

Council Meeting
September 11th 2019 | 10:00 AM – 2:00 PM
Columbia Shuswap Regional District Boardroom
555 Harbourfront Drive NE, Salmon Arm

Record of Decisions and Action Items
Approved December 11th 2019

Meeting objectives

1. Receive operations and financial update from Program Managers
2. Receive 2018 water quality report
3. Receive guest presentation from Bruce Weicker and Cliff Doherty, Royal Canadian Marine Search & Rescue
4. Receive guest presentation from Dr. Jeff Curtis, UBC-Okanagan

Present

Paul Demenok, Chair – Columbia Shuswap Regional District, Area C
Jay Simpson, Vice Chair – Columbia Shuswap Regional District, Area F
Rene Talbot – Columbia Shuswap Regional District, Area D
Ken Christian – Thompson-Nicola Regional District, City of Kamloops
Rod Crowe – Thompson-Nicola Regional District, Village of Chase
Tim Lavery – City of Salmon Arm
Colleen Anderson – District of Sicamous *(to 1:30 pm)*
Denis Delisle – Regional District of North Okanagan, Area F
Rick Fairbairn – Regional District of North Okanagan, Area D *(to 2:10 pm)*
Dennis Einarson – BC Ministry of Environment and Climate Change *(from 10:45 am)*
Randy Wood – Community Representative
Lorne Hunter – Community Representative
Sharon Bennett – Community Representative
Natalya Melnychuk – Community Representative

Erin Vieira and Mike Simpson – Fraser Basin Council

Observers

Ray Nadeau *(from 1:00 pm)*

Regrets

Rhona Martin
Laura Code
Dave Nordquist
Steven Teed

Call to Order	The meeting was called to order at 10:00 AM by Chair Paul Demenok
Welcoming comments	Chair Demenok introduced Sharon Bennett as a new Community Representative and welcomed her to her first Council meeting.
Adoption of meeting summary	<p>Moved/seconded by Mayor Christian/Director Talbot that: The summary of the June 12th 2019 meeting of the SWC be adopted.</p> <p>CARRIED</p>
Report from Chair	No report
Report from Program Managers	<p>Erin Vieira presented an update on program operations since the SWC's last meeting in June:</p> <ul style="list-style-type: none"> • Water quality monitoring in the summer months detected unsafe levels of <i>E. coli</i> bacteria at some beaches in the watershed, resulting in advisory issues. • UBC-Okanagan researchers have completed three years of water quality monitoring on Shuswap River and Salmon River for the nutrient research project. Next steps include the completion of a final report, and continuing to engage the agriculture industry, nutrient experts/scientists, advisory committee members, and the BC Ministries of Environment and Agriculture to work toward a nutrient diversion or remediation implementation plan for Spring 2020. • Staff delivered several education/awareness campaigns for the prevention of Zebra/Quagga Mussel introductions over the summer; additionally, staff worked with the Columbia Invasive Species Society to install new Clean-Drain-Dry signs at boat launches across the watershed. • Staff are presenting on Zebra/Quagga Mussel prevention at an upcoming conference in October • Staff delivered several education/awareness campaigns for safe boating and drowning prevention over the summer; marine safety whistles were distributed to recreationists. Over 50 separate campaigns were delivered, which is significantly higher than in previous years thanks to grant funding from Transport Canada for the SWC's Safe Recreation Program. • Staff provided an update on social media and website analytics: through the spring and summer months, the combined number of impressions through Twitter and Facebook was approximately 70,000

Erin presented a financial report to the end of the first quarter, April 1st – June 30th 2019:

Revenue source for 2019-20	(\$)
Surplus (from March 31 st , 2019)	186,896
CSRD (C, D, E, F and District of Sicamous)	160,000
TNRD	53,600
City of Salmon Arm	40,000
Adams Lake Indian Band	1300
Grant funding: Transport Canada <i>Boating Safety Contribution Program</i>	19,538
Total revenue	461,334

	Annual budget (\$)	Expenses (\$)
Water Monitoring Initiative	51,150	11,570
Water Protection Initiative	79,500	19,171
Zebra & Quagga Mussel Prevention Program	30,825	20,981
Safe Recreation Program	26,050	9462
Communications	42,200	8349
Management and Administration	43,150	7394
Operating Reserve	188,459	0
Total expenses to December 31st 2018	461,334	76,927

Dennis Einarson entered the meeting at 10:45 am

Discussion:

Mayor Rod Crowe inquired about monitoring for Zebra and Quagga Mussels in Alberta. Councillor Colleen Anderson inquired if any research is being done (by other organizations) about treatment methods for invasive mussels. Councillor Tim Lavery inquired if the Province is working with boating stakeholder groups on education and outreach for preventing mussel invasions.

Mayor Ken Christian suggested that staff look at coroners' data from recent years to determine what proportion of water-related fatalities are linked to alcohol consumption. Other SWC members described safe boating campaigns they have seen and thought to be effective.

Councillor Tim Lavery inquired if the SWC has considered making an Instagram account, as another method of communications and outreach.

Action items:

Staff will forward the most recent report from the Province on their Invasive Mussel Defence Program to SWC members

Staff will look into enforcement by the Province of contaminated, quarantined watercraft

Staff will obtain coroners' data and consider new ways to promote sober boating for next season.

**Report from Program
Managers: 2018
Water Quality
Summary**

Erin Vieira reviewed the 2018 Water Quality Summary, which was completed in July and sent out to SWC members and partners by e-mail and posted online (www.shuswapwater.ca). Print copies of the report have been sent to government offices and library branches throughout the Shuswap. The report has been advertised extensively in newspapers.

Discussion

Councillor Colleen Anderson inquired about how to report suspected dumping of grey water into the lake. Dennis Einarson replied that phoning the RAPP line (1-877-952-7277) would be the best way.

Mayor Ken Christian commented on the challenge of describing water quality as being 'good' or otherwise. A key point that must be considered in classifying water quality is its use. He also suggested that interpretation of beach water quality data be interpreted cautiously, as results can be significantly altered by rain.

Chair Demenok inquired if future editions of the water quality report will include water quality trends over time. Erin Vieira replied that the BC Ministry of Environment is working on this, as part of developing water quality objectives for Shuswap Lake. The SWC will work with MOE staff to include these analyses in future reports.

**Other updates for
information:
Provincial Invasive
Mussel Defence
Program**

This item arose out of a brief discussion at the June 12th 2019 SWC meeting, during which a SWC member inquired about the possibility of the SWC supporting the expansion of the Province's K9 unit of the Invasive Mussel Defence Program. Staff discussed this with provincial staff, and relayed the following key points:

- K9s provide a number of benefits to the provincial Program, including multi-purpose detection, evidence recovery, and public education/outreach
- K9s are a long-term commitment, having a 7-9 year career and requiring a full-time handler for that duration
- K9s are a full-time commitment and require a very dedicated

handler.

- The initial cost to purchase and train a K9 is insignificant relative to the commitment of training, caring, and exercising.

Discussion

Mayor Ken Christian commented that the cost to the City of Kamloops for an RCMP handler and K9 is over \$160,000 per year.

Other updates for information: Canada Border Services Agency Aquatic Invasive Species prevention

Staff have corresponded with the Canada Border Services Agency to determine what measures are in place to prevent the spread of aquatic invasive species (i.e., Zebra and Quagga Mussels) via floatplanes. The CBSA has the following two Memoranda:

Memorandum D19-8-5, *Import Prohibitions and Requirements for Commercial Importers of Aquatic Species and for Travellers Under the Aquatic Invasive Species Regulations*, which states that conveyances and equipment, including float planes, must be free of invasive mussels.

Memorandum D2-5-12, *Telephone Reporting for General Aviation and Private Boats*, which requires floatplane pilots to inform the Telephone Reporting Centre that floatplanes moving between fresh water bodies are compliant.

These two memoranda only apply to floatplanes entering Canada from outside Canada.

Discussion

Chair Demenok suggested that the SWC collaborate with the Okanagan Basin Water Board and write a joint letter to the federal Department of Fisheries and Oceans and Transport Canada.

Action item:

Staff will prepare a letter as described above.

Staff update:

Mike Simpson provided a more detailed update on the Water Protection Initiative:

- Staff participated in a webinar held Aug 19th with participants from Ministry of Environment, Ministry of Agriculture, dairy sector, and environmental groups.
- Staff have corresponded with nutrient experts, David Poon (Min. Agriculture) and Keith Reid (Agriculture and Agri-Food Canada).
- There are several other initiatives underway by other organizations that will have a bearing on nutrient management in the Shuswap watershed, including the development of Water

Quality Objectives for Shuswap Lake (MOE); the final results of the research project led by UBC-Okanagan; the new *Agricultural Environmental Management Code of Practice*; a manure centrifuge prototype being tested; the results of the Mara Lake bottom sediment core research; and an invitation from Kamloops Okanagan Dairy Association to the SWC to collaborate on crop research.

Several ideas are being considered for the SWC's next phase of work on Phosphorus mitigation. The SWC will wait for Dr. Curtis' final report before deciding on a course of action, but some possibilities could be forage nutrient research, improving manure storage, mapping low-lying areas and prioritizing locations for wetland development, and/or supporting farmers and landowners in implementing new practices to reduce or intercept Phosphorus use.

Whichever course(s) of action is decided upon, the desired outcomes are that it is agreeable to all parties, will improve nutrient loss to freshwater, and can leverage SWC funding.

Action item:

Denis Delisle requested a copy of Mike's detailed Phosphorus document

Roundtable Updates

Several SWC members provided updates on water initiatives underway in their organizations:

Director Denis Delisle reported that a large volume of people float down the Shuswap River on tubes in the summer months. There have been issues with safety, parking, and conflicts between tubers, boaters, and private property owners. The Shuswap River Ambassadors has been effective at talking to people about safety and keeping the river clean. The situation could be made even better with a shuttle service (to alleviate parking concerns).

Director Delisle further commented that the RDNO is awaiting feedback from Splatins on the Shuswap River boating regulations that are in development.

He further reported that RDNO is working on a strategy for restoring lower Gardom Creek, which is subject to flooding. Ashton Creek is also subject to flooding and the regional district is working with Lee Hesketh to restore it.

Director Rene Talbot reported that Fortis has restored a section of

Salmon River where erosion recently took place, exposing some of Fortis' underground infrastructure.

Chair Demenok has met with Minister Farnworth regarding Newsome Creek and the concerns for additional erosion and the potential loss of homes into the creek. BC Ministry of Transportation is replacing several culverts to accommodate the creek during freshet. The Chair commented that a full assessment of the Newsome Creek watershed is also needed.

Lorne Hunter reported that Valid Manufacturing has installed a prototype centrifuge on a farm to test the effectiveness of the centrifuge in separating manure into liquid and solid components.

Director Rick Fairbairn reported that the Okanagan Basin Water Board (of which he is a member, representing RDNO), is concerned about the potential listing of the native Rocky Mountain Ridged Mussel as an endangered species. Such a listing may restrict the Board's water milfoil management plan. The RMR Mussel has been recommended for listing as endangered by the Committee on the Status of Endangered Wildlife in Canada, but the matter has been reprieved for now and is referred for more study and consultation.

Mayor Ken Christian reported that Trans Mountain Pipeline expansion project is scheduled to begin near the Kamloops airport later in September. The pipeline will divert bitumen from being carried by rail through the Shuswap.

Mayor Christian further reported that the City of Kamloops has upgraded its wastewater treatment plant to improve the effluent such that more biosolids are created and discharge to the Thompson River is cleaner. The City is now trying to find a solution for storing biosolids; it has an agreement with Arrow Transportation. Arrow is looking for an alternative to the Turtle Valley.

Lunch break

SWC members took a lunch break from 12:00 – 12:45 pm.

Guest presentation: Bruce Weicker and Cliff Doherty

Chair Demenok introduced Mr. Bruce Weicker and Mr. Cliff Doherty from the Royal Canadian Marine Search & Rescue, Station 106 Shuswap (RCM-SAR).

Mr. Cliff Doherty explained the feasibility study being undertaken by RCM-SAR for a regional water safety training centre in the Shuswap. The purpose of the study is to quantify the need for such a training centre.

He acknowledged funding from the SWC for the study, as well as from other sources.

Mr. Bruce Weicker explained that the RCM-SAR is also designing a new boathouse to house their two rescue boats and training boat, to be built in Sicamous. The concept design will include a training room.

Mr. Weicker gave an overview of the RCM-SAR's operations during the summer season. They were called out on 16 missions, which is less than half of their average summer call-outs; of these 16, a significantly higher proportion were to cabins (as opposed to on-water). The *Kids Don't Float* lifejacket loaner kiosks continue to be popular, there are 14 kiosks on Shuswap Lake.

Discussion

Director Talbot inquired about the cost of the boathouse, Mr. Weicker estimated between 400 – 700 thousand and that RCM-SAR is considering grant applications to provincial and federal government organizations.

Councillor Anderson inquired about the type of training the centre would offer; Mr. Weicker explained it would be several types including search and rescue, boat operation, radio operation, and more.

Director Fairbairn inquired about the 'parent organization' to RCM-SAR Station 106 Shuswap. Mr. Weicker explained that RCM-SAR groups are 're-branded' from the Canadian Coast Guard Auxiliary; there are 33 RCM-SAR stations on the BC coast, and one inland station which is based in Sicamous. RCM-SAR is not formally connected with other community-based Search and Rescue groups, although they do share information and attend training session together.

Councillor Lavery inquired about the possibility of engaging youth in RCM-SAR; Mr. Weicker replied that they have one junior member who, with parental consent, can participate in missions.

Chair Demenok thanked Mr. Weicker and Mr. Doherty for their presentation.

Guest presentation: Dr. Jeff Curtis

Dr. Jeff Curtis provided an update on the nutrient research underway in the Shuswap River and Salmon River watersheds. The research team has completed three years of data collection, and they are in the final stages of data analysis and reporting.

The research objective is to obtain credible understanding of where the point and diffuse sources of Phosphorus are, and how Phosphorus is being transported into the Shuswap and Salmon Rivers. Some key points from Dr. Curtis' presentation:

- The research is quantifying the contribution of phosphorus from three sources in both rivers: the upper reaches, the tributaries, and the incremental flow sub-watersheds (ditches, groundwater, seasonal streams)
- The methodology includes components of hydrometrics (measuring and modeling flow from the three aforementioned sources or regions of the rivers); Phosphorus measurements from all sources; and land use coefficients, to estimate annual contributions of Phosphorus from land uses
- Phosphorus (P) loads can be expressed in terms of concentration (mass per volume, i.e. mg P/Litre) or flux (mass per time, i.e., kg P/year).

Councillor Colleen Anderson left the meeting at 1:30 pm

Results to-date indicate:

- In the Shuswap River watershed, the hydrograph is defined by snowmelt. Phosphorus flux follows the snowmelt. The contributions of Total Phosphorus (TP) from incremental flow sub-watersheds accounts for most of the TP; tributaries and the upper reaches provide very little TP.
- The Salmon River also has a hydrograph and Phosphorus flux that are defined by snowmelt. The tributaries and upper reaches of the watershed contribute the most TP, and the incremental flow sub-watersheds contribute less. These conclusions need to be considered carefully, as the Salmon River is complicated: the upper reaches include an aquifer, and the river 'leaks' (loses surface water to ground water) as it flows downstream. The incremental flows therefore don't appear to have a higher contribution of TP because water and nutrients decrease as the river flows downstream.

Dr. Curtis concluded his presentation by stating that the highest contributions of Phosphorus come from the incremental flow sub-watersheds, in the valley bottoms where the most anthropogenic development is. Management options for the SWC to consider in the future could include flow path management to enhance phosphorus retention (e.g., developing or restoring wetlands, or decommissioning ditches) and/or cultural modifications (changing human behaviour with regards to Phosphorus use in the watershed), and/or doing further

modeling to project response times and effectiveness of different management options relative to objectives.

Discussion:

Director Simpson inquired if models, such as what Dr. Curtis referred to in his conclusions, are available. Dr. Curtis replied that they are, and that it would be a matter of carefully selecting the right one.

Lorne Hunter inquired about data from monitoring the lower sections of the rivers. Dr. Curtis replied that the final report will include data, including flux. He cautioned that in looking at water quality data, the flux should be given priority because concentrations can be misleading – you may have a high concentration of Phosphorus in an area, but if there's no movement of it, there's no flux.

Director Rick Fairbairn left the meeting at 2:10 pm

Mike Simpson asked if it would make the most sense to focus management actions on the incremental flow sub-watersheds, since they account for the highest proportion of Phosphorus flux. Dr. Curtis replied that the most effective actions will be informed by areas of flux.

Chair Demenok thanked Dr. Curtis for his presentation and remarked that he looks forward to receiving the final report.

Adjourn

Meeting adjourned at 2:15 pm.

CERTIFIED CORRECT:

Chair