

AGENDA PACKAGE FOR:

Council Meeting
Wednesday March 8th 2017 | 10:30 AM – 2:30 PM
Columbia Shuswap Regional District Boardroom
555 Harbourfront Drive NE, Salmon Arm

Contents

1. December 8 th 2016 SWC meeting summary (draft) – for approval and signature by Chair	p. 2
2. Correspondence:	
• Item 1: Letter from SWC Chair Paul Demenok to Premier Clark and Minister Polak re: aquatic invasive mussel program, January 5 th 2017	p. 9
• Item 2: Response from Minister Polak re: aquatic invasive mussel program, February 10 th 2017	p. 10
3. SWC Workplan and budget for 2017-18 for approval (financial vote)	
• Item 1: Workplan and budget	p. 11
• Item 2: Memorandum: monitoring nonylphenols in 2017	p. 12
4. Report from program managers: financial update for information	p. 14
5. Draft “SWC Overview” document for discussion and approval	p. 15

Item No.	Name	Time
1	December 8 th 2016 SWC meeting summary for approval and signature	10:20

Council Meeting
December 8th 2016 | 10:15 AM – 2:15 PM
Columbia Shuswap Regional District Boardroom
555 Harbourfront Drive, Salmon Arm

Draft Record of Decisions and Action Items

Note: this record is subject to correction when adopted at the next SWC meeting

Meeting objectives

1. Receive update from program managers
2. Have roundtable discussions on SWC goals and objectives, and communications
3. Receive guest presentations from BC Ministry of Environment and Columbia Shuswap Invasive Species Society
4. Approve meeting schedule for 2017

Present

Paul Demenok, Chair – CSRD Area ‘C’
Larry Morgan, Vice Chair – CSRD Area ‘F’
Rene Talbot – CSRD Area ‘D’
Rhona Martin – CSRD Area ‘E’
Todd Kylo – District of Sicamous (*entered the meeting at 10:26*)
Dave Nordquist – Secwepemc Nation, Adams Lake Indian Band
Herman Halvorson – RDNO, Area ‘F’
Dennis Einarson – BC Ministry of Environment
Laura Code – BC Ministry of Agriculture
Ray Nadeau – Community representative
Lorne Hunter – Community representative

Erin Vieira and Mike Simpson – Fraser Basin Council

Guests: Martina Beck and Robyn Hooper

Observers: Clyde Mitchell, Bob Misseghers, Dale Kerr, Gerry Paquette, Hamish Kassa

Regrets: Nancy Cooper, Rick Berrigan, Peter Milobar, Greg Witzky, Tundra Baird, Randy Wood

Call to Order The meeting was called to order at 10:15 AM

Adoption of Meeting Summary Moved/Seconded by Directors Morgan/Halvorson that:
The meeting summary of the September 19th 2016 meeting of the SWC be adopted.

Chair Demenok noted a correction to Randy Wood’s Roundtable Update from September 19th 2016.

CARRIED

Item No.	Name	Time
1	December 8 th 2016 SWC meeting summary for approval and signature	10:20

Correspondence

Shuswap Lifeboat Society
(November 8th 2016)

Letter from Bruce Weicker, Shuswap Lifeboat Society. The letter thanks the SWC for their financial contribution toward the newly-installed lifejacket kiosk at the downtown Salmon Arm boat launch and gives a brief overview of the Royal Canadian Marine Search and Rescue activities in 2016.

Watersheds 2016 presentation
(October 1st 2016)

Presentation by SWC Chair Paul Demenok at the *Watersheds 2016* conference held in Vancouver on October 1st hosted by Fraser Basin Council, POLIS (University of Victoria) and First Nations Fisheries Council.

Discussion:

Director Martin expressed a desire to provide support to the Shuswap Lifeboat Society next year.

Ray Nadeau inquired about what the SWC can learn from other watershed-based organizations that were present at the *Watersheds 2016* conference. Chair Demenok noted that while the SWC has a relatively sustainable funding model, other groups have higher degrees of volunteerism.

Moved/Seconded by Directors Martin/Talbot that:
The correspondence contained in the December 8th SWC agenda be received for information.

CARRIED

Councillor Kylo entered the meeting at 10:26 AM

Report from Chair

Chair Demenok highlighted his participation at the *Watersheds 2016* conference held in Vancouver on October 1st hosted by Fraser Basin Council, POLIS and First Nations Fisheries Council.

Report from Program Managers

Erin Vieira reported on the program managers' activities since the September 19th SWC meeting:

- Water quality monitoring by partners is ongoing, most is wrapped up until ice-free conditions in spring
- Water Monitoring Group meeting will meet on December 15th to review 2016 monitoring activities, do preliminary planning for 2017, and discuss water quality reporting
- The special water quality monitoring project for emerging threats is in development (Water Monitoring Program, Activity F). Staff are working with scientists from the BC Ministry of Environment and Department of Fisheries and Oceans to consider a short-list of contaminants to monitor in 2017; cost for this program is a limiting factor. Applications to two external funding sources were submitted but not successful. A project recommendation will be brought to the SWC at its next meeting.
- Work on creating open access to water quality monitoring data is in

Item No.	Name	Time
1	December 8 th 2016 SWC meeting summary for approval and signature	10:20

early stages (Water Monitoring Program, Activity D)

- 10,000 additional *Water Protection Initiative* brochures were printed and are being distributed around the watershed via multiple methods
- Ongoing liaison with the Water Protection Advisory Committee regarding planning for education events and restoration projects; the committee will next meet early in the new year
- Ongoing liaison with UBC-Okanagan regarding the phosphorus research project; anticipating next quarterly report later in December and a presentation to the Water Protection Advisory Committee in spring 2017
- Boating safety was promoted through social media this fall
- Shuswap Lifeboat Society opened a lifejacket loaning kiosk at Marine Peace Park downtown Salmon Arm on October 16th; this effort was partially financed by the SWC, and Chair Demenok and Mayor Cooper were in attendance
- Staff submitted safety articles to two recreation/tourism publications for 2017

Mike Simpson reported the expenses for the first and second quarters, April 1st 2016 – September 30th 2016:

- \$5507 on the Water Quality Monitoring program
- \$56,348 on the Water Protection program
- \$12,094 on the Recreation Safety Education program
- \$10,867 on communications
- \$17,248 on management and administration

Discussion:

Director Morgan inquired if Styrofoam is being considered as a potential candidate for monitoring in the ‘emerging threats’ project in 2017. Dennis Einarson confirmed that it isn’t.

Ray Nadeau asked if staff send a media release to outlets after each SWC meeting. Erin confirmed that to-date, meeting summaries are circulated via e-mail and posted online.

Action item: Staff will prepare a one-page SWC meeting highlights report and distribute to media outlets.

Roundtable discussion: SWC goals and objectives

Erin Vieira explained that the *Shuswap Watershed Water Quality Program Terms of Reference, v. 4 (June 16, 2014)* is the original SWC program document upon which the five-year plan was created.

Chair Demenok emphasized that the objectives that are contained in the original TOR are valuable and shouldn’t be lost; this echoes the concerns raised by Ray Nadeau in May 2016. The original document is high-level, and the five-year plan is more detailed.

Item No.	Name	Time
1	December 8 th 2016 SWC meeting summary for approval and signature	10:20

Chair Demenok proposed that a slight revision or re-crafting of the document be posted online and named an 'Overview of the SWC'.

Director Morgan commented that he is supportive of making revisions to the document and using it as an Overview.

Ray Nadeau noted his experience that "what gets measured, gets done" and emphasized the importance of metrics for the SWC. Some of the metrics outlined in the original TOR are achievable in the short-term, some in the long-term.

The Chair asked if there are any objectives, goals or metrics that should be stricken or modified. Erin Vieira suggested that reference to drinking water quality not be included in the Overview document to avoid the perception that the SWC is responsible for such (the responsibility for which rests with water purveyors). A discussion took place. Lorne Hunter stated that water quality goals for the watershed need to be reasonable – raw water shouldn't necessarily be of drinking water quality. Dennis Einarson pointed out that there are raw water standards that are suitable targets. Dennis also pointed out that drinking water purveyors are supposed to do a Source Water Protection Plan.

Action item: staff will create a new Overview document that defines the objectives and goals of the SWC, and outlines how the SWC measures or evaluates itself against its workplan. An ad hoc working group consisting of the Chair, Director Martin, and Ray Nadeau will work with staff on this. A draft Overview document will be included in the next SWC meeting agenda.

Roundtable discussion: Communications activities in 2017

Erin Vieira presented an overview of the SWC's Communications Plan, which includes four priorities and four activities.

Chair Demenok noted the importance of reporting annually, in person, to the SWC partners and funders (local governments and first nations) and suggested that this become part of the Communications Plan.

Director Martin agreed that any opportunity to present to other Councils or Boards is beneficial. Director Morgan echoed Director Martin's comments. Director Halvorson commented that the SWC would be welcome any time to present to the RDNO Board as a delegation.

Action item: Chair Demenok will follow up with SWC members to determine appropriate timing for delegations in spring 2017.

Agenda Amendment

Chair Demenok suggested that the Roundtable Updates be moved up on the agenda.

CARRIED

Roundtable updates

Lorne Hunter reported that he made a presentation about Shuswap Watershed

Item No.	Name	Time
1	December 8 th 2016 SWC meeting summary for approval and signature	10:20

Council at the Kamloops Okanagan Dairy Association AGM. He emphasized issues that the agriculture sector needs to aware of.

Director Martin is participating in a conference call regarding invasive mussels, the goal is to explore options for persuading senior levels of government to take stronger action against mussels.

Ray Nadeau expressed that leaking septic systems are an ongoing concern that needs more attention. He acknowledged that the CSRD has a program for it and that it isn't in the SWC's five-year plan. Chair Demenok commented that it is an important problem with an expensive solution, but grant opportunities are as good now as they've been in a long time.

Break

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

Guest presentation: Martina Beck, BC Ministry of Environment

Martina Beck, Invasive Mussel Defence Program Coordinator, BC Ministry of Environment gave an overview of invasive mussels:

- Aquatic invasive mussels = Zebra and Quagga Mussels
- Very high reproductive capacity (> 1M eggs per female) and have an extraordinary ability to attach to surfaces. Free-swimming microscopic larvae make their detection difficult; adult mussels are also small and not easily detected (< 3 cm). These attributes enable their populations to explode rapidly and for mussels to unknowingly be transported from one waterbody to another.
- There are no known predators that keep invasive mussel populations at bay.
- The *BC Wildlife Act* prohibits the possession, breeding, transportation or release of invasive species, dead or alive
- Ecosystem impacts occur at a food-web level. Mussels are filter-feeders, therefore they remove nutrients and plankton from waterbodies which in turn negatively affects invertebrates and fish communities.
- The potential economic impact of aquatic invasive mussels to BC is estimated at \$43M in annual maintenance/remediation costs.
- BC Ministry of Environment piloted its invasive mussel program in 2015, including roadside inspections, education and outreach, and early detection monitoring
- The program was expanded in 2016 with additional locations and hours of operation, and improved signage and marketing
- 78 lakes were monitored for invasive mussels in 2016; all samples came back negative
- Western provinces and states are free of invasive mussels at this time (i.e., BC, Alberta, Washington, Idaho)
- Invasive mussel larvae were recently detected in Montana in two reservoirs. Immediate action was taken by authorities to restrict boat traffic as a measure of containment. BC MOE is continually working with authorities to manage the situation and protect the borders.

Item No.	Name	Time
1	December 8 th 2016 SWC meeting summary for approval and signature	10:20

Director Morgan inquired if there are any eradication measures for the larval stage. Ms. Beck responded that there have been successful chemical treatments in small closed-system ponds; natural open water bodies are virtually impossible to treat.

Director Morgan inquired about the length of time taken for a watercraft to go through an inspection station. Ms. Beck replied that it varies by type of watercraft: kayaks and canoes are much quicker than larger sport boats or cabin cruisers. She further explained that watercraft decontamination uses high-pressure hot water to kill and wash away mussels. Risk assessment questionnaires are done simultaneously to inspection.

Ms. Beck outlined that efforts in 2017 will continue with the promotion of “Clean Drain Dry” messaging, and further water monitoring.

Lorne Hunter noted from the presentation that most fouled boats are coming from Eastern Canada (Ontario); he asked what requirements are in place for those watercrafts before departing. Ms. Beck replied that the province of Ontario doesn’t have a prohibition against possessing or transporting invasive species. There is federal legislation in place to enable the Canadian Border Services Agency to enforce inspection and prevention methods; this is new as of 2016.

Director Martin asked if the mussels can live in deep water, or if they’re limited to near-shore habitat. Ms. Beck answered that quagga mussels have been found living in depths greater than 100-feet in Lake Mead, Utah.

Director Morgan commented that aquatic invasive mussels represent that biggest threat to the Shuswap watershed. Director Martin further commented that this is an issue that affects everybody: the potential impacts will reach everybody, and everybody will pay financial and lifestyle costs.

The Chair suggested that the SWC write a letter in support of continued invasive mussel prevention programming.

Action item: staff will write a letter in support of continued invasive mussel prevention programming.

**Guest Presentation:
Robyn Hooper,
Columbia Shuswap
Invasive Species
Society**

Robyn Hooper introduced the Columbia Shuswap Invasive Species Society (CSISS) as a non-profit organization that works toward the prevention, reduction and management of invasive species in the region. CSISS activities in 2016 included sampling for zebra and quagga mussels at 22 waterbodies in the Columbia-Shuswap region, in partnership with BC MOE and BC Hydro. All sample results were negative (free of mussel larvae). CSISS outreach activities in 2016 included visiting boat launches and marinas, and speaking with recreationists about invasive species and prevention methods; outreach focuses on “Clean Drain Dry”. Boater surveys in 2016 indicated zero at-risk boats. A short video about zebra and quagga mussels was played (see www.protectourwater.ca).

Item No.	Name	Time
1	December 8 th 2016 SWC meeting summary for approval and signature	10:20

Ms. Hooper concluded her presentation by stating that CSISS is open to ideas for further engagement with the SWC regarding aquatic invasive species.

**SWC Meeting
schedule for 2017**

The SWC meeting schedule for 2017 was approved as follows:

- Wednesday March 8th
- Wednesday May 10th
- Wednesday September 13th
- Wednesday December 13th

Unless otherwise noted, all meetings will be held at the Columbia Shuswap Regional District Boardroom from 10:00 AM – 2:30 PM.

Adjourn

Moved/Seconded by Director Morgan/Talbot that:
The December 8th meeting of the SWC be adjourned.

CARRIED

The meeting adjourned at 2:10 PM.

Item No.	Name	Time
2 – 1	Correspondence item 1: Letter from SWC Chair Paul Demenok to Premier Clark and Minister Polak re: aquatic invasive mussel program, January 5 th 2017	10:25



c/o 200A – 1585 McGill Road
Kamloops, BC V2C 6K7

Province of British Columbia
Offices of the Premier and of the Minister of Environment
Sent by e-mail to premier@gov.bc.ca and env.minister@gov.bc.ca

5 January 2017

Re: Invasive Mussel Prevention Program in 2017

Dear Honourable Premier Clark and Honourable Minister Polak, Minister of Environment:

I am writing on behalf of the Shuswap Watershed Council to express our concern about the threat that aquatic invasive mussels pose to Shuswap Lake.

The Shuswap Watershed Council (SWC) is a collaborative partnership of the Columbia Shuswap Regional District, Thompson-Nicola Regional District, District of Sicamous, City of Salmon Arm, Regional District of North Okanagan, Secwepemc Nation, and the BC Ministries of Environment and Agriculture. Its mandate is to enhance water quality and safe recreation in the Shuswap watershed. At the most recent SWC meeting held on December 8th 2016 in Salmon Arm, Ms. Martina Beck, Invasive Mussels Program Coordinator for the BC Ministry of Environment, was in attendance and gave an informative presentation. The potential ecological and economic impacts of zebra and quagga mussels – conservatively estimated to cost \$43M annually to British Columbians – are staggering. It was a relief to hear directly from Ms. Beck that BC remains mussel-free at this time. This seems to be due in part to the efforts of the BC MOE's Invasive Mussel Prevention Program and its many partners, and the cooperation of travellers into BC.

We know that prevention is key. We appreciate the increased efforts in 2016 from the 2015 pilot season, and we are very hopeful that the BC MOE will again amplify its efforts on roadside inspections and decontamination of watercrafts, education and outreach to the boating community, and early detection monitoring. We ask that you would consider the merits of establishing mandatory inspection of watercrafts at all major highway entry points to BC.

We also request that opportunities be pursued to entreat the Provinces of Ontario and Manitoba to contain aquatic invasive mussels within their jurisdictions. In 2016, 82% and 6% of mussel-fouled boats entering BC were found to be from Ontario and Manitoba, respectively.

Thank you in advance for your ongoing efforts to keep BC waters mussel-free.

Kind regards,

Paul Demenok, Chair, Shuswap Watershed Council
Area 'C' Director, Columbia Shuswap Regional District
250 517-0810
pdemenok@csrd.bc.ca

Item No.	Name	Time
2 - 2	Correspondence item 2: Response from Minister Polak re: aquatic invasive mussel program, February 10 th 2017	10:25

Paul Demenok, Chair
Shuswap Watershed Council
c/o Erin Vieira, Associate Regional Manager
Fraser Basin Council
Email: evieira@fraserbasin.bc.ca

Dear Chair Demenok:

Thank you for your letter of January 5, 2017, which was also addressed to the Honourable Christy Clark, Premier, regarding the Invasive Mussel Prevention Program in 2017. As your enquiry falls under the responsibility of the Ministry of Environment, I am pleased to respond.

I appreciate this feedback from the Shuswap Watershed Council regarding the work of the Ministry of Environment and our many partners on preventing the establishment of zebra and quagga mussels through the Invasive Mussel Defence Program. I assure you we will consider your comments regarding the merits of mandatory inspection stations at all major highway entry points to British Columbia, and pursuing opportunities to encourage Ontario and Manitoba to contain aquatic invasive mussels within their jurisdictions, as we continue to implement and improve this program.

I also appreciate that the Shuswap Watershed Council is taking the threat of invasive quagga and zebra mussels seriously. The Government of British Columbia recognizes the importance of preventative measures to avoid significant economic and ecological impacts from invasive mussels. That is why we are implementing a comprehensive response, as detailed in the [Provincial Zebra and Quagga Mussel Early Detection and Rapid Response Plan](#).

The mandatory roadside checks are an important component of British Columbia's response plan. During the 2016 season, just over 24,500 watercraft were inspected across all the inspection stations and the crews interacted with approximately 50,000 people to promote the message of "Clean, Drain, Dry". As you may recall, the watercraft inspection stations were placed on all major highways entering British Columbia from the east. For the southern entry points, the United States border is already monitored 24 hours per day by the Canada Border Services Agency. On the eastern border of British Columbia, our inspection stations are located along all major highways entering the province from the east.

There has been substantive effort between jurisdictions to establish effective communication lines, coordinate our efforts, and support each other. This is facilitated through both formal and informal inter-jurisdictional agreements signed by the Province. Coordinated efforts to create a 'perimeter defence' around Western Canada and the Columbia Basin are key components of the province's strategy.

Finally, I would like to point out that watercraft travelling from high-risk jurisdictions within Canada need to travel through inspection stations in both Alberta and Saskatchewan prior to arriving in BC. This highlights the benefits of operating a coordinated perimeter defence with our neighbouring jurisdictions.

I assure you that the Government of British Columbia intends to continue to work with international, federal, provincial and local partners to ensure the threat of invasive mussels is addressed effectively.

Thank you again for taking the time to write.

Sincerely,

Mary Polak
Minister

cc: Honourable Christy Clark, Premier

Item No.	Name	Time
3 - 1	SWC Workplan and Budget for 2017-18 Item 1: Workplan and Budget, for approval (financial vote)	10:45

Draft Workplan and Budget 2017-18 (for April 1st 2017 - March 31st 2018)

Revenue	\$
2016-17 Projected Surplus	79750
Per Contribution Agreement:	
CSRD Areas C, D, E, F and District of Sicamous	155000
TNRD	53600
City of Salmon Arm	40000
Total Revenue	328350

Workplan and Expenses	\$
Water Quality Program	
Water Monitoring Initiative	
A. Facilitate the Shuswap Water Quality Monitoring Group	7500
B. Implement the watershed water quality monitoring plan	39500
C. Annual water quality report	
D. Create access to water quality data	5000
E. Investigate historical water quality data	17000
F. Emergent threats monitoring project	14250
<i>Sub-total Water Monitoring Initiative</i>	83250
Water Protection Initiative	
A. Facilitate the Water Protection Advisory Committee	6550
B. Nutrient research project with UBC-O	47800
C. Water quality improvement projects	11400
D. Support nutrient management education	7900
E. Promote nutrient management and pollution reduction	2000
F. Annual water quality report	
<i>Sub-total Water Protection Initiative</i>	75650
Recreation Safety Education Program	
A. Implement safety campaigns	10600
B. Provide support for safety equipment	2200
<i>Sub-total Recreation Safety Education Program</i>	12800
Communications	
A. Develop SWC Brand	0
B. Create communications collateral	4000
C. Public engagement	11700
D. Annual Water Quality Report	18900
<i>Sub-total Communications</i>	34600
Administration	
A. SWC administration and liaison	27400
B. Financial administration and fund development	14200
<i>Sub-total Administration</i>	41600
Operating Reserve	80450
Total Expenses	328350

Item No.	Name	Time
3 - 2	SWC Workplan and Budget for 2017-18 Item 2: [Supporting Document] Memorandum: Monitoring Nonylphenols in 2017	10:45

MEMORANDUM

To: Shuswap Watershed Council members

From: Erin Vieira, SWC Program Manager

Date: Prepared for March 8th 2017 SWC meeting

Re: Request for funding to implement new, short-term monitoring program for Nonylphenols

Background

At the December 8th SWC meeting, staff presented an update on the development of a new monitoring project to monitor 'Emerging threats to water quality' in the Shuswap in 2017. This memorandum and request is a follow-up to that update.

Work done to-date

Staff worked with water quality scientists from the BC Ministry of Environment and the Department of Fisheries and Oceans, and sought input from the Shuswap Water Quality Monitoring Group to prepare a plan and recommendation for monitoring emerging threats to water quality in Shuswap Lake in 2017. This is in accordance with the SWC's five-year plan (Water Monitoring Initiative, activity F: *Exploratory monitoring of potential emerging threats to water quality*). The contaminant(s) to monitor would ideally meet all of the following criteria:

- Likely to be found in the Shuswap (either due to a ubiquitous nature; or land use, industry and consumer impacts in the Shuswap)
- Known to be a threat to human or ecosystem health
- Not routinely monitored
- Measureable against *Canadian Water Guidelines for the Protection of Aquatic Life*¹ and *British Columbia Working Water Quality Guidelines*
- Field and lab methodologies are defined
- Within budget
- Has a management endpoint.

There are hundreds of contaminants and compounds that *could* be included in a water quality monitoring program (e.g., *Review of Greywater Management Strategies to Improve Public Health and Water Quality in Shuswap Lake*, Northwest Hydraulic Consultants, July 2010). Setting the qualifying criteria, listed above, helped to narrow down the list of emerging contaminants to a reasonable number. It also enabled the scope of the project to be a short-term 'presence or absence' test, rather than a research project.

¹ Canadian Council of Ministers of the Environment, 2002

Item No.	Name	Time
3 - 2	SWC Workplan and Budget for 2017-18 Item 2: [Supporting Document] Memorandum: Monitoring Nonylphenols in 2017	10:45

Recommendation

The recommendation is to monitor nonylphenols in Shuswap Lake in 2017.

Nonylphenols and its derivatives are a group of compounds used in manufacturing lubricants, pesticides, surfactants, wetting agents, plastics and rubber; they are also present in many consumer products such as detergents, shampoos, cosmetics, household cleaners, and latex paints. Nonylphenols are synthetic compounds that do not occur naturally; therefore, environmental concentrations can be solely attributed to human activities. The recommendation to monitor nonylphenols in 2017 is based on the following:

- They are likely to occur in the Shuswap because they are present in many consumer and industrial products, and can be found in municipal and industrial effluents
- They are an endocrine-disrupting compound, persistent, bio-accumulative, and toxic; and known to cause adverse health effects
 - They are included on the *Canadian Environmental Protection Agency List of Toxic Substances* for the potential immediate or long-term harm to the environment and biological diversity
 - Their use is prohibited in the European Union; Environment and Climate Change Canada has phased out their use from some industries; and the Environmental Protection Agency encourages measures to limit their use in the USA
- They are not routinely monitored, and their presence or levels in the Shuswap are unknown
- There are Canadian and provincial water quality guidelines for nonylphenols
- Field and lab methodologies are straight-forward and affordable
- There are management endpoints, if needed (e.g., source control and education).

Cost and deliverables

The cost for this project is \$14,250². This allows for sufficient samples to be collected and analyzed in a lab. Collection will be done by BC Ministry of Environment staff as an in-kind contribution. Data analysis and interpretation, and a presentation to the SWC, would follow in 2018.

² The SWC's five-year plan estimated \$20,000 for *Activity F: Exploratory monitoring of potential emerging threats to water quality* in 2017

Item No.	Name	Time
4	Report from program managers: financial update for information	12:45

Staff Report: SWC finances to the end of the third quarter (December 31st, 2016)

INCOME (unchanged since last report)			
Source	Amount budgeted (\$)	Amount received (\$)	Difference (\$)
Surplus SWC funds (2015-16)	56,240	56,240	0
TNRD	53,600	53,600	0
CSRD (C, D, E, F and District of Sicamous)	108,900	108,900	0
City of Salmon Arm	40,000	40,000	0
Total	259,640	259,640	0

EXPENSES			
Activity (per 5-yr plan)	Budget (\$)	Expenses Apr 1 st – Dec 31 st 2016	Budget remaining at Jan 1 st 2017
Water Quality Monitoring – team/annual work planning (TH645)	6000	5927	73
Water Quality Monitoring Expenses (TH646)	34,300	0	34,300
Water Quality Monitoring – database/access to data (TH647)	10,000	900	9100
Water Quality Monitoring – investigate historical data (TH648)	0	0	0
Water Quality Monitoring – exploratory monitoring (TH649)	7500	4620	2880
Water Quality Monitoring – contingency	20,000	0	20,000
Water Quality Protection – advisory committee (TH650)	5500	8105	-2605
Water Quality Protection – Phosphorus research (TH651)	50,000	48,819	1181
Water Quality Protection – water quality improvement projects/remediation (TH652)	10,000	0	10,000
Water Quality Protection – nutrient management education (TH653D)	6000	0	6000
Water Quality Protection – promote other information (TH653E)	1000	3570	-2570
Recreation Safety Education campaigns (TH654)	9500	12,427	-2927
Communications – SWC brand (TH655A)	5000	2667	2333
Communications – collateral (TH655B)	10,000	2219	7781
Communications – public engagement (TH656)	8000	7796	204
Communications – annual water quality report (TH657)	4500	0	4500
Management and facilitation (TH658)	13,000	15616	-2616
Administration and fund development (TH659)	16,000	9740	6260
Operating Reserve	43,340	0	43,340
Total to-date	259,640	122,406	137,234

Item No.	Name	Time
5	Draft SWC Overview document for discussion and approval	1:15

An Overview of the Shuswap Watershed Council

The Shuswap Watershed Council (SWC) was established in 2014 as a watershed-based partnership that enhances water quality and safe recreation in the Shuswap.

There are 17 SWC members that represent three regional districts, two municipalities, the Secwepemc Nation, two provincial government agencies, and Shuswap communities.

The SWC is a collaborative, non-regulatory group. It works alongside organizations that have regulatory roles in managing the Shuswap watershed, complimenting their work and carefully avoiding duplication.

The following organizations participate in the SWC:

Columbia Shuswap Regional District
 Thompson-Nicola Regional District
 City of Salmon Arm
 District of Sicamous
 Secwepemc Nation
 Regional District of North Okanagan
 BC Ministry of Environment
 BC Ministry of Agriculture

There are also three members-at-large from Shuswap communities.

The SWC's Vision is ***Enhanced water quality that supports human and ecosystem health and the local economy in the Shuswap watershed.***

OBJECTIVES

To maintain and enhance water quality in the Shuswap watershed through collaboration with water quality monitors. By working together, we can help ensure clean water and the many benefits it affords including a healthy ecosystem and a thriving tourism economy.

Watershed-wide actions to achieve this include:

- Coordinate water quality monitoring activities with all partners
- Provide support and coordination to implement additional water quality monitoring projects to ensure locations and parameters of interest are monitored at appropriate intervals throughout the Shuswap watershed
- Identify sources or causes of water quality pollution and degradation
- Explore and develop actions to reduce and remedy water quality pollution, and make recommendations to partner agencies and regulatory bodies or undertake action through the SWC
- Encourage new management practices that improve or protect water quality.

There are many groups involved in water quality monitoring:

Regional districts
 Municipalities
 First nations
 BC Ministry of Environment
 BC Parks
 BC Ministry of Forests, Lands and Natural Resource Operations
 Interior Health Authority
 Drinking water purveyors
 Environment Canada
 Department of Fisheries and Oceans
 Stewardship groups
 Community groups
 Universities / Research institutions

Item No.	Name	Time
5	Draft SWC Overview document for discussion and approval	1:15

Success will be measured by the effective collaboration and coordination of participants in watershed-wide monitoring; completion and conclusions from science-based projects about sources of water quality degradation; and completion of water quality improvement projects. The most important measure of success – although it's contingent upon factors external to the work of the SWC – will be the long-term preservation of good water quality in the Shuswap.



To coordinate and report on water quality data and information in the Shuswap watershed.

Actions to achieve this include:

- Coordinate the collection of water quality monitoring data in the Shuswap and ensure its inclusion in a single database
- Enable public access to water quality data
- Prepare an annual water quality summary report, for distribution in print and online to Shuswap residents and visitors.

Success will be measured by the continued growth of a 'master' water quality database for the Shuswap, the development or improvement of a publically accessible online water quality portal, and the completion of annual water quality summaries.



To communicate with and inform residents and visitors about water quality in the Shuswap, and advocate for good practices to prevent water quality degradation. The SWC will also communicate with the public about its activities and accomplishments.

Actions to achieve this include:

- Develop and distribute materials about water quality initiatives, issues, and stewardship, online and in print
- Provide support for educational events and initiatives
- Regularly prepare media releases about the SWC's key activities and decisions
- Advertise SWC meetings; make meeting summaries and financial statements publically available
- Enable members of the public to communicate directly with the SWC by structuring a diverse and approachable Council membership, and positioning dedicated staff.

Success will be measured by the quality and quantity of communiqués, educational initiatives, website traffic, and engagement on social media. An additional measure of success, contingent upon factors external to the work of the SWC, is the long-term increase in awareness, appreciation and stewardship of water quality by Shuswap residents.



Item No.	Name	Time
5	Draft SWC Overview document for discussion and approval	1:15

To encourage safe behaviour by recreationists on the water.

Actions to achieve this include:

- Collaborate with safety authorities to develop effective safety campaigns without causing duplication
- Deliver safety campaigns for the most-needed water recreation safety issues
- Provide support for water recreation safety equipment.

Success will be measured by the implementation of safety campaigns, and increased availability of water recreation safety equipment. An additional measure of success, contingent upon factors external to the work of the SWC, will be fewer safety-related incidents on the water.

FUNDING

Funding from the CSRD, TNRD, City of Salmon Arm and District of Sicamous supports the work of the SWC. Each of these jurisdictions has established its own means of contributing. Additional funding may be obtained from third parties such as universities or foundations.

FIVE YEAR PLAN

The ***Water Quality Program & Recreation Safety Education Program in the Shuswap watershed for 2016 to 2020*** guides the SWC's work for five years. It explains the SWC's programs and initiatives, and the resources required to implement them. Additional activities may be initiated to address emerging threats.

GOVERNANCE

The SWC's ***Terms of Reference*** outlines the roles, responsibilities, representation, and decision-making.



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