



## SPECIAL INFRASTRUCTURE SERVICES COMMITTEE

Thursday, March 1, 2018  
SCRD Boardroom, 1975 Field Road, Sechelt, B.C.

### AGENDA

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**CALL TO ORDER: 9:30 a.m.**

#### AGENDA

1. Adoption of Agenda

#### IN CAMERA

THAT the public be excluded from attendance at the meeting in accordance with Section 90 (1) (g) (i) and (k) of the *Community Charter* – “litigation or potential litigation affecting the municipality;” “the receipt of advice that is subject to solicitor-client privilege...” and “negotiations and related discussions respecting the proposed provision of a municipal service...”.

#### PETITIONS AND DELEGATIONS

#### REPORTS

- |    |  |                     |
|----|--|---------------------|
| 2. | Chief Administrative Officer and Staff<br>Water  | Presentation        |
| 3. | Chief Administrative Officer<br>Water Source – Chapman System  | Annex A<br>pp 1 – 5 |
| 4. | Chief Administrative Officer<br>Board Attendance for Meeting with Minister of Environment and Climate<br>Change Strategy – March 6, 2018 | Annex B<br>pp 6 – 7 |

#### COMMUNICATIONS

#### NEW BUSINESS

#### ADJOURNMENT

## SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

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**TO:** Special Infrastructure Services Committee - March 1, 2018

**AUTHOR:** Janette Loveys, Chief Administrative Officer

**SUBJECT:** WATER SOURCES – CHAPMAN SYSTEM

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### RECOMMENDATION(S)

**THAT the report titled Water Sources - Chapman System be received.**

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### BACKGROUND

The following resolution was adopted at the regular Board meeting of February 8, 2018:

Special Meeting      **It was moved and seconded**

066/18                      THAT a Special Infrastructure Services Committee meeting be scheduled for March 1, 2018 for further discussion of project timelines and priorities related to the Comprehensive Regional Water Plan.

**CARRIED**

### DISCUSSION

#### *Current Water Sources for the Chapman System*

The Chapman System supplies water to 85% of SCRD water users. It relies primarily on Chapman Lake and Edwards Lake. During the summer, it is supplemented by Chaster Well and Gray Creek.

#### *Comprehensive Regional Water Plan (CRWP)*

Adopted in 2013, the Comprehensive Regional Water Plan (CRWP) identified a water supply deficit in the Chapman System, in particular during dry summer. It outlines a plan to address this deficit and meet future demand that balances demand management and supply expansion. Future demand was based on a population growth scenario of 2% per year. Census data shows the Sunshine Coast has grown at 0.9% per year between 2011 and 2016.

Four projects are outlined in the CRWP. The first three projects focus on expanding supply in the Chapman System. The CRWP reviewed water sources and lakes in the area and concluded that the following were the most feasible, cost effective, and with the least environmental impacts.

- Chapman Lake Supply Expansion to mitigate the impacts of the more frequently occurring droughts and in the future to supplement water supply for emergencies (e.g. wildfires).

- Groundwater Investigation for wells that can supplement supply.
- New Storage Lake to meet future water demand.
- Universal Water Metering, as the main tool of demand management, is expected to yield consumption savings of 20 to 30%, conserving supply.

### *Drought and Climate Change*

Climate change is decreasing summer precipitation and making the start of the fall rains less predictable as identified in the CRWP. After Stage 4 watering restrictions were called in 2015, the SCRD Board voted to proceed with the Chapman Lake Supply Expansion Project.

Climate change again impacted the Chapman System in 2017 with the late start to the fall rains. It was the first time operationally for the SCRD that Chapman Lake was not full in early November. This initiated the deployment of the siphon.

### *Environmental Flow Needs*

In 2016, the Province required under the *Water Sustainability Act*, that a certain Environmental Flow Needs (EFN) would be implemented in Chapman Creek. The new EFN requirements have resulted in a loss of 20 to 30 days of water storage in Chapman Lake due to the increased water release to Chapman Creek.

In 2015 the SCRD hired FSCI Biological Consultants (FSCI). FSCI determined that 200L/s was required for spawning salmon and to meet the EFN in Chapman Creek. The 200L/s is now noted as the EFN in the SCRD's Chapman Lake water licence. This change represents a significant impact on Chapman Lake water supply, furthering the deficit of water storage that was identified in the CRWP.

### *Chapman Lake Supply Expansion*

The Chapman Lake Expansion Project will increase access to five additional meters of the 30 meter deep Chapman Lake. The proposed work is to install a new outlet pipe and associated fittings/dam to access the lake at an 8 meter depth. This project will double the accessible water.

Engineering design work is substantially (98%) completed and the permitting process is awaiting approval.

Estimated timeline:

- Ministry of Environment and Climate Change Strategy (BC Parks) park boundary amendment completion: Fall 2018
- Park Use Permit (BC Parks) and Water Licence (FLNRORD): Spring 2019
- Outlet pipe construction: Summer 2019
- Commissioning: Fall 2019

In 2015, it was understood that before any commissioning, the Board will need to make a number of policy decisions on deployment and implementation related to the infrastructure. Most notably was the policy criteria to be met before any additional drawdown of water would be used.

### *Groundwater Investigation*

The CRWP identified the possibility of developing additional groundwater wells to supplement the Chapman System.

Stage 1 involved a desk top study of aquifers and was presented to the Infrastructure Services Committee in October 2017. The study identified four sites with the highest probability of yielding a volume of water significant enough to justify development costs. The sites are located at:

- Mahan Road
- Bridge at Gray Creek
- Soames Point
- Dusty Road (adjacent to District of Sechelt Operations Yard)

A 2018 budget proposal for Stage 2 involves mobilizing a drilling rig to drill four test wells and conducting maximum yield, water quality testing and sustainable yield tests on the wells. The plan proposes a Stage 3, which will develop wells identified at Stage 2 into production wells.

A Groundwater Task Force has been created to consult on the potential management of groundwater sources within the context of the region's water supply concerns. The Task Force's Consultation report will be presented to the March 8, 2018 Planning and Community Development Committee meeting with a Technical Report from staff scheduled for the March 15, 2018 Infrastructure Services Committee meeting.

The *Water Sustainability Act* has requirements for licensing groundwater. One requirement is demonstrating that a new production well will not negatively impact existing groundwater users or impact hydrologically connected streams.

Estimated timeline:

- Groundwater Task Force Consultation Report: March 2018
- Stage 2: Drill four test wells and conduct tests (if approved in 2018 budget): 2018
- Stage 3: Develop wells identified at Stage 2: Summer 2019-2020
- Water Licences: 2020-2022
- Commissioning: 2021-2022

### *Engineered Lake*

The *Engineered Lake* (water reservoir) is the long term option to meet water demand needs in the CRWP. Obtaining property rights to the land was identified as an action for 2021.

According to the CRWP the water reservoir project will target a storage reservoir 10-15 meters deep with a surface area of approximately 40,000-75,000m<sup>2</sup>. Since the approval of the CRWP in 2013 suggestions have been made to extend the size of such lake to 120,000m<sup>2</sup>.

The 2018 budget proposal Regional Water Storage Capacity recommends a feasibility study that will include site identification, regulatory framework, preliminary engineering and estimated Class D costs.

Estimated timeline:

- Regional Water Storage Capacity budget proposal: Spring 2018
- Regional Water Storage Investigation (if approved): 2018-2019
- Land Acquisition or Land Tenure completed: 2022-2023
- Water Licence: 2023-2024
- Engineering design and survey: 2024-2025
- Construction: 2025-2026
- Commissioning: 2026-2027

### *Universal Metering*

Universal Metering is expected to yield consumption savings of 20 to 30%, conserving supply. This is the result of resolving leaks on private properties and raising awareness around water consumption.

Installing a meter on each water service connection throughout the Regional District is divided into three phases.

- Phase 1: North and South Pender
- Phase 2: Regional Areas
- Phase 3: District of Sechelt/*shíshálh* Nation

Estimated timeline:

- Phase 1 completed: 2017
- Phase 2 Completion: 2018
- Phase 3 Completion (If approved): 2019

## **STRATEGIC PLAN AND RELATED POLICIES**

The SCRD Strategic Plan's Mission is to provide leadership and quality services to our community through effective and responsive government. This report outlines key projects that will help ensure the SCRD continues to provide the services of water purveyor. Interwoven in the projects outlined in this report are the SCRD Strategic Priorities of Ensuring Fiscal Sustainability, Embedding Environmental Leadership, Supporting Sustainable Economic Development, Enhancing Collaboration with the *shíshálh* and Skwxwú7mesh Nations, and Facilitating Community Development.

This report is built upon the Comprehensive Regional Water Plan's elements to meet the community's water needs now and in the future.

## **CONCLUSION**

This report outlines ongoing and proposed water projects affecting the Chapman System. The Comprehensive Regional Water Plan identified a water supply deficit during periods of drought on the Chapman System.

New Environmental Flow Needs requirements have furthered the water supply deficit.

Four projects will bridge this deficit and ensure a sustainable water supply for the communities in the future. The table presented below lists the estimated timelines for these projects.

<b>Source</b>	<b>Feasibility confirmed</b>	<b>Authorizations received (incl. land acquisition)</b>	<b>Commence Construction</b>	<b>Commence Commissioning</b>
Universal metering	-	-	2016	2019
Chapman Lake: supply expansion project	Confirmed	Spring 2019	Summer 2019	Late 2019
Additional groundwater	Late 2018	2020-2022	2019-2020	2021-2022
Engineered lake	2019	2022-2024	2025-2026	2026-2027

<b>Reviewed by:</b>			
Manager	X – S. Walkey X – D. Crosby	Finance	
GM	X – R. Rosenboom	Legislative	
CAO	X – J. Loveys	Other	X – R. Shay

## SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

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**TO:** Special Infrastructure Services Committee – March 1, 2018

**AUTHOR:** Janette Loveys, Chief Administrative Officer

**SUBJECT:** BOARD ATTENDANCE FOR MEETING WITH MINISTER OF ENVIRONMENT AND CLIMATE CHANGE STRATEGY – MARCH 6, 2018

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### RECOMMENDATION

**THAT** the report titled Board Attendance for Meeting with Minister of Environment and Climate Change Strategy – March 6, 2018 be received;

**AND THAT** Board attendance for the March 6, 2018 meeting with Minister Heyman be confirmed;

**AND FURTHER THAT** the recommendation be forwarded to the Special Board meeting of March 1, 2018.

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### BACKGROUND

The Board adopted the following resolution at the meeting held on February 22, 2018:

076/18                    **Recommendation No. 16**    *Meeting with Minister of Environment and Climate Change Strategy*

THAT the report titled Meeting with Minister of Environment and Climate Change Strategy be received;

AND THAT staff confirm a meeting with Minister Heyman with respect to the SCRD's Chapman Lake Expansion Project, scheduled for Tuesday, March 6, 2018 in Victoria B.C.;

AND THAT the Board members to attend the meeting be confirmed at a later date through public process at an open meeting;

AND FURTHER THAT staff prepare a presentation and technical materials for the meeting.

### **CARRIED**

The SCRD Board met with the Minister of Environment and Climate Change Strategy on September 26, 2017 at the 2017 UBCM conference.

### DISCUSSION

The Sunshine Coast Regional District has been provided an opportunity to meet with the Honourable Minister George Heyman and his staff to discuss further the Chapman Lake Expansion Project.

The meeting is scheduled for Tuesday, March 6<sup>th</sup> at the Minister's Office in the Provincial Legislature in Victoria. This meeting is 30 minutes in length with 20 minutes for a technical presentation and 10 minutes at the end of the meeting for discussion.

This invitation to meet on March 6<sup>th</sup> is a follow to the Board's meeting at UBCM.

**CONCLUSION**

At the 2017 UBCM conference, the SCR D Board met with Minister of Environment and Climate Change Strategy on September 26, 2017.

Staff request the Board confirm attendance for the March 6, 2018 meeting with Minister Heyman.