

Alberni-Clayoquot Regional District

BAMFIELD WATER ADVISORY COMMITTEE MEETING TUESDAY, AUGUST 16, 2016, 5:00 PM

Regional District Board Room, 3008 Fifth Avenue, Port Alberni, BC

			AGENDA	
1.	CALL .	TO ORD	D <u>ER</u>	PAGE#
	Recog	gnition	of Traditional Territories.	
2.	_		pprove, including late items required 2/3 majority vote)	
3.	ADOP	TION O	OF MINUTES	
	a.	Bamfi	ield Water Advisory Committee Meeting held April 21, 2016	3-5
			nutes of the Bamfield Water Advisory Committee meeting held on 6 be received.	
4.	CORR	<u>ESPON</u>	DENCE FOR ACTION/INFORMATION	
	a.	_	ID HEALTH I Health, July 14, 2016 regarding Bamfield Water System Upgrades	6-7
	b.	Island	ID HEALTH I Health, July 29, 2016 regarding Proposed Terms and Conditions e Bamfield Community Water System Operating Permit.	8-9
	THAT	corresp	ondence a-b be received.	
5.	REPO	RTS		
		a.	ADMINISTRATIVE MEMO Bamfield Water System – YTD Capital Plan and Leak Update	10
		b.	Bamfield Water System Financial Plan	11
		c.	ADMINISTRATIVE MEMO Bamfield Water System – Status Report – Water Treatment Facility	12-15

d. **ADMINISTRATIVE MEMO**Loan Authorization Bylaw

16-22

THAT reports a-d be received.

6. <u>LATE BUSINESS</u>

(requires 2/3 majority vote)

7. <u>ADJOURN</u>



Alberni-Clayoquot Regional District

MINUTES OF THE BAMFIELD WATER COMMITTEE MEETING HELD ON THURSDAY, APRIL 21, 2016, 5:30 PM

Bamfield Volunteer Fire Department Hall, 352 Pachena Road, Bamfield, BC

MEMBERS Keith Wyton, Chairperson, Director, Electoral Area "A" (Bamfield)

PRESENT: Eric Clelland

John Mass Barry Otterson Sean Rogers Lisa Herbig J.P. Hastey

STAFF PRESENT: Russell Dyson, CAO, Heather Adair, Jr. Planner/Bylaw Enforcement

Officer, Les Butler, Bamfield Water Contractor

1. CALL TO ORDER

The Chairperson called the meeting to order at 5:30 pm

The Chairperson recognized the meeting is being held in the Huu-ay-aht First Nations Traditional Territories.

2. APPROVAL OF AGENDA

MOVED: J. Mass SECONDED: L. Herbig

THAT the agenda be approved as circulated.

CARRIED

3. ADOPTION OF MINUTES

a. Bamfield Water Committee Meeting – February 12, 2016

MOVED: J. Mass SECONDED: L. Herbig

THAT the minutes of the Bamfield Water Committee Meeting February 12, 2016 be received.

CARRIED

4. REPORTS

- a. Memorandum Response to Water Treatment Facility Questions –
 R.Dyson
- b. Koers & Assoc. Preliminary Documents for consideration

- c. Bamfield Water System Preliminary Schedule
- d. Bamfield Water System Sampling History
- e. Bamfield Water System Sampling History
- f. Bamfield Water System THM Testing

MOVED: S. Rogers SECONDED: B. Otterson

THAT the Bamfield Water Advisory Committee receives reports a-f.

CARRIED

The Committee discussed the response to their questions regarding the proposed treatment plant at length. It was agreed that the Committee would meet with the various interests in the watershed to discuss water quality protection. Staff are to make these arrangements.

MOVED: B. Otterson SECONDED: S. Rogers

THAT the Bamfield Water Committee invite Island Health, Island Timberlands, Huu-ayaht First Nations and the Ministry of Forests, Land and Resource Operations to a future meeting to discuss watershed management in the interests of water quality.

CARRIED

The Committee requested that staff provide an explanation to the terminology and acronyms for the water sampling results. The City of Calgary is an example of a user friendly format.

MOVED: J.P. Hastey SECONDED: B. Otterson

THAT the Bamfield Water Committee recommend that the water treatment plant be designed to meet required water quality standards at a reasonable level to ensure capital and operating costs are at affordable levels.

CARRIED

MOVED: B. Otterson SECONDED: L. Herbig

THAT the Bamfield Water Committee request the Chair of the Alberni-Clayoquot Regional District Board of Directors write to institutional water users to request a contribution to the capital costs of the water treatment facility over and above their property tax contribution.

CARRIED

MOVED: J.P. Hastey SECONDED: B. Otterson

THAT the Bamfield Water Committee request the Alberni-Clayoquot Regional District Engineer to clearly define the treatment costs for the proposed water treatment facility, to be aligned with a cost effective capital investment and that treatment costs be specifically itemized.

CARRIED

5. **REQUEST FOR DECISION**

a. Bamfield Waterworks Contractor's Agreement

L. Butler indicated that he would be satisfied if the hourly rate remained at \$25/hr. in consideration of the extra work that may be required to bring the water treatment plant on line. Mr. Butler left the meeting at 7:55 pm.

MOVED: J. Mass SECONDED: J.P. Hastey

THAT the Bamfield Water Committee recommend to the Alberni- Clayoquot Regional District Board of Directors enter into a contract with Les Butler to carry out the duties on the Bamfield Water system as an independent waterworks contractor at a rate of \$3,000 plus GST per month for a period of three (3) years, with an hourly rate of \$25 for extra work, ending April 30, 2019.

CARRIED

6. LATE BUSINESS

(requires 2/3 majority vote)

7. ADJOURN

MOVED: S. Rogers SECONDED: B. Otterson

THAT this meeting be adjourned at 8:25 pm

CARRIED

Certified Correct:		
Keith Wyton,	Russell Dyson,	
Chairperson	CAO	

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July 14, 2016

Russell Dyson Chief Administrative Officer Alberni Clayoquot Regional District 3008 Fifth Avenue Port Alberni, B. C. V9Y 2E3

Dear Mr. Dyson,

Re: Bamfield Water System Upgrades

Island Health has received the June 15, 2016 request from Ken Doll, P. Eng., of Koers & Associates Engineering to support the proposed treatment process and treatment objectives for Sugsaw Lake, as well as to provide comments on the draft procurement (selected sections) documents for this project.

Island Health has reviewed the request as well as the pilot-testing results contained in Koers' January 16, 2015 report, and based on this review, Island Health strongly supports these proposed water system upgrades for the Bamfield Community Water System.

The proposed treatment and disinfection train consists of coagulation, flocculation, dissolved air flotation, multi-media filtration and chlorine disinfection. The proposed treatment and disinfection train will meet the *Drinking Water Treatment Objectives (Microbiological) for Surface Water Supplies in British Columbia (Version 1.1/November 2012)*, and will reduce disinfection by-product precursors to limit the formation of trihalomethanes and haloacetic acids to acceptable levels.

Island Health agrees with the proposed minimum water treatment objectives for Sugsaw Lake as outlined:

- 4-log (99.99%) inactivation/removal of viruses.
- 3-log (99.9%) inactivation/removal of Giardia cysts and Cryptosporidium oocysts
- Prescribed water quality standards for potable water as set out in Schedule A of the *Drinking Water Protection Regulation* are met.
- Turbidity* shall be less than or equal to 0.3 nephelometric turbidity units (NTU) in at least 95% of measurements either per filter cycle or per month and never to exceed 1 NTU.
- Colour ≤ 15 true colour units.
- Total organic carbon* (TOC) ≤ less than 2.0 mg/L.
- Total trihalomethanes (THMs) < 0.1 mg/L based on a locational running annual average of a minimum of quarterly samples taken in the distribution system.

Tel: 250-731-1315 | Fax: 250-731-1316

- Haloacetic acids (HAAs) to < 0.08 mg/L based on a locational running annual average of a minimum of quarterly samples taken in the distribution system.
- Tannins ≤ 0.4 mg/L
- Maintaining a chlorine residual throughout the distribution system.
- Maintaining the pH between 7-10.5 in the treated water.
- The total aluminium (if aluminum based coagulants are to be used) concentration to < 0.1 mg/L in the treated water.
- The treated water shall have an inoffensive taste and odour.
- The treated water shall meet the maximum acceptable concentrations of those parameters, as applicable, listed in the Guidelines for Canadian Drinking Water Quality (latest edition).

*Based on the performance standard for conventional filtration in the Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Turbidity.

*The level of TOC in the finished water may exceed 2 mg/L provided that the THM and HAA levels remain at acceptable levels; however Island Health has observed that disinfection by-products are above acceptable levels when TOC exceeds 4 mg/L; and may or may not be above the acceptable levels when TOC is between 2 – 4 mg/L.

With respect to the draft proposal specifications, I have asked Murray Sexton, P. Eng., Public Health Engineer for Island Health to communicate with Koers & Associates Engineering directly, and keep the Alberni Clayoquot Regional District informed of any correspondence.

Recently, lead levels in public buildings have been getting a great deal of attention and the Ministry of Health is currently reviewing the need for lead and corrosion control provisions in water systems. As the ACRD continues to move forward with the design process for the new treatment plant, it is recommended that the current information available on controlling corrosion in the drinking water distribution system be reviewed.

As you know formal acceptance of the proposed water treatment plant and permission to construct the water treatment plant is in the form of a construction permit issued by the Public Health Engineer; and permission to operate the water treatment plant is in the form of an operating permit issued by the Issuing Official.

In closing, Island Health strongly supports the proposed water treatment plant for the community of Bamfield, and we look forward to receiving your application for a construction permit.

If you have any questions or comments please contact myself or Murray Sexton, P. Eng., Public Health Engineer, Island Health in our Nanaimo Office at (250) 755-6299.

Yours truly,

Original Signed by

Stephanie Bruvall

Environmental Health Officer

cc. Dr. Paul Hasselback, MD, MSc, FRCPC, Medical Health Officer, Island Health Charlene MacKinnon, Senior Environmental Health Officer, Island Health Lynne Magee, Regional Drinking Water Coordinator, Island Health Murray Sexton, Public Health Engineer, Island Health Andrew McGifford, Environmental Services Manager, ACRD



July 29, 2016

Russell Dyson Chief Administrative Officer Alberni- Clayoquot Regional District 3008 Fifth Avenue Port Alberni, BC V9Y 2E3

Dear Mr. Dyson,

Re: Proposed terms and conditions for the Bamfield Community Water System operating permit.

In November 2013 a water quality advisory was issued for the Bamfield Community Water System for elevated trihalomethane (THM) levels in the distribution, this advisory was updated in December 2013 to include haloacetic acids (HAAs). Also in 2013, a review of the water system was completed by Koers & Associates Engineering, this report identified that the current system does not meet Island Health's *Surface Water Treatment Objectives (Microbiological)* policy.

Since November of 2013, the Alberni-Clayoquot Regional District (ACRD) has been moving forward to upgrade the Bamfield Community Water System to meet these treatment objectives and to reduce the level of disinfection by-products allowing the removal of the water quality advisory for THM and HAAs in the water supply.

I am writing pursuant to a letter of delegation from the Medical Health Officer, dated January 5, 2009, which authorizes me to act under Section 8(4) of the Drinking Water Protection Act (the "Act").

8(4) The drinking water officer or an issuing official may change the terms and conditions of an operating permit if the officer or issuing official considers this advisable, but must first consult with the water supplier respecting the proposed changes and must consider any comments of the water supplier in response.

In the interest of ensuring that the ACRD continues to move forward with the addition of the proposed water treatment plant, I propose to attach the following terms and conditions to the operating permit for the Bamfield Community Water System.

1. On or before January 31, 2018 the Bamfield Community Water System must meet the treatment objectives established in the *Drinking Water Treatment Objectives (Microbiological) for Surface Water Supplies in British Columbia (version 1.1/November 2012)*. The general objectives are:

- 4-log reduction or inactivation of viruses.
- 3-log reduction or inactivation of Giardia and Cryptosporidium.
- Two treatment processes for surface water.
- Less than or equal to one nephelometric turbidity unit (NTU) of turbidity.
- No detectable *E.coli*, fecal coliform and total coliforms.
- 2. On or before January 31, 2018 the Bamfield Community Water System must provide a treatment system that is designed to maintain total trihalomethanes to <0.1 mg/L and total haloacetic acids to <0.08 mg/L based on a locational running annual average of a minimum of quarterly samples taken at a location or locations acceptable to the Environmental Health Officer.
- 3. The ACRD must adhere to the Bamfield Water Treatment Plant Preliminary Project Schedule dated July 22, 2016 or the most recent revision approved by the Drinking Water Officer for progressing towards compliance with Conditions 1 and 2.

The above dates are based on the Bamfield Water Treatment Plant Preliminary Project Schedule that was provided to this office on July 28, 2016. The targets for THM and HAAs are based on the *Guidelines for Canadian Drinking Water Quality: Guideline Technical Documents* for Trihalomethane and Haloacetic Acids. In addition to the standard set in the guidelines, utilities should make every effort to maintain the concentrations of THM and HAAs as low as reasonably achievable without compromising the effectiveness of disinfection

Please respond in writing within 30 days of receiving this notice if you wish to comment on the proposed change to your permit. Your comments will be considered before a final decision is made.

Be advised that, short of judicial review, this is your only opportunity to influence the outcome of this process. A decision to change the terms and conditions of an operating permit is not subject to reconsideration or review under Section 39.1 of the Act.

If you have any questions, please do not hesitate to contact me at 250-731-1315.

Sincerely,

Original Signed by

Stephanie Bruvall Environmental Health Officer

c.c: Andrew McGifford, Manager of Environmental Services, Alberni Clayoquot Regional District Dr. Paul Hasselback, MD, MSc, FRCPC, Medical Health Officer, Island Health Charlene MacKinnon, Senior Environmental Health Officer, Island Health Lynne Magee, Regional Drinking Water Coordinator, Island Health Murray Sexton, Public Health Engineer, Island Health

Telephone (250) 720-2700 FAX: (250) 723-1327

MEMORANDUM

To: Bamfield Water Advisory Committee

From: Andrew McGifford, CPA, CGA, Manager of Environmental Services

Meeting Date: August 16, 2016

Subject: Bamfield Water System – YTD Capital Plan and Leak Update

In the 2016-2020 Financial Plan – Capital Plan for the Bamfield Water System \$50,000 was allocated for miscellaneous projects. The current status of that line in the budget is as follows:

<u>Replacement of old meters</u> - The 2016 Capital plan included replacement of the meters that were still in imperial gallons and may have been original water meters installed when the service was created. As meters age it fails in favour of the water users. The failure is from components that do not record the correct volume passed through the meter. The water contractor and staff developed a plan to remove and replace these meters. To date there have been approximately 16 meters replaced and the total spent on the program is \$22,209.

<u>Backup power supply</u> – As approved at the 2016 Capital planning meeting in January, a 2500 watt Honda generator was purchased to provide backup power supply at the rechlorination station and cost \$1,336.

<u>Leaks</u> - The Bamfield Water Contractor has been struggling with leaks within the Bamfield Water system for the better part of the year and seen a large bump in unaccounted water in May. The search for leaks has found many small and recently one large on Pachena Road. There is one suspected leak still being looked for and this is assumed to be somewhere on the West side.

As this process has unfolded the contractor has identified some possible tools to help isolate areas to search for leaks. When staff and the contractor have reviewed some possible solutions to the leak detection process for Bamfield a report and a request will be brought back to the committee for support. Installations or improvements to the water system will come from the Capital plan budget in future years.

Submitted by:	C MATTORY
•	Andrew McGifford, CPA, CGA, Manager of Environmental Services

June 411 - 1



Bamfield Water System YTD as of July 31, 2016

Revenue

		Budget 2016		YTD 2016
Grants in Lieu of Taxes	\$	500	\$	-
Overdue interest	\$	-	\$	8
Discounts taken	\$	-	\$	-
Water connection fees	\$	-	\$	75,00
Prior years surplus	\$	1,621	\$	3,22
Parcel Taxes	\$	55,549	\$	55,54
Conditional Federal transfer - Gas Tax	\$	426,672	\$	-
Interest on Capital Reserve	\$	-	\$	98
Sales of service	\$	131,000	\$	50,71
	\$	615,342	\$	185,55
xpenses				
Operating Costs	E	Budget 2016		YTD 2016
2016 Capital contribution	\$	482,221		985.0
ACRD Administration	\$	14,000	\$	8,16
ACRD Salaries	\$	22,000	\$	8,30
Advertising	\$	400	\$	-
Engineering	\$	5,000	\$	2,13
Insurance	\$	6,400	\$	6,20
Internet/computer	\$	1,450	\$	1,20
License & permits	\$	450	\$	21
Maintenance contractor	\$	40,000	\$	17,82
Repairs & maintenance	\$	10,000	\$	3,86
Supplies	\$	17,721	\$	8,09
Training	\$	500	\$	12
Travel	\$	700	\$	27
Utilities	\$	8,500	\$	2,84
New Connection	\$	-	\$	_
Water monitoring	\$	6,000	\$	1,69
otal Operating Costs	\$	615,342	\$	61,94
apital Costs				
Beginning Balance		254,059		254,05
Interest		1,900		98
Contributon from 2016 Parcel Tax		55,549		55,54
Gas Tax Contribution		426,672		-
Gas Tax expenditures	-	426,672		-
Misc work	-	50,000		
Water treatment plant			-	4,46
Pumphouse upgrades			-	1,33
Meter replacements			-	22,20
Tower Road upgrade				
otal Capital Costs		261,508		282,58

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MEMORANDUM

To: Bamfield Water Advisory Committee

From: Andrew McGifford, CPA, CGA, Manager of Environmental Services

Meeting Date: August 16, 2016

Subject: Bamfield Water System – Status report – Water Treatment Facility

Bamfield Water continues to be under a water advisory placed by Island Health (VIHA) as the water system supplies water that does not meet the Canadian Drinking Water Standards (CDWS) for both Trihalomethane (THM) and Haloacetic acid (HAA) levels. THM & HAA are a group of chemical compounds that are made when chlorine reacts with organic matter in water. The water advisory has been in place since November of 2013.

Since November of 2013 the Alberni-Clayoquot Regional District (ACRD) Board of Directors, staff, engineer, consultants and the Bamfield Water Advisory Committee (BWAC) have been working to find the most economical and efficient solution to address the water advisory. At the direction of the Board and with the support of the BWAC, the Dissolved Air Floatation pilot test in late 2014 was undertaken to confirm the method of treatment. The cost estimate of a Dissolved Air Floatation water treatment plant was estimated to be \$1.5 million. The Board of Directors have allocated \$1,026,672 Community Works funds (Gas Tax) towards the treatment plant.

At the BWAC meeting February 12, 2016, Dr. Paul Hasselback, Island Health Chief Medical Health Officer provided an overview of water treatment requirements in the province leading up to and after the establishment of the Drinking Water Protection Act. He stated that the ACRD has provided a lot of progress in the management of the Bamfield Water System. It is up to the operator (ACRD) to design and implement appropriate solutions to meet the drinking water standards. Filtration is required for the Sugsaw Lake water supply because of the organic material in the water source and the reaction that occurs through the chlorine treatment process.

There have been other options investigated as solutions to meet the CDWS. The other possible solutions proposed had challenges or could not fully bring the Bamfield Water System into compliance with the CDWS or would require even larger infrastructure costs while still not fully addressing the water quality issues. Koers and Associates have provided the best solution available to the Bamfield Water System with a strong understanding of what is required to meet the CDWS and comply with the operating permit issued by VIHA (as updated July 29, 2016). The ACRD must meet VIHA's 4-3-2-1 treatment objectives for Bamfield Water, and work towards that has been ongoing since November 2013. Throughout this process VIHA was confident that the ACRD will find a solution to Bamfield Water quality issues.

The water system needs to meet the terms and conditions (as set by VIHA) on the operating permit (which was updated on July 29, 2016) and a DAF treatment plant will provide an economical and efficient solution for the water quality issues Bamfield is faced with. VIHA, staff and the ACRD's engineer have met

on several occasions with the BWAC to review the issues and the options available to the Bamfield water system. VIHA requires that the design of water treatment facilities be reviewed before the process is approved in order confirm the design specifications would meet the required CDWS for water quality and the letter dated July 14, 2016(attached) provides strong support of the design submitted.

The updated terms and conditions placed on the Bamfield Water operating permit by VIHA are a result of the process that the ACRD has undertaken since November 2013. VIHA continued to see progress as the ACRD staff, engineer, consultants and the BWAC proceeded to find a solution that was within the means of the community. Now that the ACRD has a solution to address all the water quality issues associated with the Bamfield Water system they have put a clear expectation on what needs to occur.

On April 21, 2016 at the BWAC meeting, staff were asked to have the DAF treatment plant tender documents prepared and also to provide a higher accuracy of estimates for treatment components and staff has tendered to get highest accuracy. The tendering process will provide a clearer cost estimate for this project.

The final request associated with the DAF treatment plant from the meeting was "THAT the Bamfield Water Committee recommend that the water treatment plant be designed to meet required water quality standards at a reasonable level to ensure capital and operating costs are at affordable levels". Afterwards staff confirmed with the Koers and Associates that the design must be made to the meet the objectives of water quality within the capacity of the community of Bamfield. Koers and Associates designed the DAF treatment plant to meet the demands of the community and have not designed for large growth. To decrease the design size would see minimal cost savings for the construction component and future growth in Bamfield could not occur nor could future synergies with Huu-ay-aht First Nations for water services.

The implementation of a DAF treatment plant is a two-step process with two separate tenders:

- Step 1 tender for the water treatment plant components and have them prepared.
- Step 2 tender for the installation and associated work building and commissioning on site.

Step 1 – tendering of the project is underway and will be available at the meeting on August 16, 2016. This has two advantages – it gets the project going and reduces the delay for achieving the treatment (subject to a successful referendum) and it provides the community with the approximate actual cost one-third of the project – one that is hard to estimate in advance due to the supply of equipment being sourced in US dollars. This will fulfill the BWAC request to provide a higher accuracy of estimates for treatment components. Step 2 will occur at a later date as the process to build the facility and these costs are more easily estimated for construction in the area.

Long-term borrowing by local governments cannot be undertaken without the approval of the Inspector of Municipalities. In addition, elector approval is required in a majority of cases when a local government seeks to engage in a long-term liability. A local government can enter into an agreement to incur a liability provided that certain conditions are met. Liabilities under agreement can only occur if the liability is not debenture debt and it must receive elector approval should the agreement exceed five years. There are some exemptions to the borrowing approval process and the water service is not an exempt project in this case.

Finance staff will provide the details of expected borrowing costs for the project once the tender amount is received for the project, under current estimates the cost to borrow is in the \$500,000 range. ACRD

staff have prepared the required by-law and resolutions to proceed and staff presents this in the attached report and will ask for BWAC support this and bring forward for consideration by the ACRD Board on August 24, 2016. The likely outcome will be a referendum in the fall of 2016, the referendum question is expected to go to the Board on the September 14, 2016 meeting.

The initial pilot project identified a Class C estimated cost of 1.5 million in late 2014. Koers and Associates will have the DAF treatment plant tender preliminary results from the tender opening (will need to be reviewed for final recommendation) and site plans for the tender package in order to go to market and solidify the cost of the DAF treatment plant before the referendum question is presented. Once these amounts are provided through the tendering process the final amount requested to borrow will be set in the referendum question to the attached bylaws ready for the August 24, 2016 board meeting. There will be a question and answer fact sheet supplied and a public meeting in Bamfield during the referendum process. A draft schedule is attached to provide the timeline for the installation of the DAF treatment plant as prepared by Koers and this has been provided to VIHA.

Submitted by:	mefford
,	Andrew McGifford, CPA, CGA, Manager of Environmental Services
Approved by:	
•	Russell Dyson, Chief Administrative Officer





																		updated on:		July 22, 2016
Task	Description	oletion	-	-	2016						1			2	2017				!	
ö	Schedule Prepared on	July 5, 2016	July	Ang	Sept	50	۸ ٥	o Dec	Jan	Leb	Mar	Apr	May	anne	July	Ang	sept	5	NON NON	nec
-	Project Initiation																			
<u>+</u>	Project Start-up	May 26, 2016																		
7	Site Survey, Base Plan & Develop Site Layout																			
2.1	Perform Site Survey and Create Base Plan	July 21, 2016																		
2.2	Develop Site Plan Showing Layout of WTP & Tanks	August 14, 2016																		
ო	Water Treatment Equipment Supply																			
3.1	Prepare Supply Contract for Procurement of Treatment Equipment	July 14, 2016																		
3.2	Procure WT Equipment (4 weeks)	August 16, 2016																		
3.3	Borrow Bylaw to the Board for 3rd Readings & referendum Question	August 24, 2016		~																
3.4	Proposed Date for Referendum	November 19, 2016																		
3.5	Bylaw Adoption (If referendum successful)	November 23, 2016					•													
3.6	Bylaw Quashing Period ends (30 days) and approval to borrow finalized	December 23, 2016						~												
3.7	Award WT Equipment Supply Contract	December 23, 2016																		
3.8	Shop Drawings (15 days after Award)	January 21, 2017																		
4	Preliminary Design of Water Treatment Plant																			
4.1	Preliminary Design (7 weeks)	October 4, 2016																		
4.2	Review Shop Drawings (2 weeks)	February 7, 2017																		
4.3	Manufacture WT Equipment (16 - 20 weeks)	July 7, 2017																		
2	Detailed Design of Water Treatment Plant																			
5.1	Water Treatment Plant (7 weeks)	March 31, 2017																		
	- Electrical Power Supply - Building Structure - Building HVAC - Building Hectrical & Controls - Process Piping - Waste Disposal																			
9	Prepare Contract Documents and Tender																			
6.1	Water Treatment Plant Contract (6 weeks)	May 1, 2017																		
6.2	Tender Construction Contract	June 1, 2017																		
6.3	Award Construction Contract	June 9, 2017												~						
7	Award Contracts & Proceed with Construction																			
7.1	Obtain Health Permit (5 weeks)	April 21, 2017																		
7.2	Water Treatment Plant Contract	November 30, 2017																		

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MEMORANDUM

To: Bamfield Water Advisory Committee

From: Teri Fong, CPA, CGA, Manager of Finance

Date: August 11, 2016

Subject: Loan Authorization Bylaw

In order to proceed with the Bamfield Water System Treatment Plant project the Alberni-Clayoquot Regional District will need to borrow funds on behalf of the Bamfield Water Service Area to pay for the portion of the project not covered by grant funding. Electoral consent is required before borrowing can occur and therefore the Regional District plans to go to referendum this fall.

The attached Request for Decision and bylaw will be presented to the Regional District Board of Directors on August 24, 2016. It is the first step of the referendum process. Please note that the report is marked draft and that there are ???? in the report when it talks about the maximum amount of the borrowing as staff is awaiting the tender results before completing the report.

Submitted by:

Teri Fong, CPA, CGA, Manager of Finance

Telephone (250) 720-2700 FAX: (250) 723-1327

REQUEST FOR DECISION

To: Board of Directors

From: Teri Fong, CPA, CGA, Manager of Finance

Wendy Thomson, Manager of Administrative Services

Andrew McGifford, CPA, CGA, Manager of Environmental Services

Meeting Date: August 24, 2016

Subject: Bylaw No. F1126, Bamfield Water System Treatment Plant Loan Authorization Bylaw

Recommendation:

THAT the Alberni-Clayoquot Regional District Board of Directors give first reading to Bylaw cited as "Bamfield Water System Treatment Plant Loan Authorization Bylaw No. F1126, 2016".

THAT the Alberni-Clayoquot Regional District Board of Directors give second reading to Bylaw cited as "Bamfield Water System Treatment Plant Loan Authorization Bylaw No. F1126, 2016".

THAT the Alberni-Clayoquot Regional District Board of Directors give third reading to Bylaw cited as "Bamfield Water System Treatment Plant Loan Authorization Bylaw No. F1126, 2016".

Desired Outcome:

The ACRD Board to give three readings to Bylaw F1126 and forward for approval by the Inspector of Municipalities prior to conducting the referendum to gain the required consent of the electors within the service area to proceed with borrowing up to a maximum of ???? for the proposed Bamfield Water System Treatment Plant.

Summary:

The Bamfield Water System has been under a water advisory placed by Island Health (VIHA) since November of 2013 as the water system supplies water that does not meet the Canadian Drinking Water Standards for water quality. The Bamfield Water Advisory Committee, Regional District Board, staff, engineers and consultants have all worked together to develop a plan which meets the terms and conditions as set out by VIHA. The proposed direction is to install a treatment plant at an estimated cost of \$1.5 million. The ACRD Board allocated \$1 million in Community Works Funding but borrowing for approximately 1/3 of the project is required to enable treatment plant to be completed. In order to borrow funds approval of the electorate is required.

Background:

At the July 27, 2016 meeting the ACRD Board of Directors passed the following resolution:

THAT the Alberni-Clayoquot Regional District Board of Directors confirm that approval for the required borrowing of the Bamfield Water System Dissolved Air Floatation Water

Treatment Plant will be by referendum question in the fall of 2016 and staff be directed to prepare the necessary bylaws and refer the matter to the Bamfield Water Committee for their consideration.

The first step in this process is for the Board to consider giving three readings to a loan authorization bylaw (attached). Once the Board gives three readings to the bylaw it will be forwarded to the Inspector of Municipalities with the Ministry of Community, Sport and Cultural Development for approval. Ministry staff has advised that approval by the Inspector takes approximately 4-6 weeks. Once the Inspector provides approval Regional District staff must proceed with the referendum within 80 days. Regional District staff are hoping to go to referendum in early November 2016 but need to wait for Inspector approval before setting the date. If the referendum receives approval by the electorate then the bylaw will come back to the Board for consideration of adoption.

No amendment is required to the Bamfield Water System Establishing Bylaw No. 837 as the maximum annual requisition amount set in the bylaw is adequate to service the additional borrowing costs that will result from this project.

Staff will bring forward a report appointing the Chief and Deputy Election Officers as well as the referendum question at the September 14, 2016 Board of Directors meeting.

Time Requirements – Staff & Elected Officials:

Staff time will be required for both the referendum process and to oversee the project. This is a significant project to undertake with considerable communications and community engagement anticipated. Administration, finance and environmental services staff will all be engaged.

Financial:

The referendum will be paid for by the Bamfield Water System service. Based on previous referendums conducted the estimated cost of this referendum is \$5,000.

If the referendum is successful, the borrowing will be paid by parcel tax from the service area. The 2016 parcel tax was \$237 and the estimated annual increase in the parcel tax as a result of borrowing is ???? for a total estimated annual parcel tax of ????. This estimate is based on the current projected interest rate which will not be determined until the project is completed and the borrowing is locked in. Staff is also considering providing the opportunity for owners to pre-pay the debt in advance of locking in but this will be done at a later date once the project is completed.

Policy or Legislation:

Local Government Act and Community Charter apply. Staff has been in contact with Ministry representatives to confirm the appropriate process.

Submitted by:	
	Teri Fong, CPA, CGA, Manager of Finance

Submitted by:	
ŕ	Wendy Thomson, Manager of Administrative Services
Submitted by:	Andrew McGifford, CPA, CGA, Manager of Environmental Services
Approved by:	
	Russell Dyson, Chief Administrative Officer



Alberni-Clayoquot Regional District Loan Authorization Bylaw

Bylaw No. F1126

A bylaw to authorize the borrowing of the estimated cost of constructing a water treatment plant for the Bamfield Water System

WHEREAS the Regional Board of the Alberni-Clayoquot Regional District has established by Bylaw No. 837, a service for the purpose of providing a water system to the Bamfield Water System Service Area;

AND WHEREAS it is deemed desirable and expedient to construct a water treatment plant for the Bamfield Water System serving the Bamfield Water Service Area:

AND WHEREAS	the estimated cost of construct	ting the water treatment plant for
the Bamfield Water Sys	stem including expenses inciden	ital thereto is the sum of
\$	of which the sum of \$	is the amount of debt
intended to be borrowe	d by this bylaw;	

AND WHEREAS the maximum term for which a debenture may be issued to secure the debt created by this bylaw is for a term not to exceed Twenty (20) years;

AND WHEREAS the authority to borrow under this bylaw expires five years from the date on which this bylaw is adopted;

AND WHEREAS the Regional Board of the Alberni-Clayoquot Regional District has obtained the approval of electors in accordance with the *Local Government Act*;

NOW THEREFORE, the Regional Board of the Alberni-Clayoquot Regional District in open meeting assembled, enacts as follows:

1. The Regional Board is hereby empowered and authorized to undertake and carry out or cause to be carried out the construction of a water treatment plant for the Bamfield Water System serving the Bamfield Water Service Area generally in accordance with plans on file in the regional district office and to do all things necessary in connection therewith and without limiting the generality of the foregoing:

a) To borrow upon the credit of the Region	al District a sum not ex	ceeding
 b) To acquire all such real property, easem authorities as may be requisite or desiral construction of the said water treatment 	able for or in connection	n with the
2. The maximum term for which debentures by this bylaw is Twenty (20) years.	may be issued to secu	ure the debt created
 This bylaw may be cited as "Bamfield Wa Authorization Bylaw No. F1126, 2016". 	ter System Treatment	Plant Loan
READ A FIRST TIME THIS	day of	, 2016.
READ A SECOND TIME THIS	day of	, 2016.
READ A THIRD TIME THIS	day of	, 2016.
I hereby certify the foregoing to be a true and "Bamfield Water System Treatment Plant Loa as read a third time by the Regional Board of the day of, 2016.	an Authorization Bylaw	No. F1126, 2016"
	Chief Administrative	Officer
RECEIVED the approval of the Inspector of N	funicipalities this	day of
RECEIVED the approval of the electors of the day of, 2016.	∍ Alberni-Clayoquot Re	egional District on the

20	JAND ADOPTED this day of,
 Chairperson	Chief Administrative Officer
Water System Treatment Plant Loan	a true and correct copy of Bylaw F1126, "Bamfield n Authorization Bylaw No. F1126, 2016" as adopted ni-Clayoquot Regional District on the day of
	Chief Administrative Officer