INFRASTRUCTURE SERVICES COMMITTEE

Thursday, April 18, 2019
SCRD Boardroom, 1975 Field Road, Sechelt, B.C.

AGENDA

CALL TO ORDER 9:30 a.m.

AGENDA

1. Adoption of Agenda

PRESENTATIONS AND DELEGATIONS

REPORTS

2.	General Manager, Infrastructure Services Implications of the Refusal of the Park Boundary Amendment on the Chapman Lake Infrastructure Improvement Project **(Voting – A, B, D, E, F, Sechelt)**	Annex A pp 1 - 5
3.	General Manager, Infrastructure Services Impacts of Continued Siphon System Use **(Voting – A, B, D, E, F, Sechelt)**	Annex B pp 6 - 11
4.	Manager, Utility Services 2019 Snow Pack **(Voting – All)**	Annex C pp 12 - 17
5.	General Manager, Infrastructure Services 2018 Water Use and Water Users Analysis **(Voting – All)**	Annex D pp 18 - 22
6.	General Manager, Infrastructure Services Drought Management Plan 2019 **(Voting – A, B, D, E, F, Sechelt)**	Annex E pp 23 - 39
7.	General Manager, Infrastructure Services Agriculture Land Use and Water Demand Study **(Voting – All)**	Annex F pp 40 - 45
8.	General Manager, Infrastructure Services Regional Organics Diversion Strategy Implementation Plan Update **(Voting – All)**	Annex G pp 46 - 51

9.	General Manager, Infrastructure Services Solid Waste Management Plan Overview and Status Update **(Voting – All)**	Annex H pp 52 - 63
10.	General Manager, Infrastructure Services Solid Waste Management Plan Monitoring Advisory Committee Update **(Voting – All)**	Annex I pp 64 - 69
11.	General Manager, Infrastructure Services Contract Award Groundwater Investigation – Phase 3 **(Voting – A, B, D, E, F, Sechelt)**	Annex J pp 70 - 71
12.	General Manager, Planning and Community Development RFP 18 323 Granthams Landing Community Hall Rehabilitation **(Voting – A, B, D, E, F)**	Annex K pp 72 - 84
13.	General Manager, Infrastructure Services 2019 Q1 Quarterly Report **(Voting – All)**	Annex L pp 85 - 96

COMMUNICATIONS

NEW BUSINESS

IN CAMERA

That the public be excluded from attendance at the meeting in accordance with Section 90 (1) (e) and (k) of the *Community Charter* – "the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality", and "negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public".

ADJOURNMENT

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Remko Rosenboom – General Manager, Infrastructure Services

SUBJECT: **IMPLICATIONS OF THE REFUSAL OF THE PARK BOUNDARY AMENDMENT ON THE CHAPMAN LAKE INFRASTRUCTURE IMPROVEMENT PROJECT**

RECOMMENDATION(S)

THAT the report titled Implications of the Refusal of the Park Boundary Amendment on the Chapman Lake Infrastructure Improvement Project be received;

AND THAT a bylaw to repeal Chapman Lake Water Supply Expansion Loan Authorization Bylaw No. 704 be prepared;

AND THAT the project expenditures totaling $399,969 be funded from the operational reserves for the [370] Regional Water service;

AND FURTHER THAT the Financial Plan 2019-2023 be amended accordingly.

BACKGROUND

At the September 10, 2015 regular Board meeting the following recommendation was adopted:

347/15 **Recommendation No. 1** *Drought Mitigation Options*

THAT the General Manager Infrastructure Services' report dated August 25, 2015 titled Drought Mitigation Options be received;

AND THAT the SCRD move forward with the design and approval process for the Deepen Channel option, recognizing that the system will only be utilized during periods of drought and until the long term source development projects specified in the Comprehensive Regional Water Plan are constructed;

AND FURTHER THAT the design, engineering and environmental impact assessment of the Deepen Channel option be presented to the Board for consideration.

Since 2015, BC Parks staff have advised the Sunshine Coast Regional District (SCRD) on the process and provided guidance on the interpretation of the legislation. Based on this advice the SCRD applied for an amendment to its Chapman Lake Park Use Permit (PUP) on April 13, 2016 and Water Licence Amendment on April 18, 2016, to allow the installation of a gravity-fed withdrawal system to provide additional water supply from Chapman Lake.

The Board was informed in June 2016 that the SCRD received formal notice from BC Parks requiring further investigative environmental work in order to fully adjudicate the proposal and issue the Park Use Permit Amendment. In addition to the BC Parks requirement, the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) formally requested on June 20, 2016, that a new water licence application be submitted along with an Environmental Flow Needs (EFN) study as part of the Chapman Lake Water Supply Expansion project. On July 21, 2016, the SCRD Board approved an additional $123,425 expenditure from the Regional Water Service capital budget for the studies and environmental assessment work required by the Province of BC and the respective Ministries as outlined in their communications.

It was not until January 2017 that the SCRD was informed that BC Parks' initial interpretation of the *BC Parks Act* was incorrect and a Park Boundary amendment for the Tetrahedron Provincial Park was required before any provincial authorizations could be issued. BC Parks subsequently initiated this process in 2017 with public consultation commencing in May 2018.

On February 7, 2019 the SCRD received a letter from the Honorable Minster of Environment and Climate Change Strategies, George Heyman, denying the park boundary amendment for Tetrahedron Provincial Park.

The purpose of this report is to provide the Committee with insight into the implications this decision has for the SCRD, and recommended next steps regarding the project.

DISCUSSION

Operational Implications

The weir on Chapman Lake regulates the diversion of lake water into Chapman Creek. The channel connecting the lake to the weir has a high point that prevents SCRD access to the full volume authorized under its water licences.

During the dry summer of 2015, it was identified that the water supply may not be sustained until the start of the fall rains. Therefore, a temporary siphon system was designed and material for its construction was purchased. In 2017 and 2018, the SCRD relied on the use of this siphon for its water supply. The letter from Minister Heyman regarding his decision on the Park Boundary amendment stated that "*the SCRD will still be able to apply for temporary emergency amendments to their permit to employ the siphon system*." A report with the regulatory, operational, financial and human resource implications of continued reliance on this siphon system for the water supply of the Chapman Creek system is included in the agenda for this Committee meeting.

In 2017 the Ministry of Forests, Lands and Natural Resource Operations and Rural Development (FLNRORD) added the requirement to the SCRD's water licences to release 200 litres per second at all times downstream of its intake location, in order to support a sustainable fish population in the downstream reaches of Chapman Creek. FLNRORD based the Environmental Flow Needs requirement (EFN) on a technical analysis of hydrological and fish data provided by a qualified professional biologist retained by the SCRD. This study concluded that more advanced monitoring and data analysis could support a request to FLNRORD for a more refined EFN.

Given the discontinuation of the Chapman Lake Infrastructure Improvement project, there is no long-term additional water supply available to mitigate the impacts of the EFN. The impact is estimated to be a reduction in water supply of between 20 and 30 days. Staff are, therefore, currently in the process of retaining a leading expert in determining EFNs, to confirm the feasibility and the scope of a more advanced EFN analysis. A report will be provided to Committee on the findings by Q3 2019.

One of the components of this project was to upgrade the existing weir at the outlet of Chapman Lake. This weir was constructed approximately 50 years ago and is regulated under the Dam Safety regulation of the *Water Sustainability Act*. The planned weir upgrade would have required an authorization under this regulation and as well as a physical assessment of weir infrastructure. With the discontinuation of this project, the SCRD is still required to undertake a Dam Safety Assessment. The 2019 operational budget includes a project to have a consultant undertake the weir assessment on Edwards Lake. Staff will explore whether an assessment for the Chapman Lake weir could be incorporated in this project. If this requires additional resources, Staff will report back to Committee on a proposed Financial Plan amendment.

Financial Implications

Costs incurred to date

Since the beginning of the project, the following expense components have been incurred, not including staff time:

Chapman Lake Water Supply Expansion Project	
Component	**Costs**
Project Management, Design, Engineering, Approvals and Consultation	$ 281,392
Environmental Assessment	$ 118,497
Total	$ 399,889

These costs have been allocated as part of the capital project and recognized as work in progress to date; however, if the project is not moving forward, these costs no longer have a future value or benefit to the SCRD. As a result, these costs will need to be expensed through operations and staff recommend they be funded through Regional Water operational reserves.

Financial reporting

Since the decision from the Minister was released on February 7, 2019 which is after the SCRD's year end (December 31) but before the financial statements are released (April 2019), the SCRD is required to disclose a subsequent event in the 2018 Financial Statements. Here is the proposed disclosure as approved by the Auditors:

25. Subsequent Event

On February 7, 2019, the Minister of Environment and Climate Change Strategy denied the Regional District's request to amend the boundaries of a provincial park, which had been made for the purpose of the Chapman Lake Water Supply Expansion Project. As at December 31, 2018, $392,119 is included in Work in Progress in relation to this project.

Management is currently analyzing the implications and options remaining to the Regional District. The Board will make a decision on the status of the project. If the project does not move forward, there will be an impact on approved debt, tangible capital assets and the fund balances.

Approved debt

Chapman Lake Water Supply Expansion Loan Authorization Bylaw No. 704 authorizes the borrowing of up to $5,000,000 for this project. The authority to borrow under this bylaw expires July 2021. If the project does not move forward, staff recommend the Bylaw be repealed.

Procurement and Contract Implications

As a result of the permit not being awarded by the Province and the project being cancelled, the contract with Aecom will be cancelled in accordance to section 10.3.1 of the contract.

> *Upon receipt of such notice, Aecom shall discontinue the performance of the Services as instructed, whether being performed by the Consultant or any Sub-Consultants, except to the extent that those Services are reasonably necessary to comply with SCRD instructions, and shall preserve and protect all work in progress and all completed work. The SCRD shall, in addition to any other rights or remedies Aecom may have, pay Aecom for that portion of the Services satisfactorily performed or completed to the date of the notice, including Disbursements incurred as provided under this Agreement, plus any, if applicable, Termination Expenses.*

STRATEGIC PLAN AND RELATED POLICIES

N/A

CONCLUSION

On February 7, 2019 the SCRD received a letter from the Honorable Minster of Environment and Climate Change Strategies, George Heyman, denying of the park boundary amendment for Tetrahedron Provincial Park.

This report provides an overview of the operational, financial and contractual implications of this decision, including:

- Continued reliance on the siphon during Stage 4 watering restrictions;
- The need to undertake Dam Safety Assessment of weir at the outlet of Chapman Lake;
- Cancelation of the contract with Aecom;
- Amendments to the 2019-2023 Financial Plan to transfer the project from capital to operations and fund through Regional Water Operational Reserves; and
- Repeal of Chapman Lake Water Supply Expansion Loan Authorization Bylaw No. 704.

Reviewed by:			
Manager	X - S. Walkey	CFO/Finance	X – T. Perreault
GM		Legislative	X – A. Legault
A/CAO	X – A. Legault	Other/Purchasing	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Raphaël Shay, Water and Energy Projects Coordinator

SUBJECT: **IMPACTS OF CONTINUED SIPHON SYSTEM USE**

RECOMMENDATION(S)

THAT the report titled Impacts of Continued Siphon System Use be received;

AND THAT a 2019 Siphon upgrade project with a budget of $50,000 funded from [370] Regional Water Services operating reserves be approved;

AND THAT the 2019-2023 Financial Plan be amended accordingly.

BACKGROUND

The following recommendation was made at the September 27, 2018 Board meeting:

266/18 **Recommendation No.1** *Impact of Continued Siphon System Use*

THAT staff report to a future committee regarding the operational, financial and human resource implications of regular, extended periods of siphon deployment at Chapman Lake;

AND THAT the report include the legislative and regulatory aspects related to obtaining the necessary permits for long term siphon use.

The SCRD diverts water from Chapman Lake via a weir and under the authority of a storage licence from the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD). The weir on Chapman Lake regulates the diversion of lake water into Chapman Creek. The channel connecting the lake to the weir has a high point that prevents SCRD from accessing the full volume authorized under its water licence.

During the dry summer of 2015, it was identified that the water supply might not be sustained until the start of the fall rains. Therefore, a temporary siphon system was designed and material for its construction purchased.

The siphon system pulls water from Chapman Lake and transports it over the channel and weir, releasing it down the creek. A siphon system was chosen as the preferred option due to lower environmental and operational risks when compared to a pump station.

A pump station would require significant amounts of fuel to be brought on site. Helicopter flights to deliver the fuel for a pump station would need to be frequent. Fuel storage would have had to

be large enough to mitigate risks of not being able to fly due to cloud cover or the unavailability of helicopters during forest fire season.

The siphon system, by comparison, only requires a small pump to fill the siphons with water during priming and none during operation. However, if an air bubble occurred it could interrupt the siphon flow, which would require the siphon to be re-primed. This is dependent on site access and could take a considerable amount of time. This would mean there would be an interruption in the water supply.

In the summer of 2015, the SCRD obtained two provincial authorizations for the installation and operation of the siphon system. The first was a temporary amendment to its BC Parks Use Permit from the Ministry of Environment and Climate Change Strategy. The second was a Use Approval from FLNRORD to divert water beyond the existing water licence.

In 2015, rains fully replenished Chapman and Edwards Lakes in late August, thus eliminating the need for the siphon system to be installed and operated. The rain started on the day installation was to begin.

In 2016, a *Water Sustainability Act* order from FLNRORD set Environmental Flow Needs (EFN) for Chapman Creek at 200 litres per second (l/s), which equals the original design capacity of the siphon system.

The summer of 2017 was again dry and the need for the siphon system was identified. New provincial authorizations were obtained and the siphon system was installed between September 27 and October 2, 2017. The siphon system was used until October 13 for a total of 11 days of operation.

The summer of 2018 was again dry and the siphon system was used for 13 days between August 31 and September 12, 2018.

On February 7, 2019, a letter from the Honorable George Heyman, Minister of Environment and Climate Change Strategy informed the SCRD that the park boundary amendment required for the Chapman Lake Expansion Project would not proceed. The letter also stated that "the SCRD will still be able to apply for temporary emergency amendments to their permit to employ the siphon system." This is addressed in the April 18, 2019 ISC staff report titled, "*Implications of the Refusal of the Park Boundary Amendment on the Chapman Lake Infrastructure Improvement Project"*.

The purpose of this report is to outline the operational, financial and human resource implications of regular, extended periods of siphon deployment at Chapman Lake including the legislative and regulatory aspects related to obtaining the necessary permits.

DISCUSSION

Siphon System

The siphon system consists of five parallel pipes that are 285 metres in length. Each pipe is made of six segments which are designed to maximize reach into the lake. As the siphon pipes were intended to be temporary, a longer term strategy for the system is required.

Operational Implications

In both 2017 and 2018, the Chapman Water System relied on the siphon system and the Drought Management Plan to ensure water was available for human health, fire flows, and Environmental Flow Needs.

The siphon system was not designed or built to function on a multi-year basis and there are several operational items to consider, such as:

1. *More rapid escalation through water restriction stages*. The siphon system requires staff to escalate through the Drought Management Plan (DMP) Stages more rapidly. There are two factors which enable the siphon to be deployed, which is the Board's Policy and BC Parks' requirement that the SCRD be in Stage 4 watering regulations when accessing water beyond the SCRD's current water licence for the top three metres of Chapman Lake.

   Additionally, the siphon system's FLNRORD licence only allows for 200 litres per second to be diverted. The total water demand during Stage 4 can be almost double that flow. Therefore, water must be held back in Edwards Lake to be released in parallel to the siphon in order to meet total flow needs.

   Diverting a significant volume of water from Edwards Lake prior to accessing additional water in Chapman Lake via the siphon system is not preferable. It will result in a situation that the siphon would not be able to provide the total water supply demand once the accessible water in Edwards Lake is fully depleted.

   Consequently, in order to maximize the potential time period where supply can meet demand, the siphon would always need to be used parallel to a diversion from Edwards Lake. This results in the DMP's Stage 4 being implemented earlier in order to enable the use of the siphon system.

2. *Reduced control*. The siphon system cannot be operated via satellite control like the valves controlling flows from Chapman and Edwards Lakes. Monitoring and adjustments of the siphon system must be done on-site, which can be hindered due to the remote nature of Chapman Lake. This reduced control forces staff to release more water than needed to ensure adequate flows in Chapman Creek, consequently reducing the period of time accessible water supplies can meet demand.

3. *Reduced reliability*. The siphon system is not as reliable as the gravity fed valves releasing water from the lakes.

   The siphon was installed as a temporary solution. The pipes are held to concrete anchor blocks and have shifted downstream slightly. This means the lake depth at the siphon inlet is slightly shallower than when built, resulting in less accessible water. In 2018, it represented a small loss of accessible volume but this issue will persist if relied upon for future use. Once shifted downstream, there is no way of pulling the siphon back upstream and deeper into Chapman Lake.

4. *Unknown performance at lower lake levels*. The siphon system was designed and installed with the best information available at the time. It was used successfully in 2017

and 2018. However, it was identified that an extension of the outlet is required to access the fully authorized volume of water. An extension on the outlets will allow the siphon system to operate at lower lake levels while maintaining the necessary height differential between inlet and outlet.

The siphon system's performance at different lake levels is unknown. Accessing the fully authorized volume of water would result in lake levels lower than have been seen in the previous two summers. When the siphon system approaches this limit, there may be unforeseen complications limiting functioning siphons.

5. *Reliance on temporary permits*. The siphon system's operation and maintenance requires two permits. The first is a Use Approval from FLNRORD which expires August 23, 2019. Use Approvals have a legally limited term of two years. The second is a temporary amendment to the Parks Use Permit from BC Parks which expires October 30, 2019.

   While the SCRD can apply for these temporary permits, continued authorization is not guaranteed.

6. *Additional environmental monitoring*. Operation and maintenance of the siphon system requires additional environmental monitoring by a third party as well as additional reporting by staff.

7. *Winterization.* The siphon system must be winterized in order to survive the winter freeze undamaged. Saddles and valves must be removed and the siphons drained prior to freezing. This work tends to occur when temperatures drop, lake levels have replenished and creek flows are higher, making it a more challenging work environment.

Human Resource Implications

The siphon system requires more work to prepare and maintain than a permanent solution. Human resources are therefore allocated to the siphon rather than completing approved projects and work-plan items.

Prior to priming the siphon system, work includes ensuring regulatory and permitting requirements are met, operations planning, transporting equipment such as priming pump and fuel to the site, inspecting the siphons as well as reattaching saddles and valves.

The siphon system also requires constant onsite monitoring. Creek flows and water treatment plant flows are monitored constantly day and night during summer droughts and site visits are conducted on an almost daily basis. It takes 12 hours for water released from Chapman Lake to reach the Chapman Water Treatment Plant and there is no creek flow monitoring in between these two points.

When the need for the siphon system ends, it is decommissioned and winterized.

Part of the work involves frequent travel to Chapman Lake. The siphon system is accessed by helicopter or by hiking. Flying in by helicopter is the preferred option but staff must hike in when weather prevents flying or helicopters are fully booked for other purposes such as forest fires. When hiking in, a full day is required to provide a 30 minute window to conduct necessary work.

This can be necessary on an almost daily basis and requires at least two or three staff given safety considerations.

Managing the water system during times of scarcity is a challenging situation for the community as well as staff. Siphon operation contributes to staff stress and fatigue due to the additional requirements and near constant monitoring of the siphon system and water flows.

The total staff time associated with the maintenance and operations of the siphon systems in 2019 is estimated to be approximately 0.5 FTE.

Timeline for next steps

The siphon system is the only method currently available for adding substantial volumes of water to the Chapman System. This will likely be the case for the next several years if permits are obtained. As such, the siphon system will be relied upon to withstand the now more common summer droughts and has become a larger part of staff's operational focus.

Applications for extensions to the provincial authorizations to operate and keep the siphon system at Chapman Lake past 2019 will be completed shortly.

It is also recommended the siphon system receive a systemic review and evaluation for risks and improvements. Recommended work and improvements for 2019 include:

- Full engineering review of siphon system;
- Monitoring equipment to better gauge siphon performance remotely, including pressure gages and a flow meter;
- Improved tie-downs of the siphon system to anchor blocks; and,
- Extensions to the outlets.

As in the summer of 2018, work and inspections of the siphon systems start as soon as the channel is sufficiently low to enable access. This involves reattaching saddles and valves, inspections of the siphon pipes, underwater camera inspection of the fish screens and inlets. Additional measures may be required following these inspections.

Financial Implications

Continued reliance on the siphon system incurs additional costs which are not budgeted for in the Financial Plan. In 2018, materials, labour, and contractors associated with siphon system operation resulted in approximately $45,000 in costs funded from the regular operational budget for the Regional Water Service [370].

The total cost for the purchase of the materials and the helicopter transportation costs associated with the recommended works is estimated to be $50,000. Staff recommend that the 2019-2023 Financial Plan be amended to fund these costs from Operating Reserves for the [370] Regional Water Service.

Additional annual maintenance and labour costs are associated with the continued reliance on the siphon system. Staff recommend that these be further evaluated in summer of 2019 and, if warranted, be included for the Boards considerations during the 2020 Budget process.

STRATEGIC PLAN AND RELATED POLICIES

The siphon system supplements the existing water supply and ensures the SCRD can continue to meet its mission of providing quality services to our community through effective and responsive government.

CONCLUSION

The siphon system enabled the SCRD to access additional water to meet the community's needs for health and fire flows as well as Chapman Creek's Environmental Flow Needs (EFN) in 2017 and 2018.There are operational, human resource, and financial implications to long term operation.

Operationally, they include a more rapid escalation through the DMP water restriction stages, reduced control, reduced reliability, unknown performance at lower lake levels, reliance on temporary permits, additional environmental monitoring, and winterization requirements. All of these require additional human resources and incur costs.

The siphon system is the only method currently available for adding substantial volumes of water to the Chapman System. This will likely be the case for the next several years. As such, the siphon system will be relied upon to withstand the now more common summer droughts and has become a larger part of staff's operational focus.

Improvements to the siphon set-up are considered to improve the siphon operation and mitigate risks requiring a budget of $50,000. Staff recommend that the 2019-2023 Financial Plan be amended to fund these costs from the Operating Reserves for the [370] Regional Water Service.

Applications for provincial authorizations will be completed shortly to enable the siphon system to remain on site past the summer of 2019.

Reviewed by:			
Manager	X – S. Walkey	CFO/Finance	X – T. Perreault
GM	X – R. Rosenboom	Legislative	X – A. Legault
A/CAO	X – A. Legault	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Shane Walkey, Manager, Utility Services

SUBJECT: **2019 SNOW PACK UPDATE**

RECOMMENDATION(S)

THAT the report titled 2019 Snow Pack Update be received for information.

BACKGROUND

The SCRD conducts manual snow surveys at two locations in Tetrahedron Provincial Park: the Chapman and Edwards Snow Courses (see Figure 1). The sites were established by the Provincial Snow Survey Program. The SCRD participated in this program from 1993 until 2003 and began again in 2017. Surveys take place near the beginning of each snow month; historically SCRD has conducted February, March, April and May surveys. The April snow survey is considered to be the most important survey of the year for evaluating the impact of snow pack on seasonal water supply because by April 1, usually 95% of the winter snowpack has accumulated.

Snow depth and Snow Water Equivalent (SWE) measures are collected at each snow course. SWE is the primary measure that the Provincial River Forecast Centre uses for making flood and water supply predictions; it is the depth of water that would cover the ground if the snow was in a liquid state.

It has been shown over the years that the Edwards Snow Course, typically receives approximately 30% less snow and SWE than the Chapman Snow Course.

In addition to manual snow survey information, a high elevation weather station (the weather station, see Figure 1) was installed within the Chapman Creek Watershed on September 15, 2017. The weather station transmits near real-time data to the Coastal Hydrology & Climate Change Research Lab at Vancouver Island University. It was installed and is maintained in partnership between SCRD, Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) and Ministry of Environment (MOE).

The intent of collecting and tracking snow data (and additional weather data collected at the weather station) is to enhance our understanding of the hydrological characteristics of the Chapman Creek watershed, specifically, the catchment areas above both Chapman and Edwards Lakes. It allows SCRD staff to predict the volume of snow meltwater in the upper Chapman Creek watershed and the rate and timing of snow melt, assisting to inform water management decisions.

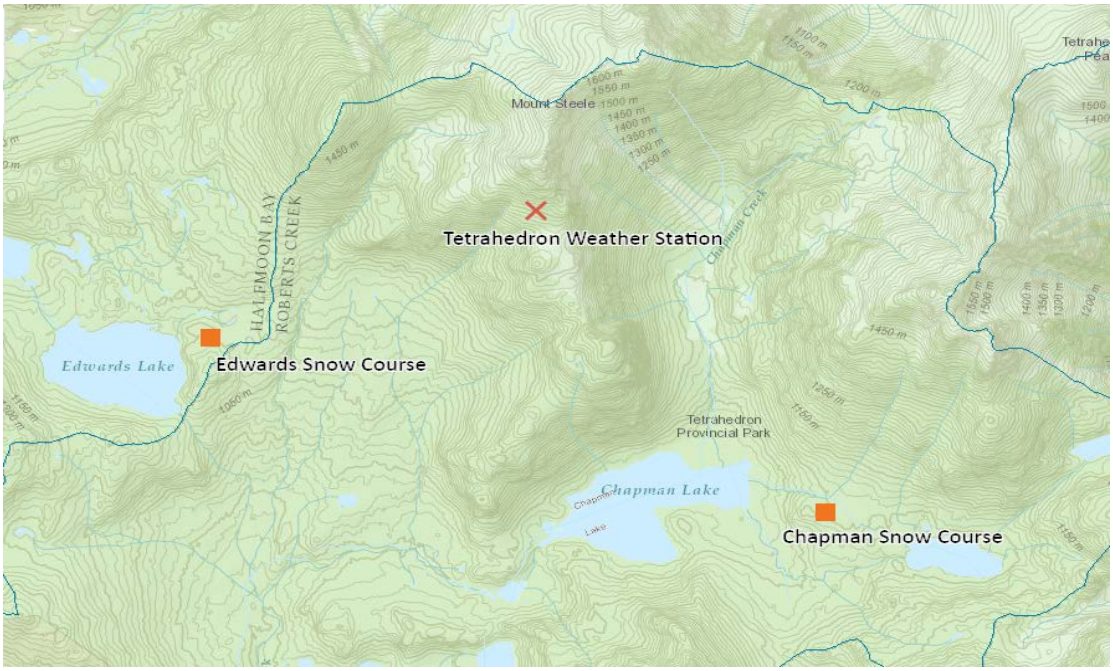


Figure 1. Locations of SCRD (Provincial Snow Survey Program) Snow Courses and Tetrahedron high elevation weather station.

Figure 2. Chapman Lake and snow course Jan 29, 2019.

The purpose of this report is to provide Committee with information regarding the snow pack for 2019.

DISCUSSION

Snow Pack

This year, the April 1 snow survey results show that the SWE is 92 cm at Chapman Snow Course, down 34% from the historic average for April (Figure 3). The SWE is 55 cm at Edwards Snow Course, down 45% from the historic average for April (Figure 4).

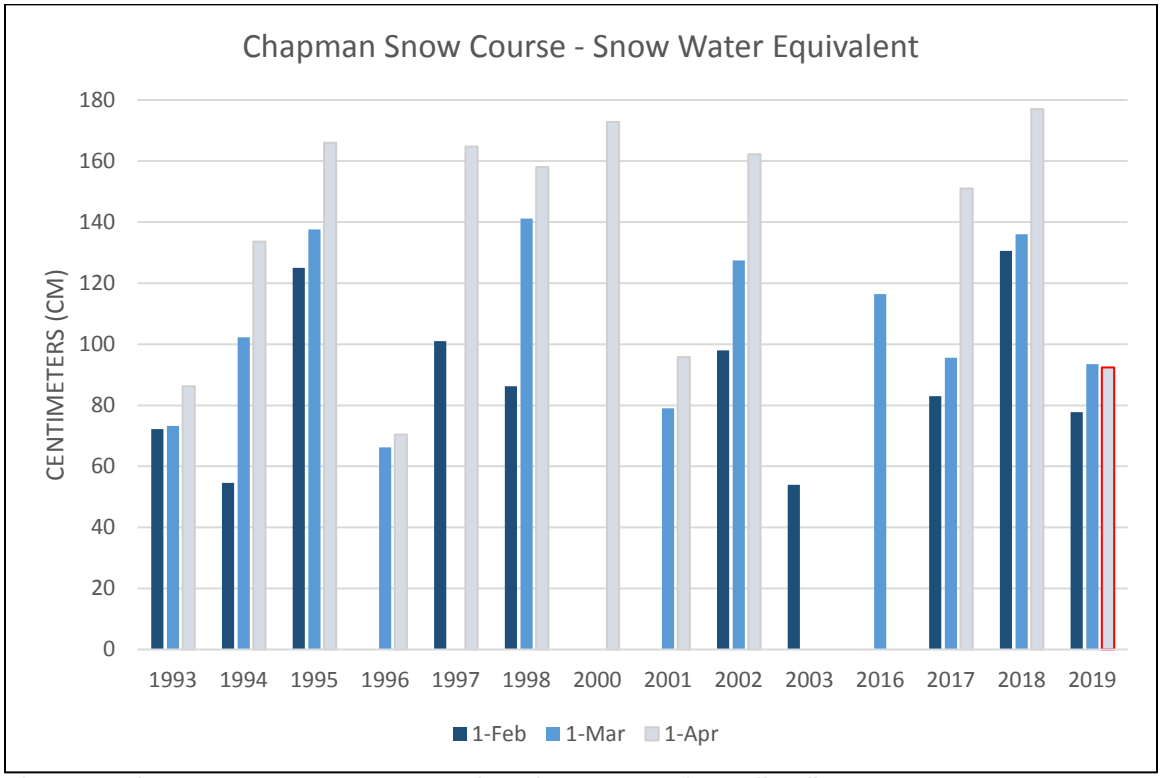


Figure 3. Chapman Snow Course SWE in February, March, April - all survey years.

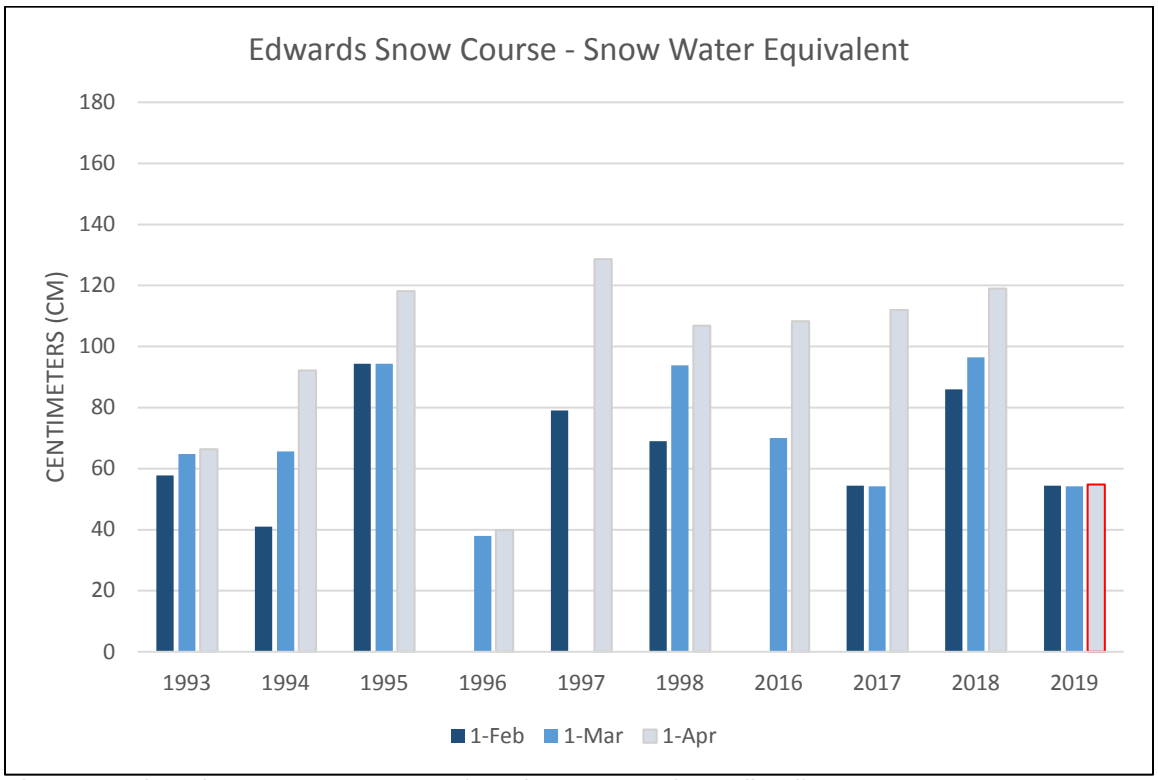


Figure 4. Edwards Snow Course SWE in February, March, April - all survey years.

Data transmitted from the weather station can be used to compare snow pack on the same day for 2018 and 2019 (see Figure 5). This is useful because we know that in 2018, all snow was gone at the weather station by mid-July. Since the SWE at the weather station is 24% lower on April 7 this year compared to the same day last year, it can be predicted that the date at which all snow will be melted in the upper Chapman Creek watershed will be earlier this year than last. The rate of snow melt is also heavily influenced by temperature and precipitation, as discussed below.

Year	Snow Depth (cm)	Snow Water Equivalent (cm)
2018	496	140
2019	338	106

Figure 5. Comparison of Snow Pack on April 7 at Tetrahedron High Elevation Weather Station 2018-19.

Snow Melt

Data from the weather station and the Chapman Creek monitoring station, located downstream of the Chapman Creek Water Treatment Plant intake, show how temperature and precipitation combine to impact snow melt and correspondingly, flow rates in Chapman Creek.

The increase and decrease of snow melt volumes in the creek is related to the warming and cooling cycle of day to night (see Figure 6). Rain affects the creek flow volumes as reflected in Figure 7.

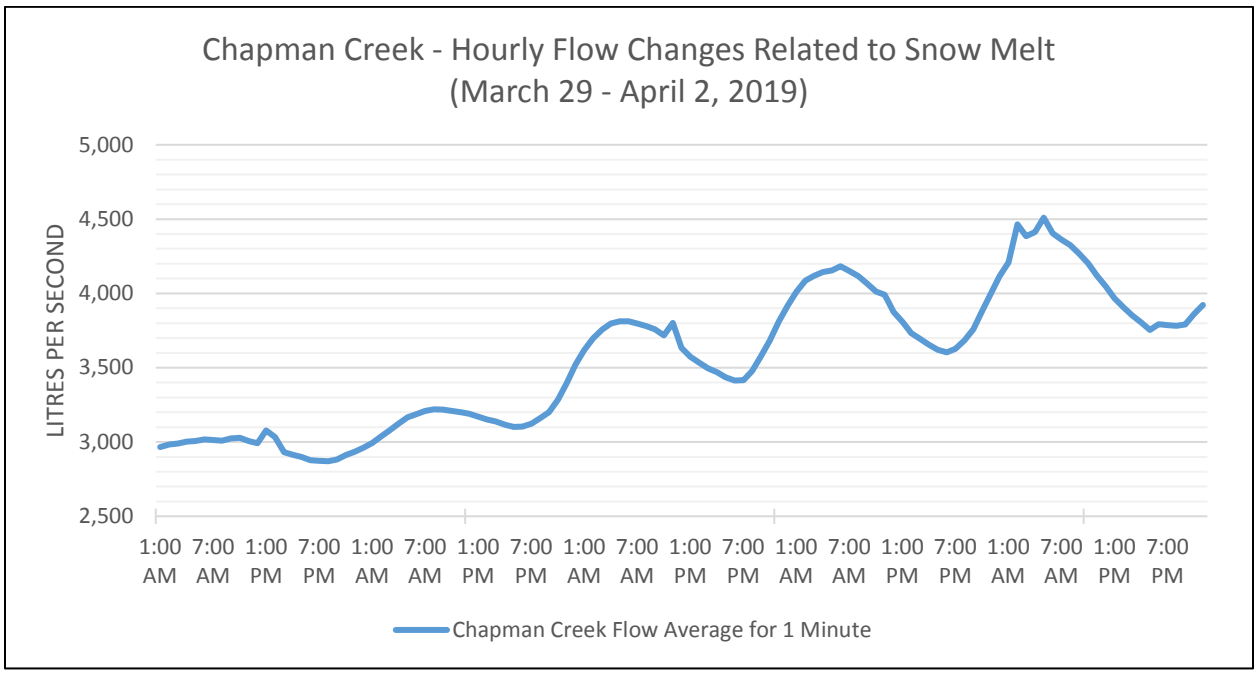


Figure 6. Chapman Creek – Hourly Flow Changes Related to Snow Melt (March 29 – April 2, 2019)

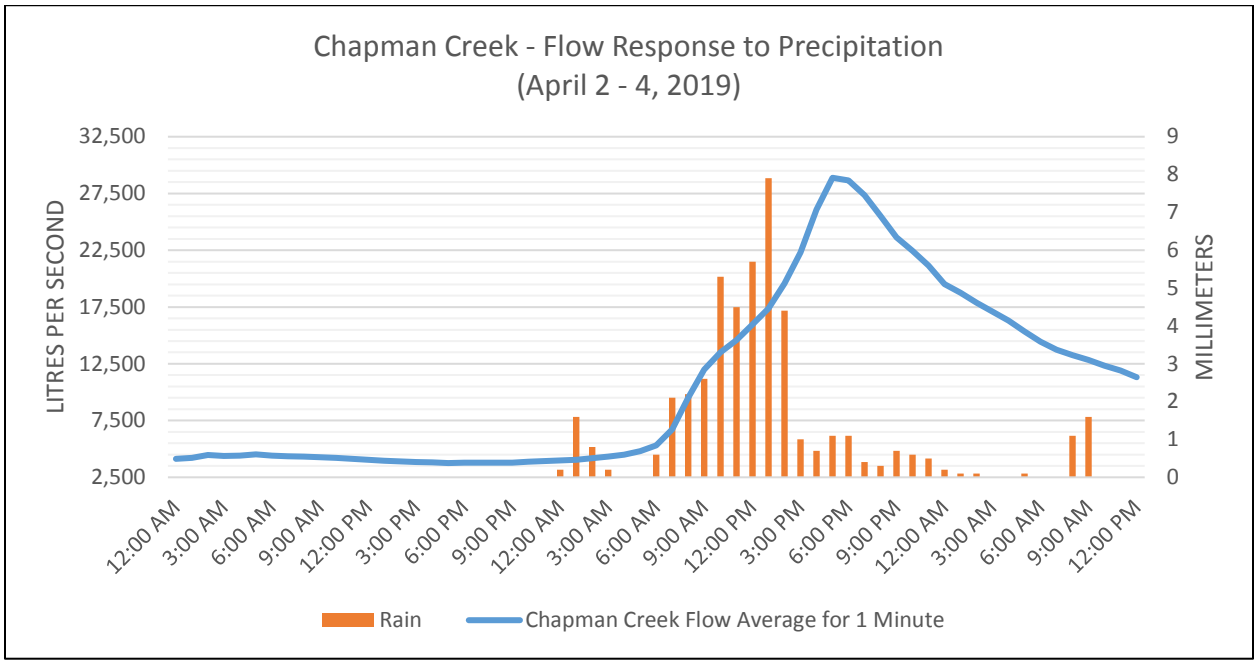


Figure 7. Chapman Creek – Flow Response to Precipitation (April 2- 4, 2019)

Based on this data it can be concluded that the frequency and intensity of rain events in the Chapman Creek watershed during the remainder of the spring and the summer will be the primary drivers for the water supply availability this summer.

Staff will continue to monitor the weather station and Chapman Creek monitoring station and will complete a further snow survey at the two snow courses in late April 2019.

STRATEGIC PLAN AND RELATED POLICIES

Monitoring the Chapman and Edwards Snow Courses assists in management and provision of a reliable water service to the community.

CONCLUSION

The SCRD conducts manual snow surveys at two locations in Tetrahedron Provincial Park: the Chapman Snow Course and the Edwards Snow Course and monitors a high elevation weather station.

In 2019, the April 1 SWE is down 34% at Chapman Snow Course and down 45% at the Edwards Snow Course compared to the historic average. The SWE at the weather station is 24% lower on April 7th this year compared to the same day last year. Therefore, it is predicted that all snow will be melted from the upper Chapman Creek watershed earlier this summer than last.

The weather station will continue to be monitored and a further snow survey at the two snow courses will be completed in late April 2019.

The frequency and intensity of rain events in the Chapman Creek watershed during the remainder of the spring and the summer will be the primary drivers for the water supply availability this summer.

Reviewed by:			
Manager		Finance	
GM	X – R. Rosenboom	Legislative	
A/CAO	X – A. Legault	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Service Committee – April 18, 2019

AUTHOR: Remko Rosenboom, General Manager, Infrastructure Services

SUBJECT: **2018 WATER USE AND WATER USERS ANALYSIS**

RECOMMENDATION(S)

THAT the report titled 2018 Water Use and Water Users Analysis be received for information.

BACKGROUND

On May 24, 2018 the Board adopted the following recommendation:

172/18 **Recommendation No. 1** *Water Sourcing Policy – Policy Framework (in part)*

AND FURTHER THAT staff report to a Committee meeting with a review of the water capacity for fire-fighting, emergency situations and for agricultural water uses.

At the March 21, 2019 Infrastructure Service Committee a report reviewing the implementation of the Drought Management Plan (DMP) in 2018 was discussed. During those discussions more detailed information was sought on specific users and uses.

The purpose of this report is to provide information on the major water users and uses based on 2018 data for the Chapman Creek water system during drought conditions.

DISCUSSION

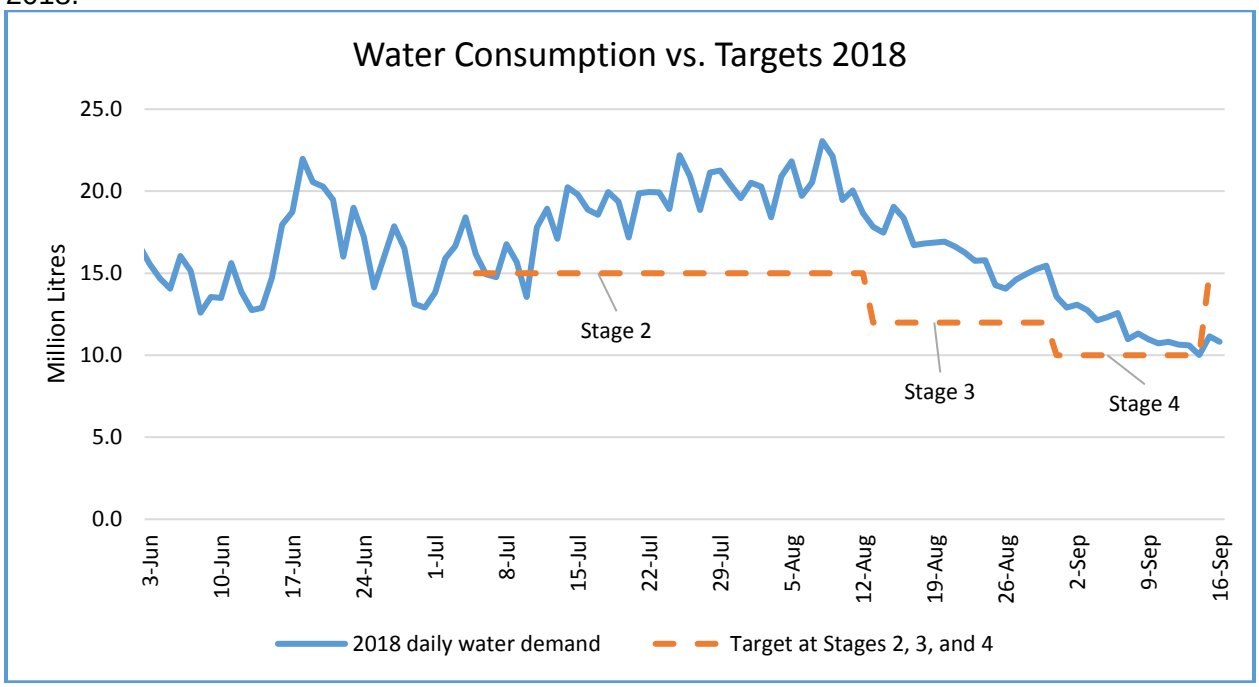
Table 1 shows the dates that the DMP Stages were called in 2018.

Table 1

Stage	Date stage called
Stage 1	May 1, 2018
Stage 2	July 5, 2018
Stage 3	August 13, 2018
Stage 4	August 31, 2018
Stage 2	September 14, 2018

Total Use

Total residential, commercial and institutional water use in the Chapman Creek water System in 2018.



It is assumed that during the winter months most outdoor use is not occurring. Consequently the difference between the usage during a DMP-stage and the winter months can be assumed to be the result of seasonal use. With the current average winter use is approximately 10,200 m3 per day, the outdoor use during Stage 2 in 2018 was approximately 10,000 m3 per day.

Residential use

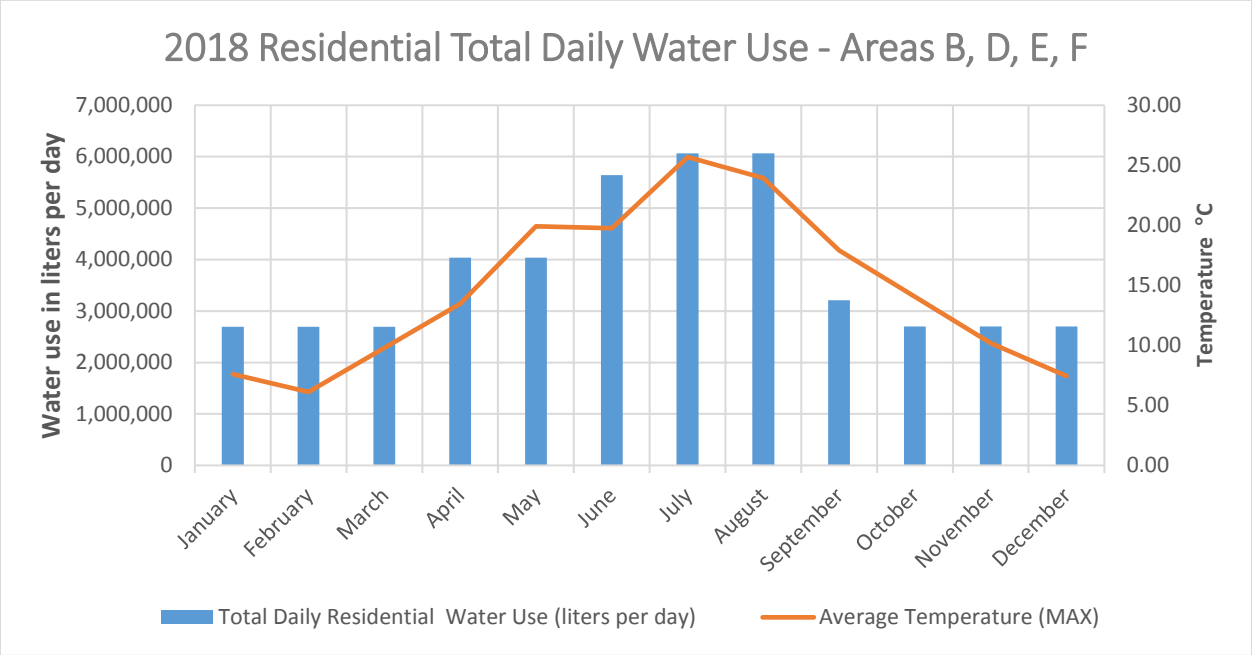
As the installation of meters on residential properties within the District of Sechelt and the Sechelt Indian Government District has not been completed yet, the data included in this report is based on residential water meters installed in the Electoral Areas only. This accounts for about 50% of all the residential service connections on the Chapman Creek water system, as well as the Langdale, Soames, and Granthams wells.

It is recognized that the difference in the average water use between a more urbanized area and a rural area could have an impact on the accuracy of the presented data.

The data also does not account for a potential increase in residential consumption due to a higher average number of persons per residential connection resulting from the increased use of short-term rentals during the summer months compared to the winter months. Similarly, the data does not account for tourism.

These factors are expected to have minimal impact to the accuracy of the conclusions included in this report.

The figure presented below shows the daily residential consumption for Electoral Areas B, D, E, and F.



Based on this data the additional residential use in these Electoral Areas during Stage 2 is about 3.4 Million liters per day, which is 125% of the average residential fall and winter use.

There has never been a detailed survey undertaken to determine how residents are using this water, but based on studies completed by other local governments it can be assumed that approximately 50% of the use during Stage 2 can be attributed to lawn watering.
Other large residential uses that could account for the remainder of the additional seasonal use will be the irrigation of vegetable gardens, fruit trees and ornamental plants and trees.
Based on observations and the water meter data, it can be concluded that a significant portion of this all of these residential outdoor uses continued during Stage 3, despite regulations.

Firefighting and emergency water supply

The treated water reservoirs in the system are the primary reservoirs for immediate firefighting water supply and the DMP stages do not impact the water levels or fill rates of those reservoirs.

Staff manage the water levels at Chapman and Edwards lakes such that even during advanced water restrictions there is a significant amount of water available to respond to emergencies such as major structural fires or small wildfires.

Agricultural use

Based on data from currently installed water meters and the 2014-2015 Agricultural Water Use Study, the increase in demand from allowing greater watering for food producers with Farm Status is about 6% percent of the total additional seasonal water use.

There were 64 water accounts with Farm Status on the Chapman System in 2018.

The SCRD does not currently have a detailed understanding of overall agricultural water demand on the coast. A report on a proposal to create such insight is included in the agenda for this Committee meeting.

Major users

All commercial, institutional and other large users on the Chapman Creek water system have meters installed which are read every quarter. Table 2 presents an overview of the top 20 commercial users on the Chapman Creek water system in 2018 sorted highest to lowest in Q3. For privacy reasons the names of these users are not listed.

Table 2

	Average Daily Use (liters per day)					
Type	**Q1**	**Q2**	**Q3**	**Q4**	**Summer (Q3) vs Winter (Q1)**	**Yearly Average**
Housing/Camp/Campground*	64,833	71,649	84,625	23,923	19,792	61,258
Commercial*	6,838	29,622	61,195	11,244	54,356	27,225
Institutional	23,036	69,189	50,774	58,176	27,738	50,294
Institutional	49,304	40,219	46,367	20,153	-2,937	39,011
Commercial*	49,600	32,438	44,055	15,868	-5,545	35,490
Public facility*	21,523	12,855	36,603	2,553	15,079	18,384
Public facility*	164	29,195	27,912	6,838	27,748	16,027
Public facility*	25,205	32,877	25,041	28,362	-164	27,871
Commercial*	13,962	20,614	24,953	16,493	10,992	19,005
Public facility*	5,019	22,553	20,679	14,553	15,660	15,701
Housing/Camp/Campground*	20,745	22,685	20,570	13,326	-175	19,332
Housing/Camp/Campground*	21,907	7,945	20,099	3,342	-1,808	13,323
Public facility*	208	57,896	19,967	5,929	19,759	21,000
Commercial*	11,319	16,603	19,879	11,167	8,560	14,742
Housing/Camp/Campground*	6,126	17,249	18,762	8,866	12,636	12,751
Housing/Camp/Campground*	11,525	13,396	18,114	10,607	6,588	13,411
Commercial	15,106	18,185	16,023	15,833	917	16,287
Commercial*	31,014	28,668	13,436	10,751	-17,578	20,967
Commercial	16,925	15,742	12,261	13,127	-4,664	14,514
Commercial*	16,395	16,668	9,260	11,342	-7,134	13,416

* The outdoor use by these users was subject to the 2018 DMP watering restrictions.

During the summer months (Q3) these 20 users consumed close to 600,000 liters a day which equates to approximately 6% of the total additional use during the summer months of 2018 compared to the winter months. It is unknown what percentage of this use is indoor use vs. outdoor use which is subject to the Drought Management Plan.

Staff will continue to work with these users to reduce their outdoor water use during the summer months. Some users could reduce their use without significant impacts to the community; however reductions by certain users could not occur without causing such impacts.

STRATEGIC PLAN AND RELATED POLICIES

The SCRD Strategic Plan 2015-2018 has a priority to Embed Environmental Leadership.

CONCLUSION

This report provides information on the water use and water users on the Chapman Creek water system during the summer of 2018.

Reviewed by:			
Manager	X – S. Walkey	Finance	
GM		Legislative	
A/CAO	X – A. Legault	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Service Committee – April 18, 2019

AUTHOR: Remko Rosenboom, General Manager Infrastructure Services

SUBJECT: **DROUGHT MANAGEMENT PLAN 2019**

RECOMMENDATION(S)

THAT the report titled Drought Management Plan 2019 be received;

AND THAT the Drought Management Plan and Water Rates and Regulations Bylaw 422 (Schedule J) be revised to reflect recommendations in Option 1, which includes prohibiting lawn watering at Stage 2 and increasing ability to use water for food production;

AND THAT Bylaw Notice Enforcement Bylaw 638 (Schedule A) be revised accordingly;

AND FURTHER THAT a request be sent to the Town of Gibsons to harmonize their bylaw with SCRD's Water Rates and Regulations Bylaw 422 (Schedule J) concerning the Drought Management Plan regulations.

BACKGROUND

The following resolutions were adopted at the regular Board meeting of March 28, 2019:

092/19 **Recommendation No. 1** *Drought Management Plan*

THAT the report titled Drought Management Plan be received;

AND THAT a report be provided that reviews the water restriction stages in other communities and looks to further restrict water uses starting at Stage 1 in the Drought Management Plan, except for food production, and also includes a review of the penalties for infractions in other communities.

The Drought Management Plan (DMP) is a technical guide that provides direction for managing water supply during times of supply challenges or seasonal droughts. Changes have been made to the DMP in the past to reflect changing community values and priorities as well as to provide greater clarity.

The regulations are structured to create an escalating mechanism that minimizes the negative impacts of regulations on the community while providing staff with operational tools for responsive and timely management of water supplies.

On one end of the spectrum, Stage 1 describes "normal" conditions where regulations limit demand peaks on water treatment and distribution infrastructure as well as foster conservation

habits. On the other end of the spectrum, Stage 4 describes a "severe" situation where water may no longer be accessible. At Stage 4, water is prioritized only for the essential uses of human health, environmental flow needs (EFN), and fire protection.

Stages 2 and 3 describe "moderate" and "acute" water supply situations respectively. Regulations at these stages are meant to prolong the period of time where accessible water is available and to reduce the need and length of a Stage 4 activation.

The purpose of this report is to present options for an updated DMP.

DISCUSSION

Staff completed a technical analysis of SCRD's water supply and demand patterns as well as a review of similar plans in neighbouring jurisdictions. This information was consequently evaluated in the context of the Board's direction to relax the restrictions on food production and increase them for lawn watering. The overall objective is to avoid increasing the vulnerability of the Chapman Creek water system supply during times of drought.

Regulating Lawn Watering

An increased number of lawns are left dormant in the summer as a result of a shift in culture on the Sunshine Coast. This shift was in part fostered by a previous Golden Lawn Award campaign. This campaign promoted the message that established lawns have the ability to go dormant during dry periods and can rejuvenate after significant rains.

Studies in other jurisdictions estimate lawn watering could represent approximately half of the seasonal summer water demand increase in the summer.

Lawn watering was prohibited at Stage 3 for the first time in 2018. Demand reductions between Stages 2 and 3 were not significantly different in 2018 compared to 2016 or 2017. Further restricting water used for lawns is considered to be the principal avenue to provide broader water demand reductions in the summer, making water available for food production. This would primarily come from further reducing lawn watering at Stage 2.

Based on the low reductions in use from Stage 2 to 3 experienced in 2018, additional education, communication, and enforcement resources will be required to realize the reduced water use.

Options Overview

The current SCRD regulations, two proposed options for 2019, and the regulations of other nearby jurisdictions are provided in Attachment A.

Option 1. Supporting overall food production (Recommended)

As outlined in Attachment A, this option provides greater flexibility for food production than currently available. The proposed prohibition of lawn watering at Stage 2 will likely create a sufficient reduction in demand to allow more water for food. This option provides additional sprinkling hours for food producing plants and trees at Stage 2. It also creates an exemption for commercial food producers to use water with more flexibility at Stages 2 and 3.

Given the severity of water supply challenges at Stage 4, an exemption for food production is not recommended at this stage. Stage 4 is needed as the final step where only essential uses of human health, fire protection, and environmental flow needs are prioritized. Effectively implementing this option may provide savings significant enough to reduce the likelihood and duration of Stage 4 regulations due to the savings from banning lawn watering. This would reduce the risk of watering regulations impacting food producers, who would not be exempt from Stage 4. Additionally, the SCRD's Rainwater Harvesting Rebate Program can support small scale food growers in creating additional water storage for crops during Stage 4 restrictions.

Most commercial farms on the Sunshine Coast pay a non-metered residential water rate. Staff propose that these farms be moved to a metered commercial rate as of January 1, 2020 to reflect the commercial nature of the business. Based on historic data, this would increase costs by an average of $350 per year. These could be identified using Farm Status, however, this may be an unreasonable barrier and was raised as a concern by the Agricultural Advisory Committee. A proposed simpler mechanism is to allow farms selling food to register for a metered rate and associated expanded irrigation schedule. The total number of registered farms is at this time unknown but the metered rate will be used to promote efficient irrigation and mitigate risks of high water users negatively impacting the Chapman Creek water system supplies.

Strengths include:

- The total water demand increases for food production will likely be less than the savings achieved from the proposed lawn watering ban at Stage 2.
- Increased sprinkling hours for food producing plants and trees at Stage 2 will help local food production.
- Not modifying Stage 4 regulations maintains the escalating mechanism operationally required in the DMP.
- Based on data from water meters and the 2014-2015 Agricultural Water Use Study, the increase in demand from allowing greater watering for food producers with Farm Status[1] is smaller than the likely savings from a ban on lawn watering at Stage 2.
- Should exemptions for commercial farms extend beyond Farm Status, water savings from the ban on lawn watering will likely remain greater than the increase in demand. Based on water meter data collected since the Agricultural Water Use Study, some of the commercial farms with higher consumption patterns have decreased consumption, partly through education work.
- A metered commercial water rate can promote more efficient use of water by the commercial farms with higher water demands, mitigating risks to the overall water supplies situation.

Weaknesses include:

- New Lawn Watering Permits would expire at Stage 2. Recently planted lawns that did not have time to establish themselves will likely be lost, along with the associated investments.

[1] There were 64 water accounts with Farm Status on the Chapman Creek water system in 2018.

Option 2: Supporting commercial food production

This option keeps current regulations for food producing plants and trees but also creates a class for commercial food production for sale. It reduces the scheduled sprinkling hours for lawn watering at Stage 2 to offset the increase in demand.

Strengths

- Strengths for farms producing food for retail are similar to Option 1.
- Lawn watering is still allowed at Stage 2 and New Lawn Watering Permits will expire in the same way as the current system, after 21 days or at Stage 3. This will help ensure new lawns have been properly established prior to prohibiting watering.

Weaknesses

- There is a higher risk than Option 1 that demand reductions from lawn watering would not offset increases in demand for food producing plants and trees resulting in the likelihood of the need to call and the duration of Stage 4 regulations.

Watering trees, shrubs and flowers

Both options provide for hand watering or micro/drip irrigation of trees, shrubs, and flowers only during morning hours at Stage 3. This will reduce evaporation losses and is better for plant health while still allowing for larger lots with extensive landscaping to irrigate all their plants over a multiple day span.

Watering times

Some jurisdictions allow a maximum number of watering hours within a specific window. For example, sprinkling can be allowed for a maximum of two hours between 4am and 8am.

Some requests have been received in the past for a similar approach at the SCRD as it allows people with automatic sprinklers to optimize irrigation at earlier hours. However, this approach is much more difficult to enforce.

Staff recommend maintaining watering schedules within specific hours as is currently done at the SCRD and in most neighboring jurisdictions. This will minimize friction between staff and residents and optimize staff resources working on non-compliance files.

Public Fields

Public infrastructure has a value that can be recognized in the DMP. One such public asset is sports fields. Currently, sports fields have a modified irrigation schedule during Stages 1 and 2 and they are not allowed to irrigate at Stages 3 and 4.

Prohibiting lawn watering at Stage 2 would prevent the SCRD, District of Sechelt, and Town of Gibsons (at Brothers Park in Zone 3) from irrigating sports fields. This would have an impact on service levels beyond current DMP impacts. Fields would likely see more closures due to soil compaction and unsafe playing conditions. More importantly, extending the period of time fields are not irrigated would place a strain on the fields from which it would be more expensive and challenging to recover.

Option 2 with one hour per week for lawn watering would be inadequate to maintain playable sports fields.

Staff recommend an exemption from lawn sprinkling for public sports fields at Stage 2.

Public Pools and Arenas

Public pools and arenas are other assets associated with community service levels and in the case of pools, public health. The SCRD works to minimize the impacts of water demand from these facilities during periods of drought. Annual pool maintenance has been moved up in the summer to avoid higher Stages. The installation of arena ice has been delayed in the past to wait until the water supply improved in keeping with the principles of the DMP.

These uses tend to follow a pattern of a large peak in demand followed by small amounts of water to top up pools or resurface ice. In pools, the peak occurs during the annual pool maintenance, which benefits from groundwater levels being lower to maintain pool structural integrity. For arenas, the peak is ice installation. The Sunshine Coast Arena has also recently received a new condenser, cutting operational water use by 85%, similar to Gibsons Arena. Pool annual maintenance and ice installation is coordinated between Recreation and Infrastructure staff to minimize impacts on the water system.

Given the smaller amounts of water used to top up pools and clean ice during operation, staff recommend keeping these uses as allowed uses at Stage 2 and exempt them from Stage 3.

One exception is the Shirley Macey Splash Pad, which has a continuous high demand. It operates at reduced hours at Stage 2 and shuts down at Stage 3. This is in accordance with the DMP regulations and is recommended to continue.

Other water conservation activities undertaken by the SCRD include:

- High-efficiency oxygenating shower heads installed in all SCRD facilities.
- Shorter showers campaign in recreation facilities with signage and education.
- Closure of the SAC hot tub during Stage 4 water use restrictions. Ongoing cleaning/maintenance requirements (per health code) require frequent emptying/refilling of SAC's large hot tub; SAC offers other warm amenities (leisure pool, steam room, sauna) for therapeutic and recreation purposes.
- Advanced turf care practices such as variable cut heights (to collect dew), regular aeration to promote root growth, custom seed and fertilizer blends to suit local climate, and twice-weekly turf testing to manage soil compaction and other wear and tear parameters.

Further water conservation activities being explored include:

- Facility audits for select SCRD facilities, including Sunshine Coast Arena – will identify energy and water saving opportunities
- Sports Field Water Efficiency project, supported with an Infrastructure Planning Grant – will consider groundwater source development and use of new technologies such as wetting agents.

Washing vehicles and boats

Some processes by commercial operations require washing, for example ICBC inspections after completed vehicle body repairs. This review will clarify Stage 3 regulations on car washing to:

"Only permitted for washing salt water from equipment or if part of an essential commercial process legally required by a third party". Wasting water will remain a contravention of the Bylaw.

In June 2018 the Board supported not reviewing regulations for vehicle washing at Stage 3 until additional water sources were secured. (See Attachment B).

Fine Review

SCRD's DMP fines were increased to current levels in 2017. The following table shows that current fines are in a similar range to neighboring jurisdictions. City of Calgary is the exception with significantly higher fines.

The maximum penalty under the Bylaw Notice Enforcement is $500 per infraction.

Table 1. Fines for DMP infractions

Stage	**1**	**2**	**3**	**4**
SCRD Current	$100	$200	$300	$400
SCRD Proposed	$200	$300	$400	$500
Capital Regional District	$100 - $250	$200 - $250	$400	N/A
Abbotsford	$100	$150	$200	$300
Mission	$250	$250	$500	$500
City of Nanaimo	$50 - $100	$50 - $100	$50 - $100	$50 - $100
Comox Valley Regional District	$50 - $75	$75	$100 - $225	$200 - $500
City of Calgary	$400	$600	$1,500	$3,000
Metro Van Members:				
-City of Vancouver	$250	$250	$250	$250
-City of Coquitlam	$75	$150	$300	$500
-Corporation of Delta	$150	$250	$400	$500
-District of West Vancouver	$100	$200	$400	$500
-District of North Vancouver	$100	$200	$300	$400

Staff requirements

Realizing water savings from increased regulations will require greater outreach, education, and enforcement efforts than currently undertaken. Staff resources are limited in this respect at this time. The SCRD hires one summer Water Conservation Assistant.

There is also potential for greater savings from an increased targeted outreach based on the Universal Water Metering program.

Hiring a second Water Conservation Assistant would increase staff capacity for one on one engagement with residents and other water users promoting water conservation. Staff could include the financial implications of doing so in the Water Community Engagement Plan 2019 which is anticipated for the April 25, 2019 Corporate and Administrative Services Committee.

Inter-departmental and Intergovernmental implications

Changes to the Drought Management Plan will require changes to Bylaws. Specifically, the Water Rates and Regulations Bylaw 422 (Schedule J) and the Bylaw Notice Enforcement Bylaw 638 (Schedule 1) will need to be reviewed to incorporate adopted changes.

The SCRD and the Town of Gibsons have harmonized their water restrictions. This is particularly important for the Town of Gibsons Zone 3, which currently uses water from the Chapman Creek water system. Staff will meet and share the latest changes to the DMP with the Town of Gibsons staff to ensure consistency and proactive communication occurs.

Communication Implications

No community-wide public participation or stakeholder consultation has been undertaken to inform the options provided in this report. The SCRD's Public Participation Toolkit provides a framework for understanding community impacts and proposed methods for meaningful public participation. The DMP generally and these options specifically would be described as the highest level of impact. As such, the proposed DMP changes would benefit from public engagement.

Staff are preparing the Water Community Engagement Plan 2019 for the April 25, 2019 Corporate and Administrative Services Committee meeting. This plan will include the organization of public events in May 2019 to inform the community of any changes to the DMP and provide a status update on the water supply projects. These events could also be used to start framing an engagement process with the community on items such as water governance, integrated watershed management and the role of the community in watershed protection. The organization of a watershed management oriented conference in Q4 2019 could also be part of this year's community engagement on water.

Staff suggest Board members be present at these events. In recognition of the recommendation made at the Planning Community and Development Committee meeting of April 11, 2019 to retain additional support the public engagement and given the short timeframe, retaining professional support to organize these events will be important.

This plan could also include hiring a second Water Conservation Assistant to increase the one on one engagement with community members on water conservation.

The plan would include an overview of the financial implications associated with the organization of the events in May 2019 and any other community engagement initiatives included in the plan.

STRATEGIC PLAN AND RELATED POLICIES

The SCRD Strategic Plan 2015-2018 has a priority to Embed Environmental Leadership. The DMP helps the SCRD minimize environmental impacts by promoting water conservation.

The Drought Management Plan is a critical component of the Region's overall water supply strategy, as outlined in the Comprehensive Regional Water Plan and furthers the SCRD goal of reducing water consumption by 33% relative to 2010 levels.

CONCLUSION

Staff completed a technical analysis of SCRD's water supply and demand patterns as well as a review of similar plans in neighbouring jurisdictions. This information was consequently evaluated in the context of the Board's direction to relax the restriction on food production and increase them for lawn watering. The overall objective is to avoid increasing the vulnerability of the water supply of the Chapman Creek water system during times of drought.

Option 1 is recommended to allow greater flexibility for water food producing plants and trees and banning lawn watering at Stage 2. Given the severity of water supplies at Stage 4, it is not recommended that food production be exempt from this stage. Effectively implementing this option will reduce the chance of Stage 4 regulations, reducing the risk watering regulations impact food producers. As part of Option 1, farms selling food will be moved to a metered commercial rate starting January 1, 2020.

An exemption for public sports fields at Stage 2 and public pools at Stage 3 is also recommended to limit impacts of the DMP on the community.

An increased fine schedule is proposed that will see fines at Stage 1 be $200, Stage 2 be $300, Stage 3 be $400, and Stage 4 be $500.

Staff will bring forward a DMP community engagement plan 2019 at the April 25, 2019 Corporate and Administrative Services Committee which will include informing the community of these changes at public events in May 2019 and could include hiring a second Water Conservation Assistant.

An additional summer Water Conservation Assistant is could increase staff capacity for direct one on one engagement with residents and other water users promoting water conservation.

The appropriate Bylaws will be amended to reflect changes to the Drought Management Plan and a request will be shared with the Town of Gibsons to harmonize their bylaws with the DMP.

Attachments:

Attachment A: Drought Management Plan comparison table
Attachment B: Car washing exemption report of June 28, 2018

Reviewed by:			
Manager	X- S. Walkey	CFO/Finance	X – T. Perrault
GM		Legislative	
A/CAO	X - A. Legault	Other	X – R. Shay

Activity	Sunshine Coast Regional District *Current*	**SCRD Proposed - OPTION 1 - Supporting overall food production**	**SCRD Proposed - OPTION 2 - Supporting commercial food production**	Metro Vancouver	Capital Regional District	Abbotsford / Mission	Regional District Nanaimo	Comox Valley Regional District	City of Calgary
Stage 1 - NORMAL									
Activation	May 1 - Sep 30	May 1 - Sep 30	May 1 - Sep 30	May 1 - Oct 15	May 1 - Sep 30	May 1 - Sep 30	April 1 - 30 and Oct 1 - 31	Year round, with escalation as required	declared when needed
Lawns (*Sprinkler, Soaker Hose or Irrigation System)*	3 days/week 7 am - 9 am & 7 pm - 9 pm **(12 hrs/wk)**	2 days/week 7 am - 8 am **(2 hrs/wk)**	2 days/week 7 am - 8 am **(2 hrs/wk)**	2 days/week 4 am - 9 am **(10 hrs/wk)**	2 days/week 4 am - 10 am & 7 pm - 10 pm **(18 hrs/wk)**	2 days/week 6 am - 8 am **(4 hrs/wk)**	Any day 7 pm - 7 am **(84 hrs/wk)**	3 days/week 5 am - 8 am & 7 pm - 10 pm **(18 hrs/wk)**	1 day/week 2 hrs maximum Between 4 am - 7 am or 9 am - 11 am or 7 pm - 10 pm **(2 hrs/wk)**
New Lawns Permits	7 days/week 7 am - 9 am & 7 pm - 9 pm **(28 hrs/wk)**	7 days/week 7 am - 9 am & 7 pm - 9 pm **(28 hrs/wk)**	7 days/week 7 am - 9 am & 7 pm - 9 pm **(28 hrs/wk)**	Can apply for permit	Permitted for new sod (within 21 days) or seed (within 45 days) any day during schedule hours **(63 hrs/wk)**	With permit, can sprinkling 6 am - 8 am daily for two weeks **(14 hrs/wk)**	Can apply for permit. Eg. City of Nanaimo: 14 day permits available	Permit for 21 days for sod or 49 days for seed. Sprinkler during Stage 1 watering times or hand-held hose with nozzle any time **(18 hrs/wk)**	Permitted for new sod (within 21 days) or seed (within 45 days) only
Public Sports Field	Restricted through different watering schedule	Restricted through different watering schedule	Restricted through different watering schedule	Any day from 7 pm - 9 am **(98 hrs/wk)**	Any day 1 am - 10 am & 7 pm - 10 pm **(84 hrs/wk)**	Sand-based daily. Soil based alternate days, 11 pm - 8 am	May vary hours of use as required to accomplish maintenance and upkeep	No restrictions	Not allowed unless using Water managed system or storm water
Trees, shrubs, flowers (*sprinkler, soaker hose or irrigation system)*	3 days/week 7 am - 9 am & 7 pm - 9 pm **(12 hrs/wk)**	3 days/week 7 am - 9 am & 7 pm - 9 pm **(12 hrs/wk)**	3 days/week 7 am - 9 am & 7 pm - 9 pm **(12 hrs/wk)**	7 days/week 4 am - 9 am **(35 hrs/wk)**	2 days/week 4 am - 10 am & 7 pm - 10 pm **(18 hrs/wk)**	No restrictions **(168 hrs/wk)**	No restrictions **(168 hrs/wk)**	7 days/week 5 am - 8 am & 7 pm - 10 pm **(42 hrs/wk)**	1 day/week 2 hrs maximum Between 4 am - 7 am or 9 am - 11 am or 7 pm - 10 pm **(2 hrs/wk)**
Trees, shrubs, flowers (*Hand-held hose equipped with shut-off nozzle, hand-held container or micro/drip-irrigation)*	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**
Food producing plants and trees (*Sprinkler, soaker hose or irrigation system)*	3 days/week 7 am - 9 am & 7 pm - 9 pm **(12 hrs/wk)**	3 days/week 7 am - 9 am & 7 pm - 9 pm **(12 hrs/wk)**	3 days/week 7 am - 9 am & 7 pm - 9 pm **(12 hrs/wk)**	Any time, any day **(168 hrs/wk)**	2 days/week 4 am - 10 am & 7 pm - 10 pm **(18 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	7 days/week 5 am - 8 am & 7 pm - 10 pm **(42 hrs/wk)**	1 day/week 2 hrs maximum Between 4 am - 7 am or 9 am - 11 am or 7 pm - 10 pm **(2 hrs watering)**
Food producing plants and trees (*Hand-held hose equipped with shut-off nozzle, hand-held container or micro/drip-irrigation)*	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**
Commercial farm watering (food for sale) (*Sprinkler, soaker hose, hand, or drip irrigation)*	same as food plants	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Commercial farms do not use system's water	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day (nurseries, market gardens, community gardens) **(168 hrs/wk)**
Washing Vehicles or Boats	Ok at any time, ONLY with container or hand-held hose with shut off nozzle	Ok at any time, ONLY with container, hand-held hose with shut off nozzle, or commercial car washes	Ok at any time, ONLY with container, hand-held hose with shut off nozzle, or commercial car washes	Allowed	Ok at any time, ONLY with container, hand-held hose with shut off nozzle, or commercial car washes	Ok at any time, ONLY with container, hand-held hose with shut off nozzle, or commercial car washes	Any time, any day	Only with hand-held container or hose with automatic shut-off nozzle	Not allowed unless for health and safety
Washing sidewalks, driveways, windows, fences or exterior building surfaces	Ok at any time, ONLY with hand-held hose with shut-off nozzle or pressure washer	Ok at any time, ONLY with hand-held hose with shut-off nozzle or pressure washer	Ok at any time, ONLY with hand-held hose with shut-off nozzle or pressure washer	Allowed	Ok at any time, ONLY with hand-held hose with shut-off nozzle or pressure washer provided it does not result in Escess Water Use	Ok at any time, ONLY with hand-held hose with shut-off nozzle or pressure washer	Any time, any day	Permitted only when applying a product such as paint, preservative and stucco, preparing surface prior to paving or repainting bricks or for health and safety	Not allowed unless for health and safety
Filling swimming pools, spas, garden ponds, decorative fountains	Ok	Ok	Ok	Ok	Ok	Allowed. Fountains must have recirculation system	Ok	Ok	Pools, hot tubs allowed fountains or other decorative features NOT allowed

Activity	Sunshine Coast Regional District *Current*	**SCRD Proposed - OPTION 1 - Supporting overall food production**	**SCRD Proposed - OPTION 2 - Supporting commercial food production**	Metro Vancouver	Capital Regional District	Abbotsford / Mission	Regional District Nanaimo	Comox Valley Regional District	City of Calgary
Stage 2 - MODERATE									
Lawns (Sprinkler, Soaker Hose or Irrigation System)	2 days/week 7 am - 9 am **(4 hrs/wk)**	Not allowed	1 day/week 7 am - 8 am **(1 hr/wk)**	1 day/week 4 am - 9 am **(5 hrs/wk)**	1 day/week 4 am - 10 am & 7 pm - 10 pm **(9 hrs/wk)**	1 day/week 6 am - 8 am **(2 hrs/wk)**	Activiation May 1 - Sept 30 Every other day between 7 am - 10 am or 7 pm - 10 pm for 2 hours max **(2 hrs/wk)**	2 days/week 6 am - 8 am & 8 pm - 10 pm **(8 hrs/wk)**	1 day/week 1 hr maximum Between 4 am - 7 am or 9 am - 11 am or 7 pm - 10 pm **(1 hr/wk)**
New Lawns Permits	Allowed any day during sprinkling hours with existing permit. No new permits **(14 hrs/wk)**	Not allowed	Allowed any day during sprinkling hours with existing permit. No new permits **(7 hrs/wk)**	Can apply for permit	Not allowed	With permit, can sprinkling 6 am - 8 am daily for two weeks **(14 hrs/wk)**	Can apply for permit	Permit for 21 days for sod or 49 days for seed. Sprinkler during Stage 2 watering times or hand-held hose with nozzle any time **(28-168 hrs/wk)**	Permitted for new sod (within 21 days) or seed (within 45 days)
Public Sports Field	Restricted through different watering schedule	Restricted through different watering schedule	Restricted through different watering schedule	4 days/week 7 pm - 9 am	3 days/week 1 am - 10 am & 7 pm - 10 pm	Sand-based daily. Soil based alternate days, 11 pm - 8 am	May vary hours of use as required to accomplish maintenance and upkeep	No restrictions	Not allowed unless using Water managed system or storm water
Trees, shrubs, flowers (sprinkler, soaker hose or irrigation system)	2 days/week 7 am - 9 am **(4 hrs/wk)**	2 days/week 7 am - 9 am **(4 hrs/wk)**	2 days/week 7 am - 9 am **(4 hrs/wk)**	7 days/week 4 am - 9 am **(35 hrs/wk)**	Any day 4 am - 10 am **(42 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	2 days/week 6 am - 8 am & 8 pm - 10 pm **(8 hrs/wk)**	1 day/week 1 hr maximum Between 4 am - 7 am or 9 am - 11 am or 7 pm - 10 pm **(1 hr/wk)**
Trees, shrubs, flowers (Hand-held hose equipped with shut-off nozzle, hand-held container or micro/drip-irrigation)	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**
Food producing plants and trees (Sprinkler, soaker hose or irrigation system)	2 days/week 7 am - 9 am **(4 hrs/wk)**	2 days/week 7 am - 9 am 7 pm - 9 pm **(8 hrs/wk)**	2 days/week 7 am - 9 am **(4 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any day 4 am - 10 am **(42 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	2 days/week 6 am - 8 am & 8 pm - 10 pm **(8 hrs/wk)**	1 day/week 1 hr maximum Between 4 am - 7 am or 9 am - 11 am or 7 pm - 10 pm **(1 hr/wk)**
Food producing plants and trees (Hand-held hose equipped with shut-off nozzle, hand-held container or micro/drip-irrigation)	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**
Commercial farm watering (food for sale) (Sprinkler, soaker hose, hand, or drip irrigation)	Same as Food producing plants and trees above	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Commercial farms do not use system's water	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day (nurseries, market gardens, community gardens) **(168 hrs/wk)**
Washing Vehicles or Boats	Ok at any time, ONLY with container or spray-trigger nozzle	Ok at any time, ONLY with container, hand-held hose with shut off nozzle, or commercial car washes	Ok at any time, ONLY with container, hand-held hose with shut off nozzle, or commercial car washes	Allowed	Ok at any time, ONLY with container, hand-held hose with shut off nozzle, or commercial car washes	Ok at any time, ONLY with container, hand-held hose with shut off nozzle, or commercial car washes	Any time, any day	Only with hand-held container or hose with automatic shut-off nozzle	Not allowed, unless required for health and safety reasons
Washing sidewalks, driveways, windows, fences or exterior building surfaces	Not allowed except pressure washing to prep for paint, etc. or as required by law for health and safety	Permitted only when applying a product such as paint, preservative and stucco, preparing surface prior to paving or repainting bricks or for health and safety	Permitted only when applying a product such as paint, preservative and stucco, preparing surface prior to paving or repainting bricks or for health and safety	Permitted for health and safety or when applying a product such as paint; Aesthetic cleaning allowed by commercial cleaning operation	Permitted only when applying a product such as paint, preservative and stucco, preparing surface prior to paving or repainting bricks or for health and safety	Ok at any time, ONLY with hand-held hose with shut-off nozzle or pressure washer	Any time, any day	Permitted only when applying a product such as paint, preservative and stucco, preparing surface prior to paving or repainting bricks or for health and safety	Not allowed except for health/safety or for professional window washers with license
Filling swimming pools, spas, garden ponds, decorative fountains	OK	OK	OK	OK	OK	Ok. Fountains must have recirculation system	OK	OK	Ok. Fountains not allowed.

Activity	Sunshine Coast Regional District *Current*	**SCRD Proposed - OPTION 1 - Supporting overall food production**	**SCRD Proposed - OPTION 2 - Supporting commercial food production**	Metro Vancouver	Capital Regional District	Abbotsford / Mission	Regional District Nanaimo	Comox Valley Regional District	City of Calgary
Stage 3 - ACUTE									
Lawns (Sprinkler, Soaker Hose or Irrigation System)	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed	Voluntary reduction on top of Stage 2	Not allowed	Not allowed
New Lawns Permits	Not allowed	Not allowed	Not allowed	No new permits, allowed with existing permits	Not allowed	No new permits issued, existing permits will be honoured until they expire	Voluntary reduction on top of Stage 2	Permits will not be issued, existing permits not valid	Permitted for new sod (within 21 days) or seed (within 45 days)
Public Sports Field	Not allowed	Not allowed	Not allowed	3 days/week 7 pm - 9 am	4 am - 10 am 3 days/week	Sand-based daily. Soil based alternate days, 11 pm - 8 am	Voluntary reduction on top of Stage 2	No restrictions	Not allowed unless using Water managed system or storm water
Trees, shrubs, flowers (sprinkler, soaker hose or irrigation system)	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed	Voluntary reduction on top of Stage 2	Not allowed	Not allowed. Unless using a Water Managed System with a certificate from The City.
Trees, shrubs, flowers (Hand-held hose equipped with shut-off nozzle, hand-held container or micro/drip-irrigation)	Ok at any time **(168 hrs/wk)**	1 hr/ day max 7 am - 8 am **(7 hrs/wk)**	1 hr/ day max 7 am - 8 am **(7 hrs/wk)**	Ok at any time **(168 hrs/wk)**	Hand watering or drip-irrigation only 4 am - 10 am & 7 pm - 10 pm any day **(63 hrs/wk)**	ok at any time, including soaker hoses **(168 hrs/wk)**	Voluntary reduction on top of Stage 2	Hand watering or drip-irrigation only 6 am - 8 am & 8 pm - 10 pm any day **(28 hrs/wk)**	Not allowed unless using a hand held container
Food producing plants and trees (Sprinkler, soaker hose or irrigation system)	Not allowed	not allowed	not allowed	Any time, any day **(168 hrs/wk)**	Not allowed	Not allowed	Voluntary reduction on top of Stage 2	Not allowed	Not allowed. Unless using a Water Managed System with a certificate from The City.
Food producing plants and trees (Hand-held hose equipped with shut-off nozzle, hand-held container or micro/drip-irrigation)	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Hand watering or drip-irrigation only 4 am - 10 am & 7 pm - 10 pm any day **(63 hrs/wk)**	Any time, any day, including soaker hoses **(168 hrs/wk)**	Voluntary reduction on top of Stage 2	Hand watering or drip-irrigation only 6 am - 8 am & 8 pm - 10 pm any day **(28 hrs/wk)**	Not allowed unless using a hand held container
Commercial farm watering (food for sale) (Sprinkler, soaker hose, hand, or drip irrigation)	same as food plants	Allowed **(168 hrs/wk)**	hand and micro/drip irrigation: any time **(168 hrs/wk)** sprinkling and soaker hose: 4 am to 9 am any day **(35 hrs/wk)**	Any time, any day **(168 hrs/wk)**	Allowed **(168 hrs/wk)**	Commercial farms do not use system's water	Voluntary reduction on top of Stage 2	Any time, any day **(168 hrs/wk)**	Any time, any day (nurseries, market gardens, community gardens) **(168 hrs/wk)**
Washing Vehicles or Boats	Not allowed except for washing salt water from equipment	Only permitted for washing salt water from equipment or if part of a non-cosmetic commercial process	Only permitted for washing salt water from equipment or if part of a non-cosmetic commercial process	Only permited for safety; and commercial operators that installed an automatic vehicle wash system before November 1, 2017 and operating on a basic wash and rinse cycle only; or a facility that installed an automatic vehicle wash system after November 1, 2017 and recycling a minimum 60% water over the full wash cycle; or a hand wash and self-service facility operating using high-pressure wands or brushes that achieve a maximum flow rate of 11.4 litres per minute	Banned (except commercial operations using <57L/wash, excluding reciculated water)	Banned (except commercial operations recirculating water)	Voluntary reduction on top of Stage 2	Banned (except commercial operations using <205L/wash)	Banned
Washing sidewalks, driveways, windows, fences or exterior building surfaces	Not allowed except for health/safety	Not allowed except for health/safety	Not allowed except for health/safety	Permitted for health and safety or by a commercial operation when applying a product such as paint	Permitted only when applying a product such as paint, preservative and stucco, preparing surface prior to paving or repainting bricks or for health and safety	Permitted for health and safety or when applying a product such as paint;	Voluntary reduction on top of Stage 2	Permitted only when applying a product such as paint, preservative and stucco, preparing surface prior to paving or repainting bricks or for health and safety	Not allowed except for health/safety or for professional window washers with license
Filling swimming pools, spas, garden ponds, decorative fountains	Not allowed	Not allowed (except public pools)	Not allowed (except public pools)	Banned (except municipal commercial/ strata pools with an operating permit)	Banned (except small wading pools)	Not allowed	Voluntary reduction on top of Stage 2	Banned (except municipal and small wading pools)	Banned

Activity	Sunshine Coast Regional District *Current*	**SCRD Proposed - OPTION 1 - Supporting overall food production**	**SCRD Proposed - OPTION 2 - Supporting commercial food production**	Metro Vancouver	Capital Regional District	Abbotsford / Mission	Regional District Nanaimo	Comox Valley Regional District	City of Calgary
Stage 4 - SEVERE									
Lawns (Sprinkler, Soaker Hose or Irrigation System)	Not allowed	Not allowed	Not allowed	Not allowed	N/A	Not allowed	Not allowed	Not allowed	Not allowed
New Lawns Permits	Not allowed	Not allowed	Not allowed	No new permits, allowed with existing permits	N/A	Not allowed	Not allowed	Not allowed	Not allowed
Public Sports Field	Not allowed	Not allowed	Not allowed	Not allowed	N/A	At the discretion of the engineer	Not allowed	Not allowed	Not allowed
Trees, shrubs, flowers (sprinkler, soaker hose or irrigation system)	Not allowed	Not allowed	Not allowed	Not allowed	N/A	Not allowed	not allowed	Not allowed	Not allowed
Trees, shrubs, flowers (Hand-held hose equipped with shut-off nozzle, hand-held container or micro/drip-irrigation)	Not allowed	Not allowed	Not allowed	Not allowed	N/A	At the discretion of the engineer	Allowed 7-10am and 7-10pm	Not allowed	Not allowed
Food producing plants and trees (Sprinkler, soaker hose or irrigation system)	Not allowed	Not allowed	Not allowed	Not allowed	N/A	Not allowed	Allowed	Not allowed	Any time, any day (nurseries, market gardens, community gardens) **(168 hrs/wk)**
Food producing plants and trees (Hand-held hose equipped with shut-off nozzle, hand-held container or micro/drip-irrigation)	Not allowed	Not allowed	Not allowed	Not allowed	N/A	At the discretion of the engineer	Allowed	Not allowed	Not allowed
Commercial farm watering (food for sale) (Sprinkler, soaker hose, hand, or drip irrigation)	same as food plants	Not allowed	Not allowed	Not addressed	N/A	Commercial farms do not use system's water	Allowed	Only for livestock	Any time, any day (nurseries, market gardens, community gardens) **(168 hrs/wk)**
Washing Vehicles or Boats	Not allowed	Not allowed except to spot clean windows, lights, mirrors, licence plates and boat engine for safety	Not allowed except to spot clean windows, lights, mirrors, licence plates and boat engine for safety	Prohibited except to clean windows, lights, mirrors, licence plates and boat engine for safety	N/A	Not allowed	Not allowed	Prohibited except to spot clean windows, lights, mirros, licence plates and boat engine for safety	Not allowed
Washing sidewalks, driveways, windows, fences or exterior building surfaces	Not allowed except as required by law for health and safety	Not allowed except as required by law for health and safety	Not allowed except as required by law for health and safety	Not allowed except as required by law for health and safety	N/A	Not allowed except as required by law for health and safety	Permitted only when applying a product such as paint, preservative and stucco, preparing surface prior to paving or repainting bricks or for health and safety	Not allowed	Not allowed except for health/safety or for professional window washers with license
Filling swimming pools, spas, garden ponds, decorative fountains	Not allowed	Not allowed	Not allowed	Not allowed	N/A	Not allowed	Not allowed	Not allowed	Not allowed

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – June 21, 2018

AUTHOR: Raphael Shay, Water and Energy Projects Coordinator

SUBJECT: **SPLASH N SHINE CARWASH STAGE 3 WATER RESTRICTIONS EXEMPTION**

RECOMMENDATION(S)

THAT the report titled Splash n Shine Carwash Stage 3 Water Restrictions Exemption be received;

AND THAT the 2018 Board approved Drought Management Plan remains in effect.

BACKGROUND

At the June 8, 2017 regular Board meeting, Bylaw 422 was adopted removing commercial exemptions from the Drought Management Plan (DMP). The change was intended to prioritize water for human health, fire protection, and environmental flow needs in Stage 3, which is an acute supply situation. Staff noted in the May 18, 2017 Infrastructure Services Committee report informing this decision that following consultation with businesses potentially impacted by the DMP, "all businesses… are negatively impacted by Stage 3 restrictions."

Staff have been in ongoing communications with the Splash n Shine Carwash regarding concerns with impacts of water restrictions since 2015. In the summer of 2017, in reply to SCRD correspondence regarding shutdown at Stage 3, Splash n Shine responded that their business would be affected and requested an order letter to help them claim monetary compensation for interrupted business from their insurance company. Before the matter was resolved, Stage 4 water restrictions were called and Splash n Shine Carwash closed voluntarily without further letters being issued.

At the April 26, 2018 regular Board meeting, the following resolution was adopted:

137/18 **Recommendation No. 6** *2018 Drought Management Plan Implementation*

THAT the report titled 2018 Drought Management Plan Implementation be received;

AND THAT the Drought Management Plan be updated to incorporate restrictions on hand watering and low flow drip irrigation of lawns at Stage 3;

AND THAT the Water Rates and Regulations Bylaw No. 422 be updated;

AND FURTHER THAT a request be sent to the Town of Gibsons to harmonize their bylaw with Bylaw 422.

The report to the April 19, 2018 Infrastructure Services Committee acknowledged a request by a business involved in car washing for Stage 3 exemption. The report concluded that "staff do not recommend any changes to the SCRD's DMP to include any such refined restrictions at least until sufficient additional water supply sources are available."

On May 15, 2018, Splash n Shine Carwash, which is located in the District of Sechelt, proposed water saving measures to implement at Stage 3 in support of their request to receive an exemption from the DMP's Stage 3 restrictions on the washing of vehicles.

The Splash n Shine Carwash proposal is attached as Attachment A.

The purpose of this report is to seek Board direction with respect to this proposal for exemption.

DISCUSSION

The Splash n Shine proposal includes the following conservation measures in support of their exemption request during Stage 3 water restrictions:

- Removing options from the automatic wash menu;
- Reducing nozzle size at the self-serve bays; and
- Eliminate cleaning wash bays with water.

Staff has consulted with the Manager of the Splash n Shine Carwash in order to better understand the proposal and its impacts.

The carwash uses approximately 20,000 litres per day.

Staff estimate that the full implementation of these measures would reduce water use by approximately 6,200 litres per day, which represents approximately 31% of Splash n Shine Carwash's total daily water consumption. Despite such a reduction in water use, this business would remain amongst the larger commercial water users on the Regional Water System.

According to Splash n Shine, these conservation measures would reduce service levels. This is why the measures will not be permanent changes to the operation. Nozzle sizes would change back to larger sizes when car washing is not restricted. Because of the drop in service level, Splash n Shine expects a slight decrease in clients. However, if Splash n Shine were to be the only option for washing a vehicle at Stage 3, it may result in an increase in clients.

Under the current version of the DMP's Stage 3, Splash n Shine Carwash would have been impacted for:

- 33 days in 2015;
- 24 days in 2016;
- 34 days in 2017.

This represents approximately a month of lost revenue. 2015 and 2017 have also had Stage 4 restrictions come into force, which would have represented an additional:

- 26 days in 2015;
- 25 days in 2017.

Staff review of this exemption request resulted in the following 2 options:

Option 1: No exemption to the 2018 Drought Management Plan

Outlined below are the following rationale to deny the proposal:

Firstly, the acute water supply situation that warrants calling Stage 3 water restrictions are meant to prioritize water for human health, fire protection, and ensure Chapman Creek environmental flow needs are met. All water usage considered non-essential during an acute water supply situation is currently not allowed, including uses such as pressure washing, car washing and lawn watering.

Secondly, the DMP restrictions are applied consistently to ensure fairness. Residential and commercial users are both restricted from washing vehicles at Stage 3. Should a commercial exemption be allowed, people could still use treated water to wash vehicles at Stage 3. Prior to removing the commercial exemption, staff would regularly receive complaints from people whose garden watering was being restricted when washing vehicles was still allowed.

Thirdly, even with the proposed savings, Splash n Shine Carwash's would use a material volume of water and it would remain amongst the larger metered commercial users on the Chapman Water System.

Fourthly, there is precedent setting risk associated with granting the exemption. Other users who wash vehicles as part of their business offering or fundraising efforts may ask for similar exemptions. Similarly, other users who believe their water use to be more important than washing vehicles will likely also request exemptions.

Option 2: Support exemption to the 2018 Drought Management Plan

The SCRD could accept Splash n Shine Carwash's proposal and support the requested exemption from the DMP's Stage 3 restrictions.

The Drought Management Plan's impact on business can be mitigated by awarding exemptions and working with commercial users such as Splash n Shine on water conservation measures to be implemented at different stages of the DMP.

Recommendation

Given the acute nature of the water supply situation when Stage 3 water restrictions are implemented, the need to fairly and consistently apply the restrictions, the volume of water used, and the risk of setting precedent, staff recommend not supporting the requested exemption to the Drought Management Plan for the Splash n Shine Carwash (Option 1).

Organizational and Intergovernmental Implications

There is a commercial carwash within the Town of Gibsons' Zone 3, which is provided water by the SCRD from the Regional Water System. Collaboration with the Town of Gibsons to ensure consistency in the application and communication of the DMP would be required.

STRATEGIC PLAN AND RELATED POLICIES

The SCRD has a mission of providing leadership and quality services to our community through effective and responsive government. Prioritizing water uses in the Drought Management Plan in a way that respects the organization's values of collaboration, environmental leadership, and transparency contributes to this mission.

The SCRD's strategic priority to Embed Environmental Leadership is supported by the Drought Management Plan.

The Drought Management Plan is a central component of the Region's overall water supply strategy, as outlined in the Comprehensive Regional Water Plan (2013) and furthering the SCRD's goal to reduce water consumption by 33% relative to 2010 levels by 2020.

CONCLUSION

Splash n Shine Carwash is requesting an exemption from the DMP's Stage 3 restrictions in exchange for the implementation of water conservation measures during that stage. The implementation of these measures would lead to savings but Splash n Shine Carwash's water use would still remain among the largest known commercial users on the Regional Water System

Given the acute nature of the water supply situation when Stage 3 water restrictions are implemented, the need to fairly and consistently apply the restrictions, the volume of water used, and the risk of setting precedent, staff recommend not supporting the requested exemption to the Drought Management Plan for the Splash n Shine Carwash

Attachment A:

Splash n Shine Carwash request to receive an exemption from the DMP's Stage 3 restrictions on the washing of vehicles, received May 15, 2018.

Reviewed by:			
Manager		Finance	
GM	X – R. Rosenboom	Legislative	
CAO	X – J. Loveys	Other	

Attachment A

Thank you for taking the time to meet with us. Splash n Shine recognizes that water is a resource that is vital for the health and wellbeing of the community. We have been proactive in water conservation for a long time. In 2009 we were awarded a platinum status by the SCRD for demonstrating innovative and responsible water use.

This year we installed a rain harvesting system resulting in thousands of gallons of rain water being used in our car wash cycle.

We understand the community is facing a water supply issue. We wish to be an active community partner in helping SCRD to assist in creating solutions to water conservation. As we discussed we propose the following water saving adaptations be implemented during Stage 3.

STAGE 3 WATER RESTRICTION ADAPTATIONS

1. Remove under spray and side blaster from automatic wash menu. (reduction of 12.5 gallons of water per car).
2. Change nozzles in the self-serve bays from 6 gallons per minute to 4 gallons per minute.
3. No water will be used to clean bays or the lot
4. Signage will be displayed informing the public of the adaptations listed above
5. Pamphlets will be distributed educating the public about Splash n' Shines responsible water use.

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee, April 18, 2019

AUTHOR: Remko Rosenboom, General Manager Infrastructure services

SUBJECT: **AGRICULTURAL LAND USE INVENTORY AND WATER DEMAND MODEL (MINISTRY OF AGRICULTURE)**

RECOMMENDATION(S)

THAT the report titled Agricultural Land Use Inventory and Water Demand Model (Ministry of Agriculture) be received;

AND THAT SCRD partner with the Ministry of Agriculture on an Agricultural Land Use Inventory and Water Demand Model for the lower Sunshine Coast;

AND THAT the SCRD provide a contribution of $2,500 split 50/50 between [370] Regional water and [500] Regional Planning and funded through 2019 base operating budgets;

AND THAT SCRD apply to the Investment Agriculture Foundation for matching project funds of $2,500;

AND THAT the delegated authorities sign a project memorandum of understanding;

AND FURTHER that the Ministry be requested to host a community awareness/participation opportunity involving the Agricultural Advisory Committee.

BACKGROUND

In February 2019, SCRD was contacted by staff from the Ministry of Agriculture regarding a partnership opportunity to complete an Agricultural Land Use Inventory (ALUI) and Agricultural Water Demand Model (AWDM) for the lower Sunshine Coast. Other local governments on the Coast have been or are in the process of being contacted by the Ministry.

An ALUI provides current data to inform local governments, industry, community groups/organizations, and other stakeholders when addressing existing and developing issues on farmland.

The ALUI/AWDM approach is being undertaken around the province, and has proven successful and beneficial in other jurisdictions. A fact sheet is attached (Attachment A).

An AWDM calculates daily agricultural water demand for each parcel using information on existing crops, irrigation system, soil, and climate. The AWDM can also be used to estimate water demand for all outdoor irrigation, including parks, golf courses and all domestic irrigation. Results include current conditions as well as water demand for future scenarios (i.e. agricultural build out in the ALR, future climates up to 2100). The results are added together to get total demand for the entire region, or sub-basin, or aquifer area, or purveyor area, or local government administrative area, etc.

The Ministry of Agriculture's proposal is to partner with the SCRD to complete an ALUI and AWDM in summer 2019. The specific request is for cost sharing, data sharing, and limited in-kind staff support. Member municipalities have been/will be presented with the same opportunity, although the cost sharing request is unique to SCRD, as the majority of agricultural lands are located in rural areas.

DISCUSSION

Benefits to SCRD and to the Sunshine Coast

ALUI results could inform analysis and decision making on future land use applications or referrals respecting agricultural lands. Regional data could be helpful for considering changes or updates to official community plans, zoning policies and for general water supply management planning.

For those working in the agricultural sector (producers, suppliers, NGOs), ALUI results could guide effective business development, identification of common needs, etc.

AWDM results can provide important information about current agricultural water needs, the level of adoption and impact of various irrigation solutions, and future demand under various climate and land base utilization scenarios. Recent dialogue around updates to the Drought Management Plan and the Plan's interface with agricultural production highlight the importance of this information.

SCRD will receive project results including a GIS dataset and thematic layers. The province will also host the data on the BC Map Hub.

The BC Agriculture Water Calculator launched in 2017 is designed to provide agricultural water users in British Columbia with an initial estimate of the annual irrigation or livestock water demand for a farm. The AWDM developed as part of this project will be more detailed in nature and allows for predictions of water uses under different climate change scenarios.

Considerations regarding Method/Approach

Staff confirm that privacy of land owners is respected through the ALUI and AWDM process. Owners are not contacted directly nor is private land accessed. All analysis is conducted from public roads or at a desktop (e.g. orthophoto analysis) level.

Ministry staff advise that anecdotal evidence from other jurisdictions shows that the greatest community benefit from the ALUI/AWDM process comes when agricultural producers and stakeholders are aware of and invited to be part of the process. A kick-off open house type meeting, supported by coordinated Ministry advertising/local government messaging has proven successful. A kick-off meeting provides an opportunity for local agricultural land owners/experts to receive information about the project and share local knowledge.

Organizational and Intergovernmental Implications

The Ministry proposal requests that SCRD:

1. Provide $2,500 toward total project costs of approximately $10,000

2. Apply to the Investment Agricultural Foundation (IAF) for a cost matching grant of $2,500 (Ministry will prepare application and final report to IAF)

3. Sign a memorandum of understanding to support the project as described in the attached fact sheet

4. Review/approve a provincial news release and assist with promotion as appropriate

5. Share land use data and orthophotos (all publicly available information)

Other local governments on the Coast will be invited to participate in items 3-5 above, and the Ministry will provide overall project management and coordination.

Staff confirm that resources are available to fulfill these partner requirements and recommend proceeding with the actions listed above.

Financial Implications

Funds are available from [500] Regional Planning and [370] Regional Water Services existing 2019 operating budgets to support the $2,500 contribution required for the project. A 50/50 ($1,250) split is recommended based on the scope of work and fit with service mandates.

Timeline for next steps or estimated completion date

An application to IAF is required by May 15, 2019.

A kick-off meeting and desktop analysis could start as early as June 1, 2019. Field work would occur in July and August. Results would be received late in 2019.

Communications Strategy

Based on the Ministry's comments about the value of early participation from local landowners/experts in the process, staff recommend that the Ministry be requested to host a community awareness/participation opportunity with involvement from the Agricultural Advisory Committee and member municipalities.

Coordinated promotion of the Ministry's project information can be undertaken through printed advertising, social media and website.

STRATEGIC PLAN AND RELATED POLICIES

Research and planning related to agriculture/food systems and water utilization support SCRD sustainability goals. Results from this project will enhance such planning.

CONCLUSION

The Ministry of Agriculture proposes a partnership to complete an ALUI and AWDM for the lower Sunshine Coast. Staff recommend that SCRD apply to IAF for matching funding, the delegated authorities sign a project MOU, and that SCRD commits to partnering on this opportunity. Community awareness and participation opportunities will be requested from the Ministry.

ATTACHMENTS:

Attachment A – Farming for Info: Agricultural Land Use Inventory and Agricultural Water Demand Model (Fact Sheet)

Reviewed by:			
Manager		CFO/Finance	X - T. Perreault
GM	X – I. Hall	Legislative	
A/CAO	X – A. Legault	Other	

the partnership for water sustainability in bc

Farming for Info: Agricultural Land Use Inventory & Agricultural Water Demand Model

A healthy agriculture sector provides economic development opportunities, fresh food to residents, and enhances local food security, however there is strong evidence that barriers to farming are increasing. Non-farm uses and residential estate uses on farmland are factors which contribute to rising costs of leasing or purchasing farmland. In addition, the availability of water is a critical element to the success of agriculture.

An Agricultural Land Use Inventory (ALUI) provides current data to inform local governments, industry, community groups/organizations, and other stakeholders when addressing existing and developing issues on farmland. ALUI's map the amount and type of farming in the region, describe how designated farmland (ALR) is being used including the level of non-farm uses, and provide a benchmark for monitoring land use change.

ALUI data is a key input into an Agricultural Water Demand Model that estimates agriculture water demand for future climate scenarios. Climate change and a growing population are challenging water supply and delivery infrastructure. Securing appropriate water allocation for current and future agricultural needs is necessary for long-term sustainability of the farming community.

Together, an ALUI and AWDM can help answer the following questions:

- What is the current extent, type, location, and scale of agricultural activities in the area?
- What is the current extent, type, location of value added activities (agritourism, events, processing, farm gate sales) occurring on farmed properties?
- How are current farmed properties being utilized; land proportion in cropped land, farm infrastructure, residences, natural / nonproductive land?
- How is parcel size, parcel location influencing utilization for agriculture?
- What is the current extent and type of non-farm use occurring on farmland?
- What is the current water demand for agriculture, both crops and livestock?
- What is the current extent and type of irrigation methods in use?
- What is the water demand for agriculture in future climate scenarios?
- What is the water demand for agriculture in future cropping and livestock scenarios (ex. full land base utilization)?

Project timing / methodology:

Over the winter and spring, office technicians use high resolution ortho-photo imagery to map field crops, irrigation, livestock facilities, farm practices, and other land uses on agricultural land across the region.

Then, during the summer (growing season), agrologists will navigate public roads and observe the land from within the vehicle to confirm information gathered in the office from the imagery (i.e. windshield survey).

Farmers are not actively contacted, but the survey crew often engages with farmers that walk up to the survey vehicle.

Deliverables include:

A geographic database of Land use and Land cover, including non agricultural uses where they occur on designated farmland (ALR) such as residential, commercial, transportation for all parcels in the ALR or outside the ALR but with Farm Class designation (BC Assessment).

On parcels where farming activities exist, additional data describing activities, including

- Crop type and practice
- Irrigation type
- Livestock type and intensity (including apiculture, aquaculture)
- Value added activities such as on farm fruit stands, crop processing, tourism activities like guest houses or wine tasting.
- Crop protection such wind machines (frost protection) or propane cannons

A written ALUI report using the standard template as defined by the Ministry of Agriculture or a web application displaying ALUI data summaries and mapping .

A populated Agricultural Water Demand Model (AWDM) for at least 5 different water demand scenarios including:

- by crops, irrigation systems and soil texture with current land use and climate;
- if more efficient irrigation systems replace the existing systems under current land use and climate;
- if irrigated acreage is increased; and
- the above with several different future climate change scenarios.

Partial funding is available through Investment Agriculture's Agricultural Area Planning Program and/or the Partnership for Water Sustainability in BC. The BC Ministry of Agriculture often coordinates and manages ALUI and AWDM projects in partnership with the local government.

For more information:

Corrine Roesler
BC Ministry of Agriculture
Phone: 604 556 3110
Corrine.Roesler@gov.bc.ca

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Remko Rosenboom, General Manager, Infrastructure Services

SUBJECT: **REGIONAL ORGANICS DIVERSION STRATEGY IMPLEMENTATION PLAN - UPDATE**

RECOMMENDATION(S)

THAT the report titled Regional Organics Diversion Strategy Implementation Plan - Update be received for information.

BACKGROUND

In 2017, the SCRD engaged Carey McIver & Associates Ltd. to develop a Regional Organics Diversion Strategy (Strategy). The Strategy was adopted by the SCRD Board on January 18, 2018 and contains eight key initiatives to divert organic waste in the region.

The eight initiatives are:

1. Implement a commercial food waste ban.
2. Implement commercial food waste drop-off at the Pender Harbour Transfer Station.
3. Implement residential food waste drop-off in Pender Harbour, mid-coast and south coast.
4. Implement residential curbside collection of food waste for all SCRD residences in Electoral Areas B, D, E and F receiving curbside collection of garbage.
5. Implement a residential food waste ban.
6. Implement a food waste reduction campaign.
7. Implement at-home compost coaching program.
8. Investigate a backyard composter subsidy program.

The following recommendation is from the February 28, 2019 Board meeting (in part):

> **061/19 Recommendation No. 1** *Regional Organics Diversion Strategy*
>
> AND THAT a report be provided to an April 2019 Committee with updates to the Solid Waste Division Workplan and the Regional Organics Diversion Strategy Implementation Plan.

The purpose of this report is to provide an update for the SCRD's Regional Organics Diversion Strategy Implementation Plan.

DISCUSSION

There are two areas of focus for the Strategy, residential and commercial food waste diversion, with both culminating in food waste bans.

Work towards both of the bans has progressed concurrently since adoption of the Strategy.

It should be noted that many of the steps are cascading or triggers for the next step and any delay affects the initiation of additional steps.

Residential Sector

Implementing a residential food waste ban is dependent on the implementation of new programs and services. These include the curbside collection of food waste for SCRD Electoral Area residences in B, D, E and F currently receiving garbage collection and establishing a residential food waste drop-off in Pender Harbour, mid-coast and south coast. Both of these programs and services require several procurement processes and assessments of financial implications.

While the original Request for Proposals (RFP) as prepared and issued in the fall of 2018 included the curbside collection services for garbage, organics and recyclables, on February 21, 2019, the SCRD Board awarded services for only weekly garbage collection. This contract allows for a transition to bi-weekly garbage collection if curbside collection for organics would be initiated by the SCRD. In the meantime the collection of organics and recycling was placed on hold.

The Board requested a report regarding weekly residential food organics collection with manual collection of small bins and a report on an opt-out program for organics collection (*061/19 Recommendation No's 3 and 4*). These reports are anticipated to be brought forward to a Committee in Q2 2019.

The cascading effect of placing the curbside collection of organics on hold is as follows:

- Without a curbside collection service for organics, establishing residential drop-offs are on hold.

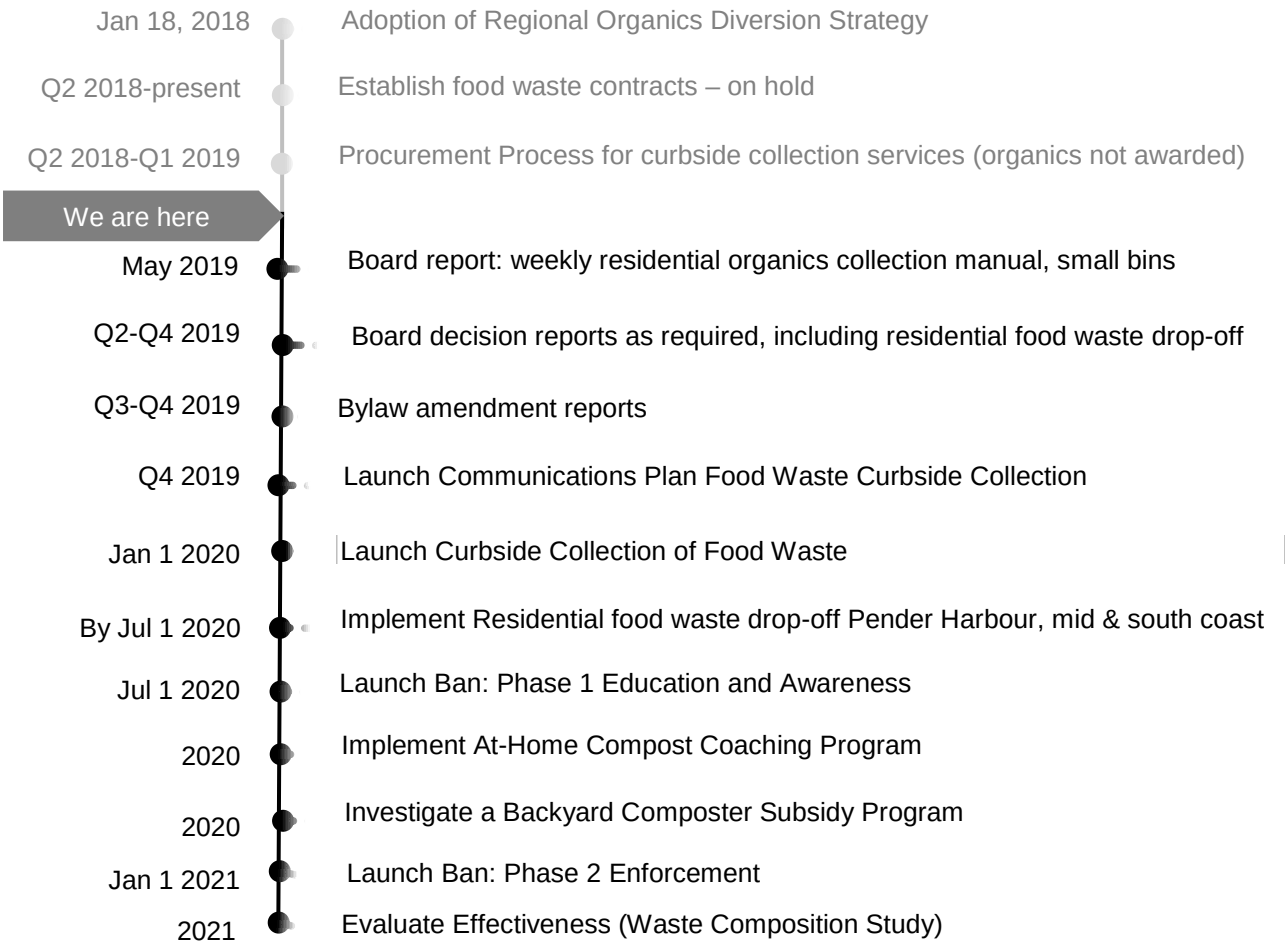
- Without curbside collection and residential drop-offs, a residential ban on food waste is on hold.

Additionally, prior to launching a ban there are bylaw amendment processes required for Bylaw 405 (landfill regulations and tipping fees) and Bylaw 431 (curbside collection services).

January 1, 2020 is currently being considered as the earliest possible start date for curbside collection of organics.

An updated timeline for the residential sector Strategy actions is provided in Figure 1.

Figure 1 – Timeline for Residential Sector Strategy Actions



A food waste reduction campaign has already been initiated as part of a larger province-wide campaign and will continue as part of ongoing communications of the Solid Waste Division.

The remaining actions from the Strategy, implementing the at-home Compost Coaching Program and investigating a backyard composter subsidy program would follow the launch of the ban and be initiated in 2020.

After implementation of Phase 2 Enforcement, a waste composition study will be commissioned to evaluate effectiveness and to recommend next steps.

Commercial Sector

There are two key initiatives to be completed prior to launching the commercial food waste ban. These include the completion of pre-ban stakeholder engagement and establishing a commercial drop-off at the Pender Harbour Transfer Station.

Pre-ban consultation and education with haulers and the commercial sector was initiated in Q2 and Q3 2018. A report summarizing the engagement will be brought forward to a future committee.

The drop-off at Pender Harbour Transfer Station also requires the establishment of contracts for hauling services to a composting facility.

While the implementation date of a commercial ban could start independent of the one for residential organics, the earliest start date of a commercial ban would be early 2020. It's recommended to align the implementation of the commercial ban with the residential ban and to focus on a start date of July 1, 2020. Having aligned start dates is anticipated to increase the effectiveness of the education and outreach efforts of both bans as well as maximize the operational requirements of implementation.

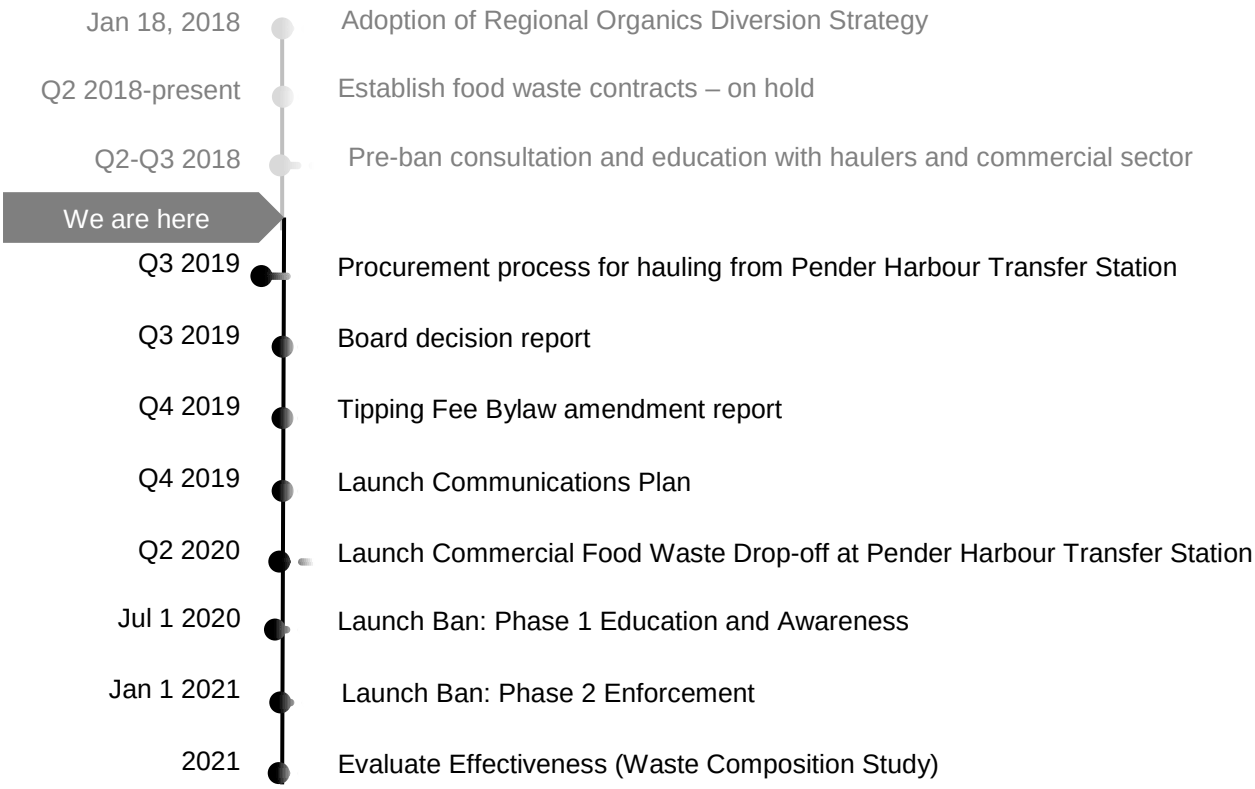
Phase 1 of the commercial ban will be focused on education and awareness and will be six months with Phase 2 Enforcement launching January 1, 2021. This phasing and duration of the two phases is the result of the stakeholder engagement completed to date.

Prior to the procurement processes for hauling from the transfer station, the physical construction of a drop-off location will need to be completed. A tipping fee for commercial food waste will need to be established via amending Bylaw 405.

If the implementation of the residential ban and commercial ban would align, this is anticipated to increase the overall effectiveness of both bans. The waste composition study initiated in 2021 could confirm this.

An updated timeline for the commercial food waste ban is provided in Figure 2.

Figure 2 – Timeline for Commercial Food Waste ban



Timeline for next steps

Staff will update the timelines presented in this report based on future decisions on the implementation of curbside collection of food waste.

As the work progresses, additional Board reports will be brought forward as necessary.

Financial Implications

Proposals to address the financial implications of the initiatives implemented in 2020 or in early 2021 will be brought forward as part of the 2020 Budget process.

STRATEGIC PLAN AND RELATED POLICIES

The Strategy is in support of the SCRD's Solid Waste Management Plan's targets of 65%-69% diversion and organics diversion is one of the SWMP's reduction initiatives.

CONCLUSION

The SCRD's Regional Organics Diversion Strategy was adopted by the SCRD Board on January 18, 2018 and contains eight key initiatives to divert organic waste in the region.

Work is progressing on those initiatives towards the timelines outlined in this report. Many of the steps have a cascading effect and a delay in one step affects the remaining steps. Most of the steps are directly or indirectly dependent on the implementation of curbside collection services.

Reviewed by:			
Manager	X – R. Cooper	Finance	
GM		Legislative	
A/CAO	X – A. Legault	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Remko Rosenboom, General Manager, Infrastructure Services

SUBJECT: **SOLID WASTE MANAGEMENT PLAN OVERVIEW AND STATUS UPDATE**

RECOMMENDATION(S)

THAT the report titled Solid Waste Management Plan Overview and Status Update be received for information.

BACKGROUND

At the February 28, 2019 Board Meeting, the following resolution was adopted:

061/19 (part) **Recommendation No. 2** *Solid Waste Workshop Summary*

AND THAT a report be provided to the Committee in Q2 2019 with respect to the following:

- Status update on the Solid Waste Management Plan

The purpose of this report is to provide an overview and status of the SCRD's Solid Waste Management Plan (SWMP).

DISCUSSION

Governance Framework

Local Government Act

The *Local Government Act (LGA)*, provides Regional Districts with the framework to manage solid waste and landfill services. A portion of the LGA Part 9, Division 4 – Waste Management is included as Attachment A.

BC Ministry of Environment

The BC Ministry of Environment and Climate Change Strategies (MoE) *Environmental Management Act* requires a Regional District to develop a SWMP for approval by the Minister. A SWMP is a strategic policy document that is not legally binding and does not provide operational guidance.

An approved SWMP authorizes a Regional District to manage municipal solid waste and recyclable material in accordance with the plan, as well as any conditions set out in operational certificates, permits or local bylaws.

Highlights of a SWMP include:

- Guiding principles
- Goals – long-term, aims to be achieved as an outcome of the SWMP
- Targets - performance measures such as solid waste per capita disposal
- Timelines – clear timelines to achieve targets
- Programs and services to achieve targets

SCRD Solid Waste Management Plan

The SCRD's first SWMP was adopted by the Board and approved by MoE in 1996. Most notably, it helped establish tipping fees at the Sechelt and Pender Harbour Landfills, a one can garbage collection program and expansion of landfill diversion programs.

This was followed by an updated SWMP in 2005 and then again in 2011. The 2011 SWMP, adopted by the Board on September 21, 2011 and approved by the MoE, is the current plan and is not anticipated to be updated until 2021.

The SWMP outlines twenty-four initiatives that contribute to reaching two targets: diversion and per capita disposal. The diversion target is 65%-69% and the per capita disposal target is 315 kg – 279 kg.

SWMP Initiatives and Targets

Initiatives

The SWMP initiatives were divided into the categories of reduce, reuse, recycling, and residuals management. Full descriptions of each initiative can be found in the SWMP.

The SWMP initiatives are in various stages of completion and their status is included as Attachment B. It is not recommended to proceed with initiatives that have not been started until it is determined that they support the pending completion of the SCRD's long term solid waste management approach.

Targets

The SWMP sets a diversion rate target of 65% - 69% and a per capita disposal rate of 315 kg - 279 kg.

The lower targets (65%, 315 kg) are based on curbside collection of food scraps and recycling in Electoral Areas B and D only, whereas the higher targets (69%, 279 kg) are based on curbside collection of food scraps and recycling in Electoral Areas B, D, E and F (all households receiving garbage collection.)

In 2011, the first year of the SWMP, the diversion rate was 48% and per capita disposal was 421 kg. Diversion rates reached the highest in 2013, 2016 and 2017 at 56%. Per capita disposal

was lowest in 2013 at 349 kg and has increased each year beyond that, likely due to increased economic activity.

The diversion rates and per capita disposal rates for 2011-2017 are summarized in Table 1 and are from the report presented at the May 17, 2018 Infrastructure Services Committee (Attachment C). A report including the 2018 diversion data will be brought to a Committee meeting in May, 2019.

Table 1 – SCRD 2011 to 2017 Rates for Diversion and Per Capita Disposal

Year	Diversion Rate %	Per Capita Disposal Rate Kg
2011	48	421
2012	53	400
2013	56	349
2014	53	399
2015	53	421
2016	56	434
2017	56	441

SWMP Effectiveness Reviews

The MoE suggests that Regional Districts plan for and carry out a review of their SWMP's implementation and effectiveness after five years. The resulting report should be made publicly available, including online, but does not need to be submitted to the MoE.

Types of items to review and report on may include:

- Overview of all programs or actions undertaken to support the plan goals and targets, including status (started, in progress, complete) and implementation costs for each.
- Summary of trends such as waste disposal per person.
- Analysis of what is working well and any challenges to meeting plan goals and targets.

Given the delayed implementation of several SMWP initiatives, including those related to an increased diversion of organics, the planned 5 year SWMP Effectiveness Review has not been completed. After discussions with our consultant and MoE, it is recommended that this effectiveness review be completed as the first phase of the SWMP update process the SCRD will be undertaking in the future. This would allow a Plan Monitoring Advisory Committee (PMAC) to be established and contribute to the review. A separate report regarding the establishment of PMAC is part of this committee meeting agenda.

SWMP Amendments and 10 Year Plan Review Process

The MoE suggests that at the end of the SWMP's 10-year planning cycle, a Regional District complete a full plan review. The plan review may result in major amendments and/or minor amendments or no amendments.

Changes to the body of the plan are considered a major amendment, whereas changing a plan schedule is considered a minor amendment.

Other "triggers" for a major amendment process may include:

- Changes to a landfill operational certificate.
- Changing disposal targets or reduction in programs supporting diversion.
- A change in the boundary of the SWMP, which would significantly change the amount of solid waste to be managed under the plan or significantly change the population of the plan area.
- The addition, deletion or revision of policies or strategies related to the conditions outlined in the Minister's approval letter.
- Major financial changes that warrant seeking elector assent.

Purely administrative provisions such as a list of applicable bylaws may be appended to the SWMP.

A summary of types of SWMP amendments, timelines and approximate costs is provided in Table 2. The total costs vary greatly depending on the type of major amendments required. For example, a plan update that includes major residuals management decisions such as a new landfill site, will cost substantially more than a plan update that does not.

Table 2 – Summary of SWMP Update Types

Type of Amendment	Example	Timeline	Estimated Costs
Minor	Change to a schedule	3 months	Internal Staff time No external costs
Major	Change to a landfill operational certificate	6-12 months	Internal Staff time $10,000+ consultant costs[1]
Plan Update	10-year plan cycle including residuals management decisions	24 months+	Internal Staff time $100,000+ consultant costs[2]

Given the anticipated remaining lifespan of the Sechelt Landfill, the SCRD will have to review its overall long-term solid waste management approach. This could be initiated in 2020 at the earliest.

The timeline for updating the SMWP is influenced by the Strategic Plan 2019-2023, which is currently in development.

[1] Cost is estimated based on 2018 Engineering Consultants fees to prepare landfill-related items. Costs will vary depending on the complexity of the work required.
[2] Cost is estimated on the 2010 SCRD SWMP Update process which was approximately $93,000. This process did not require engineering consultant costs which this update will, due to landfill-related decisions.

Any such major review of the solid waste management approach will trigger a full update of the SWMP.

It should be noted that during a full SWMP update process only the existing programs and services continue. The initiatives that are not yet started are reviewed as part of the update process.

STRATEGIC PLAN AND RELATED POLICIES

This report is in support of the SCRD's SWMP.

CONCLUSION

This report is to provide the Committee with an overview and status update of the SCRD's SWMP.

The current SWMP was adopted by the Board and MoE in 2011 and contains twenty-four initiatives to achieve a diversion rate of 65% - 69% and per capita disposal rate of 315 kg – 279 kg.

The execution of the SWMP Effectiveness Review is delayed due to the delayed implementation of several initiatives listed in the SWMPO, including those focused on an increased diversion of organics. The SWMP Effectiveness Review is now planned once the Board has provided direction on next steps regarding an increased diversion of organics and those initiatives are being implemented. This could be as early as 2021.

Given the anticipated remaining lifespan of the Sechelt Landfill, the SCRD will have to review its overall long-term solid waste management approach. This could be initiated in 2020 at the earliest.

A full SWMP update will be based on this updated solid waste management approach and could take more than two years to complete. The timeline for updating the SMWP is influenced by the Strategic Plan 2019-2023 which is currently in development.

Attachments:

Attachment A: *Local Government Act* Chapter 1, Part 9, Division 4 – Waste Management

Attachment B: SCRD SWMP Initiatives and Status

Attachment C: Regional Diversion – Annual Update, report to May 18, 2018 Infrastructure Services Committee

Reviewed by:			
Manager	X – R. Cooper	Finance	
GM		Legislative	
A/CAO	X – A. Legault	Other	

This Act is current to March 27, 2019

LOCAL GOVERNMENT ACT

[RSBC 2015] CHAPTER 1

Deposited with Clerk of the Legislative Assembly on December 16, 2015

Part 9 — Regional Districts: Specific Service Powers

Division 4 — Waste Management

Management of solid waste and recyclable material

315 (1) A board may, by bylaw, establish the service of the regulation, storage and management of municipal solid waste and recyclable material, including the regulation of facilities and commercial vehicles used in relation to these matters.

(2) If a board adopts a bylaw under subsection (1), the board has and must exercise its authority in accordance with the *Environmental Management Act* and regulations under that Act.

(3) For the purposes of this section, **"municipal solid waste"** and **"recyclable material"** have the same meaning as in the *Environmental Management Act*.

Authority in relation to waste disposal and recycling

316 A board may, by bylaw, do one or more of the following:

(a) require persons to use a waste disposal or recycling service, including requiring persons to use a waste disposal or recycling service provided by or on behalf of the regional district;

(b) require owners or occupiers of real property to remove trade waste, garbage, rubbish and other matter from their property and take it to a specified place;

(c) require the emptying, cleansing and disinfecting of private drains, cesspools, septic tanks and outhouses, and the removal and disposal of refuse from them.

SCRD's 2011 Solid Waste Management Plan Initiatives and Status

Solid Waste Initiatives		
Initiative	**Status**	**Type**
Incentive Based Tipping Fees	Completed	Reduce
Evaluation Process for Recycling Opportunities	Completed	Reduce
Community Reuse & Repair Centres (promote)	Completed	Reuse
Reuse Facilities at Landfills (continue to promote Share Sheds)	Completed	Reuse
Building Material Reuse Facilities (promote)	Completed	Reuse
Yard Waste Composting	Completed	Recycling
Illegal Dumping Program (enhance clean-up program and education)	Completed	Residuals Management
Pender Harbour Landfill Closure & Residuals Transfer Facility	Completed	Residuals Management
Sechelt Landfill Development & Gas Control	Abandoned	Residuals Management
Initiative	**Status**	**Type**
Material Disposal Bans	Being implemented[1]	Reduce
Grass-cycling and Backyard Composting	Being implemented[2]	Reduce
EPR Management Programs	Being implemented[3]	Recycling
Initiative	**Status**	**Type**
Residential Waste Reduction Education (for bi-weekly garbage)	On Hold	Reduce
Curbside Collection for recyclables (Areas B&D, or Areas B, D, E, F)	On Hold	Recycling
Curbside Collection for Food Scraps	On Hold[4]	Recycling
Every-other-week (EOW) Garbage Collection	On Hold[5]	Residuals Management
Initiative	**Status**	**Type**
Waste Stream Control System	Not Started	Reduce
Land Use Policies that Support Solid Waste Management Infrastructure	Not Started	Reduce
C&D Waste Diversion Programs	Not Started	Reduce
Business Waste Diversion Program	Not Started	Reduce
Deconstruction & Salvaging Initiatives	Not Started	Reuse
Reuse Education Pilot Programs	Not Started	Reuse
Community Swap Day Pilot Program	Not Started	Reuse
Enhanced Drop-off and Resource Recovery Facilities in: Pender Harbour, Sechelt, Gibsons	Not Started	Recycling

[1] Material disposal bans for food waste are in progress.
[2] Completed items include: promote backyard composting, offer composting training and encourage grass-cycling. Operating a compost demonstration garden has not been started.
[3] Disposal bans for some EPR items has not been started.
[4] Food scraps recycling options for Pender Harbour residents would be explored concurrently.
[5] Every-other-week garbage collection requires curbside collection of food scraps. EOW is equivalent to bi-weekly.

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – May 18, 2017

AUTHOR: Robyn Cooper, Manager, Solid Waste Services

SUBJECT: **REGIONAL DIVERSION – ANNUAL UPDATE**

RECOMMENDATION(S)

THAT the report titled Regional Diversion – Annual Update be received.

BACKGROUND

The BC Ministry of Environment requires all regional districts in BC to have a Solid Waste Management Plan (SWMP).

The SCRD's current SWMP was adopted by the Board in 2011 and outlines twenty-four initiatives that contribute to reaching targets by 2016. There are two targets: diversion and per capita disposal. The diversion target is 65%-69% and the per capita disposal target is 315kg – 279kg.

The purpose of this report is to provide an update on the SCRD's regional diversion from 2011 to 2016, the first five years of the SCRD's SWMP.

DISCUSSION

Regional Diversion Data

The format of the diversion data is consistent with the method utilized in the SWMP and was applied to the five year period of 2011 to 2016. This data was utilized for calculating waste generation, diversion rate and per capita disposal.

A summary of the diversion data is provided in Table 1.

Table 1: SCRD Regional Diversion Data 2011 to 2016

Disposal and Diversion (t)	2011	2012	2013	2014	2015	2016
Disposal						
Pender Harbour Landfill/Transfer Station	1,246	1,155	1,158	1,338	1,816	1,183
Sechelt Landfill	10,923	10,524	9,071	10,447	10,545	11,493
Total disposal	**12,169**	**11,679**	**10,229**	**11,785**	**12,361**	**12,677**
Diversion						
At Landfills	1,444	2,434	2,239	2,200	3,572	4,366
Green Waste	2,499	3191	3,437	3,672	3,415	4,343
Recycling - Curbside	667	701	685	642	631	882
Recycling - Depots	1,257	1,510	1,495	1,367	1,121	1,179
Extended Producer Responsibility	963	983	1,000	1,005	1,068	1,068*
C&D Estimate (as per SWMP)	4,255	4,255	4,255	4,255	4,255	4,255
Total diversion	**11,085**	**13,074**	**13,112**	**13,141**	**14,062**	**16,092**
Total waste generation (disposal + diversion)	**23,254**	**24,753**	**23,341**	**24,926**	**26,423**	**28,769**
Diversion rate (diversion/waste generation)	**48%**	**54%**	**56%**	**53%**	**53%**	**56%**
Population**	**28,918**	**29,222**	**29,270**	**29,512**	**29,390**	**29,243**
Disposal per person per year (kg)	**421**	**400**	**349**	**399**	**421**	**434**

*2016 EPR data not yet available; 2015 data used
**Population estimates based on BC Stats as of May 3, 2017

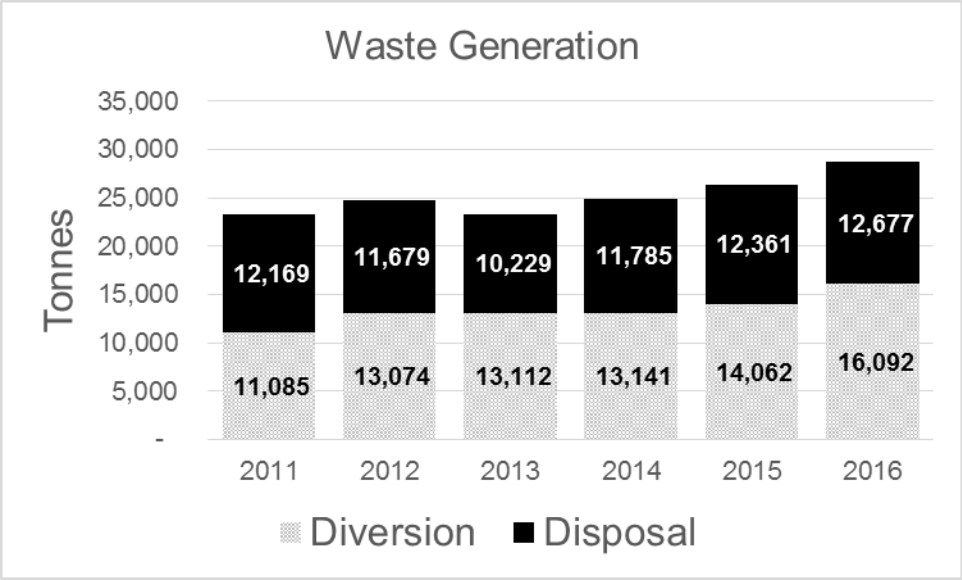
Waste Generation

Waste Generation is the sum of waste disposed and diverted. Disposal means buried in the Pender Harbour Landfill (until 2015) and at the Sechelt landfill. Whereas diversion means diverted from the landfill and includes materials recycled, composted, reused or waste exported for burial elsewhere (e.g. contaminated wood).

The trend since 2013 has been an overall increase to the total waste generated. The primary factors contributing to this increase is a growing economy. It should be noted that where there was an increase in disposal there was an increase in diversion.

A summary of waste generation is provided in Figure 1.

Figure 1: Waste Generation



Diversion Rate

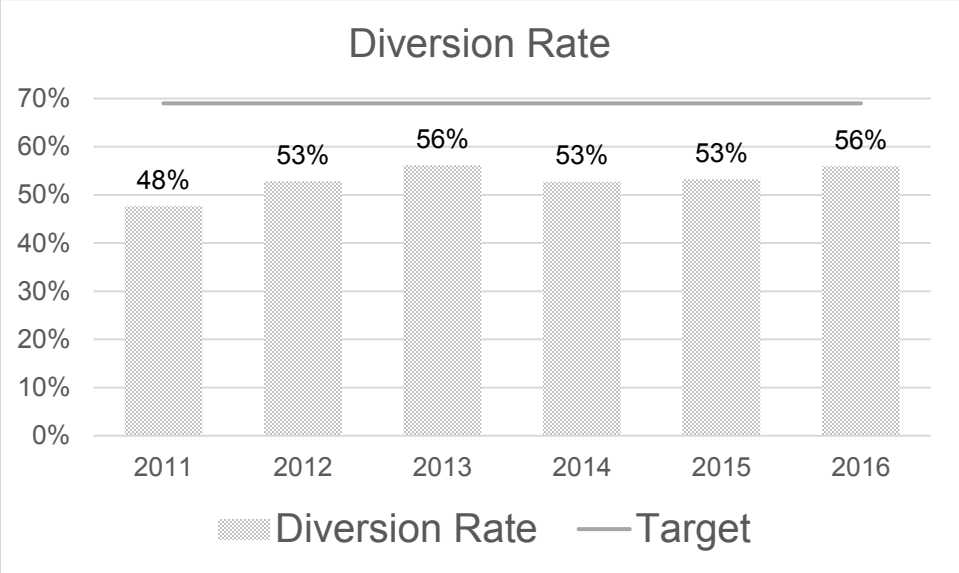
Diversion rate is calculated by dividing the diversion by the total waste generated.

2011 saw the lowest diversion rate at 48%. Since then, despite an overall increase in waste disposal, the diversion rate has remained fairly consistent with an improvement to 56% in 2016. 2016 saw an increase in tonnage in disposal and all types of diversion.

Based on 2016, a further 9%-13% diversion required to achieve the 65%-69% target.

A summary of diversion is provided in Figure 2.

Figure 2: Diversion Rate



Per Capital Disposal

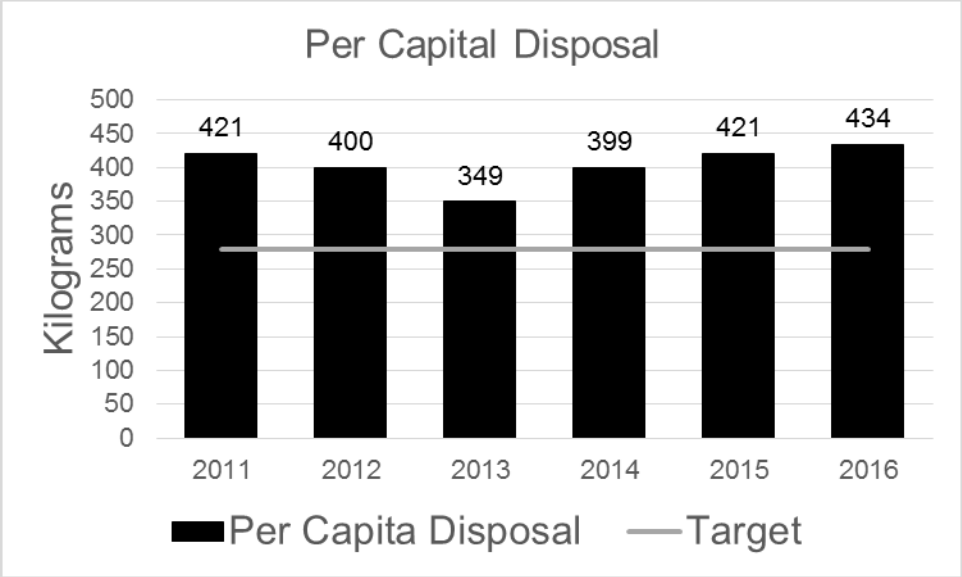
Per capita disposal is calculated by dividing the waste disposed by the population and is expressed in kilograms.

Disposal is typically related to economic trends. Since 2013, there has been a steady increase to the economy and there has been a correpsonding increase to disposal.

Based on 2016, a further 155kg reduction is required to meet the 279 kg/pp/yr target.

A summary of per capita disposal is provided in Figure 3.

Figure 3: Per Capita Disposal



Next Steps

As staff prepare the reports on short-term priorities as identified at the March 2, 2017 Special ISC, where appropriate, this regional diversion data will be referenced and recommendations will be provided in order to help achieve the diversion target.

Additionally, work continues on the development of an Organics Diversion Strategy which represents the largest opportunity for diversion.

The diversion data will also be utilized as part of a Five-Year Effectiveness Review of the SWMP that will be initiated in the fourth quarter of 2017. The review is a Ministry of Environment requirement.

Updates to Diversion Data

After the product stewardship agencies release their 2016 annual reports for the extended producer responsibility programs, the regional diversion data will be updated. The plan is to continue to provide solid waste tonnage data as part of the existing quarterly reports (green waste, depot recycling, garbage) and provide regional diversion annually.

Communications Strategy

As part of a project to restructure and update the Solid Waste web pages, a specific web page will be created for diversion data where the information contained in this report will be added. Anticipated completion date is June.

STRATEGIC PLAN AND RELATED POLICIES

This report is in support of the key strategic priority of Embed Environmental Leadership and the Solid Waste Management Plan.

CONCLUSION

The SCRD collects disposal and diversion data and calculates annual waste generation, diversion and per capita disposal rates.

There has been an increasing trend in disposal, diversion and waste generation since 2013. The increase is likely attributable to a steady improvement to the economy.

At the end of 2016, the regional diversion rate was 56% and the per capita disposal was 434kg.

Further diversion and waste reduction is required in order to meet the targets identified in the SCRD's SWMP. Specifically, a 13% increase to diversion and a reduction of waste disposed by 155kg/pp/yr is required to meet the targets.

Staff continue to work on the organics diversion strategy and preparing reports on the short-term priorities as identified at the March 2, 2017 Special ISC. Where appropriate, the regional diversion will be referenced in those reports and recommendations will be provided in order to help achieve the targets

Reviewed by:			
Manager	X – R. Cooper	Finance	
GM		Legislative	
CAO	X – J. Loveys	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Remko Rosenboom, General Manager, Infrastructure Services

SUBJECT: **SOLID WASTE MANAGEMENT PLAN MONITORING ADVISORY COMMITTEE (PMAC) - UPDATE**

RECOMMENDATION(S)

THAT the report titled Solid Waste Management Plan Monitoring Advisory Committee (PMAC) - Update be received;

AND THAT the Terms of Reference be approved;

AND FURTHER THAT staff be authorized to initiate PMAC recruitment.

BACKGROUND

There are two guiding documents for BC Regional District Solid Waste Management Plan Monitoring.

The overarching document is the BC Ministry of Environment and Climate Change Strategy's *A Guide to Solid Waste Planning Part C.3.1* and the SCRD specific document is the SCRD's *Solid Waste Management Plan* (SWMP).

The current requirement as stated in the SCRD's SWMP is to have plan monitoring utilizing a committee format: the Solid Waste Management Plan Monitoring Advisory Committee (PMAC).

Section 7.3 of the SWMP states that:

> "The role of the PMAC is to provide an independent review of Plan implementation. Committee members will:
> - become familiar with the ZWMP and its guiding principles (if they are new to the process);
> - achieve an understanding of the solid waste system in the SCRD;
> - develop methodologies for monitoring of Plan implementation and performance; Sunshine Coast Regional District Solid Waste Management Plan – The Foundation for Zero Waste Plan – Final Draft 49
> - report annually on the effectiveness of the ZWMP achieving its objectives; and
> - make recommendations on how to increase the effectiveness of the Plan or the solid waste management system."

The last PMAC meeting was held on September 29, 2015. In the following months, there were several resignations resulting in the inability to reach quorum and as such, no further meetings were scheduled.

PMAC recruitment process was initiated in Q2 2016. Three applications were received. Further recruitment was placed on hold as part of the overall review process of all SCRD advisory committees.

The purpose of this report is to reinstate PMAC and to confirm its Terms of Reference.

DISCUSSION

The first step in initiating PMAC is Board approval of the Terms of Reference, included as Attachment A.

Under the Terms of Reference:

- The mandate of PMAC is to monitor and advise on the implementation of the SCRD's Solid Waste Management Plan.
- Members are appointed by the Board for a two year term.
- Membership will reflect to the extent possible, a balance of: technical and non-technical interests, regional/geographic representation, and organizational/individual representation.

If the Board approves the Terms of Reference and initiation of the recruitment process for members in April 2019, staff would report on the results of the application process at a July 2019 Committee meeting. A first meeting of the reinstated PMAC could then be scheduled for late summer 2019.

Communications Strategy

Recruitment of PMAC members will be shared broadly through paid advertising, corporate newsletters, social media and the SCRD website. Directors could play an active role in promoting applications for PMAC membership.

STRATEGIC PLAN AND RELATED POLICIES

Section 7.3 of the SCRD's Solid Waste Management Plan (SWMP) describes the role of the Plan Monitoring Advisory Committee.

CONCLUSION

The SCRD is looking to commence the recruitment process for reinstatement of the Solid Waste Management Plan Advisory Committee (PMAC). Board approval of the Terms of Reference and direction to Staff to initiate is required.

Attachment A: PMAC Terms of Reference

Reviewed by:			
Manager	X – R. Cooper	Finance	
GM		Legislative	
A/CAO	X – A. Legault	Other	

TERMS OF REFERENCE

SOLID WASTE MANAGEMENT PLAN MONITORING ADVISORY COMMITTEE (PMAC)

1. Purpose

1.1 The purpose of the "Solid Waste Management Plan Monitoring Advisory Committee (PMAC)" is to advise the Sunshine Coast Regional District (SCRD) on matters involving monitoring the implementation of the Sunshine Coast Solid Waste Management Plan (SWMP), and evaluate its effectiveness as per the Ministry of Environment's (MoE) 2016 "*A Guide to Solid Waste Management Planning, Part C.3*.1"

2. Duties

2.1 The PMAC will:

a. Advise on the implementation of the SWMP.
b. Evaluate the effectiveness of the SWMP.

2.2 To advise and evaluate the SWMP, the PMAC will:

a. Review all information related to the implementation of the plan such as: key plan actions and implementation progress, diversion rates and waste statistics, staff reports regarding plan priorities and components.
b. Review plan implementation with a regional perspective.
c. Review annual report on the effectiveness of the SWMP.
d. Make recommendations to the SCRD Board regarding plan implementation and how to increase effectiveness via the Infrastructure Services Committee.
e. Complete PMAC member action items identified in the meeting minutes prior to the next PMAC meeting or other designated timeline.

2.3 The PMAC will be dissolved upon the initiation of a SWMP update process.

3. Membership

3.1 The PMAC is comprised of not less than 6 and not more than 12 members, with the following representation:

a. Public and/or geographical representation from Areas A, B, D, E, F, the Sechelt Indian Government District, the District of Sechelt and the Town of Gibsons – up to 8 members.
b. Commercial, Organizational and Technical representation – up to 4 members.
c. Members shall be appointed for a term of two (2) years.

3.2 The PMAC will include one elected representative from the SCRD Board as a non-voting member to provide direct liaison between the PMAC and the SCRD Board.

3.3 The MoE's Environmental Protection Officer (or designate) will be a permanent member of the PMAC and will attend meetings as possible.

3.4 The PMAC will include a Regional District staff to serve in a liaison capacity. The staff liaison to PMAC is the Manager, Solid Waste Programs or designate. When applicable, the Solid Waste Programs Coordinator and the Manager, Solid Waste Operations will participate. The role of the staff liaison is to:

a. Providing information and professional advice;
b. Facilitating and/or co-chairing meetings;
c. Assisting the secretary in preparing agendas and minutes;
d. Assisting the secretary in writing reports and recommendations to the Board as requested by PMAC;
e. Bringing such matters to the PMAC's attention as are appropriate for it to consider in support of Regional District Board direction;
f. Sending updates and correspondence to PMAC members including Infrastructure Services Committee agenda packages.
g. Make available to PMAC members available tracking information, staff reports and other information, which may include:
    i. Landfill material tracking and diversion information
    ii. SWMP progress-to-date information
    iii. Other reports, documents and links to relevant resources as required
h. Serving as one of the communication channels to and from the Board;
i. Providing advice to the Board that is at variance to a committee recommendation; and
j. Facilitate the recruitment of new members.

3.5 The SCRD Board is responsible for appointing new members.

3.6 The Chair and Vice Chair is a voluntary position that will be elected on an annual basis by PMAC members.

3.7 The PMAC Chair has the following additional responsibilities:

a. Review and provide input into the agenda.
b. Chair PMAC meetings.
c. Review final meeting minutes before distribution.
d. Encourage completion of PMAC member action items and facilitate correspondence between meetings.

3.8 All members are expected to:
a. Engage in a respectful and constructive manner in all PMAC activities.
b. Engage on the full scope of the SWMP.
c. Attend at a minimum two thirds of the meetings held in a calendar year.

4. Operations

4.1 A majority of the voting members of the committee, as listed in section 3 will constitute a quorum.

4.2 The PMAC will meet on a regular basis, not more than monthly, and at least three times per year at the SCRD Office located at 1975 Field Road, Sechelt.

4.3 All PMAC meetings must be open to the public except where the PMAC resolves to close a portion of it pursuant to Section 90 of the *Community Charter*.

4.4 The authority of the PMAC is limited as follows:

a. The PMAC does not have the authority to bind the SCRD in any way, nor engage or otherwise contact third parties, consultants, organizations or authorities in a manner which may appear to be officially representing the SCRD.

b. The PMAC may communicate with external organizations and agencies to collect information and make inquiries.

c. Where the PMAC wishes to express opinions or make recommendations to external organizations and agencies, it must first obtain authorization from the SCRD Board.

4.5 PMAC members are encouraged to:

a. Attend and participate in meetings of the PMAC.
b. Share experiences and ideas while maintaining an open mind to others' perspectives.
c. Speak to the SCRD staff liaison(s) first regarding SWMP information, issues or recommendations.

4.6 Members who are absent for four consecutive regularly scheduled meetings will be deemed to have resigned their position unless the absence is because of illness or injury or is with the leave of the SCRD Board.

4.7 In carrying out its mandate, the PMAC will work towards conducting operations in a way that:

a. Improves the economic, environmental and social well-being for present and future generations;
b. Encourages and fosters community involvement;
c. Enhances the friendly, caring character of the community;
d. Maintains an open, accountable and effective operation;
e. Preserves and enhances the unique mix of natural ecosystems and green spaces in the SCRD;
f. Is consistent with the goals and objectives of the SCRD's strategic plan; and
g. Recognizes advisory committees are one of many channels that the regional board may utilize to obtain opinions and advice when making decisions.

4.8 The SCRD will provide a recording secretary whose duties will include:

a. Preparing meeting agendas and distributing them to the PMAC members and MoE liaison in advance of the meeting.
b. Preparing minutes of all meetings using SCRD standard practices.

c. Forwarding the minutes to the PMAC Chair for review prior to submitting to the appropriate Standing Committee.
d. Forwarding the approved minutes to the Infrastructure Services Committee for further consideration and approval.
e. Forwarding the approved minutes to the PMAC members and MoE liaison.

4.9 Unless otherwise provided for, meetings will be conducted in accordance with the rules of procedure set out in the Board Procedure Bylaw.

4.10 Committee members are subject to the Conflict of Interest legislation outlined in Section 100-109 of the *Community Charter*. The terms "Council" and "Committee" shall be interchangeable for the purpose of interpretation of these sections.

4.11 Committee members must respect and maintain confidentiality of the issues brought before them.

4.12 PMAC members serve without remuneration but may be eligible to have reasonable expenses reimbursed in accordance with the SCRD Policy on Committee Volunteer Meeting Expenses.

4.11 No votes will be held to determine the PMAC's position on issues. The PMAC is to operate on a consensus basis. Where consensus exists, it will be noted; and where it does not exist, the diversity of opinion will be communicated through meeting minutes and staff reports to the SCRD Board.

4.12 By written request, the PMAC may agree to receive delegations. Interested parties are encouraged to attend meetings as observers; but will refrain from sitting at the table and participating in the proceedings.

4.13 Ultimately, the decisions regarding implementation of the SWMP lie with the SCRD Board.

5. Reference Documents

5.1 *A Guide to Solid Waste Management Planning,* Part C.3.1
5.2 SCRD Procedure Bylaw No. 717
5.3 *Community Charter*, Section 100 – 109 – Conflict of Interest
5.4 *Committee Volunteer Meeting Expenses*

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Remko Rosenboom, General Manager, Infrastructure Services

SUBJECT: **CONTRACT AWARD GROUNDWATER INVESTIGATION - PHASE 3**

RECOMMENDATION(S)

THAT the report titled Contract Award Groundwater Investigation - Phase 3 be received;

AND THAT the contract for Groundwater Investigation - Phase 3 be awarded to Associated Environmental Consultants Inc. in the amount up to $299,900 (excluding GST);

AND THAT the delegated authorities be authorized to execute the contract.

BACKGROUND:

On January 24, 2019, the Infrastructure Services Committee received the results of the Phase 2 Test Drilling of the Groundwater Investigation. At its January 31, 2019 meeting the Board adopted the following recommendations:

015/19 **Recommendation No. 2** Groundwater Investigation Phase 2 Results (in part)

THAT a 2019 Round 1 budget proposal with respect to the permitting phase for a well field in the Church Road area be brought forward;

The scope of this permitting phase (Phase 3) as presented at the January 24 Infrastructure Services Committee meeting included:

- Drilling of a pilot test well within the Church Road area and determination of water quality and well yield for use as a future supplemental water well;
- Application for a Water License under the *Water Sustainability Act* (including completion of any associate assessments);
- Communication with the public, local governments, *shíshálh* Nation and/or Sḵwx̱wú7mesh Nation;
- Assessment of the tie in options to the current water infrastructure;
- Preliminary construction cost estimates;
- Confirmation of funding options.

It is estimated that the development of a single well or well field and all associated infrastructure could be completed by 2022 and completion and commissioning of the well(s) would be completed under a future Phase 4 Groundwater project.

The formal 2019 budget was approved by the SCRD Board on March 28, 2019, which allocated $300,000 for Phase 3 of the Groundwater Investigation.

DISCUSSION:

In May 2018, a Request for Proposal (RFP) for the Groundwater Investigation – Phase 2 engineering study and Associated Environmental Consultants Inc. was awarded as the most qualified consultant to complete this study. The Phase 2 RFP contained a stipulation that would allow the flexibility, at the conclusion of the Phase 2 study, for the SCRD to enter negotiations with the selected consultant to proceed with future phases of this project.

Based on the experience with Associated Environmental Consultants Inc. during Phase 2 of the Groundwater Investigation, staff engaged with this consultant regarding a potential contract for Groundwater Investigation - Phase 3.

Staff and the consultant have agreed on the terms and conditions, therefore, it is recommended to award the contract for the Groundwater Investigation - Phase 3 project to Associated Environmental Consultants Inc. in the amount of up to $299,900 (exclusive of GST).

Included within this scope and fee estimate is a contingency of approximately $45,000 that, at the sole discretion of the SCRD, may be used for this project. These items may include additional permitting requirements or other design work that is required in order to keep the project on schedule. This contingency is only to be used on an as needed basis and must be approved by the SCRD in advance. This contingency, in the approximate amount of 15 percent of this total contract amount, which is within industry standard for these types of project.

Financial Implications

The recently approved 2019-2023 Financial Plan approved $300,000 toward this project and so this project award is within budget.

STRATEGIC PLAN AND RELATED POLICIES

The Groundwater investigation Project is intended to supplement the existing water supply and ensure the SCRD can continue providing quality services to the community through effective and responsive government**.**

CONCLUSION

At its January 31, 2019 meeting, the Board supported the initiation of the Groundwater Investigation - Phase 3 project. Staff recommend awarding the contract for this project to Associated Environmental Consultants Inc. in the amount of up to $299,900 (excluding GST).

Reviewed by:			
Manager	X – S. Misiurak	CFO/Finance	X - T. Perreault
GM		Legislative	
A/CAO	X – A. Legault	Other/Purchasing	X - V. Cropp

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Ian Hall, General Manager, Planning and Community Development

SUBJECT: **RFP 18 323 GRANTHAMS LANDING COMMUNITY HALL REHABILITATION AWARD REPORT**

RECOMMENDATIONS

THAT the report titled RFP 18 323 Granthams Landing Community Hall Rehabilitation Award Report be received;

AND THAT SCRD enter into a contract with Summerhill Fine Homes for up to $524,540 (excluding GST);

AND THAT the project budget be increased from $427,000 to $592,843 funded through:

- **Short Term Borrowing of up to $100,000;**
- **Independent Power Projects (IPP) community benefit funds of up to $100,000;**
- **Area F Gas Tax Agreement - Community Works Fund (CWF) of up to $392,843, including the $227,000 previously committed.**

AND THAT any grant support received for the Granthams Hall Rehabilitation project offset taxation required for Short Term Borrowing or Gas Tax;

AND THAT the 2019-2023 Financial Plan be amended accordingly;

AND FURTHER THAT the delegated authorities be authorized to execute the contract.

BACKGROUND

Request for Proposal (RFP) 18 323 Granthams Landing Community Hall Rehabilitation (formally titled “Restoration” but referred to as rehabilitation in this report for technical clarity), was published on January 28, 2019 and closed on February 25, 2019. A mandatory site meeting was held on February 6, 2019. Four addendums were issued.

There are 9 major components of the scope of the work:

Foundation:

- Raise the existing building, excavate for new footings and an expanded crawl space;
- Pour new concrete reinforced footings and foundation wall;
- Backfill with new perimeter drainage system;
- Repair and/or replace all structural elements of the flooring, joists, posts and beams;
- Construct perimeter skirting on top of the new foundation wall; and

- Level the building and set it back down onto the new foundation structure.

Roof
- Remove the existing roof structure;
- Install new roof trusses and roofing systems;
- Install insulation, vapour barrier and ventilation; and
- Install new ceiling finish.

Additions
- Construct a new accessible / family washroom and storeroom;
- Construct a new lower level storeroom;
- Upgrade the existing kitchen interior finishes and millwork;
- Construct an accessible ramp and new concrete front stairs; and
- Construct a new wooden rear fire exit and stairs.

Building Systems
- Plumbing;
- Construct a new septic tank and field system;
- Connect all plumbing fixtures to the septic tank;
- Install new hot water tank; and
- Run new cold and hot water lines to 3 washrooms and the kitchen.

Mechanical
- Install exhaust fans to the 3 washrooms;
- Install new kitchen range hood and exhaust fan;
- Reinstall existing circulation fans; and
- Install new electrical baseboard heaters.

Electrical
- Install new electrical panel; and
- Install new light fixtures and controls.

Exterior
- Repaint the exterior completely matching the existing colour scheme; and
- Make good all soft landscaping around the building.

Interior
- Repaint the interior completely matching the existing colour scheme.

Site Landscaping
- Repair landscaping to match pre-existing conditions (grading and turf).

Although this is an extensive list of work, this scope is limited to bringing the building back into service by addressing condition issues (some of which are structural) and bringing the building into compliance with building code. When complete, the building will effectively be a “new old building” with sound structure and contemporary required accessibility and life safety features.

As described in RFP 18 323, construction is planned to begin in May 2019, with substantial completion scheduled for the end of 2019.

DISCUSSION

RFP Process and Results

Following development of a scope of work by a registered architect in consultation with other design professionals and input received from the community and a community project steering committee, standard advertising, three proposals were received. The evaluation team included staff and the architect. Submissions were reviewed and scored on criteria set out in the RFP, including: corporate experience, reputation, capacity and resources; technical methodology, quality control program, project schedule; added value. Staff recommend that a contract be awarded to the highest scoring proponent, Summerhill Fine Homes Ltd., as the proposal represents overall best value.

Company Name	Contract Bid (excluding GST)
Summerhill Fine Homes Ltd.	$476,540

Summerhill Fine Homes' proposal met or exceeded expectations for capacity and resources, technical methodology and quality control. The proposal included a detailed schedule and carried the required costs for septic system work. When considering the weighted criteria evaluation set out in the RFP (price is 40%), Summerhill Fines Homes represents overall best value.

Proponents were allowed to suggest alternatives or substitutions to save costs/enhance project value. Summerhill Fine Homes suggested substitutions and alternatives offering potential savings of up to $39,500. Staff will explore these substitutions with the contractor with goal of reducing project cost. For the purpose of making an award, it is recommended that an "up to" amount reflecting the original scope be made.

Financial Implications

In preparation for making further grant application(s) and taking the project to tender, and recognizing the increasing cost of construction on the Sunshine Coast, staff had an updated project costing prepared. A March 22, 2018 Class B costing (+/- 10%), escalated to 2019 gave an estimated construction cost of $427,147. This figure is/was not escalated to 2019, and included a 5% construction contingency.

On October 11, 2018, the SCRD Board resolved, in part:

> **293/18** **Recommendation No. 2** Granthams Hall Project Update
>
> THAT Granthams Hall Rehabilitation project budget be increased to $427,000 funded through:
>
> - Short Term Borrowing of up to $100,000;
> - Independent Power Projects (IPP) community benefit funds of up to $100,000;
> - Area F Gas Tax Agreement - Community Works Fund (CWF) of up to $160,600 in addition to the $66,400 previously committed…
>
> AND THAT any grant support received for the Granthams Hall Rehabilitation project offset taxation required for Short Term Borrowing.

The project budget as approved in 2018 did not include escalation to 2019, construction insurance, or project management.

The September 27, 2018 Staff Report is attached as background information (Attachment A).

Current project costs include:

1.	Design and planning costs (spent to date)	$43,782
2.	Remaining design oversight costs	$8,621
3.	Construction (up to)*	$476,540
4.	Construction insurance	$7,500
5.	Project management (internal)	$8,400
6.	Recommended project contingency (10%)	$48,000
	Total project value	$592,843

**May be reduced by up to $39,500 through substitutions or alternatives*

If alternatives and substitutions are maximized and no contingency is utilized, the minimum project cost is estimated at $505,343.

A gap of up to $165,843 exists between the 2018 project budget and the project requirements as currently known. This gap must be addressed for the project to proceed.

Grant Status

A grant application to the Canadian Heritage Canada Cultural Spaces Fund (CCSF) was made in 2018 (an updated version of an application first made in 2017). The amount applied for is $235,414 (the maximum 50% of eligible expenses).

In March and then again in April 2019, staff contacted the grant officer regarding status of SCRD's application and were informed that no information about decision timelines is available however a decision is imminent and can be expected at any time.

The expense eligibility guidelines for CCSF state that Canadian Heritage "cannot fund expenses incurred before we receive your application. If you incur expenses for your project before receiving written confirmation of your funding approval, you will be doing so at your own risk." Practically, this means that if the project proceeds prior to grant approval, SCRD's expenses could be funded by CCSF.

Options

Option 1: Amend the Project Budget and Proceed with Award of Work per RFP 18 323 (recommended)

This option would see the project proceed as scheduled. If CCSF funds are received they would offset the need for taxation/use of SCRD resources or Gas other funding.

The project budget gap of $165,843 could be met by:

A. **Additional CWF Gas Tax – (Recommended Option)** Inclusive of regular 2019 funding allocations and an additional one-time bonus payment in 2019 that was recently announced by the Federal Government, Area F has uncommitted CWF funding of $787,127 which is eligible to be used for this project. If applied, the total CWF funding commitment for this project will increase from $227,000 to $392,843. Uncommitted Area F CWF funding would be reduced to $621,284. Staff plan to provide a subsequent report to the April 25, 2019 Corporate & Administrative Services Committee on Gas Tax.

B. **Capital reserves** – The Community Parks service has an available capital reserve balance of $486,562 inclusive of budgeted contributions and funding commitments in 2019. Of this amount, $300,000 has been contributed for the purposes of replacing the parks building at the Mason Road Works Yard through a $50,000 annual contribution which began in 2014 (Res. 087/14 No. 46). This leaves an unrestricted balance of $186,562 which can be used to fund the Granthams Hall project budget gap.

C. **Operating reserves** – The Community Parks service has an available operating reserve balance of $222,772 inclusive of budgeted contributions and funding commitments in 2019. This balance could be used to fund the Granthams Hall project budget gap.

D. **Increased short-term borrowing** – This option will increase the short-term borrowing requirement from $100,000 to $265,843 and will result in an increase to the estimated annual debt servicing costs from $23,000 to $61,000 based on a maximum five-year borrowing term. Debt servicing costs for the Community Parks service are funded through taxation. It is anticipated that the full impact of the resulting taxation increase would be incurred in 2020 based on anticipated project timelines. A Board resolution detailing the purposes of borrowing, repayment sources and timing is required prior to applying for a loan. This option is not recommended by staff, as it does not include formal public assent.

E. **Long-term borrowing** – This option would require electoral approval through an Alternate Approval Process (AAP) or referendum which would need to take place concurrently with construction. Long-term borrowing for a period of 10 to 20 years allows for debt servicing costs to be matched more evenly with the life cycle costs of the asset. Based on a principal loan of $265,843 and a 3% interest rate, the estimated annual debt servicing costs for 10,

15 and 20 year terms are $31,165, $22,269 and $17,869 respectively. This founding source would delay the project into 2020.

Option 2: Defer a Project Budget Decision and Award of Work per RFP 18 323 Pending Decision on CCSF Grant Application

The implied direction from a deferral would be that the project is contingent on the CCSF grant.

Pricing provided by bidders is held through May 25, 2019 (90 days from bid). Deferring a decision to a time prior to May 25 will require a new construction schedule and may prevent completion in 2019. Delaying award is not good practice for vendor relations; special communications would be required. Deferring beyond May 25 may require a new RFP if bidders will not voluntarily hold pricing.

Option 3: Cancel the Project

SCRD is not obliged to award the work. All bids received are over the anticipated construction cost. Should the Board decide that the project no longer represents sufficient value for the Regional District, the project could be cancelled. If Option 3 is selected, staff would bring forward a report to a future Committee on next steps/options, which could include an option to divest Granthams Hall to the community.

Communications Strategy

Signage will be posted at the site informing the public of the work. The SCRD Parks and Recreation Facebook page and Granthams Hall webpage will have dates of work and project updates posted.

STRATEGIC PLAN AND RELATED POLICIES

Work undertaken through this contract is aligned with SCRD's asset management goals and would support community, arts and cultural development. An additional arts and culture venue on the Sunshine Coast can contribute to local economic development.

CONCLUSION

The SCRD received three compliant bids on RFP 18 323 Granthams Landing Community Hall Rehabilitation Project. Staff recommend award of the contract to Summerhill Fine Homes Ltd. for up to $524,540 (excluding GST).

A project budget amendment of $165,843, funded from CWF Gas Tax is recommended, with the 2019-2023 Financial Plan to be updated accordingly.

If CCSF grant funds are received, they will be used to offset the requirement for taxation to support short term borrowing.

Substantial completion is planned for the end of 2019.

Attachments:

Attachment A: September 27, 2018 CAS staff report Granthams Hall Rehabilitation Project Update and Funding Plan

Reviewed by:			
Manager		CFO/Finance	X - T. Perreault
GM		Legislative	
A/CAO	X – A. Legault	Purchasing	X - V. Cropp

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – September 27, 2018

AUTHOR: Ian Hall, General Manager, Planning and Community Development

SUBJECT: **GRANTHAMS HALL REHABILITATION PROJECT UPDATE AND FUNDING PLAN**

RECOMMENDATION(S)

THAT the report titled Granthams Hall Rehabilitation Project Update and Funding Plan be received;

AND THAT Granthams Hall Rehabilitation project budget be increased to $427,000 funded through:

- Short Term Borrowing of up to $100,000;
- Independent Power Projects (IPP) community benefit funds of up to $100,000;
- Area F Gas Tax Agreement - Community Works Fund (CWF) of up to $160,600 in addition to the $66,400 previously committed;

AND THAT the 2018-2022 Financial Plan be amended accordingly;

AND THAT any grant support received for the Granthams Hall Rehabilitation project offset taxation required for Short Term Borrowing.

BACKGROUND

Granthams Landing Community Hall (Granthams Hall) has been closed since March 2015 due to building condition issues. Since the closure, with the involvement and support of a community steering committee, a rehabilitation plan has been completed and is ready for implementation, pending confirmation of funding.

The Sunshine Coast Regional District (SCRD) Board adopted the following resolution on September 14, 2017:

259/17 **Recommendation No. 1** *Granthams Hall*

THAT the report titled Granthams Hall Rehabilitation Project Update and Funding Plan be received;

AND THAT Granthams Hall Rehabilitation project budget be increased by $338,600 to $405,000 funded through:

- Short Term Borrowing of up to $100,000;
- Independent Power Projects (IPP) community benefits funds of up to $100,000;
- Area F Gas Tax Community Works Funds of up to $138,600 in addition to the $66,400 previously committed;

AND THAT the 2017-2021 Financial Plan be amended accordingly;

AND THAT if grant funding is successful it will be used to offset any funding required from the Community Parks [650] function;

AND FURTHER THAT staff report back in November 2017 to confirm the final funding mix pending notification of outstanding grant applications.

The SCRD Board adopted the following resolution on January 25, 2018:

027/18 **Recommendation No. 4** Granthams Hall

THAT the report titled Granthams Hall Rehabilitation Project Funding Plan be received;

AND THAT the Granthams Hall Rehabilitation Project Funding Plan be deferred.

In 2018, staff have received letters of community support for the Granthams Hall rehabilitation project, made further application to the Canada Cultural Spaces Fund grant program, and continued to communicate with the community steering committee.

Staff are aware there remains a strong community desire to see the hall rehabilitated and reopened.

The purpose of this report is update the SCRD Board on the project and to articulate options for the hall's rehabilitation to proceed.

DISCUSSION

Hall History, Context and Management

Granthams Hall was constructed in 1931 as a church. The land, building, and 16 benches were sold to the Granthams Landing Property Owners Association (GLPOA) in or around 1943 for use as a hall.

Throughout its life, the Granthams Hall has been subject to various fundraising efforts intended for the repair and upkeep of the building. Between 1994 and 1997, the *Granthams Hall Resurrection Project* was sponsored by the GLPOA. Extensive community and volunteer support was gathered to renovate the hall.

Ownership and responsibility of the hall was transferred to SCRD in 2009 as part of the dissolution of the Granthams Landing Improvement District (GLID). The dissolution/transfer process was largely focused on the transfer of the Granthams Landing water system; the hall was included in the transfer.

SCRD did not have a condition assessment for the hall at the time of acceptance, but records indicate it was in serviceable condition and well used.

While SCRD's preventative maintenance and asset management programs have recently been developed, no such programs existed at the time the hall was transferred to SCRD. Consequently, the hall's condition declined; a situation made worse by building components (roof, foundation, etc.) nearing or reaching end-of-useful-life. The building was closed due to safety concerns in March 2015.

Overview of Rehabilitation Work

The work to be completed through this project includes construction of a new foundation, a new roof, levelling of floors, construction of small addition for an accessible washroom, building envelope insulation, kitchen ventilation, electrical system upgrade, and construction of a wheelchair access ramp. External improvements including parking and septic system are also part of the project. The project is estimated to take 6 months to complete once a construction contract is initiated.

In preparation for making further grant application(s), and recognizing the increasing cost of construction on the Sunshine Coast, staff had an updated project costing prepared. The March 22, 2018 costing provided an estimated construction cost of $427,147.

Financial Options and Implications

A budget of $66,400 for design and engineering funded from Area F Gas Tax Agreement - Community Works Fund (CWF) was approved in 2015. Applying the remaining design and engineering funding, it is estimated that an additional $404,452 in capital funding is required to complete the rehabilitation.

In July 2018, though the Box Canyon Independent Power Project, $100,000 was received towards the Granthams Hall project.

<u>Grant Application Result</u>

The Government of Canada has not yet made a decision on the Canada Cultural Spaces Fund application. Based on the Department of Heritage's service standard, a response should be provided before mid-February 2019.

To see the project forward as quickly as possible, and taking into account the preferred tendering window of January 2019, staff recommend confirming a funding plan that does not rely on this grant. If grant support is received, it will be used to offset taxation. A January 2019 tender would mean that construction would not have started/project costs not be incurred prior to a grant decision.

Other Grants

Staff considered the just-announced *Investing in Canada Infrastructure Program* as a possible funding avenue for this project. However, the timelines for application and anticipated funding announcements would mean that construction would likely take place no sooner than 2020. In order to see this truly shovel-ready project move forward in 2019, applying for this grant is not recommended.

Option 1:

Reflecting that Granthams Hall is a core community social infrastructure and that avoided maintenance / repairs during the closure which would have been funded from taxation; capital reserves, borrowing or taxation should form part of the funding mix for this project. Of these, Short Term Borrowing best suits the planning and financial situation of SCRD and provides a timely and efficient approach.

Funding options for the $338,600 include uncommitted Area F CWF ($346,000), uncommitted Capital Reserves ($175,000), Short or Long Term Borrowing, Taxation and Independent Power Project (IPP) community benefit funds.

Staff propose moving forward with a funding mix for the additional amount that is comprised of Short Term Borrowing ($100,000), IPP Community Benefit Funds ($100,000) and Area F CWF ($160,600)

If grant resources are received they will be used to offset taxation required for short term borrowing.

Option 2: Divest the Hall

This option is not supported by staff, but was suggested by the community and is included for consideration.

Background to Acquisition

Board direction relating to the acquisition of Granthams Hall is captured in resolutions (summarized):

- October 11, 2007: 486/07, Recommendation No. 14 (in part): Adopt in principle the conversion and transfer of the Granthams Landing Improvement District; forward the report the Granthams Landing Improvement District Board for review and to ask which option they prefer.

- October 25, 2007: 523/07, Recommendation No. 25 (summary): Proceed with acquisition of hall by having building inspection done; developing acquisition and maintenance budget; inspecting septic system; pursuing course of action to bring septic into legal compliance; ask Granthams Landing Improvement District to pay for building and septic inspection costs.

- November 27, 2008: 536/08, Recommendation No. 1: SCRD Parks take over Granthams Hall and the adjoining lot to the Granthams Landing Community Hall; explore heritage designation; explore community management; report back on a plan for improvements.

The hall was accepted by SCRD during the transfer of the Grantham's Landing Improvement District water system assets in 2009. SCRD's records do not indicate any specific obligation with regard to the hall in terms of maintenance, operation or use.

Possibilities for Community Ownership

Through the process of considering transfer of assets, community ownership of the hall was offered by GLID to the Granthams Landing Wharf Association (May 2007) but was, at that time, declined.

Notwithstanding the decision of the day, frustration from having the building closed has resulted in a suggestion that returning the hall to the community be considered again. A responsible community group may have access to different funding opportunities or choose to apply a different standard of rehabilitation to manage costs.

Staff do not consider that a formal request for community ownership of the hall has been made. No community group has indicated they would accept ownership of the hall.

This option could include:

- Divestment of the park containing the hall, through an elector-approved bylaw per the *Local Government Act*; or

- A lease of the hall (only); with SCRD retaining the parkland*;* and/or

- A Regional District contribution toward community-led rehabilitation works, predicated on future community use of the facility. This could include designs and engineering work completed to date and/or funding.

If this option is selected, staff will prepare an options report that would include a process for engaging the community in next steps.

Communications Strategy

Once a preferred path has been confirmed, staff will update the Community Steering Committee for the project.

STRATEGIC PLAN AND RELATED POLICIES

SCRD community halls facilitate Community Development. As a venue for artistic and cultural production and exposition, halls contribute to sustainable economic development and foster our unique coastal culture.

CONCLUSION

Staff, with extensive support from a community steering committee, developed a rehabilitation plan for Granthams Hall. The plan is now ready for implementation, and several funding pathways are available to advance the work.

Staff recommend a funding plan combining grants, Short Term Borrowing and IPP community benefit funds and CWF-Gas Tax to move this project forward. If grant support is received it will offset taxation required.

Tendering in January 2019 is recommended to achieve best value and synchronize with a grant decision by the Government of Canada.

Reviewed by:			
Manager		CFO/Finance	X-T. Perreault
GM		Legislative	
CAO	X-J. Loveys	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Infrastructure Services Committee – April 18, 2019

AUTHOR: Remko Rosenboom, General Manager, Infrastructure Services

SUBJECT: **INFRASTRUCTURE SERVICES DEPARTMENT – 2019 Q1 REPORT**

RECOMMENDATION(S)

THAT the report titled Infrastructure Services Department – 2019 Q1 Report be received.

BACKGROUND

The purpose of this report is to provide an update on activities in the Infrastructures Services Department for the First Quarter (Q1) of 2019: January 1 – March 31.

The report provides information from the following divisions: Water, Wastewater, Transit and Fleet, Solid Waste Programs and Solid Waste Landfill Operations.

Utilities Division [365, 366, 370]

The Utilities Division serves three water service areas, the North Pender Water Service Area [365], the South Pender Water Service Area [366], and the Regional Water Service Area [370]. The Regional Water Service Area includes the Chapman water system as well as the smaller systems of Egmont, Cove Cay, Granthams, Soames Point, Langdale, and Eastbourne. The Utilities Division is also responsible for 18 wastewater facilities in Areas A, B, D, E, and F.

The SCRD water systems supply potable water to approximately 23,000 residents between Egmont and Langdale. This includes operations and maintenance of the Langdale, Soames Point, Granthams Landing, Eastbourne (Keats Island), Chapman/Gray Creek including the Chapman Creek Water Treatment Plant, the South Pender Harbour Water Treatment Plant, Cove Cay, Egmont and the North Pender Harbour Water Systems. In addition to water for drinking, these water systems supply potable water used for fire protection, recreation (pools and ice rinks), industrial use and irrigation.

Combined, the SCRD Water Systems consist of over 379 km of watermains, 16 storage reservoirs, 15 pump stations, 29 pressure reducing valve stations, 1145+ fire hydrants, 10 chlorination stations and approximately 11,475 water connections.

The quarterly report includes information about larger capital works and projects, and noteworthy program developments, as well as, monthly water treatment volumes from the Chapman Creek Water Treatment Plant and the South Pender Water Treatment Plant, and a summary of work orders.

PROJECTS - CAPITAL WORKS

- **Watermain Replacement Program**

    - North and South Pender Harbour Watermain Replacement
        - Construction is underway including blasting, roadworks and watermain construction. All of the North Pender and South Pender water mains have been installed. Connecting the new pipes to the existing pipes, paving and site clean-up are required in South Pender. The Clean Water and Wastewater Fund (CWWF) grant deadline has been extended to allow for completion of these projects. Delays have occurred due to blasting of the high volume of rock encountered during excavation. North Pender water main will be complete in mid April and South Pender will be complete in late April.

    - Chapman Creek Bridge Watermain Replacement
        - The watermain attached to the Chapman Creek Bridge is in need of replacement due to age and corrosion. This project has been awarded and completion is expected by mid-May. Construction planning with the contractor is underway.

    - Exposed Watermain Rehabilitation
        - The first tender process was unsuccessful, one bid was received and over budget. Staff are exploring alternate methods and construction techniques to complete the work as required. Staff attended a contractor sponsored workshop on the various paint coating systems available and proper metal and substrate preparation. Several locations of exposed watermain were reviewed with a contractor to identify and prioritize different painting options available. This project will be retendered in Q3 2019.

    - Henry Road Watermain Replacement
        - This project is to replace150 mm asbestos cement watermain with 200 mm ductile iron watermain. 480 metres of ductile iron watermain has been installed along Henry Road by SCRD Utilities Staff and supported by contractor machinery. Paving and final site cleanup is required. This project will be complete by the end of April 2019.

- **Water Projects**

    - Chapman Lake Infrastructure Improvement Project
        - A decision on the Tetrahedron Park boundary amendment was received from Minister Heyman on February 7, 2019 which rejected the amendment. A separate report on this project is part of the April 18, 2019 Infrastructure Services Committee agenda.

    - Groundwater Investigation– Phase 3
        - A report on the formal contract for engineering is part of the April 18, 2019 Infrastructure Services Committee agenda.

- Raw Water Reservoir(s) – Feasibility Study Phase 3
  - A report on this project will be brought to the April 25, 2019 Corporate & Administrative Services Committee meeting.
- Universal Metering Program
  - Options for implementation and funding of Phase 3 will be brought forward to the May Infrastructure Service Committee meeting.
- Town of Gibsons Zone 3 uncoupling
  - Staff are scheduling a meeting to discuss next steps.
- Review Bulk Water Agreement Town of Gibsons
  - Staff are scheduling a meeting to discuss next steps.
- Chapman Water Treatment Plant Chlorination Project
  - The existing chlorination system at the Chapman WTP is nearing the end of its useful life and an alternative disinfection system to mitigate safety hazards is required. The results of a 2017 feasibility study recommended an On-Site Generation system to replace the existing chlorine gas disinfection system. The RFP document for engineering of an On-Site Generation system will be issued in Q2 2019. The plan is to begin this project in Q4 2019 with completion in early 2020.
- Langdale Well Upgrade
  - The pump and motor at the Langdale well was installed in the early 1970s and is in need of replacement. The preliminary design of interior piping and pump station shutdown planning is underway. Assessment of the well casing and other required building maintenance is in progress. The Request for Quotation (RFQ) document for construction will be issued in Q2 2019. The projected completion is expected in Q4 2019.

- **Wastewater**
  - Square Bay Wastewater Plant
    - Construction of a new wastewater plant at Square Bay is complete. The new Upflow Sludge Blanket design has returned excellent quality discharge meeting the 10 mg/L TSS and 10mg/L BOD requirements. Final landscaping is underway. This project will be complete at or under budget.
  - Canoe Road Wastewater Field and Collection System Replacement
    - This project is complete. A new sewage treatment process utilizing Ecoflo Biofilters was installed. The filter media in the new system utilizes coconut husk by-products to filter the grey water and improve discharge quality.
  - Merrill Crescent Wastewater Field Replacement
    - This project has been completed. The new septic field was installed with a Flout dosing system, a gravity dosing system that improves septic field dispersal and does not require power. Site remediation will improve maintenance of the field and improve aesthetics. This project was completed on budget.

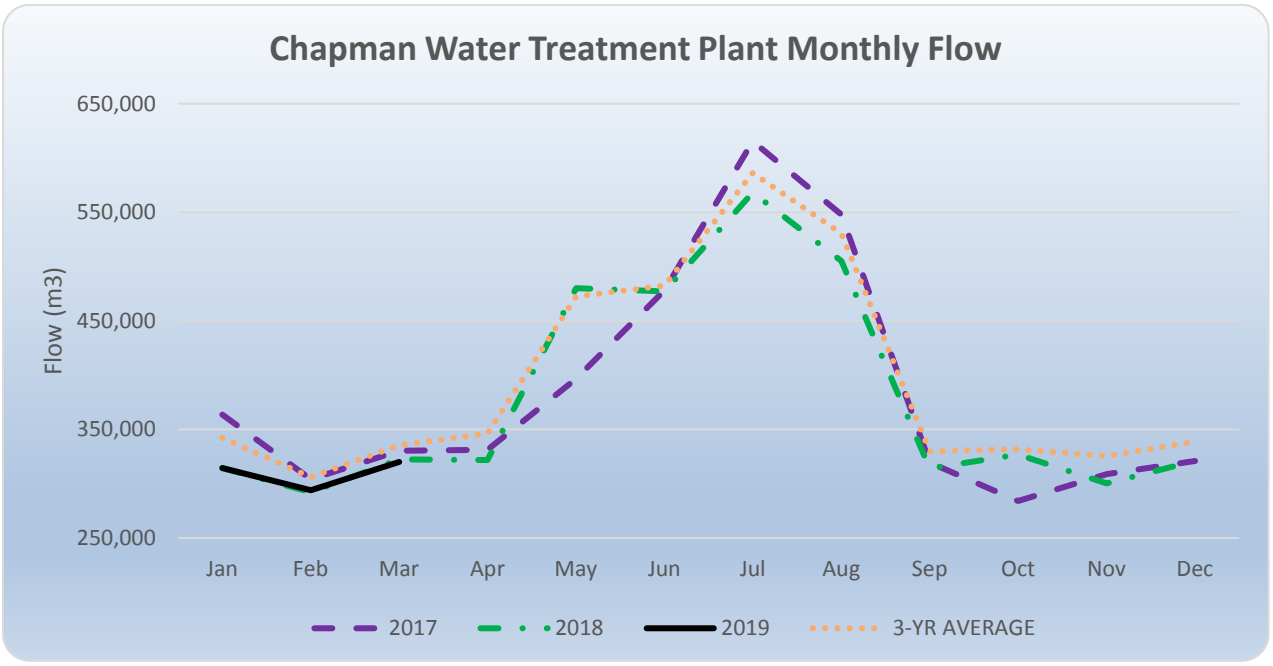
- Curran Road
  - The outfall weights on the Curran Road outfall pipe are failing and need replacement. A proposal to replace all of the aging outfall pipe weights on the Curran Road outfall was approved to be incorporated into the 2019 Budget as Categorized Mandatory. A RFQ document for construction is required.
- Woodcreek Wastewater Plant
  - An RFP for engineering and design services for the replacement sand-filter septic system will be issued in Q2 2019.

- **Demand Reduction Rebate Programs**
  - The 2019 Rainwater Harvesting Rebate Program will launch April 15, 2019. There are 50 rebates available in the Regional Water Service Area, four rebates available in the South Pender Water Service Area and three rebates available in the North Pender Water Service Area. Applicants have 90 days to complete the installation.

OPERATIONS - WATER DISTRIBUTION SYSTEM

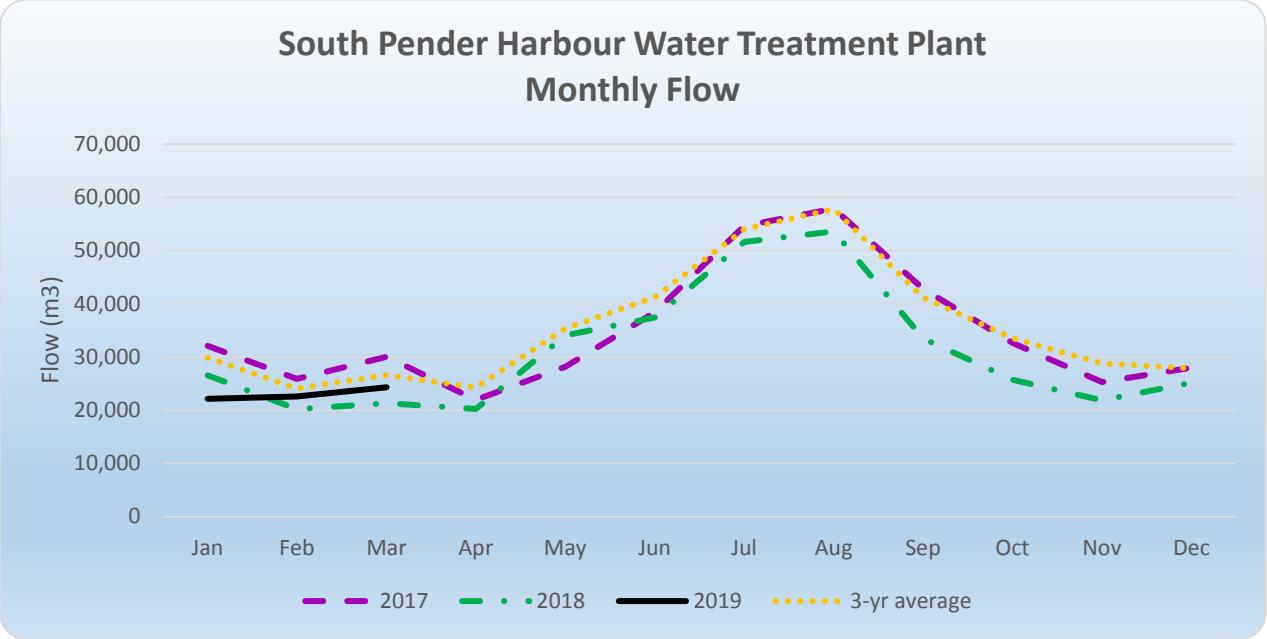
CHAPMAN WATER TREATMENT PLANT

In the Q1 2019, the Chapman Creek Water Treatment Plant produced and supplied 928,398 m^3 of potable water to residents, a 5% decrease over the three year average.



SOUTH PENDER WATER TREATMENT PLANT

In the Q1 2019, the South Pender Water Treatment Plant produced and supplied 69,019 m^3 of potable water to approximately 2,300 full and part-time residents of Madeira Park, Francis Peninsula and the surrounding area. This is a 1.4% increase over the three year average.

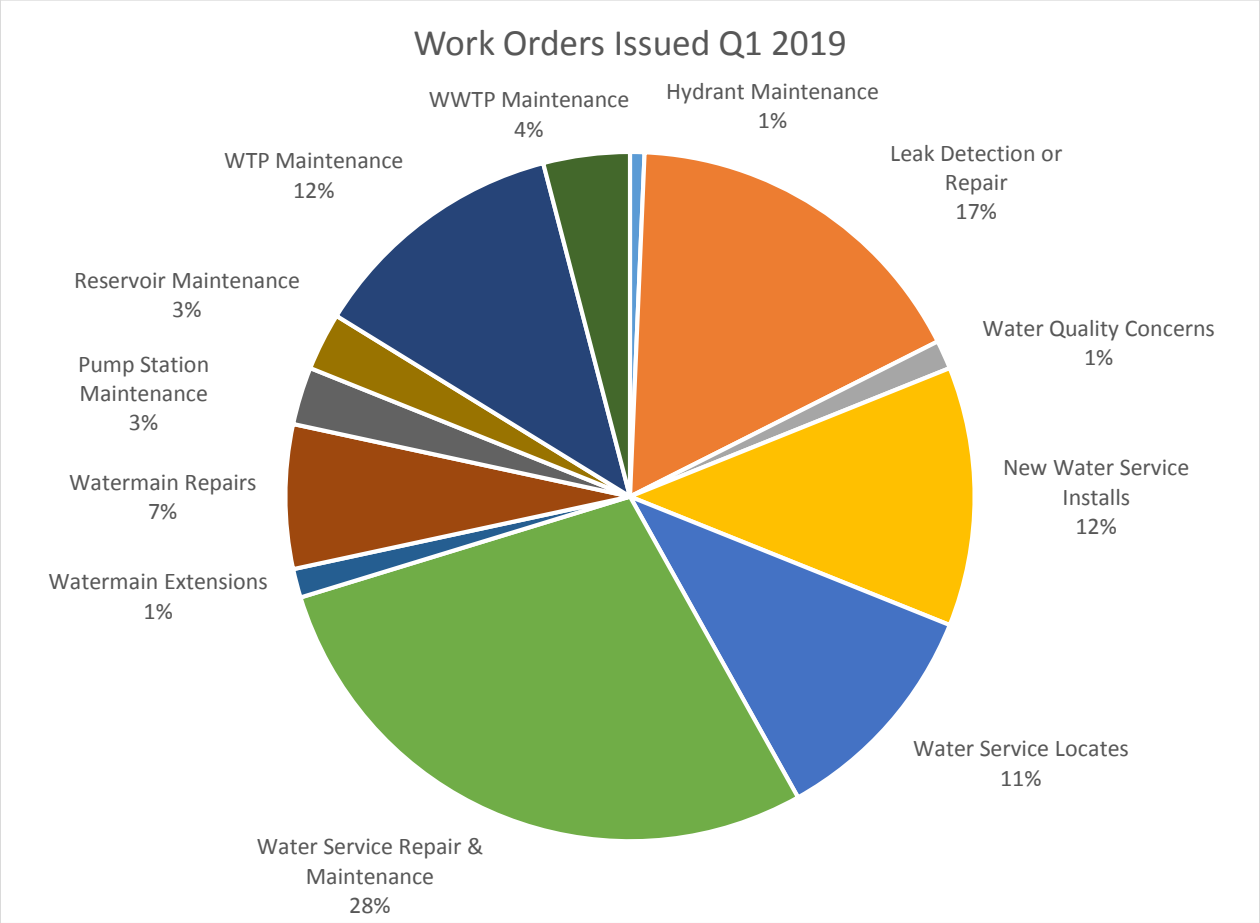


Snow Surveys

Surveys were conducted for the February 1, March 1 and April 1 snow survey periods in 2019. A report on the 2019 Snow Pack is part of the April 18, 2019 Infrastructure Services Committee agenda.

Work Orders Issued in Q1 2019

Work performed by SCRD Utility Services is tracked through the department's work order management system. Work may include scheduled or reactive maintenance and repairs, service locates or capital asset work.



Transportation and Facilities [310, 312, 345, 350]

In contrast to most BC Transit systems, the SCRD functions as both the Local Government partner and the service contractor in relationship with BC Transit. This provides a clearer picture of costs than would otherwise be the case. Service expansion in October 2017 added approximately 6,300 annual hours or a 26% service increase.

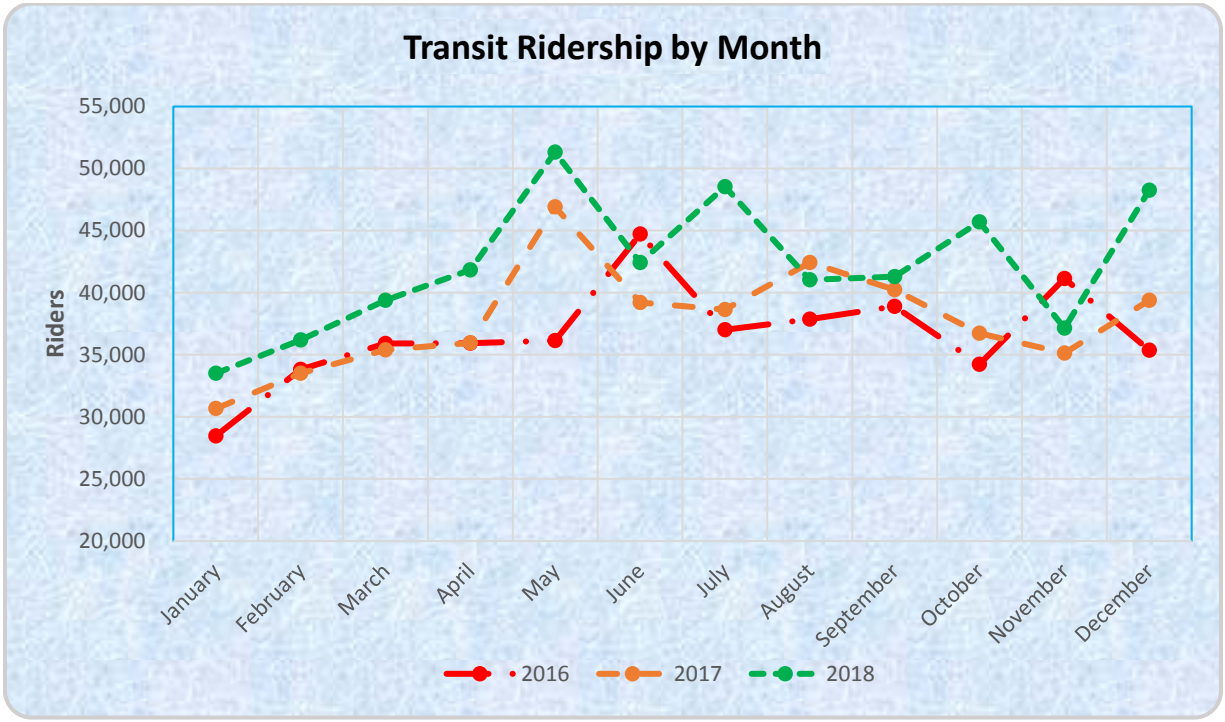
PROJECTS

Transit

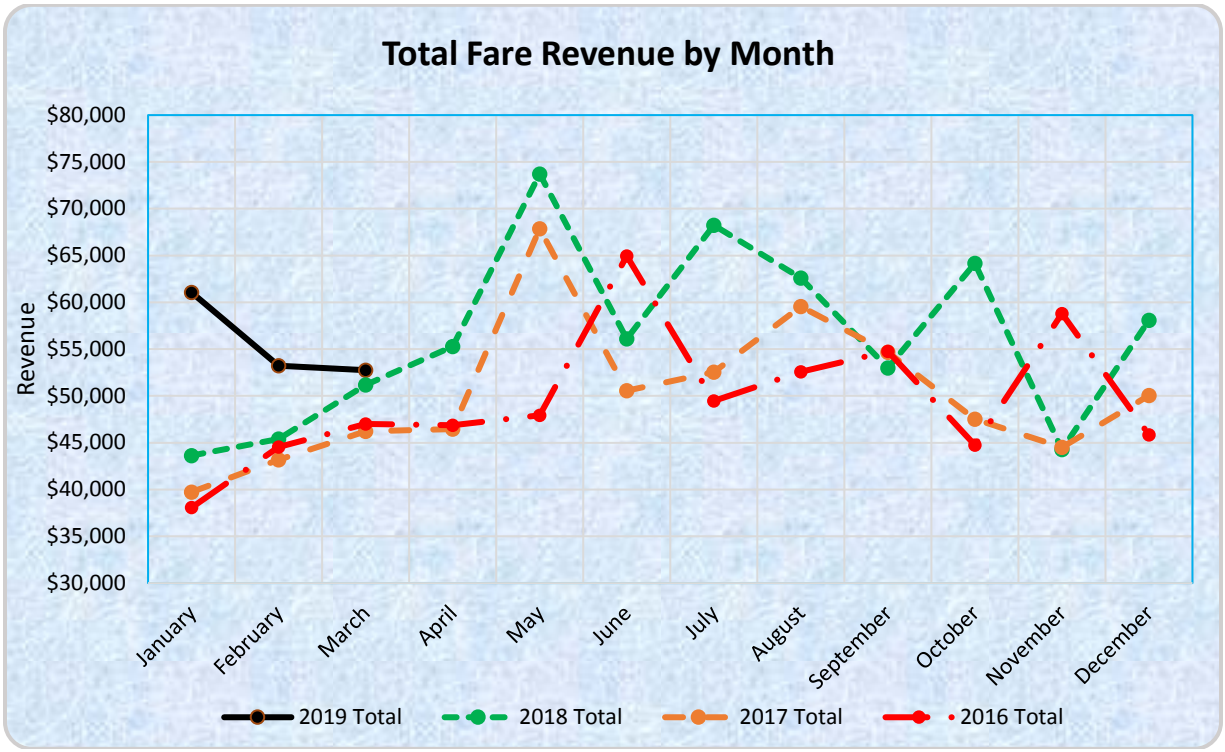
Transit fare sales are up for the second year, with March year-to-date showing a 19% increase over 2018, led by cash fare and ticket sales. Monthly pass sales are up 6% from 2018, a year which saw significant increases over 2017. Cash fares create more net revenue, satisfied riders may shift to monthly passes when committing to longer-term transit use.

Maintaining on-time performance was a challenge last summer due to several factors including increases in both ridership and ferry traffic. A review of the summer schedule was completed, and changes go into effect in mid-May. Significant effort has been made to improve schedule adherence while remaining budget-neutral, with several trips shifted from low ridership periods to those with higher demand, such as Saturday morning and Sunday afternoon.

After the first year of utilizing the same "core" ferry schedule from spring to fall, BC Ferries has returned to separate shoulder schedules to meet customer demand. Beginning in mid-May 2019, more frequent adjustments to the transit schedule to align with ferries may impact ridership.



*2019 Transit Ridership data is not yet available from BC Transit



Fleet Services

Some workload pressures are developing in SCRD Fleet maintenance. Newer mid-sized Vicinity buses are seeing larger maintenance tasks come due to accumulated mileage, while full-sized Nova buses are gaining mileage more rapidly with increased service hours, raising the frequency of maintenance. The gradual addition of fire truck maintenance and testing is also being felt more fully as their service requirements are integrated into the regular Fleet work schedule.

Solid Waste [350, 351, 352, 355]

The Solid Waste Division provides solid waste management for the Sunshine Coast. In British Columbia, Regional Districts are mandated by the Provincial *Environmental Management Act* to develop Solid Waste Management Plans. The SCRD's Solid Waste Management Plan 2011(SWMP) guides how the SCRD manages its solid waste including waste diversion programs, services and disposal activities.

The division oversees the operation and maintenance of the Sechelt Landfill and the Pender Harbour Transfer Station. The division also maintains the contracts for curbside garbage collection services for Electoral Areas B, D, E and F, three recycling depots and green waste drop off locations.

The SCRD adopted the Regional Organics Diversion Strategy in January 2018. The goal of the Strategy is to develop a financially sustainable roadmap that will lead to a robust, region-wide organics diversion program.

The quarterly report provides an update on current projects, diversion programs, services and monthly statistics.

SOLID WASTE PROGRAMS

Regional Organics Diversion Strategy

The planning work continues for the commercial sector ban on organics and recyclables, including an implementation plan for the landfill disposal bans. A separate report on this project is part of the April 18, 2019 Infrastructure Services Committee agenda.

AVICC Solid Waste Communications Group – Recycle Right at Home Campaign

The Solid Waste Programs Coordinator participated in the AVICC Solid Waste Communications Group to revitalize older recycling education videos to be more effective educational and communication tools. The focus was on the common recycling issues identified by resident inquiries and depots. The videos will be launched in early spring 2019 and coordinated with all AVICC members.

Love Food Hate Waste 2019 Provincial Campaign

The Province of British Columbia has invited local governments to join a provincial partnership to promote food waste reduction across BC. The Solid Waste Programs Coordinator participated in a conference call on March 20, 2019 to discuss campaign collaboration this year. Solid Waste Services staff will work with the province to deliver coordinated education campaigns and raise awareness of food waste in households. The campaign provides digital materials, outreach

resources and supports information sharing about best practices from other local governments. The education campaign will make use of the SCRD social media outlets and updates to SCRD Solid Waste webpage will include images and infographics to support the campaign.

Metro Vancouver Municipal Waste Reduction Coordinator Committee (MVMWRCC) Meeting

On January 16, 2019 and March 13, 2019 the Solid Waste Programs Coordinator participated in meetings with the MVMWRCC. At the meetings, past community campaigns were reviewed for their effectiveness including Create Memories Not Garbage for Christmas and Food Scraps Recycling with focus on multi-family. Future campaigns for Clothing Waste Reduction, Love Food Hate Waste, Food Waste Reduction for Restaurants, and Abandoned Waste were also discussed.

British Columbia Product Stewardship Council (BCPSC)

Solid Waste Programs Coordinator attended a meeting on March 12, 2019 with the BCPSC of which all BC Regional Districts are members. The BCPSC is dedicated to improving access to Extended Producer Responsibility programs for all BC residents. The Ministry of Environment & Climate Change Strategy (MoE) provided information on updated product stewardship plans. The BCPSC was invited to provide feedback on plans for Electric Outdoor Power Equipment and was advised of improvements in progress on beverage containers, used oil and tire programs. Members expressed to MoE the need for additional Extended Producer Responsibility programs to address propane and pressurized cylinders (particularly non-fillable), as well as trailers, RVs and 5th wheels. Members also expressed concern that smaller communities are left without adequate access.

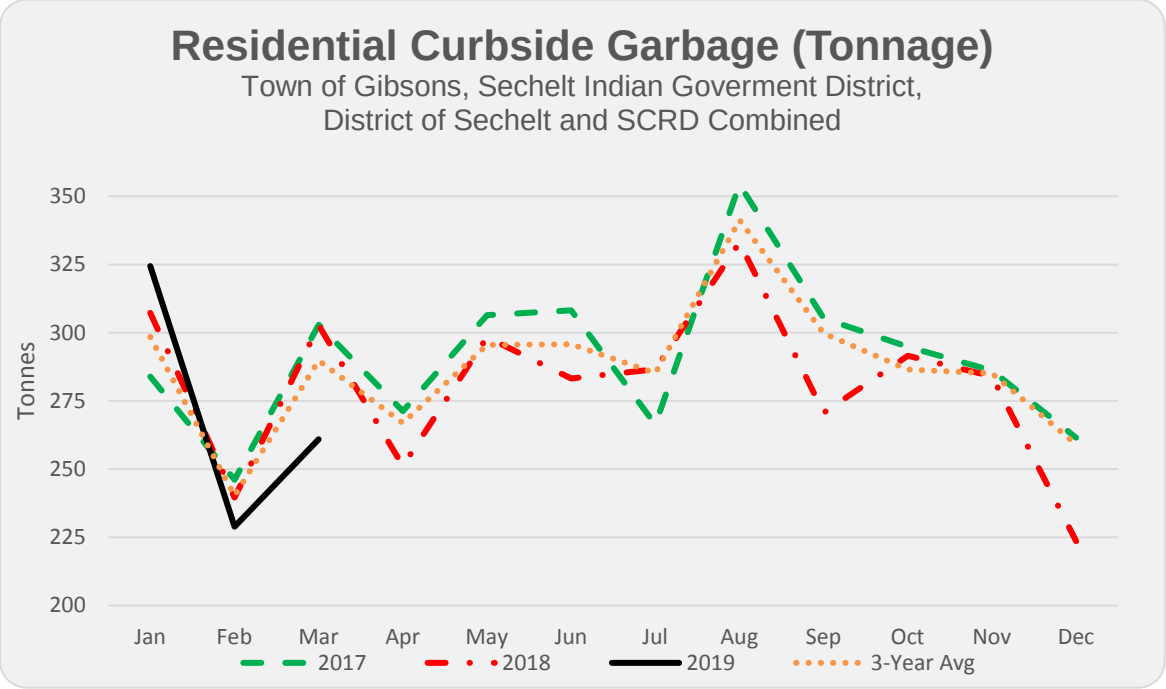
Islands Clean up

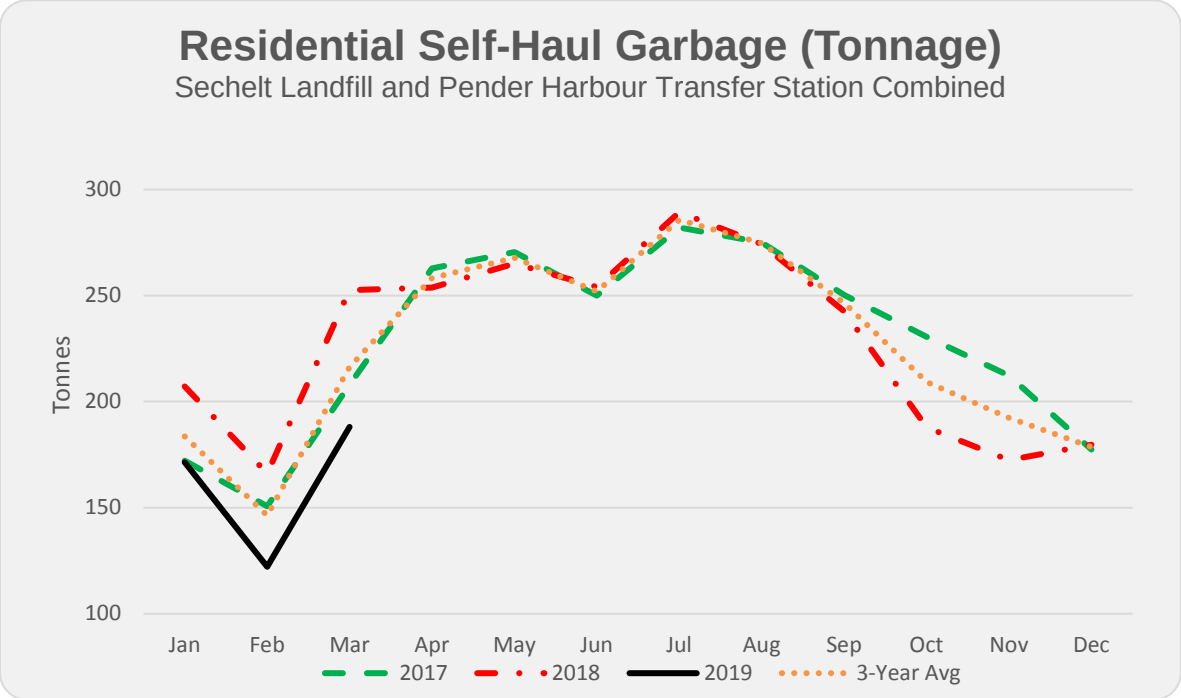
Preparation for the annual event is underway and the first meeting with the contractor took place on March 27, 2019. A preliminary schedule is currently being drafted.

SOLID WASTE OPERATIONS

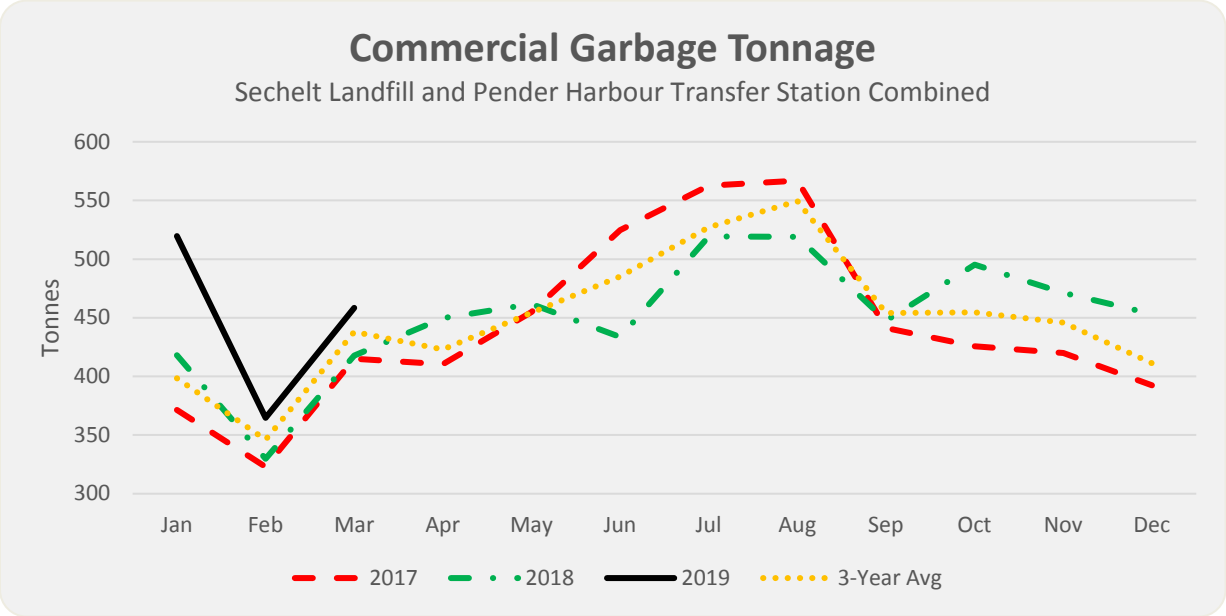
Statistics – Landfill

Residential garbage consists of both garbage collected curbside and garbage self-hauled by residents to the Pender Harbour Transfer Station and Sechelt Landfill. The residential curbside garbage tonnage presented includes a combined total of garbage collected curbside from residential dwellings in the Town of Gibsons, Sechelt Indian Government District, District of Sechelt and Sunshine Coast Regional District. Curbside residential garbage is then delivered to the Sechelt landfill and buried. The residential self-haul garbage presented includes a combined total of garbage self-hauled by residents to the Sechelt landfill or the Pender Harbour Transfer Station.


Residential Curbside Garbage (Tonnage)
Town of Gibsons, Sechelt Indian Goverment District,
District of Sechelt and SCRD Combined
Tonnes
350
325
300
275
250
225
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2017
2018
2019
3-Year Avg

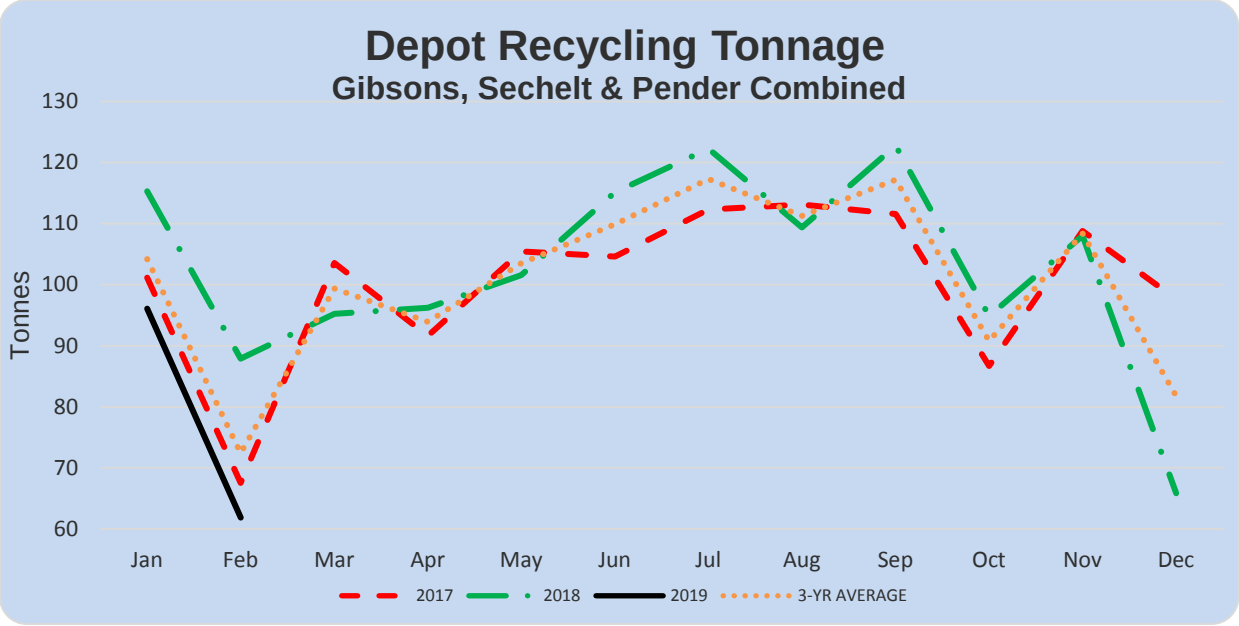

Residential Self-Haul Garbage (Tonnage)
Sechelt Landfill and Pender Harbour Transfer Station Combined
Tonnes
300
250
200
150
100
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2017
2018
2019
3-Year Avg

The commercial garbage tonnage presented includes garbage generated by commercial activity picked up from businesses and multi-family dwellings (SCRD) or dropped off at the Sechelt landfill and Pender Harbour Transfer Station. This does not include other landfilled items such as construction/demolition waste, asbestos or furniture.



Statistics – Recycling

The SCRD has an agreement with Recycle BC to provide PPP Depot Recycling Services in Gibsons, Pender Harbour and Sechelt. The SCRD contracts these services to Gibsons Recycling, GRIPS and Salish Soils respectively. The data presented is provided by RecycleBC and is updated as it is received. The data represents the combined monthly weight (by tonne) of the materials dropped off at the three recycling depots.

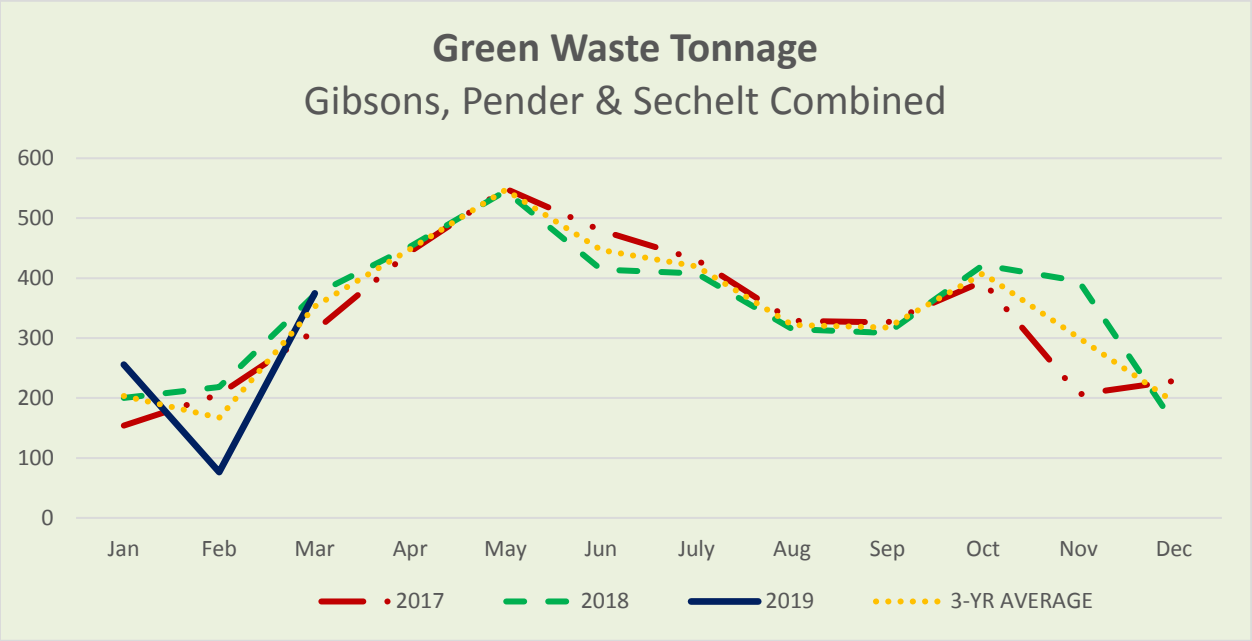


*March data is not yet available from RecycleBC

Statistics - Green Waste

The SCRD green waste recycling program provides collection locations for residents to self-haul and drop off yard and garden green waste at the Town of Gibsons Green Waste Facility, Pender Harbour Transfer Station, Sechelt Landfill and residential self-haul at Salish Soils. The collected green waste is then processed in Sechelt for composting.

The data presented provides the combined monthly weight (by tonne) of green waste dropped off at the collection locations.



Reviewed by:			
Manager	X – S. Walkey X – G. Dykstra X – R. Cooper X – S. Misiurak X – A. Kumar	Finance	
GM		Legislative	
A/CAO	X – A. Legault	Other	