

REGIONAL DISTRICT OF NANAIMO
COMMITTEE OF THE WHOLE
AGENDA

Tuesday, May 14, 2019

Immediately Following the Nanaimo Regional Hospital District Board Meeting
Board Chambers

This meeting will be recorded

Pages

1. CALL TO ORDER
2. APPROVAL OF THE AGENDA
3. ADOPTION OF MINUTES
 - 3.1 Regular Committee of the Whole Meeting - April 9, 2019 3
That the minutes of the Regular Committee of the Whole meeting held April 9, 2019, be adopted.
4. DELEGATIONS
 - 4.1 Peter Webber, Regional Transportation Planning, and Dave Edgar, Transportation Planning Engineer, Ministry of Transportation and Infrastructure, re Cathedral Grove Pedestrian and Traffic Safety Study 7
 - 4.2 Dr. David Witty, Director, Mount Arrowsmith Biosphere Region, re Mount Arrowsmith Biosphere Roundtable Representation 8
5. CORRESPONDENCE
That the following correspondence be received for information:
 - 5.1 Leonard Krog, Mayor, City of Nanaimo, re Climate Emergency 9
6. CORPORATE SERVICES
 - 6.1 Regional District of Nanaimo Board Live Web Streaming Review 10
That the Board web cast Committee of the Whole and Board meetings for a capital cost of \$5,000 plus an annual ongoing cost of \$19,900 per year for streaming and closed captioning services; and further, that staff be directed to track viewership and feedback and report back to the Board in December 2019 to ensure that there is a cost-benefit review of the provision of additional service to the public.

7. REGIONAL AND COMMUNITY UTILITIES

7.1 Bylaw 1788 – A Cross Connection Control Regulation Bylaw, Water Services

14

1. That “Regional District of Nanaimo Cross Connection Control Regulation Bylaw No. 1788, 2019” be introduced and read three times.

2. That “Regional District of Nanaimo Cross Connection Control Regulation Bylaw No. 1788, 2019” be adopted.

3. That “Regional District of Nanaimo Bylaw Notice Amendment Bylaw No. 1786.01, 2019” be introduced and read three times.

4. That “Regional District of Nanaimo Bylaw Notice Amendment Bylaw No. 1786.01, 2019” be adopted.

7.2 Chase River Forcemain Replacement – Engineering Scope Change

29

That the Board authorize staff to negotiate a revised fee with CH2M Hill Canada (now Jacobs Engineering) for engineering services for the Chase River Forcemain No.1 and City of Nanaimo Haliburton Street upgrades, not to exceed a total contract value of \$435,000 (excluding GST).

8. BUSINESS ARISING FROM DELEGATIONS

9. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

9.1 Conventional Transit Service

Director Brown provided notice of the following motion at the April 23, 2019 Regular Board meeting:

That a report be prepared outlining the options and implications of offering conventional transit service 365 days a year.

9.2 Electoral Area H Community Works Funds

Director McLean provided notice of the following motion at the April 23, 2019 Regular Board meeting:

That pending project approval by the Union of BC Municipalities, up to \$150,000 of unallocated 2019 Electoral Area H Community Works Funds be allocated to the Deep Bay Improvement District in order to support the replacement of critical drinking water infrastructure.

10. NEW BUSINESS

11. IN CAMERA

That pursuant to Section 90 (1) (e) of the *Community Charter* the Committee proceed to an In Camera meeting for discussions related to the acquisition of land or improvements.

12. ADJOURNMENT

**REGIONAL DISTRICT OF NANAIMO
MINUTES OF THE REGULAR COMMITTEE OF THE WHOLE MEETING**

**Tuesday, April 9, 2019
3:00 P.M.
Board Chambers**

In Attendance:	Director I. Thorpe	Chair
	Director B. Rogers	Vice Chair
	Director K. Wilson	Electoral Area A
	Director V. Craig	Electoral Area B
	Director M. Young	Electoral Area C
	Alternate	
	Director J. Fell	Electoral Area F
	Director C. Gourlay	Electoral Area G
	Director S. McLean	Electoral Area H
	Director L. Krog	City of Nanaimo
	Director S. Armstrong	City of Nanaimo
	Director D. Bonner	City of Nanaimo
	Director T. Brown	City of Nanaimo
	Director B. Geselbracht	City of Nanaimo
	Director J. Turley	City of Nanaimo
	Director E. Mayne	City of Parksville
	Director A. Fras	City of Parksville
	Director M. Swain	District of Lantzville
	Director T. Westbroek	Town of Qualicum Beach
Regrets:	Director L. Salter	Electoral Area F
	Director E. Hemmens	City of Nanaimo
	Alternate	
Also in Attendance:	Director B. Wiese	Town of Qualicum Beach
	P. Carlyle	Chief Administrative Officer
	R. Alexander	Gen. Mgr. Regional & Community Utilities
	G. Garbutt	Gen. Mgr. Strategic & Community Development
	T. Osborne	Gen. Mgr. Recreation & Parks
	D. Wells	Gen. Mgr. Corporate Services
	S. De Pol	Director of Water & Wastewater Services
	D. Pearce	Director of Transportation & Emergency Services
	L. Gardner	Mgr. Solid Waste Services
	T. Mayea	Legislative Coordinator
	L. Moilanen	Communications Coordinator
	C. Golding	Recording Secretary

CALL TO ORDER

The Chair called the meeting to order and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

APPROVAL OF THE AGENDA

It was moved and seconded that the agenda be approved as presented.

CARRIED UNANIMOUSLY

ADOPTION OF MINUTES

Regular Committee of the Whole Meeting - March 12, 2019

It was moved and seconded that the minutes of the Regular Committee of the Whole meeting held March 12, 2019, be adopted.

CARRIED UNANIMOUSLY

DELEGATIONS

Dr. Paul Hasselback, Island Health, re Role of the Medical Health Officer

Dr. Paul Hasselback advised the Board on the role of the Medical Health Officer and current health issues in the region.

Sharon Welch, Chair, Oceanside Health and Wellness Network, and Bobbi Coleman, member of Oceanside Local Action Team and Educator, re Trauma-Informed Community

Sharon Welch, Bobbi Coleman and Rosalinda Bose provided a presentation about becoming a Trauma-Informed Community.

CORPORATE SERVICES

Continuing the Conversation: Best Practices for Regional District of Nanaimo Communications and Engagement

It was moved and seconded that the Board approve the communications and engagement tools.

CARRIED UNANIMOUSLY

REGIONAL AND COMMUNITY UTILITIES

Performance Monitoring of New Waste Technology – Sustane Chester

It was moved and seconded that the Board partner with the Comox Valley Regional District and the Cowichan Valley Regional District for:

1. participation in the performance monitoring program of new waste technology – Sustane Chester;
2. contribution of \$7,500 from the Regional District of Nanaimo in the cost sharing of the performance monitoring program; and
3. preparation of a staff report to the Board at the conclusion of the performance monitoring program.

Opposed (1): Director Westbrook

CARRIED

Liquid Waste Management Plan Monitoring Committee Terms of Reference

It was moved and seconded that the Board approve the Draft Liquid Waste Management Plan Monitoring Committee Terms of Reference.

CARRIED UNANIMOUSLY

TRANSPORTATION AND EMERGENCY PLANNING SERVICES

Emergency Services Update

It was moved and seconded that the Emergency Services Update be received for information.

CARRIED UNANIMOUSLY

NEW BUSINESS

The Chair acknowledged the following people for their personal and professional accomplishments:

- Staff who organized the two volunteer appreciation events this week
- Larry Gardner, Mgr. Solid Waste Services for the international recognition he has received for his expertise and a successful trip to Vietnam
- Phyllis Carlyle, CAO and Geoff Garbutt, GM Strategic & Community Development for being invited to work at the Ministry because of their knowledge and expertise
- Director Westbrook for his contributions over the years as a Director on the Regional District Board.

The Vice Chair thanked Julie Pisani, Drinking Water & Watershed Protection Coordinator for her expertise and the excellent presentation at the Water Stewardship Symposium in Parksville.

ADJOURNMENT

It was moved and seconded that the meeting be adjourned.

CARRIED UNANIMOUSLY

TIME: 4:14 PM

CHAIR

Delegation: Peter Webber, Regional Transportation Planning, and Dave Edgar, Transportation Planning Engineer, Ministry of Transportation and Infrastructure, re Cathedral Grove Pedestrian and Traffic Safety Study

Summary: To provide an update to the Board regarding the completion of Phase 1 of the Cathedral Grove Pedestrian and Traffic Safety Study. Moving to Phase 2 based on the public input received from Phase 1.
(<https://engage.gov.bc.ca/cathedralgrove/>).

Action Requested: N/A

Delegation: Dr. David Witty, Director, Mount Arrowsmith Biosphere Region, re Mount Arrowsmith Biosphere Roundtable Representation

Summary: Mount Arrowsmith Biosphere Region (MABR), a UNESCO designated area, lies within the Regional District of Nanaimo. The Biosphere has become known internationally for its significant work in community-based research and Indigenous relationships with the Snaw-Na-As First Nation and Qualicum First Nation. MABR has signed a Memorandum of Agreement with the City of Parksville and Town of Qualicum Beach both of which sit on the MABR Roundtable (in itself recognized for its innovative, collaborative processes). In the past, the RDN also attended the MABR Roundtable through the RDN's DWWP Program Coordinator. Unfortunately, the last RDN Council determined that it did not need to be involved in the MABR.

A UNESCO Biosphere designation (there are 650+ in the world and 18 are in Canada) is considered by other communities to be a major accomplishment and recognition of the importance of the natural environment and the relationship of humans to the environment. Such designations draw international attention.

On behalf of MABR, I am requesting an opportunity to make a presentation to the RDN Committee of the Whole to seek RDN representation on the MABR Roundtable to join the leaders of Parksville, Qualicum Beach and the two First Nations. In addition, the RDN is requested to reappoint the Coordinator of DWWP, with whom the MABR continues to work on joint research projects, to also sit on the Roundtable (joining VIU and citizen representative and time company representation).

Action Requested: 1) RDN appoint a RDN representative to the Mount Arrowsmith Biosphere Region Roundtable; and
2) Reappoint the Coordinator of DWWP to also sit on the Roundtable.

2019-MAY-02

Via email: PCarlyle@rdn.bc.ca

CAO Phyllis Carlyle
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2

Dear Phyllis Carlyle,

Re: CLIMATE EMERGENCY

At the 2019-APR-29 Regular Council meeting, the Council of the City of Nanaimo unanimously passed the following motion:

"That Council direct staff to send a correspondence to the Regional District of Nanaimo requesting the addition of 20,000 annual public transit hours to improve public transit service delivery within the City of Nanaimo and to develop transit routes that connect our local system with inter-regional connections."

We look forward to working with the Regional District of Nanaimo in the development of additional public transit hours as the City of Nanaimo has officially declared a climate emergency for the purposes of identifying and deepening our commitment to protecting our economy, our eco systems, and our community from global warming.

Sincerely,



Leonard Krog
MAYOR

Streaming Option 1 - Stream Via eScribe

This would deliver live (latency under 5 seconds) video streaming and close captioning that is integrated with the agenda and minutes. This investment in hardware and services would remain useable if there were future upgrades to the technology in the Board Meeting room. This solution would also require the least amount of user intervention on an ongoing basis.

Risk

- Has the highest cost

Opportunities

- Integrates with the eScribe platform and agenda
- Easy to operate and with a minimal learning curve
- Only solution capable of closed captioning
- Consistent with the City of Nanaimo

Streaming Option 2 - Stream Via Social Media

This solution offers a minimalistic approach to the streaming of the meetings. There are various existing technologies that could be utilized. Possible solutions include Facebook Live and YouTube. Video could be streamed from video cameras with minimal financial investment but would not be integrated into the eScribe agenda and would not offer closed captioning

Risks

- Does not offer closed captioning
- Has commercial advertising and generally considered unprofessional
- User experience may suffer (ie. potential for ads, account registration, etc.)
- Archival and management of videos may be challenging
- Does not integrate with the eScribe platform and agenda
- Will require intervention to post and manage videos

Opportunity

- Lowest cost

Streaming Option 3 – Stream Via the RDN Website

Streaming from the corporate website would offer a more professional look than social media but would require development of a streaming platform. There would also be a requirement to administer the feeds. After the initial setup work and templates were developed, the ongoing administration would be minimal.

Risks

- The solution does not offer closed captioning
- There may be increased streaming costs incurred from the vendor
- There would be a requirement for RDN staff to post the videos and links
- Would require website updates and vendor cooperation as the website is hosted
- This solution does not integrate with the eScribe platform and agenda

Opportunity

- Low cost once the service was in place

Future Enhancements

This proposal aimed to minimize additional demands on RDN staff and to keep capital costs low. The service should deliver an acceptable user experience but could be enhanced further.

An example of a fixed view from a potential camera is below.



Sony camera model SNC-VM772R

If in the future the RDN Board wished to enhance the video capture technology with additional features, the proposed system could be augmented. Such features as scrolling banner messages, multiple camera views, zooming or split screen views with the agenda, camera view, and computer presentation, are possible. These enhancements would require an increase in funding to both capital and operating.

Streaming Option 1 provides an integrated agenda, video stream and is the only solution to offer closed captioning. Implementing this option can be done with minimal operational impact to the Board Meeting room and offers a solution that integrates closely with the existing eScribe agenda management system. This option also provides consistency to viewers that may be watching City of Nanaimo and RDN video streams. Additionally, this option can remain in use if significant changes are made to the physical layout of the Board Meeting room in the future.

FINANCIAL IMPLICATIONS

The total first year cost of the proposed Option 1 would be \$24,900. This includes \$19,900 for services and \$5,000 to have a quality camera installed and integrated into eScribe. All of these costs are in the 2019 Financial Plan. In addition, there will be an ongoing operating cost of \$19,900 per year for the streaming and closed captioning services which will be added to the 5-year Financial Plan should it continue beyond 2019.

Initial Capital Costs			Yearly Operating Costs	
	Hardware	Labour	Video Streaming Service	\$10,450.00
Camera	\$3,000.00	\$2,000.00	Closed Captioning Service	\$9,450.00
Total Initial Costs	\$5,000.00		Total Annual Operating Costs	\$19,900.00

Labour and hardware costs are based on previous installations and discussions with vendors.

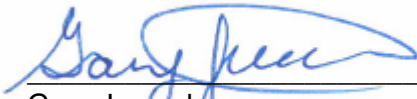
With regard to the staff time for the Information Technology (IT) support at present, IT staff are supporting the Electoral Area Services Committee (EASC), Committee of the Whole (COW) and Board Meetings, which each happen once per month. The amount of time spent varies at each of these meetings, and the hourly cost of the IT support based on 2019 rates is approximately \$47 per hour at regular time including wages and benefits. The Board Meetings require overtime premiums at time and a half which is \$70 per hour. Typically, IT staff spend about 2 hours each for EASC/COW and Board Meetings for a total staff cost of \$234 per month. Any expansion of these services beyond EASC, COW and Board Meetings will need to be costed accordingly and incorporated into our budget, including the addition of travel time and associated expenses for any additional off-site meetings.

The RDN will also live stream the new Oceanside Services Committee meetings, which is an additional \$750 for staffing for 2019 as we have three meetings at an estimated cost of \$250 per meeting for IT staff time estimated at 4 hours plus expenses. Because of the off-site location for these meetings, these three meetings are being done outside of this proposal and will be utilizing different technology. The capital cost of the off-site meetings will be \$2,000 for a portable camera and streaming device.

At this time, it is proposed that the live streaming being with the above-noted meetings in 2019 and if successful, build the staffing/operating and capital budgets to expand this service for 2020 and beyond should the level of use warrant the increase.

STRATEGIC PLAN IMPLICATIONS

Focus On Relationships- We Will Focus On Improved Two-Way Communication Within The Regional District And With Our Communities



Gary Jurasek
gjurasek@rdn.bc.ca
May 8, 2019

Reviewed by:

- D. Wells, General Manager, Corporate Services
- P. Carlyle, Chief Administrative Officer

devices is completed for **high health-hazard** connections to the water system. Many¹ BC municipalities and regional districts have already adopted such a bylaw to mitigate the risk of backflow into the public water supply on an on-going basis, thereby reducing the risk of an event and their exposure to legal liability.

The RDN owns and operates nine public water systems and three parks with drinking water facilities. These water systems operate under the terms of Operating Permits issued by the provincial Ministry of Health. One of the conditions of the permits is to have a Cross Connection Control Program in place to protect the public health by reducing the risk of industrial fluids, gases, sewage, biohazards or other wastes flowing back into the public water supply. There are not many businesses served by the RDN's public water systems that pose **high health-hazard** risks of backflow into the water system. Those businesses falling into this category include wastewater treatment plants, dental clinics, meat processing operations, marinas, and a naval defense base. While the RDN already has a Cross Connection Control Program in place, there are only a few backflow prevention terms listed in *Regional District of Nanaimo Water Use Regulation Bylaw No. 1654, 2012*. The Ministry of Health is encouraging the adoption of a separate, stand-alone Cross Connection Control Regulation Bylaw that can regulate the type of backflow prevention equipment installed on certain types of customers' water service lines, and can mandate the testing and reporting frequency of such backflow prevention equipment.

There are documented incidents of sickness and death across North America where backflow into the public water system has occurred. These situations have led to the development of better public health standards and awareness, but no additional safeguards to the public in the building or plumbing codes. Therefore, it's important to establish a bylaw in the RDN that protects the public water supply from high health-hazard backflow incidents before they arise, thereby reducing the risk of an event and the RDN's exposure to legal liability.

The attached *Cross Connection Control Regulation Bylaw No. 1788, 2019* enables the RDN, as a public water purveyor, to require the installation and maintenance of backflow protection equipment that is commensurate with (equivalent to) the assessed degree of hazard.

Bylaw Notice Bylaw

Penalties for offences committed under bylaws in the RDN are consistently described in *Bylaw Notice Bylaw No. 1786*. Penalties related to contravention of the Cross Connection Control Regulation have been added to this bylaw in amendment 1786.01. For reference, penalties related to another Water Services bylaw, "*Water Use Regulation Bylaw No. 1654, 2012*", are already included in the Bylaw Notice Bylaw.

¹ On Vancouver Island: City of Nanaimo, City of Parksville, City of Port Alberni, City of Campbell River, City of Courtenay, District of Port Hardy, District of North Cowichan, and Capital Regional District

ALTERNATIVES

1. Adopt “Regional District of Nanaimo Cross Connection Control Regulation Bylaw No. 1788, 2019”; and “Regional District of Nanaimo Bylaw Notice Amendment Bylaw No. 1786.01, 2019”, or
2. Do not adopt the Cross Connection Control Regulation bylaw and the amendment to the Bylaw Notice Bylaw.

FINANCIAL IMPLICATIONS

The Cross Connection Control Program, under the RDN Water Services Department, is currently funded by a combination of residential and commercial customer water rates, and direct billing. An annual operating budget of \$5,000 has been in place for several years for the ongoing administration of the Cross Connection Control Program. The cost recovery for backflow prevention equipment will continue to be imposed on new building permits and payable by the applicable permit-holders. However, if existing premises are discovered to be a **high health-hazard** risk of backflow, the property owner will be requested to install additional backflow equipment on their property at their expense. The cost to the customer depends on the size and type of equipment. A testable backflow assembly for a small dental clinic could cost roughly \$500. A testable backflow assembly for a sewage pumping and treatment facility may cost roughly \$10,000.

In keeping with the Board’s strategic plan to be effective and efficient, the Water Services staff will work with customers to determine the most cost-effective solution to mitigate **high health-hazard** risks of backflow into the public water supply. In this regard, customers will have the option to install smaller, less expensive “fixture” isolation equipment wherever possible, in comparison to larger, more expensive “premise” isolation equipment.

The RDN’s water system customers are largely low health-risk residential consumers that already have adequate backflow prevention equipment in place at the water meter. Where commercial customers such as dental offices, shopping centers, wastewater lift stations, and restaurants exist, the RDN’s provincially-certified operators have already identified the degree of hazard posed to the public water system and ensured that the appropriate backflow prevention equipment has been installed. Moving forward, however, if new risks to the water system are identified and the customer is unwilling or unable to install the appropriate backflow prevention equipment, there may be some initial costs to the RDN to purchase this equipment. The customer will subsequently be invoiced for the actual time and expenses incurred, and any unpaid amounts remaining by December 31st of the calendar year in which the work was done will be considered taxes in arrears and collected as debt through the Surveyor of Taxes.

The penalties for offences committed under the Cross Connection bylaw are fully described in “*RDN Bylaw Notice Bylaw Amendment Bylaw No. 1786.01, 2019*” and are summarized in the table below. For reference, these penalties are consistent with those for similar offences in the City of Nanaimo.

**Penalties for Offences Committed Under RDN
 Cross Connection Control Regulation Bylaw No. 1788, 2019**

Bylaw Section	Description	Penalty	Early Payment Penalty	Late Payment Penalty
6(b)	Unapproved Connection	\$200	\$150	\$250
7(a)	Prohibited Cross Connection	\$200	\$150	\$250
7(i)	Tamper with Backflow Preventer Assembly	\$200	\$150	\$250
9(a)	Fail to test Backflow Preventer Assembly	\$200	\$150	\$250
9(b)	Fail to provide test report (Backflow Preventer Assembly)	\$200	\$150	\$250
11	Prohibited connection to private water system	\$500	\$375	\$500
12	Prohibited greywater connection	\$500	\$375	\$500

The inclusion of Cross Connection penalties in the Bylaw Notice Bylaw does not preclude the RDN from pursuing more serious matters through injunctive relief or higher fines from the courts where deemed appropriate by the Board.

STRATEGIC PLAN IMPLICATIONS

Focus On Service And Organizational Excellence - As We Invest In Regional Services We Look At Both Costs And Benefits - The RDN Will Be Effective And Efficient

Establishing a Cross Connection Control Regulation Bylaw also meets the Board’s Governing Principles:

- To Have Vision and Courage – an increasingly unpredictable future will require courage to take bold actions to realize our vision for a resilient region; and
- To Be Responsive – we will be informed and prepared in order to respond to the needs of the Region in a timely manner, prioritizing projects and activities that advance residents’ well-being.

Deb Churko
 dchurko@rdn.bc.ca
 April 30, 2019

Reviewed by:

- M. Walters, Manager, Water Services
- S. De Pol, Director, Wastewater and Water Services
- R. Alexander, General Manager, RCU
- P. Carlyle, Chief Administrative Officer

Attachments

1. Regional District of Nanaimo Cross Connection Control Regulation Bylaw No. 1788, 2019
2. Regional District of Nanaimo Bylaw Notice Amendment Bylaw No. 1786.01, 2019

**REGIONAL DISTRICT OF NANAIMO
BYLAW NO. 1788**

**A BYLAW TO PROTECT PUBLIC HEALTH BY CONTROLLING CROSS
CONNECTIONS TO WATER SYSTEMS OWNED AND OPERATED BY THE
REGIONAL DISTRICT OF NANAIMO**

WHEREAS under the *Local Government Act*, a regional district may operate any service that the Board considers necessary or desirable for all or part of the regional district;

AND WHEREAS under the *Local Government Act*, subject to the *Public Health Act*, a regional district board may, by bylaw;

- a) regulate and prohibit for the purposes of maintaining, promoting or preserving public health or maintaining sanitary conditions; and
- b) undertake any other measures it considers necessary for those purposes;

AND WHEREAS the Regional District of Nanaimo owns, operates and maintains water supply and distribution systems which currently provide Water Service to the RDN Water Service Areas in accordance with *Regional District of Nanaimo Water Use Regulation Bylaw No. 1654, 2012*;

AND WHEREAS the Board wishes to protect public health by controlling Cross Connections in all Water Systems owned, operated and maintained by the Regional District of Nanaimo;

NOW THEREFORE the Board of the Regional District of Nanaimo in an open meeting assembled hereby enacts as follows:

1. CITATION

This Bylaw may be cited as the "Regional District of Nanaimo Cross Connection Control Regulation Bylaw No. 1788, 2019".

2. PURPOSE

The purpose of this Bylaw is to:

- a) protect the Potable Water supplied by the RDN against the possibility of contamination, by removing or isolating existing, or potential, Contaminant sources that may Backflow into the RDN Water Systems; and
- b) provide for the installation, inspection, and maintenance of Approved Backflow Preventers and other devices required by the Cross Connection Control Program, so as to systematically and effectively prevent the introduction of Contaminants into the RDN Water Systems.

3. INTERPRETATION

- a) Words or phrases defined in the *Interpretation Act*, the *Community Charter*, or the *Local Government Act*, R.S.B.C. 1996, Chapter 323 shall have the same meaning when used in this Bylaw, unless otherwise defined in this Bylaw.
- b) The headings contained in this Bylaw are for convenience only and are not to be construed as defining or in any way limiting the scope or the intent of the provisions of this Bylaw.
- c) Any enactment referred to herein is a reference to an enactment of the Province of British Columbia and regulations thereto, as amended, revised, consolidated or replaced from time to time, and any bylaw referred to herein (as may be cited by short title or otherwise) is a reference to a bylaw of the Board, as amended, revised, consolidated or replaced from time to time.
- d) If any provision of this Bylaw is held to be invalid by a court of competent jurisdiction, the provision may be severed from the Bylaw, and such invalidity shall not affect the validity of the remaining portions of this Bylaw.

4. DEFINITIONS

In this Bylaw, unless the context requires otherwise:

"Actual Cost" means the total amount invoiced to the RDN by a contractor or supplier for goods and services purchased and performed in performing work under this Bylaw.

"Alternate or Auxiliary Water Supply" means any water supply available on the Premises, or to the Premises, other than an RDN Water System.

"Approved Backflow Preventer" means an apparatus that is approved by the RDN or its authorized agent for installation in a water system so as to prevent Backflow of Contaminants into the RDN Water System, and includes approved Backflow Prevention Assemblies and approved Backflow Prevention Devices.

"Backflow" means the flow of water or other liquids, gases or solids from any source in the reverse direction of the intended direction of flow and back into the Consumer's plumbing system or the RDN Water System.

"Backflow Assembly Tester" means a person holding a valid certificate from the American Water Works Association, British Columbia section (BCWWA) for testing Backflow Prevention Assemblies.

"Backflow Assembly Test Report" means a record, in the form provided or approved for use by the RDN Manager of Water Services, which contains all pertinent information and test data resulting from a Backflow assembly test conducted by a Backflow Assembly Tester in accordance with the provisions of this Bylaw.

“Backflow Preventer” means an apparatus that is installed in a water system so as to prevent Backflow of Contaminants into the RDN Water System, and includes Backflow Prevention Assemblies and Backflow Prevention Devices.

“Backflow Prevention Assembly” means a CSA Standard B64.10-approved apparatus that is installed in a Water System to stop the flow of water or other liquids, gases or solids from flowing in the reverse direction of the intended direction of flow and back into the Consumer's plumbing system or the RDN Water System. A Backflow Prevention Assembly is equipped with an inlet and outlet shut-off valve and test cocks that allow it to be tested and repaired while in service.

“Backflow Prevention Device” means a non-testable apparatus that is installed in a water system to stop the flow of water or other liquids, gases or solids from flowing in the reverse direction. A Backflow Prevention Device is not equipped with an inlet and outlet shut-off valve or test cocks that would allow its functionality to be tested or determined.

“Board” means the Board of Directors of the Regional District of Nanaimo.

“Bylaw Enforcement Officer” means a person or persons appointed from time to time by the Board as a bylaw enforcement officer, or any other person appointed as such by the Board for the purposes of administering, enforcing or carrying out this Bylaw.

“Consumer” means any person who is the owner or occupier, or agent for the owner or occupier, of any Premises or equipment to whom water is supplied by the RDN.

“Consumer Supply Line” means the pipe that conveys water from an RDN Water System to the Consumer's building or property being served.

“Contaminant” means any physical, chemical, biological or radiological substance or matter in water which may render the water non-potable, according to the *Drinking Water Protection Act*.

“Cross Connection” means any existing or potential physical connection whereby an RDN Water System is connected, directly or indirectly, with any Non-Potable or unapproved Private Water System, or any sewer, drain, conduit, well, pool, storage reservoir, pond, boiler, plumbing fixture, or any other device which contains or may contain contaminated water, liquid, gases, sewage, or other waste, of unknown or unsafe quality, capable of introducing Contaminants into the public water supply by Backflowing into the RDN Water System.

“Cross Connection Control Program” means the program developed and operated by the RDN to administer and regulate the selection, approval, installation, inspection, testing and maintenance of Backflow Prevention Devices.

“CSA or CAN/CSA” means the Canadian Standards Association.

“Disconnect” and **“Disconnection”** mean turning off or physically separating the Consumer Supply Line from the RDN Water System, and includes stopping the flow of water between the Consumer Supply Line and the RDN Water System by closing an RDN-owned valve, or by any other means approved by the RDN.

“Greywater ” means untreated household wastewater that has not come in contact with toilet waste, and includes wastewater from bathtubs, showers, clothes washers and laundry tubs, but excludes wastewater from toilets, urinals, bidets, kitchen sinks, and dishwashers.

“Inspect” means an on-site review of the water use, facilities, meters, piping, equipment, operating conditions and maintenance records for the purpose of evaluating for conformity with the terms and conditions of this Bylaw.

“Manager of Water Services” means the person appointed to the position of Manager of Water Services of the RDN Regional and Community Utilities Department, and shall include any person designated by the Board to act on behalf of the Manager of Water Services.

“Non-Potable Water” means water that is not fit for human consumption as defined in the *Drinking Water Protection Act*.

“Potable Water” means water that is fit for human consumption as defined in the *Drinking Water Protection Act*.

“Premises” means any real property and all buildings and improvements thereon.

“Private Water System” means any Water System serving a premises with water originating from a source or system not owned or operated by the RDN.

“RDN” means the Regional District of Nanaimo.

“RDN Official” means a Bylaw Enforcement Officer, Building Inspector or any other person employed by the RDN for the purposes of administering, enforcing or carrying out the provisions in this Bylaw.

“RDN Water System” means any Water System owned, operated and maintained by the RDN or its authorized agent, and any and all parts thereof.

“Reconnect” and **“Reconnection”** mean to turn on, or physically connect the Consumer Supply Line to the RDN Water System, and includes allowing the flow of water by opening an RDN-owned valve, or by any other means approved by the RDN.

“Reclaimed Water” means wastewater or Non-Potable Water that has received at least secondary treatment and basic disinfection, and is available for reuse for a beneficial purpose.

“Service Connection” means any connection through means of a pipe, valve, and other appurtenances extending from an RDN Water System to the boundary of the property being served.

“Used Water” means any Potable Water which is no longer in the RDN Water System, including Potable Water that has moved downstream or past the Service Connection valve and/or the property line to the Premises.

“Water Service” means the supply of water to a Consumer by means of the RDN Water System.

“Water System” means a system of water supply pipes and appurtenances that conveys water to a Consumer.

5. APPLICATION

This Bylaw applies to all water supplied by the RDN to the RDN Water Service Areas, and to all Consumers receiving or using such water.

6. WATER SUPPLY AND PRESSURE

- a) Water Service shall only be provided where, in the opinion of the Manager of Water Services, the RDN Water System has been effectively protected from any actual or potential Cross Connections existing at or within the Consumer’s private water system.
- b) No person shall operate a valve in order to provide Water Service to the occupants of any newly renovated, constructed or reconstructed Premises until an RDN Official has first:
 - i) inspected the Private Water System in such Premises for Cross Connections; and
 - ii) confirmed that all required Backflow Preventers have been installed and tested, in accordance with this Bylaw.

7. CONNECTIONS, CROSS CONNECTIONS AND BACKFLOW PREVENTION

- a) Except as specifically provided in this Bylaw, no person shall create a Cross Connection.
- b) If an RDN Official or authorized agent determines that there exists a connection or Cross Connection prohibited by this Bylaw, that person may send written notice to the Consumer ordering the Consumer to correct the connection or Cross Connection at the expense of the Consumer within a specified time.
- c) A Consumer to whom notice has been given under this section shall eliminate or control the connection or Cross Connection by installing an Approved Backflow Preventer that conforms to the CAN/CSA B64.10 standard or most current edition, for the selection and installation of Backflow Preventers, and that is approved by the RDN Manager of Water Services.
- d) The failure to be sent a notice(s) or the failure to receive a notice(s) shall not excuse the mandatory duty of the Consumer or other responsible party to comply with this Bylaw and all other applicable bylaws.
- e) Where the Consumer has not installed an Approved Backflow Preventer to the satisfaction of the Manager of Water Services within the time specified in the notice, or the Backflow Preventer fails to function as designed, the RDN may:

- (i) Disconnect the Consumer's Water Service with notice to the Consumer at the time of the disconnection; and
 - (ii) install an Approved Backflow Preventer on or near the Premises and invoice the Consumer for the Actual Cost to have an Approved Backflow Preventer installed on or near the Premises.
- f) In the event a Consumer's Water Service is Disconnected pursuant Section 7(e) of this Bylaw, the Consumer may apply to have the Water Service reinstated on the condition that the Consumer pays outstanding fees and charges, including all RDN costs associated with the Disconnection and Reconnection, and is otherwise in compliance with this Bylaw.
- g) Where there is any indication that an Approved Backflow Preventer is malfunctioning, including, without limitation, due to damage caused by freezing, hot water, fire, neglect or mistreatment, the Consumer shall immediately notify the RDN, and cease using the Cross Connection until the Approved Backflow Preventer is replaced or repaired and re-tested in accordance with this Bylaw.
- h) All Approved Backflow Preventers installed by the RDN or its authorized agent on or near the Premises under Section 7(e) of this Bylaw remain the property of the RDN.
- i) No person shall impede, remove, bypass, stop-up, render inoperable, or replace an Approved Backflow Preventer without prior written consent from the RDN Manager of Water Services.

8. INSPECTION

- a) A Bylaw Enforcement Officer has the authority to enter at all reasonable times on any property that is subject to this Bylaw to ascertain whether the requirements of this Bylaw are being met or observed.
- b) The RDN and its authorized agent may:
- (i) Impose minimum standards that must be met and satisfied relating to the type of Backflow Preventer and the installation and maintenance of the same as specified in the RDN Cross Connection Control Program; and
 - (ii) Inspect the type of Backflow Preventer, the installation and state of maintenance and repair of the same.

9. TESTING OF BACKFLOW PREVENTION ASSEMBLIES

- a) Every Consumer must ensure that all Approved Backflow Prevention Assemblies serving their Premises are inspected and tested by a certified Backflow Assembly Tester, upon installation, after repair and at least once in every twelve (12) month period following installation or more often if written notice is given to the Consumer.

- b) Every Consumer must ensure that within thirty (30) days of installation, repair, inspection, test, replacement or relocation of an Approved Backflow Prevention Assembly, a completed Backflow Assembly Test Report is provided to the RDN Manager of Water Services.
- c) In addition to any other requirement in this Bylaw, an RDN Official may at any time require a Consumer to have a Backflow Prevention Assembly tested at the Consumers' expense, provide Backflow Assembly Test Reports to the RDN, and undertake whatever other measures are required to prevent the contamination of the RDN Water System.

10. FAILURE TO COMPLY WITH TESTING OR REPORTING REQUIREMENTS

- a) If a Consumer fails to comply with any testing or reporting requirements contained in this Bylaw: the RDN or its authorized agent may undertake the Backflow Preventer testing and reporting on behalf of the Consumer in order to ensure compliance with this Bylaw and the RDN Cross Connection Control Program and may invoice the Actual Cost of the testing to the Consumer.

11. PRIVATE WATER SYSTEM (ALTERNATE/AUXILIARY WATER SUPPLY)

No person shall cause a connection to be installed or a connection to be maintained whereby water from a Private Water System or Alternate or Auxiliary Water Supply can enter the RDN Water System unless:

- a) the Consumer has received the prior written approval of the RDN;
- b) an Approved Backflow Preventer has been installed in accordance with the RDN Cross Connection Control Program; and
- c) the Consumer has entered into an agreement on terms and conditions acceptable to the RDN, for the installation, operation and maintenance of the connection.

12. RECLAIMED WATER, GREYWATER, and other NON-POTABLE WATER SYSTEMS

- a) No person shall install, or permit or allow to be installed any direct connection between Reclaimed Water, Greywater, or other Non-Potable water system and an RDN Water System.

13. INVOICED COSTS

- a) All invoices issued to a Consumer under this Bylaw must be paid within 30 days of issue.
- b) If any part of an invoice remains unpaid on December 31st of the year it was issued, the amount unpaid is deemed to be taxes in arrears and the Regional District's financial officer shall seek collection in accordance with section 399(2)(b) of the *Local Government Act*.

14. OFFENCE AND PENALTY

- a) A Consumer who violates any provision of this Bylaw, or who suffers or permits any act or thing to be done in contravention or in violation of any provision of this Bylaw, or who neglects to do or refrains from doing anything required to be done by any provision of this Bylaw, is guilty of an offence under this Bylaw.
- b) A Consumer who commits an offence under this Bylaw is liable on summary conviction to a penalty of not less than \$100.00 and not more than \$2,000.00, plus the costs of prosecution if ordered by the court.
- c) Each day that an offence under this Bylaw continues shall be deemed a separate and distinct offence.
- d) Any penalty imposed pursuant to this Bylaw shall be in addition to, and not in substitution for, any other penalty or remedy imposed pursuant to any other applicable statute, law or legislation.

15. Effective Date

- a) This Bylaw shall come into full force and effect upon adoption.

Introduced and read three times this day of , 2019.

Adopted this day of , 2019.

CHAIR

CORPORATE OFFICER

**REGIONAL DISTRICT OF NANAIMO
BYLAW NO. 1786.01**

**A BYLAW TO AMEND THE
BYLAW NOTICE BYLAW**

WHEREAS the Board of the Regional District of Nanaimo adopted “Regional District of Nanaimo Bylaw Notice Bylaw No. 1786, 2019”;

AND WHEREAS the Board of the Regional District of Nanaimo wishes to amend the Bylaw Notice Bylaw to include penalties for offences committed under the Cross Connection Control Regulation Bylaw;

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

1. CITATION

This Bylaw may be cited as the "Regional District of Nanaimo Bylaw Notice Amendment Bylaw No. 1786.01, 2019".

2. AMENDMENT

“Regional District of Nanaimo Bylaw Notice Bylaw No. 1786, 2019” is amended by:

- a) Amending Sections 5 and 6(a) by deleting the words “Schedules 2-26” and inserting the words “Schedules 2-27”;
- b) Amending Section 11 by deleting the words “Schedules 1-26” and inserting the words “Schedules 1-27”;
- c) Inserting the following row at the bottom of the table in Schedule 1:

27	Regional District of Nanaimo Cross Connection Control Regulation Bylaw No. 1788, 2019	Manager of Building & Bylaw Services
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and;

d) Inserting the following as Schedule 27:

SCHEDULE 27

BYLAW NOTICE BYLAW NO. 1786

Cross Connection Control Regulation Bylaw No. 1788, 2019

Section	Description	Penalty	Early Payment Penalty	Late Payment Penalty
6(b)	Unapproved Connection	\$200	\$150	\$250
7(a)	Prohibited Cross Connection	\$200	\$150	\$250
7(i)	Tamper with Backflow Preventer Assembly	\$200	\$150	\$250
9(a)	Fail to test Backflow Preventer Assembly	\$200	\$150	\$250
9(b)	Fail to provide test report (Backflow Preventer Assembly)	\$200	\$150	\$250
11	Prohibited connection to private water system	\$500	\$375	\$500
12	Prohibited greywater connection	\$500	\$375	\$500

3. EFFECTIVE DATE

a) This Bylaw shall come into full force and effect upon adoption.

Introduced and read three times this day of , 2019.

Adopted this day of , 2019.

CHAIR

CORPORATE OFFICER

BACKGROUND

The Chase River Pump Station and Forcemains are critical infrastructure components of the southern communities wastewater infrastructure that receives wastewater from the south end of the City of Nanaimo. Wastewater from the pump station is conveyed approximately 1.1 kilometers northward beneath Haliburton Street to the Nanaimo Interceptor Pipeline through twin 450 mm diameter ductile iron pipes (Chase River Force Mains No. 1 and 2). The forcemains were installed in 1980 and 1998 respectively.

Serious leaks the Chase River Wastewater Forcemain #1 have required that it be shut down and replaced on an expedited emergency basis. This project was advanced as a high priority for completion in 2019 before the wet weather season to eliminate the current risk of wastewater spills from the system. The engineering was expedited by combining the pre-design and detailed design into one services contract. It was anticipated that the initial contract scope would need to be revised as the design proceeded. In July 2018, the RDN Board awarded the Detailed Engineering Services for the Chase River Forcemain No.1 Replacement and Pump Station Upgrade Project to CH2M Hill Canada for \$199,682 (excluding GST).

Following the award of the engineering services contract, an opportunity was identified to partner with the City of Nanaimo (CoN) to coordinate CoN watermain replacement and road upgrades along this stretch of Haliburton Street. Combining these activities into one coordinated construction project allows the RDN and CoN to reduce overall cost and disruption to the taxpayer by coordinating engineering, procurement and construction resources.

Design and construction tendering are proceeding under an extremely tight schedule to ensure the work can be completed prior to the wet weather season, and winter shutdown of asphalt plants (anticipated end of October).

City of Nanaimo Scope of Work.

The Chase River Forcemain No. 1 (CRFM1) installation beneath Haliburton Street will require the removal of the asphalt surface and road closure during construction. The CoN Transportation Masterplan identifies the same section of Haliburton Street for a dedicated pedestrian/cycling path (see image below) and the CoN Capital Plan includes replacement of the aging asbestos cement watermain. The CoN has elected to undertake the multi-use path and water main replacement work on Haliburton Street to correspond with the timing of the RDN forcemain replacement, in order to reduce overall cost and disruption to the taxpayer.



In December 2018, the RDN and the CoN agreed to cost share the engineering design for the three projects, under the current RDN Engineering Services contract with CH2M Hill Canada. A change order for design fees in the amount of \$81,205 was negotiated between RDN, CoN, and CH2M Hill to undertake design work associated with the pedestrian/cycling path and watermain replacement. Additional design work associated with storm system and road design has recently been identified at an estimated cost of up to \$39,285, subject to approval by CoN staff.

RDN Scope of Work

In July 2018, the RDN Board awarded the Detailed Engineering Services for the Chase River Forcemain No.1 Replacement and Pump Station Upgrade Project to Jacobs Engineering for \$199,682 (excluding GST).

Through the design process, CH2M Hill has identified changes required to the valve station and electrical system design, not anticipated in the original expedited engineering scope, to allow the new forcemain to be commissioned without risk of overflows at the pump station during tie-in of the new forcemain to the pump station. This work includes relocating the valve chamber and variable frequency drive and associated controls/electrical components. A change order in the amount of \$86,741 has been negotiated between RDN and CH2M Hill to complete this work.

ALTERNATIVES

1. That the Board authorize staff to negotiate a revised fee with CH2M Hill Canada for engineering services, for the Chase River Force Main No.1 and City of Nanaimo Haliburton Street upgrades, not to exceed a total contract value of \$435,000 (excluding GST).
2. Defer the proposed additional engineering. This will result in: significant risk of environmental spills during connection of the new force main to the existing wastewater system; lost partnership opportunity with CoN; and higher ultimate cost and disruption to the taxpayer.

FINANCIAL IMPLICATIONS

The proposed contract value of \$435,000 is available in the total 2019 project budget for the Chase River Forcemain Project. The City of Nanaimo has agreed to pay their portion of the project expenditures to the RDN.

The City of Nanaimo portion of the proposed maximum contract value is up to \$120,490, comprised of:

- \$81,205 (previously approved scope)
- \$39,285 (scope revision – expenditure subject to CoN approval)

The RDN portion of the proposed maximum contract value is up to \$314,423 comprised of:

- \$199,682 (original contract amount)
- \$86,741 (current change order design for new valve station and system controller)
- \$28,000 (10% contingency)

The additional RDN scope includes design of an above ground valve station to allow the connection of the new forcemain to the pump station and the replacement of the aging system controller to ensure a reliable pumping system.

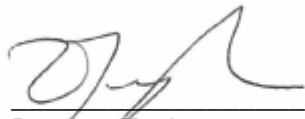
STRATEGIC PLAN IMPLICATIONS

The upgrade of the Chase River Forcemain; Pump Station and Haliburton Street infrastructure directly supports the Board Key Strategic Areas of:

Environmental Stewardship: This project will upgrade existing infrastructure, reducing the risk of accidental discharge of untreated wastewater to the environment.

Growth Management: The Chase River Pump Station and Force Main are critical infrastructure assets. Upgrading and maintaining this crucial part of the wastewater management system are vital components of the RDN's Asset Management Plan.

People and Partnerships: Through the partnership with the City of Nanaimo, we can optimize the construction of buried infrastructure and provide a tangible benefit to the community with the addition of a safe multi-use pathway along a section of Haliburton Street.



Duncan Taylor
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April 19, 2019

Reviewed by:

- S. De Pol, Director, Water & Wastewater Services
- R. Alexander, General Manager, Regional and Community Utilities
- J. Bradburne, Director of Finance.
- P. Carlyle, Chief Administrative Officer