority of CRD services on SSI are provided through 12 SSI CRD commissions, eight of which are local water or sewer service commissions serving a small number of properties. Water and sewer operations staff, while located on SSI, they are supervised and managed by CRD staff on Saanich Peninsula. Each Commission was established through an Establishment Bylaw that defines its structure and authority. On SSI, the Commissions are largely advisory and report to the SSI CRD Director.

The CRD also provides a variety of voluntary services to electoral areas, to Salt Spring Island only, and to specific areas within Salt Spring Island. On Salt Spring Island, examples of CRD voluntary services include community transit, economic development, parks, community sewer (though the CRD is not responsible for individual septic systems), and some community water services.

While most of the CRD's administrative functions are handled from the CRD Victoria office, there is a small complement of CRD staff on Salt Spring Island led by the manager of Salt Spring Island Administration. There are local staff for parks and recreation, the CRD's water and sewer infrastructure on the Island, and other related services.

To fund its services on Salt Spring Island, the CRD requisitions funds from the Province and also charges user fees where applicable (e.g. for water or sewer services). Requisitions are used because the CRD (and all other regional districts) is not a taxing jurisdiction (the Province collects taxes on behalf of the regional district. Tax revenues flow back to the regional district in relation to the services provided. Revenues are restricted to the service for which they are specifically collected and residents only pay for the services that they directly receive.

CRD is not responsible for land use planning on Salt Spring Island as this is the responsibility of the Islands Trust.

Islands Trust – Established in 1978 when amendments were made to the 1974 *Islands Trust Act*, the Islands Trust is responsible for land use planning and regulation. The Islands Trust areas that are located within CRD boundaries include the southern gulf islands: Galiano, Salt Spring, Mayne, Pender, and Saturna.

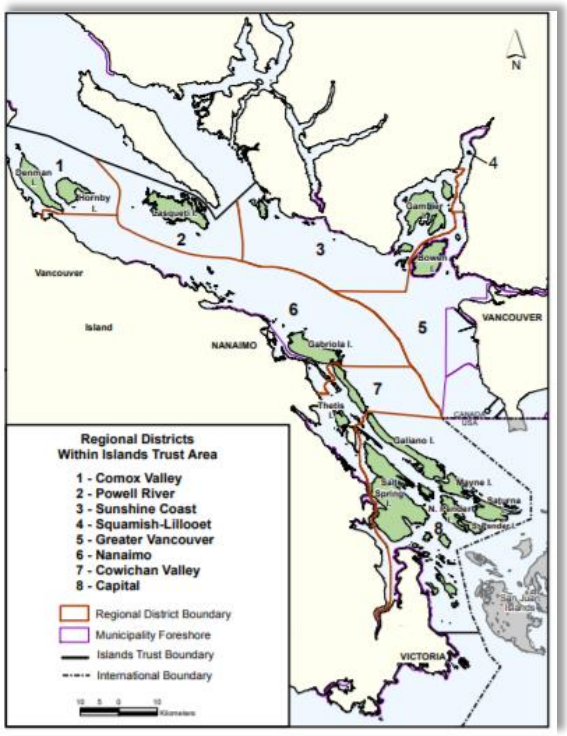


Figure 2-2 Regional Districts wtihin Islands Trust Area

The Islands Trust has a mandate to preserve and protect the islands in the Trust Area. It does this through land-use planning, regulation and conservation. As part of its conservation mandate on Salt Spring, Islands Trust provides an annual budget for the Salt Spring Island Watershed Protection Alliance (SSIWPA) to protect freshwater sources.

Salt Spring Island elects two Trustees every four years, as part of local government elections.

Existing Supporting Agencies – There are a number of on-Island non-profit and funded advocacy groups / agencies (Cusheon Lake Stewardship Committee, Salt Spring Island Watershed Protection Authority, Salt Spring Island Water Preservation Society, etc.) that support and provide background analysis and opinion related to water on the island. Although these agencies do not have delegated authority for making decisions, they currently create great interest and influence political outcomes on the Island.

2.2 SALT SPRING ISLAND WATER SYSTEMS

There are a number of different ways that residents capture and utilize water on Salt Spring Island. Groundwater and surface water are the primary sources and water is treated and distributed through various piping and appurtenances to serve household, business, institutional, and agricultural needs. The multiple systems are not governed by a single entity; they are governed by multiple jurisdictions that collectively create various levels of confusion as to overall responsibilities on Salt Spring Island.

Jurisdictional issues regarding water systems are not unusual for local government in British Columbia. These issues most often rest with regional districts and involve hundreds of different and disparate systems throughout B.C.

Most incorporated municipalities deal with a single water system that is managed through a utility model built within the framework of local government elected leadership. These single utilities are relatively simple to operate as they receive direction from an elected Council, they operate independently financially, and they utilize all the support services that a typical municipality provides.

Salt Spring Island jurisdiction over water is shared by a variety of different agencies and groups on Salt Spring Island.

Water System	Estimated Population	Commercial Demand?	Industrial / Institutional Demand?	Ownership	Serviced by	Source of Water
North Salt Spring Waterworks District	5500	Yes	Yes	NSSWD	NSSWD	Surface
Highland/Fernwood Water Service	672		Yes	CRD	CRD	Surface
Fulford Water Service	200	Yes	Yes	CRD	NSSWD	Surface
Cedars of Tuam Water Service	34			CRD	CRD	Well
Cedar Lane Water Service	78			CRD	NSSWD	Well
Beddis Water Utility	267			CRD	NSSWD	Surface
Scott Point Improvement District	58			Private	NSSWD	Well
Mt. Belcher Improvement District	100			Private	NSSWD	Well
Harbour View Improvement District	35			Private	Private	Well
Erskine Water Society	76			Private	NSSWD	Well
Strata Water Systems	195		Yes	Private	Private	Well
Private wells (estimated)	3427			Private	Private	Well
Total	**10640**					

2.2.1 Water Jurisdiction on Salt Spring Island

Province of British Columbia

The **Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR)** is responsible for the implementation of the *Water Sustainability Act* (WSA), which includes the allocation and regulation of fresh water. It regulates water by deciding on water licenses for both surface and groundwater diversion and use. Licensees are responsible for payment of fees annually and to meet any conditions associated with the license. Additionally, the province authorizes works in and about a stream and short- term use of water. Dams constructed to store water are also regulated under the *Water Sustainability Act.*

The Province also maintains a number of long-term observation wells that monitor groundwater levels on the Island and dependent on funding, or need, carries out scientific studies to better manage and protect the freshwater resource on the Island. Provincial staff also respond to concerns with licensees, private well owners and the general public.

Island Health is responsible for regulating the quality of drinking water for sources where there is more than one user (e.g. do not regulate private wells for individual households) through water source approvals, water system construction, and operating permits all under the *Drinking Water Protection Act*. Island Health is responsible for all large systems and the following small systems:

- GOOD BUDS
- HYPEX TECHNOLOGIES
- ISLAND FRUITSICLES
- RUCKLE PARK
- SALT SPRING ABATTOIR SOCIETY
- SALT SPRING ISLAND CHEESE CO.
- SALT SPRING SHINE WATER SYSTEM
- SALT SPRING WATER COMPANY
- MINERAL SPRINGS RESORT WATER SYSTEM
- MOUNT BELCHER IMPROVEMENT DISTRICT
- REGINALD HILL WATER SYSTEM
- SCOTT POINT WATERWORKS DISTRICT
- THE COTTAGES ON SALT SPRING ISLAND
- ALOHA FARM
- BULLOCK LAKE FARM WATER SYSTEM
- BURGOYNE BAY WATER SYSTEM

• SOYA NOVA TOFU SHOP • STILL MOUNTAIN FARM WATER SYSTEM • BEDDIS WATER DISTRICT • CEDAR BEACH RAILS RESORT WATER SYSTEM • CEDAR LANE WATER SYSTEM • CEDAR VIEW TRAILER PARK • CEDARS OF TUAM • ERSKINE WATER SOCIETY • FERNWOOD/HIGHLAND COMBINED WATER DISTRICT • FULFORD HARBOUR WATER DISTRICT • GREENACRES LAKESIDE COTTAGE RESORT • HARBOUR VIEW IMPROVEMENT DISTRICT • MARACAIBO WATER SYSTEM • MERCHANT MEWS	• CROFTONBROOK WATER SYSTEM • CULTURALIVE FERMENTED FOODS WATER • GULF ISLAND SENIOR RESIDENCE ASSOCIATION • HIGH HILL WATER SYSTEM • LAKESHORE ON SALT SPRING • LAUGHING DAUGHTERS WATER SYSTEM • MUSGRAVE OWNERS STRATA 1453 • SALT SPRING ARTISAN VINEGAR • SALT SPRING SPROUTS & MUSHROOMS WATER SYSTEM • SSI SEA PRODUCTS • SWAN POINT WATERWORKS • LAKE MAXWELL WATER WORKS • ST. MARY LAKE • SALT SPRING WATER COMPANY (BULK DELIVERY)

The **Ministry of Municipal Affairs & Housing (MAH)** is responsible for ensuring that local government operates efficiently and effectively and makes decisions in the best interest of the Province and of local taxpayers. MAH also provides grants for capital improvements / new infrastructure related to water.

The **Ministry of Environment and Climate Change** has responsibility for the *Environmental Management Act* which has a number of regulations which protect the quality of water.

Capital Regional District

The Capital Regional District (CRD) owns and is responsible for the operation of five water systems on Salt Spring (**Fulford, Beddis, Cedar Lane, Cedars of Tuam**, and **Highland/Fernwood**). It contracts with North Salt Spring Waterworks District to operate three of the five systems. The CRD also owns and operates three wastewater facilities on Salt Spring. The CRD holds licenses for these systems and is responsible for ensuring compliance with terms and conditions associated with those licenses.

Islands Trust

Islands Trust has a mandate to preserve and protect the islands in the Trust Area. It does this through land-use planning and regulation and conservation. Islands Trust does not manage or approve water systems on Salt Spring Island. Its only interest, when making land use decisions, is the availability and quality of water proposed for any development proposal. Depending on jurisdiction, Islands Trust refers this question to NSSWD, CRD, or the Ministry of Health. There is no Island-wide evaluation protocol to provide consistency around the availability of water however, it has an active interest in ensuring that scientific rigor is employed when making land use decisions.

The Islands Trust 2019 / 2020 Strategic Plan provides direction for the following water related projects:

- Develop a regional freshwater management framework ($4,000)
- Map and develop water budgets for groundwater aquifers
- Develop a model land use regulation regarding freshwater sustainability including groundwater, rainwater catchment and greywater recycling.

In addition, as part of its conservation mandate on Salt Spring, Islands Trust provides funding for the Salt Spring Island Watershed Protection Alliance (SSIWPA) to protect freshwater sources. At the March 12, 2020 Island Trust Council meeting, $75,500 was approved to fund additional operations of the Salt Spring Island Local Trust Committee (LTC) in preserving and protecting the quality and quantity of water resources within the Salt Spring Island Local Trust Area.

Improvement Districts

The North Salt Spring Waterworks District (NSSWD) provides water to an estimated 5,500 people on Salt Spring Island. It owns and operates two water treatment and distribution systems using lake sources of water and operates six others on contract (two other improvement districts' systems, one private water utility (Erskine Water Society), and three of the five CRD water systems). These systems hold appropriate water licences to store and divert water (both lake and groundwater).

Three other water improvement districts exist on the island (**Scott Point** (pop.58), **Mt. Belcher** (pop.100), and **Harbour View** (pop.35). Scott Point and Mt. Belcher contract with NSSWD to operate its water systems and Harbour View Improvement District is operated by residents of that district. All three of these systems use groundwater sources.

Private Water Systems

On Salt Spring Island, there are many lots that are not serviced by a public water system. On these properties, land owners are responsible for development and maintenance of their water systems. These lots are serviced in one of the ways described below:

- A private groundwater well provides domestic water to one single-family dwelling. In this case, the *Water Sustainability Act* does not require a water licence and Island Health does not consider the well and works to be a water supply system so does not require that the owner be compliant with the *Drinking Water Protection Act*.
- A private groundwater well (or wells) provides water to more than one single-family dwelling, a multi-unit residential development, or a multi-unit commercial development. This includes private utilities or water societies regulated by the *Water Utilities Act* (e.g. the **Erksine Water** Society) as well as all types of strata developments (e.g. **Maracaibo Estates** and **Merchant Mews**) regulated by the *Strata Properties Act*. In these cases, the *Water Sustainability Act* does require a water licence and Island Health considers the system to be a water supply system so requires that it be compliant with the *Drinking Water Protection Act.*
- A surface water source is used to provide domestic water to one single-family dwelling on a private lot. In this case, the *Water Sustainability Act* does require a water licence, but Island Health does not consider the intake and works to be a water supply system and does not require that the owner be compliant with the *Drinking Water Protection Act.*
- A surface water source is used to provide domestic water to more than one single-family dwelling, a multi-unit residential development, or a multi-unit commercial development. This could include private utilities or water societies regulated by the *Water Utilities Act* or strata developments regulated by the *Strata Properties Act*. In this case, the *Water Sustainability Act* does require a water licence and Island Health considers the system to be a water supply system so requires that it be compliant with the *Drinking Water Protection Act.*

- A private lot collects rainwater for domestic use in one single-family dwelling. Rainwater catchment is not regulated by the *Water Sustainability Act*; therefore, a water licence is not required and Island Health does not consider the catchment or treatment works to be a water supply system (does not require that the owner be compliant with the *Drinking Water Protection Act*). Island Health does not permit rainwater to be used as the water supply for anything other than a single-family dwelling.

Others

- **Salt Spring Island Water Preservation Society (SSIWPS**) is a local non-profit whose purpose is to promote and preserve the sources of potable water on Salt Spring. It does this by acquiring land, conducting and promoting scientific studies of water resources and increasing public awareness of the value of water.
- **Salt Spring Island Watershed Protection Alliance (SSIWPA)** was established in 2013 by Islands Trust to coordinate a more integrated approach to water resource management on Salt Spring Island. Members have included both elected officials and/or staff of the Salt Spring Island Local Trust Committee, CRD, FLNR, Ministry of Agriculture, North Salt Spring Waterworks District, Highland and Fernwood Water Service Commission, and Beddis Water Service Commission. The Alliance currently receives most of its funding from Islands Trust which restricts the use of the funds to coordination and facilitation.

2.2.2 North Salt Spring Waterworks District

The NSSWD is an improvement district and a single service waterworks utility within the Capital Regional District on Salt Spring Island. NSSWD is the largest water supplier on Salt Spring Island, with a 29.4 square kilometre service area located along the northwest part of Salt Spring Island. The village of Ganges falls within the district boundaries.

NSSWD letters patent (1948) state, "The objects of the said improvement district shall be the provision of water-supply and the acquisition, maintenance, and operation of works for the said purposes and all matters incidental thereto."

NSSWD has withdrawal and storage licences on two water supply sources, located 14 km apart - St. Mary Lake and Maxwell Lake. In addition to the operations and maintenance of the water systems, NSSWD carries out some water resource management activities at both water sources, as part of its source-to-tap approach to drinking water provision.
The NSSWD is comprised primarily of residential customers, but also serves the business centre, which includes commercial customers such as restaurants and hotels and institutional customers such as schools, the hospital and elder care facilities. In 2018, the NSSWD distributed 551,487 m^3 of water, the equivalent of 3,103 Single Family Equivalents (SFEs).

Figure 2-3 NSSWD St. Mary's Treatment Plant

The water distribution system is comprised of approximately 45 km of 100mm to 300mm mains with 2,836 m^3 of distribution storage, eight Pressure Reducing Valve (PRV) stations, seven pump stations, 167 fire hydrants and 1,826 service connections. The NSSWD has also recently completed a 52 L/sec dissolved air floatation water treatment plant at the St. Mary Lake source. In addition, NSSWD owns multiple properties and easements registered in favour of the District.

The NSSWD has built a Supervisory Control & Data Acquisition (SCADA) system that monitors water quality and quantity and many other operational parameters at most sites in the Maxwell and St Mary Lake systems. There are currently 13 full-time staff, with one operator vacancy, employed at the NSSWD.

NSSWD is responsible for the following key areas:

- Management and operation of supply and treatment
- Capital construction projects
- Asset management
- Engineering studies
- Engineering advice and technical support

- Providing recommendations for development reviews (to Islands Trust)
- Inspections
- Mapping
- Administrative support and customer complaints
- Billing
- Management oversite and operations, maintenance & repair contracts with other small water systems.

At present the NSSWD serves an area of approximately 7,260 acres extending from Southey Point in the north to near Cusheon Lake in the south including Ganges, Vesuvius, Channel Ridge, and many rural properties. An asset register should be complete by in 2020 and will provide an up-to-date accounting of asset value. Infrastructure and other assets include a recently opened $7.9M water treatment plant at St. Mary Lake, a $3M annual budget, and 1,792 water connections serving approximately 5,500 users.
The NSSWD is governed by a Board of five trustees who serve for three-year terms and are elected by its ratepayers on a rotational basis with an election occurring every year.

NSSWD Customer Satisfaction Survey

https://northsaltspringwaterworks.ca/wp- content/uploads/2019/04/NSSWD-survey- responses-2019.pdf

NSSWD surveyed its ratepayers in 2019. It received 376 responses primarily from St. Mary Lake (268 responses). Key indicators:

- Ratepayers prefer a newsletter for communication
- Satisfaction with NSSWD: Approximately 50% satisfied / 21% dissatisfied
- 59% believe that "NSSWD staff provide prompt, courteous, and helpful service" while 6% do not
- 38% believe that "NSSWD management addresses concerns in a responsive and professional manner" while 14% do not
- 34% believe that "the NSSWD Board of Trustees makes decisions that are in the best interests of the ratepayers" while 22% do not
- Additional questions:

Question	Excellent	Good	Fair	Poor	Don't Know
Quality of water	29%	39%	19%	11%	3%
Providing uninterrupted service	56%	39%	5%	1%	2%
Planning sustainable water supply in the long term	16%	34%	18%	14%	19%
Helping customers to conserve water	17%	32%	23%	15%	13%
Communicating effectively with the community	16%	36%	27%	14%	7%
Providing services at good value for the cost	11%	30%	24%	20%	15%

2.2.3 Highland/Fernwood Water Service

The Highland/Fernwood Water Service is a semi-rural residential community and includes servicing Fernwood Elementary School. The Highland service was first developed in the 1970s under the name Vesuvius Holdings and was converted to the Highland Water System in 1978. It then became a CRD service in 2004. The Fernwood service was created in the 1970s by a private developer and was converted to the Fernwood Improvement Water District in 1984. It then became a CRD service in 1989. This service functions as a local area service, funded by property owners within the service area boundaries and supported by an advisory water commission.

Water service to Highland and Maliview are administered by the Highland Water and Sewer Local Services Commission and water service to Fernwood is administered by the Fernwood Water Local Service Commission. The intent is to establish a single commission to administer the merged service, but this has not been completed as yet.

Previously, the two water services operated on separate treatment and distribution systems both drawing water from St. Mary Lake. As of mid-September 2012, both service areas are supplied through a single water treatment plant and interconnected distribution systems. A new operating budget was established in 2013 to accommodate the single treatment plant and combined distribution systems.

The Highland/Fernwood Water Service is comprised of 333 parcels of land with 320 of those parcels connected to the service. The service obtains its drinking water from St. Mary Lake, which lies within an uncontrolled multi-use watershed. The Capital Regional District (CRD) holds five licenses to divert a total of up to 230,000 m^3 per year and store up to 30,800 m^3. St. Mary Lake is subject to seasonal water quality changes and is affected by periodic algae blooms.

The Highland/Fernwood water system is comprised of:

- a water treatment plant using a rapid mix system, flocculation, dissolved air floatation (DAF) and filters, ultraviolet disinfection, then chlorination prior to being pumped, via the distribution system to two different reservoirs.
- one raw water pump station;
- approximately 12,000 m of water distribution pipe;
- 4 water reservoirs:
    - 180 m3 (40,000 Ig)
    - 91 m3 (20,000 Ig)
    - 45 m3 (10,000 Ig)
    - 91 m3 (20,000 Ig)
- 2 water system booster pumps;
- fire hydrants, standpipes, and gate valves;
- water service connections complete with water meters; and
- 2 pressure reducing valve stations.

CRD's Integrated Water Services, Saanich Peninsula and Gulf Island Operations, is responsible for the day to day operations of the water system. Salt Spring Island based operations staff perform regular weekly routine operational visits to several locations including the water treatment facility, reservoirs and various water

distribution system sites to ensure the water system is functioning properly. Additional support is provided by Peninsula Operations staff including the electrical and mechanical maintenance groups as required.

2018 User Fee charges were $858.15 per Single Family Equivalent (SFE) and 2018 Parcel Tax charges were $173.84 per Taxable Parcel. The balances in the Highland / Fernwood Water service capital funds and reserve accounts at December 31, 2018 were:

- Operating Reserve Fund $28,840
- Capital Reserve Fund $103,201

2.2.4 Fulford Water Service

The Fulford Water Utility is a semi-rural residential community and services Fulford Elementary School and a small commercial component, including the BC Ferries Terminal. The service was created in 1968 as the Fulford Water Improvement District and became a CRD service in 2004. The Fulford Water Utility is comprised of 102 parcels of land with 91 of those parcels connected. Within those 91 parcels, there are 95 single family equivalents (SFE) as the use on some parcels represent more than one dwelling. This service functions as a local area service, funded by property owners within the service area boundaries and supported by an advisory water commission.

The utility obtains its drinking water from Weston Lake, a small lake that lies within an uncontrolled multi-use watershed outside and northeast of the service area. The Capital Regional District (CRD) holds two licenses to divert a total of up to 291.6 cubic metres per day and store up to 49,339 cubic metres. Lake Weston is estimated to have a total volume of 1,090,000 cubic metres. Weston Lake is subject to seasonal water quality changes and is affected by periodic algae blooms.

The Fulford water system is comprised of:

- a water treatment plant (WTP) using a rapid mix system, flocculation, dissolved air floatation (DAF) and filters, ultraviolet disinfection, then chlorination prior to being pumped, via the distribution system to a reservoir;
- one raw water pump station;
- approximately 4,500 m of water distribution pipe;
- 1 water reservoir;
- fire hydrants, standpipes, and gate valves;
- water service connections complete with water meters on commercial properties only; and
- 1 pressure reducing valve station.

The NSSWD is responsible for the day to day operations of the water system. NSSWD staff perform regular weekly routine operational visits to several locations including the water treatment facility, reservoirs and various water distribution system sites to ensure the water system is functioning properly. NSSWD operations staff also provide emergency response. Additional support is provided by Peninsula Operations staff including the electrical and mechanical maintenance groups as required.

2018 User Fee charges were $1,255.89 per Single Family Equivalent (SFE) and 2018 Parcel Tax charges were $771.73 per Taxable Parcel. The balances in the Fulford Water service capital funds and reserve accounts at December 31, 2018 were:

- Operating Reserve Fund $17,213
- Capital Reserve Fund $99,187

2.2.5 Cedars of Tuam Water Service

The Cedars of Tuam Water Utility is a rural residential community. The service was created in 1970 and became a CRD service in 2002. The Cedars of Tuam Water Utility is comprised of 16 parcels of land, all of which are connected to the system which utilizes a ground water source. This service functions as a local area service, funded by property owners within the service area boundaries and supported by an advisory water commission.

The Cedars of Tuam water system is comprised of:

- One ground water source well;
- a water treatment plant with a vortex sand separator and disinfection using sodium hypochlorite;
- 1 water reservoir;
- 650 meters of water distribution pipe;
- standpipes and gate valves; and
- water service connections complete with water metres.

CRD's Integrated Water Services, Saanich Peninsula and Gulf Island Operations, is responsible for the day to day operations of the water system. Salt Spring Island based operations staff perform regular weekly routine operational visits to several locations including the water treatment facility, reservoirs and various water distribution system sites to ensure the water system is functioning properly. Additional support is provided by Peninsula Operations staff including the electrical and mechanical maintenance groups as required.

2018 User Fee charges were $1,795 per Single Family Equivalent (SFE). The balances in the Cedars of Tuam Water service capital funds and reserve funds at December 31, 2018 were:

- Operating Reserve Fund $8,007
- Capital Reserve Fund (1057 101843) $6,561

2.2.6 Cedar Lane Water Service

The Cedar Lane Water Utility is a rural residential community. The service was created in 1970 and became a CRD service in 2007. The Cedar Lane Water Utility is comprised of 37 parcels of land of which all are connected to the system which utilizes a ground water source. This service functions as a local area service, funded by property owners within the service area boundaries and supported by an advisory water commission.

The Cedar Lane water system is primarily comprised of:

- two ground water source wells;
- a water treatment plant that provides primary disinfection with ultraviolet (UV) radiation and residual disinfection using sodium hypochlorite;
- 1 water reservoir;
- 1,260 metres of water distribution pipe;
- fire hydrant, standpipes, and gate valves; and

- water service connections complete with water metres.

NSSWD is responsible for the day-to-day operations of the water system. NSSWD operations staff perform regular weekly routine operational visits to several locations including the water treatment facility, reservoirs and various water distribution system sites to ensure the water system is functioning properly. NSSWD operations staff also provide emergency response. Additional support is provided by Peninsula Operations staff including the electrical and mechanical maintenance groups as required.

2018 User Fee charges were $854.86 per Single Family Equivalent (SFE) and 2018 Parcel Tax charges were $605.05 per Taxable Parcel. The balances in the Cedar Lane Water service capital funds and reserve accounts at December 31, 2018 were:

- Operating Reserve Fund $20,831
- Capital Reserve Fund $84,599

2.2.7 Beddis Water Utility

Beddis Water Service the Beddis Water Utility is a rural residential community. The service was created in 1969 as the Beddis Waterworks District and became a CRD service in 2004. The Beddis Water Utility is comprised of 137 parcels of land of which 127 are presently connected to the system. This service functions as a local area service, funded by property owners within the service area boundaries and supported by an advisory water commission.

The utility obtains its drinking water from Cusheon Lake, a relatively small lake that lies within an uncontrolled multi-use watershed. The Capital Regional District (CRD) holds two licenses to divert a total of up to 102,850 m3 per year. Cusheon Lake is subject to seasonal water quality changes and is affected by periodic algae blooms.

The Beddis water system is comprised of:

- a water treatment plant using a rapid mix system, flocculation, dissolved air floatation (DAF) and filters, then chlorination prior to being pumped, via the distribution system to reservoirs.
- approximately 7,200 m of water distribution pipe;
- 1 pump station/re-chlorination station;
- 2 water reservoirs;
- fire hydrants, standpipes, and gate valves;
- water service connections complete with water metres; and
- 2 pressure reducing valve stations.

NSSWD is responsible for the day-to- day operations of the water system. NSSWD operations staff perform regular weekly routine operational visits to several locations including the water treatment facility, reservoirs and various water distribution system sites to ensure the water system is functioning properly. NSSWD operations staff also provide emergency response. Additional support is provided by Peninsula Operations staff including the electrical and mechanical maintenance groups as required.

2018 User Fee charges were $595.04 per Single Family Equivalent (SFE) and 2018 Parcel Tax charges were $554.98 per Taxable Parcel. The balances in the Beddis Water service capital funds and reserve accounts at December 31, 2018 were:

- Operating Reserve Fund $19,652
- Capital Reserve Fund (1069 101894) $75,255

2.2.8 Scott Point Improvement District

Scott Point Improvement District serves a population of 58 utilizing a well, pumps, pipes, and other related appurtenances. NSSWD provides operations, maintenance and emergency response on a contract basis.

2.2.9 Mt. Belcher Improvement District

Mt. Belcher Improvement District serves a population of 100 utilizing a well, pumps, pipes, and other related appurtenances. NSSWD provides operations and maintenance and emergency response on a contract basis.

2.2.10 Harbour View Improvement District

Harbour View Improvement District serves a population of 58 utilizing a well, pumps, pipes, and other related appurtenances. The owners provide operations and maintenance on the system.

2.2.11 Erskine Heights Water System

The Erskine water system is a private water system that is operated and maintained by NSSWD and consists of 36 service connections and 40 properties. NSSWD also provides emergency response. The system is comprised of:

- 2 - groundwater source wells;
- 1 – reservoir;
- 2 - poly tanks for use when main reservoir is out of service;
- 2 - pressure reducing stations; and
- fire hydrants, stand pipes, air valves, mainline isolation valves, etc.,

2.2.12 Strata Water Systems

Strata development water systems (e.g. Maracaibo Estates and Merchant Mews) are regulated by the *Strata Properties Act*. They require a water license and Island Health considers the systems to be a water supply system and they are required to comply with the *Drinking Water Protection Act*. Existing Strata water systems are not regulated by CRD or Islands Trust.

Maracaibo Estates water system services 95 households utilizing a well, pumps, pipes, and other related appurtenances. Merchants' Mews is a 23-unit light industrial zoned strata complex built in the mid-1980s utilizing a well, pumps, pipes, and other related appurtenances.

RELEVANT REPORT AND STUDIES

Water governance has been an ongoing issue for Salt Spring Island residents for many years. A number of studies and analyses have been completed that are relevant, informative, and valuable background to this report.

The question of governance has been important to Salt Spring Island ever since the original municipal incorporation in 1873, a decision that was reversed 10 years later. Since that time, Salt Spring Island has been an unincorporated community, with a "rural area" governance system. In its present form, this system involves service delivery by a number of bodies, including the Province, the Capital Regional District (CRD), the Islands Trust, and improvement districts.

In recent years, studies have been undertaken to examine both municipal incorporation and governance in general. In 2002, a full municipal incorporation study was completed, followed by a referendum that was defeated. In 2007, another governance review explored Salt Spring Island's representation on the Islands Trust, along with options to better coordinate the activities of the Salt Spring Island Local Trust Committee and the Capital Regional District (CRD). As a result of this review, in 2008 there was a proposal to increase the size of Salt Spring Island's Local Trust Committee (Islands Trust) from two elected officials to four, though this referendum was also defeated.

During the 2011 local government elections, the subject of incorporation was frequently raised, and Salt Spring Island's elected Local Trustees (Islands Trust) and Electoral Area Director (CRD) requested government support for an incorporation study. The Province funded a study to "engage the public in a review of all governance structures on Salt Spring Island and to outline the general differences between rural (unincorporated) and municipal (incorporated) local governments." This report was finished in 2013 and found significant community interest in exploring how these issues could be addressed through municipal incorporation.

As a result of the governance study, in 2015, the Province provided funding for the completion of an Incorporation Study. This report was completed in late 2016.

In 2017, the Citizens of Salt Spring Island again voted for incorporation by referendum, which subsequently failed.

The following anecdotal reports provide relevant background information on key water governance issues.

NOTE: Innova Strategy Group has not independently verified third-party statements included.

2.2.13 Salt Spring Alliance 'Governance Working Group Report' (2018)

The Governance Working Group included volunteers who supported both sides in the 2017 incorporation referendum and some who remained neutral. The goal was to consider options to enhance how local government works within the current unincorporated system. The belief was that it is important to enhance democratic participation and decision-making on Salt Spring and improve the effectiveness and efficiency of service delivery.

The report was completed utilizing the following approach:

- Research and analyze governance options
- Identification of a range of options for improvement and develop criteria to assess
- Discussion of each option in depth, first testing it against three "screening criteria" to identify which options were feasible. Options that passed these criteria were scored using 17 evaluation criteria.

Key recommendations (relevant to this study):

1. **Create a Local Community Commission (LCC),** an elected body charged with the responsibility for addressing regional district services (highest-scoring option). This option scored well partly due to its potential for strengthening local decision-making by adding locally-elected commissioners and providing a structure within which additional local government services could be consolidated in the future.
2. **Establish an Inter-Agency Working Group**, comprised of elected officials and decision-making agencies. Regularly-scheduled meetings open to the community would focus on a coordinated approach to solving island-wide issues. While not a decision-making body, this group would provide a forum for enhanced communication and integration among Salt Spring's decision-making agencies.

3. **Determine whether the Province is open to legislative and policy changes in the following areas:**
   - Establishing a Salt Spring Island Local Community Commission
   - Enhance the role of non-profit agencies in local government service delivery on Salt Spring
   - Strengthen CRD collaboration with and support for existing improvement districts

4. **Islands Trust to:**
   - Follow through on its proposed review of Trust governance and service delivery
   - Commission an independent evaluation of the Salt Spring Island Watershed Protection Alliance to determine whether its current tax requisition is delivering value for money

2.2.14 Positively Forward 'Improving Capital Regional District Service Delivery on Salt Spring Island' (2018)

Positively Forward is a Salt Spring Island community group that undertakes research and advocacy to advance improvements in local governance which also support the separation of the land use planning authority from the delivery of services.

The purpose of this report was to review Capital Regional District (CRD) service delivery on Salt Spring Island (SSI), to recognize achievements, document any reported problems, to identify possible causes and suggest solutions. The work was undertaken by the Positively Forward group in response to concerns raised in 2017 by islanders on both sides of the incorporation referendum question. This report complements a parallel report prepared by the Salt Spring Community Alliance Governance Working Group.

The report included the following steps:

- literature review, including a brief review of legislation;
- interviews with 32 individuals with substantial CRD experience;
- follow-up questionnaire with 28 of those individuals;
- analysis of responses;
- development of strategies to address identified issues; and
- report writing, fact-checking, editing and review.

The resulting report provides an overview of CRD service delivery from the perspective of islanders who interact closely with the CRD and know something of its strengths and weaknesses. The report acknowledges the many successes achieved within the CRD administration on Salt Spring. These success stories provide insights into why some Initiatives work. The purpose of identifying concerns and problem areas is to demonstrate a way forward, leading to improved service delivery.

Key findings (relevant to this study):

- For the most part CRD provides and maintains infrastructure and delivers services on SSI reliably and efficiently.
- Much that has been accomplished by the CRD over the years can be attributed to a strong community involvement in decision-making, and partnerships between CRD management and various island groups.
- 93% of respondents agreed that there should be a Salt Spring CRD Work Plan and Priorities List updated on a regular basis and available online
- There is an accumulating backlog of SSI projects that have been approved and funded, but have not progressed in a timely manner
- 82% of respondents agreed that projects could be completed more efficiently if qualified community organizations and volunteers were enlisted to help with certain aspects
- 81% of respondents agreed that it now takes an unacceptable amount of time for CRD to complete SSI projects that are funded and approved.
- 86% of respondents agreed that commissioners should be permitted to hold informal working group meetings without the presence of staff. 81% agreed that their skills, and those of other commissioners, were not being utilized appropriately.
- Most of the 14 local water and sewer commissioners interviewed described serious financial and communication challenges that were reportedly causing hardship for local ratepayers, particularly those in small water districts.
- 71% of respondents agreed that operating and capital costs place an excessive burden on the relatively small number of properties serviced.
- 64% agreed that CRD made mistakes in design decisions leading to higher costs to water service or sewer service ratepayers.

Report recommendations:

- Provide a public, up-to-date Salt Spring CRD Work Plan with priorities and status reports.
- Hold regular SSI inter-agency information meetings.
- Establish an elected Salt Spring CRD Local Community Commission.
- Hold periodic public Salt Spring CRD All-Commission meetings.
- Allow and encourage commissioners to meet in informal working groups.
- Appoint a Salt Spring CRD Commission Coordinator.
- Provide an annual orientation session for all commissioners.
- Allow and encourage commissioners to take on tasks for which they are qualified.

- Provide local water and sewer service commissions with ratepayer contact information.
- Initiate a consultation process with the local water and sewer service commissions on
- organizational improvements to better serve their ratepayers.
- Prioritize good community relations within CRD corporate culture.
- Adopt a problem-solving approach.
- Continue and expand service delivery by Salt Spring's not-for-profit groups, by local contractors, and by other local service providers.

2.2.15 SSIWPA 'Integrated Freshwater Management Program' (2016 - present)

Protection of the Island's water resources is one of the most significant concerns to local residents. Watershed protection is a major issue identified by the community, particularly in relation to St. Mary Lake. Throughout the Island, source protection is a concern, as it is on all of the Gulf Islands. Recognizing the importance of water issues, in June 2013, Islands Trust Council voted to delegate some of its coordinating and advocacy powers to the Salt Spring Island Local Trust Committee so that the Local Trust Committee can act as a coordinating body for the Salt Spring Island Watershed Protection Authority. This vote marked the first time that the Islands Trust Council has delegated additional powers to a local trust committee.

In a working group format, the Salt Spring Island Watershed Protection Authority brings together a number of bodies, including the Local Trust Committee, CRD, Vancouver Island Health Authority, Ministry of Environment, Ministry of Health, North Salt Spring Water District, and Highland and Fernwood Water Commissions. The Authority's mandate is to initially address concerns over St. Mary Lake, and to then eventually address long term watershed management across Salt Spring Island.

The purpose of the Salt Spring Island Watershed Protection Alliance is to:

- Provide a framework for freshwater resources in the Salt Spring Island Local Trust Area to be managed in a manner that integrates and considers both human and ecosystem needs through integrated planning, policy development and recommendations for implementation by member agencies and organizations;
- Advise on policies of regional, local and Provincial government organizations that are related to freshwater resources;
- Coordinate the implementation of those policies.

The SSI Water Preservation Society, a separate non-profit society that is a member of the SSI Watershed Protection Alliance, is currently leading the SSI Freshwater Catalogue project with the following objectives:

- Raise community awareness of the island's water diversity;
- Help develop island watershed communities;
- Support data gathering for island water resource quantification and quality work, and
- help inform island watershed preservation/management activities

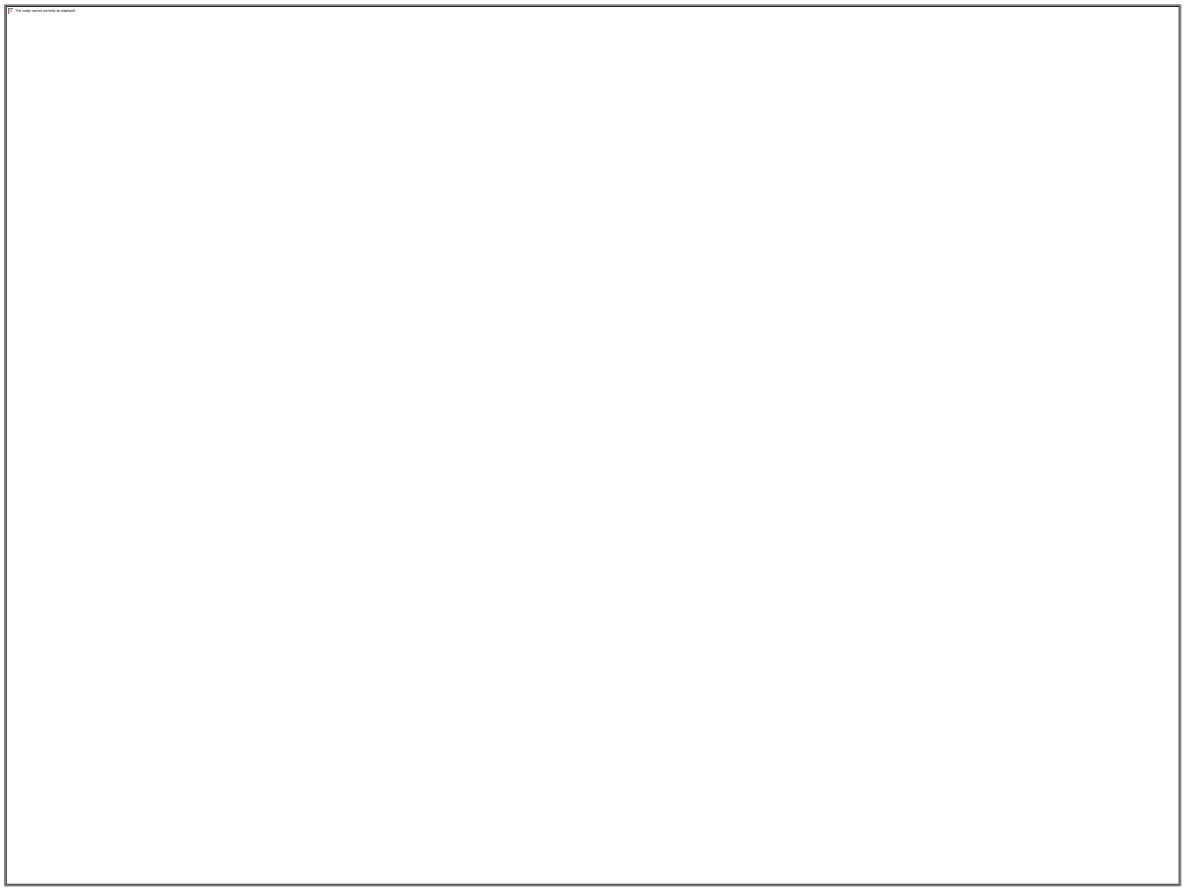


Figure 2-4 Water Preservation Society SSI Freshwater Catalouge

2.2.16 Provincial/CRD joint 'Salt Spring Island Governance Study' (2013)

After the 2011 local government elections, the subject of incorporation was frequently raised, and Salt Spring Island's elected Local Trustees (Islands Trust) and Electoral Area Director (CRD) all favoured a study to gain the views of Salt Spring property owners and residents on governance. The Province agreed to fund a study to "engage the public in a review of all governance structures on Salt Spring Island and to outline the general differences between rural (unincorporated) and municipal (incorporated) local governments."

In addition to outlining the general differences between rural and municipal governments, this study process offered numerous opportunities to engage with the community in discussion about issues and potential challenges facing Salt Spring Island, and the level of public interest in proceeding to a full municipal incorporation study. The intent was to engage the community in a discussion about whether the current governance structures are sufficient to address the issues facing Salt Spring Island, with a focus on the potential for combining services. Key statements form the report:

- There was the greatest degree of dissatisfaction with the coordination and prioritization of issues under the current system of governance.
- More than fifty percent of respondents indicated a degree of dissatisfaction with coordination of local services, number of local elected officials, the overall performance of the Islands Trust, and the number of government bodies delivering local services.

- More than sixty percent of participants responded positively to having a municipal government that would coordinate local services, coordinate and prioritize issues (i.e. strategic planning and major community expenditures), and take on responsibility for current improvement district services and local land use planning
- "Solutions lie in the ability to collaborate and cooperate for common goals."
- "Too many agencies and hoops to jump through with the result that nothing gets done."
- Protection of the Island's water resources is one of the most significant concerns to local residents. Under the current system there are four water improvement districts, six CRD water service areas, and a number of private utilities.
- Watershed protection is a major issue identified by the community, particularly in relation to St. Mary Lake.
- Throughout the Island, source protection is a concern, as it is on all of the Gulf Islands. Recognizing the importance of water issues, in June 2013, Islands Trust Council voted to delegate some of its coordinating and advocacy powers to the Salt Spring Island Local Trust Committee so that the Local Trust Committee can act as a coordinating body for the Salt Spring Island Watershed Protection Authority. This vote marked the first time that the Islands Trust Council has delegated additional powers to a local trust committee. In a working group format, the Salt Spring Island Watershed Protection Authority brings together a number of bodies, including the Local Trust Committee, CRD, Vancouver Island Health Authority, Ministry of Environment, Ministry of Health, North Salt Spring Water District, and Highland and Fernwood Water Commissions. The Authority's mandate is to initially address concerns over St. Mary Lake, and to then eventually address long term watershed management across Salt Spring Island.
- Improvement district services would be eligible for senior government grants once the systems are transferred to the municipality (though it is recognized that grants would also be available for CRD systems under the current structure)

2.2.17 North Salt Spring Waterworks District Strategic Plan (2018)

Received and approved by the Board on December 20, 2018, the NSSWD Strategic Plan provided direction to manage challenges, set priorities, allocate scarce resources, measure success, guide the work of staff, and communicate to District ratepayers as well as the broader community.

The vision of the NSSWD: *The NSSWD is a leader in providing potable water in an environmentally, economically, and socially sustainable manner.* The mission of the NSSWD: *To provide potable water within the NSSWD boundaries in an efficient and sustainable manner.*

The report identified six strategic focus areas:

1. Governance
2. Water supply and management
3. Communication and engagement
4. Asset management
5. Organizational strength
6. Financial management

Key goals / objectives (relevant to this study) from the Strategic Plan:

	Goal	Objective
1	Ensure an efficient, coordinated and enabled governance structure for water supply, treatment, distribution and resource management.	A governance structure that enables coordinated and efficient water service delivery and resource management including the potential for an island-wide governance water authority
2	Access funding from external sources	Provincial government approval to access funding though MFA & senior government sources such as grants and gas tax funds
3	Ensure the moratorium is an effective tool to manage water demand within District boundaries	Evaluate the effectiveness of the current moratorium and identify options for and impacts of lifting various components of the moratorium
4	Cost achievable infrastructure that does not defer costs to future ratepayers	Inventory and assess the condition of tangible assets. Develop a plan for asset replacement and renewal
5	Long term sustainable finances	Complete an achievable 15-year capital plan

2.2.18 Salt Spring Island Incorporation Study (2016)

The 2016 Salt Spring Island Incorporation Study examined the financial, governance, and other implications of a potential municipal incorporation for Salt Spring Island. The Incorporation Study did not provide a recommendation on whether Salt Spring Island should incorporate. Rather, the intent was to provide the community with the information needed to make an informed decision about municipal incorporation.

The study identified that if Salt Spring Island were to incorporate, ownership and responsibility for all CRD and improvement district water systems would shift from the CRD and improvement districts to the municipality. They suggested that:

- North Salt Spring Waterworks staff would play a large public works role for the municipality once water services are transferred to municipal jurisdiction.
- All municipal water services would function as local area services.
- Reserves and debt associated with local area services would typically remain with the service areas so that taxpayers in one area do not take on new responsibilities for obligations elsewhere.
- The municipality could continue to maintain advisory committees related to the water systems.
- In the event that Salt Spring Island incorporates as a municipality, the Ministry of Community, Sport and Cultural Development would coordinate the details of the service delivery transitions with the municipality and the water improvement districts.
- The Province indicated that the North Salt Spring Waterworks District would be dissolved and transferred to the municipality immediately upon incorporation.

- The CRD water systems and the three smaller improvement district systems would likely be transferred to the municipality within three years following a municipal incorporation (with the CRD systems potentially transferring earlier than the smaller improvement district systems)
- Each water service area currently has varying degrees of administrative expenses. A municipality's overall administration (e.g. corporate services, finance) would provide assistance to these local area services upon transfer of the service to the municipality.
- This study does not contemplate changes to individual water utility user fees and/or parcel taxes as a result of municipal incorporation. Notwithstanding, a municipality's approach to administrative expenses (as it relates to utilities) could potentially affect water user fees.
- A municipality would inherit the North Salt Spring Waterworks District works yard and offices.
- If desired, a municipality could gradually shift to consistent user fee rates (i.e. the same user rates would be applicable within all water service areas) to fund operations and maintenance. Any such shift would be a future local decision made by an elected municipal council.
- It is unlikely that a municipality would synthesize property taxes (as opposed to user fees) for the various water and sewer systems, given the unique capital costs and debts associated with each system (If a municipality wanted to merge and synthesize property taxes, the approval of the electors must be obtained separately for each local area service being merged).
- A municipality would be responsible for all publicly owned water utilities, and it would coordinate water protection efforts. Many municipalities develop community-wide Water Master Plans, and a Salt Spring Island municipality would have an opportunity to create such a plan for the entire island.
- A municipal engineering department would provide a centralized and coordinated system of public works and engineering administration. Administrative functions would be centralized in one jurisdiction, which would have the ability to establish priorities, coordinate capital projects (e.g. undertake related water and road projects in the same location in a coordinated fashion), apply for senior government grant funding, and oversee operations of all public works and engineering services. Centralization of these functions could also provide an opportunity to coordinate drainage improvements, which could help to extend the life of roads.
- In a municipal system, a municipal council would be responsible for coordinating all water planning initiatives (e.g. completion of watershed protection and water master plans), and it would take on the lead role in the current work of the Salt Spring Island Watershed Protection Authority.
- The municipality would have no obligation to take over private utilities.

2.2.19 Joint SSI Water Commission Input to CRD (2018 / 2019)

Following the 2018 local government elections, the Water Commissioners for CRD SSI water systems met to understand and discuss strategies to approach the CRD with collective ideas and concerns on how to improve efficiencies in management of the water systems and communications with the CRD.

A year of meetings and dedicated time by the named commissions (and commissioners) went into the preparation and consolidation of recommendations. This summary of key concerns captures insights and recommendations that are unique and of direct importance to the future of water governance on Salt Spring island. The group of Commissioners presented the following key concerns with CRD:

- Perceived CRD lack of transparency – budget, operations, post budget decisions (i.e., those falling beyond annual budget activities)

- Perceived CRD lack of accountability (e.g., cost overruns, serious and expensive errors, lack of safety or planning accountability by CRD, consulting and reporting fees unreported)
- The cost recovery model may discourage water conservation (punishing) and lacks accountability by CRD staff
- Perceived risk adverse culture at CRD (e.g., refusal to respond in writing or communicate by email with commissioners)
- Perception that Staff costs at meetings is excessive.
- Perceived history of bad advice, lack of follow up and shifting cost overruns and errors
- Perception that the high demands on CRD staff reflect the existence of ongoing and unresolved problems with water and financial management of water systems on SSI.

Comments on future governance:

- The systems could be run better and realize greater cost efficiencies at the level of individual commission operations
- All of the Water Commissioners feel that a single commission would not address perceived past financial decisions, cost overruns and transparency
- Salt Spring Island has an enormous amount of local expertise that is not being drawn on

**** The statements from this report are the opinion of the Commissioners at the time and do not necessarily reflect accurate and defensible positions. This document simply provides the perception to the group at the time of their review. Readers may wish to review this document themselves and form their own opinions.*

2.3 BEST PRACTICES

Throughout British Columbia and Canada there are challenges in managing water systems. There are many residents who do not have access to clean drinking water and there are hundreds of boil water orders across the country. Operating and capital costs continue to rise and the ability to pay is an ongoing concern. Provincial and Federal grants are available for capital improvements, but are never enough for the overall needs.

Regional Districts generally manage large infrastructure well. Large diameter piping, expansive pump stations and major treatment plants are often the core line of business for regional districts. Many regional districts are not set up to maintain small systems effectively.

Incorporated municipalities generally have the most economical approach to water system management. They typically hire and train competent operators to maintain the system and utilize the strengths available in the rest of the municipality to assist with the core functions (human resources, finances, design, construction, procurement, etc.)

2.3.1 Review of British Columbia Regional District Best Practices

Innova Strategy Group conducted a survey in November 2016 of regional districts in B.C. and determined that most are facing similar challenges with water and wastewater utilities. Of 27 regional districts surveyed, 11 responded with detailed comments. This survey remains relevant today as the only know n changes to governance occurred at the CVRD and is discussed further in this report. Survey findings include:

1. Some regional districts utilize a water, wastewater and/or utility commission/committee to assist with governance. These are providing good value.
2. Most regions do not have detailed asset management plans. They follow Public Sector Accounting Board reporting requirements but have not completed detailed condition assessments.
3. Funding of small utilities is a challenge for all.
4. Changes in legislation have caused significant financial concerns for all. Many utilities were added to regional districts when standards were much lower. New standards have created funding shortfalls and anxiety with users who are not willing to pay higher fees.
5. Most regional districts rely on grants for assisting with capital improvements for existing small utilities.
6. Residents typically resent the high fees for operating a small utility. They often have a traditional outlook on water in B.C. – that water is plentiful and clean.
7. Two regional districts have written policy for adding new utilities under their jurisdiction. Most regional districts have some criteria that require a detailed assessment of any utility considered for inclusion. The Regional District of Central Kootenay has a comprehensive policy (Water and Wastewater Utilities Acquisition Strategy - 600-03-01) that ensures any new utilities are accepted with limited risk to the regional district.
8. Half of the regional districts surveyed have standard operating procedures and performance standards for their small utilities. Others simply rely on meeting compliance with regulations.
9. Most regional districts are satisfied with the level of communications around their small utilities. They use a multitude of communication techniques including print advertising, public engagement, direct mail, operator interaction, and many use the opportunity to provide information through billing mail outs.

2.3.2 The Value of Consolidated Water Systems

Throughout the world it has been demonstrated that there are significant advantages to combining water systems whenever feasible. The economies of scale and the higher level of water quality controls make amalgamation of systems a key mandate of small utilities. Small systems and individual wells are considerably more costly than well-run multiple user systems, as demonstrated below:

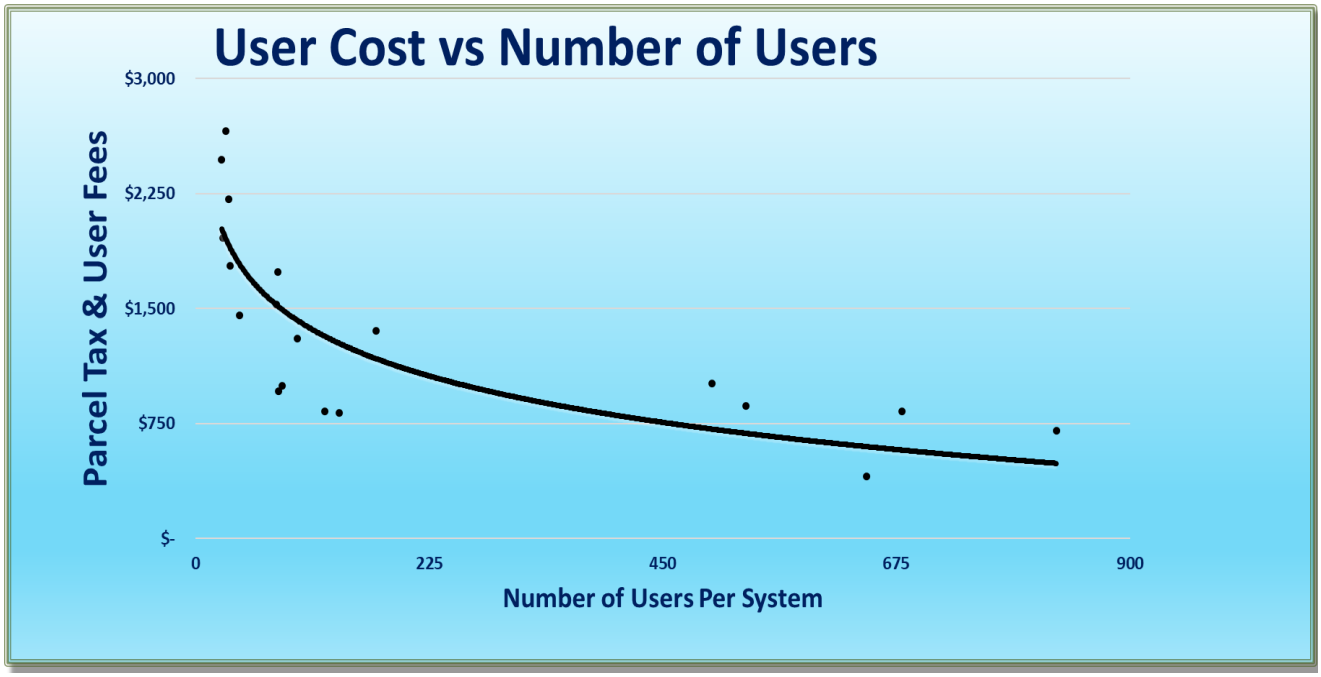


Figure 2-5 2017 Innova Strategy Group study of the Cowichan Valley Regional District utilities.

When water management is coordinated effectively, smaller systems are combined with larger systems to reduce operations, maintenance and treatment costs.

For Salt Spring Island, there have been a number of studies, reviews, and attempts to incorporate that would provide a consolidated approach to water management. This concept of consolidation considers the advantages of economies of scale along with broader based decision making. There will be considerable demand for other systems to join the larger systems in the coming years as it will most always be the most cost-effective and safest water supply system for the island. It is important to note that there is no single water supply with sufficient capacity to serve all systems. Furthermore, while consolidated operation and administration would increase cost-effectiveness, the geographical separation of Salt Spring water systems means physical consolidation may be cost-prohibitive.

2.3.3 Regional District of Nanaimo Drinking Water & Watershed Protection Program

The Regional District of Nanaimo has achieved significant success managing their watersheds with the creation of the Drinking Water and Watershed Protection (DWWP) program, established in 2009. The DWWP program helps protect the Region's water resources. Through the DWWP program, they are working to learn more about water in the Region, use this information to make better land use decisions, and help communities protect the environment.

The RDN first implemented its Drinking Water and Watershed Protection (DWWP) Program in 2009 to proactively address watershed challenges facing the region. For the first decade of the DWWP Program, the RDN's focus was on public education promoting water conservation and protection and establishing systems to collect data and generate information to support sustainable land-use planning. RDN created a department that centralizes and assists homeowners in finding solutions to their water issues. Their web site has considerable information and references.

The RDNO Drinking Water and Watershed Protection Action Plan 2.0 is a 2020 – 2030 strategic plan that retains alignment with the original Plan yet focus attention on emerging challenges and priorities for the next decade and beyond. The year-long update process involved structured engagement with various stakeholder committees and the public to identify what actions are needed between 2020- 2030 to continue to effectively pursue regional water protection.

Their vision is for healthy, safe and resilient water resources in the region, enabled through strong partnerships. Their mission is to provide regional leadership at the watershed scale through coordination of water management, land-use planning and community outreach to support drinking water sustainability, climate adaptation, and healthy ecosystems.

The RDNO DWWP program provides region wide coordination of issues related to water and watershed protection and integrates their work into all facets of RDNO planning and operations. The DWWP is a business unit within RDNO that supports the RDNO Board decision-making. SSIWPA does not have the integration or the authority to effectively provide the same level of service.

2.3.4 Cowichan Valley Regional District (CVRD) Drinking Water and Watershed Protection Program

The CVRD established, through a referendum during the last local government election (2018), a new water service with a budget of $750,000 / year. All areas of the CVRD are included in this program (CVRD, Duncan, North Cowichan, Lake Cowichan, Ladysmith, and Electoral areas A, B, C, D, E, F, G, H, and I). The establishment of this service was a result of considerable work including a 2017 comprehensive and detailed study of options by the Innova Strategy Group "Water & Wastewater Utilities Review and Assessment for the Cowichan Valley Regional District." This report recommended changes to governance to better address coordination of water services across the District.

Details of the referendum as follows:

COWICHAN VALLEY REGIONAL DISTRICT BYLAW NO. 4202, A Bylaw to Establish a Service for Drinking Water and Watershed Protection:

WHEREAS pursuant to Sections 332 and 338 of the *Local Government Act*, a Regional District may, by bylaw, establish and operate any service that the Board considers necessary or desirable for all or part of the Regional District;

SERVICE BEING ESTABLISHED

The service being established under the authority of this bylaw is a service for the purpose of protecting drinking water and watersheds by:

a) Increasing the level of knowledge regarding drinking water sources to support the long-term sustainability of the water resource;
b) Coordinating the efforts of provincial and local governments and non-governmental organizations with respect to drinking water source protection;
c) Increasing the level of public awareness regarding drinking water and watershed protection requirements and strategies;
d) Obtaining and holding water licenses;
e) Promoting and undertaking water conservation initiatives and programs;
f) Developing and implementing water management plans;
g) Entering into agreements as needed to accomplish the objectives of this service;
h) Assessing needs and planning for infrastructure and natural system improvements to maintain or enhance water quality or water supply; and
i) Providing grants and financial support to entities approved by the Board for the purpose of water and watershed protection.

The service shall be known as the “Drinking Water and Watershed Protection Service”

Similar to the RDNO DWWP program, the CVRD Drinking Water and Watershed Protection Program provides region wide coordination of issues related to water and watershed protection and integrates their work into all facets of CVRD planning and operations. The program supports CVRD Board decision-making. SSIWPA does not have the integration or the authority to effectively provide the same level of service.

3. FINDINGS

3.1 OVERALL STRENGTHS AND WEAKNESSES

Strengths	Weaknesses
NSSWD is a well-run system with dedicated and skilled staff	Complex and varied governance structures restrict the ability to achieve efficiencies
CRD provides a high level of service for the region it serves	Perceived inadequate water supply to meet existing and future demand
CRD provides many ancillary support services that are difficult to replicate with smaller water districts	Inadequate capital funding, particularly with access to grants for NSSWD
CRD has the ability to draw upon professional CRD expertise in Victoria	Inability to meet drinking water guidelines at all times (note, this is common to most utilities)
NSSWD provides excellent on-Island connections to contractors and other service providers	Complex water treatment system designs that are difficult to maintain
Community interest in water issues is high	Difficulty in attracting on-Island qualified staff
	Aging infrastructure and future challenges with asset management.
	Coordination of services
	Ratepayers pay a premium for the services provided.
	Inadequate fire flows to support standard structural fire-fighting response.

3.2 EVALUATION OF NORTH SALT SPRING WATER DISTRICT

In addition to the operations and maintenance of the water systems, NSSWD carries out some water resource management activities at both water sources, as part of its source-to-tap approach to drinking water provision. The NSSWD owns most of the Maxwell Lake watershed as well as the Rippon and Larmour Creek watersheds, from which water is diverted into Maxwell Lake to ensure it refills each winter. Most of these watershed lands were purchased by the NSSWD with financial contribution from local charitable organizations for the purpose of protecting Maxwell Lake as a drinking water supply. Most of the watershed lands have conservation covenants on title that require the NSSWD to restrict public access and land use.

NSSWD also operates and maintains six other water systems on a fee for service basis.

Key interview findings through the evaluation process:

Maxwell and St Mary Systems

- The water systems are under-designed for appropriate fire flows for much of the service areas
- Maxwell Lake has high levels of disinfection byproducts
- The St Mary water treatment plant was installed on time and under budget
- NSSWD uses contemporary technology to manage the infrastructure
- There have been many improvements to NSSWD over the past few years
- Water loss in the NSWWD system is minimal considering the expansive system

- Most of the pipe network is undersized and nearing the end of service life.

Leadership

- New Board members have brought professionalism to the organization
- There are adequate employees and management structure to fulfill obligations
- Decisions are made effectively and timely
- Non-unionized staff work overtime/standby without official policy.
- NSSWD provides extensive and excellent training for employees, ensuring retention of qualified and capable staff
- NSSWD requires a level 4 operator for both water distribution and water treatment
- There is no HR staff expertise to support NSSWD.

Ratepayers

- Users are generally happy with NSSWD (see survey)
- External communications have improved significantly over past few years. Web site is up-to-date and functional.

Other

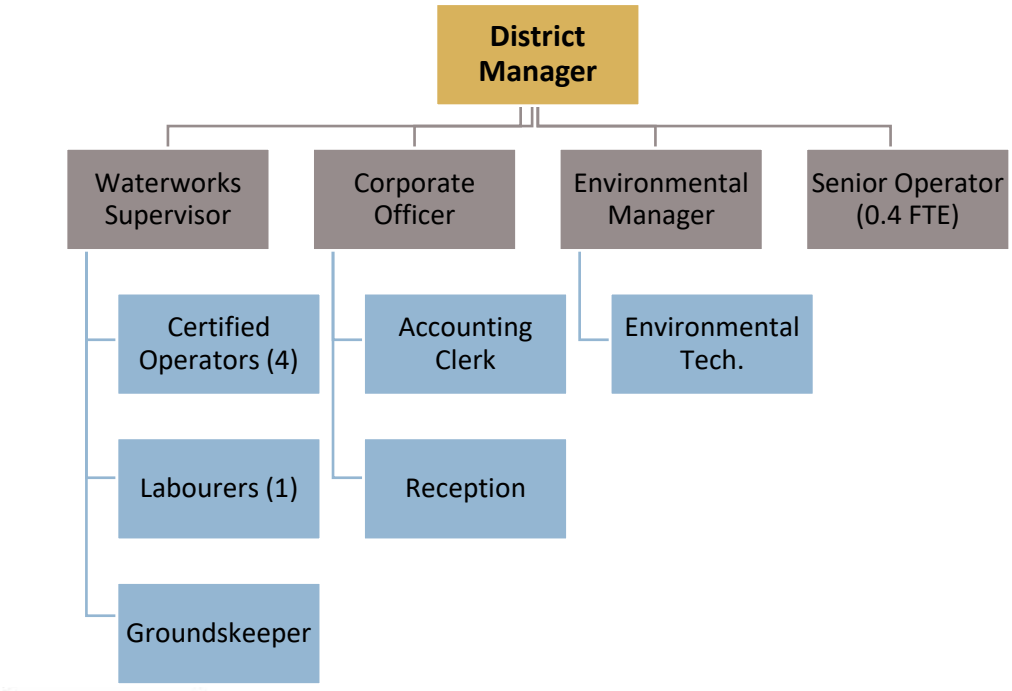
- The NSSWD Board limits Islands Trust land use decisions by determining there is no water available
- The province has said, in writing, no capital grants will be issued for NSSWD

North Salt Spring Waterworks District Water Licenses (as provided by NSSWD)

NSSWD Water Licenses								
Source	**Date**	**Lic. #**	**Purpose**	**Withdrawal (m3)**		**Max Storage**	**Allowed Period of Use**	**Other conditions of license, comments etc.…**
				Daily	**Annual**	**m3/year**		
St Mary Lake	1967	32525	Waterworks	568	207,415		Whole year	The Engineer may allow additional quantity to be used for losses from time to time.
St Mary Lake	1977	47548	Waterworks	1,705	622,246		Whole year	The Engineer may allow additional quantity to be used for losses from time to time.
St Mary Lake	2001	101050	Waterworks & Storage	1,991	363,687	370,044	Whole year	Records of lake levels/outflows must be kept & submitted by the Engineer.
St Mary Lake	1969	120417	Waterworks	25	9,126		Whole year	Issued in substitution of conditional water license 35715
St Mary Lake	2015	1003316	Storage	550,996		550,996		Storage license application to raise the weir to 41.0 m asl - on hold since 2016
St Mary Lake	2015	1003316	Storage	550,996		550,996		
Total St Mary				**4,289**	**1,202,475**	**1,472,036**		
Maxwell Lake	1939	58203	Waterworks	227	82,966		Whole year	This license was issued in substitution of conditional water license 14356.
Maxwell Lake	1914	58204	Waterworks	55	19,912		Whole year	This license was issued in substitution of final water license 8968.
Maxwell Lake	1953	58205	Waterworks	627	228,987		Whole year	This license was issued in substitution of conditional water license 21352.
Maxwell Lake	1984	65784	Waterworks	1,364	331,865		Whole year	A flow measuring device must be incorporated into the works at the source.
Maxwell Lake	1984	65785	Storage			629,075	Whole year	Storage to be held within the elevation of 1022.5 (intake) and 1030.0 (spillway).
Rippon Creek	1990	101070	Waterworks			246,696	Diversion	Original license states storage - letter later corrects be the same as for license 65784 (Waterworks)
Larmour Creek	1996	110780	Storage			202,291	Diversion	Purpose is storage.
Total Maxwell				**2,273**	**663,729**	**1,078,062**		
Total System				**6,562**	**1,866,204**	**2,550,098**		

NSSWD Organizational Structure

NSSWD staff support the direction of the elected Board. This includes providing professional advice, operating the utilities, and providing financial services for the major activities of the utility.



*** as of February 2020

3.2.1 NSSWD Operations

Although this study provided only a high-level review of the existing operations of NSSWD, there are some areas that require further study in order to accurately determine best steps forward. The efficiency of NSSWD operations is average compared to other similar utilities. The system is similar to many water utilities throughout B.C. and is geographically easy to manage. 13 positions are allocated to the Waterworks District and comparing like-sized / like complexity systems, the number of operators / labourers would seem to be relatively high, as follows:

EVALUATION OF OPERATORS REQUIRED TO OPERATE & MAINTAIN WATER SYSTEMS

	Connections serviced	Residents	Industrial Commercial Institutional?	Number of Operators / Labourers	# of Residents / Operator	Comments
System 1	8708	18983	Yes	8	2373	3 systems, 4 treatment plants
System 2	3791	8643	Yes	6	1441	19 systems, 2 treatment plants, 32 wells
System 3	3790	8537	Yes	4	2134	1 system, 2 treatment plants
Average					**1983**	
NSSWD *	2034 (estimated)	6271	Yes	6	**1045**	8 systems, 5 treatment plants, 9 wells

* - includes contracted works

Operations staff are very competent however, utilization may not be optimal. Some examples of higher than expected expenditures compared to like-sized utilities, along with some explanation as to why:

1. Excessive site visits to pump stations (although there is a plan in place to reduce in this area now that the SCADA system is nearing completion)
2. Considerable unavoidable overtime (note that approximately 50% of this time is for contracted services) compared to like size utilities. It was reported that overtime for NSSWD operators was often related to “keeping the system patched together” as a result of delayed CRD contracted repairs / replacement.
3. Excessive training (this is an important component of NSSWD’s attraction and retention strategy and helps to support the requirement for level 3 and 4 operators)
4. Inadequate coordination of maintenance activities

There is a distinct lack of benchmarking to evaluate the efficiency of NSSWD maintenance programs making it difficult to compare unit rates to equivalent operations.

3.2.2 NSSWD Management / Leadership

The District Manager reports directly to the Board in a typical Board / CEO relationship. The District Manager has been with the organization for over 33 years and has significant technical knowledge that will be challenging to replicate when he retires. Overall, NSSWD’s has good employee attraction and retention

primarily due to their ability to remunerate fairly and to develop employees once they have commenced employment. In general, NSSWD treats its employees well.

The management of NSSWD does not have available key skills that are common in similar sized municipalities. Due to the small size of the organization, there is no designated Human Resources, Information Technology, or Occupational Health & Safety expertise. The NSSWD utilizes contracts and consultants to provide this expertise. A number of examples of challenges in these areas were provided and confirmed with the Managers, who fully understand the limitations.

The District Manager reports directly to the Board in a typical Board / CAO relationship. There is a natural succession plan in place that will ensure the operation can continue to operate with strong leadership.

Compared to like-sized utilities, NSSWD has few policies, procedures and standards that are required to reduce risk and to increase productivity. Standard Operating Procedures are either non-existent or out of date although Managers understand the need for this documentation. Documentation of legislated data requirements are all to standard.

Personnel issues and ongoing relationship challenges were identified as a concern to staff. Although NSSWD provides excellent opportunities to provide training and certification of operators, very little attention is paid to supervision and leadership development. There is a lack of "middle" leadership with the organization which is affecting overall performance levels.

Finance operates with a Chief Financial Officer and an Accounting Clerk.

NSSWD Finances

NSSWD finances operations, maintenance, and capital through tolls, taxes, and derived revenues totaling over $3M per year. There is limited subsidization through government grants. Half of the overall NSSWD expenses are for labour and benefits. The remaining expenses are relatively standard for a water utility.

Overall, areas of concern include:

- Employee capacity to be reviewed
- High insurance costs
- Organizational efficiency

NSSWD 2020 Approved Budget - Expenses

	Operations	Administration	Total	% of budget
Staffing	$798,718	$735,998	$1,534,716	48.4%
Depreciation	$300,000		$300,000	9.5%
St Mary WTP Debt interest		$273,335	$273,335	8.6%
Net Operating Loss			$246403	7.8%
St Mary Lake WTP	$218,994		$218,994	6.9%
Supplies	$109,358		$109,358	3.4%
R&M	$99,828		$99,828	3.1%

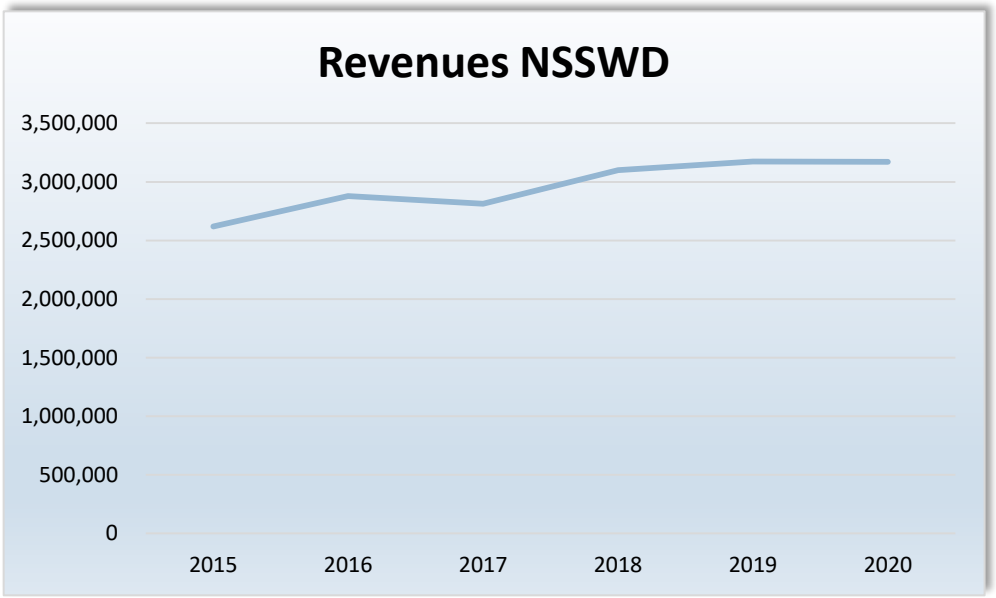
NSSWD 2020 Approved Budget - Expenses				
Insurance - general		$65,392	$65,392	2.1%
Office		$61,243	$61,243	1.9%
Phone	$32,436	$9,792	$42,228	1.3%
Advertising		$40,000	$40,000	1.3%
Vehicle	$35,305		$35,305	1.1%
Energy	$31,844		$31,844	1.0%
Other	$25,500	$3,060	$28,560	0.9%
Information technology		$18,541	$18,541	0.6%
Insurance - vehicle		$16,912	$16,912	0.5%
Postage and courier		$14,696	$14,696	0.5%
Consulting	$6,120	$7,650	$13,770	0.4%
Legal		$10,000	$10,000	0.3%
Bank/CC fees		$9,832	$9,832	0.3%

Total Expenses budgeted for 2020 = $3,171,000

NSSWD derives revenues from three main sources: water tolls, parcel taxes, and surtaxes. An additional $245,000 is derived from contracted services to CRD systems and the Erskine system.

NSSWD 2020 Revenues		
Water tolls	$	1,174,530
Parcel taxes	$	876,180
Surtaxes	$	795,861
Contract services	$	244,810
Other water revenue	$	69,975
CEC revenue	$	3,600
Other revenue	$	6,000
Grants	$	-
TOTAL	**$**	**3,170,956**

NSSWD has increased ratepayer costs by 20% over the past five years although the bulk of the increases are related to the construction and operations of the new Water Treatment Plant.

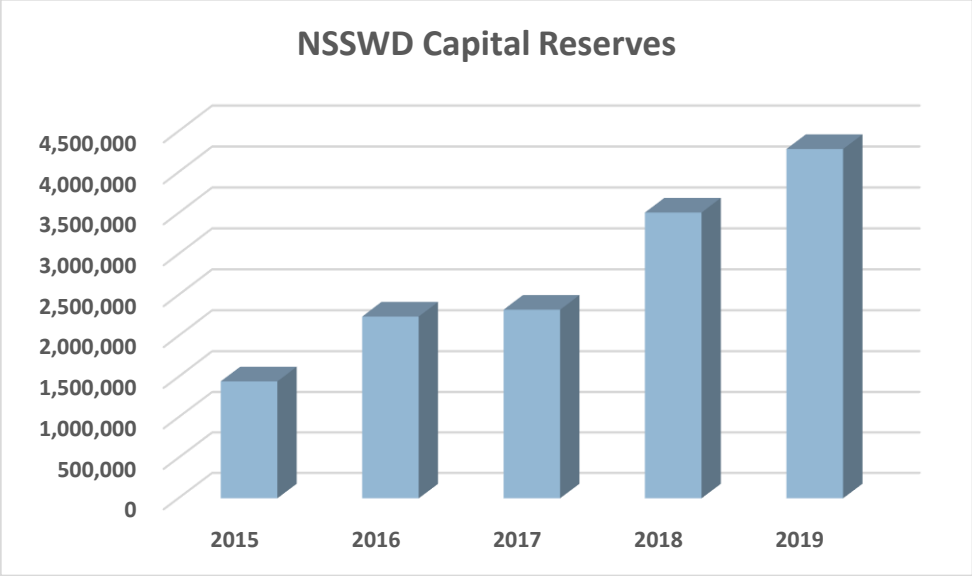


2020 Capital Projects

The 2020 approved Capital Plan clearly recognizes the need for reviewing efficiencies of services and forward planning. Capital is being allocated for pending litigation which is a potential organizational liability. It is important to note that there are no plans for watermain replacement in 2020.

2020 NSSWD CAPITAL PLAN		
Consultant - Recruitment Ops Manager	$	15,000
Consultant - Internal Review	$	50,000
District Manager Office Upgrade	$	15,000
Office Vehicle	$	25,000
Maxwell Lake Treatment Plant feasibility study	$	50,000
Civil Work & Water Main Replacement Design	$	25,000
Legal Fees - extraordinary	$	50,000
Infrastructure Assessment	$	10,000
Consultant - IT Review	$	11,000
TOTAL	**$**	**251,000**

NSSWD has a robust capital reserve that will greatly assist in watermain replacement, contingent on results of an asset management review.



Fee for Service

The NSSWD currently provides operations and maintenance services to two other improvement districts, one private system and three[1] CRD systems. The work is completed utilizing existing personnel based on a charge-out rate of $75 / hour, including vehicle. This rate is charged for all work, including general labouring work. Compared to normal public sector charge out rates, $75 / hour may not cover the full costs of providing the service. Most public sector organizations charge out at the operator pay rate with a premium loading for all other corporate charges.

The full cost for providing support services includes the cost of land, buildings, vehicles, insurance, support costs, etc. This is a significant cost that may or may not be fully compensated within the $75 / hour rate.

Grant Funding

Improvement Districts are not eligible for senior government grant funding for capital projects. As a result, local property owners must bear the full cost of projects such as North Salt Spring Waterworks' planned project to raise the Duck Creek weir (which, based on current estimates, could have a capital cost of approximately $5 million according to the North Salt Spring Waterworks District). **Only regional districts and municipalities are eligible for senior government grant funding.**

NSSWD inability to access infrastructure grants has increased the burden to ratepayers. The St. Mary treatment plant was constructed with 100% NSSWD funding. If NSSWD had been eligible for infrastructure grants, they would have had access for up to 70% of the capital costs and would have been likely to receive the full allocation of $5.7 million.

The NSSWD system requires significant replacement funding over the coming years and there are potential costly improvements to existing water treatment facilities. These costs will be borne by the ratepayers in full.

[1] Scott Point ID, Mt Belcher ID, Erskine Water Society

3.2.3 NSSWD Asset Management

NSSWD is only starting to evaluate assets and considering long term financial planning to sustain the system. NSSWD has received a grant from the Ministry of Municipal Affairs to develop an asset register that includes a comprehensive asset inventory, estimated replacement dates and costs. The asset register will be complete before the end of 2020. There is no funding in place to provide long-term financial planning at this time.

Utilizing the Asset Management BC "BC Framework" (AMBC) for asset management and sustainable service delivery, a sustainable service fulfills these criteria:

- Meets the needs of those who receive it
- Protects natural assets and does not degrade the environment
- Is financially viable and stable over time

Figure 3-1 Assest Management BC Framework

Based on the AMBC Road map, the NSSWD is working at the "BASIC" level, as defined in the Asset Management Building Blocks. NSSWD is not, as yet, even approaching an intermediate level. The NSSWD board approved an additional expenditure of $37,000 to develop an asset register that will provide a better estimate of future capital costs to the NSSWD.

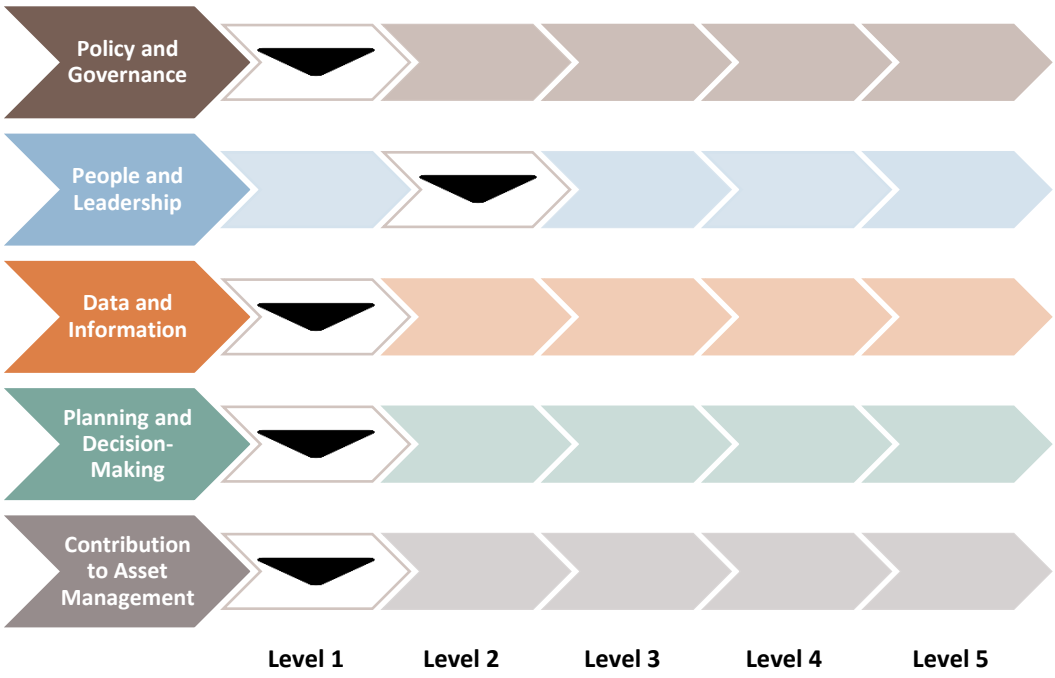
The Federation of Canadian Municipalities (FCM) Asset Management Readiness Scale assists government organizations in understanding where their current state and how they can adopt business practices that support better decisions about investing in infrastructure assets like roads, buildings water and waste water systems. FCM's readiness scale is a tool to identify where government organizations can improve asset management practices over time.

The readiness scale helps to:

- Assess current asset management practices
- Identify opportunities to adopt new practices, or formalize asset management activities into documented business practices
- Measure and track the progress of asset management practices and activities

The readiness scale is designed for staff and elected officials in any municipality or local government organization across Canada.

Asset Management Capacity Assessment - FCM Readiness Scale for NSSWD



NSSWD received a small grant to catalogue assets however, this funding is not enough for a fulsome asset management review. There is much work to do in asset management and the NSSWD is lagging far behind similar sized water utilities in British Columbia. The lack of attention to asset management is an extremely high risk to the viability of the system. A high-level review of assets indicates that there are significant future costs to consider steady state financial modeling. The following rudimentary table is an estimation of potential future costs to NSSWD:

Estimate of Future Capital Costs - 2020 to 2030

Assumptions			
Total watermains		45,000	metres
Watermain replacement rate (steady state, ideal conditions)		100	years
25% required renewal in next 10 years		1125	metres / year
Watermain construction / replacement cost (150mm)	$	500	/ metre
2020 - 2030 Capital Costs			
Cost / year ($500 / metre replacement costs)	$	618,750	/ year
Premium to upgrade to fire standards ($50 / m)–high-level estimate only	$	56,250	/ year
Treatment plant, PRV, air valve, pump station, etc. replacement	$	40,000	/ year
New Water Treatment Plant (Maxwell)	$	4,500,000	
2020 - 2030 Total Capital Replacement	$	11,650,000	
Annual cost to ratepayers		**$ 1,165,000**	**/ year**

3.2.4 NSSWD Governance

NSSWD is governed by elected Trustees who serve a three-year term on behalf of the District ratepayers. Elections take place at the Annual General Meeting, usually held in April of each year.

To be eligible as a nominee, candidates must be a Canadian Citizen, 18 years of age or older, an owner of land in the North Salt Spring Waterworks District whose account is in good standing, and entitled to be registered as a voter under the *Elections Act*. Trustees are elected by the ratepayers of the District who are present at the Annual General Meeting to represent them and make decisions on their behalf for a term of three years.

Trustees receive a small honorarium for their services which include; attending one or more monthly Trustees meetings, reviewing staff and/or consultants reports and customer correspondence prior to meetings, serving on working groups with staff, and sometimes representing the District at various government and special interest group meetings about the island. The time commitment can vary from a few hours per month to several hours a week or more.

3.2.5 Overall Evaluation of NSSWD

Strengths	Weaknesses
Skilled operators	Asset Management
Succession planning	Long term planning
Employee engagement	System fire flows
Leadership (elected officials)	Human resources *
Leadership (staff)	Information technology *
Connection to the community	Communications *
	Legal services *
	No access to grants
	OH & S *

*** Typical of small to mid-sized utilities

3.3 EVALUATION OF THE CAPITAL REGIONAL DISTRICT

Administration and operation of CRD water and sewer systems is provided through the CRD offices in Victoria (Integrated Water Services department) and on Salt Spring Island, where there is a Manager of Engineering and Engineering Tech. In some cases, operational support is provided through contract arrangements (e.g. North Salt Spring Waterworks District). Staff provide operational support to the water systems, and also undertake all capital infrastructure projects for all five systems, as required.

Overall, the management of Salt Spring Island water issues is inconsistent. It would seem that Salt Spring Island issues are not always a priority for IWS and do not fit in with their main line of business: "large pipes and large treatment facilities." This is not surprising as the Gulf Islands comprises only a small portion of CRD's overall business and it is difficult to resource capacity due to the remoteness and challenges with travel.

Interview findings through the evaluation process:

The Systems

- CRD water systems are historically under-designed for appropriate fire flows for much of the service areas (typical of small systems in BC)
- CRD systems are in various states of repair
- CRD contracted services to NSSWD viewed favourably by receiving systems.

Leadership

1. CRD has had difficulty attracting and retaining certified operators to work on Salt Spring Island (attracting certified operators is a challenge throughout B.C.)
2. CRD's operations overtime is difficult to manage. One employee worked over 1,100 hours of overtime in 2018, which is not sustainable. This is not surprising considering the small number of operators (3) assigned to Salt Spring Island.
3. There are many emergencies that require dispatching specialists from the peninsula. Emergency response is challenging when considering the difficulty with getting to the island at all times.

Ratepayers

1. Although many ratepayers claimed that financial reports were difficult to understand, this would seem to be a remnant from the past. It is Innova Strategy Group's opinion that the financial reports are easy to understand and professionally presented.
2. Many ratepayers stated that CRD leadership is below standard however, there are few recent examples that would support these claims. Most examples given were related to decisions made by different leaders many years ago.
3. Commissions approve operating, capital, rates, taxes and fees prior to implementation by the Board however, many Commissions generally believe the CRD costing models are inaccurate. Innova Strategy Group has reviewed the costing models and they are fully consistent with standard rate setting.
4. Many Commissioners do not have the full understanding of the true costs to operated, maintain, and improve a small water system. This is typical of governance around small systems in B.C. due to the inability to achieve economies of scale, the aging infrastructure, inadequate supply, changing regulations, and systems built prior to current standards. There is a general reluctance on the part of

water users to pay the true cost of water and many compare their rates to "City" rates. As previously mentioned, small systems are much more expensive to operate than large systems.

5. CRD owned small system Commissioners feel Islands Trust does not consult regarding growth and the effects of water demand from nearby developments (outside of their particular service areas).
6. Commissioners generally feel they require more communication, accountability, and transparency however, it is Innova's opinion that at this time, these issues are being dealt with professionally.

Others

- There is a need for CRD long-term strategies:
  - Metering
  - Monitoring
  - Asset management
  - Financial planning
  - Fire protection
  - Efficient operations
  - Overall water management
  - Conservation

Organizational Structure

The organizational structure that supports water services on Salt Spring Island is disjointed and confusing. There are two distinct and different services, as identified in the organizational chart.

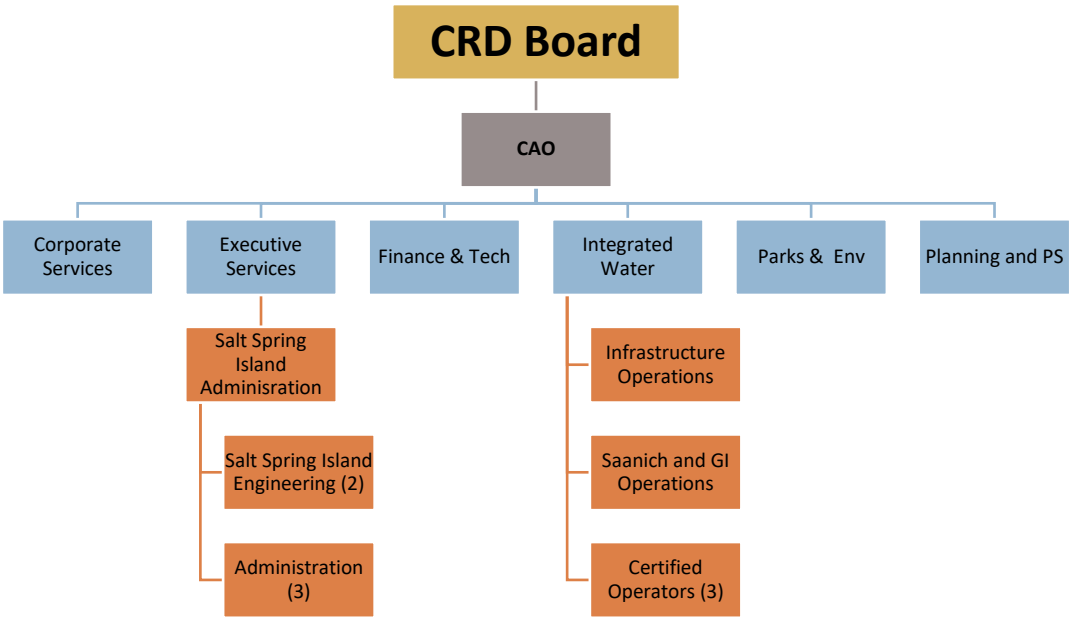
Salt Spring Island Administration provides support services involving water in the following areas:

1. Commission, Committee, and Board meetings
2. Design and construction (pedestrian, cycling, water, wastewater, etc.)
3. Parks and recreation
4. Contract administration
5. Salt Spring Island taxation, requisitions, utility fees, etc.

Integrated Water's Infrastructure Operations provides the following water services:

1. Small water system operations and maintenance
2. Wastewater system operations and maintenance
3. Water and wastewater budgeting in conjunction with the Finance & Technology Dept. (for approval by Commissions)
4. Water and wastewater OH&S and human resources (This is provided by Executive Services' Corporate Safety and Human Resources functions; they do not operate on a charge-back model but are paid for by all municipalities and EAs)

Key CRD Staffing to Service Salt Spring Island Water



3.3.1 CRD Operations

CRD operations staff report some difficulties in responding to call outs due to operator capabilities, overtime burn out, and the small staff complement available on Island.

The standby structure is set up to be provided by the operations crew throughout the year. The contract for service with North Salt Spring Water Works (NSSWW) provides standby services for the Beddis, Fulford, Beddis, and Cedar Lane. NSSWW systems. The NSSWD does not have qualified sewer operators therefore could not be considered as an option for additional standby support for sewer operation of CRD wastewater systems.

Operators were faced with the following issues in 2019 (note that NSSWD assisted in a number of instances):

- Reservoir that had access issues and needed the level control equipment replaced.
- Two lake intakes that needed replacing.
- Only three CRD operational staff available permanently on Salt Spring
- Required coverage for vacation and training days.
- Sunnyside water main replacement
- Safety and equipment deficiencies
- Normal emergencies, water leak repairs, etc. that happen throughout the summer months.
- On-call for Salt Spring

It was reported that there are a number of outstanding preventative maintenance work orders or the work orders entered as complete when they were not.

Staff identified concerns that internal safe work procedures were not up to standard. A number of safety issues were brought forward and a safety professional was retained to complete a full hazard identification and risk assessment of the eight utilities on Salt Spring Island; as well as a gap analysis between CRD processes and equipment to what is required from WorkSafeBC regulatory requirements. This work was completed in Q1 2020 and recommendations have now been actioned.

Capital projects require design review and on-site project coordination which is now be supported by the on-Island engineering resources. With the lack of existing system as-built drawings and standard specifications for the various systems, project management is challenging for any project on the Island.

CRD Stormwater Quality Management

The SSI Stormwater Quality Management Service was established in 1996 essentially to be a storm water monitoring service. The program dealt with stormwater contamination issues related to septic fields and other land-based contaminant discharges to stormwater that affect many surface waters and selected sections of shoreline.

In 2017 the Electoral Area Director requested the service be expanded to provide support to include a broader range of water quality and quantity protection initiatives (i.e. SSIWPA who were at the time leading efforts to protect and improve water resources) and to apply and/or receive grants in areas related to groundwater, water capture/reuse or watershed protection activities not directly related to water quality. In 2017 the service was amended with an annual requisition of $22,500 to include the following:

1. the control of pollution in stormwater runoff from land;
2. watershed assessment, protection and enhancement;
3. groundwater monitoring, assessment, and protection;
4. investigation and implementation of reclaimed water programs; and
5. other related activities

3.3.2 CRD Management / Leadership

This review does not contemplate an analysis of the efficiency of the overall leadership of CRD however, as with any large regional district; it is often difficult to provide direct and efficient management control due to the remoteness of operations.

It is important to differentiate between the two leadership groups that manage water issues on Salt Spring Island:

Integrated Water

The Integrated Water Department has a number of layers that support the 3 operators who work on Salt Spring Island. As with any large organization, these multiple layers make it difficult to manage down the line for the needs of Salt Spring Island. This is compounded by the difficulty in traveling to Salt Spring Island to support the water systems. CRD mechanical and electrical staff visit SSI regularly, and for emergencies, and

these visits are billed to the CRD managed systems including ferry and travel time. CRD staff provided examples where decision making, coordination, and on-Island leadership could be improved.

Salt Spring Island Administration
On island resources through Salt Spring Island Administration are generally led effectively, although there have been many challenges with gaining the trust of residents after years of neglect. The Manager consistently strives to provide support for island residents however, when issues related to water are involved, it is extremely difficult to coordinate the activities with the rest of CRD. Managing of on-Island capital projects has improved over the past few years and the addition of on-Island engineering resources ensures future success.

3.3.3 CRD Finances

CRD provides the support services to determine rate structures for each service area, funding the operations, maintenance and capital improvements for each system. CRD collects these funds through parcel taxes. There is some subsidization through government grants for capital improvements.

Overall, the provision of services for the CRD water systems is challenging due to the remoteness of the operations, the lack of on-Island capacity, and the additional costs for travel.

Operating Costs
CRD's operating costs to service the 5 water systems (approximately 600 households) totaled $668,000 in 2020. To put this in perspective, average household charges were approximately $1100 in 2020, independent of capital borrowing. This is not out of line with similar sized small systems in BC.

CRD NET OPERATING BUDGETS						
	2019 Actual	**2020**	**2021**	**2022**	**2023**	**2024**
Beddis	$ 155,805	$162,046	$165,349	$168,696	$172,350	$191,089
Cedar Lane	$ 39,520	$ 48,480	$ 49,264	$ 50,054	$ 51,126	$ 52,236
Cedars of Tuam	$ 25,250	$ 27,505	$ 27,912	$ 28,331	$ 28,954	$ 29,590
Fulford	$ 125,090	$139,353	$141,806	$144,739	$147,875	$151,107
Highland / Fernwood	$ 294,850	$291,264	$295,966	$303,824	$309,048	$314,517
Total	$ 640,515	$668,648	$680,297	$695,644	$709,353	$738,539
% increase		4.2%	1.7%	2.2%	1.9%	4.0%

Taxation – 2020 Budget
Over and above user rates and water charges, the CRD requisitioned the following

CRD PARCEL TAX REQUISITION (DOES NOT INCLUDE WATER / USER CHARGES)						
	2019 Actual	2020	2021	2022	2023	2024
Beddis	$ 72,240	$ 72,240	$ 77,576	$ 94,455	$ 96,964	$102,834
Cedar Lane	$ 12,680	$ 11,951	$ 12,044	$ 12,134	$ 1,224	$ 12,324
Cedars of Tuam	$ -	$ -	$ -	$ -	$ -	$ -
Fulford	$ 74,790	$ 66,359	$ 63,800	$ 62,524	$ 61,274	$ 60,048
Highland / Fernwood	$ 55,000	$ 56,822	$ 61,814	$ 67,217	$ 81,266	$ 82,565
Total	$ 214,710	$207,372	$215,234	$236,330	$240,728	$257,771
% increase		-3.5%	3.7%	8.9%	1.8%	6.6%

A review of the 2019 budget expenses indicates the baseline operational labour costs totals $435,000, which is generally equvalent to approximatley 4.5 FTEs operator support. Note that this does not include additonal charges for extra work, callouts, and overtime.

SYSTEM	NSSWD CONTRACT LABOUR	CRD LABOUR
Beddis	$46,394	
Cedar Lane	$14,544	
Cedars of Tuam		$17,359
Fulford	$44,769	
Highland/Fernwood		$207,104
TOTAL	$105,707	$330,170
GRAND TOTAL	**$435,877**	

CRD Staffing Review

	Connections serviced	Residents	Industrial Commercial Institutional?	Number of Operators / Labourers	# of Residents / Operators	Comments
System 1	8708	18983	Yes	8	2373	3 systems, 4 treatment plants
System 2	3791	8643	Yes	6	1441	19 systems, 2 treatment plants, 32 wells
System 3	3790	8537	Yes	4	2134	1 system, 2 treatment plants
Average					**1983**	
CRD [1]	600	1290	Yes	4.5	**n/a [2]**	2 water systems, 3 treatment plants (including 2 wastewater), 1 well

[1] CRD operators on Salt Spring Island, and operators assisting from the Saanich Peninsula, operate 3 water systems and 2 wastewater systems, for a total of 5 systems. The bulk of their work is on the wastewater treament plants.

[2] There are 3 fulltime CRD operators on Salt Spring Island however, with additonal Pensinsula support, the equivalent number of operators is 4.5. Detauil is not avalable to calcate the operator capacity allocated to the water systems.

A review of actual 2019 CRD expenses provided detail regarding the flow of money within CRD.

Overall Expenses – 2019

EXPENSES	BEDDIS	CEDAR LANE	CEDARS OF TUAM	FULFORD	HIGHLAND FERNWOOD	TOTALS
Labour IWS Settled			$ 17,359		$ 207,184	$224,543
Principal Payment	$ 48,291	$ 5,394		$ 39,250	$ 24,971	$117,905
Contracts-Operations	$ 46,394	$14,544		$ 44,769		$105,706
Interest Payment	$ 18,004	$ 4,460		$ 15,969	$ 16,250	$ 54,683
Contract for Services	$ 25,564	$ 4,548	$ 56	$ 18,243		$ 48,411
Transfers To Reserve Fund		$10,392	$ 5,702	$ 24,112		$ 40,205
Electricity	$ 9,330	$ 3,827	$ 637	$ 8,747	$ 17,237	$ 39,778
Allocation - Finance & Corporate	$ 8,330	$ 2,992	$ 1,670	$ 8,471	$ 15,659	$ 37,122
Transfer - Op Reserve Fund	$ 5,000	$ 2,500	$ 2,700	$ 7,140	$ 19,000	$ 36,340
Labour IWS Settled	$ 21,633	$ 1,265		$ 10,340		$ 33,238
Water Testing	$ 6,323	$ 2,457	$ 1,706	$ 3,667	$ 10,195	$ 24,348
Supplies - Chemicals	$ 4,932	$ 148	$ 159	$ 4,990	$ 12,446	$ 22,675
Waste Sludge Disposal	$ 6,149			$ 5,954	$ 10,018	$ 22,120
Labour Consumption	$ 6,482	$ 2,971	$ 2,158	$ 5,919	$ 4,073	$ 21,604
Supplies Clearing	$ 9,647	$ 197		$ 257	$ 10,581	$ 20,683
Contracts-Sludge Hauling	$ 4,155			$ 4,357	$ 6,378	$ 14,890
Supplies - Operating	$ 3,150	$ 1,575		$ 1,977	$ 3,284	$ 9,985
Labour IWS Ops					$ 9,844	$ 9,844
Exp Allocation Clearing	$ 2,494			$ 2,169	$ 3,746	$ 8,409
Landlines	$ 1,256			$ 992	$ 3,748	$ 5,996
Contract Service Clearing				$ 1,000	$ 4,725	$ 5,725
Insurance - Fire	$ 1,720	$ 260	$ 130	$ 1,470	$ 1,470	$ 5,050
Allocations	$ 1,500				$ 3,530	$ 5,030
Allocation -ES-Water Quality	$ 1,920				$ 1,950	$ 3,870
Courier & Express	$ 973	$ 272	$ 240	$ 759	$ 1,460	$ 3,705
Travel Clearing	$ 719	$ 42			$ 2,477	$ 3,238
Interest - Internal	$ 957	$ 61	$ 33	$ 324	$ 1,474	$ 2,849
Labour Settlement			$ 95		$ 2,734	$ 2,829
Postage & Freight	$ 505	$ 142	$ 63	$ 430	$ 1,521	$ 2,662
Allocation - Operations ERF		$ 130	$ 190	$ 200	$ 1,510	$ 2,030
Data Communications		$ 747				$ 747
Other	$ 1,823	$ 1,847	$ 734	$ 9,009	$ 5,329	$ 18,742
TOTAL	**$237,250**	**$60,771**	**$ 33,633**	**$220,516**	**$ 402,792**	**$954,962**

Overall Revenues

REVENUES	BEDDIS	CEDAR LANE	CEDARS OF TUAM	FULFORD	HIGHLAND FERNWOOD	TOTALS
User Charge	81,270-	37,350-	31,310-	119,835-	275,469-	-$545,235
Req Parcel Tax	72,240-	13,090-		74,790-	55,000-	-$215,120
Sale- Water	68,622-	9,475-	2,142-	17,053-	39,495-	-$136,787
Tranfers From Operating Reserve Fund	3,000-			8,000-	2,500-	-$13,500
Penalties / Servc charge	256-	194-	114-	220-	1,010-	-$1,794
Interest Income	129-	189-	68-	363-	62-	-$810
MFA Debt Reserve Fund Earn	218-	33-		254-	144-	-$649
Accrued Debt Charges		439-				-$439
Budget Deficit	-$11,514				-$29,112	-$40,626
TOTAL	**-$237,250**	**-$60,771**	**-$33,633**	**-$220,516**	**-$402,792**	**-$954,961**

Charge-Out Rates

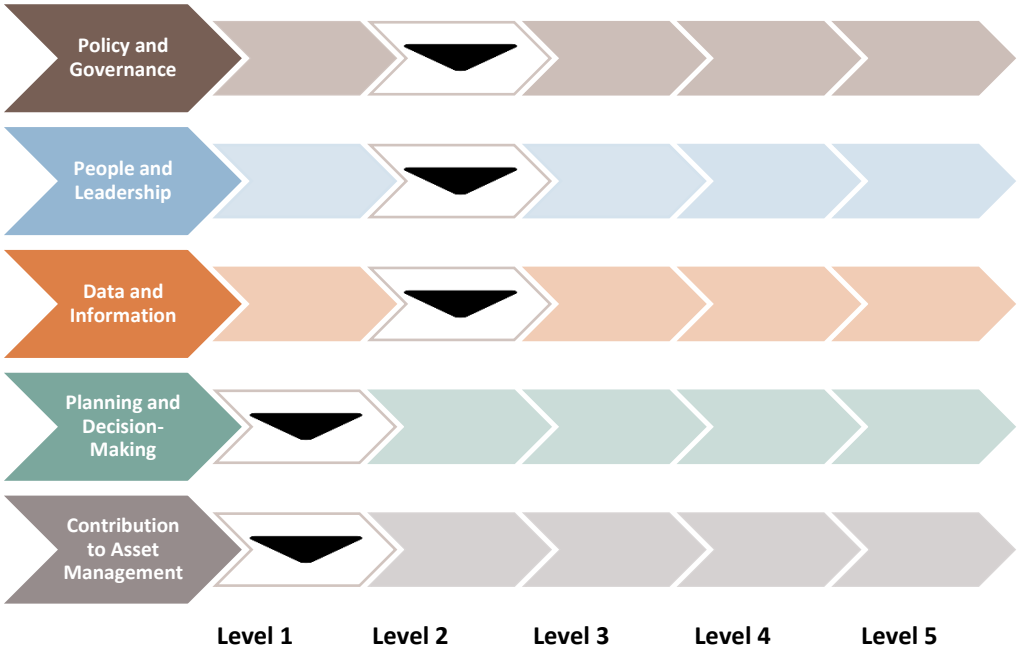
The CRD provides over 200 services to taxpayers in the capital region, many of which require expertise in areas such as engineering, operations, information technology. This expertise provides time and expertise to different CRD services. Funding models include an hourly charge model to recover staff and operating costs.

Section 379 of the *Local Government Act* provides that all costs of a service, including costs of administration, are part of the costs of the service. CRD allocation methods have been structured to ensure that each service bears a fair allocation of operating costs as is practicable and reasonable in consideration of the effort to allocate and charge the costs

3.3.4 CRD Asset Management

The CRD has made excellent efforts to model the assets of the systems managed. In 2019, detailed analysis occurred and the final reports were due to be finalized in Q1, 2020. Based on the Asset Management BC (AMBC) Road map, the CRD is at the intermediate level, as defined in the Asset Management Building Blocks.

Asset Management Capacity Assessment - FCM Readiness Scale for CRD



3.3.5 CRD Governance

CRD has five utility commissions that provide feedback and advice for CRD to operate their individual systems. Each Commission, made up of local residents and property owners, and the SSI Electoral Area Director, provide community input for the delivery of the water services. This service is managed and operated by the CRD Integrated Water Services Department with support from SSI Administration. Meetings generally occur on an as needed basis with annual budget and Annual General meetings which involve considerable travel cost for Victoria based Integrated Water Services staff to attend.

The CRD Commissions are very active and engaged. Some are extremely knowledgeable about water systems and all want to ensure that best value is provided by CRD for services. Through the interview process, most CRD water system Commissioners identified that they are not comfortable with their current relationship with CRD.

3.3.6 Overall Evaluation of CRD Water Operations

Strengths	Weaknesses
Legal services (Victoria)	Long term planning
Communications (Victoria)	System fire flows
Capital project planning & delivery	Human resources
Electrical / mechanical expertise (Victoria)	Information technology
Asset management	Connection to the community
Leadership (elected officials)	Leadership (staff)
	Skilled operators

Strengths	Weaknesses
	Lack of CRD policies and procedures on SSI
	Succession planning (on-Island)
	OH & S
	Employee engagement
	Travel costs
	Multiple Commissions

3.4 EVALUATION OF PRIVATE SYSTEMS

3.4.1 Private System Operations

The private systems on Salt Spring Island are either operated by one of the utility users or by a hired contractor specializing in water system operations and maintenance. This presents advantages when there are skilled, knowledgeable and certified residents willing to assist however, this is often unsustainable. NSSWD has challenges with providing services to private utilities and time is taken away from valuable core services. This is compounded by the lack of management, capital planning, and hiring of contractors for these systems. This is not sustainable.

3.4.2 Private System Management

Private systems are typically managed by ratepayers, either through a formal commission, strata, or a collection of interested parties. The knowledge and understanding of private water system management varies. Management activities are generally outsourced (NSSWD, consultants, etc.) or handled by the ratepayers.

3.4.3 Private System Finances

Financing of private systems is generally done with an understanding of operational costs and immediate improvement only. There is very little attention to long-term replacement costs.

3.4.4 Private System Asset Management

There is no evidence of full cycle asset management of the private systems on Salt Spring Island. Without this information, there is no ability for long-term financial planning.

3.4.5 Private System Governance

Governance of private systems varies. Some are regulated through the *Strata Property Act* and others are managed as a private utility. All must meet provincial drinking water regulations.

3.4.6 Overall Evaluation of Private Systems

Strengths	Weaknesses
Volunteer contributions	Asset Management
Low cost	Long term planning
Connection to the community	System fire flows
	Risk of total failure
	Difficulty in providing certified operators

3.5 STAKEHOLDER FEEDBACK

In consideration of the goal to provide options for better governance on Salt Spring Island, the following conclusions were made:

1. NSSWD ratepayers are generally pleased with the services provided and they trust the District
2. CRD water system ratepayers are generally unhappy with the services provided and they generally do not trust the CRD
3. There are many opportunities to reduce costs for both CRD and NSSWD, as existing
4. Amalgamating all water services is the most cost-effective way to ensure long term financial savings
5. NSSWD needs to access government grants to offset the costs of upcoming capital expenditures.
6. Any amalgamation should consider retention of existing qualified and capable staff
7. Any amalgamation should strive to streamline services and reduce the bureaucracy
8. Water decisions and control should remain with the residents of Salt Spring Island
9. Open and transparent communications are critical for all water issues
10. Considering the current island-wide water supply issues along with potential climate change impacts, water needs to be managed by the island as a whole, not by individual users / systems.
11. **EVERYONE agrees that a consolidated model is the right solution, with the right conditions**

3.5.1 STAKEHOLDER SURVEY RESULTS

A stakeholder survey was conducted during the COVID 19 pandemic and may not provide accurate representation of opinions and response levels. Isolation protocols limited paper-based survey transactions and the bulk of responses (98%) were on-line.

There were 177 responses with 154 completed in full. The responses came from the following residents;

- North Salt Spring Waterworks District (NSSWD) 42.9%
- Fulford 11.9%
- Beddis 15.3%
- Cedar Lane 4.0 %
- Cedars of Tuam 1.1%
- Erskine 0 .6%
- Harbour Vie w 0 .6%
- Highland/Fernwood 5.1%
- Scott Point 1.7%
- Private well 15.8%

There were many excellent comments provided by survey participants, demonstrating their passion for the issues, but also a high level of knowledge regarding water issues on Salt Spring Island.

For the purpose of determining opinions, responses were broken down into the following categories:

- NSSWD (76 responses)
- CRD (58 responses)
- Private Systems (4 responses)
- Private wells (33 responses)

Private systems had a total of four responses and statistically cannot be considered as valuable. The private well responses are irrelevant for this study and have not been included in the data, however, their comments are consistent with full system comments.

Key findings for the NSSWD responses include:

- 81% support overall service as good –excellent
- 87% rate water quality as good – excellent
- 92% are knowledgeable about future replacement investment needs
- 91% believe that the issue of no single water authority is important
- 57% rate the infrastructure as good – excellent
- 73% rate emergency response as effective, with 23% who didn't know
- 53% viewed the water rates as right / fair while 32% felt they were too high
- 76% viewed communications as good – excellent
- 41% believe that annual rates will go up at the rate of inflation, 26% increase by 5% / year. 11% increase by 10% / year, and 6% increase by 15% or more per year.
- 92% feel it is important to consolidate management of water services.
- 99% believe it is important to access government grants
- 94% believe it is important to have water services managed on Salt Spring Island.
- Survey responses indicated a strong majority supports the inclusion of all water functions in a consolidated model.

Overall, we can conclude that from this survey, NSSWD ratepayers have an interest in a combined water service that is eligible for government grants and is managed on Salt Spring Island.

Key findings for CRD Systems include:

- 66% support overall service as good –excellent
- 69% rate water quality as good – excellent
- 81% are knowledgeable about future replacement investment needs
- 91% believe that the issue of one single water authority is important
- 35% rate the infrastructure as good – excellent
- 83% rate emergency response as effective, with 12% who didn't know
- 33% viewed the water rates as right / fair while 50% felt they were too high
- 36% viewed communications as good – excellent

- 38% believe that annual rates will go up at the rate of inflation, 16% increase by 5% / year. 7% increase by 9% / year, and 6% increase by 15% or more per year.
- 85 feel it is important to consolidate management of water services.
- 98% believe it is important to access government grants
- 86% believe it is important to have water services managed on Salt Spring Island.
- Survey responses indicated a strong majority supports the inclusion of all water functions in a consolidated model.

Overall, we can conclude that from this survey, there is keen interest in providing a combined water service that is eligible for government grants and is managed on Salt Spring Island. These opinions are consistent with both NSSWD system ratepayers and CRD ratepayers.

3.6 GROWTH PROJECTIONS

Land use decisions on Salt Spring Islands are made by the Islands Trust. Islands Trust refers to the CRD, NSSWD, or the Province to answer the question "is there enough potable water?" Any future growth is managed by the Islands Trust and it is impossible to predict what future changes to the Official Community Plan (OCP) or to Zoning Regulations will further regulate growth. These are political decisions.

It is important to recognize that the current OCP and zoning on Salt Spring Island is not at full build out. If all empty parcels were built on, if lots zoned for accessory dwelling were built out, and if commercial/ industrial and institutional sites were built to capacity, there would be a significant increase in the demand for water. In simple terms, without any increase to the current density planned for the island, demands on water resources will increase. Although significant study is required to determine exact growth projections based on the current situation, additional build out loading could be as high as 25% above current demand levels.

3.7 SHARED SERVICE OPTIMIZATION GOALS

Through the interview process, reviewing background financial information, and reviewing past reports a number of common themes arose where there was agreement between key stakeholders. These were further reviewed with senior staff and the following shared service optimization goals provide the basis for considering future governance possibilities:

- Consider implications of decisions in both the short and long term
- Provide language that is simple to understand now and in the future by all elected officials, staff, and, most importantly, the community
- Consider the investment to date by existing members
- Establish using binding legal bylaw / policy tools
- Provide representative control to Salt Spring Island residents, not to the CRD Board
- Ensure overall cost savings to Salt Spring Island
- Encourage on island capacity, wherever possible
- Provide open and transparent communications
- Provide opportunities to be collaborative
- Provide scalability to allow for additional functions to be included

4. DISCUSSION & OPTIONS

4.1 Background

There is simply no easy formula, procedure, or direction that will satisfy all stakeholders. Stakeholder interests vary from those that wish to maintain the current system as it exists today to those who desire a collaborative approach to water management on the island. It must be noted that the options considered in this report are NOT equivalent or comparable to the incorporation referendum.

A key consideration for allowing any further development on Salt Spring Island is the overall long-term availability and management of water. Salt Spring Island residents believe that water will become increasingly threatened in the future and will require better overall management of the precious resource.

The development of any new model should consider the impact on the existing systems, the impact on the future operation of the systems, governance, and overall water management on Salt Spring Island. Those within current defined service areas are the original "investors" and have no obligation to amalgamate. In simple terms, the existing owners should not subsidize anyone who joins a system or coordinated function in any way, considering both at inception and future costs.

There will be significant public interest in any change to the current structure. Meeting today's service, infrastructure, and environmental goals as well as the needs of the future are all important to the residents of Salt Spring Island. Incorporation of Salt Spring Island was not viewed favourably by the majority however, the survey shows majority interest in providing a better solution to the current governance structure.

It should be noted that all stakeholders are not the same. They have differing interests and the impacts of conversion do not affect all stakeholders equally. NSSWD ratepayers are clearly interested in the ability to access government grants which has a significant impact on future costs. Existing CRD ratepayers have much to gain by joining with NSSWD as they will likely see reductions in operating costs.

4.2 Key Considerations

For the development of any new governance model, it is imperative to include the following criteria:

- Must consider the implications of decisions in both the short and long term
- Must be simple to understand now and in the future by all elected officials, staff, and, most importantly, the community
- Must consider the investment by existing members
- Must be established through bylaw / policy and agreements must be legally binding.

And any change of governance for the NSSWD will need NSSWD elector approval, along with CRD Board approval.

Based on all the background materials, interviews, research, and best practices, it is clear that any new model must have the following:

1. **Present and future control must be with Salt Spring Island residents**
2. **Must present overall cost savings to Salt Spring Island**
3. **Must provide on-Island management of water**
4. **Must be open and transparent**
5. **Must be collaborative**

Protection of the Island's water resources is one of the most significant concerns to local residents. Watershed protection is a major issue identified by the community, particularly in relation to St. Mary Lake. Throughout the Island, source protection is a concern, as it is on all of the Gulf Islands. Recognizing the importance of water issues, in June 2013, Islands Trust Council voted to delegate some of its coordinating and advocacy powers to the Salt Spring Island Local Trust Committee so that the Local Trust Committee can act as a coordinating body for the Salt Spring Island Watershed Protection Authority. This vote marked the first time that the Islands Trust Council has delegated additional powers to a local trust committee. In a working group format, the Salt

Spring Island Watershed Protection Alliance brings together a number of bodies, including the Local Trust Committee, CRD, North Salt Spring Water District, the Ministry of Forests, Lands and Natural Resource Operations and Rural Development, and Highland and Fernwood Water Commissions. The Authority's mandate is to initially address concerns over St. Mary Lake, and to then eventually address long term watershed management across Salt Spring Island.

Growth on Salt Spring Island

Land use decisions on Salt Spring Islands are made by the Islands Trust. It is important to understand that based on the current OCP for Salt Spring Island, full build out (maximizing current zoning and construct on vacant parcels) will require significant additional water supply. Although significant further study would be required to determine a more exact range for additional pressure on the water systems, the growth could amount to an increase of 20% to 25% above existing demand scenarios.

There is no exact science to determine what water quantities and quality we might have in the future and it is reasonable to be cautious about future water supply. We cannot predict the exact effects of climate change and there is no agreed-upon model that can assist with long-range water planning. Based on a review of all the prior scientific studies of water on the island, there is no conclusive evidence that there is or isn't water for future growth. In fact, one could argue there is much more water available through desalination (extremely costly), water storage expansion (costly and environmental issues), or utilizing potable water sources on Vancouver Island (costly and politically challenging). Innova's opinion is there should be significant concerns about the availability of water in the future and, if any development were to occur, it should be based on community need (such as institutional, affordable housing, community care, etc.), not developer profit.

Surface water and groundwater are not owned by island residents. Water is provincially "owned" and needs to be managed on an island-wide basis. Overall water supply, water quality, water use, and potential growth are interlinked and must be considered collectively by the island, in full. This is important to emphasize as there is and will be demand for growth on the island.

The Need for On-Island Operations

It is critical that any governance model strive to utilize Salt Spring Island resources whenever possible. Staff, contractors, and other resources should be based on Salt Spring Island, as long as rates are equitable. This is positive for the island economy but also provides advantages for operational efficiencies, emergency response, and reduced travel costs.

CRD currently has difficulties managing the needs with only three on island operators. NSSWD provides service with on-Island staff. It is recognized that attracting operators is challenging however, this is true throughout the province. The current challenges with housing on Salt Spring Island contributes to the attraction and retention of operators. There may be some consideration for the provision of a housing subsidy to attract operators in the future if housing scarcity and affordability continues.

Private Sector Operations?

There are a number of private companies that provide water services for private and public systems. The costs to provide services are generally not less than government costs as they all are required to profit from any service contract. A review of Vancouver Island water contractors determined that there is little interest in operating small systems on Salt Spring Island unless they could be based on Vancouver Island. This limits the opportunity for all systems to consider private sector operations and maintenance of their systems.

4.3 Financial Considerations

Cost Recovery for Services

The *Local Government Act* (Section 379) specifies that **a**ll costs incurred by a regional district in relation to a service, including costs of administration attributable to the service, are part of the costs of that service. This is important to understand as it is based on the principle that any service user should pay the full costs of the service and not be subsidized by others. We also need to consider the cost of new development and cost recovery tools, and in general, more sparsely populated areas disproportionately affect overall infrastructure costs, which may lead to some subsidization, typical of most BC water rate finances.

Operation & Maintenance Costs

Using the principles of "economies of scale," there are significant overall savings that can be realized by utilizing one independent service for all operations and maintenance. Any consolidated model can blend general operational costs across all systems as geographically, Salt Spring Island does not have long distances between systems. Blending operational costs will benefit some more than others therefore it may be more equitable to separate out systems by service area (currently done by CRD), allocating the true costs of service delivery. Blending operational costs would have to be contingent on systems investing in replacement of infrastructure when operational costs are excessive.

Capital Costs for New and/or Replacement Infrastructure - by individual service area

The lack of coordination of capital projects between organizations and the lack of grant availability to NSSWD has been and remains a massive barrier to ensuring Salt Spring Island ratepayers are provided with the minimum cost for overall water production and distribution on the island.

A single but poignant example is the duplication of water treatment facilities by NSSWD and the Highland / Fernwood systems. Both extract identical water from St. Mary Lake and both provide identical treatment processes. If the parties had worked collaboratively and built a single connected treatment plant, each and every property within the combined service area would have saved over $800 per household. In addition, if at the time both parties were eligible for provincial and federal grants, every property would have saved approximately $1,800 per household. **These overall savings amount to $2,500 per household or $7 million overall**. We can only imagine the opportunities for utilizing this $7 million in other ways to benefit Salt Spring Island.

Any water governance structure needs to access to the following funds for all water systems on the island including:

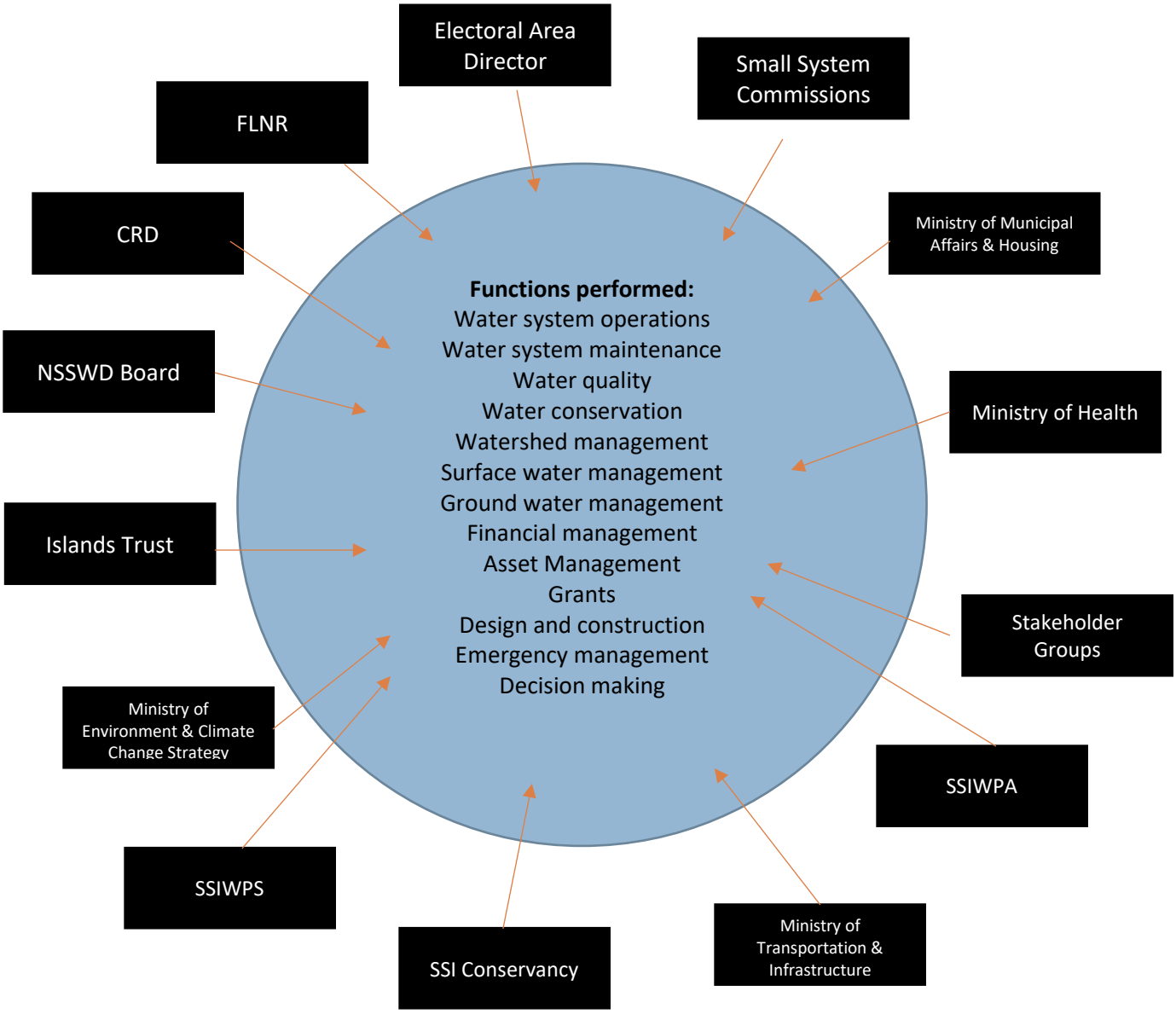
- Access to loans at low interest rates through the MFA.
- Two Gas Tax programs: Community Works Fund (Direct Federal to Local Government transfer) and Strategic Priorities Fund (Application Based)
- Investing in Canada Plan (ICIP), Green Infrastructure, "Environmental Quality Program"
- Community Works Fund Revenues
- Senior government conditional grant funding for infrastructure planning and capital projects (infrastructure planning grants, new infrastructure programs)
- Building Canada Fund, which typically provides senior government funding for **two-thirds of capital costs**.
- Gas Tax Agreement Strategic Priorities Fund, which provides funding to implement infrastructure projects.

Capital costs for replacement and new infrastructure should be allocated to each individual system as there are significant variances in the amount invested, the current state of the systems, and reserves.

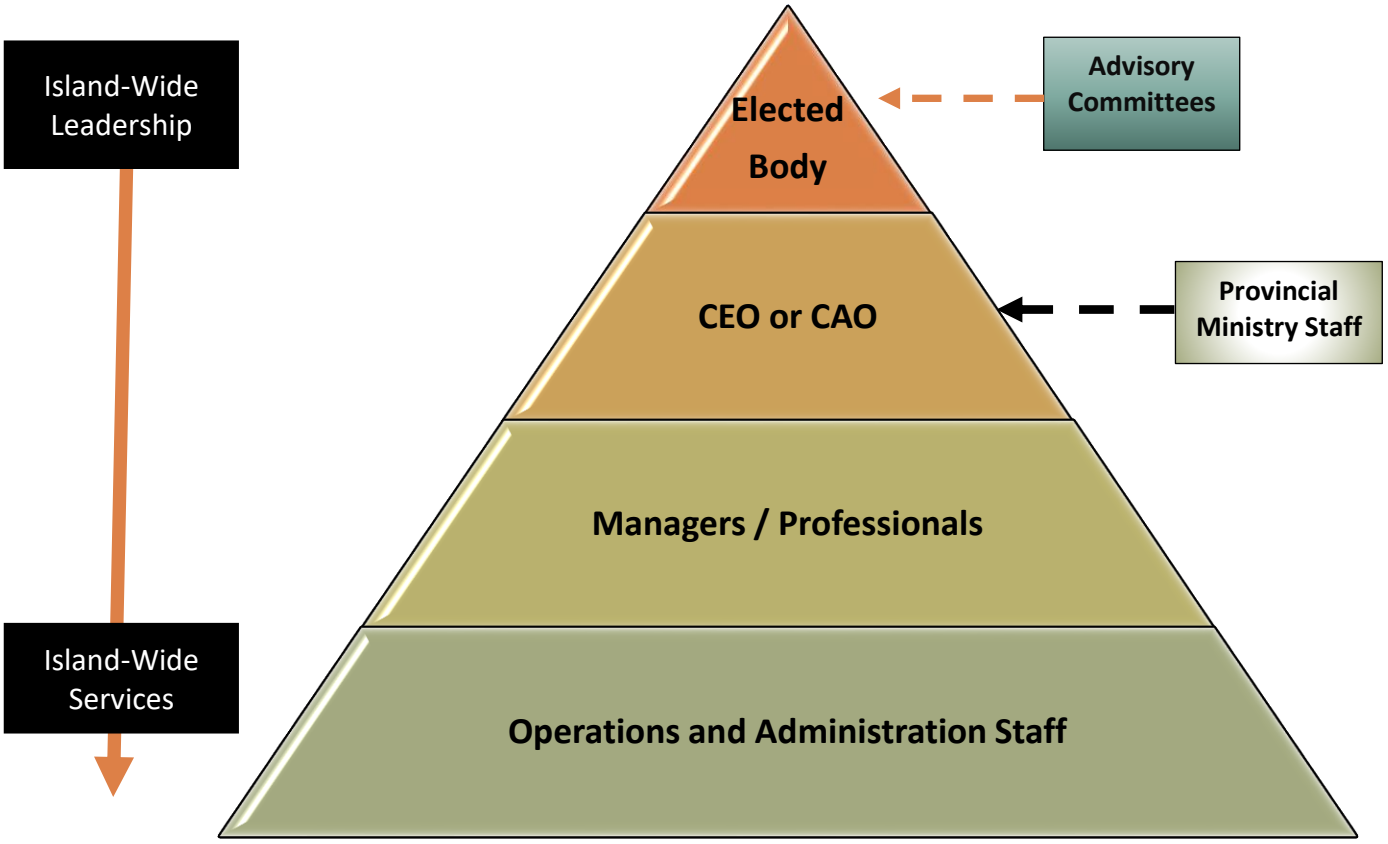
4.4 What "Fits" together

Utilizing best practices and following the local government municipal model of utility management, the disparity in coordination and effective management of water on Salt Spring Island is evident when comparing current state versus "municipal best practice." The following hypothetical analysis shows the challenges today versus what might be the optimum model:

WHO INFLUENCES SALT SPRING ISLAND WATER TODAY?



IF YOU WERE STARTING FROM SCRATCH, WHAT GOVERANCE WOULD YOU CREATE FOR SALT SPRING ISLAND WATER?



Elected Body: approves strategy, policy and finances / listens and responds to advisory committees and constituents

CEO or CAO: reports to the elected body and ensures that the organization is financially stable, operates efficiently, meets all legislative requirements, and supports the strategic plan, etc.

Managers / Professionals: ensure best practices, scientific analysis, financial reporting, benchmarking, asset management, communicating to stakeholders, HR, IT, capital planning, design & construction, etc.

Operations and Admin. Staff: operate and maintain systems, customer service, day-to-day operations, procurement, emergency response, etc.

Advisory Committees: provide on-Island expertise and advice for the Commission on specific issues that require support

Provincial Ministry Staff: Liaise directly with the CEO / CAO

5. GOVERNANCE OPTIONS

The scope of this study provided direction as follows:

> Recommendation of at least three different options for NSSWD and CRD to move forward with a positive governance change.
>
> Two options to be included:
>
> a. Option A - Outline and make recommendations to improve integration and decision-making between NSSWD and the CRD if NSSWD does not convert based on the shared water service optimization goals established by stakeholders.
>
> b. Option B - Outline and make recommendations for a consolidated CRD Salt Spring Water Commission with operation and administration of water service.

Throughout the interview process there were many comments and questions relating to alternative models that could support an on-Island utility with all the benefits of local government but total control by the island itself. Unfortunately, legislation in British Columbia does not allow an independent water system to act on its' own behalf, except for Improvement Districts such as NSSWD. Current Legislation is designed to provide equitable, effective, and efficient local services to communities while ensuring that there is fair representation of resident interests. In dialogue with Provincial officials, it is clear that the Province has no intention of rewriting legislation to support alternative governance models for water systems. In fact, it is clear that the Province wishes to see better coordination of water services through the legislated and recognized governmental authority of regional districts in local government

A number of options were considered; however, it was determined that there were few viable options that would realistically improve island water services AND be supported by the majority. The following four options were considered as the most appropriate for review, discussion, and possible implementation:

BASELINE - Continue with the existing governance of water systems. All Boards and Commissions to be retained.

1. Enhance the existing governance through improvements to NSSWD and CRD operations, maintenance and planning. All Boards and Commissions to be retained.
2. CRD to operate all systems within their current structural alignment. All Boards and Commissions to be eliminated (this would involve a governance change for NSSWD as it would be required to convert to a CRD service area).
3. Create a CRD Salt Spring Island department that reports to a single elected Salt Spring Island Commission. This would involve a governance change for NSSWD as it would be required to convert to a CRD service area.
4. Establish a contribution service, where water delivery on Salt Spring is fully privatized (to a society or other body reporting to ratepayers) and CRD uses its taxation authority to collect to fund the service based on its operational and capital budgets.

5.1 Baseline – Existing

A. Description

NSSWD provides the bulk of surface water supply, CRD manages small systems, and some systems operate independently. NSSWD operates and maintains some CRD and private systems on contract.

B. Governance

12 independent commissions / boards provide various levels of oversight of the independent systems on Salt Spring Island. Various on-Island official and unofficial authorities who influence decisions related to water (Islands Trust, CRD, NSSWD, etc.)

C. Pros / Cons

As discussed previously in the report, the current model does not support fulsome collaboration between the various systems on Salt Spring Island. Most importantly, the current model is inefficient and does not effectively control costs for the operation, maintenance and capital replacement of the systems. Continuing with this model will inevitably cost all Salt Spring residents considerably more than they should and, most importantly, will further degrade the already fractured relationships around water issues.

The pros and cons are different depending on the stakeholder. For example, for NSSWD, a pro of the existing model is independent governance and a con is the lack of access to grants. CRD has exceptional internal support services available off island (pro) but struggles to provide on-Island resources and contracts much of the work to NSSWD (con).

D. Costing

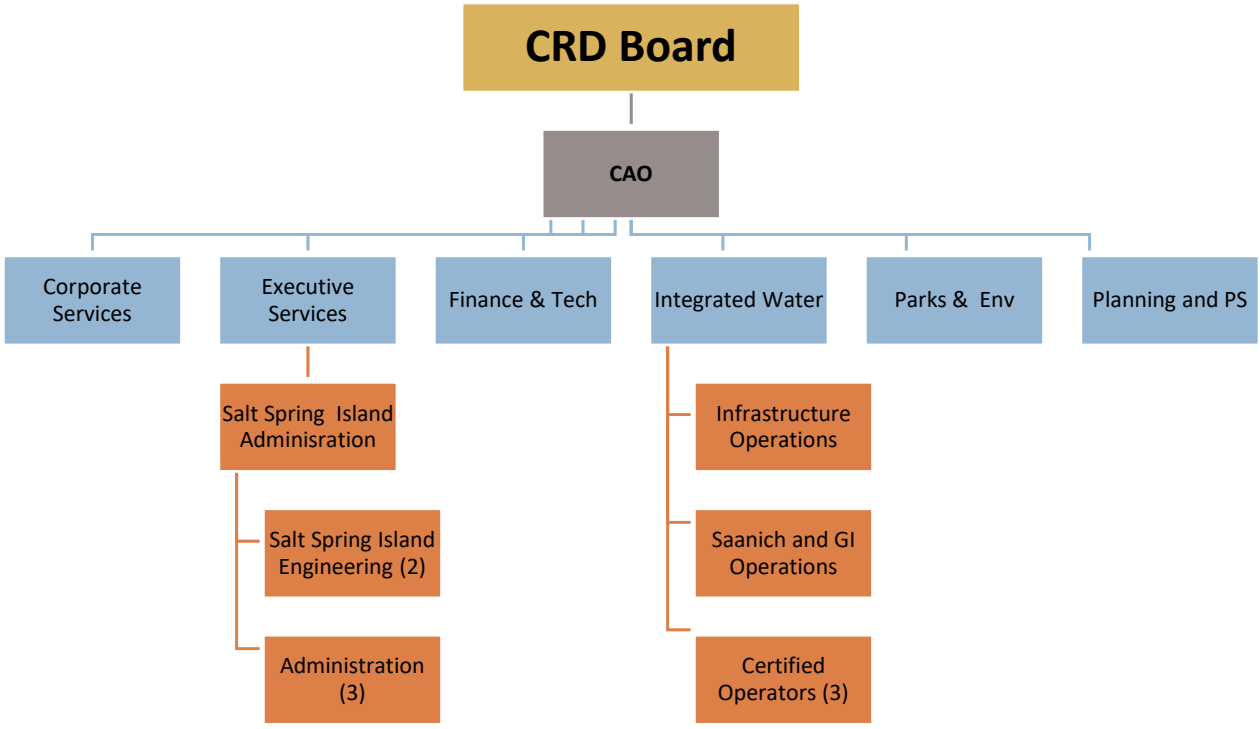
Inefficiencies with the existing governance model will continue to challenge Salt Spring Island residents financially, operationally and collaboratively. At a high level, it is estimated that the following premiums are currently charged because of the inefficiencies and governance restrictions:

	$ Premium	Comments
CRD Operations	10% - 30%	Inefficient due to off island resourcing, inadequate personnel, and poor island-water-related leadership
CRD Capital Construction	5% - 15%	CRD expertise is an advantage. Inefficient due to off island resourcing, small contracts
CRD Planning	5% - 10%	Victoria and SSI Administration staff are competent and capable of long-range planning
CRD Financing	0	Provincial and Federal grants and low-cost financing available through regional district
CRD Emergency Response	20% - 40%	Severely limited on island staff resources and skills
NSSWD Operations	3% - 6%	Skilled operators – some improvements can be made

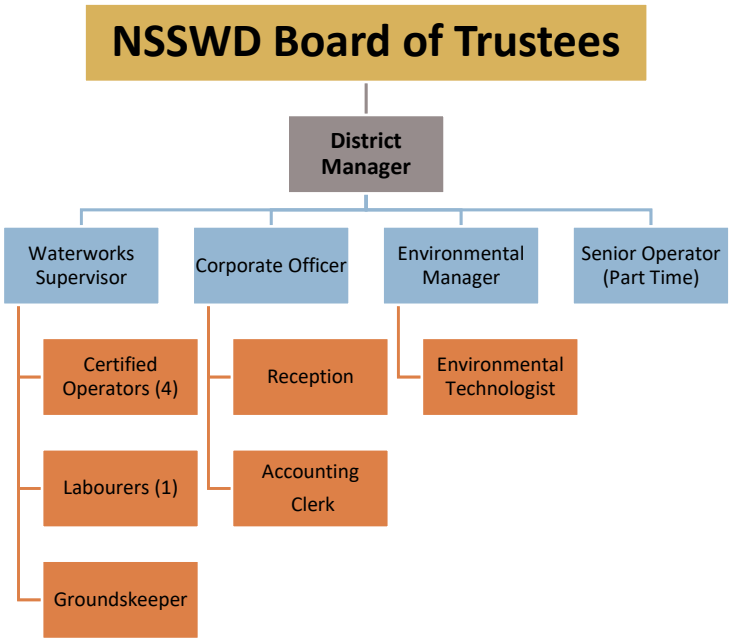
NSSWD Capital Construction	5% - 15%	On island sourcing of equipment and materials advantageous. Understanding of contract management limited
NSSWD Planning	10% to 30%	NSSWD has limited access to skilled planning staff and must utilize outside consultants
NSSWD Emergency Response	0	Effective on-Island response procedures
NSSWD Financing	50% - 70%	Provincial and Federal grants not available and access to financing limited
Private Systems	unknown	Limited access to funding. High risk in providing potable water. High risk of system failure.

**** $ premium represents the additional costs to operate overall as compared to traditional municipally operated systems.*

E. Existing Structure



NSSWD Board


NSSWD Board of Trustees
District Manager
Waterworks Supervisor
Corporate Officer
Environmental Manager
Senior Operator (Part Time)
Certified Operators (4)
Labourers (1)
Groundskeeper
Reception
Accounting Clerk
Environmental Technologist

5.2 Option 1 – Enhanced Existing

A. Description

The existing governance of water on Salt Spring Island has some challenges however; there are many improvements that can be made to the planning and operations of both the CRD and NSSWD without changing the governance structure. Key recommended changes:

1. Utilize NSSWD for **all** on-Island water operations and maintenance (fee for service with full cost recovery)
2. Utilize CRD SSI Administration for **all** capital construction, in full partnership with NSSWD. Projects bundled to ensure best value.
3. Decrease overall costs through operational efficiencies for both CRD and NSSWD
4. Significantly increase collaboration between CRD and NSSWD
5. Attention to asset management, long range capital planning, and steady state financial modeling
6. Reduce risk through adoption of contemporary human resources, safety, and financial policies and procedures

The North Salt Spring Waterworks District (NSSWD) continues to report to an elected NSSWD Board with improvements to planning, operations maintenance and construction:

1. Policies and procedures upgraded to contemporary standards
2. Management practices updated to contemporary standards
3. Review and adjust management pay structure based on industry comparators
4. Provide fully costed fee for service for small systems (including emergency response). Evaluate the true costs for providing fee for service.
5. Utilize on-Island contract services (equipment, emergency support, etc.)
6. Streamline financial services
7. Implement a Performance Development program
8. Operationalize the strategic plan
9. Develop standard operating procedures for all functions
10. Ensure contemporary WorkSafeBC standards are in place and followed by all staff
11. Develop industry benchmarking for operations activities including:
    - Hydrant maintenance
    - Valve maintenance
    - Pump maintenance
    - Leak repair
    - Absenteeism
    - Productive daily hours
    - Etc.
12. Develop a fulsome asset management plan including a 20-year capital replacement plan. Develop a long-term financial plan and set steady state user rates.

13. Reconfiguration of Corporate Officer duties to increase attention to human resources, occupational health and safety, analytics, procurement, and performance metrics.
14. Increased transparency and communications for ratepayers
15. Oversight by a qualified performance specialist to develop best practices around operations and maintenance including:
    - Schedule and streamline hydrant, valve, flushing, pump, PRV and other related maintenance functions.
    - Decrease inspection schedule and increased reliance on SCADA

The Capital Regional District (CRD) continues to provide management services to small water systems (and wastewater treatment plants) with improvements to planning, operations, maintenance and construction:

- All water functions report directly to Salt Spring Island Administration including delegated authority to operate independently but within the policies and procedures of CRD:
    - Capital construction managed and delivered on-Island (in partnership with NSSWD)
    - Utilize on-Island contract services (equipment, emergency support, etc.) whenever possible
    - Limit Vancouver Island to Salt Spring Island travel
    - Support services provided by CRD Integrated Water Services on a fee for service basis
- Oversight by a qualified performance specialist
- Develop a fulsome asset management plan including a 20-year capital replacement plan.
- Develop a long-term financial plan and set steady state user rates.
- Ensure contemporary WorkSafeBC standards and SOP's are in place and followed by all staff
- Develop and execute a performance management program for on-Island staff
- Contract operations and maintenance to NSSWD, or others.
- Capital construction for all Salt Spring Island water projects led by CRD in partnership with NSSWD. Funding for capital project management through embedded project costs.
- Increased transparency and communications for ratepayers

Private Water Systems can request NSSWD or others to provide services. There are, however, risks associated with providing operating and maintenance to private systems that do not comply with minimum standards, drinking water quality guidelines, and investing in repairing aging infrastructure. For CRD or NSSWD to consider operating these systems, there must be agreement on the standard of care to ensure there is no liability borne by the service provider.

B. Governance

12 independent commissions / boards would continue to provide various levels of oversight of the independent systems on Salt Spring Island. Various on-Island official and unofficial authorities would continue to influence decisions related to water (Islands Trust, CRD, NSSWD, Salt Spring Island Preservation Society, etc.).

Coordination of decisions would continue to be problematic however, if all parties are willing, consideration should be given to providing a CRD led coordinating body that could meet on a regular basis, or based on

emerging issues. The key positive in creating such a body is in open and transparent communication with all Salt Spring Island water users. Potential attendees would include SSI Trustees, SSI Electoral Area Director, CRD staff, Vancouver Island Health Authority, Ministry of Environment, Ministry of Health, Ministry of FLNRORD, NSSWD Chair, NSSWD staff, and a single representative from Beddis, Cedar, Cedars of Tuam, Fulford, and Highland/ Fernwood. Consideration should be given to continuing servicing of other improvement districts (Scott Point, Mt. Belcher, Harbour View, and Erskine water systems) due to the risks with operating sub-standards infrastructure.

C. Pros / Cons

1. Increased operational efficiencies will result in significant savings
2. Federal / Provincial grants not available to NSSWD or Private Water Systems
3. Difficult to coordinate island-wide water issues.
4. On-Island capital construction coordination will reduce overall costs. Funding for capital construction project management and engineering costs through embedded capital overhead. This partnership between CRD and NSSWD has some risk as CRD has not proven to be capable of providing effective project management on some occasions in the past.
5. Financial and operational risks reduced for all

D. Costing

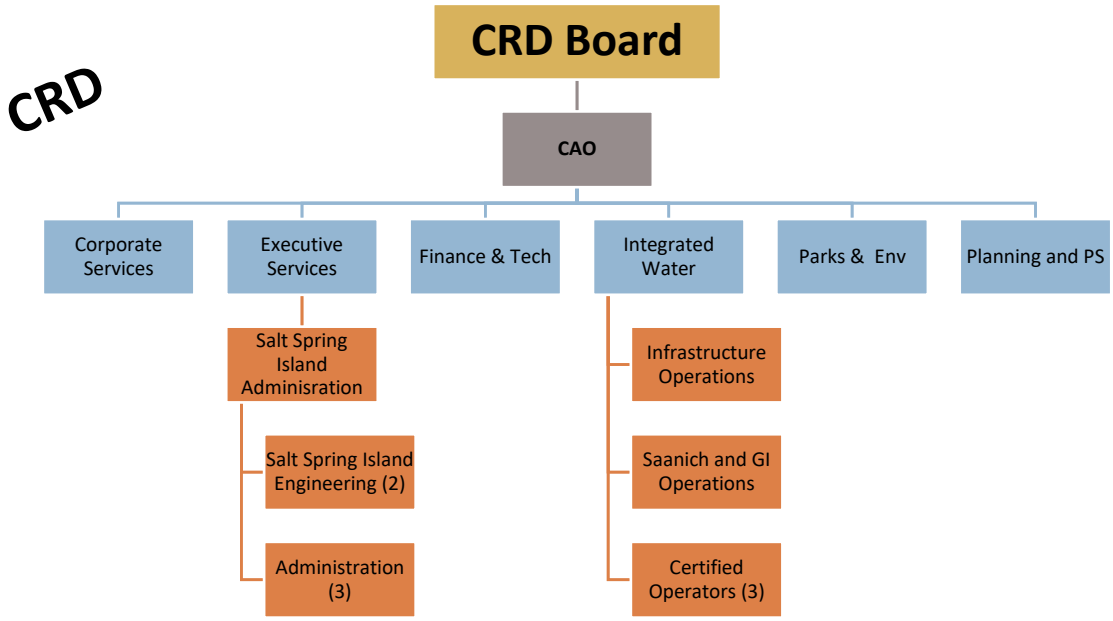
Improvement to both CRD and NSSWD will reduce overall costs. Collaboration between CRD and NSSWD is critical in ensuring that capital and operating costs are optimized.

	$ Premium	Comments
CRD Operations	5% - 15%	More efficient utilizing NSSWD and on-Island resources
CRD Capital Construction	0	NSSWD coordinating agency for all island capital construction will ensure lowest costs
CRD Planning	15% - 25%	Victoria and SSI Administration staff are competent and capable of long-range planning
CRD Financing	0	Provincial and Federal grants and low-cost financing available through regional district
CRD Emergency Response	0	Contract with NSSWD
NSSWD Operations	0	Operational improvements will optimize operational efficiencies
NSSWD Capital Construction	0	In partnership with CRD, NSSWD leads capital construction on Salt Spring Island
NSSWD Planning	5% - 15%	NSSWD improves staffing for long range planning
NSSWD Emergency Response	0	Effective on-Island response procedures

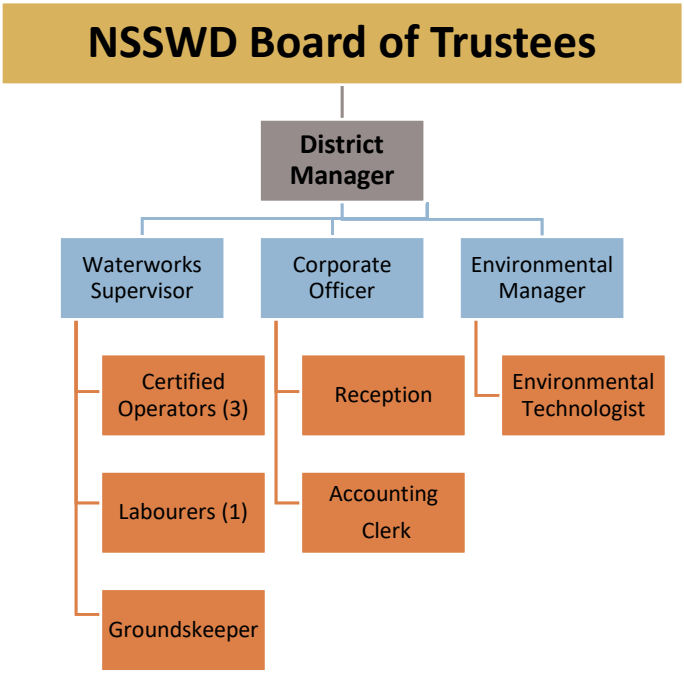
NSSWD Financing	70%	Provincial and Federal grants not available and access to financing limited
Private Systems	unknown	Limited access to funding. High risk in providing potable water. High risk of system failure.

**** $ premium represents the additional costs to operate overall as compared to traditional municipally operated systems.*

E. Proposed Structure



NSSWD


NSSWD Board of Trustees
District Manager
Waterworks Supervisor
Corporate Officer
Environmental Manager
Certified Operators (3)
Labourers (1)
Groundskeeper
Reception
Accounting Clerk
Environmental Technologist

5.3 Option 2 – CRD Operates Water Systems

A. Description

This option recognized that the CRD has the capability of managing all water on Salt Spring Island. CRD has many employees who specialize in water and can contribute, in theory, to the most economical operation. To accomplish this effectively, CRD would have to:

1. Receive the authority to convert NSSWD to a CRD function (majority vote of NSSWD ratepayers and majority vote of CRD Board)
2. NSSWD ratepayers would form a commission to provide oversight of the new local service area
3. Financing to be set up blending general operations costs across all Salt Spring Island service areas but separating system maintenance costs and capital improvements and borrowing costs by service area (similar to the current local service area distribution of costs)
4. Restructure CRD Management structure throughout and streamline service lines
5. All NSSWD assets and liabilities would be absorbed into a CRD service area (similar to existing CRD service areas)
6. Hire NSSWD staff into positions where capacity is required.
7. Develop leadership skills of existing staff
8. Increase on-Island presence
9. Professionally manage the non-performance of employees
10. Increase communications and outreach
11. Manage safety to WorkSafeBC standards
12. Transfer existing NSSWD employees to CRD, wherever possible
13. Utilize the support services of CRD in Victoria (planning, engineering, human resources, IT, water quality, etc.)
14. Employees would join CRD union. NSSWD employees becoming CRD CUPE employees and will result in some minor increased costs however, this is offset by efficiencies with other CRD functions.

B. Governance

CRD would operate the water systems on Salt Spring Island in full, utilizing their existing structure and overall governance of CRD functions. The Salt Spring Island Electoral Area Director would represent all water system ratepayers as part of the broader CRD Board. Service Area Commissions (including the prior NSSWD service area) would continue. NSSWD would be identified and financed as an independent service area (similar to other existing CRD service areas).

C. Pros / Cons

1. CRD Community concerns regarding CRD's capacity to manage on-Island water systems on a large scale may be an issue. It would take time to change this perception based on past history. To hand-over all water systems to CRD presents uncertainty and may lead to unfavourable community opinion and support.
2. NSSWD board loses self-governance and decision-making authority is transferred to CRD IWS staff in Victoria. NSSWD ratepayers have reduced representation by moving from a five-person elected board to one elected CRD SSI Electoral Area Director.

3. Some NSSWD employees could lose their jobs.
4. Increased operational efficiencies could result in overall savings of $200,000 to $400,000 / year however, this is unlikely considering the current state of CRD.
5. Federal / Provincial grants would become available to NSSWD and Private Water Systems.
6. Island-wide water issues would be much better coordinated
7. On-Island capital construction coordination will reduce overall costs. Funding for capital construction project management and engineering costs through embedded capital overhead.

D. Costing

There are financial advantages to joining CRD directly:

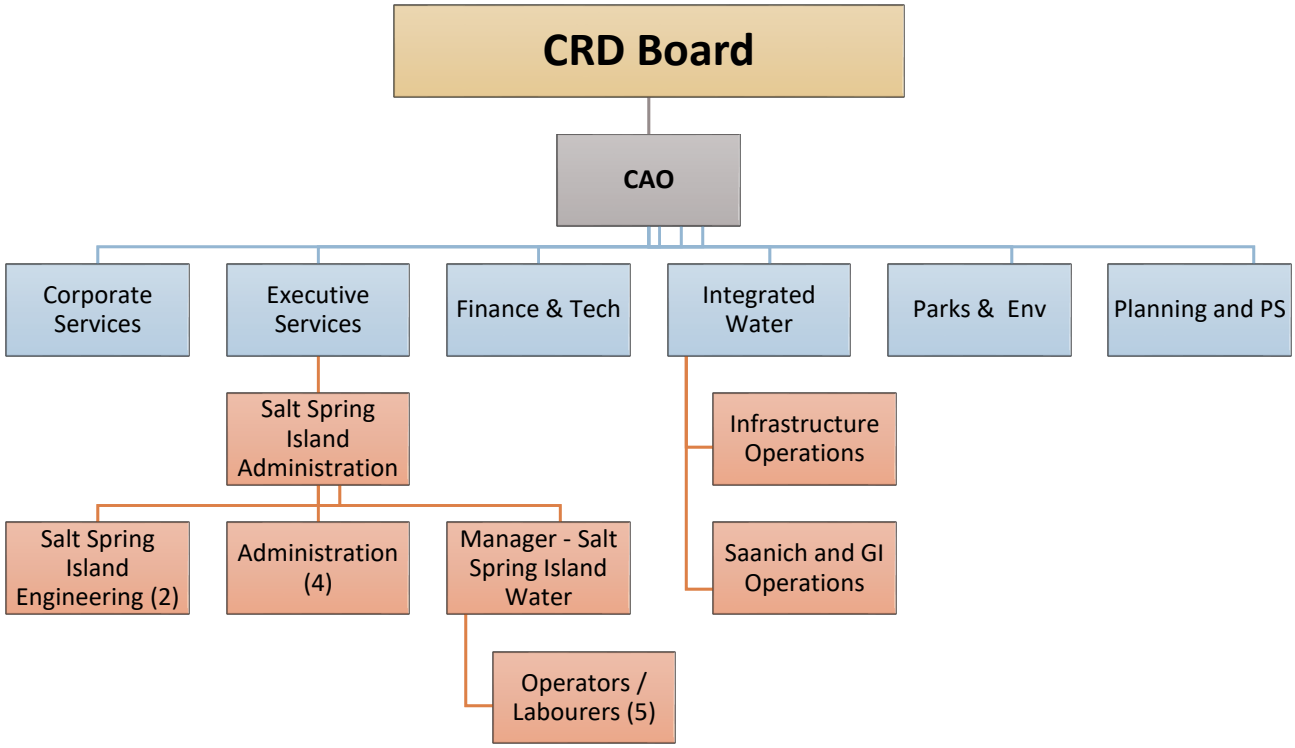
1. All water systems would have access to Provincial and Federal grants. This will potentially decrease the ratepayer cost for capital construction significantly and is estimated to provide value of between $5 million and $20M over the next 10 years.
2. CRD is currently insured privately and costs would increase slightly with the addition of the NSSWD system and other small systems. The nominal increase in insurance costs to the CRD would then be allocated to the users based on overall cost to maintain a self-insurance fund and obtain commercial insurance. The amount paid be each service area is based on the amount of the asset value. For a small water system, the amount would be negligible. This represents a saving of approximately $70,000 / year based on NSSWD's current insurance coverage.
3. Utilizing on-Island operators will decrease costs significantly (if they choose to join CRD)

The following cost implications consider the current state of CRD with the absorption of NSSWD:

	$ Premium	Comments
CRD Operations	5% - 15%	Absorbing NSSWD on-Island staff will greatly assist operations
CRD Capital Construction	0	CRD on-Island coordination of all capital construction will ensure lowest costs
CRD Planning	15% - 25%	Victoria and SSI Admin. staff are competent and capable of long-range planning, but costly
CRD Financing	0	Provincial and Federal grants and low-cost financing available through regional district
CRD Emergency Response	5% - 10%	Absorbing NSSWD on-Island staff will greatly assist responses
Private Systems	unknown	Limited access to funding. High risk in providing potable water. High risk of system failure.

*** $ premium represents the additional costs to operate overall as compared to traditional municipally operated systems

Proposed Structure



5.4 Option 3 – On-Island CRD Department Operates Water Systems

A. Description

An independent CRD department using on-Island resources and governed by an elected Salt Spring Island Waterworks Commission has the potential to resolve a number of issues inherent with the current model. This option recognizes the strengths of both CRD and NSSWD. CRD has considerable depth with support services in Victoria such as financial services, human resources, occupational health & safety, water quality, planning, engineering, etc. CRD also has contemporary policies and procedures to ensure that risks are mitigated. NSSWD operates their system relatively efficiently and effectively, utilizing a model of on-Island governance and operations.

- **The Salt Spring Island Waterworks Utility (SSIWC)** (an independent department of CRD):
    1. Reports to a new Salt Spring Island Water Commission, representing Salt Spring Island water
    2. The staff leadership position reports directly to the Commission and collaborates regularly with other CRD Management.
    3. All employees report to work on Salt Spring Island
    4. Employees would join CRD union
    5. CRD policies would apply
    6. Existing NSSWD staff retained whenever feasible
    7. Oversight by qualified performance specialist
    8. Binding through legal agreement
    9. Utilize on-Island contract services (equipment, emergency support, etc.)
    10. Utilize CRD expertise on a fee for service basis (human resources, OH&S, finance, water sampling, etc.)
    11. Federal / Provincial grants received for all systems (50 – 70% of project costs, subject to approval)
    12. Smaller systems would have the option to join
    13. The Salt Spring Island Watershed Protection Alliance funding could be reallocated through a new CRD drinking water and watershed protection service like that of RDN. SSIWPA would no longer be funded and, instead, would be included and funded by an island-wide tax requisition levied by CRD.
    14. All water sampling (wastewater, stored water, water) to be done by qualified CRD staff or a single consultant (business case required)
    15. The CRD Board would approve SSIWC budgets

B. Governance

LEGAL TOOLS AVAILABLE FOR CREATING A CRD "SALT SPRING" GOVERNING BODY

The Local Government Act regulates the ability to delegate responsibility of service provision. Section 229 of the Local Government Act (LGA) provides regional district boards with the authority to delegate responsibility for the operation and administration of services to its' "employees, committees, members or other bodies established by the local government".

There exist two options for an on-island Committee / Commission:

- **Standing Committees**
  Section 218 of the LGA provides that the board chair may establish standing committees for matters the chair considers would be better dealt with by committee, and may appoint persons to those committees. At least one member of each standing committee must be a regional district director. Standing Committees are appointed, not elected, and can be repealed, at any time, by the Board.
- **Local Community Commission**
  Sections 243 and 342 of the LGA provides the authority for a regional district board to establish local community commissions (LCC). The bylaw to create an LCC must be approved by the electors in the local community through an assent vote, Commissions are elected, and dissolution requires elector assent and approval of the Inspector of Municipalities.

A Standing Committees would involve appointments by the CRD Board which has the potential to degrade the level of control over Salt Spring Island water interests. A Local Community Commission is the preferred option as it provides the highest level of certainty for NSSWD ratepayers.

It is recommended that a new Commission be established by the CRD Board - **The Salt Spring Island Waterworks Commission (SSIWC).** The SSIWC would be:

1. Enacted as a Local Community Commission with bylaws under Section 342 of the LGA
2. Approved by the electors in the local community through an assent vote
3. 5 Commissioners would be elected every four years as part of the Local Government cycle. Eligibility would include the minimum standards under the *Elections Act* along with on-Island residency.
4. Similar to the Institute of Corporate Directors Board Governance Standards, the Commission would approve policy, strategy, and finances (final approval by CRD Board) related to the water utility. This Commission would not be responsible for the day-to-day operations of the service area and would not interfere with land use issues (responsibility of Islands Trust) but would emulate the model of "Board Governance".
5. Votes would not be weighted as all Commissioners would have equal standing.
6. If other improvement districts do not want to convert, they would not participate with the Commission however, collaboration would be a priority for all.

7. Advises the CRD Board of any major policy changes
8. Provides provisional budgets to be approved by the CRD Board (ALL costs associated with the Salt Spring Island Water Utility would be fully funded without subsidization).
9. Responsible for hiring and performance management of the General Manager (following CRD bylaws)

Create on-Island ad-hoc advisory committees to engage island experts and assist with strategic goals, as required, and as approved by the CRD Board.

For this model, small systems will have the option to privatize. This is considered to be an unlikely option as costs would be considerably higher than the amalgamated model.

C. Pros / Cons

This model provides a number of important advantages with some challenges:

- Governance remains on Salt Spring Island although for the NSSWD, the ultimate decision- making authority will be transferred from the NSSWD Board to the CRD Board.
- Utilizes the strong operations and maintenance currently performed by NSSWD
- On a fee-for-services basis, accesses capacity from CRD in areas that NSSWD currently cannot provide effectively (finance, human resources, OH & S, etc.)
- Significate cost savings with the ability to access grants and operational efficiencies.
- Island-wide water issues would be much better coordinated
- Elimination of multiple commissions
- NSSWD employees becoming CRD CUPE employees will result in some minor increased costs however, this is offset by efficiencies with other CRD functions.
- There is some potential that NSSWD employees could lose their jobs.
- The CRD Board will ultimately make the final decision on all Commission recommendations however, this can be mitigated through strong language in all legal agreements
- NSSWD ratepayers may lose some level of representation if non NSSWD Service Area representatives are elected to the Commission.

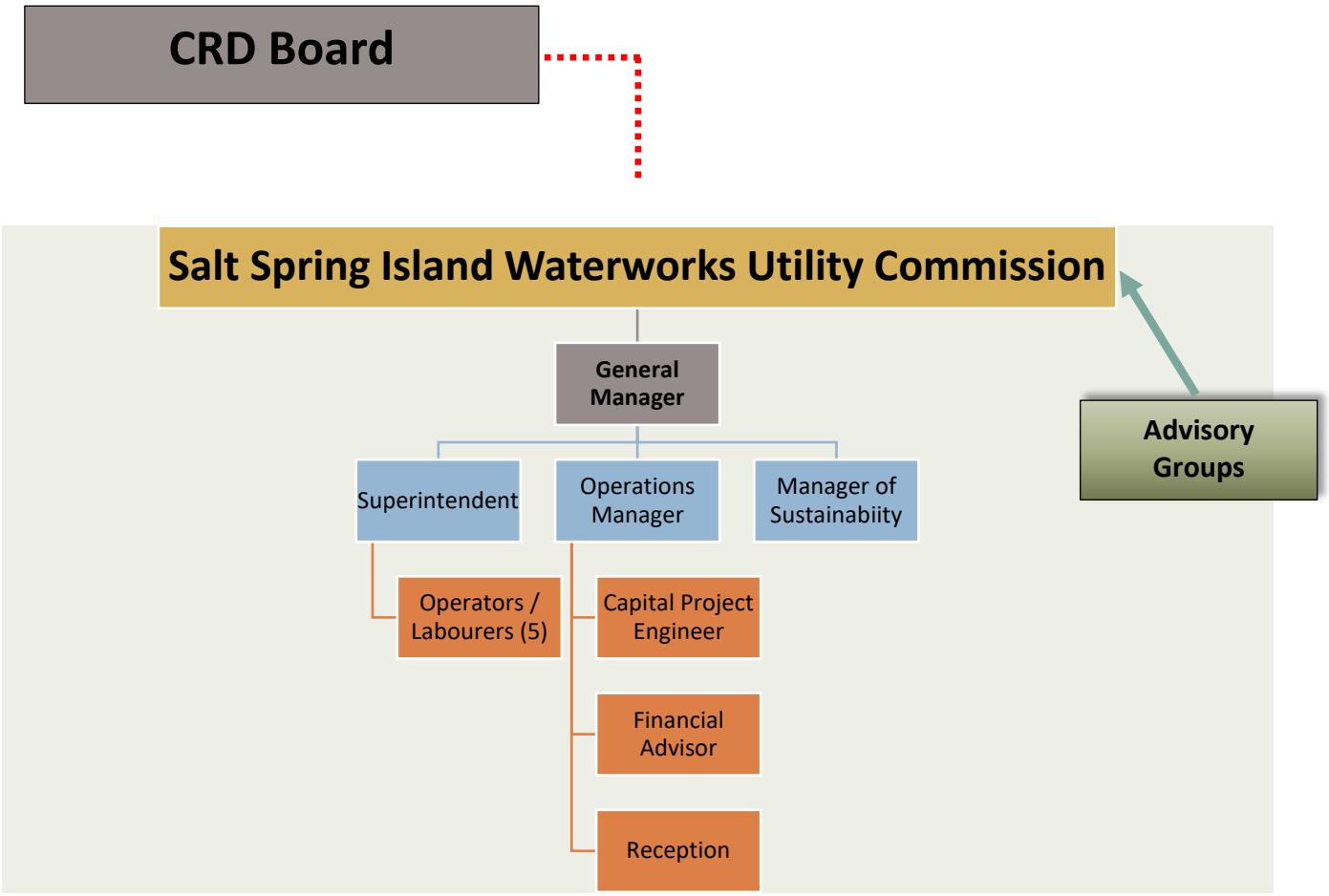
D. Costing

There are a number of financial advantages to this model:

1. All water systems would have access to Provincial and Federal grants. This will decrease the ratepayer cost for capital construction significantly and is estimated to provide value of between $5 million and $20 million over the next 10 years.
2. Moving from multiple commissions to a single commission could provide savings, primarily with small CRD systems
3. Capital and operational costs would be significantly reduced. The on-Island utility would manage independently, utilizing on-Island resources for operations, maintenance, and construction. It is expected that this model would reduce operational costs by 20% to 30% and capital costs by 40% to 70% (offsetting grants). Although grants are never a “sure thing”, Salt Spring Island would likely be considered as a CRD higher priority, based on age of infrastructure, requirements for water quality, and inadequate fire flows.
4. CRD is currently insured privately and costs would not materially increase with the addition of the NSSWD system and other small systems. This represents a saving of approximately $70,000 / year.

	$ Premium	Comments
SSIWU Operations	0	Absorbing NSSWD on-Island staff will greatly assist operations
CRD Capital Construction	0	CRD on-Island coordination of all capital construction will ensure lowest costs
CRD Planning	0% - 10%	Victoria and SSI Admin. Staff costs would be "managed" by independent utility
CRD Financing	0	Provincial and Federal grants and low-cost financing available through regional district
CRD Emergency Response	0	Absorbing NSSWD on-Island staff will greatly assist responses
Private Systems	unknown	Limited access to funding. High risk in providing potable water. High risk of system failure.

E. Org. Structure



Additional Support from CRD:

- General CRD Requisition: Legal, FOI/Privacy, Risk/Insurance, Corporate Safety, HR
- Fee for Service: Information Technology, GIS. procurement, design & construction, etc.

Additional Benefits to Option 3

The successful implementation of Option 3 opens the door to considering adding other water related services to the Utility and under the guidance of the Commission. There are natural synergies with wastewater, storm water, and other island water challenges, recognizing the advantages to managing water "from source to tap and tap to source". This option mimics local government utilities and best practices in the industry.

Although not in scope for this review, it is recommended by Innova that wastewater operations be included in the new utility. Operations and maintenance of water and wastewater infrastructure typically utilizes operators with similar skills, knowledge and abilities. Using a broader team of operators for both water and wastewater increases overall capacity and the ability to respond to emergencies. In BC, most small to mid-sized local government utilities provide combined support for both water and wastewater.

5.5 Option 4 – Privatize water operations and maintenance

A. Description

Establish a contribution service, where water delivery on Salt Spring is fully privatized (to a society or other body reporting to ratepayers) and CRD uses its taxation authority to collect funds for the service based on operational and capital budgets.

The privatization of water services would allow for full control of water issues by island residents and would require the dissolution of all NSSWD and other systems currently serviced by CRD. All water issues would be managed on-Island and CRD's only interface would be collecting funds on behalf of the Society.

The Society Board could choose to hire staff and operate and maintain the systems itself or could contract the work to private enterprises.

B. Governance

A registered nonprofit society would be fully responsible for the financial security, operations, maintenance and liability for the water systems. Elections to govern the Society would comply with the *Society's Act*. CRD would provide for the collection of funds only.

C. Pros / Cons

This option has many risks and there are currently no examples of this model, at this scale, in British Columbia. Over the past 20 years some municipalities have utilized contracted utility services but, in most cases, they have made a decision to bring services in-house at a later date.

Because this would be a private society, there are no linkages to local government support. Provincial drinking water legislation would still apply but there would not be eligibility for Provincial and Federal Infrastructure Grants. There would be no eligibility for UBCM grants and MFA financing. Insurance coverage would be difficult to retain. Borrowing for capital improvements could be challenging.

This option would definitely provide control to Salt Spring Island residents however, because this is an independent society, there would be no assurances that the Board would be functional and productive.

Employee attraction and retention would be solely dependent on the solvency of the organization and the perceived benefits of joining a non-government organization that essentially "contracts" the provision of services.

D. Costing

Although it is arguable that some operating costs could be reduced by operating an on-Island Water Society, there would be many increases in costs by not being part of a government organization. Most importantly, there would be limited access to grants for capital improvements. There are many negatives and uncertainties that make this option unfavourable financially.

E. Org. Structure

As determined by the elected Society Board, services may be fully contracted, developed as a staff department, or a combination of the two.

Overall, this option does not have enough positives to consider any further analysis.

5.6 Summary / Comparison of All Options

	BASE	1	2	3	4
	Existing	Enhanced	CRD	CRD Independent	Privatization
Asset management	2	8	10	10	4
Managing resources	3	5	7	9	6
Operational savings	0	7	4	9	6
Capital savings	3	3	10	10	2
Coordination	1	4	7	9	4
Represents on-Island interests	3	5	1	9	6
TOTAL VALUE	**12**	**32**	**39**	**56**	**28**
ACCEPTANCE	**x**	**Yes**	**x**	**Yes**	**x**

What would this mean financially to Salt Spring Island residents?

If recommended changes Option 1 and 3 had occurred previously, an analysis of costing indicates considerable overall savings to ratepayers.

Comparing 2019 Existing Governance versus Viable Options Annual Costs (Estimate Only)			
	Existing	Option 1 - Enhanced Existing	Option 3 - Combined Water
Operating	$ 3,300,000	$ 3,135,000	$ 2,970,000
Capital (debt repayment)	$ 617,000	$ 555,300	$ 370,200
TOTALS	**$ 3,917,000**	**$ 3,690,300**	**$ 3,340,200**
Costs include domestic water only, based on 2019-year end totals			

Although this is an estimate only and does not consider inflation, it clearly identifies substantial savings of $330,000 / year for enhancing existing governance and $580,000 / year for combined governance. Looking forward, these annual savings will become much greater when considering the availability of capital grants for

new and replacement infrastructure. These savings would differ between existing systems, who would see reduced costs operating costs, and NSSWD ratepayers, who will benefit from the ability to access grants.

Comparing Existing Governance versus Viable Options Annual Costs (Estimate Only) in 2025			
	Existing	Option 1 - Enhanced Existing	Option 3 - Combined Water
Operating	$ 3,630,000	$ 3,448,500	$ 3,267,000
Capital (debt repayment)	$ 1,100,000	$ 990,000	$ 660,000
TOTALS	**$ 4,730,000**	**$ 4,438,500**	**$ 3,927,000**
Costs include domestic water only, based on 2025 estimated costs and likely capital replacement costs (inflation not included)			

Based on these rudimentary estimates, the overall savings for ratepayers' totals approximately $3 million over the next 10 years for enhanced governance and over $8 million over the next 10 years using the combined model. The potential savings vary between users across the system but to put this into perspective, this represents approximately 11% decrease in overall spending for the 10-year period.

For all ratepayers included in this new governance model, savings will vary. Smaller systems will benefit by reduced operational costs while NSSWD ratepayers will benefit by reduced capital costs.

5.7 Implementation Plan

There is considerable work implementing the two viable options. Careful attention must be paid to ensuring that personnel are treated respectfully throughout the processes and communications is honest, direct and transparent.

Communications Plan

A communication framework/plan for introducing, understanding and asking questions about the final report will be important. Next Steps for consideration:

A. CRD and NSSWD staff to prepare a joint staff report to share findings of report and next steps with CRD and NSSWD Boards and the Province, encouraging input. Subsequent revisions to be made if needed.

B. CRD and NSSWD staff to formally report to their Boards decision on recommendations within the report

C. Public/stakeholder/ratepayer engagement strategy to be established. Key elements to be considered:
   - Develop easy to understand graphics, background information to describe the viable options to the community
   - Provide information to the public through email, web sites, Facebook, and mail outs.
   - Provide opportunities for input (website, email, mail)
   - Provide a town hall meeting (COVID dependent – may require multiple video conferencing meetings)

D. Utilize comments to refine the options

E. Next steps -to be determined based on decision of Boards.

Option 1 "Enhanced Existing" does not require any changes in bylaws or governance as the variations are all operational. This option provides direction to streamline services, take advantage of CRD and NSSWD strengths, and, where possible, collaborate on island-wide water issues. To achieve success, the following general steps should be followed:

1. CRD, NSSWD, and MAH review report recommendations and notionally agree with Option 1
2. Collaborative communications developed and provided to the affected parties (NSSWD, CRD Water Systems) including opportunities for public input. Consider a town hall meeting, online feedback mechanisms, etc.)
3. Terms and conditions edited, if necessary, after public input
4. Develop process mapping and operational best practices for both CRD and NSSWD. Consider changes required for NSSWD to provide operations and CRD to provide capital projects for all systems
5. Develop an MOU between CRD and NSSWD for fee for service charges for the operation and maintenance of all systems. Include components to manage costs fairly and mediation protocols for unresolved issues
6. Develop an MOU between CRD and NSSWD for fee for service charges for capital construction. Include components to manage costs fairly and mediation protocols for unresolved issues
7. Develop benchmarking and key performance indicators for all operations, maintenance and capital construction work

8. Adopt recommendation from the core service review and integrate into operations and maintenance.
9. Develop asset management and long-term financial plans for all systems
10. Develop / upgrade all policies and procedures to industry standards
11. Provide leadership training to all parties
12. Provide HR, IT and OH&S training to all managers
13. Adjust staffing levels, if necessary.
14. Establish an Inter-Agency Working Group, comprised of elected officials and decision-making agencies. Regularly-scheduled meetings open to the community would focus on a coordinated approach to solving island-wide issues. While not a decision-making body, this group would provide a forum for enhanced communication and integration among Salt Spring's decision-making agencies.

Option 2 – CRD Independent - not considered as a viable option

Option 3 "CRD Department" implementation will require the following steps:

1. CRD Board, NSSWD Board, and MAH review report recommendations and notionally agree with option 3.
2. NSSWD transfer of assets and liabilities documented
3. Terms and conditions along with an agreement in principle signed off by all parties
4. Collaborative communications developed and provided to the affected parties (NSSWD, CRD Water Systems) including opportunities for public input. Consider a town hall meeting, online feedback mechanisms, etc.)
5. Terms and conditions edited, if necessary, after public input
6. Existing CRD small systems will have the opportunity to opt out through a notice to CRD with approval from the majority of service area land owners (This is considered to be an unlikely option as costs would be considerably higher than the amalgamated model)
7. Develop a service area establishment bylaw for referendum voting. Although a service area may be established by a petition, alternative approval process, or directly by Cabinet order, a referendum is highly recommended. Since elector approval is required under this option, it gives more certainty to the decision to convert. This new service area will include existing CRD service areas and the NSSWD service area.
8. Conduct the referendum. Consider including NSSWD dissolution language (item #10) to streamline the process.
9. If referendum results in majority support, CRD Board to approve change in governance
10. NSSWD ratepayers to approve change in governance and dissolution of District (majority vote)
11. Province to approve consolidation. Establishment Bylaws approved and executed
12. New Salt Spring Island Consolidated Water Commission elections:
    - Number of positions - 5
    - Eligibility: Canadian Citizen, 18 years of age or older, registered owner of land within the service area.
    - Voting based on the *Elections Act*.

- Term = 4 years in alignment with local government elections
- Elections to be timed consistently with the Local Government elections cycle. This approach is the easiest to manage and the least costly. The next LG election is October 15, 2022 and depending on timing, may be appropriate for the commencement of this service.
- Chief Commissioner to be nominated by the Commission each and every year.

13. Commission to consider ad hoc advisory groups / panels / working groups, as required. Approval by the CRD Board would be required
14. General Manager (or Superintendent) position to be posted publicly and the elected Commission to determine the appropriate candidate to fulfill the obligations. Contract to meet all CRD policies.
15. Review performance and provide process mapping and operational best practices along with a change management plan.
16. Staffing changes:
    - NSSWD employees transfer to CRD and, where applicable, register with CUPE local 1978, based on Collective Agreement language
    - Any NSSWD employees who refuse transfer to CRD will be provided with severance appropriate to Employment Standards or contractual obligations
    - All existing staff (both CRD and NSSWD) to be retained through the process. If positions are determined to be redundant, provide opportunities through attrition or reassignment within CRD
17. Develop benchmarking and key performance indicators for all operations, maintenance and capital construction work.
18. Ensure transparency and open data reporting protocols for all ratepayers based on service areas.
19. Adopt recommendation from the core service review and integrate into operations and maintenance.
20. Develop asset management and long-term financial plans for all systems. Ensure that capital costing is split between service areas
21. Adopt all CRD policies and procedures
22. Provide leadership training to all parties
23. Provide HR, IT and OH&S training to all managers
24. Communicate, communicate, and communicate
25. Private or strata systems may wish to join the new combined utility. The Commission should consider these applications however, strict policies must be developed to ensure that added systems are not subsidized by the existing systems. These conditions should include:
    - Full asset review must be conducted to inform expectations around future capital costs
    - System must be to an acceptable standard
    - Added system must not increase proportional operational costs
    - Access to the system must be legal

Option 4 – Privatization - not considered as a viable option

6. ADDITIONAL ISSUES TO BE CONSIDERED

1. This study terms of reference included water systems only. As noted, wastewater systems were considered within this study as this is an obvious additional benefit for any consolidated model. Through discussion with elected officials, the benefits of this model could be considered in a larger context in the future for other services:
    a. Fire
    b. Parks and recreation
    c. Neighboring Gulf Island water and wastewater systems
2. There will be considerable ongoing capital construction in the future. There may be advantages in creating an on-Island construction crew, made up of NSSWD or SSIWU personnel. This is a business case that could be considered in the future.
3. Water reclamation should be considered for wastewater treatment
4. Current fire protection water supply is limited due to the small pipe sizes and hydraulics of the existing systems. A study should be conducted to evaluate the overall property insurance savings if fire flows could be increased to NFPA standards. These savings may offset the costs for system improvements while increasing public safety.
5. Conduct a coordinated Salt Spring Island demand study for all water systems before consideration of any development expansion on the island. Include both surface water and ground water use for all systems / connections which draw water greater than one equivalent household. Utilize existing studies available on Salt Spring Island including the Golder Aquifers study. This should include a coordinated surface water study to analyze availability of water for each watershed.
6. Develop island-wide water conservation programs. Coordinate water conservation education for water purveyors. Encourage or mandate each improvement water district and each private water district to establish more aggressive water conservation strategies and to track progress. At the Water District level, develop stringent rate structures to incentivize storage and mandate and/or incentivize meters on all users.
7. Develop and maintain central data collection and management systems for demand/user data of all types.
8. Provide an island-wide effective and regular public education campaign and include social reasons to conserve.
9. Develop rainwater harvesting polices and incentives. There are no effective rate structures or incentives to coordinate ongoing annual rainwater harvesting and storage use and education for the public. Coordinate a long term, financially stable Rainwater Rebate program similar to the Regional District of Nanaimo. Incentivize rainwater harvest, storage and use in water districts for non-potable use.

7. APPENDIX

Terms of Reference – Detailed Accounting

Requirement	Met
Background	
1. Background overview of the purpose of the study and report contents; stakeholder analysis; data collection; and methodologies. 2. Summary and evaluation of existing governance, administration, and operation of water services currently conducted by each of the public water service providers on Salt Spring. 3. Summary and evaluation of existing governance, administration, and operation of water services currently conducted by each of the public water service providers on Salt Spring. 4. Review and summary of various regional district water service models. 5. Review and summary of long-term growth scenarios. 6. Summary of stakeholder consultations. 7. Summary of shared service optimization goals identified by key stakeholders.	✓
Findings	
1. Areas of agreement between the key stakeholders. 2. Summary of what 'service optimization' means in the context of public water service on Salt Spring Island. Evaluation criteria used to decide on potential options for service optimization goals. 3. Summary of service model research. 4. Evaluation of future models, including existing model:	✓
Analysis	
1. Water service optimization goals. 2. Industry best practices. 3. Stakeholder expectations. 4. Analysis of gaps, overlaps, strengths, and challenges of each.	✓
Recommendation	
1. Recommendation of at least two different options for NSSWD and CRD to move forward with a positive governance change. Two options to be included: a. Option A - Outline and make recommendations to improve integration and decision-making between NSSWD and the CRD if NSSWD does not convert based on the shared water service optimization goals established by stakeholders. b. Option B - Outline and make recommendations for a consolidated CRD Salt Spring Water Commission with operation and administration of water service. 2. Prioritization matrix of recommended and existing governance models. 3. Implementation options / plans.	✓
Appendices	
1. Appendices: technical or aggregated data (as necessary).	✓

8. REFERENCES

1. Are our Water Systems at Risk? Assessing the Financial Sustainability of BC's Municipal Water and Wastewater Utilities Report, February 2015, BC Water & Waste Association and Urban Systems
2. Best Practices Guidelines for Approving New Water Systems, Report for UBCM by Urban Systems - www.ubcm.ca/assets/.../Policy/.../1_Final%20Subdivision%20BMP.pdf
3. Drinking Water Officers' Guide, Province of BC, Province of BC (2007) - http://www2.gov.bc.ca/assets/gov/environment/air-land- water/dwog-introduction.pdf
4. Copy of WaterLicensesSSIWaterShed.xlsx
5. Beddis Water License (Cusheon Lake) C034555
6. Beddis Water License (Cusheon Lake) C037160
7. Fulford Water License (Weston Lake) C120292
8. Fulford Water License (Weston Lake) C120382
9. Highland Fernwood Water License (St. Mary Lake) C065711
10. Highland Fernwood Water License (St. Mary Lake) C065712
11. Highland Fernwood Water License (St. Mary Lake) C065713
12. Highland Fernwood Water License (St. Mary Lake) C104325
13. CRD Org Chart
14. CRD Transition Plan (2015 Draft)
15. CRD-IWS Operations Org Chart
16. CRD-SSI Org Chart
17. Governance Study FINAL 2013
18. SSI OCP Maps
19. SSI OCP_vol-1_2019
20. SSI OCP_vol-2_2019
21. Positively Forward CRD report 2018
22. Positively Forward CRD Summary Report 2018
23. Salt Spring Alliance - Governance Working Group Report 2018
24. Salt Spring Island Incorporation Study 2016 Final Report
25. Salt Spring Water Service Areas and Districts
26. SSIWPA Salt Spring Water Responsibilities Comparison Chart
27. SSIWPA Terms of Reference

28. Beddis Water Service 2018 AGM Report
29. Cedar Lane Water Service 2018 AGM Report
30. Cedars of Tuam Water Service2018 AGM Report
31. Fulford Water Service 2018 AGM Report
32. Highland Fernwood 2018 AGM Report
33. CRD Climate action 2018 annual report
34. SSI Rainwater Harvesting 2017 Report
35. SFU Final Report Research Monitoring Well on Salt Spring Island 2015
36. SFU Final Report the Hydrogeology of Salt Spring Island
37. SSI Agricultural Water Demand Model for Salt Spring Island 2017
38. SSSI agriculture land 2017 ALR report
39. SSIWPA groundwater monitoring project charter
40. Stakeholder List for Water Service Optimization Study
41. St Mary Lake integrated watershed management plan 2015
42. Water Service Optimization Study
43. CRD Operating and Revenues 2019
44. CRD 5-year operating plans
45. SSI Aquifer mapping
46. NSSWD Economics financial review
47. Maxell Lake hydrology study
48. NSSWD Managing a sustainable water supply 2015
49. NSSWD Strategic Plan
50. Positively Forward CRD Report 2018

BC Regional District Best Practices Survey

Direct Comments - Best Practices Survey – BC Regional Districts
October, 2016

Participating Districts

1. Fraser Fort George	2. East Kootenay	3. Peace River
4. Prince Rupert	5. Comox Valley	6. Bulkley-Nechako
7. Okanagan Similkameen	8. Central Kootenay	9. Kitimat - Stikine
10. Alberni-Clayoquot	11. Islands Trust	

1. Does your organization have detailed asset management plans for each of your utilities?

Nope. We have 2 small water systems and 5 small community water systems and some of these systems are well over 30 years old. We are currently exploring what we need to be doing in the way of asset management.

Yes, we have an asset management plan for our utilities. Is it detailed, not exactly. We have a lot of useful content but it is the real finite details that we want to take to the next stage. Our initial asset compilation was a general scan with rational assumptions. We have some good working numbers to present to the Board for scheduled upgrades. However, we really want to delve into a full blown and detailed condition assessment now and along with that get more involved with the GPS component. What I mean by that is now we will have more than simply water distribution lines. We will document the lineal measurement of the lines, pipe composition, estimated or real date of construction, number of main collections converging on one intersection, number of lift stations, size and construction of vaults, pump make and model, serial numbers etc. etc.

No. We have met the required “Tangible Capital Asset” requirement for PSAB; and we’re working on an Asset Management Plan; and we have short-term capital plans for some of our utilities, but I wouldn’t say we have a comprehensive plan for each of our utilities.

The regional district is in the process of developing a comprehensive asset management program. We will begin with the Beaver Creek water system as the model. We have been proactive in developing and maintaining inventories of our water systems for the purpose of acting on necessary upgrades and replacements.

Not at this time. We are working on the asset management plan for one of our utilities, and the others will follow.

Not at this time although we have been participating in UBCM asset management seminars and are looking to develop a process early in 2017. We are still investigating whether the additional staff/consultants will be employed to aid in plan developments or complete any work in-house through the establishment of an asset management committee.

Yes. The part that we are still trying to improve on is field assessment of actual condition of our assets, particularly our in-ground assets. Right now, most asset replacement schedules are based on standard schedules for replacement for specific types of assets (i.e. steel reservoir 50 years, etc.)

No, we do not have detailed asset management plans across each of our functions. We do however have some very good plans within specific functions. For example, in our Waste Water service we have developed detailed asset management plans for the service that include asset identification, criticality assessment, condition assessment, replacement timing, replacement value and a determination of the annual cost required for asset replacement. The service includes an annual financial contribution dedicated to asset replacement and managed for that purpose. In many of our other services we have also completed similar plans but not taken them through to completion or implementation.

Not really, we have basis information on age/value/condition but not detailed asset management plans; this is ‘in progress’

asset management plans under development, should be completed within the next few months. (3 water and one sewer system)

2. Is ongoing funding a challenge for your utilities?

Yes. These systems serve a small number of users in rural settings so economy of scale is lost and many of the systems were built when asset replacement was not a factor and regulatory compliance standards were lower so users' expectation on what they should pay presents a number of challenges.

Yes, funding is a challenge. I will go out on a limb and suggest that many water systems in BC were created without performing a business case model. The year, availability of water and the safety standards regime of the day also played a role. So, establishing a system for 5 – 10 residents was not a concern. But now with the regime of higher water safety (Walkerton/North Battleford) standards plus PSAB and asset management, small systems are very challenged to responsibly fund and manage them properly. A small number of residents benefitting from the system means that to adequately put funds into reserves can make the system almost cost prohibitive. It makes the system unsustainable unless provincial or federal grants are the answer to upgrades, rainy day accounts or any other improvement. Small systems are also challenged with adequate water fees to absorb operational costs. Many residents resent the fees or outright protest them because in their mind BC is potable water plentiful. Look around, there is a stream or river every other kilometer or less.

Funding is always a challenge for utility owners. We have capital reserves for most, but it's always problematic for small systems to raise the capital required for replacement without grants.

Yes, in part on account of reluctance to increase charges, increased regulatory requirements, an overall infrastructure deficit and inadequate grant funding that we have to complete for. Asset man agent will help political leaders to set the right priorities.

Yes

In some cases, yes, we have utilities that, as a result of their restrictive service area tax base, do not adequately fund capital and operational reserves. It has been difficult to maintain these reserves over time as equipment is replaced and the reserves are eroded.

Yes, it is. However, the last 2 years have seen some successes in regards to securing grants to augment reserves and capital borrowing. The establishment of asset management plan with presenting visually the long-term financial performance to customers and Water Commissions has helped with acceptance of higher rates and therefore somewhat improved financial performance.

Ongoing funding is often a challenge for many of our services, especially utility services. Much of our infrastructure was constructed some 30 to 40 years ago and is approaching the end of its design capacity and in some cases its useful life. New infrastructure is expensive and without adequate reserve funds in place costs increase in order to cover higher debt payments required to fund replacement projects.

Yes, definitely. The region faces economic challenges generally and funding utilities is no exception. Costs escalate and the ability for users to pay does not…

properly funding utilities has become a problem, one we will be in the midst of correcting over the next couple of years

3. Do you have criteria or policy for adding new systems? If so, can you provide documents?

Nope. It is a rarity for adding a new system. However we have had discussions with developers and existing improvement districts regarding the RD taking over a system and we advise that we need a QP to undertake a full assessment of the existing system, including a comparative analysis of works to bring a system up to current standards, a go forward asset renewal plan and general support from the users that they are

supportive of the RD taking over the system and willing to pay all associated costs in respect of capital investment and operations.

We do not have any written criteria or policy on adding new systems. I imagine you are referring to taking over existing small private, association or ID systems. Ours is an unwritten policy. The Board's train of thought is if the system is not up to snuff or does not meet current standards, then they do not want to touch them. Why would they? It will still be the same 20 – 30 households paying for all of the upgrades unless a heavy provincial or federal grant can be secured.

We have an old water utility acquisition policy under review. We acquired two new systems in 2016 and another two under review for 2017. We typically require a system analysis prior to accepting a new system paid for by the system or with a provincial planning grant.

No – this is hard as the regional district is typically the last resort.

Just an unwritten policy that we will only take over systems where the users have agreed to any upgrades required to bring the system up to standards set in our subdivision servicing bylaw.

There is no policy, rather a process. People generally come forward through their local area director with a request for service. Staff provide information on how to get funding and the public approval process to approve the service. If approved staff move forward with auctioning the install and service setup.

Yes, we do. Please see attachment. It is somewhat outdated since we do have a moratorium for taking additional water systems on in place since 2012. (We took on 9 additional water systems on in 2011/2012).

We have a policy in place to help guide the transfer of an improvement district or private water system to the regional district. We produce an annual five-year financial plan for each of its services. These plans project all operating, maintenance and capital cost requirements for each service for the next five years. The FP's are reviewed and approved by the board and then consolidated into the financial plan. Adding a new service would require the creation of a FP. Further, anytime we contemplate adding a new service (most often as the result of a service conversion process), a feasibility assessment of the infrastructure is conducted to inform and interested stakeholders as to the potential costs and obligations regarding the system. The feasibility assessment results are used for planning purposes and also communicated to the public to ensure all parties are informed to the same levels.

We have not faced the addition of new systems and hence have not had cause to create a policy in this regard.

No specific formal policies in place with regard to adding new systems

4. Do you have criteria/policy for the operation and maintenance of your utilities?

No Board Policy other than the Board's direction that we meet our regulatory obligations. As we move towards an Asset Management Policy, we would see this a component of that Policy.

No, we do not have any criteria or policy regarding operation or maintenance procedures. However, we are currently working through an accountability framework and key process steps for staff. Plus, we are applying asset management best practices to our systems as best we can and as the Board allows. We are also looking at developing an Asset Management Policy for our financial department.

No. We rely on provincial standards for that.

Yes and no – depending on the system and its complexity.

We have procedures for daily/weekly/monthly/annual operation in the form of checklists, Preventative Maintenance Plans and reports.

Operational and maintenance standard operations procedures are developed when the systems are designed and constructed.

Since we are dealing mostly with very small water systems (19 in total) we are mostly just aiming for compliance. We are starting to implement in some of our systems backflow devices and in a couple metering programs. We have as well some water conservation programs with summer staff supporting the public awareness component. Leak detection is still in its infancy. Often limited to night flow analysis.

The criteria by which we operate is provided by regulatory permission (environmental permits or operating certificates). Internally we follow many best practices for the operation and maintenance. At several (but not all) of our facilities we employ computerized maintenance systems to track and schedule our maintenance tasks and activities.

Yes, criteria/policy/practice, regular schedule for maintenance

operating policies are in place

5. Do you feel that your feedback through the MOTI subdivision approval process is valued?

Yes. We have always had a close working relationship with the MoTI Approving Officer.

For the most part yes, our input into MOTI subdivisions is valued. We do not have many regulatory bylaws in effect in the Regional District. As such our referrals most always reference our OCP's. The Ministry has been very obliging to observe and respect our OCP's and seldom, if at all, have overridden them with their decisions.

We have a good relationship with our Subdivision Approving Officer and we have a Subdivision Bylaw that he takes into account, as well as referring all applications to us for comment. In the end, it's still a provincial decision.

No issue here.

Our feedback helps guide MoTI in their decisions.

MOTI carefully considers the input we provide during the referral process. We have a good working relationship with MOTI and are able to ask questions, provide concerns, and have good dialogue back and forth.

In terms of MOTI, that relationship has been varied, most often the challenge centers around maintenance of rural roads and how we maintain rural road standards in the modern era.

In regards to utilities: yes, since proof of water is required for the applicant.

Yes, we have developed good working relationships with our local MoTI office and meet several times per year with our provincial approving officer. Earlier in 2016, MoTI senior staff and our CAO entered into an implementation agreement intended to promote collaboration in order to implement the objectives and policies of our Regional Growth Strategy. We note that our requests for conditions of preliminary layout approval are particularly heeded when the conditions derive from a regulatory bylaw (i.e. zoning bylaw versus Official Community Plan bylaw).

Yes, when we get referrals and raise concerns, they take those very seriously

MOTI values RD feedback from subdivision process

6. Does your organization communicate effectively with your utility users?

Interesting question, as we don't have a formal communication strategy with users. We take a common-sense approach to engaging our users when we doing things like undertaking maintenance and we haven't had any issues arise that has caused us to think about how we communicate, so I suspect we are meeting their needs.

I would say that depends on who you are speaking to. But on average I would say yes, we do have effective communication with our utility users. We only have two utilities. One small water distribution system and

one small sewer system. The sewer system is relatively quiet. So there has not been a ton of engagement with them. However, the water system has been engaged due to capital investment and asset management best practices. That went over well and after the last budget the raise in taxes was not questioned. I would say that denotes effective communication.

I believe so. Each Electoral Area Director is involved in the communication side and has a good handle on issues. We have Board-appointed Water Commissions for a couple that administration meets with semi-regularly and we send out notices and updates with our water bills. If there's anything significant or any significant project specific to a system we hold Town Hall meetings and invite ratepayers into the discussion prior to implementation.

Yes, we use our utility billing to keep them informed regularly, conduct an annual budget meeting for the public and have advisory committees for the larger systems.

Yes. In addition to notifications sent with quarterly billings, and emails and mailouts when required, we have also established utility advisory commissions for most of our utilities, with members of the communities participating in discussions and helping to disseminate information back to users.

Communications over the past three years have improved, with the addition of a communications manager to the District. Ad campaigns have been produced and mailers to residents through their utility bills. We are looking to continuing to improve over the coming years with identified budgets

I believe we do. It still requires more work and increased resources. Since we have mostly very small rural systems with a large regional spread a lot of our communication happens on the customer operator level and works very well. The larger communication is often difficult because the situation seems to be in every system just a bit different and makes general messaging often difficult and ineffective. We attempt to counteract a bit through local "Advisory Committees" or already historically established "Water Commissions".

We communicate with its utility users in a variety of ways, including direct mail outs for important initiatives, adding information bulletins to utility bills, website posts and newspaper advertisements. This range of public engagement is effective on some measures but could be improved on other measures. We are committed to finding better and more effective ways to engage its residents and ratepayers.

Yes. We have regular (monthly) commission meetings and the commissioners are in close contact with the users generally, even going door-to-door recently to address a grant application in relation to planned infrastructure replacement.

We try and hopefully have effective communications with our utility users

Innova Strategy Group Ltd.

1372 Lennox Street
North Vancouver, BC
V7H 1X3
kevin@isgl.ca
www.innovastrategygroup.com