

**REGIONAL DISTRICT OF NANAIMO
COMMITTEE OF THE WHOLE
AGENDA**

Tuesday, March 12, 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 - February 19, 2019	5
That the minutes of the Regular Committee of the Whole meeting held February 19, 2019, be adopted.	
4. DELEGATIONS	
4.1 June Ross, Chair, Vancouver Island Water Watch Coalition, re Request to Submit Forestry and Watersheds Resolutions to AVICC	10
4.2 Joanne Sales, Broombusters Invasive Plant Society, re Scotch Broom	27
5. CORRESPONDENCE	
That the following correspondence be received for information:	
5.1 Cedar Community Hall Association, re Requesting Community Works Funds	29
6. COMMITTEE MINUTES	
That the following minutes be received for information:	
6.1 Agricultural Advisory Committee - February 28, 2019	38
6.2 District 69 Recreation Commission - February 21, 2019	40
6.3 Drinking Water and Watershed Protection Technical Advisory Committee - February 14, 2019	45

7. COMMITTEE RECOMMENDATIONS

7.1 District 69 Recreation Commission

7.1.1 District 69 Youth Recreation Grants

That the following District 69 Youth Recreation Grant applications be approved:

- Bowser Elementary School - spring field trip - \$2,500
- Arrowsmith Community Recreation Association - Youth Week events - \$461
- Mid-Island Distance Youth Running Club - equipment purchase - \$1,054
- Errington War Memorial Hall Association - World Music Youth Camp - \$1,000
- Oceanside Community Arts Council - summer school creative art supplies - \$1,000
- Ravensong Aquatic Club - equipment - \$1,275
- Errington Elementary School - field coach equipment - \$2,219

Total - \$9,509

7.1.2 District 69 Community Recreation Grants

That the following District 69 Community Recreation Grant applications be approved:

- Errington Elementary School - Grade 3 swim program - \$1,675
- Forward House Community Society - program costs - \$2,215
- Bow Horn Community Club - fall fair - \$2,500
- Qualicum Beach Weavers & Spinners Guild - materials, promotions, meeting space - \$2,000
- Parksville Golden Oldies Sports Association - meeting space - \$800
- Oceanside Building Learning Together Society - Dad's night out - \$650
- Town of Qualicum Beach - Beach Day event - \$1,000
- Bowser Tennis Club - repair court surface, purchase ball machine - \$2,253
- Arrowsmith Community Recreation Association - Country Picnic event supplies - \$1,250
- Parksville Curling Club - LED lighting upgrade project - \$2,000
- Canadian Paraplegic Association (BC) - Spinal Cord Injury BC event equipment rental - \$1,000

Total - \$17,343

7.2 Recreation Infrastructure

Please note: Committee recommendation has no accompanying staff report

That the Board proceed with the original recommendations of the Oceanside Recreation and Sport Infrastructure Sub-Committee Report without delay.

8. ADMINISTRATION

8.1 Regional District of Nanaimo Draft Strategic Plan 2019 - 2022

48

Presentation of the Draft Strategic Plan by Dan Huang, Urban Systems

That the Draft Strategic Plan be received for information, and further, that public consultation on the Draft Strategic Plan proceed with the results of such consultation reported to the Board at the April 23, 2019 Regular Board meeting.

9. STRATEGIC AND COMMUNITY DEVELOPMENT

9.1 2019 Asset Management Review and Implementation Report 61

That the Board receive the Regional District of Nanaimo 2019 Asset Management Review and Implementation Report.

10. RECREATION AND PARKS

10.1 Ministry of Forests, Lands, Natural Resource Operations and Rural Development Wildfire Response Agreement 2019-2022 216

That the 2019-2022 Wildfire Response Agreement with the Ministry of Forest, Lands, Natural Resource Operations and Rural Development be approved for execution.

11. REGIONAL AND COMMUNITY UTILITIES

11.1 French Creek Pollution Control Centre, Engineering Services 233

That the Board approve an additional \$222,172 (excluding GST) to AECOM Engineering Services contract for Thickener Facility Upgrade engineering and Landscape Architecture design.

12. BUSINESS ARISING FROM DELEGATIONS

13. NEW BUSINESS

14. IN CAMERA

That pursuant to Sections 90 (1) (e), and 90 (2) (d) of the *Community Charter* the Committee proceed to an In Camera meeting for discussions related to the acquisition, disposition or expropriation of land or improvements and a matter that, under another enactment, is such that the public must be excluded from the meeting.

15. ADJOURNMENT

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

Tuesday, February 19, 2019

4:42 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 E. Hemmens	City of Nanaimo
	Director J. Turley	City of Nanaimo
	Director E. Mayne	City of Parksville
	Director A. Fras	City of Parksville
	Director M. Swain	Town of Qualicum Beach
	Director T. Westbroek	Town of Qualicum Beach
Regrets:	Director L. Salter	Electoral Area F
Also in Attendance:	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
	J. Bradburne	Director of Finance
	D. Pearce	Director of Transportation & Emergency Services
	T. Armet	Mgr. Building & Bylaw Services
	T. Mayea	Legislative 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

It was moved and seconded that the following minutes be adopted:

Regular Committee of the Whole Meeting - January 8, 2019

Special Committee of the Whole Meeting - December 4, 2018

CARRIED UNANIMOUSLY

CORPORATE SERVICES

2019-2023 Financial Plan

It was moved and seconded that the Board approve the 2019-2023 Financial Plan as presented.

Opposed (1): Director Rogers

CARRIED

It was moved and seconded that "Southern Community Economic Development Service Amendment Bylaw No. 1648.02, 2019" be introduced, read three times and forwarded to the Inspector of Municipalities for approval.

Opposed (1): Director Rogers

CARRIED

It was moved and seconded that "Regional District of Nanaimo Regional Parks and Trails Service Area Amendment Bylaw No. 1231.06, 2019" be introduced, and read three times.

Opposed (1): Director Rogers

CARRIED

It was moved and seconded that "Electoral Area 'G' Community Parks Service Amendment Bylaw No. 805.07, 2019" be introduced, and read three times.

Opposed (1): Director Rogers

CARRIED

STRATEGIC AND COMMUNITY DEVELOPMENT

Regional District of Nanaimo Bylaw Notice Bylaw No. 1786, 2019, being a Bylaw to Implement a Bylaw Notice Bylaw

It was moved and seconded that Regional District of Nanaimo Bylaw Notice Bylaw No. 1786, 2019, being a Bylaw to Implement a Bylaw Notice Bylaw be referred to the Electoral Area Services Committee for detailed discussions.

Opposed (15): Director Thorpe, Director Wilson, Director Craig, Director Gourlay, Director Krog, Director Armstrong, Director Bonner, Director Brown, Director Geselbracht, Director Hemmens, Director Turley, Director Mayne, Director Fras, Director Swain, and Director Westbroek

DEFEATED

It was moved and seconded that "Regional District of Nanaimo Bylaw Notice Bylaw No. 1786, 2019" be introduced and read three times.

Opposed (2): Director Young, and Director Fell

CARRIED

It was moved and seconded that "Regional District of Nanaimo Bylaw Notice Bylaw No. 1786, 2019" be adopted.

Opposed (2): Director Young, and Director Fell

CARRIED

RECREATION AND PARKS

Oceanside Recreation and Sport Infrastructure Sub-Committee

It was moved and seconded that the Oceanside Recreation and Sport Infrastructure Sub-Committee item be deferred.

This motion was withdrawn with the consent of the assembly.

It was moved and seconded that the Board receive the Oceanside Recreation and Sport Infrastructure Sub-Committee report.

Opposed (4): Director Fell, Director Gourlay, Director McLean, and Director Westbroek

CARRIED

REGIONAL AND COMMUNITY UTILITIES

RDN Drinking Water and Watershed Protection Action Plan Update Project

It was moved and seconded that the Board appoint Director Geselbracht, Director Craig and Director McLean to a temporary Drinking Water and Watershed Protection Action Plan Update Board Steering Committee for the 2019 project.

CARRIED UNANIMOUSLY

MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

Gabriola Community Hall, re Electoral Area B Community Works Funds

It was moved and seconded that pending project approval from UBCM, staff be directed to complete an agreement with the Gabriola Community Hall Association for up to \$25,000 from the Electoral Area B Community Works Fund allocation as a matching contribution towards roof upgrades for the Gabriola Community Hall.

CARRIED UNANIMOUSLY

NEW BUSINESS

Notice of Motion - Electoral Area G Community Works Funds

Director Gourlay provided notice of the following motion:

That \$5,000 of Electoral Area G Community Works Funds be allocated to the installation of street lights at both ends of the French Creek highway bridge.

Notice of Motion - Bus Passes for Veterans

Director Bonner provided notice of the following motion:

That staff be requested to prepare a report for presentation at a future Transit Select Committee meeting on the costs and options for implementing free fares for veterans.

Directors' Roundtable

Directors provided updates to the Committee.

IN CAMERA

It was moved and seconded that pursuant to Sections 90 (1) (e), (j), and (k) of the *Community Charter* the Committee proceed to an In Camera meeting for discussions related to the acquisition, disposition or expropriation of land or improvements, third party business interests, and the provision of a proposed service.

CARRIED UNANIMOUSLY

TIME: 5:48 PM

ADJOURNMENT

It was moved and seconded that the meeting be adjourned.

CARRIED UNANIMOUSLY

TIME: 6:18 PM

CHAIR

Delegation: June Ross, Chair, Vancouver Island Water Watch Coalition, re Request to Submit Forestry and Watersheds Resolutions to AVICC

Summary: See attached

Action Requested: See attached



Vancouver Island Water Watch Coalition presented to many of the Island MLA's in April, 2018. From a legislation perspective, our concern is with the Forestry Acts, the Mining Act and the Water Sustainability Act. Changes are desperately needed. The Mining and Forestry Acts must be amended to state that Water and it's sources take precedence over Mining and Forestry. The Water Sustainability Act has few regulations developed. We need effective water governance in place now...not tomorrow...but now!

Following our presentation to Government and a subsequent press release, we were contacted by many groups across the province. Since that time, we have become associated with a provincial group called the BC Coalition for Forestry Reform. The membership of this group is increasing as voices get louder for amendments to the various Acts that must occur.

There is growing concern and evidence among local governments that widespread timber harvesting, specifically clear cutting, is driving significant financial and social costs onto local governments and the citizens they serve. Astonishingly, local government has no legislated role or decision-making power in the planning of timber harvesting, nor indeed in any aspect of timber harvesting including its location, volume, rate of harvest, cumulative impact, etc.

We hear every day how BC's timber supply is dwindling. Yet, cities, towns, municipalities, and regional districts are finding that more and more harvest activity is being performed nearer urban-forest interfaces, within watersheds that are the sole source of drinking water for downstream communities, and within recreation and tourism areas that provide the lifestyle and tourism dollars that municipalities seek to enhance and encourage.

Local governments must now clean up water sources that have become silted and modified by resource extraction activities in their watersheds. Millions of tax dollars are now required to upgrade or build water treatment facilities now needed to treat what used to be pristine water sources.

The negative impact of clear-cutting to recreation and tourism areas has been a growing issue raised by local taxpayers. Yet local governments find themselves unable to make any impact whatsoever on harvesting decisions in these critical local economic and lifestyle resources.

Devastating spring freshet flood events such as occurred in 2017 and 2018 in the Okanagan and Grand Forks are driving massive costs onto local government. Scientific evidence confirms that extensive clear cutting within watersheds is a significant contributing factor to flood events.

Landscape-scale forest fires are also driving costs onto local taxpayers, yet once again local government have no say or role in ensuring forest harvest and management practices within their area are performed in a way that mitigates wildfire risk to local communities.

In summary, local governments are increasingly bearing the risks and costs of forestry activity, but have no regulatory power to ensure industry is not simply offloading their external costs onto local governments.

The Forest and Range Practices Act (FRPA) is currently being reviewed by the Forest Ministry. We ask that you, personally, apply pressure to the Ministry's involved and that you demand that changes to the Acts be made as follows:

1. Local governments are given the funding and authority to define critical local resources such as watersheds and recreation area, and in doing so ensure these areas are treated differently in legislation compared to "standard" timber supply areas.
2. Local governments have the funding and authority to become actively involved in long term land and resource planning, especially with respect to forest harvesting.
3. Local governments have the authority to influence, modify, and when necessary, prevent forest harvesting that demonstrably increases financial risk to local government
4. Local governments have the authority to influence, modify, and when necessary, prevent forest harvesting that will demonstrably degrade recreation and tourism resources within their area and that all Water sources be protected in perpetuity.

In addition, the Private Managed Forest Land Act requires equivalent amendments in order to protect cities and regional districts across the province where local watersheds are in private hands. Further, the Water Sustainability Act must be supported by regulations that allow for Local Governance of local watersheds. Financing must also be included in order that municipalities and Regional Districts can create committees to protect our drinking water watersheds.

In summary, it is not just our ancient forests that are being affected... It is ALL forests and ALL wildlife and ALL drinking water watersheds. We have attached many pictures of areas grossly affected by clear cut logging. It really must be stopped before there is nothing left for our children, our grandchildren or their children. This insanity must stop!

If you require any further information, please do not hesitate to contact either myself as Chair of VIWWC or BC Coalition for Forestry Reform.

Sincerely,

June Ross

Chair – Vancouver Island Water Watch Coalition

Editor – www.vancouverislandwaterwatchcoalition.ca

c.c

BCCFR

VIWWC- Core Group

FORESTRY

WHEREAS many areas in BC are experiencing clear-cutting in their community watersheds in an unsustainable manner; and

WHEREAS both the Private Managed forest Land Act and the Forest and Range Practices Acts have unsustainable logging allowed within them which must be amended to meet today's dwindling forest supply; and

WHEREAS encroachment on community watersheds is creating slides, floods, fires and damaged drinking water sources thereby offloading remedial efforts onto local governments:

THEREFORE the Forest and Range Practices Act, the Private Managed Forest Land Act and associated regulations and BCTS regulations MUST be amended to prevent clear-cut logging and that the allowable cutting be amended to meet with today's realities in terms of allowed cutting; and

FINALLY, all logging MUST be paused until such amendments to the Acts are completed and become enforceable.

WATERSHEDS

WHEREAS many areas in BC are experiencing clear-cutting in their community watersheds in an unsustainable manner; and

WHEREAS drinking water sources are being damaged to the extent that communities are forced to purchase water treatment facilities; and

WHEREAS the clear-cutting is destroying streams and creeks, many of which are where salmon want to spawn; and

WHEREAS wildlife is being taken to extinction levels;

THEREFORE all community watersheds MUST be designated, once again, as WATERSHED RESERVES that do not allow any industrial activity within their boundaries.

FINALLY, all logging MUST be paused until such watershed reserves are designated and become enforceable.

Watershed Destruction

Various Locations

Holland Lake



Comox lake



COMOX LAKE



COOK CREEK



MCLAUGHLIN RIDGE



MCLAUGHLIN RIDGE



MT. WASHINGTON - backside



NANAIMO WATERSHED AREA



YELLOWPOINT- prior to logging



YELLOWPOINT



YELLOWPOINT



OKANAGAN AREA



Delegation: Joanne Sales, Broombusters Invasive Plant Society, re Scotch Broom

Summary: Broombusters began in 2006 in Oceanside, working with MOTI in Coombs and the Town of Qualicum Beach. Twelve years later, municipalities from Campbell River to North Cowichan work with Broombusters each year. In 2018, over 500 volunteers cut broom for over 5000 hours on East Vancouver Island. Why?

Scotch broom is an aggressive, ALIEN invasive plant that:

- Spreads rapidly and densely - anywhere in the sun.
- Forms dense thickets - Crowds out native plants
- Leads to a dramatic loss of diversity
- Slows and prevents forest re-growth
- Highly flammable
- Toxic to grazing animals - Changes soil chemistry.
- Makes farmland useless.

Scotch broom does great harm to our local ecology, forestry, tourism, agriculture, and energy sectors. Broom quickly takes over areas that have been deforested. It spreads quickly onto agricultural land, especially on land owned by speculators and non-farmers.

FIRE DANGER: Of greatest concern is that high oil content of broom and abundant dead branches make broom highly flammable and increases the risk of wildfire. The Coastal Fire Centre and Terry Peters (Fire Chief Powell River) make it very clear:

Scotch broom is a volatile flash fuel that increases a wildfire's fuel load, increases the fire's intensity, and makes wildfires more difficult to predict and control.

Broom has spread without controls under BC Hydro utility corridors. The dangers of having broad yellow avenues of flammable broom stretch across the island cannot be underestimated.

We have photos from New Zealand of broom covered mountains. It can and does happen all over the world – simply by neglect. Scotch broom has been ignored for too long. Once upon a time we didn't know how bad it was – now we do. We want the RDN to be a leader in slowing the spread of this dangerous, noxious woody weed.

Action Requested: Broombusters request that the RDN consider some or all of the following steps.

We request that:

1. The RDN initiate and support efforts being made to control the spread of Scotch broom, including Broombusters, and other groups working in parks, green spaces, and cleared forest land.
2. The RDN implement immediate, clear and effective rules to slow the spread of Scotch broom. These rules should apply especially when forests and farm lands are cleared of trees, whether by forest industries, private forest managers, or private land owners. Ideas: Land should not be cleared until developers are ready to build. There should be fines or consequences for allowing land to be taken over by broom. The bottom line: Broom should no longer be allowed to spread onto any cleared land.
3. The utility corridors should be a fire break. Instead, the extensive coverage of broom on the BC Hydro transmission lines increases the danger of wildfire. The corridors have become an avenue for fire to travel across the island. We ask the RDN to require control of this fire hazard.
4. There should be regulations to prohibit broom from growing on or near all gravel pits, as the transportation of gravel to new locations spreads long living broom seeds.
5. Ineffective techniques of broom control have been used for decades, which have only made the spread of broom worse. Pulling, mowing, and poison do not work – because the spread of broom is caused by the seeds, not the roots. Broombusters has been successful in many areas and would like to have input about removal techniques.



Cedar Community Hall Association
2388 Cedar Road
Nanaimo, BC
V9X 1K3

September 7, 2018

Board of Directors
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, B.C.
V9T 6N2

Dear Directors:

Cedar Community Hall Association has been working on an accessibility project for the past year, and we are now requesting Community Works Funds to make our hall open to every community member.

The project began last winter when we recognized the state of our parking lot was a real barrier to anyone with mobility issues. (See attached photo.) From there, we began to address other accessibility issues, in particular the lack of a proper wheelchair ramp. Our main user groups—the Cedar Lions' Club, Yellow Point Drama Group, and attendees at community events such as weddings, celebrations of life, courses, and meetings—include a high proportion of seniors. Even more important, the hall is a designated emergency reception centre for this part of the RDN; easy access is essential for such a centre.

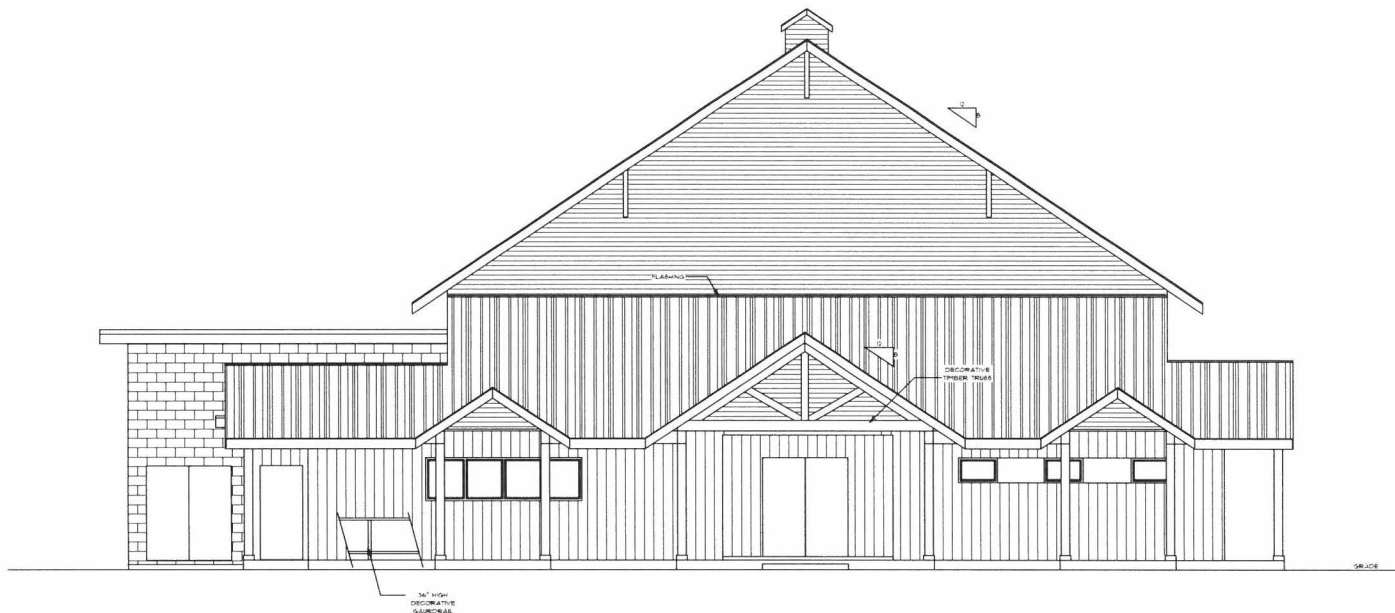
In the fall of 2018, Jack Anderson of Greenplan in Cedar kindly offered to draw up plans at cost for a new entry. (Please see the attached drawings.) We presented his ideas to the community at an event in May of 2018 and solicited feedback. Mr. Anderson incorporated those suggestions into his drawings. Armed with his design and an engineer's approval, we submitted the project to Brian Childs and Company Construction Ltd. for costing. (Please see attached estimate of \$219,240.) We are also attaching a quote of \$170,618 for paving the parking lot. Total estimated cost for the project is \$389,858.51. Of course, we will also solicit discounts and in-kind donations from local businesses as well as volunteer labour to keep costs to a minimum.

With a paved parking lot and a proper wheelchair ramp, Cedar Community Hall will become accessible to everyone in our community. Our board members and volunteers have put in countless hours over the years improving, maintaining, managing and renting the hall. The interior is now beginning to shine and reflect its status as a valued heritage building. With CWF funding, we are confident the exterior can be brought up to current standards.

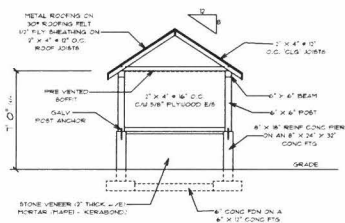
Area A Director Alec Mcpherson has been supportive throughout this process. We are now asking the RDN board to approve CWF funding for the needed improvements to our emergency reception centre and the gathering place for our community.

Sincerely,
Jim Fiddick
President, Cedar Community Hall Association

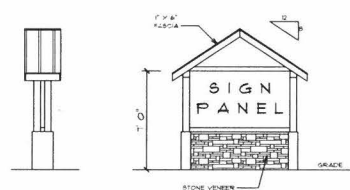




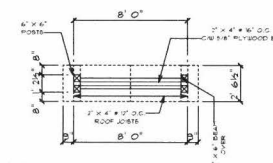
FRONT (WEST) ELEVATION
SCALE : 1/4" = 1' 0"



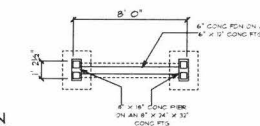
SIGN SECTION
SCALE : 1/4" = 1' 0"



SIGN ELEVATION
SCALE : 1/4" = 1' 0"



FLOOR PLAN
SCALE : 1/4" = 1' 0"



FDN PLAN
SCALE : 1/4" = 1' 0"

REVISION

CEDAR COMMUNITY HALL

Anderson Greenplan

1655 Cedar Road
Nanaimo, BC
(250) 722-3456
info@greenplan.ca

Designed: Drawn: Checked:

Date: 01 JUN 2018

Project: ITTH-CCH

Drawing #: ITTH-WD-0601-4

Scale: 1/4" = 1' 0"

Sheet Title: ELEVATIONS

Sheet #:

A-1 / 5



BRIAN CHILDS & CO.
CONSTRUCTION LTD.

GENERAL BUILDING CONTRACTORS

Box 331, Ladysmith BC V9G 1A3

Phone/Fax: 250.245.5090

E-mail: childsc@shaw.ca

Estimate

Sept./03/2018

To: Ted and Kate Girard

For: Exterior additions and renovations to Cedar Community Hall (as per plans supplied by Greenplan)

Includes the following:

-Set up -----	\$600.00
-Demolition -----	\$18,000.00
-Disposal -----	\$8,400.00
-Excavator, bobcat, misc. Equipment -----	\$6,000.00
-Footings, piers etc. -----	\$7,800.00
-Gravel, trucking -----	\$3,000.00
-Concrete patio with handicap ramp -----	\$14,400.00
-Cedar Post, beam, trusses, plywood etc. -----	\$24,000.00
-Metal roofing -----	\$12,000.00
-Gutters -----	\$1,800.00
-Wood soffits -----	\$6,000.00
-Aluminum railings -----	\$12,000.00
-Construction labour -----	\$36,000.00
-Sign -----	\$12,000.00
-Mechanical fasteners -----	\$2,400.00
-Electrical (move mast, tie in, sign etc.) -----	\$18,000.00
-Paint, stain -----	\$14,400.00
-Miscellaneous -----	\$12,000.00
Sub Total -----	\$208,800.00

Gst 5% ----- \$10,400.00

Total ----- \$219,240.00



Carson Sakundiak
Phone (780)832-2233
Fax (780)568-2654
2481-A Rosstown Rd
Nanaimo, Bc V9T 3R6
www.rocksapaving.com

DATE: July 9,2018

To: Jim Fiddick
Phone:

Regarding: Removal of Existing Ground & Install New Asphalt Parking Lot at Cedar Community Hall

Thank you for giving Rocksaw Paving Ltd. the opportunity to provide the following quote:

This quote includes:

- Mobilization of crew and equipment.
- Site survey for drainage to be determined.
- Excavation and haul away of 150mm(6in) average depth of existing waste material.
- Provide deliver and install filter cloth geo-textile for additional structural support
- Provide, deliver and Install 100mm(4in) compacted depth of 20mm crushed gravel base.
- Apply Tack Oil Coat at a rate of 1 liter per square meter as required
- Provide, deliver and Install 75mm(3in) compacted depth of ACP asphalt to maximum compacted density.
- Price Based on 81 square meters (872 Sq ft)

Total Price: \$ 5,520.⁵⁶

Price does not include GST & PST

Option 2: Entrance and area closest to hall based on 1,455 M² \$83,618.⁰⁵

Option 3: Whole parking lot including entrance based on 2,980 M² \$170,618.⁵¹

Concrete Pad: Based on 18 M² \$3,567.⁸⁶ -Note: in option 2 or 3 are accepted deduct \$2000 from of Concrete Pad

Culvert: Supply, deliver and install 12m of 900mm Sloped end culvert \$3,883.²¹

Note: Please Return Signed acceptance so we can schedule buried utilities to be marked.

Sincerely: Carson Sakundiak (Regional Manager)

A handwritten signature in black ink, appearing to read 'Carson Sakundiak', written over a horizontal line.

Rocksaw Paving Ltd. will Guarantee workmanship with a 1 year warranty.

This quote is valid for 30 days.

Payments will be due upon completion of work.

Don't forget to inquire about Seal Coat to protect your investment.Available for Pavement and Concrete

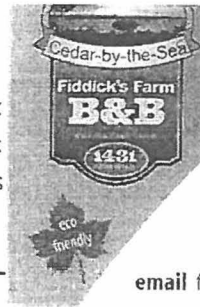
Accepted: _____

Date: _____



2481-A Rosstown Rd
Phone: (778) 268-2233
Fax: (780) 568-2654
www.rocksapaving.com

Customer:
Phone:
Address

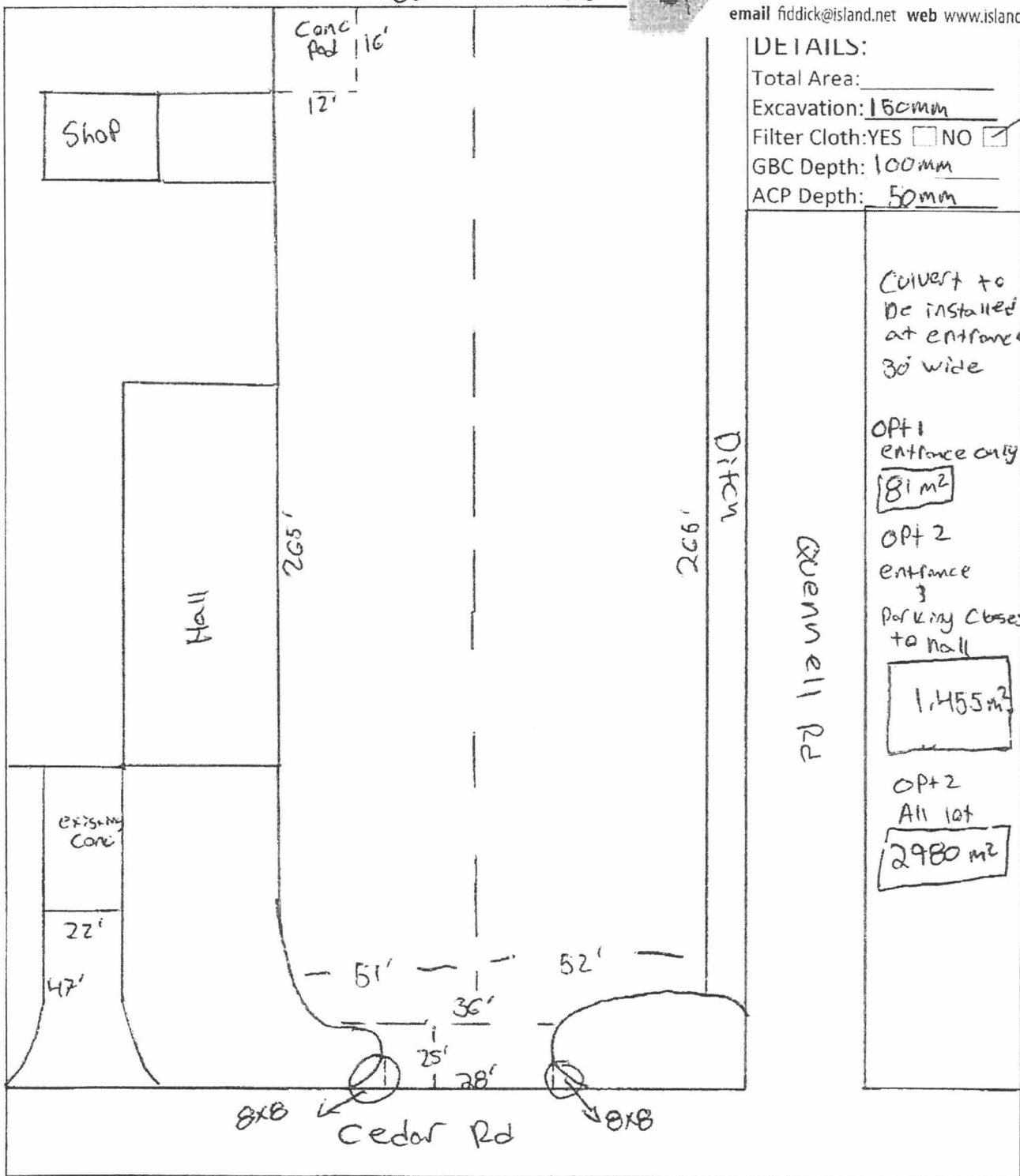


Fiddick's
Farm B&B

1431 Ivor
Cedar-by-the-Sea
Nanaimo, BC V9X 1

phone 250-722-2507 cell 250-751-5

email fiddick@island.net web www.island.net/~fidd



DETAILS:

Total Area: _____
Excavation: 150mm
Filter Cloth: YES ☐ NO ☒
GBC Depth: 100mm
ACP Depth: 50mm

Convert to
be installed
at entrance
30' wide

OPT 1
entrance only

81 m²

OPT 2
entrance

3
Parking closest
to hall

1,455 m²

OPT 2
All lot

2,980 m²

Drawing By:

Date:

July 5, 2018

**REGIONAL DISTRICT OF NANAIMO
MINUTES OF THE AGRICULTURAL ADVISORY COMMITTEE MEETING**

**Thursday, February 28, 2019
2:00 P.M.
Board Chambers**

In Attendance:	Director M. Young	Chair
	Director S. McLean	Electoral Area H
	Director J. Turley	City of Nanaimo
	J. Thony	Regional Agricultural Organization
	C. Brown	Regional Agricultural Organization
	K. Reid	Shellfish Aquaculture Organization
	G. Laird	Representative District 68
	R. Thompson	Representative District 69
	C. Watson	Representative District 69
Also in Attendance:	Director C. Gourlay	Electoral Area G
	P. Thompson	Mgr. Long Range Planning
	S. Syme	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

Agricultural Advisory Committee Meeting - December 7, 2018

It was moved and seconded that the minutes of the Agricultural Advisory Committee meeting held December 7, 2018, be adopted.

CARRIED UNANIMOUSLY

REPORTS

Request for Comment on Subdivision in the Agricultural Land Reserve Application No. PL2019-007 - 2452 Hemer Road, Electoral Area A

Rhonda Kulai, Owner, spoke in support of the application and answered questions from the Committee.

It was moved and seconded that the application for subdivision in the Agricultural Land Reserve Application No. PL2019-007 - 2452 Hemer Road, Electoral Area A, be forwarded to the Agricultural Land Commission with a recommendation to approve.

CARRIED UNANIMOUSLY

Request for Comment on Subdivision and Non-Farm Use in the Agricultural Land Reserve Application No. PL2019-009 - Doumont Road, Electoral Area C

Chair, Maureen Young, recused herself from the discussion and vote due to a perceived conflict of interest.

Agent Glen Carey of Glencar Consultants Inc. spoke in support of the application and answered questions from the Committee.

It was moved and seconded that the application for Subdivision and Non-Farm use in the Agricultural Land Reserve Application No. PL2019-009 - Doumont Road, Electoral Area C, be forwarded to the Agricultural Land Commission with a recommendation to deny.

Opposed (4): Director McLean, G. Laird, R. Thompson, and C. Watson

DEFEATED

Agricultural Land Commission Final Decisions Chart

There were no new decisions from the Agricultural Land Commission since the last Agricultural Advisory Committee meeting held on December 7, 2018.

NEW BUSINESS

Janet Thony provided a brief update on the Rusted Rake Farm Project and request for ALC to allow restaurant use in the ALR.

ADJOURNMENT

It was moved and seconded that the meeting be adjourned.

TIME: 3:05 PM

CARRIED UNANIMOUSLY

CHAIR

**REGIONAL DISTRICT OF NANAIMO
MINUTES OF THE DISTRICT 69 RECREATION COMMISSION MEETING**

**Thursday, February 21, 2019
2:00 P.M.
Oceanside Place**

In Attendance:	Commissioner S. McLean	RDN Board
	Commissioner L. Krofta	Electoral Area E
	Commissioner R. Nosworthy	Electoral Area F
	Commissioner R. White	Electoral Area G
	Commissioner L. Bucke	Electoral Area H
	Commissioner M. Chandler	City of Parksville
	Commissioner E. Young	School District 69 Trustee
Regrets:	Commissioner R. Filmer	Town of Qualicum Beach
Also in Attendance:	Director B. Rogers	Electoral Area E Director
	Director C. Gourlay	Electoral Area G Director
	Director A. Fras	City of Parksville
	T. Osborne	Gen. Mgr. Recreation and Park Services
	D. Banman	Mgr. Recreation Services
	H. King	Superintendent, Recreation Services
	M. Chestnut	Superintendent, Aquatic Services
	J. Marcellus	Superintendent, Arena Services
	A. Harvey	Recording Secretary

CALL TO ORDER

D. Banman chaired the meeting until a Chair was elected.

D. Banman 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

INTRODUCTIONS

Commissioner and staff introductions were made around the table for the newly appointed Commissioners.

ELECTION OF CHAIR & DEPUTY CHAIR

Commissioner Nosworthy nominated Commissioner Young for Chair. Commissioner Young declined the nomination.

Commissioner McLean nominated Commissioner Nosworthy for Chair. Commissioner Nosworthy declined the nomination.

Commissioner Young nominated Commissioner Chandler for Chair. Commissioner Chandler declined the nomination.

Commissioner Nosworthy nominated Commissioner McLean for Chair. Commissioner McLean accepted the nomination.

With no other nominations, Commissioner McLean was acclaimed Chair.

Commissioner Nosworthy nominated Commissioner Bucke for Deputy Chair. Commissioner Bucke accepted the nomination.

With no other nominations, Commissioner Bucke was acclaimed Deputy Chair.

DELEGATIONS

G. Bickerton, Oceanside Generals Junior B Society, re: Introduction between Oceanside Generals & RDN

G. Bickerton introduced himself and described some of the community initiatives the Oceanside Generals are a part of. He mentioned some possible future (team dressing room) projects with Oceanside Place.

Commissioner Chandler left the meeting - 2:25pm

ORIENTATION

D. Banman reviewed some orientation slides to summarize the Recreation and Parks Department as it pertains to the D69 Recreation Commission.

T. Osborne updated the Commission of the Board's resolution to receive the Oceanside Recreation and Sport Infrastructure Sub-Committee Report. The Commissioners had a discussion and it was suggested to bring the topic of the Infrastructure report to New Business for discussion so that the agenda could proceed.

INVITED PRESENTATIONS

D. Cooper, Physical Literacy and Play Oceanside Initiative Presentation

D. Cooper gave a presentation about Physical Literacy and Play Oceanside initiatives. He answered questions from the Commissioners.

ADOPTION OF MINUTES

District 69 Recreation Commission Meeting - October 18, 2018

It was moved and seconded that the minutes of the District 69 Recreation Commission meeting held October 18, 2018, be adopted.

CARRIED UNANIMOUSLY

ELECTION OF D69 GRANT SUB-COMMITTEE (3 members)

Commissioner Krofta nominated Commissioner Nosworthy for the D69 Recreation Commission Grant Sub-committee. Commissioner Nosworthy declined.

Commissioner Nosworthy nominated Commissioner Young for the D69 Recreation Commission Grant Sub-committee. Commissioner Young accepted.

Commissioner Young nominated Commissioner Bucke for the D69 Recreation Grant Commission Sub-committee. Commissioner Bucke accepted.

Commissioner Nosworthy nominated Commissioner Krofta for the D69 Recreation Commission Sub-committee. Commissioner Nosworthy accepted.

With no other nominations, Commissioners Young, Bucke and Krofta were acclaimed to the D69 Recreation Commission Grant Sub-Committee.

ELECTION OF D69 FEES & CHARGES SUB-COMMITTEE (3 members)

Commissioner Krofta nominated Commissioner White for the D69 Fees and Charges Sub-Committee. Commissioner White declined.

Commissioner Krofta nominated Commissioner McLean for the D69 Fees and Charges Sub-Committee. Commissioner McLean accepted.

Commissioner McLean nominated Commissioner Krofta for the D69 Fees and Charges Sub-Committee. Commissioner Krofta declined.

There were no other nominations or volunteers. Commissioner McLean was acclaimed to the Sub-Committee and Mr. Osborne suggested inviting the Commissioners who were unable to attend this meeting to express their interest in sitting on the D69 Fees and Charges Sub-Committee and staff will report back.

CORRESPONDENCE

It was moved and seconded that the following correspondence be received for information:

W. Veenhof, RDN Chair, re: Rx for Health Program Funding Request

I. Thorpe, RDN Chair, re: Letter of Support for Qualicum Beach Community Park Upgrade

CARRIED UNANIMOUSLY

COMMITTEE MINUTES AND RECOMMENDATIONS

District 69 Grants Sub-Committee Meeting - February 6, 2019

It was moved and seconded that the following District 69 Youth Recreation Grant applications be approved:

- Bowser Elementary School - spring field trip - \$2,500
- Arrowsmith Community Recreation Association - Youth Week events - \$461
- Mid-Island Distance Youth Running Club - equipment purchase - \$1,054
- Errington War Memorial Hall Association - World Music Youth Camp - \$1,000
- Oceanside Community Arts Council - summer school creative art supplies - \$1,000
- Ravensong Aquatic Club – equipment - \$1,275
- Errington Elementary School - field coach equipment - \$2,219

Total - \$9,509

CARRIED UNANIMOUSLY

It was moved and seconded that the following District 69 Community Recreation Grant applications be approved:

- Errington Elementary School - Grade 3 swim program - \$1,675
- Forward House Community Society - program costs - \$2,215
- Bow Horn Community Club – fall fair - \$2,500
- Qualicum Beach Weavers & Spinners Guild - materials, promotions, meeting space - \$2,000
- Parksville Golden Oldies Sports Association - meeting space - \$800
- Oceanside Building Learning Together Society - Dad's night out - \$650
- Town of Qualicum Beach - Beach Day event - \$1,000
- Bowser Tennis Club – repair court surface, purchase ball machine - \$2,253
- Arrowsmith Community Recreation Association - Country Picnic event supplies - \$1,250
- Parksville Curling Club- LED lighting upgrade project - \$2,000
- Canadian Paraplegic Association (BC) - Spinal Cord Injury BC event equipment rental - \$1,000

Total - \$17,343

CARRIED UNANIMOUSLY

REPORTS

Parks Update Report – October-December 2018

Mr. Osborne gave a summary of the Parks projects in the District 69 area for the Commission's information.

It was moved and seconded that the Parks Update Report – October-December 2018 be received as information.

CARRIED UNANIMOUSLY

NEW BUSINESS

BC Recreation and Parks Association Symposium - May 1-3, 2019

Mr. Banman told the Commission members about the BC Recreation and Parks Association Symposium and 2 members from the Commission are invited to attend. He requested that any Commissioners that are interested in attending May 1-3 to let staff know. Commissioner Bucke and Commissioner Krofta indicated their interest. An email to the members not in attendance will be sent and 2 attendees will be determined.

Recreation Infrastructure

It was moved and seconded that the Recreation Commission strongly recommend that the RDN Board reverse its decision to defer funding for the Multiplex, Ravensong Aquatic Centre and the Ballenas Track and ensure funding for those projects is re-established in the current budget.

This motion was withdrawn with the consent of the assembly.

It was moved and seconded that the Board proceed with the original recommendations of the Oceanside Recreation and Sport Infrastructure Sub-Committee Report without delay.

CARRIED UNANIMOUSLY

ADJOURNMENT

It was moved that the meeting be adjourned.

TIME: 4:05pm

CHAIR

REGIONAL DISTRICT OF NANAIMO

**MINUTES OF THE DRINKING WATER AND WATERSHED PROTECTION TECHNICAL
ADVISORY COMMITTEE MEETING**

Thursday, February 14, 2019

12:30 P.M.

Board Chambers

In Attendance:	R. Alexander	Chair
	L. Cake	Water Purveyors (Coastal Water Suppliers Assoc.)
	K. Epps	Forest Industry Representative
	A. Fiddick	Environment Community Representative
	P. Jorgenson	Forest Industry Representative
	P. Lapcevic	BC Ministry of Forests, Lands & Natural Resource Ops.
	L. Magee	Island Health
	K. Miller	Cowichan Valley Regional District
	H. Rueggeberg	General Public Representative (South)
	W. Shulba	Islands Trust Representative
	B. Weir	Municipal Representative (Town of Qualicum Beach)
	C. Cole	General Public Representative (North)
	R. Barlak	BC Ministry of Environment
	M. Squire	City of Nanaimo
Regrets:	O. Brandes	Academic Community Representative (POLIS)
	A. Gilchrist	Academic Community Representative (VIU)
	N. Leone	Department of Fisheries and Oceans
	B. Silenieks	Municipal Representative (City of Parksville)
	F. Spears	Municipal Representative (District of Lantzville)
	G. Wendling	Hydrogeologist Representative
	K. Fagervik	Ministry of Transport & Infrastructure
Also in Attendance:	J. McCallum	Regional District of Nanaimo
	J. Pisani	Regional District of Nanaimo
	L. Fegan	Regional District of Nanaimo
	C. Brugge	Regional District of Nanaimo

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

Drinking Water and Watershed Protection Technical Advisory Committee Meeting - October 25, 2018

It was moved and seconded that the minutes of the Drinking Water and Watershed Protection Technical Advisory Committee meeting held October 25, 2018 be adopted.

CARRIED UNANIMOUSLY

BUSINESS ARISING FROM MINUTES

J. Pisani updated the Committee that the Surface Water Quality Trend Report that was presented last meeting has been received by the Board, and staff were recommended to present findings to municipal councils for information. The schedule is as follows:

-Town of Qualicum Beach Jan. 30, 2019

-District of Lantzville Feb. 4, 2019

-City of Nanaimo Mar. 4, 2019

-City of Parksville Mar. 18, 2019

-2018 Results Session & Trend Analysis Presentation for Volunteers Mar. 27, 2019 Parksville

REPORTS / PRESENTATIONS

Roundtable Updates

Committee members provided roundtable updates on current activities.

Area F OCP Update Support - Water Quality Risk Assessment project planning

J. Pisani introduced Area F Official Community Plan (OCP) Update as an upcoming project in 2019 where DWWP will be providing support to the Planning department. The Committee provided guidance on what to consider when scoping a Water Quality Risk Assessment for the Area to inform the OCP.

Water to Earth Month & Parksville Water Stewardship Symposium - Event Announcements

J. McCallum presented the event list for the upcoming Water to Earth month series of outreach activities through March and April. This included Parksville Water Stewardship Symposium April 2-4th. The Committee was presented with copies of the Water to Earth Month poster to assist in promoting the activities.

DWWP Action Plan Update 2019 input on Project Charter including engagement plan

J. Pisani introduced the Drinking Water and Watershed Protection Action Plan Update Project for 2019 and presented a draft Project Charter and Engagement Strategy for Committee input. The Committee provided suggestions, guidance and support for this milestone project.

NEW BUSINESS

Next meeting date April 25th will be an interactive session for the Committee to contribute to the issue identification and idea generation stage of the DWWP Action Plan Update.

ADJOURNMENT

It was moved and seconded that the meeting be adjourned.

CARRIED UNANIMOUSLY

TIME: 3:00 PM

CHAIR

DRAFT



**REGIONAL
DISTRICT
OF NANAIMO**

STRATEGIC PLAN 2019-2022

ABOUT THE REGIONAL DISTRICT OF NANAIMO

The Regional District of Nanaimo (RDN) is situated within the traditional territory of several First Nations, including three that have reserves within the region: Snuneymuxw, Snaw-Naw-As and Qualicum. The Board recognizes the rich cultural history of these First Nations, and is committed to developing positive working relationships to the benefit of all residents of the region.

As a local government, the RDN is a regional federation of four municipalities and seven electoral areas, with an estimated population of approximately 160,000 (2017). The four municipalities are: the City of Nanaimo, the City of Parksville, the Town of Qualicum Beach, and the District of Lantzville. The electoral areas are as follows:

Electoral Area A: Cedar, South Wellington, Yellowpoint, Cassidy

Electoral Area B: Gabriola, Decourcy, Mudge Islands

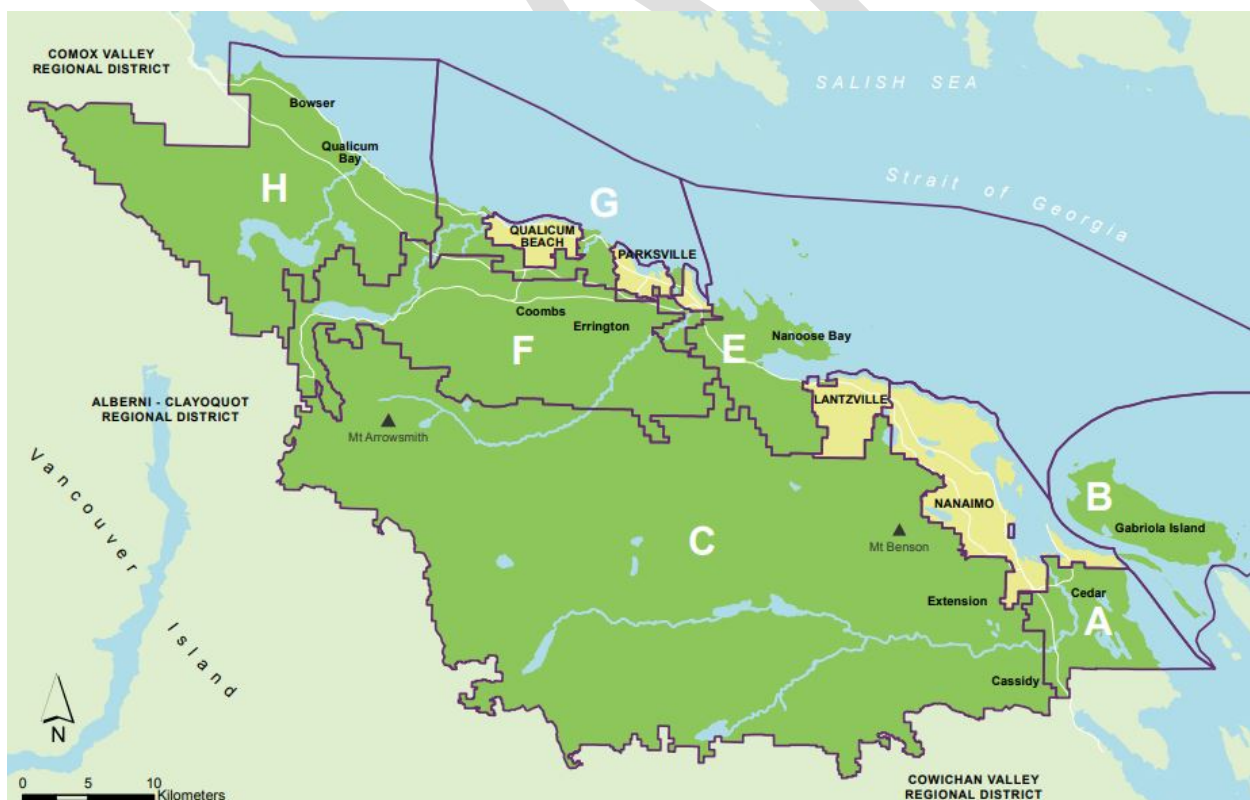
Electoral Area C: Extension, Nanaimo Lakes, East Wellington, Pleasant Valley

Electoral Area E: Nanoose Bay

Electoral Area F: Coombs, Hilliers, Errington, Whiskey Creek, Meadowood

Electoral Area G: French Creek, San Pareil, Little Qualicum

Electoral Area H: Bowser, Qualicum Bay, Deep Bay



PURPOSE OF THE STRATEGIC PLAN

The purpose of this Strategic Plan is to express the **vision** and set the **priorities** of the Board of Directors for their 2019-2022 term. The plan also looks beyond the current term to advance the long-term vision of the Regional District of Nanaimo to become a healthy, resilient and sustainable region.

In early 2019, through a series of workshops, the Board identified various challenges and opportunities facing the region. The Board then outlined a series of objectives (grouped by themes) and associated action items to achieve those objectives.

The Strategic Plan is the highest-level plan for the Board, providing guidance to the elected officials as they make policy and regulatory decisions, as well as direction to staff as they deliver plans, projects, and services to residents. Continuous monitoring of the objectives as well as annual review and reporting will ensure that progress is being made in achieving the various goals outlined in the Plan.

VISION

“The Regional District of Nanaimo honours and protects its natural assets, respects its diverse communities, and promotes and enhances the wellbeing of all its residents”

MISSION

We serve the public by providing effective governance and delivery of services to residents in communities throughout the Region, based on mutual respect and a common understanding of local needs and priorities.

VALUES

The Regional District of Nanaimo will make thoughtful and well-informed decisions and provide important services to its residents based on the following values and guiding principles:

- Respect
- Fiscal Responsibility
- Meaningful Engagement
- Collaboration and Relationships
- Good Governance
- Reconciliation

KEY STRATEGIC AREAS

Based on the working sessions with the Directors in early 2019, a number of Key Strategic Areas were identified, with a goal statement associated with each theme. The following pages provide further details for each Key Strategic Area, with a series of actions and timelines under each heading.

- **Climate Change** – be leaders in climate change adaptation and mitigation, and become Net Zero by 2032.
- **Environmental Stewardship** – protect and enhance the natural environment for future generations.
- **Housing** – provide affordable and supportive housing for residents.
- **Growth Management** – provide effective regional land use planning and responsible asset management for both physical infrastructure and natural assets.
- **Transportation and Transit** – provide opportunities for residents to move effectively through and around the Region.
- **Economic Coordination** – set the table to enable diverse economic opportunities across the Region.
- **People and Partnerships** – improve the governance and awareness of RDN activities for citizens throughout the Region.
- **Social Well-Being** – make the Region a safe and vibrant place for all.



1.0 Climate Change

Goal: Be leaders in climate change adaptation and mitigation, and become net zero by 2032.

Actions	Timeline
1.1 Strike a Technical Advisory Committee on climate change strategy	2019
1.2 Review and update corporate emissions plan and greenhouse gas (GHG) reduction strategy	2020
1.3 Develop a regional strategy for electric vehicle charging	2020
1.4 Complete a Net Zero strategy for building efficiency and localized energy generation	2022



2.0 Environmental Stewardship

Goal: Protect and enhance the natural environment for future generations.

Actions	Timeline
2.1 Identify lands to protect and acquire for environmental preservation and parkland	2019
2.2 Update the Drinking Water and Watershed Protection Program Action Plan	2019
2.3 Achieve the 90% waste diversion target as per Solid Waste Management Plan	2022+
2.4 Continue to improve the quality of treated wastewater in the Region	2022+



3.0 Housing

Goal: Provide affordable and supportive housing for residents.

Actions	Timeline
3.1 Advocate for additional funding support for housing from senior governments	2019
3.2 Develop a Regional Housing Strategy, including support/tools for affordable housing	2019-20
3.3 Advocate for alternative regulations in the BC Building Code to support innovation	2020



4.0 Growth Management

Goal: Provide effective regional land use planning and responsible asset management for both physical infrastructure and natural assets.

Actions

- 4.1 Protect agricultural lands and promote agriculture and food production in the Region
- 4.2 Fully develop our Asset Management Plan
- 4.3 Conduct a full review of the Regional Growth Strategy

Timeline

2019
2019-20
2020-21



5.0 Transportation and Transit

Goal: Provide opportunities for residents to move effectively through and around the Region.

Action	Timeline
5.1 Enhance dialogue with the Ministry of Transportation & Infrastructure (MOTI) for on- and off-road pedestrian and active transportation improvements	2019
5.2 Develop a Regional Transportation Plan, considering all modes of travel	2020
5.3 Work with BC Transit to expand transit service (e.g. transit hours) to connect important community hubs	2020
5.4 Develop an active transportation network linking the Regional Districts in central Vancouver Island (e.g. Regional Districts of Nanaimo, Cowichan Valley, Comox Valley, Alberni-Clayoquot)	2022+



6.0 Economic Coordination

Goal: Set the table to enable diverse economic opportunities across the Region.

Actions	Timeline
6.1 Develop a Regional Economic Development Strategy that addresses both overall regional goals as well as those of the municipal partners and electoral areas	2019
6.2 Establish a staff position (e.g. Regional Economic Development Coordinator) to coordinate business development and retention throughout the Region	2020



7.0 People and Partnerships

Goal: Improve the governance and awareness of RDN activities for citizens throughout the Region.

Actions	Timeline
7.1 Explore webcasting and/or live-streaming of RDN Committee and Board meetings	2019
7.2 Explore the potential need for a Grant Coordinator, in order to maximize current and future funding opportunities	2019
7.3 Develop a Communications Strategy to improve and enhance community engagement and public outreach	2020
7.4 Continue to build and enhance relationships with First Nations based on the specific needs of each community's leaders	Ongoing



8.0 Social Wellbeing

Goal: Make the Region a safe and vibrant place for all.

Actions	Timeline
8.1 Update the Parks and Trails Master Plan, including funding options for parkland acquisition and development	2019-20
8.2 Prepare a Social Needs Assessment study, which identifies the broad range of social service providers at the local level, and develop a strategy to identify the RDN's role where appropriate	2020



COMMUNITY ENGAGEMENT (to be amended based on public input)

Even at this high level, the Draft Strategic Plan has identified 26 potential action items for consideration and completion within this Board's current term (i.e. by 2022). Furthermore, many of the action items will have multiple sub-tasks associated with them, once they are reviewed in greater detail.

Upon review of the Draft Strategic Plan by the RDN Board of Directors, a period of public engagement will take place in March-April 2019, in order to obtain feedback from the community on the Key Strategic Areas, Goals, and Actions over the next four years. Some of the community's priorities may not align directly with those which have been identified to date. The Board will have an opportunity to revisit the Key Strategic Areas and Actions based on feedback from the community, prior to adoption of the Strategic Plan.

MOVING FORWARD

Once the Strategic Plan has been approved by the Board, it becomes a "road map" over the next four years. The stated priorities of the Board should come to light during the annual budgeting process, which are then aligned with the Operational Plans of each RDN department.

Recognizing our dynamic environment, the RDN Board will annually review and confirm the direction of the Strategic Plan and resources required for implementation.

TO: Committee of the Whole **MEETING:** March 12, 2019

FROM: Geoff Garbutt
General Manager of Strategic and
Community Development **FILE:** 1025-01 AM

SUBJECT: 2019 Asset Management Review and Implementation Report

RECOMMENDATIONS

That the Board receive the Regional District of Nanaimo 2019 Asset Management Review and Implementation Report.

SUMMARY

The Regional District of Nanaimo (RDN) 2019 Asset Management Review and Implementation Report (Attachment 1) is the culmination of three years of collaborative effort involving all departments responsible for management of all RDN-owned assets, excluding non-physical and natural assets.

The Asset Management Review and Implementation Report (the Review) is divided into three sections with Section 1 providing an overview of asset management in the RDN, Section 2 provides an overview of the current state of assets owned by the RDN in the form of comprehensive Asset Snapshots, and Section 3 outlines the implementation framework to further advance asset management practices at the RDN.

As outlined in Section 3 of the Review, the key immediate tasks necessary to move forward with implementation of the asset management framework and further strengthen and integrate asset management practices across the RDN are:

- Complete Comprehensive Replacement Cost Study funded through a grant from the Provincial Strategic Priorities
- Continue program coordination through the RDN Asset Management Working Group;
- Initiate a formal Condition Assessment Framework; and
- Further invest in staff training and development.

Regular updates and revisions are part of the continuous improvement process required to maintain the currency of the Review document and the Asset Snapshots will be updated on a regular basis to support service delivery and financial planning.

DISCUSSION

While this Asset Management Review is the first report of its kind undertaken by the RDN, the organization has responsibly and effectively managed assets since its creation in 1967. One of

the fundamental purposes of regional districts is to provide services best delivered on a collaborative basis, across jurisdictions, on large scale, and beyond the financial ability of individual municipalities or electoral areas. However, asset management within the RDN has historically fallen to individual departments or service areas, often operating in isolation, resulting in varying levels of maturity in asset management practices across the organization. An important part of the RDN Asset Management Program is to eliminate departmental isolation, and build a consistent organization-wide program.

In 2016, the Board adopted the RDN Asset Management Policy (the Policy) (Attachment 2) to establish an organization-wide approach to managing assets, reach the optimal service lives of assets, and fully enable asset renewal and replacement. The Asset Management Working Group (the Working Group) formed alongside the Policy. Together, the Policy and the Working Group form the RDN Asset Management Program (the Program).

Sequentially, in formal documentation of the Program activities to date, the purpose of the Review is to:

- Document current asset management practices across the full range of departments responsible for infrastructure in the RDN;
- Provide a high level overview of the state the infrastructure assets owned and managed by the RDN; and
- Outline an implementation framework to continue best practices in asset management.

Asset Management Program Goals

Beginning in late 2015, the RDN began the process of developing a more integrated, holistic approach to asset management. The three key goals for RDN's Asset Management Program are to:

- Manage assets in a consistent fashion across the RDN, allowing for greater stability in financial and capital planning;
- Guide decision-making regarding investment in assets, based on full lifecycle costs (maintenance and asset investment is based on informed decision-making); and
- Enhance inter-departmental and inter-jurisdictional collaboration on projects that involve asset management.

Fulfilling these goals will formalize the RDN's asset management practices across the organization, laying the foundation for more advanced asset management practices in all departments. The RDN's first corporate-wide Review will result in a more consistent, cohesive approach to defining, costing, and forecasting service delivery options for the RDN and ensure that infrastructure and service delivery decisions are being made with an understanding of long-term cost implications.

Current State of RDN Assets

In Section 2 of the Review, an overview of asset management practices is provided for each department responsible for the management of infrastructure assets.

The department reviews have been guided by the Asset Management British Columbia's (AMBC) Roadmap. The Roadmap is a tool developed by AMBC to guide organizations in the Province toward increasing maturity in asset management practices. As is shown below, the Roadmap is organized around six primary building blocks, which are further defined by modules that are required for basic level asset management. The six modules provide the framework for examine current asset management practices, as well as identifying gaps in current practices.



Following each departmental overview are Asset Snapshots for each service area dependent on infrastructure assets. These are essential, two-page summaries of the current-state-of-the-assets for each relevant department in the RDN.

The key information in each Snapshot includes level of service, current replacement costs, total replacement value, lifecycle period, average useful life of all assets in the service and average annual replacement costs for the service area. The snapshots also compare planned capital investment against average annual replacement cost over a five year period to illustrate whether annual capital expenditures align with lifecycle replacement costs. The Snapshots conclude with an assessment of asset condition based on age.

Of particular importance, the Review shows, for the first time, the total current replacement value for all RDN assets. As shown below, the current replacement value for all RDN assets totals almost \$382,000,000 (2017 dollars). These values will be updated later in 2019 through a Comprehensive Replacement Cost Study.

Service Area (or Department)	Total Asset Replacement Value (2017)
Southern Communities Wastewater Service Area	\$ 111,300,000
Northern Communities Wastewater Service Area	\$ 53,400,000
Nanoose Bay Peninsula Water Service Area	\$ 42,600,000
Oceanside Place Arena	\$ 25,000,000
Fairwinds Sewer/Nanoose Bay Pollution Control Centre	\$ 14,200,000
French Creek Sewer Service Area	\$ 13,500,000
Ravensong Aquatic Centre	\$ 12,000,000
Transportation Administration Building	\$ 11,500,000
Main Administration Building	\$ 9,700,000
Cedar Road Landfill	\$ 8,300,000
Duke Point Wastewater Service	\$ 7,500,000
District 69 Arena (Parksville Curling Club)	\$ 7,300,000
Nanoose Bay Fire Service Area	\$ 7,200,000
Church Road Transfer Centre	\$ 6,800,000
Englishman River Water Service Area	\$ 5,700,000
Errington Fire Service Area	\$ 5,000,000
French Creek Water Service Area	\$ 4,700,000
Dashwood Fire Service Area	\$ 4,700,000
San Pareil Water Service Area	\$ 4,400,000
Coombs Hilliers Fire Service Area	\$ 4,200,000
Bow Horn Bay Fire Service Area	\$ 3,600,000
Corporate Vehicle Fleet	\$ 2,300,000
Whiskey Creek Water Service Area	\$ 2,100,000
Streetlighting Service Areas	\$ 2,100,000
Extension Fire Service Area	\$ 2,100,000
Cassidy Waterloo Fire Service Area	\$ 2,000,000
Barclay Crescent Sewer Service Area	\$ 1,800,000
Information Technology Infrastructure	\$ 1,600,000
Cedar Sewer Service Area	\$ 1,200,000
Melrose Terrace Water Service Area	\$ 1,100,000
Decourcey Water Service Area	\$ 1,050,000
Surfside Water Service Area	\$ 688,000
Surfside Sewer Service Area	\$ 634,000
Emergency Planning Services	\$ 350,000
Wharves	\$ 325,000
Total	\$ 381,947,000

Next Steps for Asset Management

Section 3 of the Review is the Asset Management Implementation Framework, which is comprised of four components:

- Completion of a Comprehensive Replacement Cost Study;
- Initiation of a formal Condition Assessment Framework,
- Continued interdepartmental collaboration through the RDN Asset Management Working Group; and
- Organizational capacity building in asset management through training and development.

The primary activity planned for the coming year is to complete a Comprehensive Replacement Cost Study. This work will be undertaken through a \$150,000 grant from the Provincial Strategic Priorities Fund, and is intended to result in a regional replacement cost database informed by actual construction prices and accurate cost data into the future. This information will be added to the Asset Snapshots and be a critical tool in the development and implementation of the financial planning required to manage RDN assets in accordance with the Asset Management Policy and the Asset Management BC Roadmap.

ALTERNATIVES

1. That the Board receive the 2019 Asset Management Review and Implementation Report.
2. That the Board provide alternate direction to staff.

FINANCIAL IMPLICATIONS

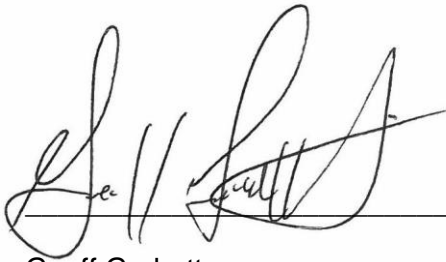
The development of the 2019 Asset Management Review and implementation activities is accounted for in the 2019 Approved Budget for Strategic Initiatives. Activities related to implementation will be coordinated and rolled out with the support of the Asset Management Working group and operationalized through each department responsible for managing assets, as departmental capital and operational expenditures.

The larger financial implications will arise as the organization shifts capital planning based on full lifecycle costs, generally from five years to a minimum of 20 years. This will involve verifying and aligning targets for planned capital expenditures (including contributions to capital reserves) to average annual replacement cost based on up-to-date current replacement costs and service area lifecycle periods. Such an approach will be brought in incrementally over time to minimize the potential financial impact to residents, and include significant outreach and engagement to ensure residents are informed about the true costs of infrastructure ownership.

STRATEGIC PLAN IMPLICATIONS

Focus On Service And Organizational Excellence - We Will Fund Infrastructure In Support Of Our Core Services Employing An Asset Management Focus

The completion of the 2019 Asset Management Review and Implementation Report represents a major milestone for the RDN asset management program, and is a key tool for advancing the strategic priority to fund infrastructure employing an asset management focus.



Geoff Garbutt
ggarbutt@rdn.bc.ca
March 5, 2019

Reviewed by:

- G. Garbutt, General Manager, Strategic and Community Planning and Acting Chief Administrative Officer

Attachments:

1. 2019 Asset Management Review and Implementation Report
2. Policy A2-21 Asset Management Policy (April 2016)



2019

Asset Management Review and Implementation Report

Version 2019.01
March 7, 2019



REGIONAL DISTRICT OF NANAIMO: Asset Management Review and Implementation Report

Version 2019.1

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1 INTRODUCTION

1.1 Background

While this is the first document of this kind generated by the RDN, the RDN has responsibly and effectively managed assets for more than fifty years. The focus within asset management on integration, sustainability, and whole lifecycle optimization, however, has only more recently gained traction.

As the region has grown and flourished, a diverse portfolio of assets has been established to support services that deliver a high quality of life to residents of the region, including parks, recreational opportunities, drinking water, waste water processing, solid waste collection and disposal, transportation services, and emergency planning. If these service areas had to replace their assets today, it would cost an estimated \$382,000,000.

These assets are part of interrelated networks that require significant resources to be operated throughout their lifecycles, ensuring that they are maintained, monitoring their performance, and eventually replacing and disposing of them. By applying the principles of effective asset management, the RDN will get the most value from these significant investments in terms of ensuring levels of service and minimizing risks.

1.2 Purpose

The purpose of this Asset Management Review and Implementation Report (Review) is to:

- Document current asset management (AM) practices across the full range of departments responsible for infrastructure in the Regional District of Nanaimo (RDN);
- Provide a high level overview of the state the infrastructure assets owned and managed by the RDN; and
- Outline an implementation framework to continue best practices in asset management.

1.3 Goals

The three key goals for RDN's Asset Management program are to:

- Manage assets in a consistent fashion, to support financial and capital planning;
- Guide maintenance and asset investment is based on informed decision-making; and
- Enhance inter-departmental and inter-jurisdictional collaboration on projects that involve AM.

Fulfilling these goals will formalize the RDN's asset management practices across the organization, laying the foundation for more advanced asset management practices in all departments. The RDN's first corporate-wide Review will result in a more consistent, cohesive approach to defining, costing, and forecasting service delivery options for the RDN and ensure that infrastructure and service delivery decisions are being made with an understanding of long-term cost implications.

1.4 AMBC Roadmap

This Review and the broader Asset Management Program are guided by the Asset Management BC Roadmap (Roadmap), developed by Asset Management British Columbia (AMBC). The Roadmap is a

simple model designed to assist in the implementation of best asset management practices. The Roadmap consists of six building blocks, as illustrated below in Figure 1.1.



Figure 1.1 - Asset Management BC Roadmap: Building Blocks

Each of the Roadmap's building blocks are further defined by modules that are required for basic level asset management; the Roadmap building blocks and modules are illustrated in Figure 1.2. For this Review, the objective is to complete all modules of the Roadmap to achieve a basic level of asset management across the organization. Initial efforts have focussed on building asset inventories and understanding the current levels of asset investment. In turn, this information forms the basis of the individual Asset Snapshots included as Sections 3 to 10 in this Review.



Figure 1.2 - Asset Management BC Roadmap: Modules Required for Basic Level Asset Management



1.5 Assets Included

This asset review is intended to include all assets; however some asset groups and service areas are lacking data. Where data is lacking, or if there is a lower confidence level in the information available, this has been noted. The following service areas that support the RDN's core services are included in this Review:

Service Area (or Department)	Total Asset Replacement Value (2017)
Southern Communities Wastewater Service Area	\$ 111,300,000
Northern Communities Wastewater Service Area	\$ 53,400,000
Nanoose Bay Peninsula Water Service Area	\$ 42,600,000
Oceanside Place Arena	\$ 25,000,000
Fairwinds Sewer/Nanoose Bay Pollution Control Centre	\$ 14,200,000
French Creek Sewer Service Area	\$ 13,500,000
Ravensong Aquatic Centre	\$ 12,000,000
Transportation Administration Building	\$ 11,500,000
Main Administration Building	\$ 9,700,000
Cedar Road Landfill	\$ 8,300,000
Duke Point Wastewater Service	\$ 7,500,000
District 69 Arena (Parksville Curling Club)	\$ 7,300,000
Nanoose Bay Fire Service Area	\$ 7,200,000
Church Road Transfer Centre	\$ 6,800,000
Englishman River Water Service Area	\$ 5,700,000
Errington Fire Service Area	\$ 5,000,000
French Creek Water Service Area	\$ 4,700,000
Dashwood Fire Service Area	\$ 4,700,000
San Pareil Water Service Area	\$ 4,400,000
Coombs Hilliers Fire Service Area	\$ 4,200,000
Bow Horn Bay Fire Service Area	\$ 3,600,000
Corporate Vehicle Fleet	\$ 2,300,000
Whiskey Creek Water Service Area	\$ 2,100,000
Streetlighting Service Areas	\$ 2,100,000
Extension Fire Service Area	\$ 2,100,000
Cassidy Waterloo Fire Service Area	\$ 2,000,000
Barclay Crescent Sewer Service Area	\$ 1,800,000
Information Technology Infrastructure	\$ 1,600,000
Cedar Sewer Service Area	\$ 1,200,000
Melrose Terrace Water Service Area	\$ 1,100,000
Decourcey Water Service Area	\$ 1,050,000
Surfside Water Service Area	\$ 688,000
Surfside Sewer Service Area	\$ 634,000
Emergency Planning Services	\$ 350,000
Wharves	\$ 325,000
Total	\$ 381,947,000

Non-physical and natural assets not included in this Review are:

- Digital and non-digital records (Data);
- Human resources (staff); and
- Non-engineered assets such as watersheds and drinking water recharge areas.

1.6 Data Sources

Information sources for the Review included:

- Department specific asset software (Water and Waste Water Services)
- Geographic Information Systems (GIS)
- Tangible Capital Asset (TCA) Register
- Engineering Studies
- Financial Plans and Reports
- Insurance valuations and appraisals
- Record drawings
- Department managed Excel spreadsheets
- Operations records
- Observations and information provided by staff

Individual departments manage the above data sources independently. Other than the centralized financial reporting and budgeting tools, no common asset information system is in place.

1.7 Gaps and Limitations

This Review is based on the best available information. Where information is limited, assumptions include:

- Asset ages where installation or acquisition dates are unavailable;
- Replacement costs of system sub-components when only whole-facility replacement cost data is available;
- Asset condition based on age in the absence of formal condition assessments; and
- Cost estimates based on professional judgment where cost information is unavailable.

In addition to the assumptions above, areas for improvement include:

- Developing consistent approaches to asset management across the organization;
- Developing centralized asset management system that offers a complete asset inventory and summary project information;
- Continuing to refine asset inventory information;
- Developing a level-of-service registry to track levels of service for all service areas;
- Formalizing and documenting condition assessment procedures for all departments;
- Defining and formalizing a decision-making process to prioritize infrastructure investment; and
- Formalizing asset management plans at the individual service level.



2 CURRENT STATE OF ASSET MANAGEMENT

This section outlines common asset management practices across the RDN, details current practices in each department responsible for the management of infrastructure assets, and examines opportunities to improve current asset management practices. Throughout this section, current practice descriptions and opportunities for improvement are aligned to the AMBC Roadmap.

Following each departmental overview are Asset Snapshots for each service area dependent on infrastructure assets. These are essential, two-page summaries of the current-state-of-the-assets for each relevant department in the RDN.

The key information in each Asset Snapshot includes level of service, current replacement costs, total replacement value, lifecycle period, average useful life of all assets in the service, and average annual replacement costs for the service area. The Asset Snapshots also compare planned capital investment against average annual replacement cost to illustrate whether annual capital expenditures align with lifecycle replacement costs. The Asset Snapshots conclude with an assessment of asset condition based on age.

The information contained in this Review is the result of extensive interviews with RDN staff and management including input from the RDN Asset Management Working Group.

2.1 Asset Snapshot Descriptions

2.1.1 Level of Service

Each Asset Snapshot includes a level of service description that provides a brief statement about the specific service provided to participating residents. These originate from departmental business plans, various management plans, annual reports and other documents in use in the RDN.

2.1.2 Current Replacement Cost and Total Replacement Value

Current replacement costs refers to the dollar value to replace individual assets in a service area at the present time. For this Review, current replacement costs are shown in 2017 dollars¹ (unless otherwise noted), and are illustrated as time series graphs that show the dollar value of all the asset replacements anticipated in each year of the Lifecycle Period. These graphs illustrate costs over a time period ranging from 10 to 100 years, depending on the anticipated useful life of the longest-lived assets in a given service area.

The sum total cost to replace all of the assets in a given service area is referred to as Total Replacement Value. Current Replacement Costs and Total Replacement Value should be updated on a three to five year basis to ensure accurate long-term financial planning. Replacement costs for the RDN will be updated in 2019.

Current replacement costs are given a data confidence rating from 1 to 5 (1 being the lowest confidence rating) based on the following table:

¹ See Section 3.3, a new Comprehensive Replacement Cost Study will update values in 2019.

Confidence Rating	Description of Replacement Cost Data
1 (low)	Inflated historic costs: Replacement costs are from historic cost inflated to present day dollars using a simple 2% annual inflation rate.
2	Market unit cost indices: Replacement costs are from Industry cost indices such as Hanscomb (2016) Yardsticks for Costing: Cost Data for the Canadian Construction Industry, or anecdotal knowledge from operational staff.
3	Property insurance values: Replacement costs are from most recent insurance appraisal, or technical documents greater than three-years old.
4	Third Party Cost Estimates: Replacement costs are from recent third-party cost estimates within the last three years.
5 (high)	Tender pricing and recent unit costs: Replacement costs are from on actual tender bids of like projects within the last three years.

2.1.3 Lifecycle Period

Lifecycle Period refers to the period, in years, over which all of the assets currently in use in a service will be replaced. Lifecycle Period is equal to the anticipated useful life of the longest-lived asset in a service. Presently, PVC pipes are anticipated to last 100 years. This is the longest Lifecycle Period in use for RDN service areas.

2.1.4 Average Useful Life

Average useful life is the average of all the useful lives of all individual assets in a service area. If a service area has 10 assets, and five of those assets have a 20-year life and five have a 50-year life, the average useful life of is calculated as follows:

$$\begin{aligned}
 & ((5 \times 20) + (5 \times 50)) / 10 \\
 & = 350 / 10 \\
 & = 35 \text{ years}
 \end{aligned}$$

2.1.5 Annual Average Replacement Cost

Annual Average Replacement Cost is the result of dividing the Total Replacement Value for all assets in a service by the Average Useful Life of all assets in a service. In the example above, if the total replacement value of the 10 assets in the service is \$100,000, the Annual Average Replacement Cost is calculated as:

$$\begin{aligned}
 & \$100,000 / 35 \text{ years} \\
 & = \$2,857 / \text{year}
 \end{aligned}$$

This cost is important for two reasons. Firstly, dividing the Total Replacement Value by Average Useful Life takes into consideration multiple replacements of assets with short useful lives during a Lifecycle Period. Secondly, the Annual Average Replacement Cost smooths out the annual variability in actual replacement costs. This reveals a target value for capital investment (including contributions to reserves) on an annual basis. Some years will demand more investment as costly assets are replaced, requiring transferring funds from reserve or borrowing. Some years will demand less, resulting in larger contributions to reserves in preparation for future expenditures.



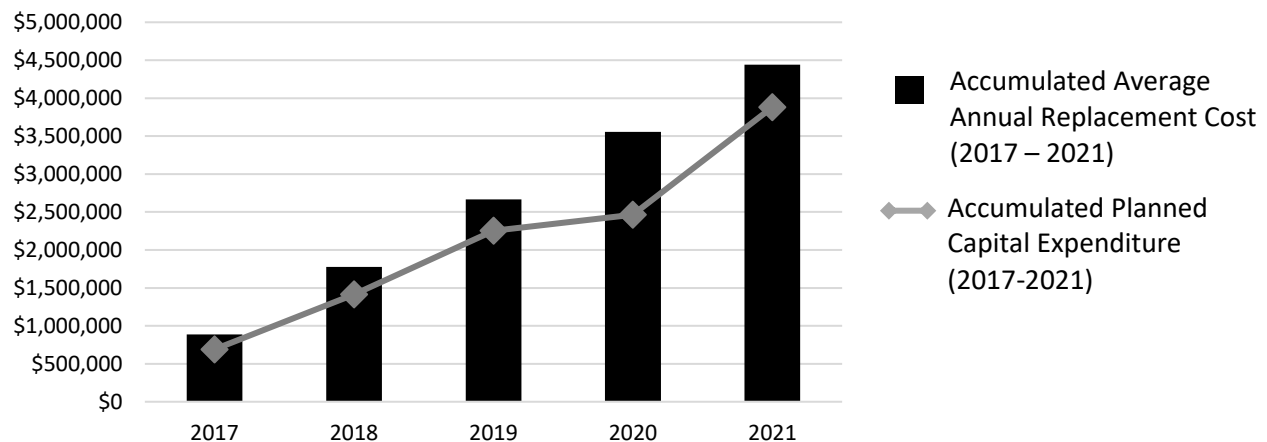
Annual Average Replacement Cost must be revised at the same time as current replacement costs to reflect current year dollars (no more than 3-5 years old). This improves accuracy in longer-term financial planning and ensures that contributions to reserves take into account inflation over time.

2.1.6 Planned Capital Expenditure & Annual Average Replacement Cost

Planned Capital Expenditure refers to actual figures identified in the RDN 5-Year Financial Plan and the annual budget. Planned Capital Expenditure includes anticipated costs on actual capital projects, contributions to reserve, and a portion of operations and maintenance costs. A portion of operations and maintenance costs are included to reflect that currently some renewal expenditures are captured as operation and maintenance costs by RDN Departments. Over time, as asset management practices mature, it will be increasingly possible to distinguish renewal costs from other more general operations and maintenance costs.

Comparing Planned Capital Expenditure against Average Annual Replacement Costs is a good indicator of whether planned expenditure aligns with anticipated costs for the asset. Showing these figures as accumulated costs over time reveals a trend of continued alignment or divergence of expenditures and costs, as shown in the example below and in each asset snapshot.

Overall alignment of the Accumulated Average Annual Replacement Costs (black bar) and Accumulated Planned Capital Expenditure (grey line) indicates that planned infrastructure spending corresponds with the anticipated costs over the five-year period. When the accumulated expenditure diverges above the accumulated costs, it indicates a period of re-investment in infrastructure. Conversely, when the accumulated expenditure diverges below the accumulated costs, it indicates growing deficit in infrastructure spending.



In the example above, Annual Average Replacement Costs equal about \$890,000 per year. Over five years, this sum accumulates evenly to a total of almost \$4.5 million. By contrast, Planned Capital Expenditure proceeds more unevenly, as spending inevitably varies year-over-year. Ongoing Planned Capital Expenditures (including contributions to reserve and a portion of operations and maintenance) is generally keeping up with the costs one would expect to incur over time, and there is a minimal infrastructure deficit developing.

2.1.7 Asset Age and Condition

The Asset Snapshots (outlined in Sections 0-2.11) conclude with an examination of the age and condition of assets. For this Review, where a comprehensive condition assessment program is not in place, age serves as a proxy for condition. This final section of the Asset Snapshots shows a bar graph illustrating the total value of assets in each age category as well as a pie graph showing the actual number of assets in each age category. For this analysis, age and condition categories are as follows:

- New 0-30% of useful life Very Good Condition
- Medium 30-60% of useful life Good Condition
- Aging 60-90% of useful life Fair Condition
- End of Life 90-99% of useful life Poor Condition
- Deficit 100 + % of useful life Very Poor Condition

In accordance with asset management best practice, a formal condition assessment program should be initiated for assets once they reach 60% of their estimated useful life. Formalizing a condition assessment program based on this best practice is a key next step.

2.2 Common Asset Management Practices Across the RDN

Asset management practices are well-established across all RDN departments responsible for the development and maintenance of infrastructure assets. The organization's current asset management practices are described relative to the AMBC Roadmap in the table below and include budgeting, financial tools, and documentation of processes. This table highlights good practices, as well as areas to address across the RDN.

Table 1 Common RDN Asset Management Practices

AMBC Category	Current Asset Management Practice
Know Your Assets	RDN's Accounting Services maintain the Tangible Capital Asset (TCA) inventory for all RDN departments. RDN Policy A2.05 <i>Capital Asset Accounting Budgeting</i> requires that when an asset is purchased, the asset and its attributes, including its expected lifespan is to be reported in the inventory. RDN Policy A2.12 <i>Asset Disposal</i> requires reporting asset disposal.
	Corporate-wide systems to monitor expenditures for materials, contracted services and other cost centres are well-used.
	Estimated useful life is not updated on a regular basis (actual rate of deterioration, age, or condition of assets).
	Budgeting tools that include up to 10 years of capital planning and investment are well-used.
	Multiple software systems and tools used to manage assets by different departments in the RDN and current software applications meet the individual needs of the department. Integrated asset management software will be implemented across the RDN.



AMBC Category	Current Asset Management Practice
Know Your Financial Position	<p>Current practices around budget forecasting provide a strong foundation for long-term capital planning in accordance with a 10-year budget forecast period however this period does not encompass the full lifecycle of many assets and for applicable assets separate financial planning process are in place to augment this 10-year horizon.</p> <p>The 10-year financial planning horizon is relatively long in the local government context. Improvements will come from calculating full lifecycle costs for all assets in a service area to determine funding requirements to maintain expected levels of service over the long-term.</p>
Understand Decision-Making	<p>Current practices for decision-making procedures are not formally documented and consolidated, resulting in challenges when reviewing and analysing the decision-making process on assets.</p>
Manage Asset Lifecycle	<p>The cost of providing higher or lower levels of service are determined through the RDN budget process. Current levels of service descriptions do not universally connect the full cost of a service to the quality or level of service.</p> <p>Response to conditions currently drives alternatives considered for infrastructure repair, renewal, and replacement. Asset management practice will drive proactively evaluate alternatives and recommend the best options for action.</p>
Know the Rules	<p>Strategic goals are known. Links between Board strategy and departmental business strategies have been established, including broad linkages to day-to-day asset management activities.</p>
Monitor Sustainability	<p>Analysis and review is required to ensure existing services and current service levels are sustainable over the long term.</p> <p>The majority of asset intense departments have been consolidated in Regional Community Utilities Division which allows the RDN to capitalize and coordinate infrastructure management across departments. With representation from departments across RDN the Asset Management Working Group is sharing knowledge and expertise in this area.</p>

2.3 Opportunities to Improve Common Asset Management Practices Across the RDN

Aligning with the AMBC Roadmap, the following table outlines key opportunities to improve Asset Management practices across the RDN.

Table 2 Opportunities to Improve RDN Asset Management Practices

AMBC Category	Opportunities to Improve
Know Your Assets	Knowing Your Assets is the foundation for effective asset management. At the RDN, most departments have a baseline inventory of their assets in electronic form. Across the organization there are varied levels of information on data and system governance practices, asset componentization, and the ability to differentiate assumed from verified values.
Know Your Financial Position	In the Know Your Financial Situation category, gaps that are being addressed include verified replacement costs in current dollars for the purpose of long term financial planning, recording full cost of operations including maintenance of key assets.
Understand Decision-Making	In the Understand Decision-Making category, formal documentation of decision-making processes varies across the RDN. Individuals and departments responsible for making recommendations know the relevant processes. Formal documentation will increase utilization pre-determined procedures across the organization.
Manage Asset Lifecycle	Level of service measures and indicators are in place but are not oriented to assess the quality of service. Gaps in the Manage Asset Lifecycle category are addressed by asset condition monitoring and documentation of maintenance strategies.
Know the Rules	Compliance monitoring and reporting is managed by each service area. There are minimal gaps in the Know the Rules category as staff involved with managing assets and related activities have high capacity as it relates to their work areas.
Monitor Sustainability	For the Monitor Sustainability category, the RDN is at an early stage of implementing organization-wide asset management and improving the level of information and detail necessary to reliably assess the different elements of sustainability in terms of service delivery. Improvements in the Monitor Sustainability category are a relatively lower priority.



2.4 Water and Utility Services

The Water and Utility Services department is responsible for nine domestic drinking water systems, components of a bulk water distribution system, six sewer collection systems, and eight street lighting service areas. Pump stations within the sewer collection systems are managed by the RDN's Wastewater Services, and the streetlight inventory is rented from BC Hydro.

The RDN does not have a management role over street lighting systems, but is responsible for the maintenance of poles.

Table 3 Water and Utility Services AM Practices

AMBC Category	Summary of Current Asset Management Practice
Know Your Assets	Approximately 90% of the water and sewer asset inventory is compiled. Linear assets are segmented and facilities are identified as single-point assets. Sanitary pump stations are componentized in the Wastewater Services asset management program <i>Webworks</i> . Improving asset inventory data and componentization is a continuous process that forms part of day-to-day operations.
	Asset data is digitally recorded in a custom-built system called AMS that enables the use and manipulation of asset information which is supported using the RDN GIS system. Maintaining an up-to-date asset inventory that is aligned between AMS and GIS is an ongoing activity that requires resources to be consistent.
	Software applications should be updated to improve efficiency, ensure integration, and support implementation of a work order system.
Know Your Financial Position	The data stored in the AMS system enables calculating current replacement values for a large portion of the asset inventory and resources need to be directed to updating replacement costs regularly. Recorded useful lives of assets need to be revised to reflect verified condition or the rate of deterioration.
	Systems should be updated to facilitate linking assets with maintenance expenditures and operational costs.
Understand Decision-Making	Beyond the annual budget and 5-Year Financial Plan, the budgeting process also includes estimates and parcel taxes for a 10-year period, based on anticipated operational needs and capital requirements. Development Cost Charges and Capital Cost Charges are used to fund increases in service levels necessary to accommodate new development.
	Decision processes for planning and capital projects and determining budget requirements are well established. These are well structured, consistent, and known by staff. Formal documentation of these processes are required.
Manage Asset Lifecycle	General work history for assets is available in AMS but should be more consistently tied to specific assets. Most preventive maintenance conducted in the field is recorded in AMS and asset failures need to be consistently recorded.
	Formalize procedures and tools for recording work history on assets.
	Asset condition is known by operational and technical staff. Formal systems required to improve ability to monitor and assess asset condition.



Preventive maintenance activities are diligently scheduled and monitored by Water Services staff.

Know the Rules

Relevant staff know legislative requirements and responsibilities are clear. In all cases, the manager is responsible to ensure the terms and conditions of permits are met and formal checklist of legislative requirements is in development for operational information.



2.4.1 Decourcey Water Service Area (DWSA)

Level of Service

The DWSA provides treated drinking water to five residential connections.

The water is sourced from one groundwater well, stored in one reservoir and chlorinated manually. Over the course of 2017, all measured parameters for water quality were within Canadian Water Quality Standards.

Average per capita water consumption in the service area in 2017 was 157 litres per person per day. This consumption is 45 percent less than the 283 litres per person per day average for all other RDN water systems. This system is regularly placed under Stage 4 water usage restrictions in order to protect the community drinking water supply, and to maintain water storage for fire protection.

The cost per connection in the DWSA in 2017 was \$1,637.20 per parcel, plus an average of \$235.76 in metered charges.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement costs for the DWSA are based on values for the Nanoose Bay Peninsula Water Service Area as provided by a third-party engineering firm in 2015. This provides a data confidence rating of '3' due to differences in the scale of the respective water systems and the age of the comparative data.

Total Replacement Value (2016 Dollars)

\$1,050,000

Lifecycle Period

100 years

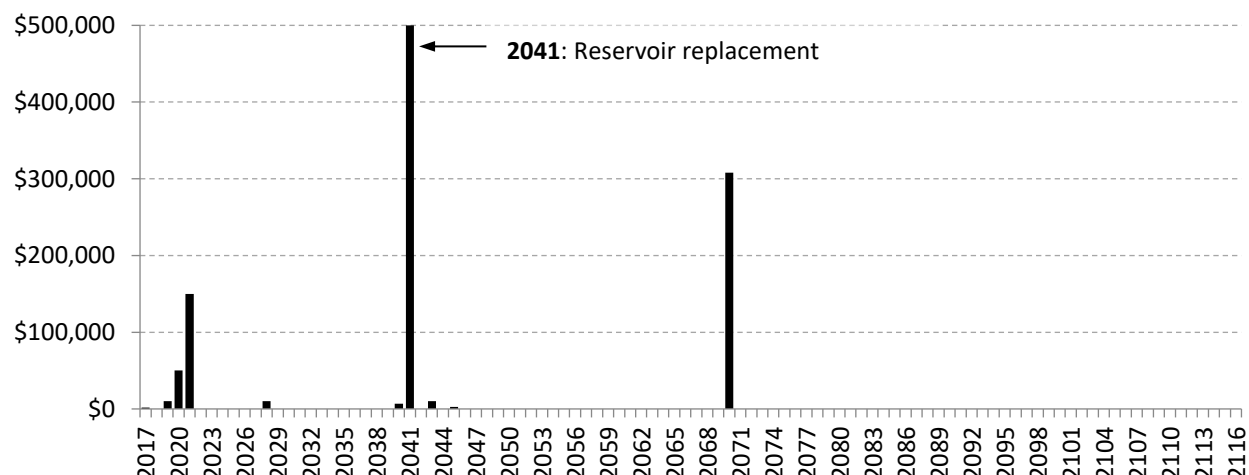
Average Useful Life of All Assets

60 years

Average Annual Replacement Cost

\$17,500

DWSA: Current Replacement Costs (2017-2117)

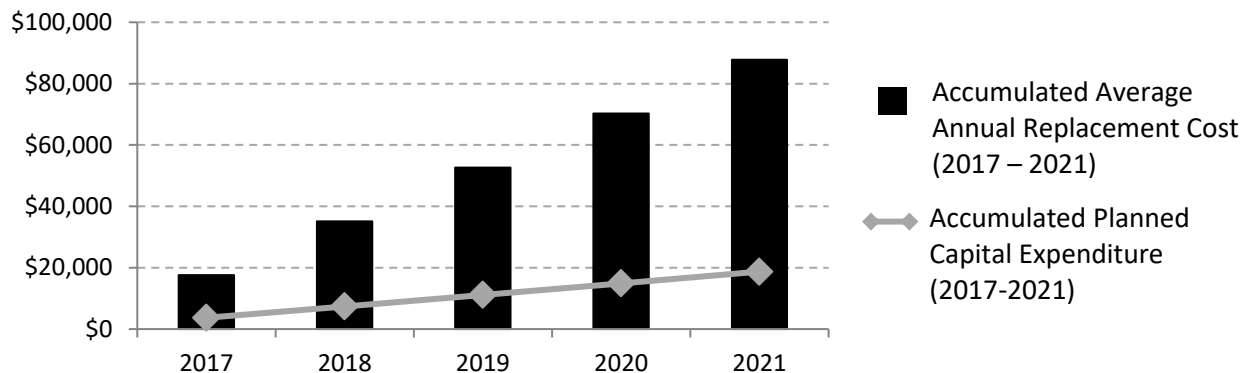




Planned Capital Expenditure & Average Annual Replacement Costs

For the DWSA there are \$18,700 in Planned Capital Expenditures over the 2017-2021 period. This is significantly below the Average Annual Replacement Costs for the system, and highlights the challenge of charging for the full cost of infrastructure ownership when those costs are shared across a small number of service area participants.

DWSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

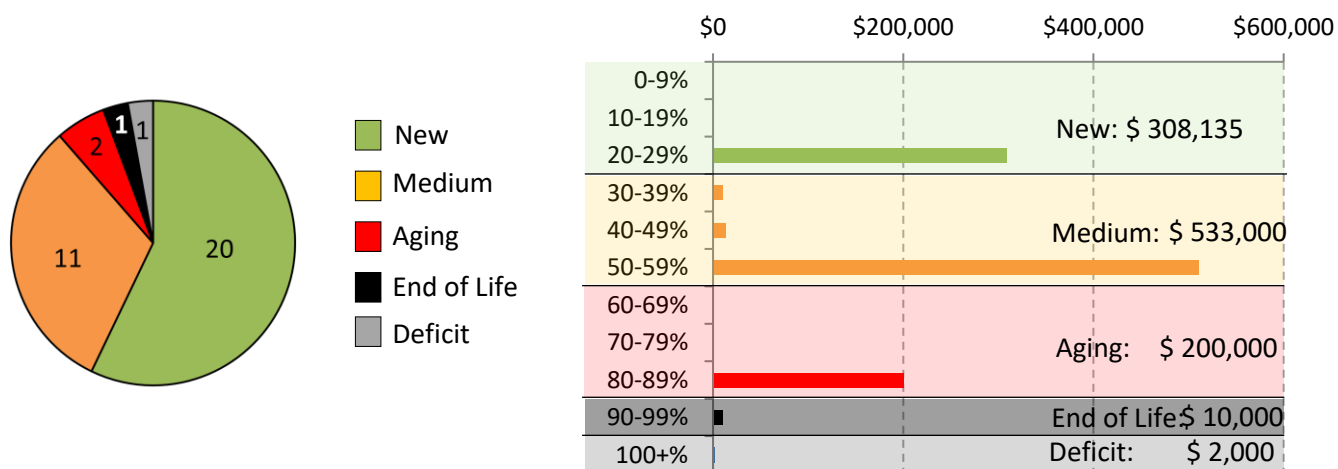
\$18,000

Age and Asset Condition

For the DWSA, asset age provides a proxy for asset condition. For the DWSA, 88% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*, while 12% of assets are nearing or have exceeded their estimated useful lives. 80% of the value of all the assets are in the *New* or *Medium* category. Assets that have entered the *Aging* category will benefit from a condition assessment to confirm the need for replacement.

DWSA: Total Number of Assets by Age Class

DWSA: Total Asset Value by Age Class



2.4.2 Englishman River Water Service Area (ERWSA)

Level of Service

The ERWSA provides treated drinking water to 157 residential connections, serving an estimated 375 residents. Over the course of 2017, all measured parameters for water quality were within Canadian Water Quality Standards.

Average per capita water consumption in the service area in 2017 was 417 litres per person per day. This consumption is 47% higher than the 283 litres per person per day average for all other RDN water systems.

The cost of water in the ERWSA in 2017 was \$239.50 per parcel in the service area, plus an average of \$543.79 in metered charges.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement costs values for the ERWSA are based on Nanoose Bay Peninsula Water Service Area values as provided by a third-party engineering firm in 2015. This provides a data confidence rating of '3' due to differences in the scale of the respective water systems and the age of the comparative data.

Total Replacement Value (2016 Dollars)

\$5,700,000

Lifecycle Period

100 years

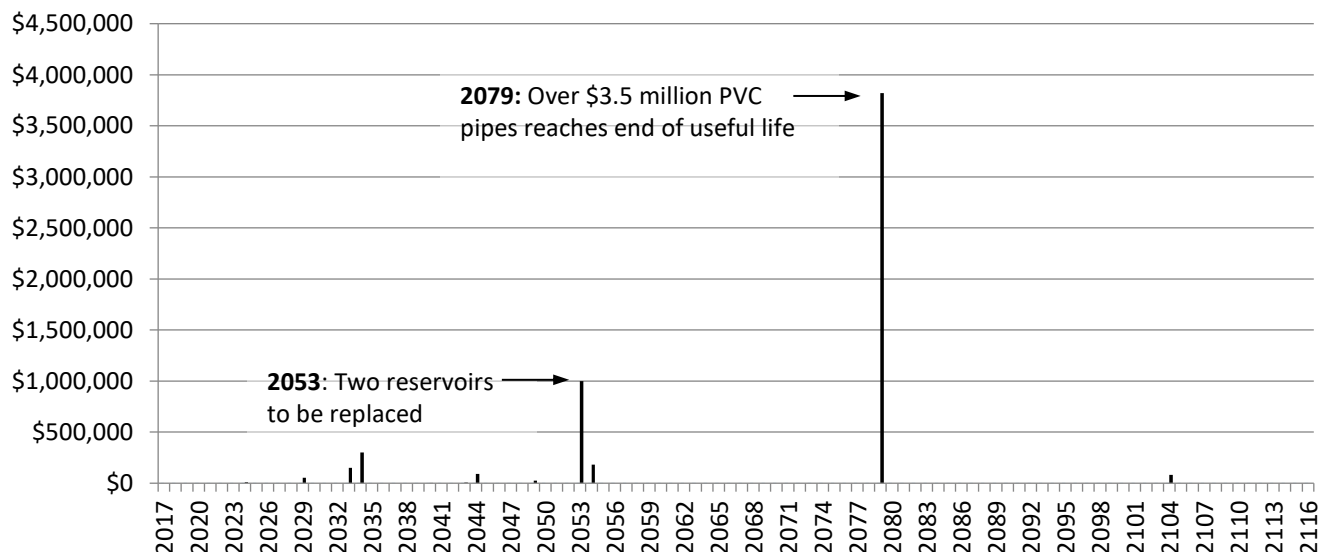
Average Useful Life of All Assets

60.9 years

Average Annual Replacement Cost

\$93,600

ERWSA: Current Replacement Costs (2017-2117)

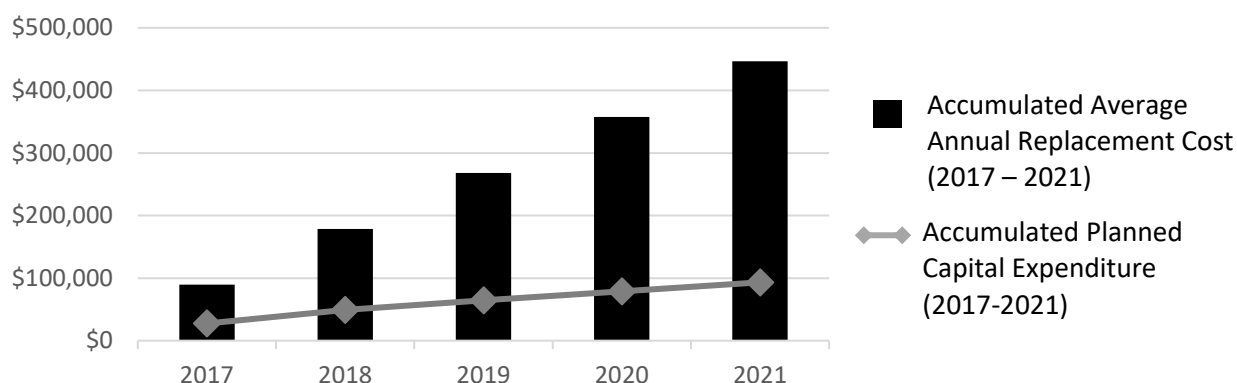




Planned Capital Expenditure & Average Annual Replacement Costs

For the ERWSA there are \$96,000 in planned capital expenditures over the 2017-2021 period. This reflects the generally young age of the water system, but also highlights that contributions to capital reserves are low early in infrastructure lifecycles, when replacements are not imminent. There is an opportunity for the ERWSA to increase reserve contributions gradually to ensure that assets can be replaced with minimal borrowing over the course of the asset lifecycle.

ERWSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



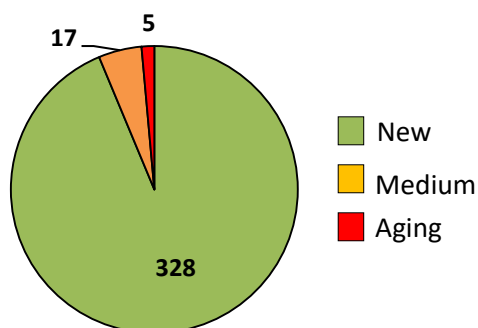
Capital Reserve Opening Balance (2018):

\$290,000

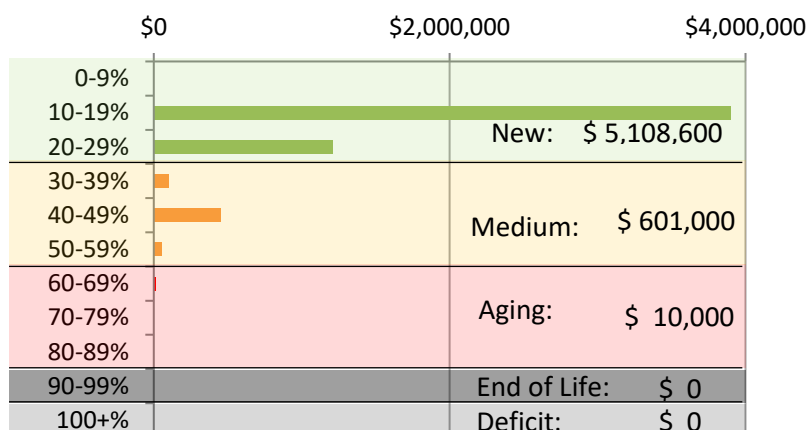
Age and Asset Condition

Asset age indicates asset condition. For the ERWSA, 99% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. 99.8% of the value of all the assets are in the *New* or *Medium* category. This shows that assets in the ERWSA are early in their lifecycle, and are in good or very good condition.

ERWSA: Total Number of Assets by Age Class



ERWSA: Total Asset Value by Age Class



2.4.3 French Creek Water Service Area (FCWSA)

Level of Service

The FCWSA provides treated drinking water to 239 residential connections, serving an estimated 570 residents. Over the course of 2017, all measured parameters for water quality were within Canadian Water Quality Standards with the exception of high readings of iron and manganese which exceeded the aesthetic standard but did not pose health concerns.

Average per capita water consumption in the service area in 2017 was 231 litres per person per day. This consumption is 18% lower than the 283 litres per person per day average for all other RDN water systems.

The cost of water in the FCWSA in 2017 was \$323.43 per parcel in the service area, plus an average of \$245.78 in metered charges.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement cost values for the FCWSA are based on the Nanoose Bay Peninsula Water Service Area values as provided by a third party engineering firm in 2015. This provides a data confidence rating of '3' due to differences in the scale of the systems and the fact that the data is currently 3-years out of date.

Total Replacement Value (2016 Dollars)

\$4,700,000

Lifecycle Period

100 years

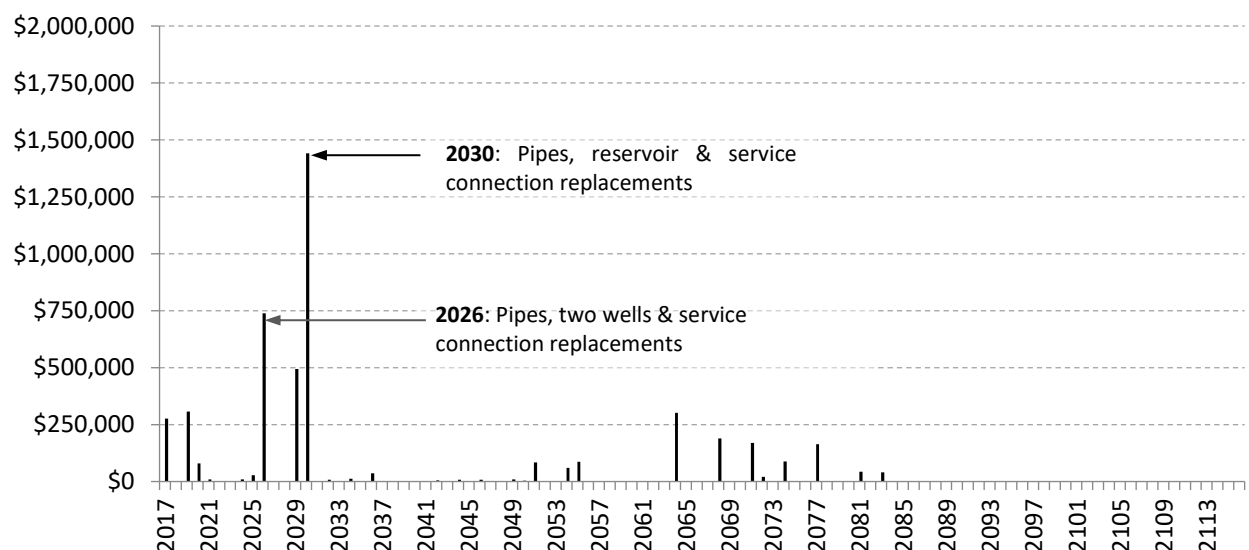
Average Useful Life of All Assets

55 years

Average Annual Replacement Cost

\$85,500

FCWSA: Current Replacement Costs (2017-2117)

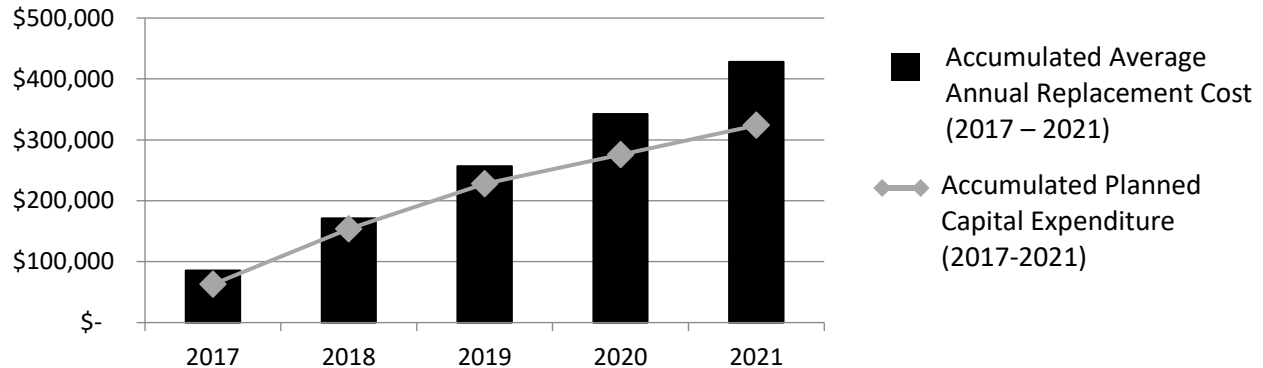




Planned Capital Expenditure & Average Annual Replacement Costs

Planned capital expenditures for the FCWSA over the next five years amounts to \$310,000, including upgrades to two well heads. There is a modest deficit in infrastructure expenditure emerging by 2020-2021. Significant capital expenditures are anticipated over the 2025-2029 period as many assets reach the end of their anticipated useful lives.

FCWSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



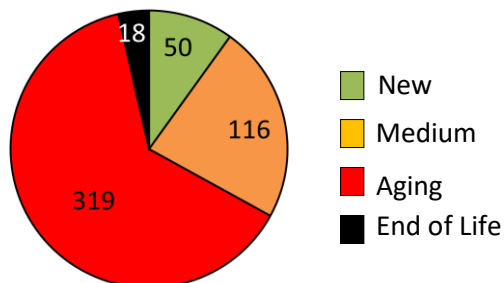
Capital Reserve Opening Balance (2018):

\$189,000

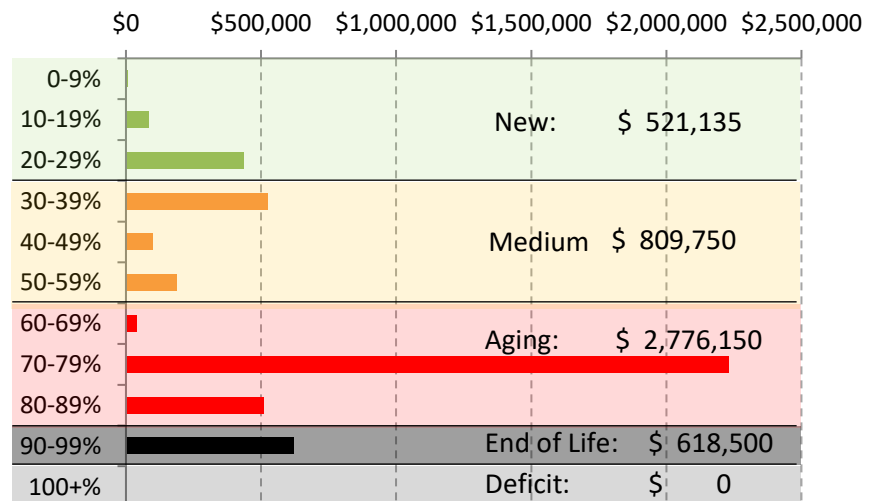
Age and Asset Condition

Asset age indicates asset condition. For the FCWSA, 67% of all assets are in the *Aging* or *End of Life* age category, resulting in a condition rating of *Fair* or *Poor*. 72% of the value of all the assets are in the *Aging* or *End of Life* category. This shows that the majority of assets in the FCWSA are at or nearing replacement.

FCWSA: Total Number of Assets by Age Class



FCWSA: Total Asset Value by Age Class



2.4.4 Melrose Terrace Water Service Area (MTWSA)

Level of Service

The MTWSA provides treated drinking water to 28 residential connections, serving an estimated 60 residents. Over the course of 2017, all measured parameters for water quality were within Canadian Water Quality Standards.

Average per capita water consumption in the service area in 2017 was 221 litres per person per day. This consumption is 22% lower than the 283 litres per person per day average for all other RDN water systems.

The cost of water in the MTWSA in 2017 was \$823.18 per parcel in the service area, plus an average of \$171.40 in metered charges.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement cost values for the MTWSA were based on the Nanoose Bay Peninsula Water Service Area values as provided by a third-party engineering firm in 2015. This provides a data confidence rating of '3' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$1,100,000

Lifecycle Period

100 years

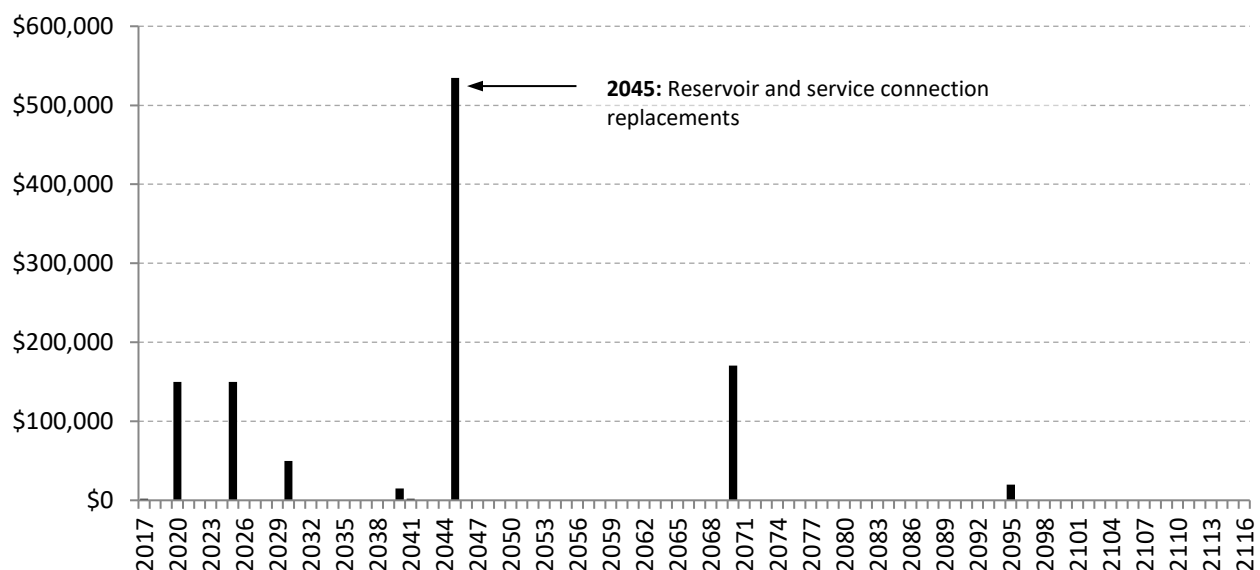
Average Useful Life of All Assets

57.5 years

Average Annual Replacement Cost

\$19,000

MTWSA: Current Replacement Costs (2017-2117)

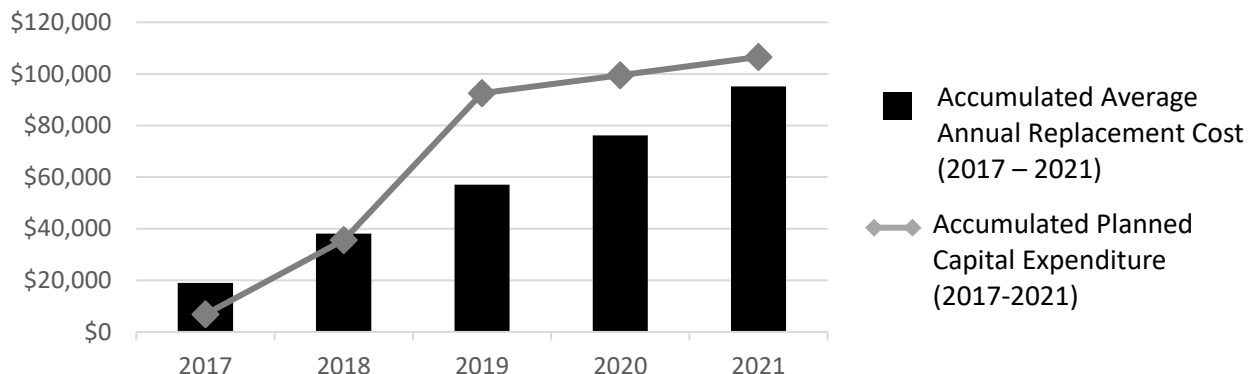




Planned Capital Planned Capital Expenditure & Average Annual Replacement Costs

For the MTWSA there are planned capital expenditures of \$106,000 over the 2017-2021 period including a reservoir replacement project in 2019. Infrastructure replacement in the WTWSA are generally well aligned to annual average replacement costs.

MTWSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



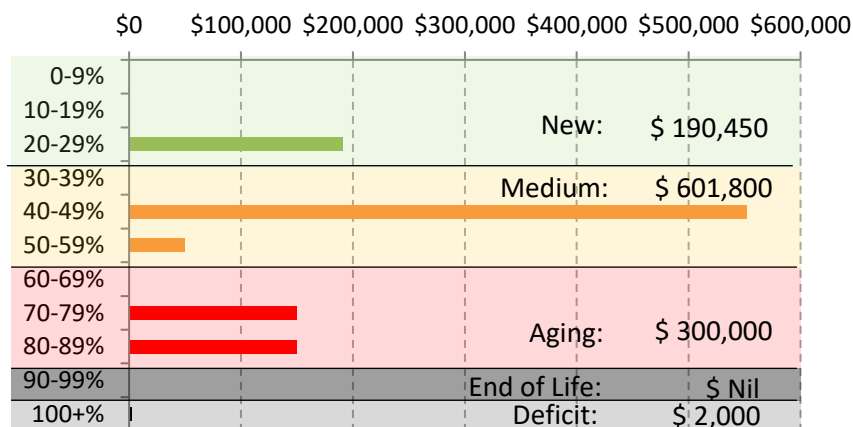
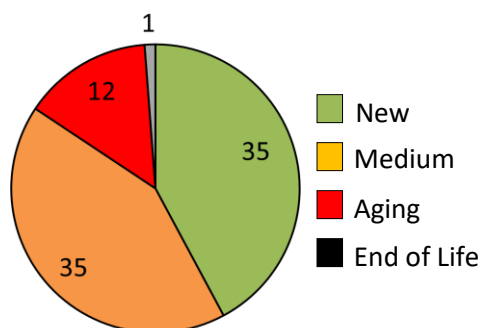
Capital Reserve Opening Balance (2018):

\$11,000

Age and Asset Condition

Asset age indicates asset condition. For the MTWSA, 84% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. 72% of the value of all the assets are in the *New* or *Medium* category. This shows that a majority of assets in the MTWSA are early in their lifecycle, however renewals or replacements need to be planned for approximately 25% of assets in the foreseeable future.

MTWSA: Total Number of Assets by Age Class MTWSA: Total Asset Value by Age Class



2.4.5 Nanoose Bay Peninsula Water Service Area (NBWSA)

Level of Service

The NBPWSA provides treated drinking water to 2098 residential and 67 commercial connections, serving an estimated 5,700 residents. This is expected to increase to approximately 11,000 people over 25 years.

For 2017, all measured parameters for water quality were within Canadian Water Quality Standards. Average per capita water consumption in the service area in 2017 was 285 litres per person per day, compared to 283 litres per person per day for all water services.

The cost of water in the NBPWSA in 2017 was \$357.90 per parcel in the service area, plus an average of \$325.80 in metered charges.

Current Replacement Costs

Data Confidence Rating: 4

Current replacement cost values for the NBPWSA were provided by a third-party engineering firm in 2015. This provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$42,600,000

Lifecycle Period

100 years

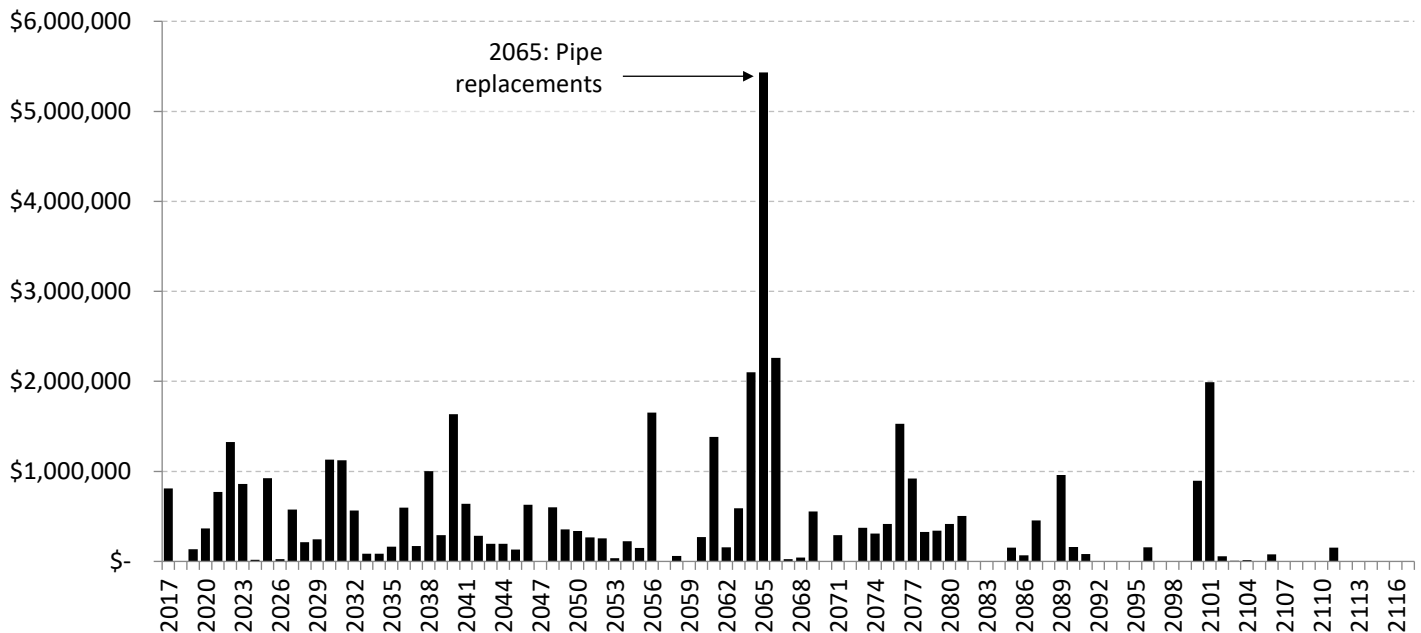
Average Useful Life of All Assets

48 years

Average Annual Replacement Cost

\$887,500

NBPWSA: Current Replacement Costs (2017-2117)

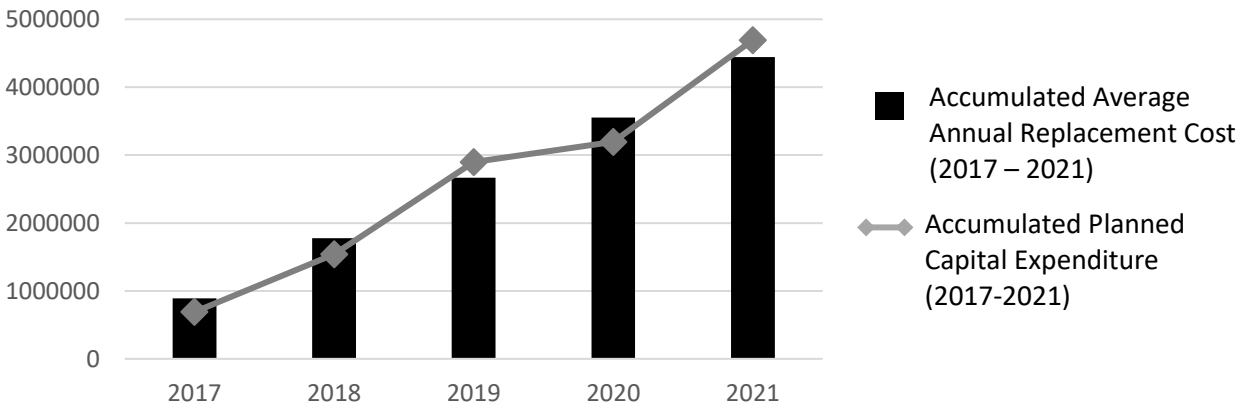




Planned Capital Expenditure & Average Annual Replacement Costs

For the NBPWSA, \$4.7 million in planned capital expenditures include anticipated expenditures on planned capital projects; annual contributions to reserve, which cover future capital spending; and anticipated expenditures on underground utilities replacements. Planned capital expenditures are well aligned to average annual replacement costs.

NBPWSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



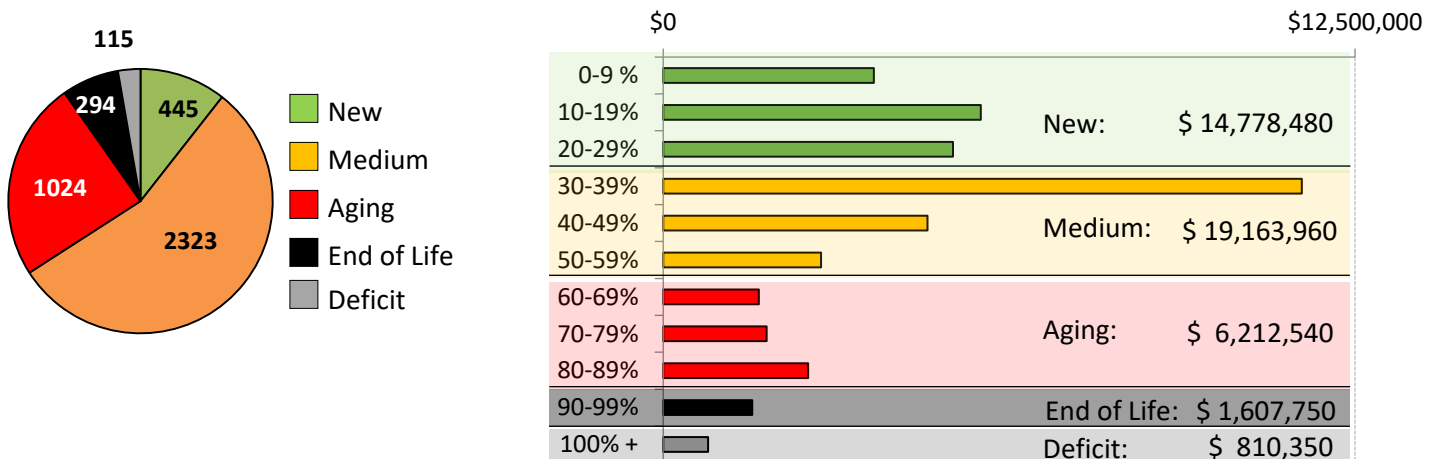
Capital Reserve Opening Balance (2018):

\$770,000

Age and Asset Condition

Asset age indicates asset condition. For the NBPWSA, 66% of all assets are in the New or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. 80% of the value of all the assets are in the *New* or *Medium* category. This shows that assets in the NBPWSA are relatively early in their lifecycle, and are in good or very good condition.

NBPWSA: Total Number of Assets by Age Class NBPWSA: Total Asset Value by Age Class (millions)



2.4.6 San Pareil Water Service Area (SPWSA)

Level of Service

The SPWSA provides treated drinking water to 290 residential connections, serving an estimated 690 residents. Over the course of 2017, all measured parameters for water quality were within Canadian Water Quality Standards.

Average per capita water consumption in the service area in 2017 was 256 litres per person per day. This consumption is 90% of the 283 litres per person per day average for all other RDN water systems.

The cost of water in the SPWSA in 2017 was \$460.28 per parcel in the service area, plus an average of \$283.86 in metered charges.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement cost values for the SPWSA were based on values for the Nanoose Bay Peninsula Water Service Area as provided by a third-party engineering firm in 2015. This provides a data confidence rating of '3' due to differences in the scale of the respective water systems and the age of the comparative data.

Total Replacement Value (2016 Dollars)

\$4,400,000

Lifecycle Period

100 years

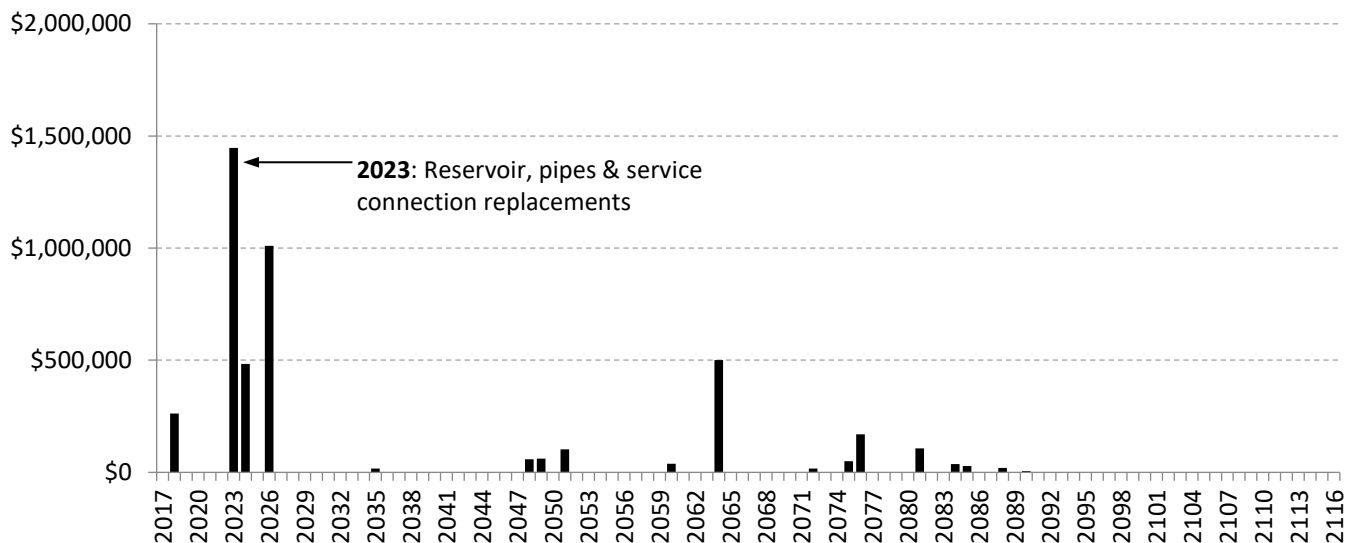
Average Useful Life of All Assets

56 years

Average Annual Replacement Cost

\$78,500

SPWSA: Current Replacement Costs (2017-2117)

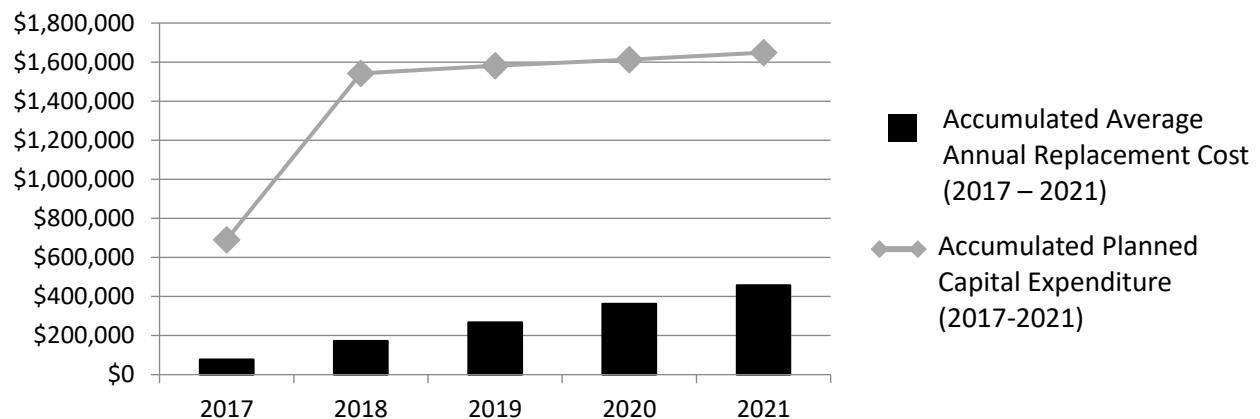




Planned Capital Expenditure & Average Annual Replacement Costs

A new ultraviolet treatment was installed in the SPWSA system over the 2017-2018 period. This was a major capital expenditure that was required by the Provincial Ministry of Health, skewing the relationship between planned capital expenditures and average annual replacement costs. The replacement costs for the new UV system have not been incorporated into average annual replacement value for the system.

SPWSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



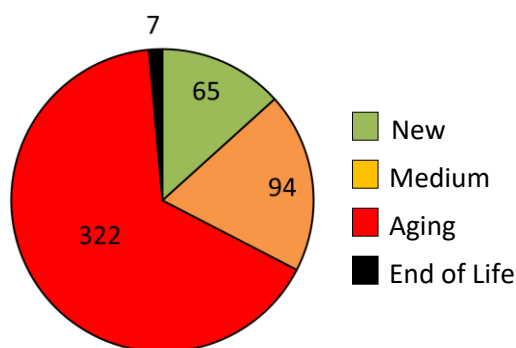
Capital Reserve Opening Balance (2018):

\$28,000

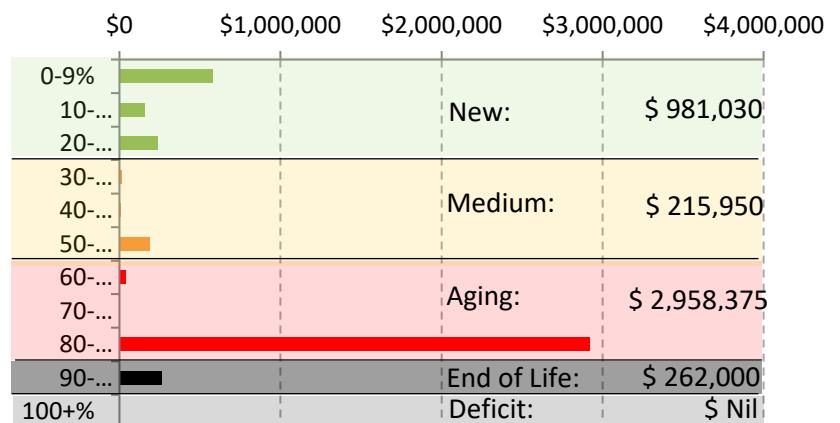
Age and Asset Condition

Asset age indicates asset condition. For the SPWSA, 66% of all assets are in the *Aging* age category, resulting in a condition rating of *Fair*. 67% of the value of all the assets are in the *Fair* category. This shows that assets in the SPWSA are nearing the point of requiring more frequent condition assessments, with plans for renewal or replacement to be prioritized.

SPWSA: Total Number of Assets by Age Class



SPWSA: Total Asset Value by Age Class



2.4.7 Surfside Water Service Area (SWSA)

Level of Service

The SWSA provides treated drinking water to 39 residential connections, serving an estimated 90 residents. There is no reservoir the SWSA; water is sourced from two groundwater wells and pumped into the system via a dual pressure tank arrangement. Over the course of 2017, all measured parameters for water quality were within Canadian Water Quality Standards.

Average per capita water consumption in the service area in 2017 was 276 litres per person per day, which is 2% lower than the 283 litres per person per day average for all other RDN water systems.

The cost of water in the SWSA in 2016 was \$371.92 per parcel in the service area, plus an average of \$335.07 in metered charges.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement cost values for the SWSA were based on values for the Nanoose Bay Peninsula Water Service Area as provided by a third-party engineering firm in 2015. This provides a data confidence rating of '3' due to differences in the scale of the respective water systems and the age of the comparative data.

Total Replacement Value (2016 Dollars)

\$688,000

Lifecycle Period

100 years

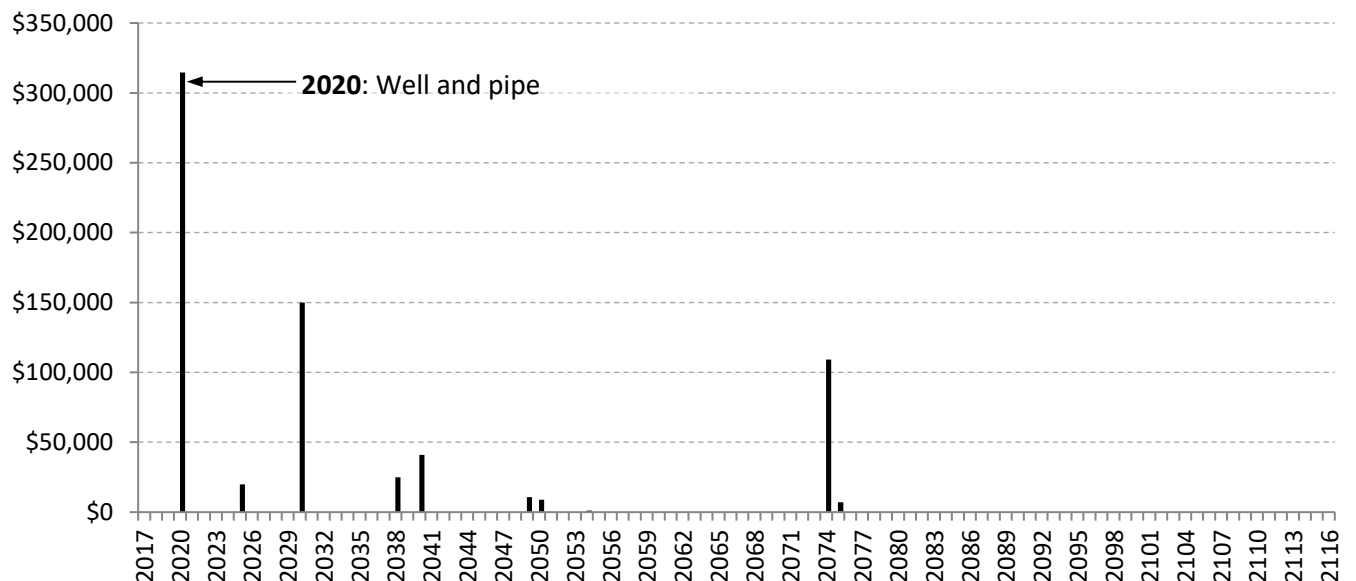
Average Useful Life of All Assets

54.3 years

Average Annual Replacement Cost

\$12,500

SSWSA: Current Replacement Costs (2017-2117)

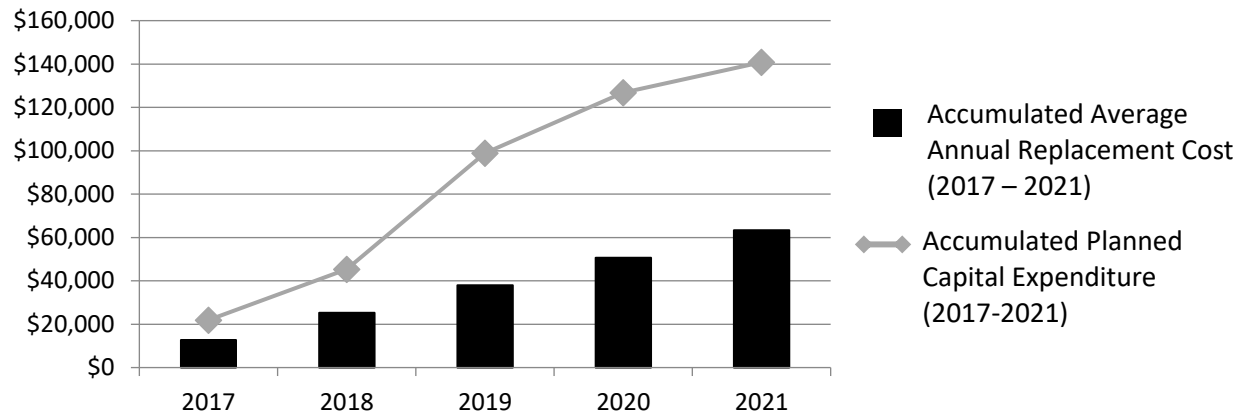




Planned Capital Expenditure & Average Annual Replacement Costs

For the SWSA there is planned capital expenditures of \$141,000 for the 2017-2021 period, including renewal work on the wellheads planned for 2019-2020. This level of expenditure above the average annual replacement costs is consistent with high levels of anticipated expenditures.

SWSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



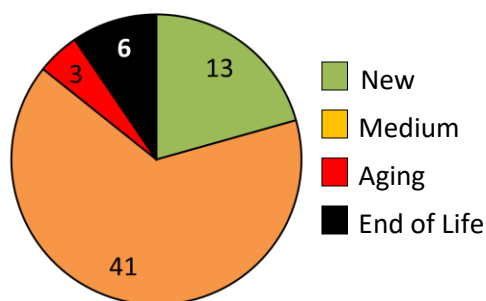
Capital Reserve Opening Balance (2018):

\$3,500

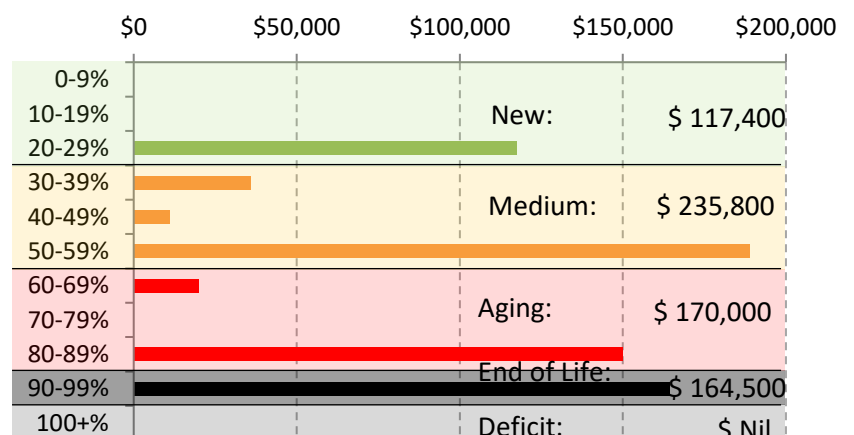
Age and Asset Condition

Asset age indicates asset condition. For the SWSA, 86% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. While 51% of the value of all the assets are in the *New* or *Medium* category, 49% of the value of all the assets are considered to be *Aging* or *End of Life*. This shows that a small number of high value assets are at or nearing the time for replacement or renewal.

SWSA: Total Number of Assets by Age Class



SWSA: Total Asset Value by Age Class



2.4.8 Whiskey Creek Water Service Area (WCWSA)

Level of Service

The WCWSA provides treated drinking water to 126 residential connections, serving an estimated 300 residents.

Over the course of 2017, all measured parameters for water quality were within Canadian Water Quality Standards. There were occasional high turbidity events in the Spring and Fall that required temporary shutdowns of the system while drinking water was trucked-in from another RDN water system nearby to top up the water storage reservoir until the high turbidity event passed.

Average per capita water consumption in the service area in 2017 was 232 litres per person per day. This consumption is 18% lower than the 283 litres per person per day average for all other RDN water systems.

The cost of water in the WCWSA in 2017 was \$720.02 per parcel in the service area, plus an average of \$326.05 in metered charges.

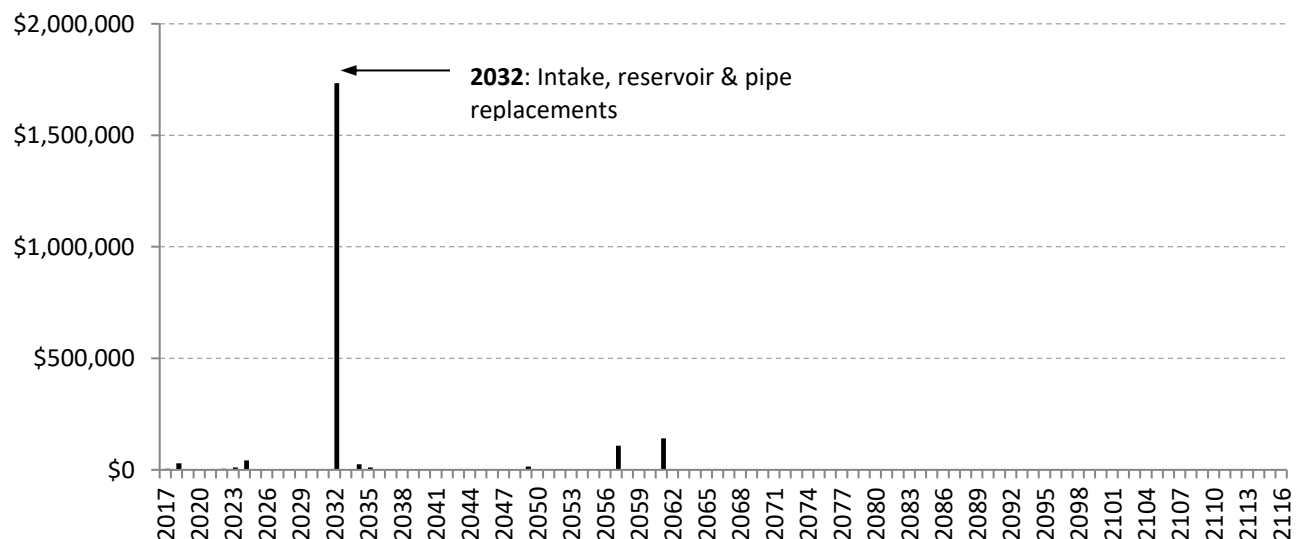
Current Replacement Costs

Data Confidence Rating: 3

Current replacement cost values for the WCWSA were based on values for the Nanoose Bay Peninsula Water Service Area as provided by a third-party engineering firm in 2015. This provides a data confidence rating of '3' due to differences in the scale of the respective water systems and the age of the comparative data.

Total Replacement Value (2016 Dollars)	\$2,100,000
Lifecycle Period	100 years
Average Useful Life of All Assets	54.7 years
Average Annual Replacement Cost	\$38,500

WCWSA: Current Replacement Costs (2017-2117)

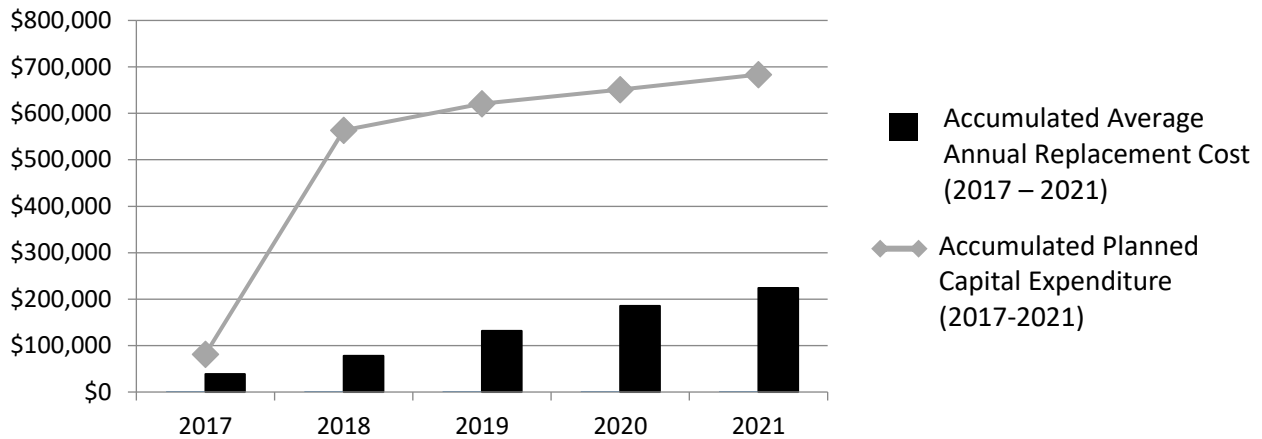




Planned Capital Expenditure & Average Annual Replacement Costs

For the WCWSA there are planned capital expenditures of \$685,000 over the 2017-2021 period, including the installation of a new well and distribution system. This new well will eliminate reliance on the current surface water source, and is a high priority project to ensure quality drinking water with reduced operational costs.

WCWSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

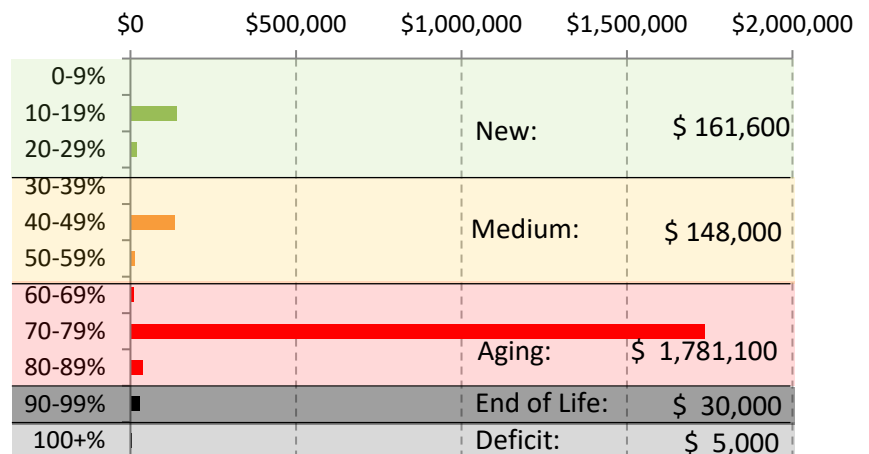
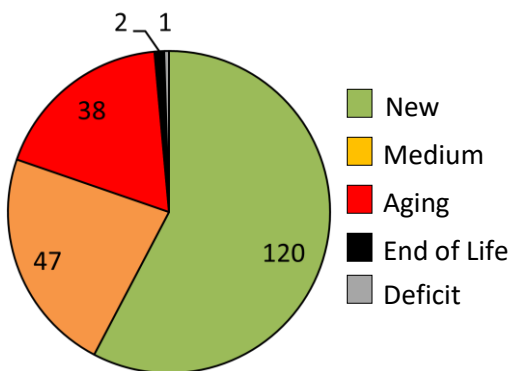
\$40,000

Age and Asset Condition

Asset age indicates asset condition. For the WCWSA, 81% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. However, 85% of the value of all the assets are in the *Aging* or *End of Life* category meaning a number of costly assets are at or nearing the time for replacement or renewal.

WCWSA: Total Number of Assets by Age Class

WCWSA: Total Asset Value by Age Class



2.4.9 Westurne Heights Water Service Area (WHWSA)

Level of Service

The WHWSA provides treated drinking water to 17 residential connections, serving an estimated 40 residents. Ownership of the water utility was transferred to the RDN in September 2016. The water system is comprised of one groundwater well, two underground cisterns, a pumphouse, and a short network of watermain.

In the time the RDN has managed the system, all measured parameters for water quality were within Canadian Water Quality Standards.

Average per capita water consumption in the service area in 2017 was 231 litres per person per day. This consumption is 18% lower than the 283 litres per person per day average for all other RDN water systems.

The cost of water in the WHWSA in 2017 was \$1,135.00 per parcel in the service area, plus an average of \$147.56 in metered charges.

Current Replacement Costs

Data Confidence Rating: N/A

No information is available at this time to calculate replacement costs. An asset registry has not been completed. Over the course of 2017 the RDN completed a number of upgrades to the existing infrastructure as well as installing new meters for each connection.

The data, along with age and condition ratings will be available in 2019 and included in the updated asset snapshot for this service area.

Planned Capital Expenditure & Current Replacement Costs

Following the acquisition and initial capital investments in the system over 2016 and 2017, minimal capital expenditures are planned for the WHWSA. Contributions to capital reserves vary from \$5,000 to \$6,000 dollars per year between 2018 and 2021.

Capital Reserve Opening Balance (2018):

\$0



2.4.10 Barclay Crescent Sewer Service Area (BCSSA)

Level of Service

The BCSSA was established in 2005 and comprises an area south of the Island Highway between Drew Road and Barclay Crescent (in Electoral Area G between the municipalities of Parksville and Qualicum Beach). There are currently 247 residential and no commercial connections to the system. The sanitary sewer collection system discharges into a trunk sewer system that conveys the sewage to the French Creek Pollution Control Centre located on Lee Road.

The infrastructure cost per parcel in the service area in 2017 was \$336.97 for 57 of the connections, and \$722.55 for 190 connections. The annual utility fee (usage charge) for the homes on the BCSSA was \$250.37.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement cost values for the majority of components in the BCSSA were based on the Nanoose Bay Peninsula Water Service Area values as provided by a third-party engineering firm in 2015. This evaluation data was comparable for analysis purposes but not specific to a sewer service so there is a lower data confidence rating of '2' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$1,800,000

Lifecycle Period

100 years

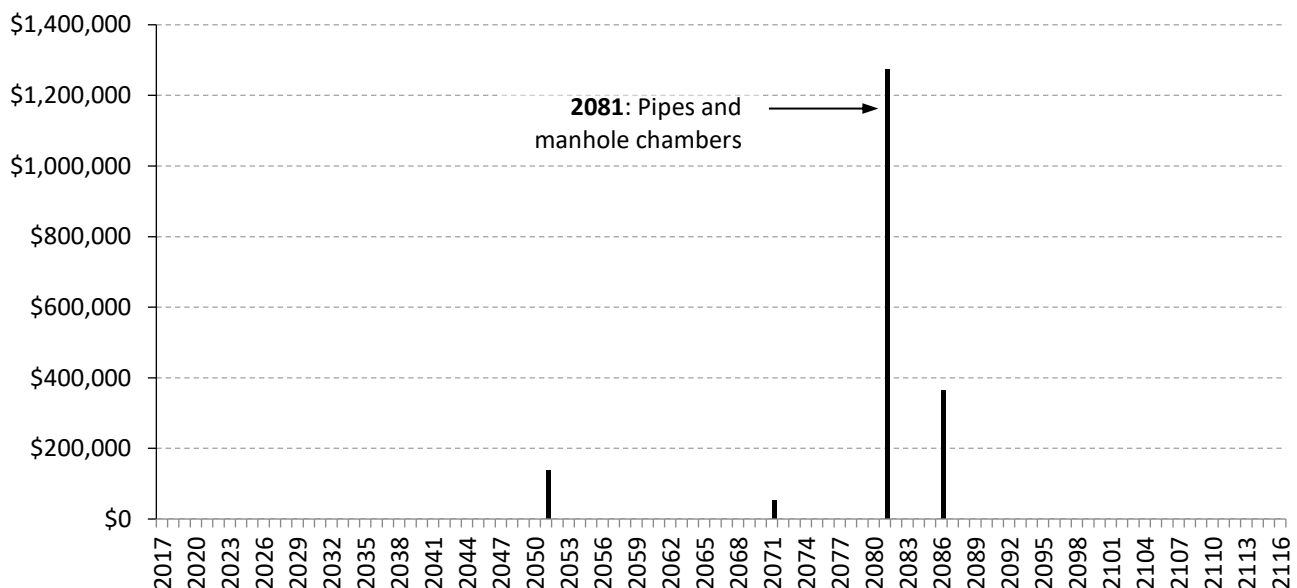
Average Useful Life of All Assets

74.1 years

Average Annual Replacement Cost

\$24,500

BCSSA: Current Replacement Costs (2017-2117)

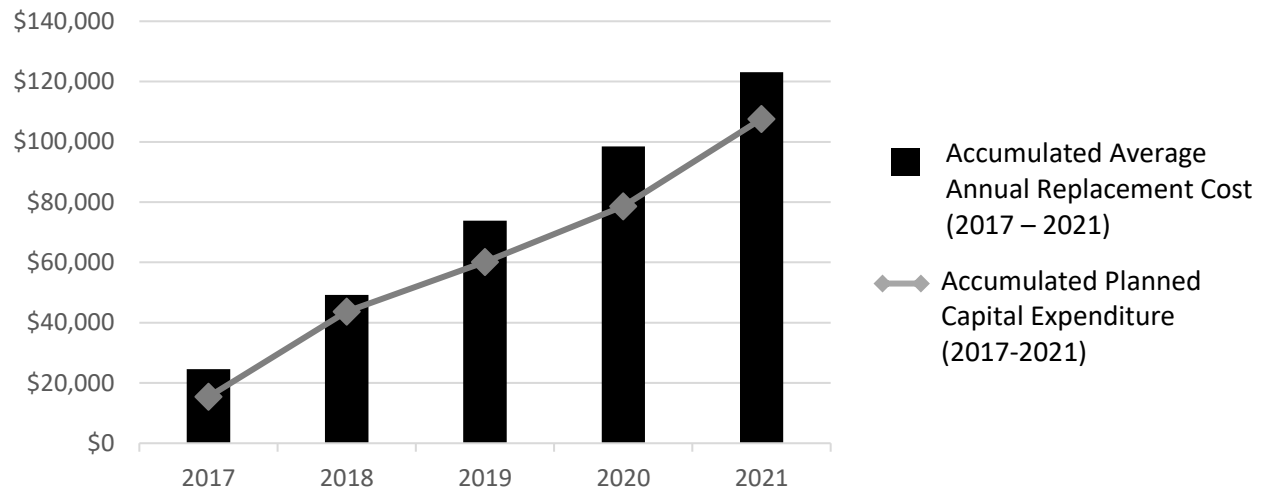




Planned Capital Expenditure & Average Annual Replacement Costs

For the BCSSA there are planned capital expenditures of \$108,000 over the 2017-2021 period, including a planned pump replacement. There is a close alignment between planned capital expenditures and average annual replacement costs, with a minimal infrastructure deficit developing over the 2017-2021 period.

BCSSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



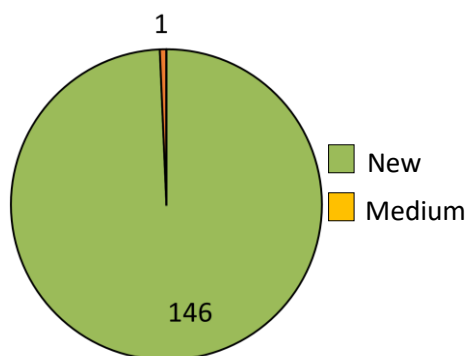
Capital Reserve Opening Balance (2018):

\$5,000

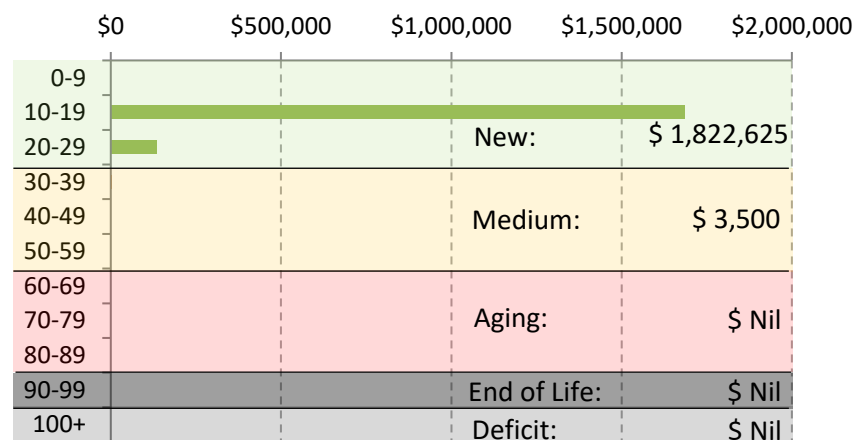
Age and Asset Condition

Asset age indicates asset condition. For the BCSSA, 99% of all assets are in the *New* age category, resulting in a condition rating of *Very Good*. The entire 100% of the value of the assets are in the *New* category meaning the system is early in its life cycle.

BCSSA: Total Number of Assets by Age Class



BCSSA: Total Asset Value by Age Class



2.4.11 Cedar Sewer Service Area (CSSA)

Level of Service

The Cedar Sewer Service Area was established in 2010 and serves 68 residential and commercial connection in the Cedar town core, on parts of MacMillan Road and Cedar Road. The sanitary sewer collection system discharges into a trunk sewer system that conveys wastewater to the Duke Point Pollution Control Centre.

Infrastructure costs are calculated on the basis of size and land use, and vary considerably widely per connection. The annual utility fee for the homes on the CSSA was \$233.40 plus \$1.60/day.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement cost values for the majority of components in the CSSA were based on the Nanoose Bay Peninsula Water Service Area values as provided by a third-party engineering firm in 2015. This evaluation data was comparable for analysis purposes but not specific to a sewer service so there is a lower data confidence rating of '2' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$1,200,000

Lifecycle Period

100 years

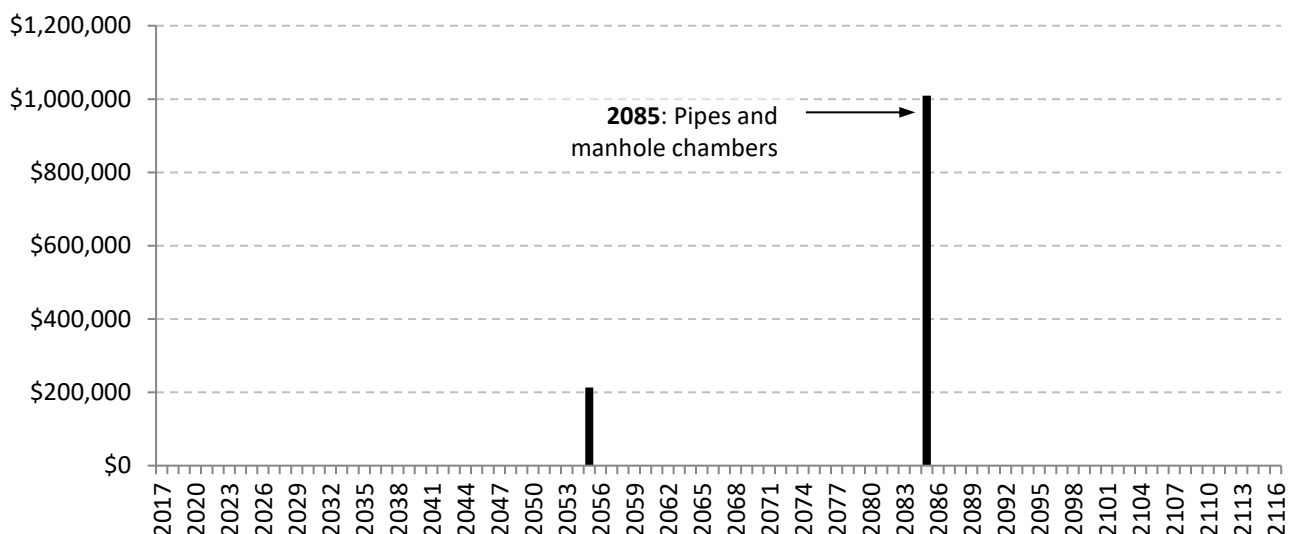
Average Useful Life of All Assets

74.7 years

Average Annual Replacement Cost

\$16,000

CSSA: Current Replacement Costs (2017-2117)

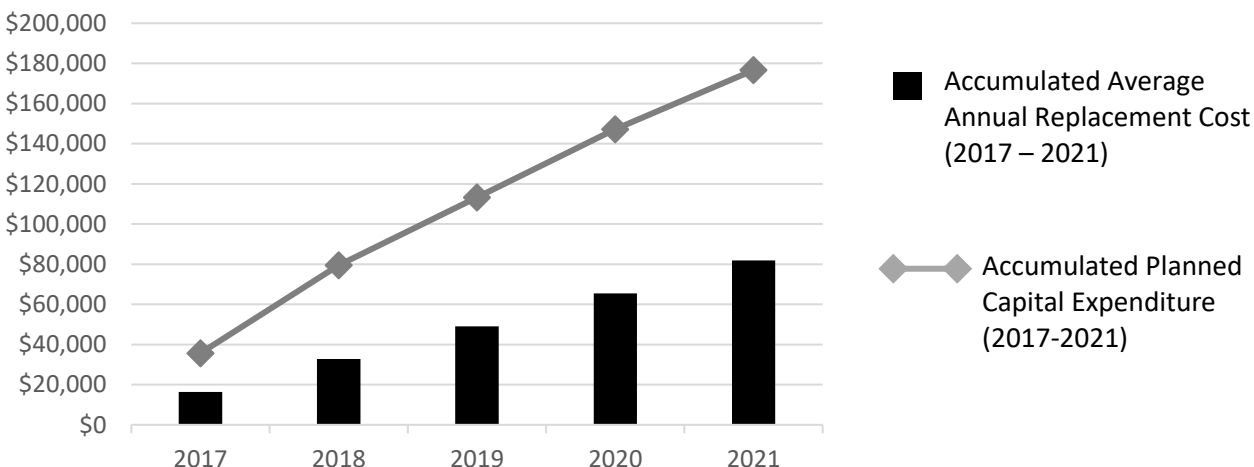




Planned Capital Expenditure & Average Annual Replacement Costs

For the CSSA there are \$177,000 in planned capital expenditures over the 2017-2021 period. This is above the anticipated capital expenditures given the young age and average annual replacement values for the CSSA. A closer examination of operating costs included as capital expenditures is necessary to refine the schedule of planned capital expenditures for the CSSA.

CSSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

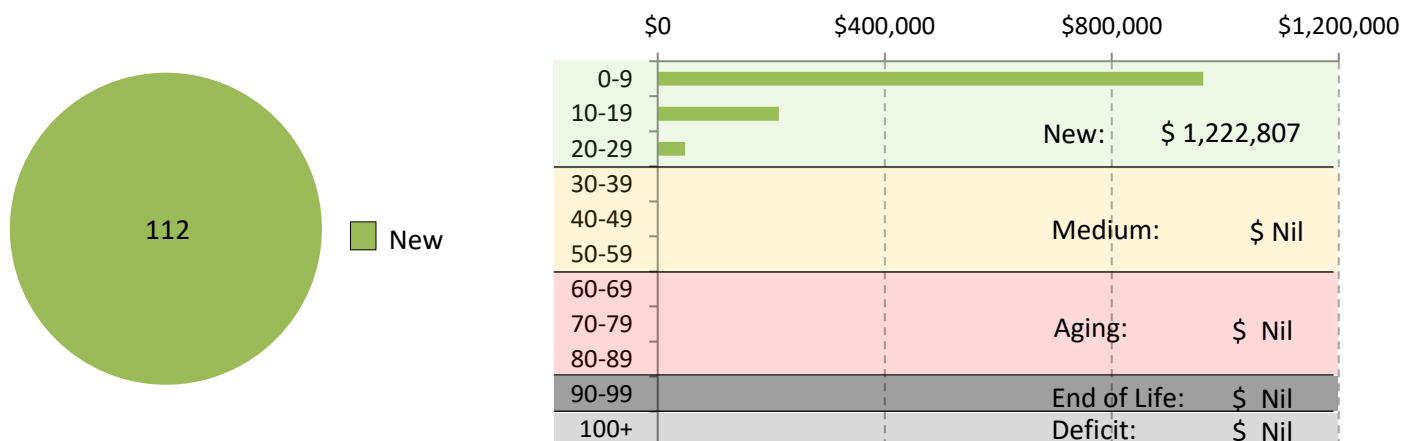
\$87,000

Age and Asset Condition

Asset age indicates asset condition. For the CSSA, 100% of all assets are in the *New* age category, resulting in a condition rating of *Very Good*. The entire 100% of the value of the assets are in the *New* category meaning the system is early in its life cycle.

CSSA: Total Number of Assets by Age Class

CSSA: Total Asset Value by Age Class



2.4.12 French Creek Sewer Service Area (FCSSA)

Level of Service

The French Creek Sewer Service Area was established in 1980 and comprises an area west of Drew Road and south of the Island Highway between the City of Parksville and the Town of Qualicum Beach. There are currently 1,918 residential and commercial connections to the system. The sanitary sewer collection system discharges into a trunk sewer system that conveys the sewer to the French Creek Pollution Control Centre located on Lee Road.

The infrastructure cost per parcel in the service area in 2017 was \$357.61. The annual utility fee (usage charge) for the homes on the FCSSA was \$175.63.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement cost values for the FCSSA were based on the Nanoose Bay Peninsula Water Service Area values as provided by a third-party engineering firm in 2015. This evaluation data was comparable for analysis purposes but not specific to a sewer service so there is a lower data confidence rating of '2' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$13,500,000

Lifecycle Period

100 years

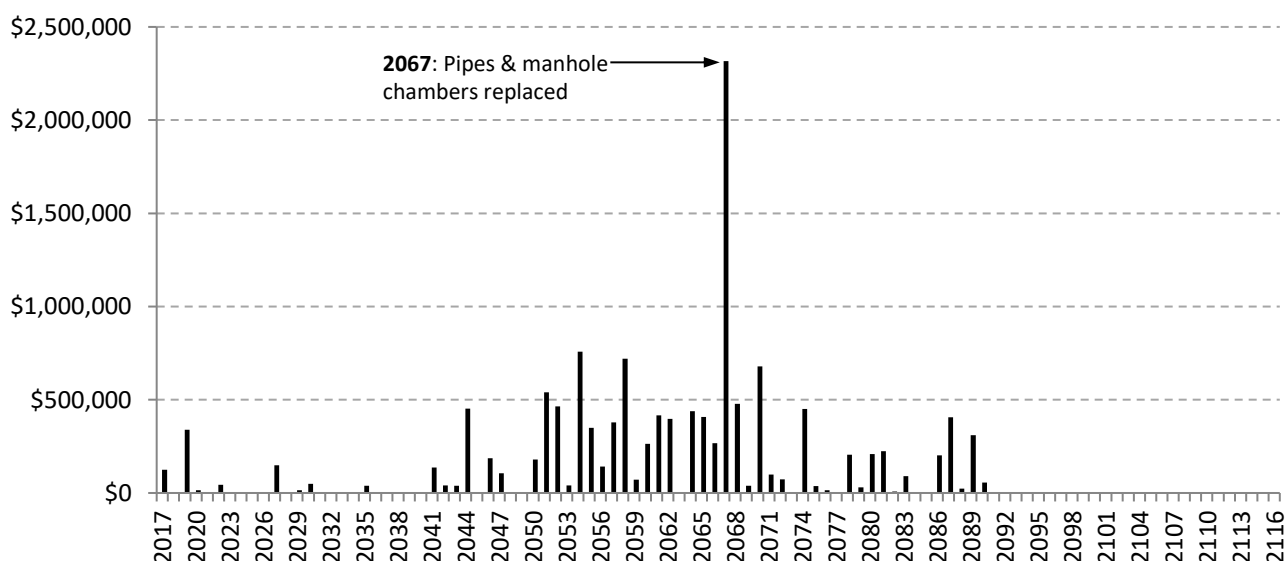
Average Useful Life of All Assets

71.7 years

Average Annual Replacement Cost

\$230,000

FCSSA: Current Replacement Costs (2017-2117)

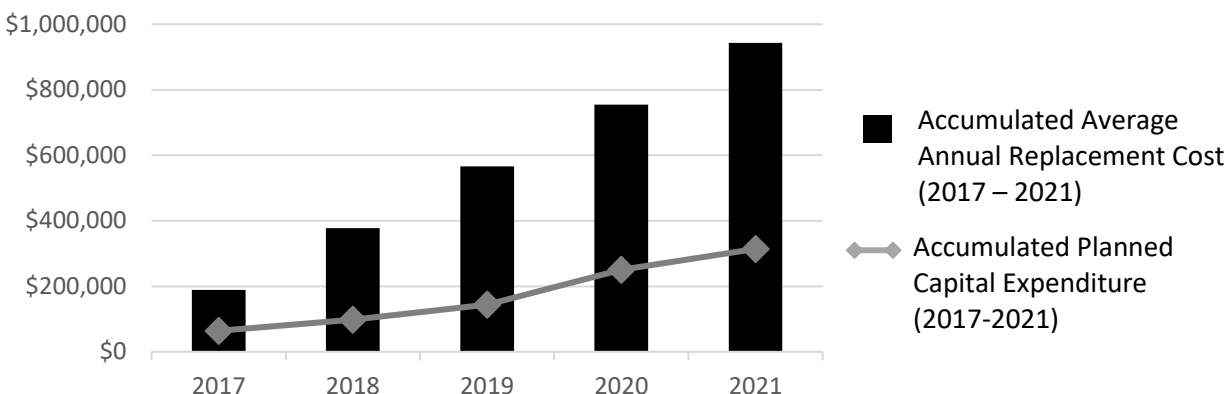




Planned Capital Expenditure & Average Annual Replacement Costs

For the FCSSA there are planned capital expenditures of \$315,000 over the 2017-2021 period, including a pump station upgrade. This expenditure is well below the average annual replacement costs for the FCSSA, reflecting the relatively young age of the system. Due to the age of this system there is a need for a closer examination of planned capital expenditures to ensure that asset renewal and replacements can proceed over the longer-term without significant changes to utility rates.

FCSSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

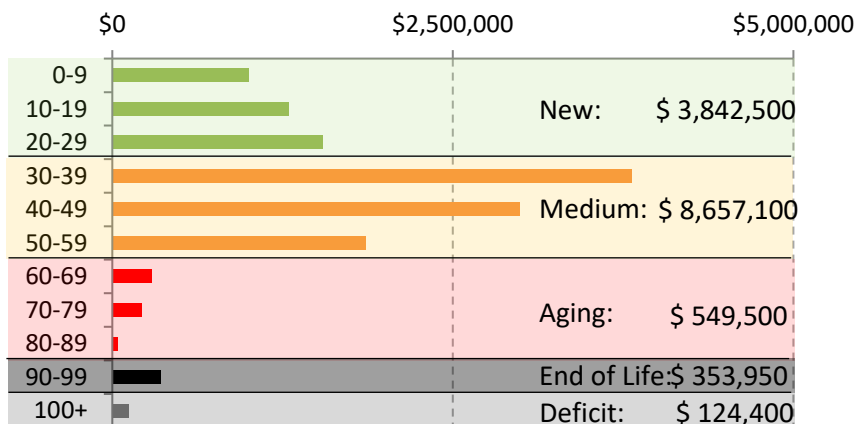
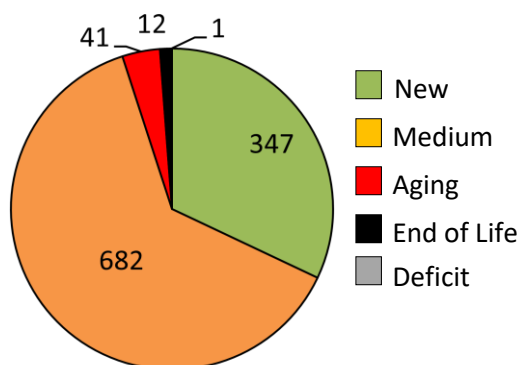
\$498,000

Age and Asset Condition

Asset age indicates asset condition. For the FCSSA, 95% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. In terms of asset value, 92% of the value of all the assets are in the *New* or *Medium* category. 1% of assets (4% by value) are at or nearing the time for replacement or renewal.

FCSSA: Total Number of Assets by Age Class

FCSSA: Total Asset Value by Age Class



2.4.13 Surfside Sewer Service Area (SSSA)

Level of Service

The Surfside Sewer Service Area was established in 1998 and comprises an area north of Qualicum Beach in the McFeely Drive and Kinkade Road area. There are currently 27 residential connections and no commercial connections to the system. The sanitary sewer collection system discharges into a trunk sewer system that conveys the sewer to the French Creek Pollution Control Centre located on Lee Road.

The infrastructure cost per parcel in the service area in 2017 was \$801.22. The annual utility fee (usage charge) for the homes on the SSSA was \$145.66.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement cost values for the SSSA were based on the Nanoose Bay Peninsula Water Service Area values as provided by a third-party engineering firm in 2015. This evaluation data was comparable for analysis purposes but not specific to a sewer service so there is a lower data confidence rating of '2' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$634,000

Lifecycle Period

100 years

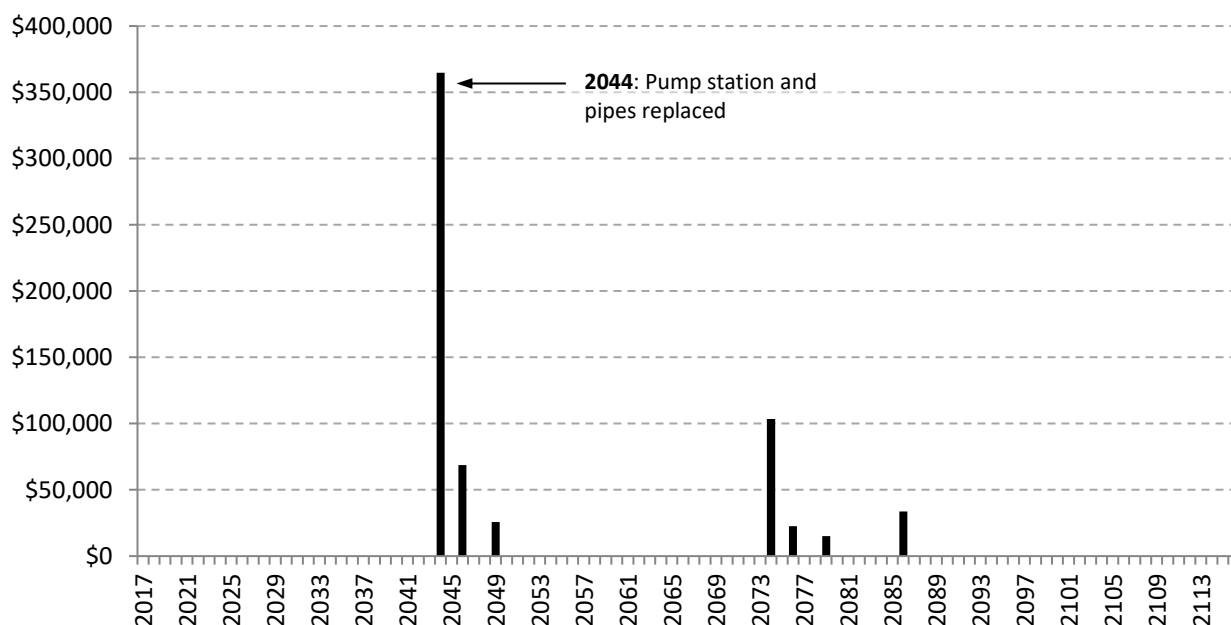
Average Useful Life of All Assets

62.4 years

Average Annual Replacement Cost

\$10,000

SSSA: Current Replacement Costs (2017-2117)

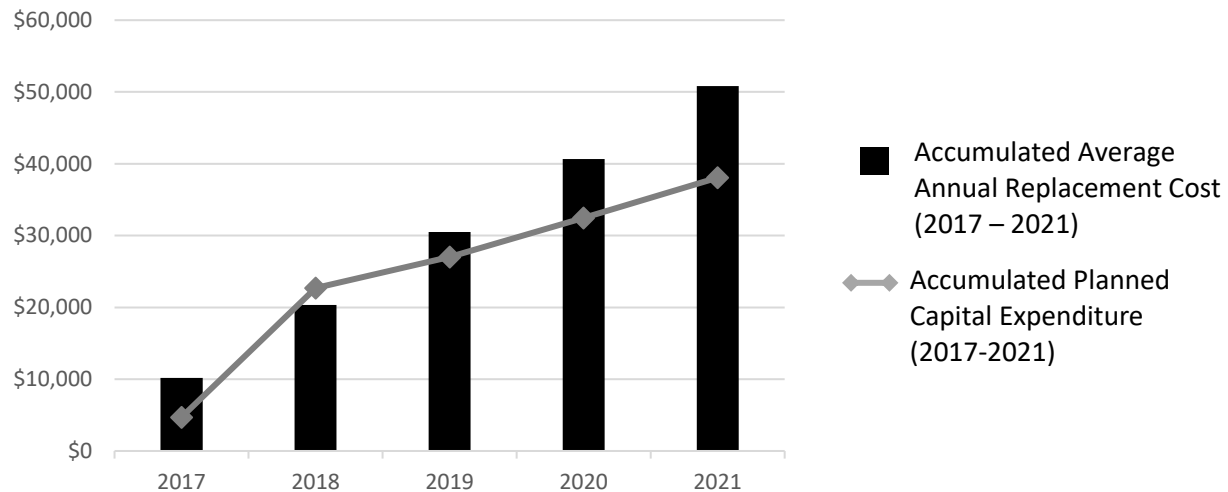




Planned Capital Expenditure & Average Annual Replacement Costs

For the SSSA there are planned capital expenditures of \$38,000 over the 2017-2021 period. This is closely aligned to the average annual replacement costs for the system, with a small deficit in infrastructure investment developing in 2020-2021.

SSSA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

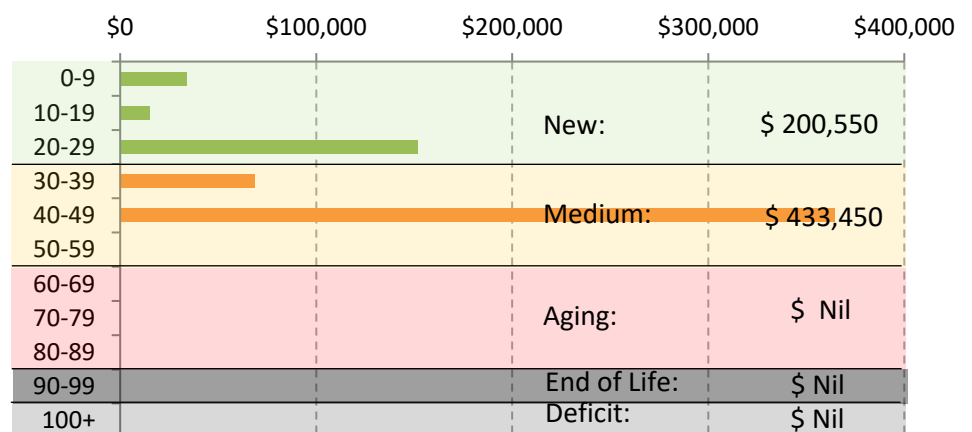
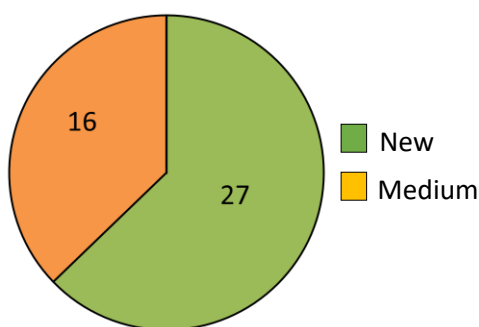
\$8,100

Age and Asset Condition

Asset age indicates asset condition. For the SSSA, 100% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. The value of all 100% of the assets are in the *New* or *Medium* category meaning the assets are early in their lifecycles.

SSSA: Total Number of Assets by Age Class

SSSA: Total Asset Value by Age Class



2.4.14 Street Lighting Local Service Areas (SLSSA)

Level of Service

There are seven street lighting local service areas (SLLSAs) in the RDN, each established through separate bylaws.

- Bylaw 789, Fairwinds
- Bylaw 869.01, Morningstar
- Bylaw 909, Sandpiper
- Bylaw 1062, French Creek Village
- Bylaw 791, French Creek / Nanoose rural
- Bylaw 1048, Highway 4 Intersection
- Bylaw 1353, Englishman River

The SLLSAs are non-contiguous, self-contained areas that are financially supported by the properties within each individual service area.

The two types of streetlights installed in the SLLSAs are the more common cobra-head streetlights attached to hydro poles, or ornamental streetlights which are installed by developers at the time of construction in newer subdivisions. An electrical contractor maintains and repairs the ornamental streetlights within local services areas. BC Hydro looks after the repair and maintenance of all other streetlights.

The cost of service in the SLLSAs in 2016 was \$720.02 per parcel in the service area, plus an average of \$239.39 in metered charges.

Current Replacement Costs

Data Confident Rating: 2

Current replacement costs for the SLLSAs are based on operations staff knowledge. This provides a data confidence rating of '2'.

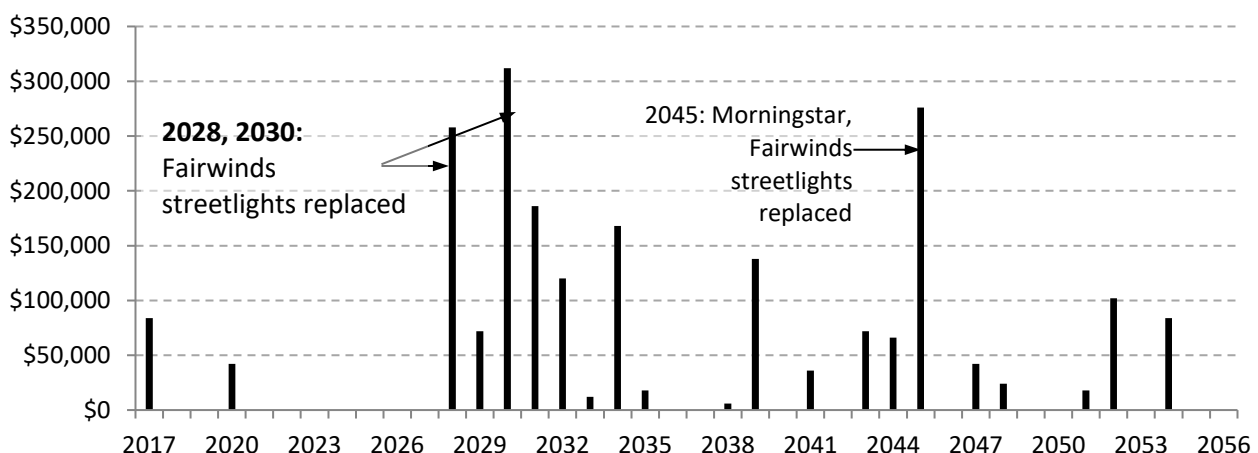
Total Replacement Value (2016 Dollars) \$2,100,000

Lifecycle Period 40 years

Average Useful Life of All Assets 39.4 years

Average Annual Replacement Cost \$53,000

SLLSAs: Current Replacement Costs (2017-2056)

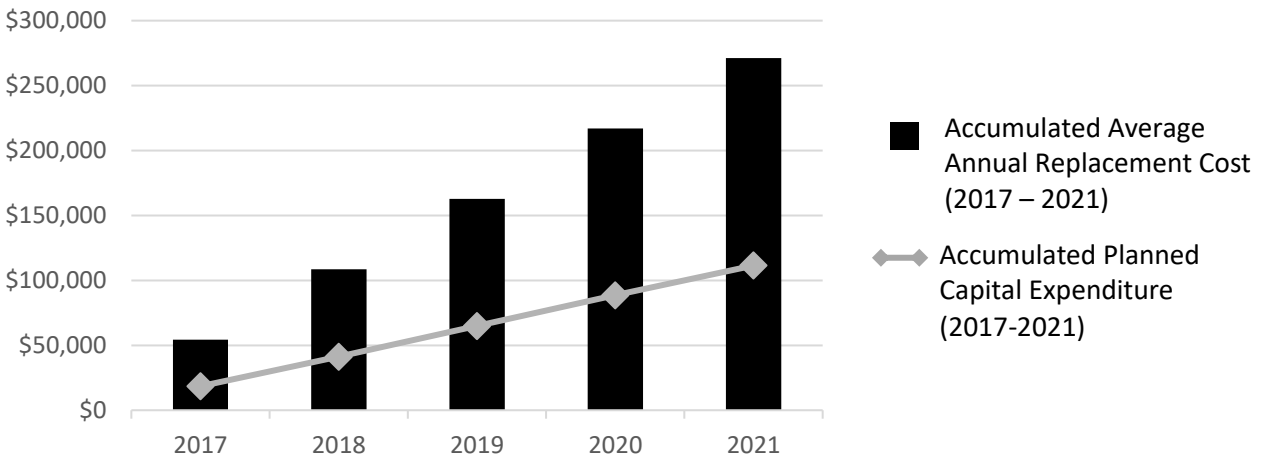




Planned Capital Expenditure & Average Annual Replacement Costs

For the SLLSAS \$111,000 of planned capital expenditures over the 2017-2021 period contribute to extending the life of these assets, however expenditures on actual capital are minimal, resulting in a growing infrastructure deficit over time.

SLLSAS Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balances (2018):

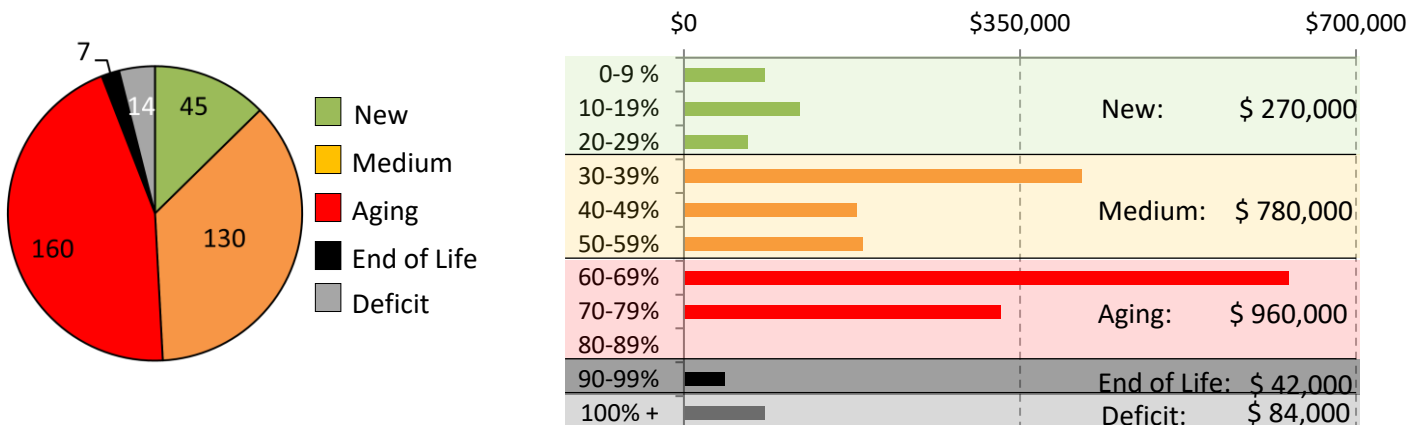
Fairwinds:	\$35,000	Morningstar:	\$13,000
EA E & G:	\$13,000	Eng. River:	\$8,000

(Other Streetlighting Service Areas do not have capital reserves.)

Age and Asset Condition

Asset age indicates asset condition. For the SLLSAS, 50% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. Regarding the value of assets, 6% of the value of all the assets are in the *End of Life* or *Deficit* category meaning a number of the assets are at or nearing the time for replacement or renewal.

SLLSAS: Total Asset Value by Age Class SLLSAS: Total Number of Assets by Age Class



2.5 Wastewater Services

The Wastewater Services department treats sewage and discharges effluent through the Duke Point, French Creek, Greater Nanaimo and Nanoose Pollution Control Centres.

The department is also responsible for sewer mains and pump stations, and conducts maintenance of the sewer pump stations operated by the Water and Utility Services department.

Table 4 Wastewater Services AM Practices

AMBC Category	Summary of Current Asset Management Practice
Know Your Assets	The overall asset inventory is estimated at more than 90% accurate. Asset inventories for pump stations and treatment plants, as well as equipment details are stored in Web Works. The diameter and material of linear assets are stored in an Excel spreadsheet. Inclusion of gravity mains, outfalls, and forcemain assets into GIS are ongoing. An \$82 million upgrade and expansion to the Greater Nanaimo Pollution Control Centre is currently underway.
	Web Works is the primary software tool in use to manage asset information, with information on linear assets stored in Excel and ArcGIS. Treatment process data is stored in WaterTrax and Intelex is the Environmental Management System (EMS) software. Configuration and use of software tools such as Web Work will be improved to support advanced decision-making and data analysis.
	The costs for all wastewater systems are tracked and kept within individual cost centres and service areas.
Know Your Financial Position	Current replacement values for assets is available Web Work and in a reinvestment planning spreadsheet. Lifespans have been revised to reflect the rate of deterioration of assets with ground-truthing and resources will be directed to keep these values current. The foundational elements under this category are complete.
	The long-range financial plan for Wastewater Services includes new capital projects and is reinvestment rather than lifecycle focused.
	Wastewater staff can differentiate operations from maintenance costs as far as 17 years back and resources will be directed to improve data capture at the asset level.
Understand Decision-Making	Taxation funds operations and maintenance for all wastewater systems. The amount of revenue collected through taxation is apportioned according to the volume of wastewater each area or participant generates. There are also user charges for septage receiving and pump and haul customers. Expansions to accommodate additional capacity are funded in part through DCCs and grants as well as taxation.
	Decision making in this service area is based on an understanding of good asset management practices through staff. Wastewater services documents purchase decisions in Web Work and decisions that require expertise undergo a documented process. Options for repairs are known by key personnel, but documentation of the range of repair options considered requires development.



	A procedure to improve the process for entering assets and asset information into Web Works has been developed.
	A portion of work history indicative of asset condition can be found in Web Work.
Manage Asset Lifecycle	The condition of the assets is well understood by technical staff. The condition of certain assets has been verified by external expertise. Condition data is recorded against relevant assets in Web Work. It is also kept in separate technical documents.
	The Wastewater Service uses Web Work to generate work orders to ensure preventive maintenance is completed as identified in equipment maintenance manuals or as reported by staff. Review of maintenance options depend on the criticality and the risk of failure of the equipment.
Know the Rules	Legislative requirements are known and documented within the EMS Intalex, WaterTrax and Web Work systems. These systems ensure continuity across staffing changes, reflect active monitoring and provide evidence of compliance.



2.5.1 Wastewater Services - Level of Service

The Regional District operates four wastewater treatment facilities, 23 pump stations, and two septage receiving sites to transport and treat wastewater from about 110,000 homes and businesses. This number includes homes and businesses located within the municipalities of Nanaimo, Parksville, Qualicum Beach, and Lantzville and in sewer service areas located in Electoral Areas A, E and G.

Property owners not connected to sewer, largely those residing in rural areas and island communities, are responsible for their own wastewater treatment, and often use privately-owned septic and onsite systems. A small number of properties are authorized by Island Health to use pump and haul services and the RDN receives and treats holding tank waste from these properties as well as septage from pumped septic tanks.

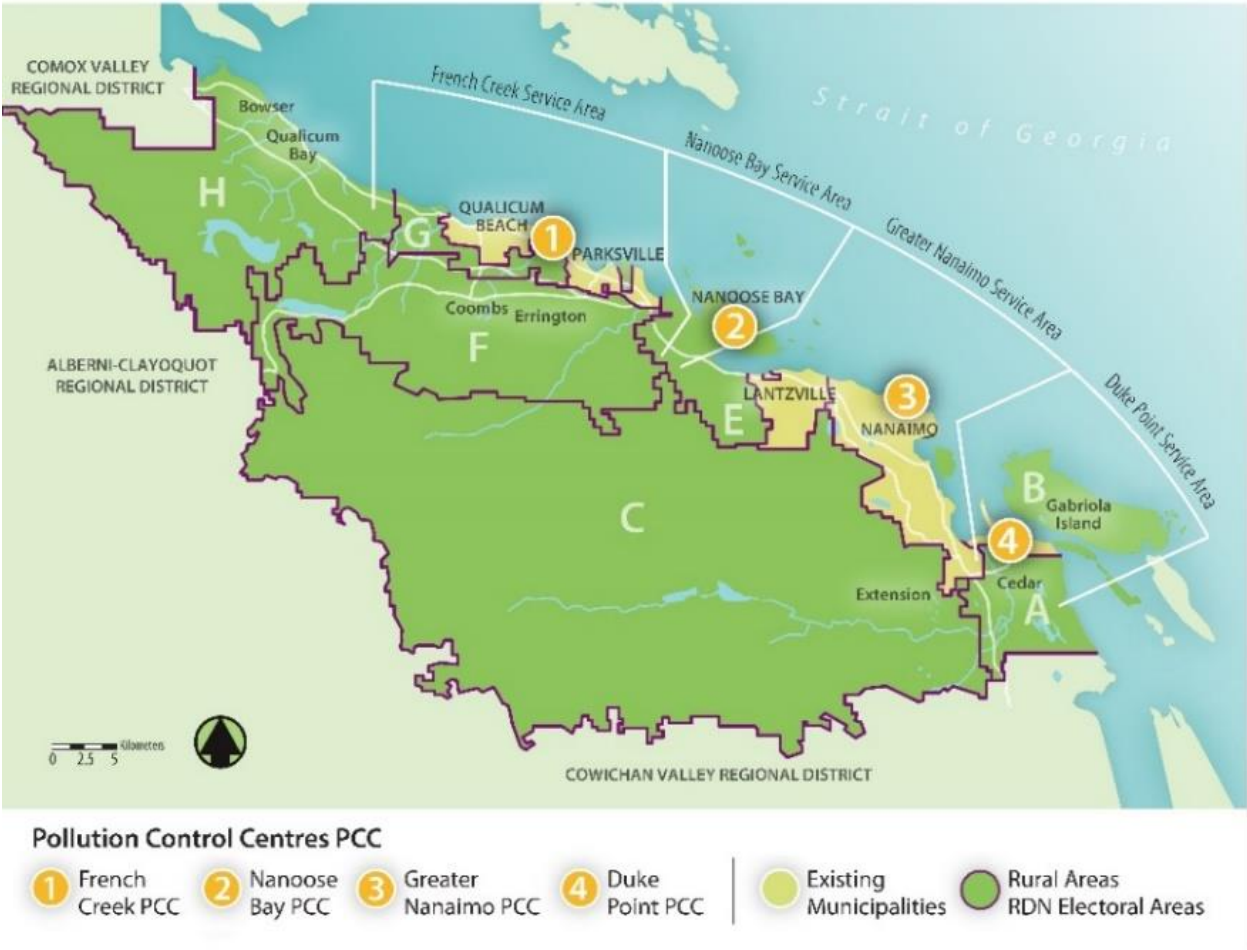
There is a vast network of pipes, interceptors, pumps, lift stations, chamber, manholes, valves, treatment facilities and outfall pipes. The asset inventory is the largest of any of the RDN departments, and the estimated replacement value is by far the greatest. Many parts of the system (such as interceptors and other piping) have been in the ground for decades. Due to the complexity of the network, work is ongoing to fully update the inventory with details such as replacements costs and estimated useful lives.

A conservative estimate for the total replacement value of RDN waste water services, based on inflated historic costs, known replacement values, and current construction pricing, is about \$186.4 million.

Significant capital investment is currently underway at the Greater Nanaimo facility. The expansion and upgrade to secondary treatment began in May 2017 and will continue to December 2019. The project budget is \$82 million including contingency. The upgrade project will be paid for through a combination of reserves, development cost charges, grants and borrowing.



WASTEWATER SERVICES IN THE REGIONAL DISTRICT OF NANAIMO



2.5.2 Fairwinds Sewer Service Area and Nanoose Bay Pollution Control Centre

Level of Service

The Fairwinds Sanitary Sewer Service Area (FSSA) serves approximately 800 residential and commercial connections in the Fairwinds neighbourhood of Nanoose Bay. The collection system and main trunk sewer conveys liquid waste to the Nanoose Bay Pollution Control Centre (NBPCC) for treatment. Wastewater is gravity fed and pumped to NBPCC from nine pump stations.

The infrastructure cost per parcel in the service area in 2017 was \$731.05. The usage charge for the homes on the FSSA was \$77.09.

The NBPCC uses chemically-enhanced primary treatment to remove up to 70% of biological oxygen demand (BOD) and up to 80% of total suspended solids (TSS). Sludge from NBPCC is trucked to the French Creek Pollution Control Centre where it undergoes further treatment.

Current Replacement Costs

Data Confidence Rating: 3

A detailed asset inventory is available for both the FSSA and NBPCC. This provides a data confidence rating of 3.

Total Replacement Value (2016 Dollars)

\$14,200,000

Lifecycle Period

70 years

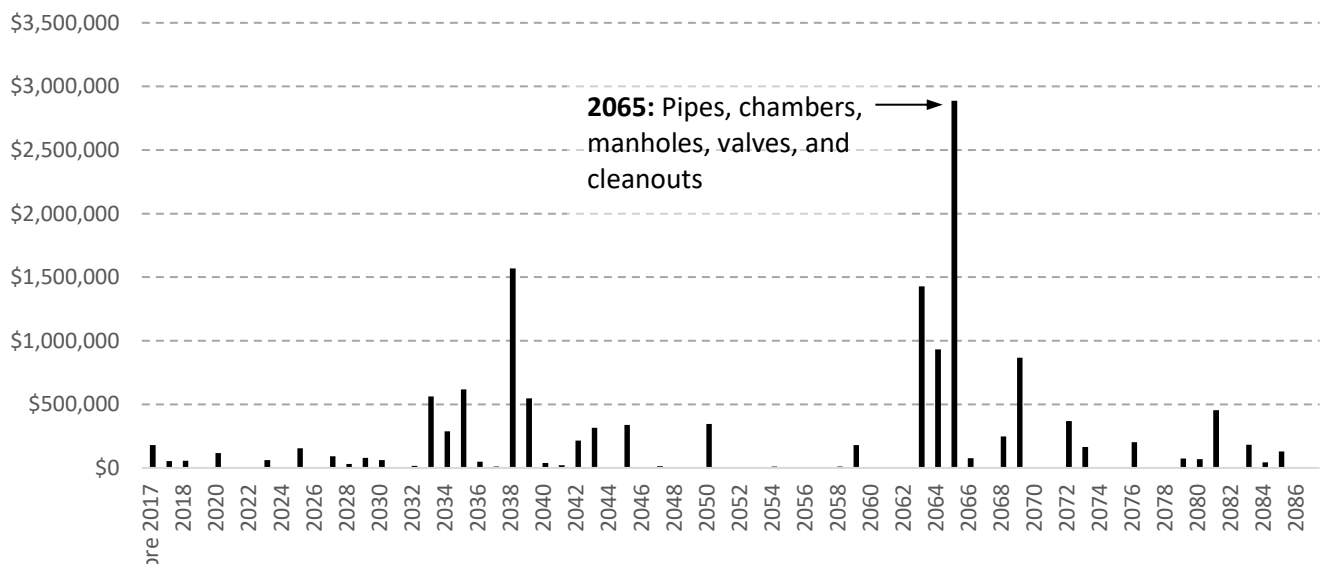
Average Useful Life of All Assets

65.7 years

Average Annual Replacement Cost

\$216,000

Fairwinds Sewer and NBPCC: Current Replacement Costs (2017-2087)

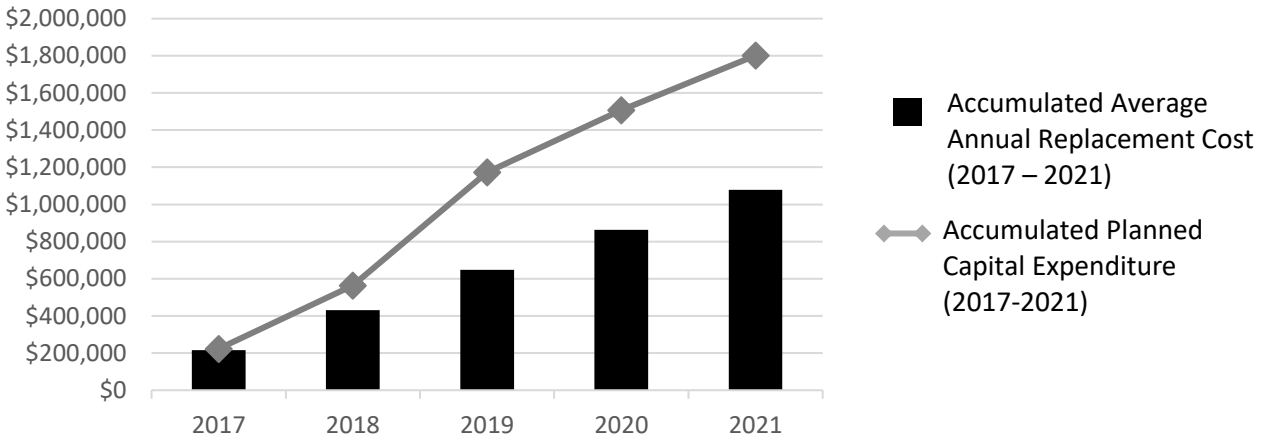




Planned Capital Expenditure & Average Annual Replacement Costs

The NBPCC has planned capital expenditures of \$1.8 million over the 2017-2021 period. Items of expenditure include back-up pumps for lift stations, a new generator and generator truck, and replacement of major lift station components.

FSSA & NBPCC Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



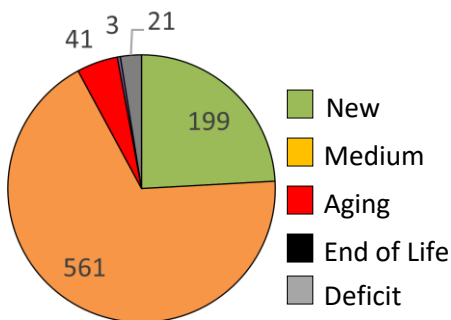
Capital Reserve Opening Balance (2018):

\$1,035,000

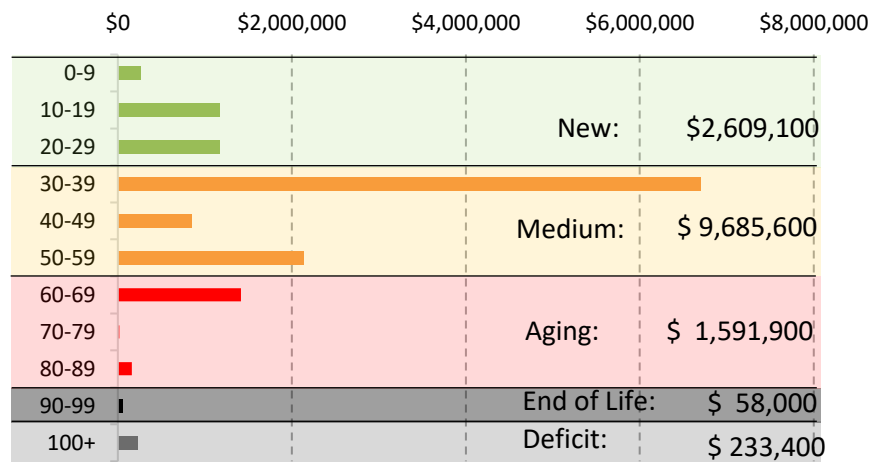
Age and Asset Condition

Asset age indicates asset condition. For the FSSA and NBPCC service area, 97% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. A total of 87% of the value of all the assets are in the *New* or *Medium* category. The majority of assets are early in their lifecycles.

FSSA, NBPCC: Total Number of Assets by Age Class



FSSA/ NBPCC: Total Value of Assets by Age



2.5.3 Duke Point Waste Water Service (DPWW)

Level of Service

Wastewater from 56 connections in the Duke Point service area is treated at the Duke Point Pollution Control Centre (DPPCC). Wastewater is gravity fed and pumped to DPPCC via three pump stations.

The DPPCC uses Secondary Treatment to remove 95% of biological oxygen demand (BOD) and total suspended solids (TSS). Sludge from DPPCC is trucked to the Greater Nanaimo Pollution Control Centre where it undergoes further treatment.

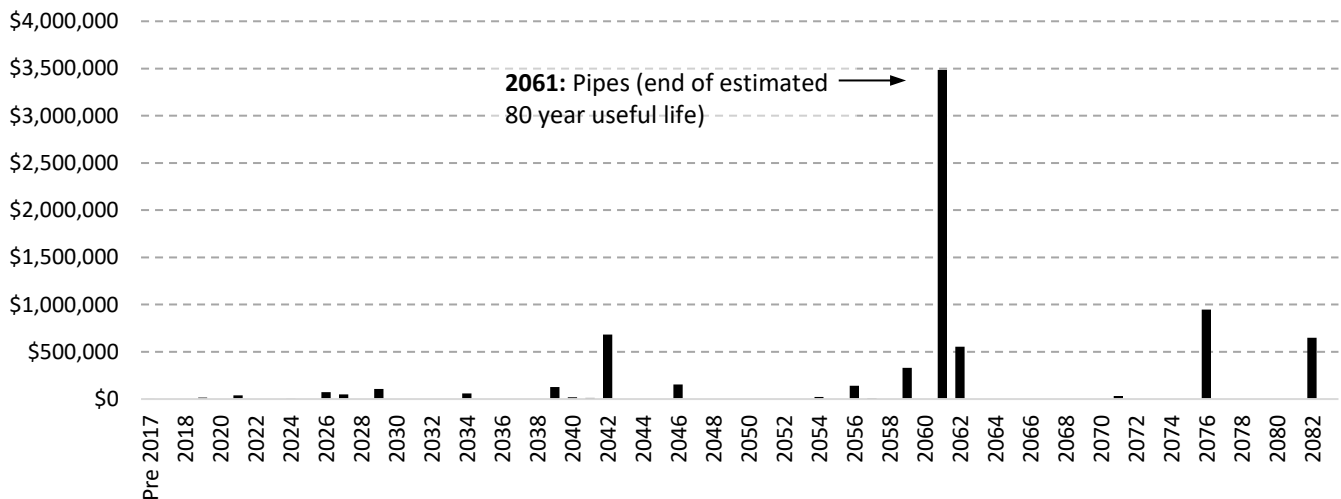
Current Replacement Costs

Data Confidence Rating: 2

An asset inventory is available for the system. Current replacement costs and anticipated useful life are based on historic values and known market costs. The data confidence rating is 2.

Total Replacement Value (2016 Dollars)	\$7,500,000
Lifecycle Period	65 years
Average Useful Life of All Assets	53 years
Average Annual Replacement Cost	\$124,000

Duke Point Waste Water: Current Replacement Costs (2017-2082))

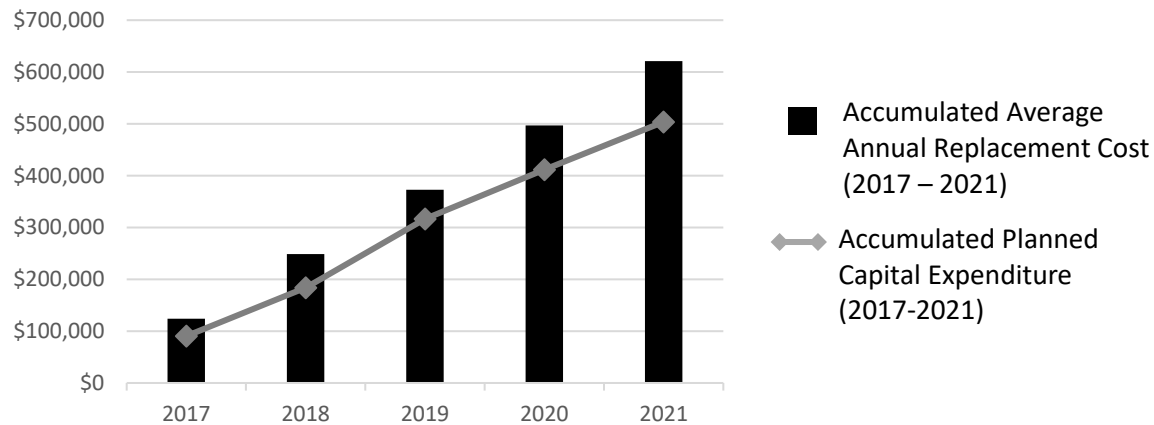




Planned Capital Expenditure & Average Annual Replacement Costs

For the DPPCC there are planned capital expenditures of \$424,000 over the 2017-2021 period. Items of expenditure include new pumps and blowers for the treatment plant, in addition to anticipated routine plant maintenance and equipment repairs.

DPPCC Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

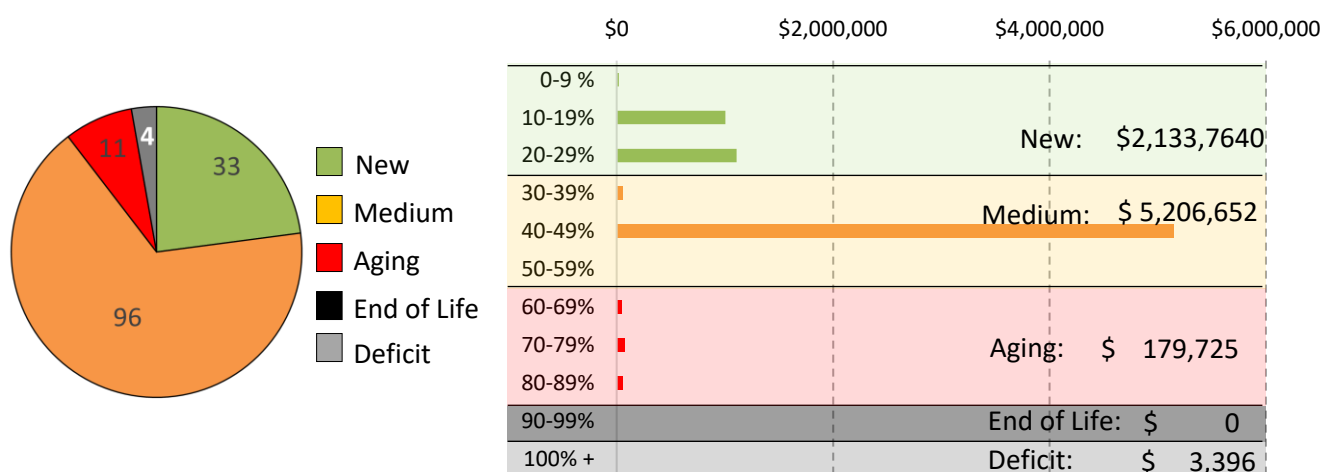
\$216,000

Age and Asset Condition

Asset age indicates asset condition. For the DPPCC, 90% of assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. A total of 98% of the value of all the assets are in the *New* or *Medium* category. The majority of assets are early in their lifecycles.

DPPCC Total Number of Assets by Age Class

DPPCC Total Value of Assets by Age Class



2.5.4 Northern Community Waste Water (NCWW)

Level of Service

The Northern Community Waste Water service area treats wastewater from residential and commercial connections (an estimated population of 30,000) in Parksville, Qualicum Beach and five RDN sewer service areas at the French Creek Pollution Control Centre (FCPCC). Wastewater is gravity fed and pumped via three major pump stations. FCPCC also accepts septage from residential onsite septic systems and wastewater from pump-and-haul clients. Treated effluent is discharged into the Strait of Georgia at a depth of 61 metres, 2,440 metres offshore.

The FCPCC opened in 1977 and has received several upgrades and improvements over the years. Secondary Treatment processes remove 94% of Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS).

Current Replacement Costs

Data Confidence Rating: 2

Current replacement costs and lifecycle information are based on historic values and known market costs. The data confidence rating is 2.

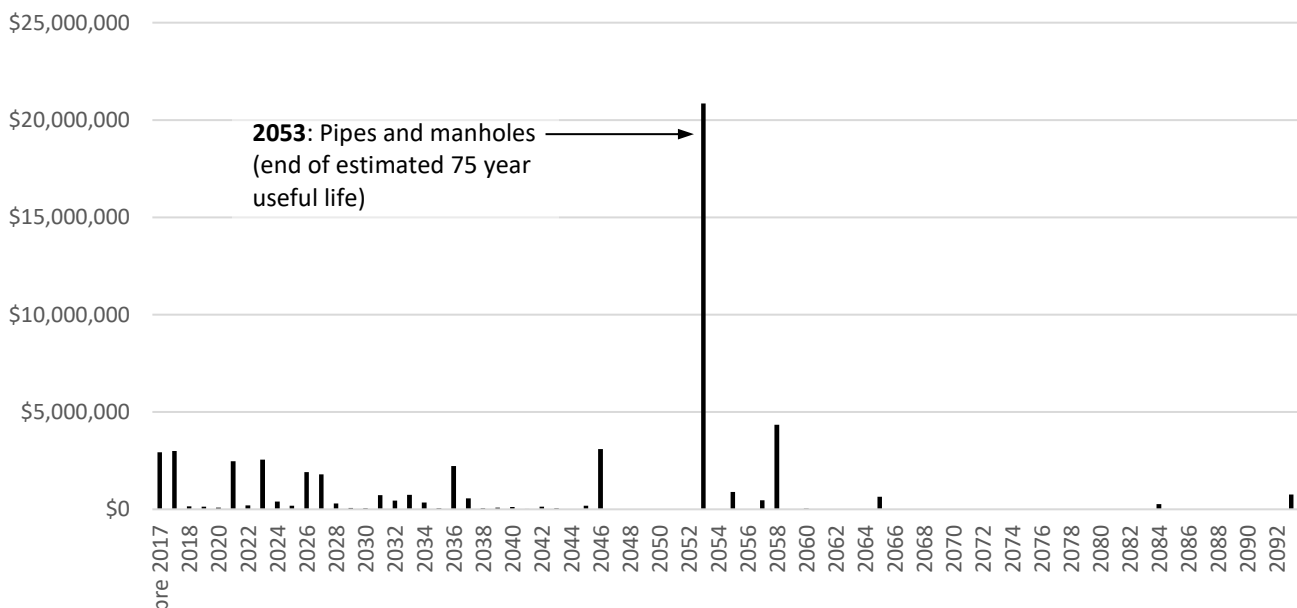
Total Replacement Value (2016 Dollars) **\$53,400,000**

Lifecycle Period **75 years**

Average Useful Life of All Assets **38.2 years**

Average Annual Replacement Cost **\$1,400,000**

Northern Community Waste Water: Current Replacement Costs (2017-2092)



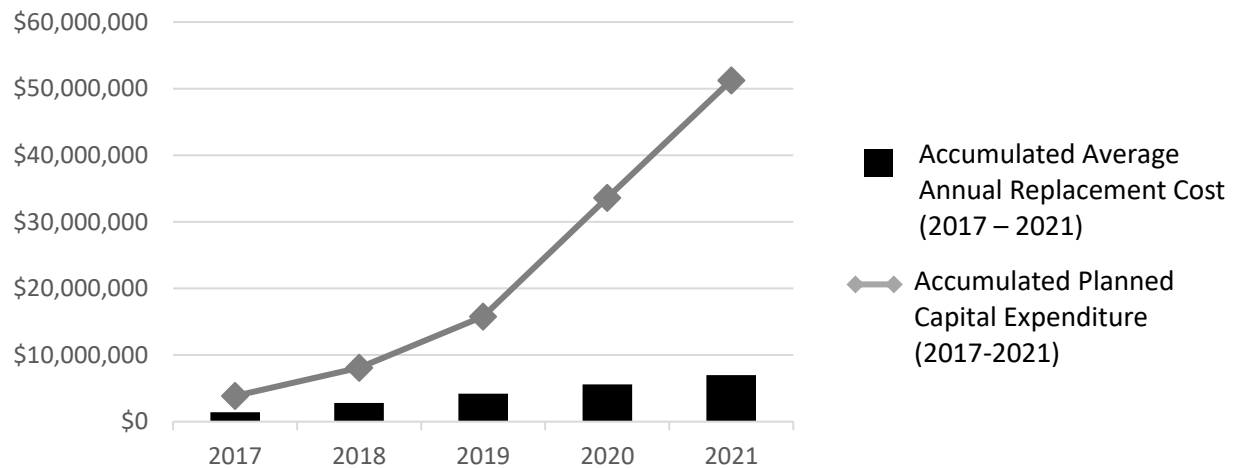


Planned Capital Expenditure & Average Annual Replacement Costs

For the Northern Community Waste Water service area, planned capital expenditures over the 2017-2021 period total \$51 million. The largest item is an expansion to the plant itself, at \$33 million. A pump station upgrade is budgeted at \$2.5 million, and renewal or replacement of interceptors, pumps and other treatment plant infrastructure are also planned for.

The expansion work is being funded through a combination of taxation, reserves, DCCs, and grants.

NCWW Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

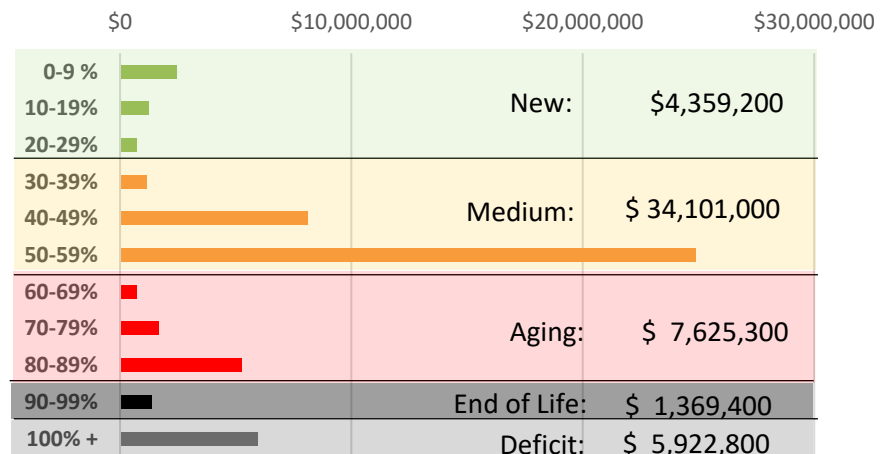
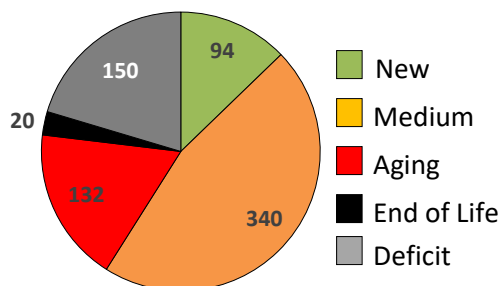
\$11,890,000

Age and Asset Condition

Asset age indicates asset condition. For the NCWW service area, 60% of assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. A total of 72% of the value of all the assets are in the *New* or *Medium* category.

NCWW Total Number of Assets by Age Class

NCWW Total Value of Asset by Age Class



2.5.5 Southern Community Waste Water (SCWW)

Level of Service

The Southern Community Waste Water service serves an estimated population of 93,000 in the City of Nanaimo, Snuneymuxw First Nation, and parts of Lantzville. Wastewater is gravity fed and pumped via three major pump stations to the Greater Nanaimo Pollution Control Centre (GNPCC). The Chase River pump station also accepts septage from residential onsite (septic) systems and wastewater from pump-and-haul clients. Treated effluent is discharged into the Strait of Georgia 2,030 metres offshore at a depth of 70 metres.

A Secondary Treatment upgrade project is currently underway with completion due December 2019. This service level change will result in new data for replacement costs.

Current Replacement Costs

Data Confidence Rating: 2

A Current replacement costs and anticipated useful life information are based on historic values and known market costs. The data confidence rating is 2.

Total Replacement Value (2016 Dollars)

\$111,300,000

Lifecycle Period

80 years

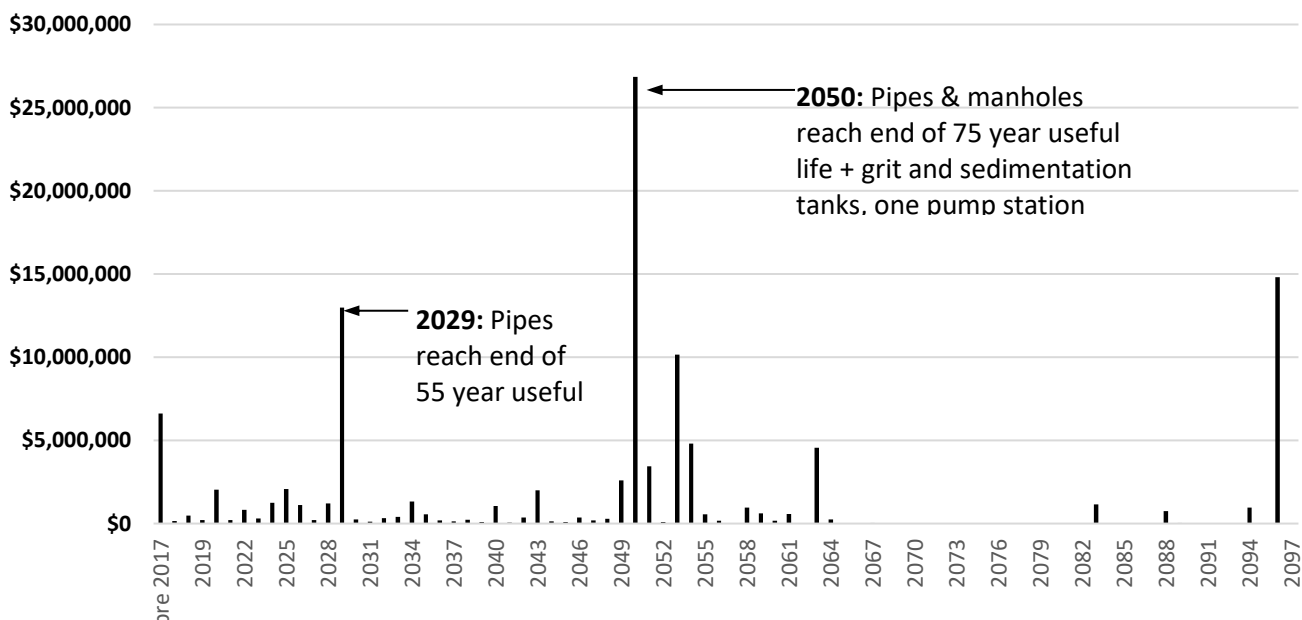
Average Useful Life of All Assets

45.2 years

Average Annual Replacement Cost

\$2,462,000

SCWW: Current Replacement Costs (2017-2117)



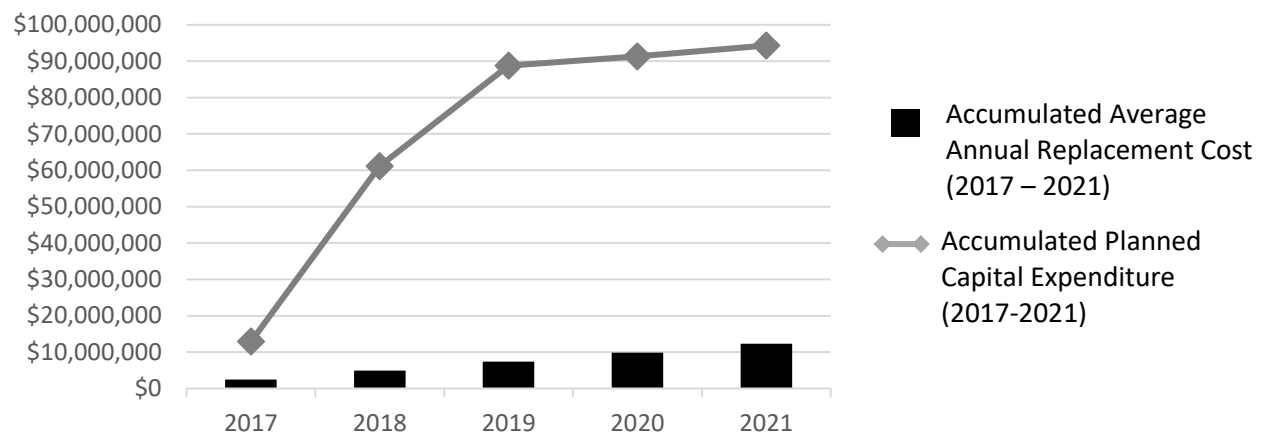


Planned Capital Expenditure & Average Annual Replacement Costs

Planned capital expenditures for the Southern Community Waste Water service area total \$95 million over the 2017-2021 period. The largest item is the secondary treatment upgrade at \$82 million, which is currently underway. Forcemain inspections, a new centrifuge, pump station works and digester upgrades are also planned.

The upgrade work is being funded through a combination of grants, borrowing and from contributions from reserve funds.

SCWW Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

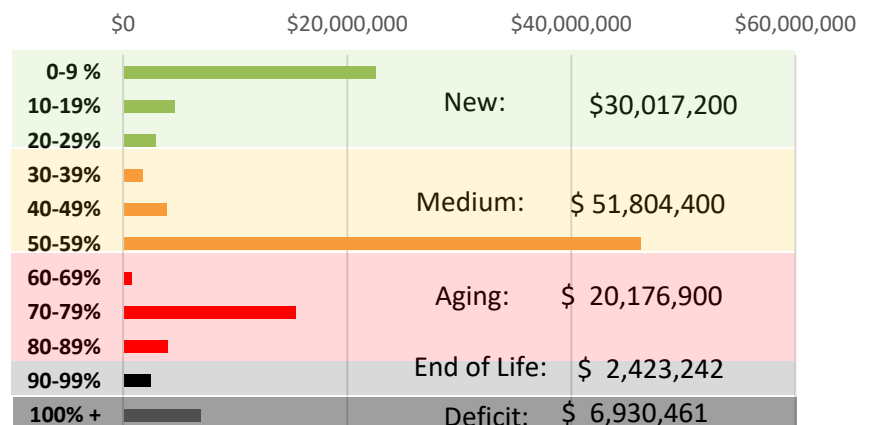
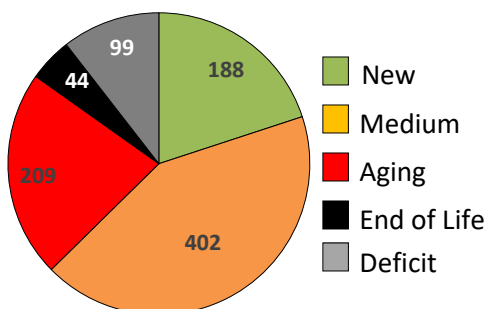
\$22,981,000

Age and Asset Condition

Asset age indicates asset condition. Asset age indicates asset condition. For the NCWW service area, 63% of assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. A total of 73% of the value of all the assets are in the *New* or *Medium* category.

SCWW Total Number of Assets by Age Class

SCWW Total Value of Asset by Age Class



2.6 Recreation and Parks Services

The RDN has a comprehensive regional and community parks and trails network. This network encompasses the lowlands and foothills, ranging from oceanfront, lakefront and riverside parks, to alpine and forest parks, as well as small local community parks. Physical amenities within community and regional parks include pedestrian bridges, playgrounds, and benches and other furnishing. Other assets include vehicles and machinery required for park maintenance.

RDN recreational facilities provide many of the recreational and cultural programs offered in Electoral Areas A, C, E, F, G, and H, as well as Parksville and Qualicum Beach. Facilities include the Oceanside Place arena, the Ravensong Aquatic Centre, the District 69 Arena/ Parksville Curling Club and the Cedar Heritage Centre.

Table 5 Recreation and Parks Services AM Practices

AMBC Category	Summary of Current Asset Management Practice
Know Your Assets	Much of the information for Parks Services is captured in the RDN GIS system. Many park assets do not meet the value threshold to be recorded as Tangible Capital Assets therefore are not included in long-term plans for replacement. Information such as serial numbers and warranty expiration dates are stored in spreadsheets.
	Staff maintain detailed asset inventories for recreational facilities that are owned and operated by the RDN (Ravensong Aquatic Center and Oceanside Place Arena). Detailed asset inventories for facilities operated by third parties (District 69 Arena and the Cedar Heritage Centre) requires resourcing.
	Recreation facilities' components, such as equipment, are identified separately. For Regional and Community Parks, bridge and road components with different service lives are not identified separately.
	The Recreation Service has developed an in-house work order system within Sharepoint. Significant operations and maintenance activities as well as invoicing are logged in this system.
Know Your Financial Position	Parks Service activities are tracked on a work plan. Projects, project costs and some maintenance costs are tracked on spreadsheets. Operational tasks, park inspections and service requests are tracked and monitored using the City Reporter software program. .
	Replacement costs for Parks and Recreation assets requires updating. A procedure to consistently and comprehensively revise the assets replacement is in development. Currently, the replacement of assets relies on personnel identifying and scheduling important replacements.
	Recreation Services has developed a 20-year capital plan.
	The ten-year financial plan for the Parks and Recreation Services includes the cost of operations based on rolling the past year's budget forward with adjustments for inflation and known capital expenditures.
	For Parks and Recreation services, the costs of operations and maintenance are not tracked at the asset level.



	<p>Community parks are funded through a combination of taxes raised by individual Electoral Areas, available Community Works Funds and various contributions made through the development process.</p> <p>Taxation for the Regional Parks Acquisition and Capital Development Fund is collected by a parcel tax on every household in the region. Operations and maintenance costs for regional parks are collected on a per capita basis. Recreational facilities are funded through a combination of taxes from participating communities and user fees.</p>
Understand Decision-Making	<p>In the Recreation Service, the process to identify and prioritize capital projects is consistent.</p> <p>At the time of budget planning Parks staff review anticipated projects and those listed in management plans.</p> <p>For both Parks and Recreation Services, maintenance of assets is driven by staff knowledge and asset condition.</p>
Manage Asset Lifecycle	<p>The condition of the assets maintained by the Parks and Recreation departments are recorded on a scale of 1 to 5. A portion of the work history is available on SharePoint. The condition of assets maintained by external service providers is not currently tracked.</p> <p>Recreation has well-defined levels of service.</p> <p>The Recreation business plan indicates each offering with service indicators and a service goal. Business plans describe major programs for each function, and include indicators for current, targeted and benchmark levels of service. Levels of service are outlined in Park Services business plans and measure planned works against a historic baseline.</p> <p>There are maintenance strategies in place for Parks and Recreation assets. Existing practices and maintenance strategies are based on the knowledge and experience of staff and resources are being directed to develop additional documentation on asset groups.</p>
Know the Rules	<p>Stakeholders are consulted on management plans and strategies.</p> <p>Legislative requirements are known by staff and documented in manuals and training is provided as to address knowledge gaps related to staff changes.</p>



2.6.1 Community Parks

Level of Service

In the seven Electoral Areas, the RDN is responsible for managing and maintaining over 200 parcels of land (610 hectares in total) that have a Community Park designation. Community Park land is typically provided as a result of subdivision and/or rezoning. While a number of parkland properties have been acquired outright, some parkland is not owned by the RDN but managed through a license of occupation or permit from the landowner (such as a Ministry of Transportation water access).

Development of parks, such as construction of amenities, has been occurring at a steady pace in recent years. These projects include viewing benches, trails, signage, parking lots, fencing, skate parks, playgrounds, washrooms, and landscaping. The majority of the amenities are reasonably new having been installed over the past 10 years. Park development and maintenance are paid for through local taxes from each community (Electoral Area), from grants, or as an amenity contribution through a rezoning.

Current Replacement Costs

Data Confidence Rating: 2

The most significant asset class for community parks is land, which is not included in asset management planning. Work is underway to identify and prepare current replacement cost values for the various amenities within the over 200+ Community Parks in the RDN. Park amenities have been mapped using the RDNs GIS system. Typically, assets that fall beneath Tangible Capital Asset reporting requirements are accounted for in annual operations budgets. For larger capital items (such as bridges, buildings, etc.) the asset register is in the process of being updated to include acquisition and installation dates, expected useful life, and replacement costs.

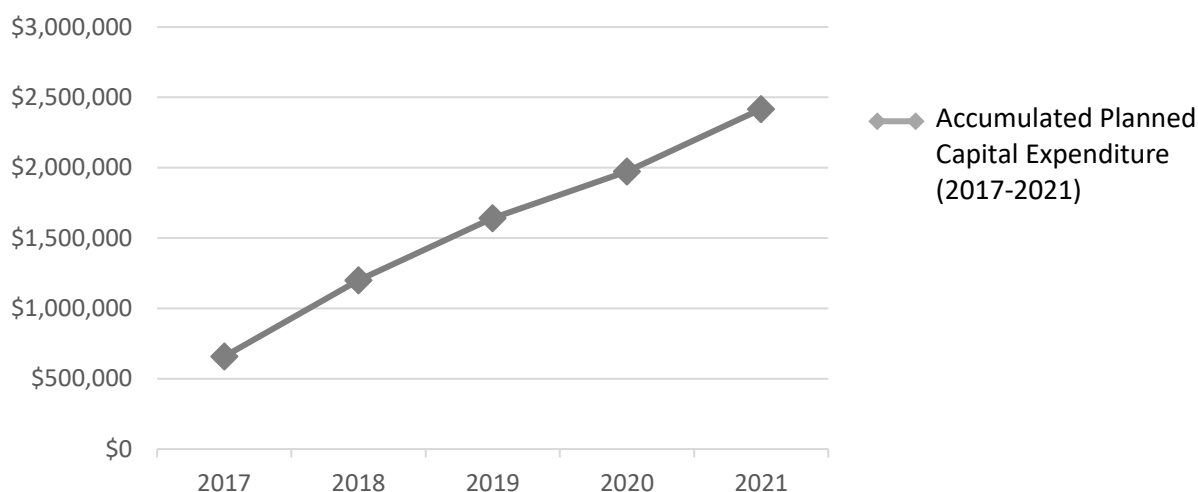


Planned Capital Expenditure & Average Annual Replacement Costs

Capital project expenses total \$1.8 million over the 2017-2021 period, spread across all parks in each Electoral Area of the region. Planned major projects include park trails, playgrounds, sport courts, parking areas, and general landscape improvements.

In addition to work funded through the Community Parks budgets, Community Works Funds have been allocated to projects in a number of Community and Regional Parks.

Community Parks Planned Capital Expenditures (2017-2021)



The Planned Capital Expenditure data shows ongoing investment in operations and maintenance of RDN Community Parks. Resources are being identified and directed to develop replacement cost and expected useful life information for RDN Community Parks in order to generate Average Annual Replacement Cost data.

Age and Asset Condition

Resources are being identified and directed to develop an age and asset value breakdown for Community Parks' assets, however most Community Park amenities are less than 10 years old.

2.6.2 Regional Parks and Trails

Level of Service

There are twelve Regional Parks in the RDN. Since 1995, the area of land managed for regional parks has increased from 25 hectares to more than 2,100 hectares. In addition to the parks, over 85 kilometres of Regional Trail have also been developed.

While some of the park land is owned by the RDN, the majority is managed under license from the Crown or private landowners (such as forest companies). Regional trails have been developed within existing rights-of-way, for which the RDN holds permits, or licenses to access private land on behalf of the public.

Development of Regional Parks and Trails has been occurring at a steady pace in recent years. These projects include picnic tables and benches, trails, signage, parking lots and access controls, bridges, washrooms, camping facilities and landscaping.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement cost values for the many and varied amenities within the Regional Parks and Trails have not been calculated. Many smaller amenities have been, and continue to be, funded from operating budgets, and not tracked through the Tangible Capital Asset registry.

A number of larger assets have been constructed by the RDN on land accessed through license, lease, permit or agreement. These tenures have limited terms which further complicates assigning a useful life value to an asset which the RDN may not be able to replace if the tenure ends.

Available information on the assets provides a moderate data confidence rating of '3' for current replacement costs.

Given that many of the smaller value amenities in regional parks and along trails fall below the threshold for being considered a "capital expense", building an asset registry based on the Tangible Capital Asset registry records has proven challenging. Plentiful information as to what is in each park and trail is available courtesy of GIS data. For larger capital items (such as bridges, buildings, etc.) the asset register is in the process of being updated to include acquisition and installation dates, expected useful life, and replacement costs.

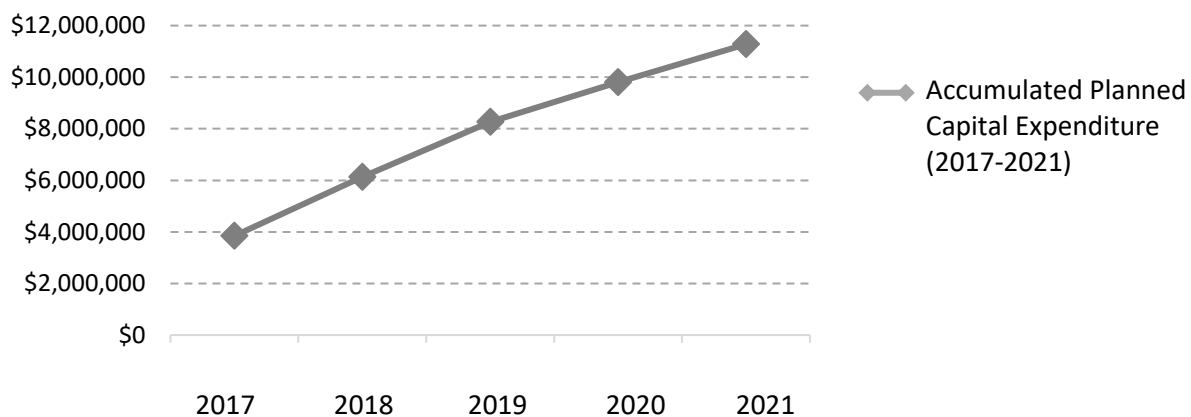


Planned Capital Expenditure & Average Annual Replacement Costs

Development of amenities within Regional Parks and Trails is happening at a rapid pace, with many smaller projects funded through operating budgets. Capital project expenses are in excess of \$11 million over the next five years, excluding potential land acquisition. Planned projects include parking facilities, bridge construction, new trails, park buildings, park access development, stairs and related infrastructure.

In addition to work funded through the Regional Parks and Trails budgets, Community Works Funds have been allocated to projects in a number of Community and Regional Parks.

Regional Parks and Trails Planned Capital Expenditures (2017-2021)



The Planned Capital Expenditure data shows the steady pace of development within Regional Parks and Trails. Resources are being identified and directed to develop replacement cost and expected useful life information for RDN Regional Parks and Trails in order to generate Average Annual Replacement Cost data.

Age and Asset Condition

Resources are being identified and directed to develop an age and asset value breakdown for Regional Parks and Trails assets, however most Park or Trail amenities are less than 10 years old. Staff will continue to compile this data to be inserted into the next iteration of this Review.

2.6.3 Oceanside Place Arena (OP)

Level of Service

The Oceanside Place Arena (OP) is a public facility located in the Wembley Mall on Highway 19A in the French Creek area between Qualicum Beach and Parksville. The facility was built in 2003. Operations and management activities are provided by Regional District staff.

The public-accessible components consists of two NHL size ice sheets (17,000 sq-ft each), a separate leisure ice surface, multipurpose over ice floor cover available for shows and events, 1,200 total spectator seating, a 1,200 sq-ft dividable Multi-Purpose Room, meeting room, and 3500 sq-ft Lobby available for event use. In addition, the facility contains the administration space for the Regional District Recreation Department staff with a suite of offices and work spaces.

The arena offers a wide range of ice and dry-surface based programs and events for all ages.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement cost values for the Oceanside Place Arena are based on a combination of historic cost, market unit costs and insurance values. The combination of information provides a data confidence rating of '2' for current replacement costs.

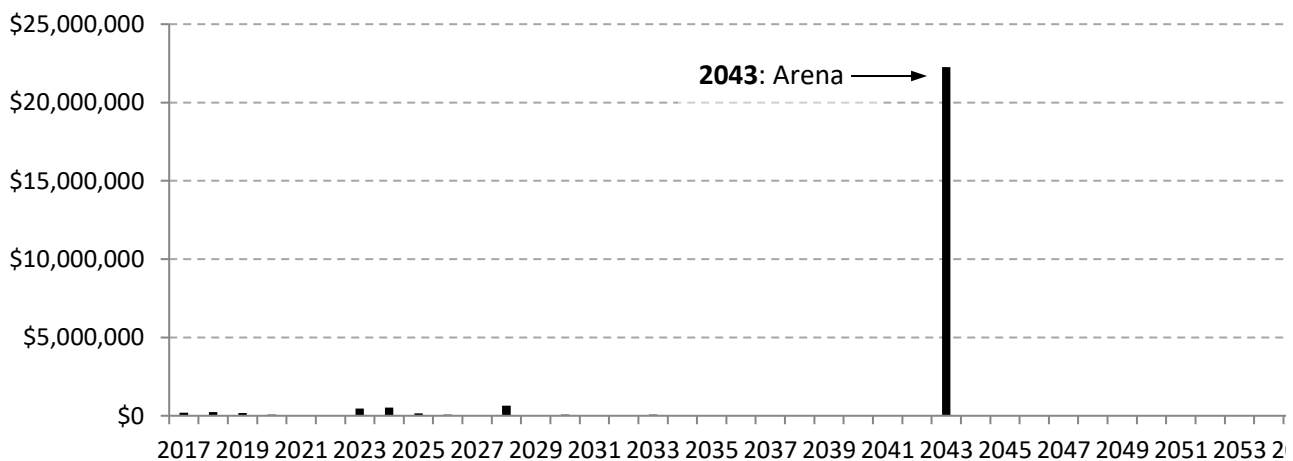
Total Replacement Value (2016 Dollars) **\$25,000,000**

Lifecycle Period **40 years**

Average Useful Life of All Assets **18 years**

Average Annual Replacement Cost **\$1,390,000**

Oceanside Place Arena: Current Replacement Costs (2017-2057)

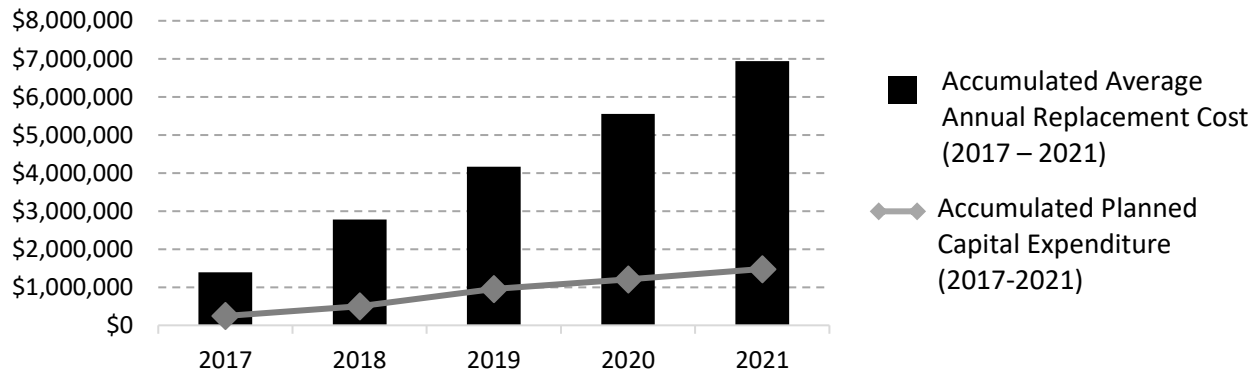




Planned Capital Expenditure & Current Replacement Costs

For the Oceanside Place Arena there are planned capital expenditures of \$1.5 million over the 2017-2021 period. Expenditures include a new Zamboni, upgrades and renewals to ice plant components, air handling units and HVAC systems, and planned retrofits of the building's interior finishings (paint, lighting, sound system, flooring etc.). The Average Annual Replacement Cost is based on the wholesale replacement of the arena, estimated at \$25 million, while planned capital expenditures focus on renewal and replacement of mechanical systems and infrastructure that keep the arena operating well. The infrastructure deficit arising over the next 5-years should be verified to ensure adequate preparation for the replacement of the arena in 25-years.

Oceanside Place Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



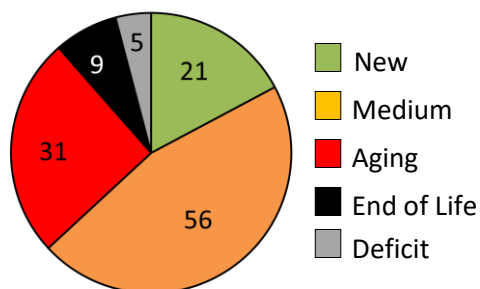
Capital Reserve Opening Balance (2018):

\$226,000

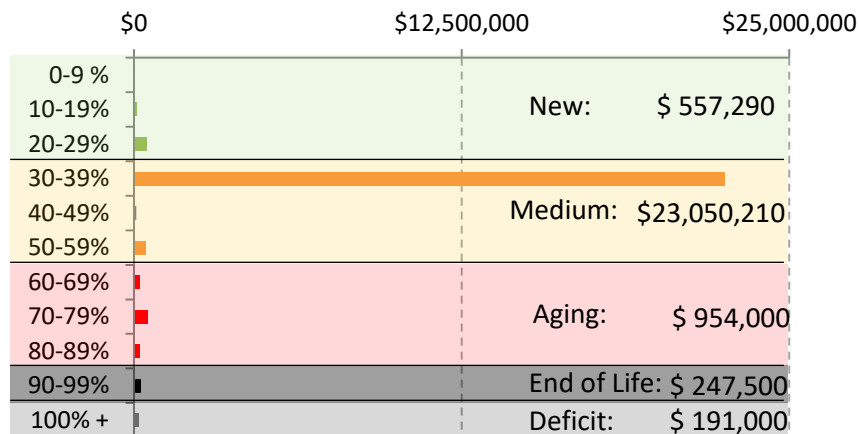
Age and Asset Condition

Asset age indicates asset condition. For the Oceanside Place Arena, 63% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. Over 90% of the value of all the assets are in the *New* or *Medium* category meaning most assets are early in their lifecycle.

OP: Total Number of Assets by Age Class



OP: Total Asset Value by Age Class



2.6.4 District 69 Arena/ Parksville Curling Club (D69 Arena)

Level of Service

The Parksville (District 69) Arena (D69 Arena) is a dedicated curling facility located in the Parksville Community Park. The arena was constructed in 1974 as a community facility for hockey, skating and community events and was converted to a curling facility in 2003 when Oceanside Place opened. It is owned by the Regional District and has been operated under a lease agreement by the Parksville Curling Club since 2003.

As a dedicated curling facility the ice surface hosts five curling sheets. The Club has 14 weekly leagues, and hosts Special Olympics, school and junior curling programs. Up to ten bonspiels are held during the year, along with events that bring instructors and curlers from across North America and around the world. The Club has hosted a number of regional, provincial and national championships.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement cost values for the D69 Arena were based on a combination of historic cost, market unit costs and insurance values. This provides a lower data confidence rating of '2' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$7,300,000

Lifecycle Period

30 years

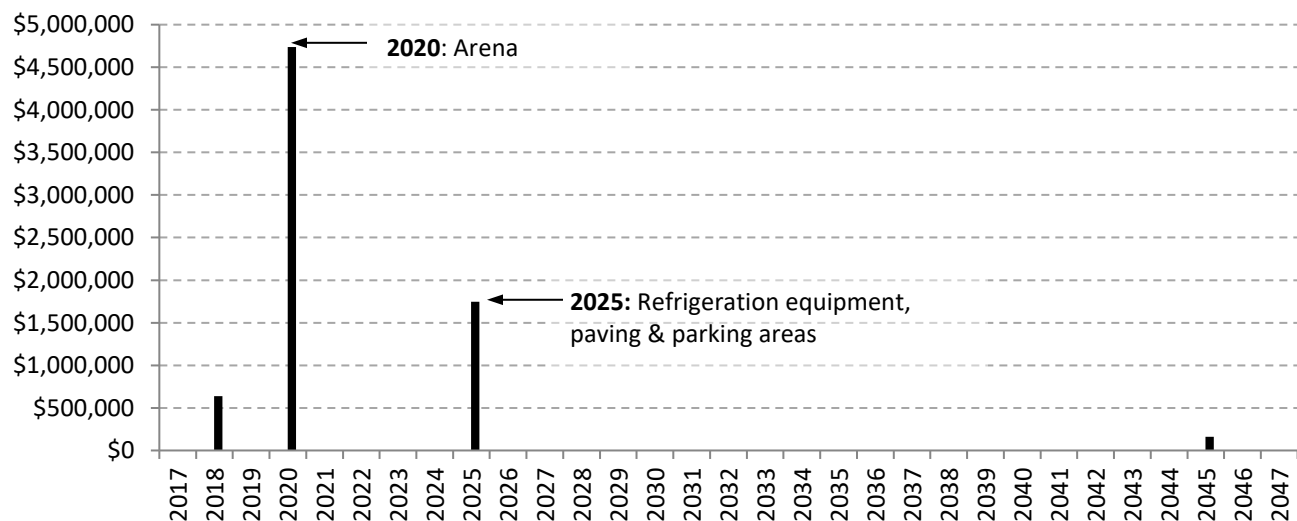
Average Useful Life of All Assets

29 years

Average Annual Replacement Cost

\$252,000

Parksville (District 69) Arena: Current Replacement Costs (2017-2047)





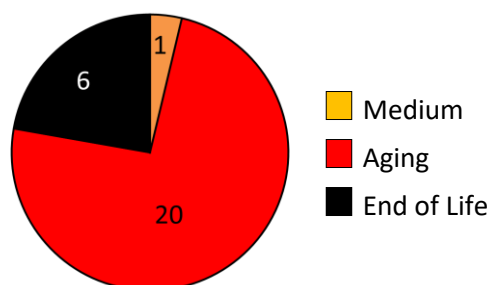
Planned Capital Expenditure & Average Annual Replacement Costs

For the D69 Arena, budgeted capital expenditures over the next five years are focused on developing reserves to prepare its demolition once determined the facility is no longer viable for public use. Maintenance tasks and capital replacement for facility infrastructure and equipment are handled and funded by the Curling Club as the lessee. The facility is generally nearing the end of its useful life. Significant asset reinvestment over the next decade is necessary to maintain service at current levels. The D69 Arena is at a critical juncture in its service life where future service levels must be reviewed.

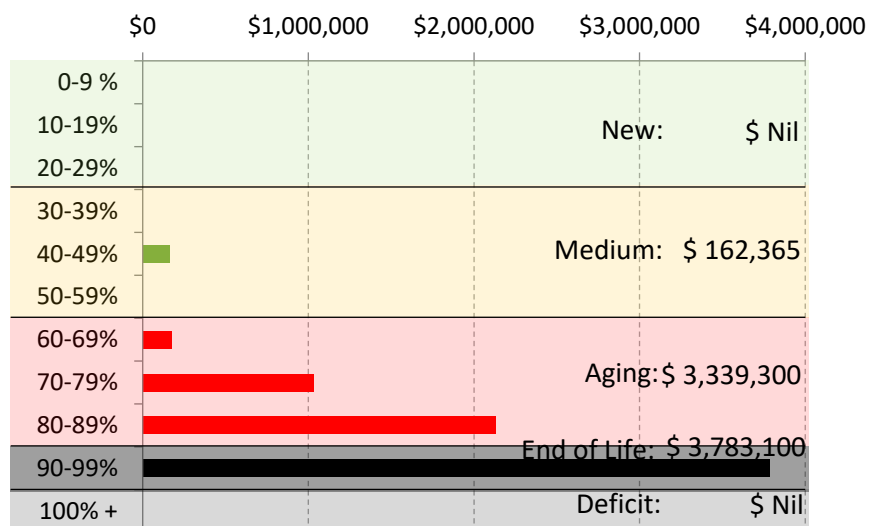
Age and Asset Condition

Asset age indicates asset condition. The facility is approaching 40 years of age, as evidenced by 96% of all assets being in the *Aging* or *End of Life* age category, resulting in a condition rating of *Fair* or *Poor*. Over 50% of the value of all the assets are in the *End of Life* category meaning the assets are approaching the end of their expected lifecycles.

D69 Arena: Total Number of Assets by Age Class



D69 Arena: Total Asset Value by Age Class



2.6.5 Ravensong Aquatic Centre (RAC)

Level of Service

The Ravensong Aquatic Centre (RAC) is a public facility located in the Qualicum Beach Community Park adjacent to the Qualicum Beach Civic Centre. The facility was built in 1995 and received a \$4.9 million remediation in 2010. Operations and management are provided by Regional District staff and the land is leased from the Town of Qualicum Beach.

The facility consists of a main 25 metre (6 lane) pool, small leisure pool, 25 person hot tub, steam room and infra-red sauna. RAC operates between 6:00 am and 9:00 pm / 10:00 pm, seven days per week. An annual three-week maintenance shut down takes place each August-September. The facility offers a wide range of aquatic based programs and services for all ages.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement costs are based on a combination of historic cost, market unit costs and insurance values. This provides a data confidence rating of '3' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$12,000,000

Lifecycle Period

40 years

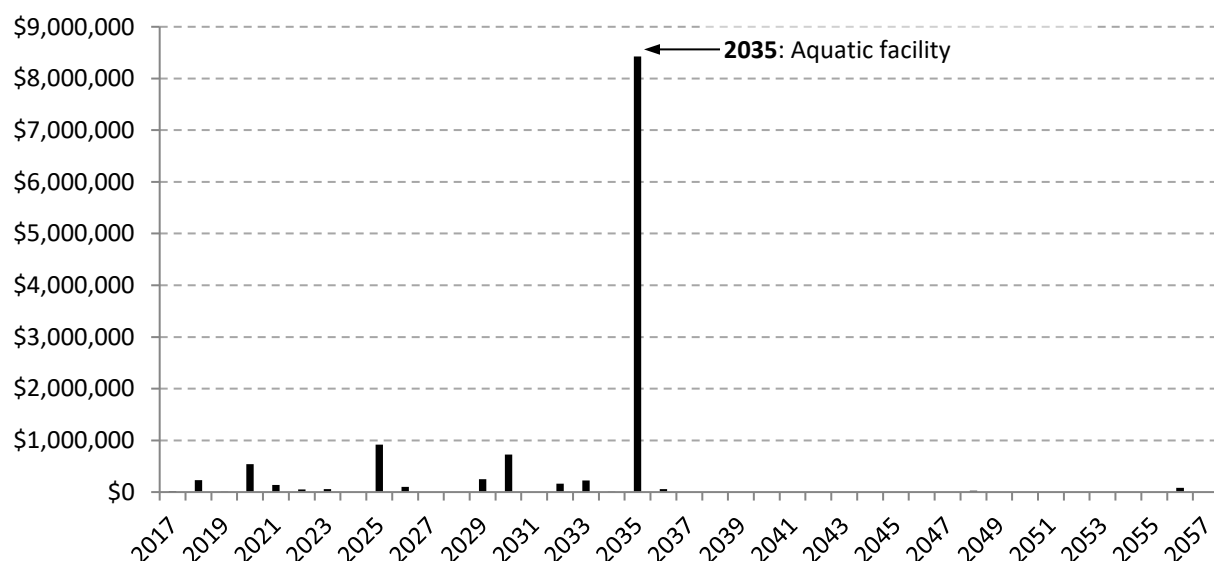
Average Useful Life of All Assets

16.3 years

Average Annual Replacement Cost

\$736, 000

Ravensong Aquatic Centre: Current Replacement Costs (2017-2057)

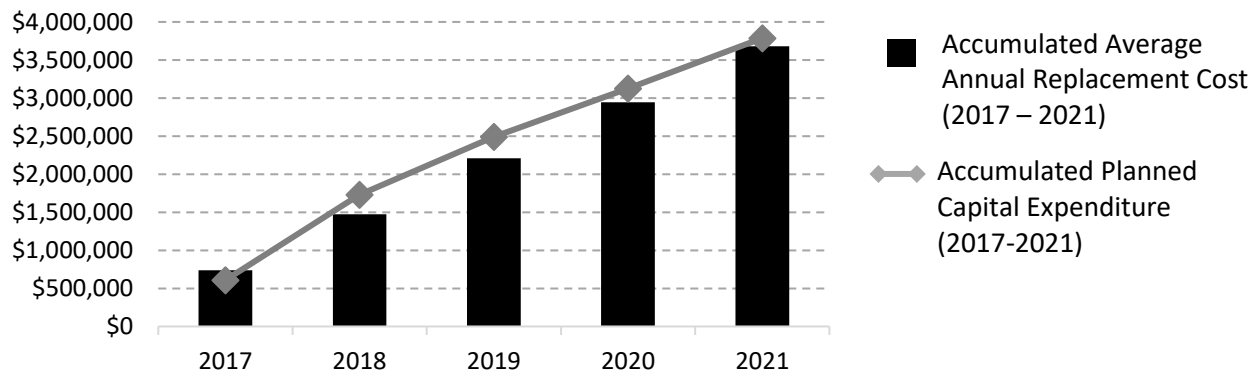




Planned Capital Expenditure & Average Annual Replacement Costs

For the RAC there are planned capital expenditures of \$3.8 million over the 2017-2021 period. The majority of this is for upgrades and renewals to air handling units and HVAC systems, energy efficiency upgrades, and planned retrofits of the building's interior finishings (paint, lighting, sound system etc.). Planned capital expenditures closely align to average annual replacement costs, suggesting that asset renewal and reinvestment is at an appropriate level.

RAC Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

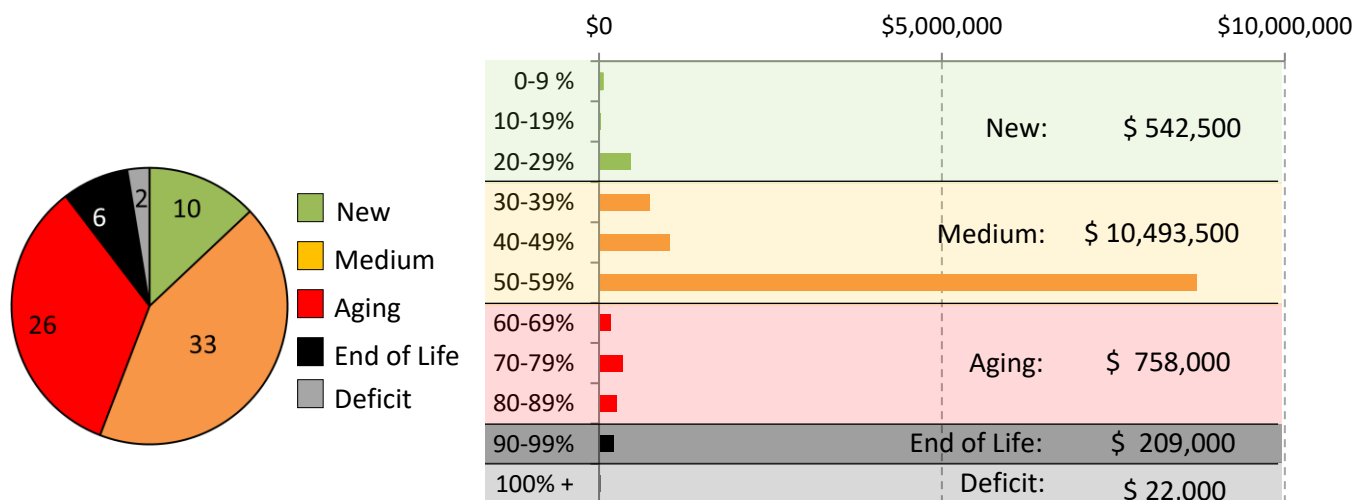
\$1,347,000

Age and Asset Condition

Asset age indicates asset condition. For the Ravensong Aquatic Centre, 56% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. Over 90% of the value of all the assets are in the *New* or *Medium* category meaning most assets are early in their lifecycle.

RAC: Total Number of Assets by Age Class

RAC: Total Asset Value by Age Class



2.6.6 Cedar Heritage Centre (CHC)

Level of Service

The Cedar Heritage Center (CHC) was constructed in 1921 as a three room school house, and served as a school building until 2000. The building has undergone renovations, alterations, expansion and contraction by the previous owner during its long-term school use.

The building's current configuration is similar to the original design, but instead of school use the building now serves as a Community Center operated by the Cedar School and Community Enhancement Society (CSCES)

The building sits on property owned by School District 68 and leased to the RDN. The building ownership was transferred to the RDN in 2001.

The CSCES presently has a lease with the RDN for use and the operation and routine maintenance of the building.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement cost value for the CHC is estimated at \$550,000 based on a calculation of market unit costs. This provides a lower data confidence rating of '2' for current replacement costs.

A Building Condition Assessment Report was completed in January 2019 by Herold Engineering. Findings from the report will be used to prepare a Current Replacement Cost chart for the facility.

Planned Capital Expenditure & Current Replacement Costs

The January 2019 Building Condition Assessment report recommends \$1,000 be allocated and expended for capital works within one year and \$76,000 within five years.

The Electoral Area 'A' Recreation Services function is carrying \$800,000 in reserve allowing urgent or unforeseen capital expenditures to be covered.



2.7 Solid Waste Services

The RDN Solid Waste Services department owns and operates the Regional Landfill and the Church Road Transfer Station, and provides residential curbside collection to over 29,000 households throughout the region. The City of Nanaimo provide Solid Waste services within its boundaries. Delivery of the curbside collection service is provided by a third-party contractor.

Table 6 Solid Waste Services AM Practices

AMBC Category	Summary of Current Asset Management Practice
Know Your Assets	The asset inventory is estimated to be 75% complete. Information gaps are limited to older assets as more information has been captured for newer assets. The asset inventory requires detailed componentization.
Know Your Financial Position	Less than 10% of the Department's budget is funded by tax revenue. The primary revenue source is tipping fees collected for waste disposal at the Church Road Transfer Station and Cedar Road Landfill. The residential curbside collection program is entirely paid by participants in the service through a utility fee.
	The record of replacement costs, in current dollars, can be improved. Many of the assets are permanent installations within the landfill and will never be replaced (e.g. landfill gas collection system). Anticipated useful life is considered for equipment that will be replaced during the operational life of the landfill. Financial planning is reinvestment rather than lifecycle focused. A post-closure reserve has been established to finance monitoring and maintenance of the site once it reaches capacity.
	Maintenance and operations budgets are based on past experience and staff knowledge. Limited information on the work completed on assets year over year is recorded. Improvements can be made to better separate maintenance and operating costs, and link them to specific assets.
Understand Decision-Making	Decision processes exist for planning capital projects and determining budget requirements.
Manage Asset Lifecycle	New tools are required to better monitor and track the condition of assets over time. The condition of assets is verified through the annual budget process involving discussion with staff.
	The level of service currently provided is well understood and documented. The desired level of service is revised through Solid Waste Management Plan updates and through the Zero Waste program. The cost of service is well documented.
	Some maintenance tasks are scheduled (e.g. by equipment operating hours) while other tasks are scheduled through staff knowledge and experience. The completion of some preventative maintenance work and calibration is monitored through maintenance contracts (heavy equipment, scales) and formal monitoring is in development.



Know the Rules

The goals and objectives of the organization's stakeholders are defined in the Solid Waste Management Plan, levels of service, and cost of service delivery (tipping fee and curbside collection).

Processes for compliance and monitoring report submission rely on staff preparing documents as required. A formalized system to identify deadline dates is in development, as well as more formal procedures document listing legal obligations and individuals responsible for the Solid Waste Services.



2.7.1 Church Road Transfer Station (CRTS)

Level of Service

The Church Road Transfer Station (CRTS) is located at 860 Church Road, four kilometres southwest of Parksville. The facility opened in 1991, and was significantly redeveloped in 2009-2010 to meet the needs of the growing region and to extend the facility's lifespan. The site is approximately two hectares in area. The CRTS receives garbage, food waste, yard waste, wood waste, construction/demolition waste, and recyclables from communities in the northern portion of the Regional District of Nanaimo: Parksville, Qualicum Beach, and Electoral Areas E, F, G, and H.

The CRTS is open to the public seven-days a week (with the exception of statutory holidays). Waste is accepted with tipping fees charged based on weight and material type. Material brought to the CRTS is transferred to the appropriate licensed disposal facilities elsewhere in the region.

Current Replacement Costs

Data Confidence Rating: 3

Current replacement costs are based on the historic costs, staff knowledge of current unit pricing, and from insurance values. This information provides a data confidence rating of '3' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$6,800,000

Lifecycle Period

70 years

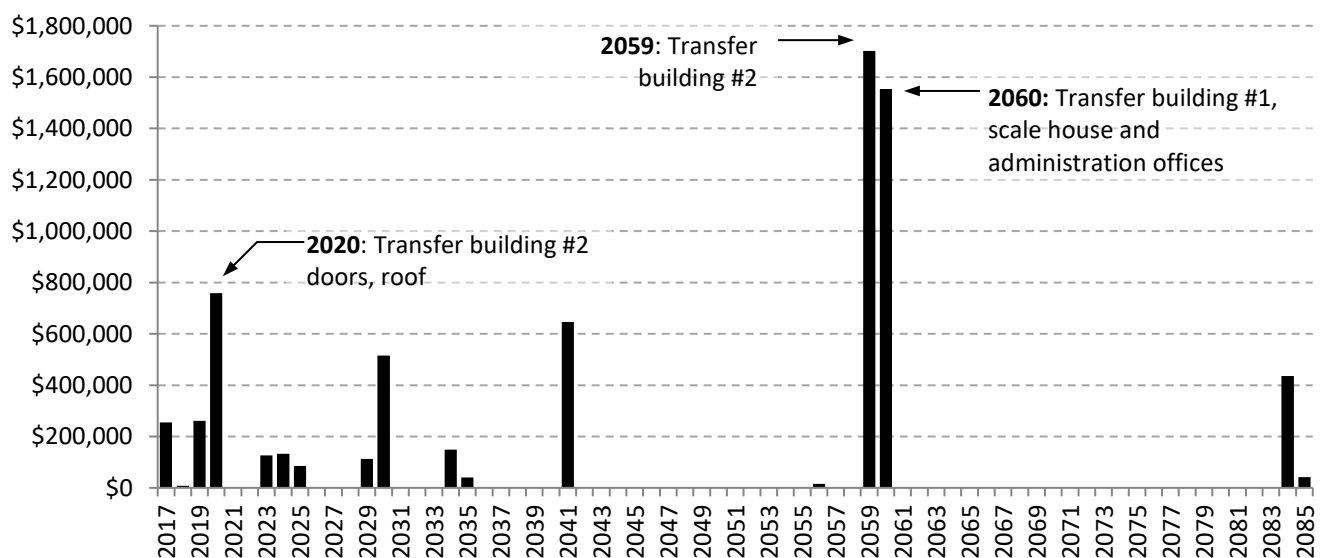
Average Useful Life of All Assets

25.4 years

Average Annual Replacement Cost

\$245,000

Church Road Transfer Station: Current Replacement Costs (2017-2087)

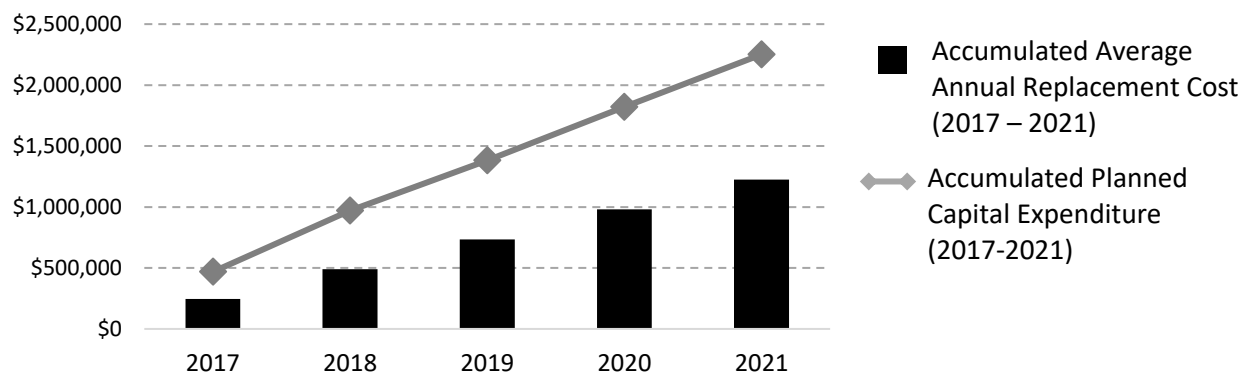




Planned Capital Expenditure & Average Annual Replacement Costs

For the CRTS, there are planned capital expenditures of \$2.2 million over the 2017-2021 period. The major items in these expenditures include replacing the tipping floor in one transfer building and replacing waste water tanks. The Current Replacement cost table above shows that the 2017-2020 period is a period of significant asset renewal. This is also reflected in comparison between planned capital expenditures and annual average replacement costs.

CRTS: Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



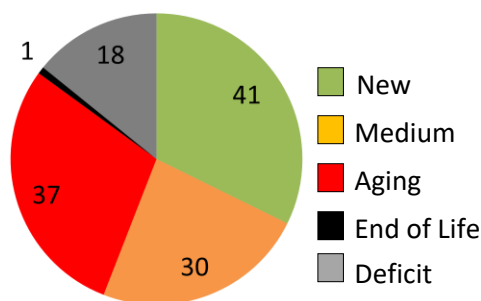
Capital Reserve Opening Balance (2018):

\$2,337,000

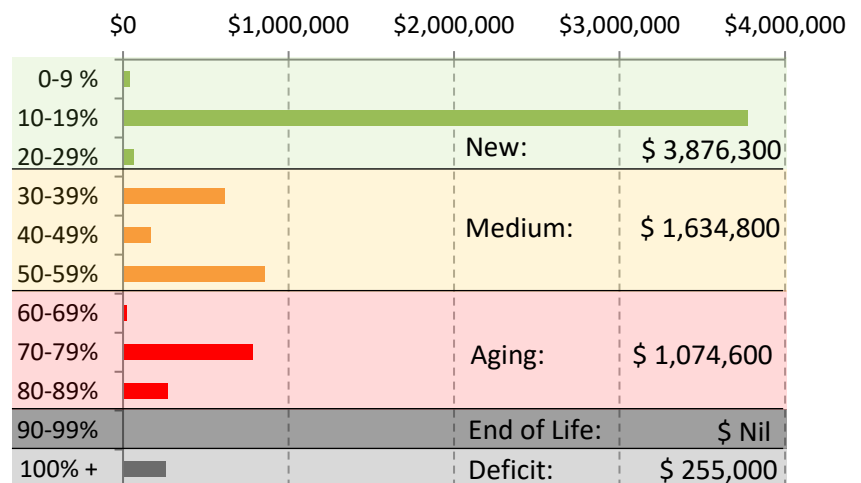
Age and Asset Condition

Asset age indicates asset condition. For the CRTS, 56% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. Two thirds (67%) of the value of all the assets are in the *New* or *Medium* category meaning most assets are early in their lifecycles.

CRTS: Total Number of Assets by Age Class



CRTS: Total Asset Value by Age Class



2.7.2 Regional Landfill (Landfill)

Level of Service

The Regional Landfill (Landfill) is located at 1105 Cedar Road, 5 kilometres south of downtown Nanaimo. The site opened in the 1940s and is approximately 37 hectares in size. The 13.7-hectare operational area of the site has a high-density plastic liner and has been receiving municipal solid waste since 1991. The 8.8-hectare unlined portion of the site was closed in 1996.

The Landfill operates under an operational certificate issued by the BC Ministry of Environment. Landfill gas and leachate are collected from throughout the landfill site. Leachate is directed into the sanitary sewer system for treatment at the Greater Nanaimo Pollution Control Centre. The landfill gas collection system directs the gas to a privately owned and operated on-site electricity producing plant.

The Landfill is open to the public seven-days a week (with the exception of statutory holidays). Waste is accepted with tipping fees charged based on weight and material type.

Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs for “above ground” assets at the Landfill were based on the historic costs, staff knowledge of current unit pricing, and from recent construction work completed. This information provides a data confidence rating of ‘4’ for current replacement costs. Buried (in-ground) infrastructure was not costed because it will not be replaced.

Total Replacement Value (2016 Dollars)

\$8,300,000

Lifecycle Period

40 years

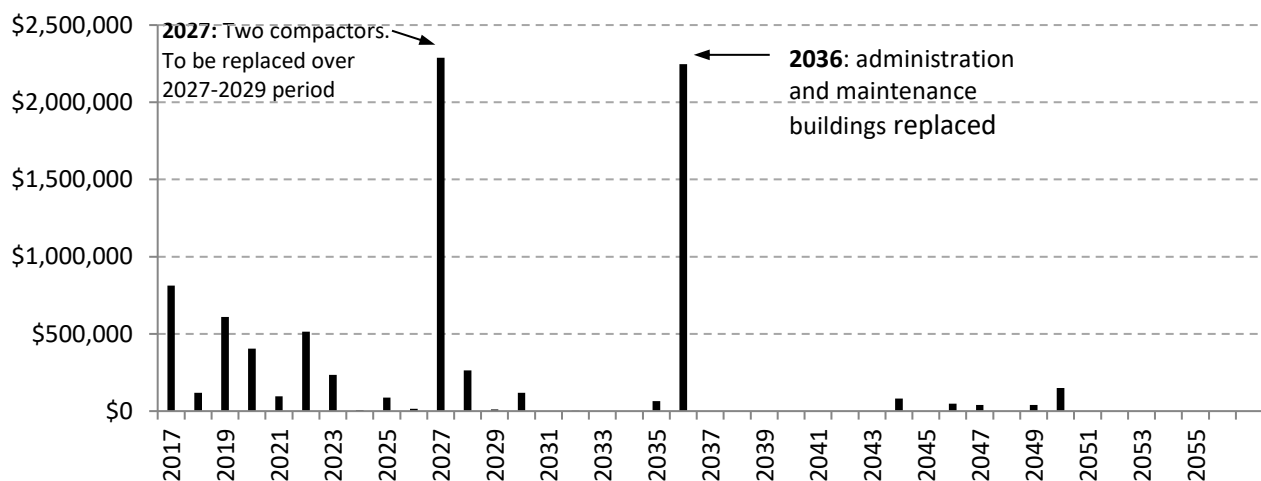
Average Useful Life of All Assets

17.6 years

Average Annual Replacement Cost

\$470,000

Landfill: Current Replacement Costs (2017-57)

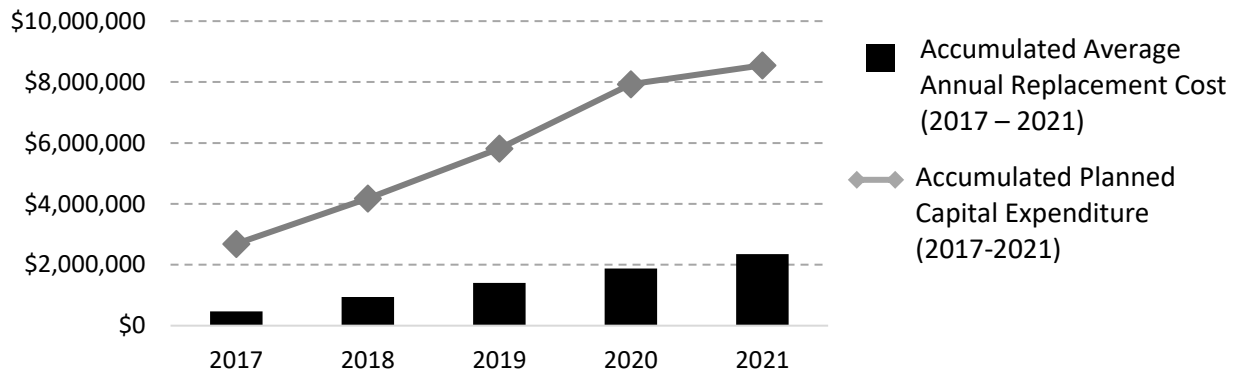




Planned Capital Expenditure & Average Annual Replacement Costs

The Landfill has planned capital expenditures for above ground assets of \$8.5 million over the 2017-2021 period. Major items contained within this amount include heavy equipment replacements, scale house and scale replacement, as well as site improvements. The 2017-2022 period is a period of significant investment in the overall lifecycle of the facility. This provides an explanation for the high level of planned capital expenditures relative to average annual replacement costs.

Landfill Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

\$2,337,000

(Same reserve fund as Church Road Transfer Station)

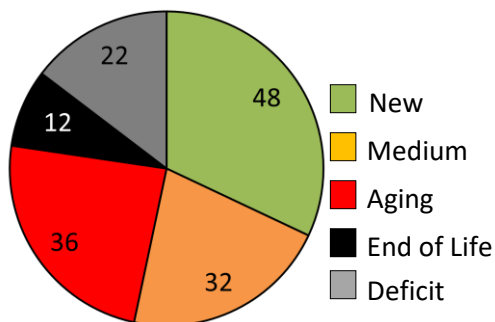
Post-Closure Reserve Fund Opening Balance (2018)

\$1,844,000

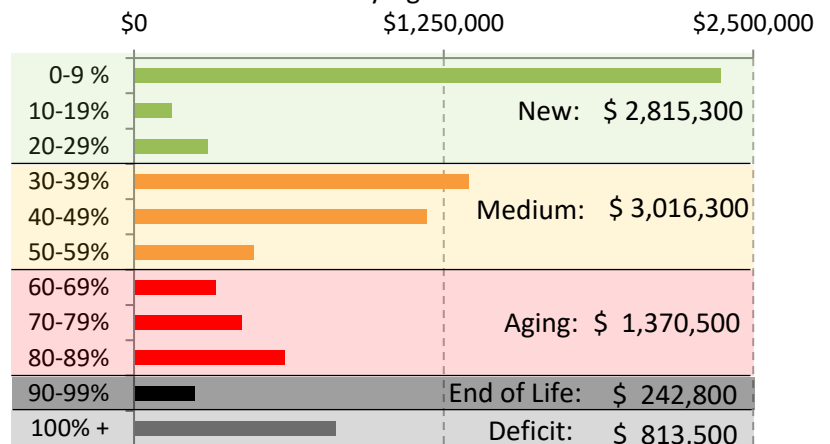
Age and Asset Condition

Asset age indicates asset condition. For the Landfill, 53% of all assets are in the *New* or *Medium* age category, while 23% are in the *Aging* or *End of Life* category. In terms of value, 71% of the value of all the assets are in the *New* or *Medium* category while 13% of the value of the assets are at or nearing the time for replacement or renewal.

Landfill: Total Number of Assets by Age Class



Landfill: Total Asset Value by Age Class



2.8 Transportation Services

Transportation Services is responsible for the delivery of regional transit operations and is housed in the Transportation Administration Building, which is currently managed by NAI Commercial, a Vancouver Island property management firm. Regional transit operations include operating a fleet of full size, compressed natural gas buses, as well as door-to-door HandyDart services. Transportation Services is also responsible for the Descanso Bay Emergency Wharf, and the Green's Landing Wharf on Gabriola Island.

Due to in-house expertise in the department, Transportation Services also manages and maintains much of the RDN vehicle fleet. Though the vehicles that comprise the fleet are owned by a variety of other service areas, the Asset Snapshot for the RDN fleet is included in this section.

Table 7 Transportation Services AM Practices

AMBC Category	Summary of Current Asset Management Practice
Know Your Assets	The complete asset list owned by the Fleet and Transit is not sufficiently componentized and consolidated to facilitate decision-making. It is estimated that 70% of the inventory needs to be broken down into more detail but there is reliable information on the transit building, shelters, and components in the transit shop.
	A work order system tracks maintenance completed on fleet vehicles and other components. Work orders begin as paper records that are then sent to a Transit supervisor. There is coordination between BC Transit and the RDN for warranty work that is not automated. The name of the BC Transit maintenance program is RTS Connect. The work completed on the wharves are tracked through purchase orders.
Know Your Financial Position	There is no long-term planning document that outlines assets owned, asset replacement dates, and replacement costs, though this information is now captured in Asset Snapshots. For the buses, BC Transit is responsible for financial records and maintains a full life cycle analysis which includes depreciation, repair costs, and replacement of the buses.
	There is a very detailed budget coding and cost tracking system. It is particularly robust for the buses that are leased from BC Transit because it allows the RDN to determine the costs that are to be shared with BC Transit. Wharf costs, fuel stations and corporate fleet are accounted for in the budgeting software FMW and in comprehensive spreadsheets.
	Funding for the Transit System is shared between the RDN and BC Transit. The transit building and fleet are cost shared with BC Transit (46.69% BCT, 53.31% RDN). The wharves are funded completely by the RDN through tax requisition.
Understand Decision-Making	Decision processes exist for planning capital projects and determining budget requirements. Decisions about fares, routes and service levels are made by the Board, based on information and planning provided by Transit Services and BC Transit. The decision making processes are well documented and consistent for all areas in transit (building included) and the wharves.



Manage Asset Lifecycle

Monitoring the condition of the assets is completed in an ad-hoc fashion and it does not cover the entire asset inventory.

BC Transit defines the hours of service the RDN is to provide by contract, the RDN board defines the allocation of that time, and Transit Planning defines and schedules the routes. The relationship with the cost of service and level of service is not sufficiently defined. It has been partially determined for the wharf.

Know the Rules

The board develops strategic goals for the RDN to inform annual work plans. Strategic goals and business plan are connected and key performance indicators that relate back to the strategic goals are used.

All motor vehicle and professional driver legislation, safety procedures, and other directives from the RDN are outlined in the Transportation Manual. The Superintendent is responsible for keeping this document current and communicating updates to staff.



2.8.1 Transportation Services (TS)

Level of Service

The RDN's Transportation Service (TS) is an integrated service connecting communities from Deep Bay in the north, to Electoral Area A (Cedar) south of the City of Nanaimo. Conventional and Custom (handyDart) service buses are leased from BC Transit; and are not classified as assets owned by the RDN.

The Transit building at 6400 Applecross Road, Nanaimo accommodates the operational, dispatch and administrative functions of the TS. In addition to offices and public reception, the building houses maintenance bays for servicing as well as exterior painting. Adjacent to the building is a natural gas compressing and fueling station. The original structure dates from the 1970's; with significant upgrades in 2008, and 2012. Three transit exchanges and a number of shelters are included for asset management purposes.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement costs are based on historic costs from financial records, and property insurance valuation. The asset inventory is not considered to be complete. This information provides a data confidence rating of '2' for current replacement costs.

Total Replacement Value (2017 dollars)

\$11,500,000

Lifecycle Period

41 years

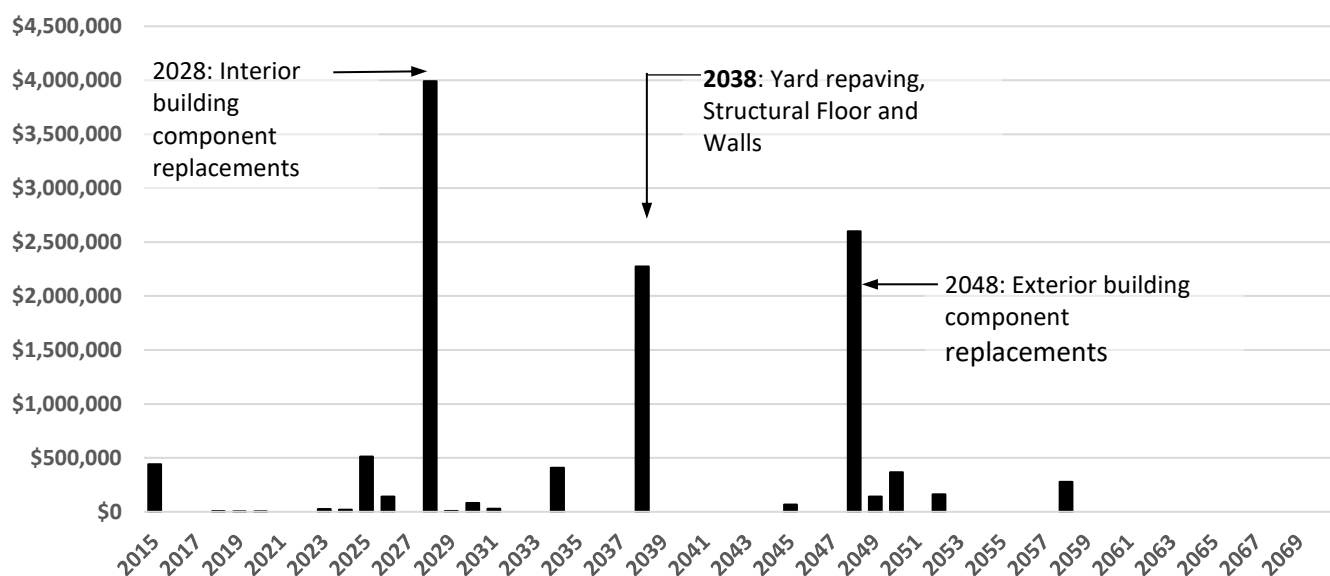
Average Useful Life of All Assets

17.8 years

Average Annual Replacement Cost

\$650,000

TS: Current Replacement Costs (2017-2058)

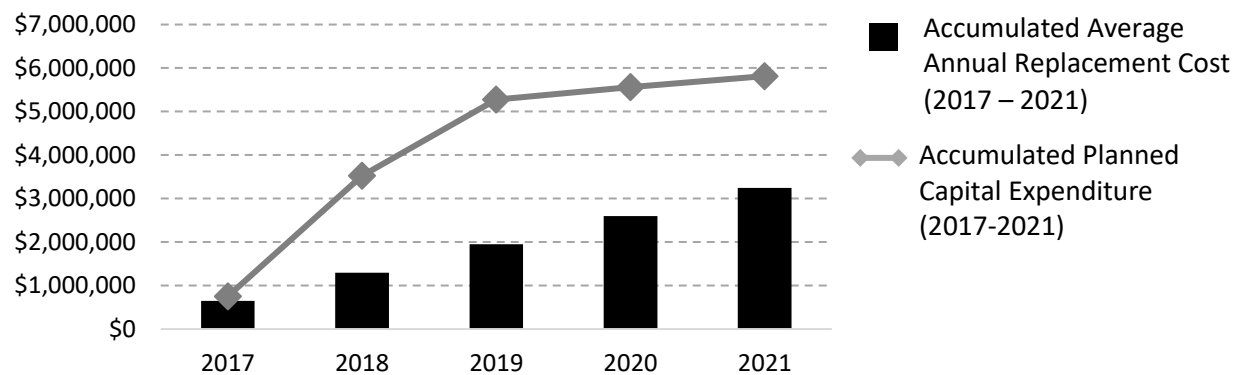




Planned Capital Expenditure & Average Annual Replacement Costs

For the TS there are planned capital expenditures of \$5.8 million over the next five years. The majority of this is for a new transit exchange construction and improvements to existing exchanges in Nanaimo. Distinguishing capital expenditures that support current service levels from those that introduce new service levels, including new bus exchanges is necessary to better align planned capital expenditures and average annual replacement costs.

TS: Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

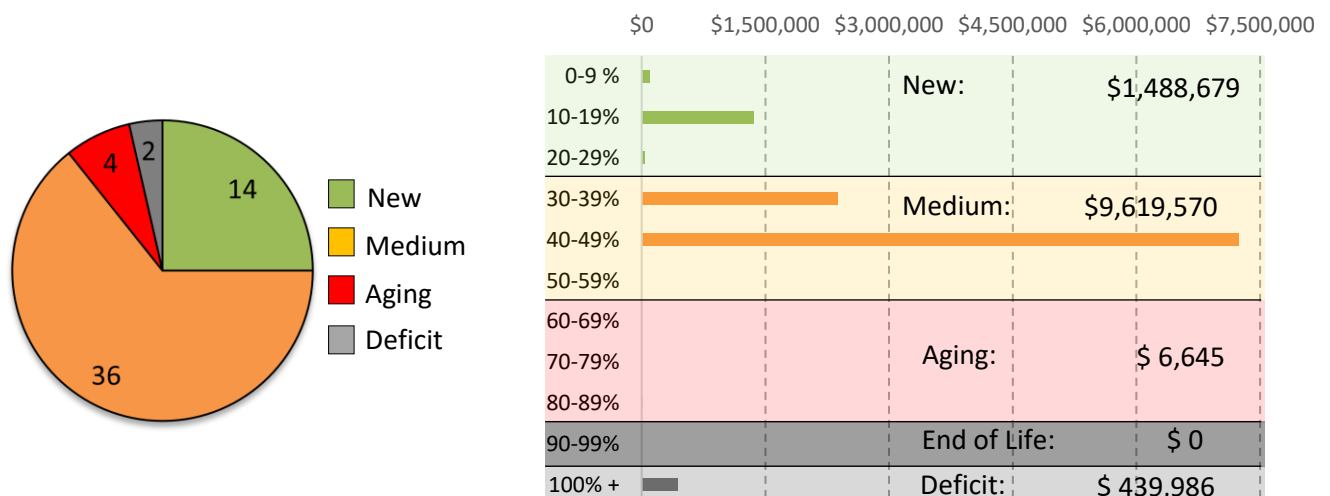
\$3,732,000

Age and Asset Condition

Age is a simple indicator of asset condition. For the Transportation Services, 96% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. A total of 4% of the value of all the assets are in the *End of Life* category meaning a number of the assets are at the time for replacement or renewal.

TS: Total Asset Value by Age Class

TS: Total Number of Assets by Age Class



2.8.2 Vehicle Fleet

Level of Service

The Regional District's Vehicle Fleet includes over 45 on-road passenger vehicles used daily by staff throughout the region (cars, vans and pickup trucks), plus numerous smaller mobile equipment assets for use in operations (such as trailers, bobcats, dump trucks, and utility vehicles).

Included in the fleet are vehicles in the shared pool – not assigned to any one department – as well as vehicles effectively owned by specific departments. Equipment and vehicles based at RDN solid waste facilities, transit buses, and vehicles based at the volunteer fire departments have been excluded from this Snapshot.

Current Replacement Costs

Data Confidence Rating: 5

Current replacement cost values for the Vehicle Fleet are based on recent tender pricing for replacements and from market place knowledge. This provides a data confidence rating of '5' for current replacement costs.

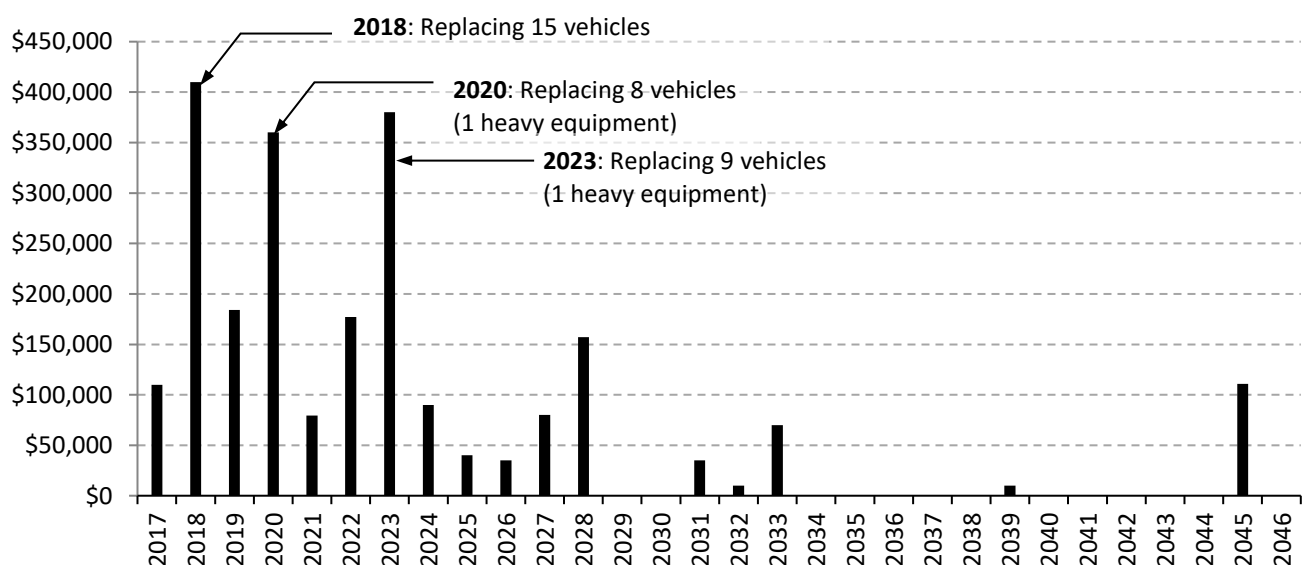
Total Replacement Value (2016 dollars) \$2,300,000

Lifecycle Period 30 years

Average Useful Life of All Assets 15 years

Average Annual Replacement Cost \$153,000

Vehicle Fleet: Current Replacement Costs (2017-2047)

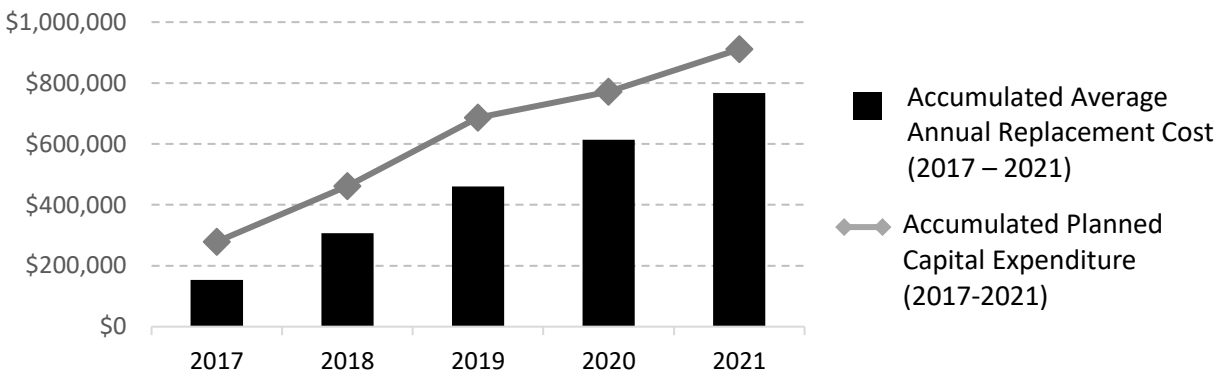




Planned Capital Expenditure & Average Annual Replacement Costs

For the Vehicle Fleet, there are planned capital expenditures of \$911,000 over the 2017-2021 period. Replacements are planned for several of the shared pool vehicles, specific department vehicles, as well as utility-type equipment in the Waste Water department. The replacement program for vehicles is well established, as evident in the alignment between planned capital expenditures and average annual replacement costs.

Vehicle Fleet Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



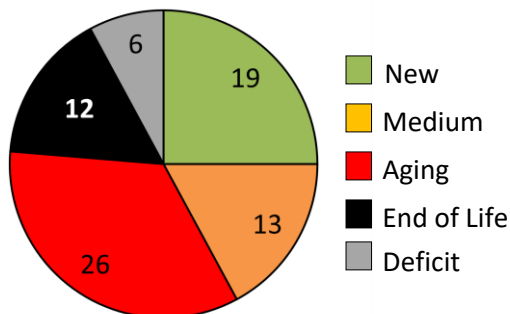
Capital Reserve Opening Balance (2018):

\$377,000

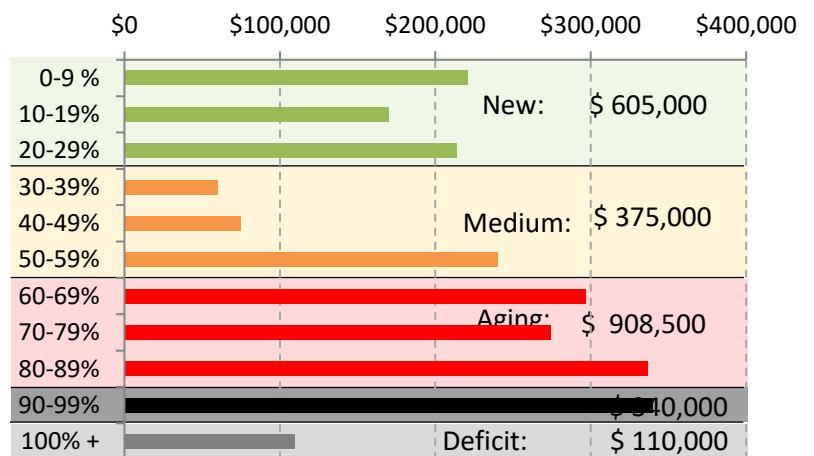
Age and Asset Condition

Asset age indicates asset condition. The Vehicle Fleet has assets in all age classes, with 32% of assets in the *Aging* or *End of Life* age category, resulting in a condition rating of *Poor* or *Very Poor*. Regular inspections and maintenance ensure these aging vehicles continue to be roadworthy. By value, the assets in the *Aging* or *End of Life* category make up 19% of all the Vehicle Fleet.

Fleet: Total Number of Assets by Age Class



Fleet: Total Asset Value by Age Class



2.8.3 Wharves

Level of Service

The Regional District is responsible for operating and maintaining two wharves, both located on Gabriola Island.

The Gabriola Island Emergency Wharf is located adjacent to the BC Ferries ferry terminal at Descanso Bay. It was constructed in 2004. The wharf is not accessible to the public but maintained for emergency purposes such as medical evacuation.

Green's Landing Wharf was constructed in 1959 by the Federal Government. Ownership was transferred to the RDN in 2016 to ensure continued public access. The majority of its use is by residents accessing Mudge Island.

Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs are based on a combination of recent engineer's appraisal (Green's Landing), and the historic cost (Emergency Wharf). This information provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 dollars)

\$325,000

Lifecycle Period

50 years

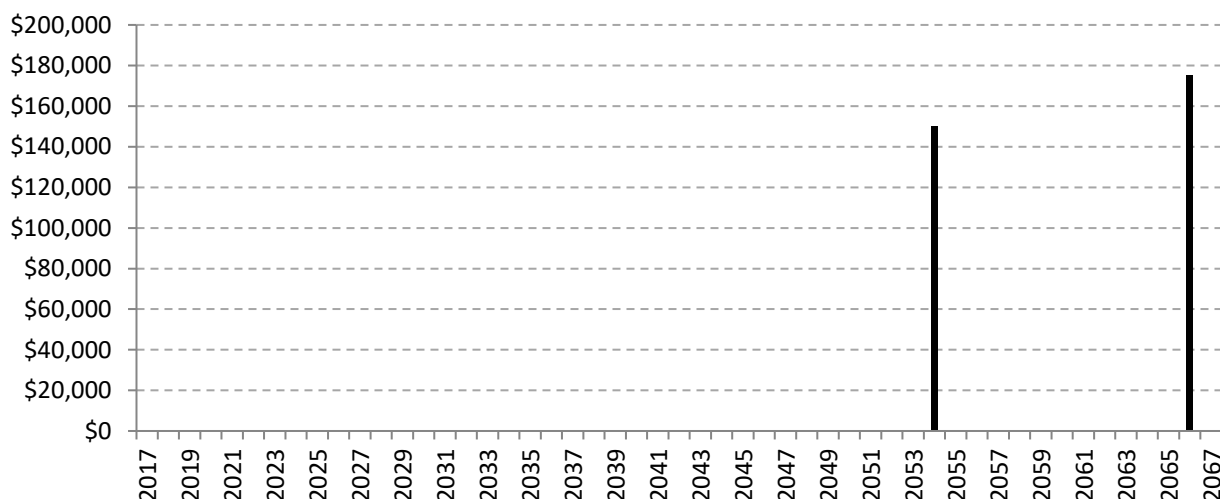
Average Useful Life of All Assets

50 years

Average Annual Replacement Cost

\$6,500

WHARVES: Current Replacement Costs (2017-2067)

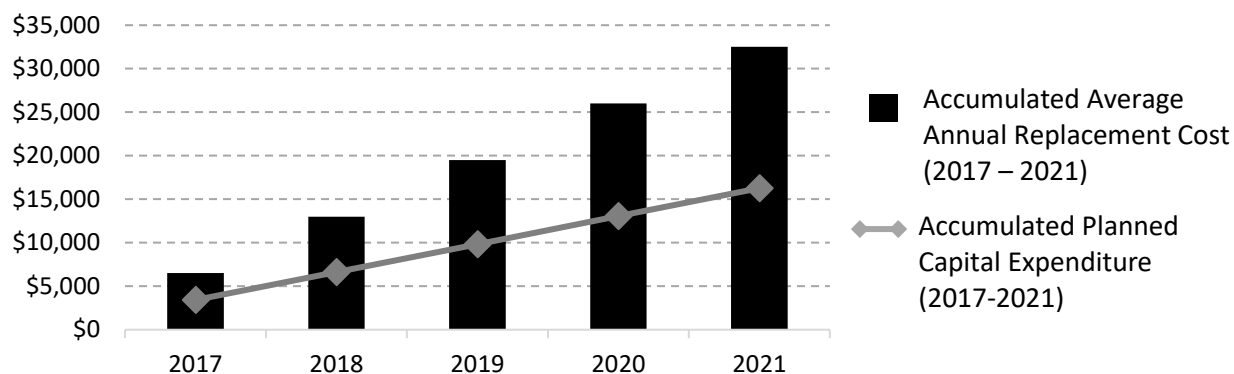




Planned Capital Expenditure & Average Annual Replacement Costs

There are \$16,000 in planned capital expenditures over the 2017-2021 period for the wharves. This includes contributions to reserve funds as well as a portion of operating costs. As is commonly the case for assets early in their estimated useful life, planned capital expenditures are trending below average annual replacement costs.

WHARVES Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



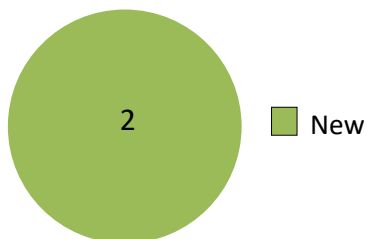
Capital Reserve Opening Balance (2018):

\$204,000

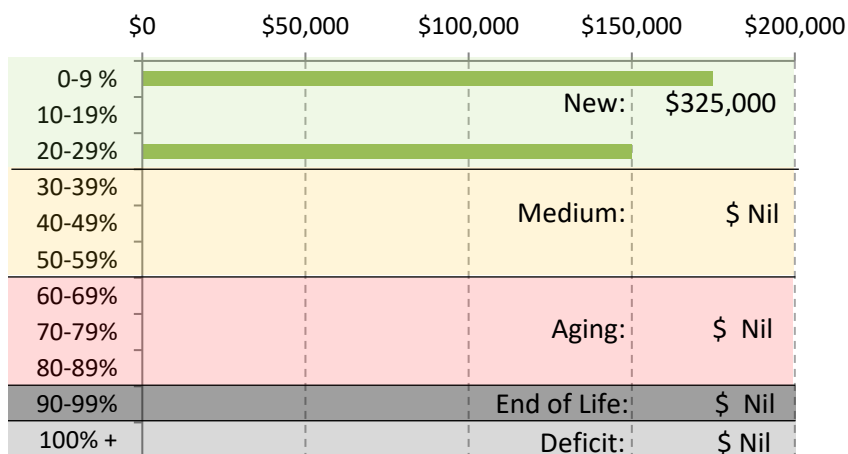
Age and Asset Condition

Asset age indicates asset condition. For the Wharves, 100% of both assets are in the *New* age category, resulting in a condition rating of *Very Good*. Subsequently, 100% of the value of both Wharves is also in the *New* category meaning they are early in their lifecycles.

WHARVES: Total Number of Assets by Age Class



WHARVES: Total Asset Value by Age Class



2.9 Administrative Services

The Administrative Services Department is responsible for the RDN Main Administration Building. Maintenance and repairs of the building are coordinated and managed by a local property management company (NIA) working with staff support from Building and Bylaw Services. NAI has managed the RDN offices for over ten years. Building servicing is completed entirely by subcontractors hired by NIA.

The Administrative Services Department is also responsible for Information Technology and the corporate vehicle pool fleet used by all departments. Operations, maintenance and replacement of the vehicle pool fleet is managed by RDN Transit Services employees and is included in the Transportation Services Section.

Table 8 Administrative Services AM Practices

AMBC Category	Summary of Current Asset Management Practice
Know Your Assets	<p>The asset for the RDN Main Administration is estimated at 75% complete. It includes details such as interior/exterior painting and carpets.</p> <p>For the Administration Building, the RDN uses an insurance appraisal document to calculate replacement values for basic building components, and there are no tools in place to record lifespan estimates of building components.</p> <p>Funds budgeted for reinvestment are placed into reserve to provide funding for miscellaneous replacements as required. Significant projects like replacement of the roof are included in a ten-year capital plan.</p>
Know Your Financial Position	<p>The majority of the operation and maintenance information is logged in report documents; however, there is no simple method to generate reports and analyze operations and maintenance history. Resources are being directed to create a detailed cost tracking system that links costs to assets.</p> <p>The operations, maintenance and management costs of the building are covered by the Administrative Services department budget. The department is funded from interdepartmental transfers charged to every department housed in the building.</p>
Understand Decision-Making	<p>Asset repairs or replacements are prioritized and managed by the RDN property management contractor in consultation with RDN staff. The individual responsible for the property management contract is also responsible for managing Building Inspection Services, therefore has some technical knowledge of building systems.</p>
Manage Asset Lifecycle	<p>The condition of assets are not consistently recorded and submitted to the RDN through the contracted property management firm. Documentation is being developed to relate work history to assets and condition of assets.</p> <p>Renewal alternatives are assessed the contracted property management firm and brought forward to RDN staff for approval. RDN staff do not participate in the process of assessing alternatives except for major work.</p> <p>Maintenance of the building is reactive. As system to verify maintenance strategies for the assets is in development by the RDN.</p>



2.9.1 Administration Building

Level of Service

The RDN Administration Building is the political and administrative centre for the RDN. It is a 25,000 square foot, LEED Silver certified office building that provides workspace and meeting rooms for almost 90 staff; front counter services to the public; and Chambers for the RDN Board of Directors. The building is currently at full capacity, with no space available to accommodate additional staff. Addressing this capacity issue will be a key challenge as staffing needs increase.

In addition to the capacity challenge, the building has undergone several renovations and expansions since its initial construction in 1972. As a result, different areas of the building provide different comfort levels for occupants, and competing mechanical systems operate with diminished efficiency. Off-street parking for 155 vehicles is shared with the adjacent Transportation Services Building and is also at capacity.

Current Replacement Costs

Data Confidence Rating: 2

Current replacement costs are based on historic costs from financial records, and property insurance valuation. The asset inventory is not considered complete. This provides a data confidence rating of '2' for current replacement costs for the RDN Administration Building.

Total Replacement Value (2016 dollars)

\$9,700,000

Lifecycle Period

40 Years

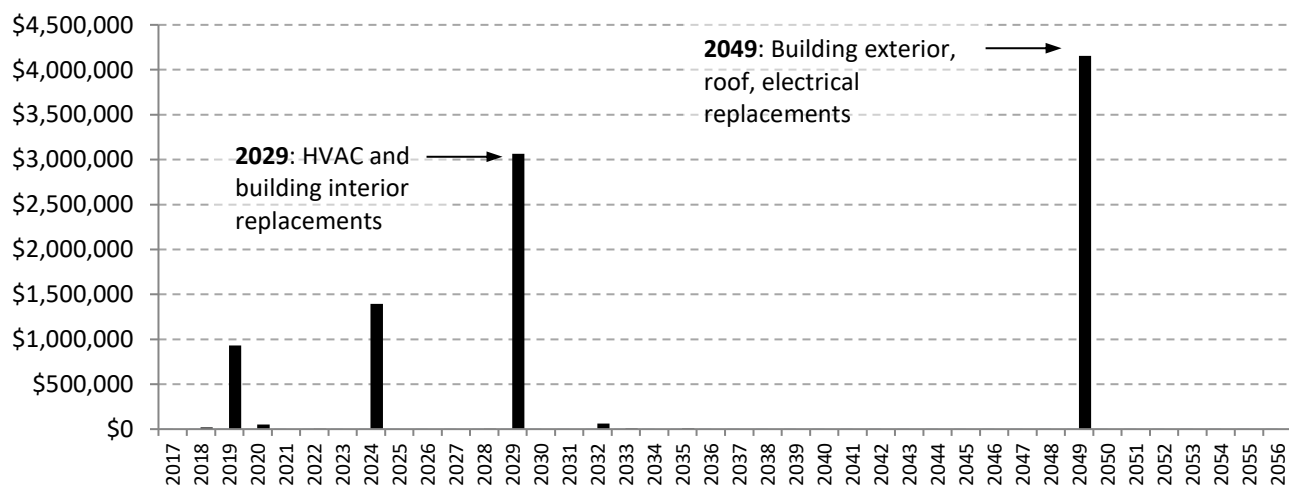
Average Useful Life of All Assets

17 years

Average Annual Replacement Cost:

\$485,000

Administration Building: Current Replacement Costs (2017-2056)

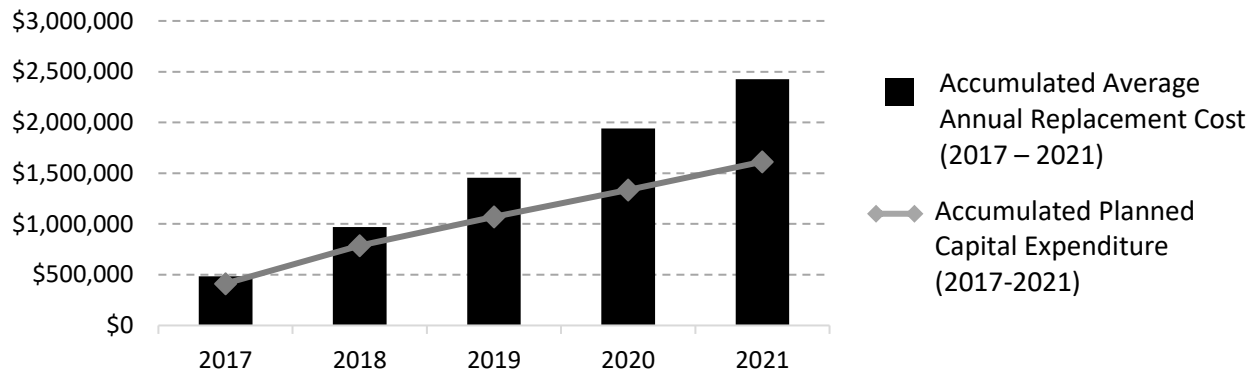




Planned Capital Expenditure & Average Annual Replacement Costs

Planned capital expenditures for the Administration Building total \$1.6 million over the 2017-2021 period, including roof and HVAC replacements, and technological upgrades for the building. The 12-year period from 2017-2029 is a time of reinvestment in the RDN Admin Building, however to justify that reinvestment, an overall assessment of the facility is needed.

Admin Building Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

\$339,000

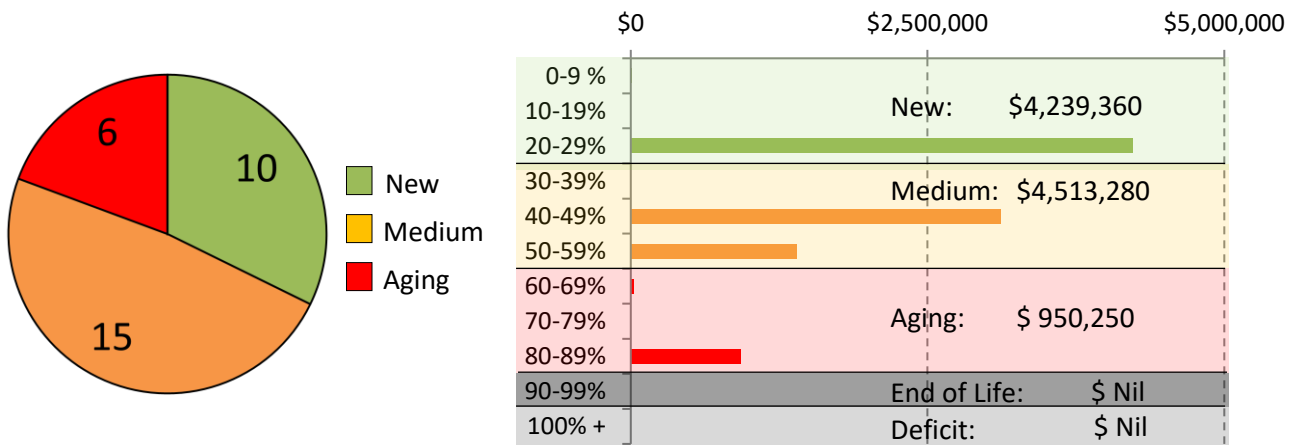
Age and Asset Condition

For the Administration Building, 81% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*.

90% of the value of all the assets are in the *New* or *Medium* category. Completing a more detailed asset registry will increase confidence in this analysis.

Admin Building: Total Number of Assets by Age Class

Admin Building: Total Asset Value by Age Class



2.9.2 Information Technology

Level of Service

The Information Services department plans and implements the utilization of computer technology, provides advice to inter-departmental projects, and maintains all aspects of the network / telecom communications related equipment on behalf of the organization.

The Regional District has computing resources in 27 locations across the region (including offices, public facilities, and operations buildings). Physical infrastructure includes 324 personal computers, 64 file/application servers (the majority of which operate in a virtual server environment), 156 Wireless Device users and associated peripheral equipment, and telecommunications equipment.

Current Replacement Costs

Data Confidence Rating: 5

Current replacement cost values for the Information Technology (hardware) are based on the ongoing replacement and upgrading program set in place by the Information Systems Department Manager. This provides a high data confidence rating of '5' for current replacement costs.

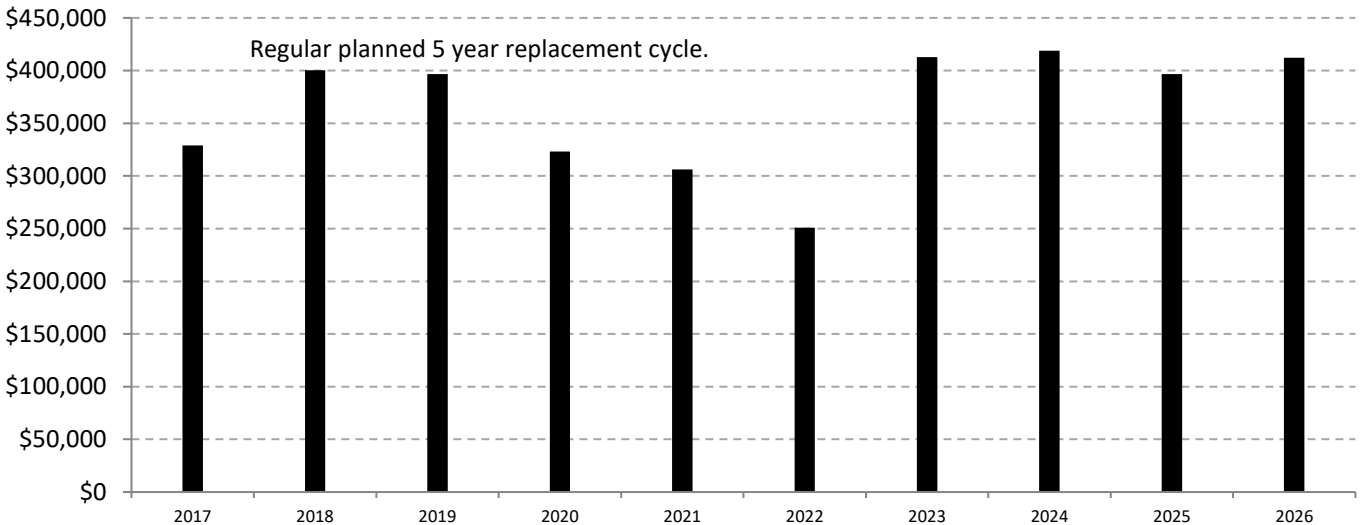
Total Replacement Value (2016 Dollars) **\$1,600,000**

Lifecycle Period **10 years**

Average Useful Life of All Assets **5.2 Years**

Average Annual Replacement Cost **305,000**

Information Technology: Current Replacement Costs (2017-2026)

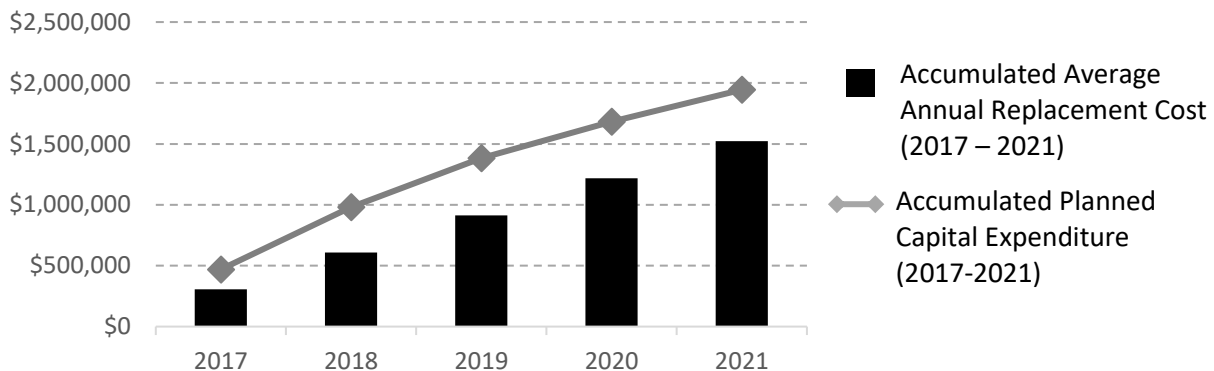




Planned Capital Expenditure & Average Annual Replacement Costs

Planned Capital Expenditures attributed to the Information Services Department includes workplace personal computers and phones which are expensed to the individual departments. There are planned capital expenditures of \$1.9 million over the 2017-2021 period.

IT: Planned Capital Expenditures & Average Annual Replacement Costs (2017-2022)



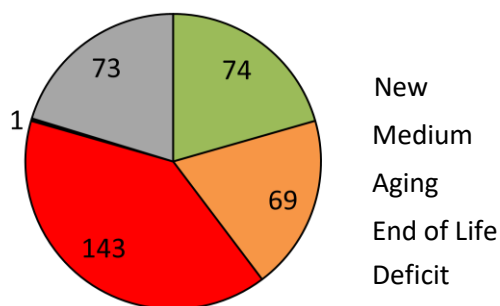
Capital Reserve Opening Balance (2018):

\$1,946,000

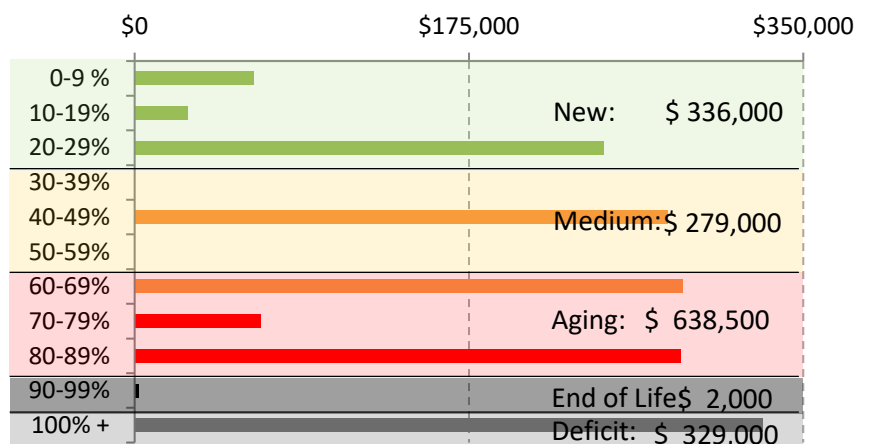
Age and Asset Condition

For the Information Services Department, 40% of all assets are in the *New* or *Medium* age category, while 20% are in the *Deficit* category. Many of these “aged out” assets are still in use having been re-purposed for non-frontline applications. Twenty-one percent (21%) of the value of all the assets are in the *End of Life* or *Deficit* category meaning the assets are at or nearing the time for replacement or renewal.

IT: Total Number of Assets by Age Class



IT: Total Asset Value by Age Class



2.10 Fire Protection Services

The RDN Fire Services Coordinator, in collaboration with the Accounting Services Department, oversees budgeting including capital project financing, and asset procurement for six volunteer-based fire department societies. These societies provide fire protection and emergency response services in Electoral Areas C, E, F, portions of Electoral Area G and portions of Electoral Area H. Other areas are served by member municipalities or local improvement districts independent from the RDN.

The volunteer fire department societies are responsible for day-to-day management of fire departments as well as operational guidance to their volunteers. They also advise the RDN of their capital improvement requirements. The fire protection assets are owned by the RDN.

Table 9 Fire Protection Services AM Practices

AMBC Category	Summary of Current Asset Management Practice
Know Your Assets	The assets located at each fire hall are generally listed in the TCA Inventory spreadsheet maintained by the Finance Department. The fire services assets require componentization to provide the information required to support decision-making.
	The RDN and Fire Halls' information systems are under review for alignment and service integration. Resources are being directed to improve coordination and sharing of asset information between the RDN and the Fire Halls. This will support improved decision-making and data analysis.
Know Your Financial Position	Long range capital reinvestment plans and replacement cost, in current dollar value, for the fire services assets owned by RDN is under development. RDN staff work with the fire halls to budget replacement of trucks.
	Operations and Maintenance costs are under review for linkage to individual assets. Annual operations and maintenance costs are approximated based on the prior year's budget with little detailed information on work completed and what is required.
	The Fire Halls are financed through tax requisition. Installments are paid on a quarterly basis that the Fire Halls use to run their facilities and operations.
Understand Decision-Making	Of the fire departments within the RDN there are six that the RDN has contracts with. Part of each contract agreement indicates that their assets became the property of the RDN.
	Fire Halls are staffed by volunteer staff in the electoral areas. The six departments submit a budget that has been approved by their board. Finance enters these budgets into the FMW budget program which is then approved by the RDN board.
	Spending of the taxes collected on behalf of the Fire Halls is decided by the fire society board or chief, in consultation with the RDN.
Manage Asset Lifecycle	. Condition and work history condition and work history of the trucks, buildings, and other firefighting equipment is readily available at each Fire Hall through the fire service provider..



Maintenance of Fire Services assets is managed by the volunteers and these procedures have been communicated to the RDN.

Know the Rules

The RDN has laid out specific fire protection goals and has identified the stakeholders of the service.

The RDN has knowledge of legislation and standards to follow. The RDN Fire Departments have lists of these documents.



2.10.1 Fire Protection in the Regional District - Level of Service

Fifteen fire departments operate 23 fire halls throughout the RDN, providing fire protection for all four municipalities and most unincorporated areas.

Nine of these fire departments are administered and financed by municipalities and improvement districts, and operate independently of the RDN.

A. Municipal or Improvement District Fire Departments

- Cranberry
 - *contracts with RDN to provide service to portions of Electoral Areas A and C*
- Deep Bay
- East Wellington (Mountain Improvement District)
- Gabriola Island
- District of Lantzville
- City of Nanaimo
 - *contracts with RDN to provide service for a portion of Electoral Area C*
- North Cedar
- City of Parksville
 - *contracts with RDN to provide service to portions of Electoral Area G*
- Town of Qualicum Beach
 - *contracts with RDN to provide service for a portion of Electoral Area G*



B. RDN Volunteer Fire Departments

The remaining six fire departments are volunteer fire department societies. These societies provide fire protection and emergency response services in all, or portions of, Electoral Areas C, E, F, G, and H.

- Bow-Horn Bay
- Coombs-Hilliers
- Dashwood
- Errington
- Extension
- Nanoose Bay



The RDN collects property taxes for these fire departments, and provides financing for their operations and capital expenses. The volunteer fire department societies are responsible for day-to-day management of their fire departments, and operational guidance to their volunteers. They also advise the RDN of their capital improvement requirements. Planning assistance and financial oversight is provided by the RDN Fire Services Coordinator.

2.10.2 Bow Horn Bay

Level of Service

The Bow Horn Bay Volunteer Fire Department (VFD) was established in 1952 as the Qualicum Bay Fire Department. A purpose-built, three-bay hall was erected on Lions Way in Qualicum Bay in 1978. Two additional bays were added on to the rear of the hall in the early 1980's.

The department presently has eleven pieces of major equipment including tanker trucks, pumper apparatus, command vehicle, rescue vehicles, a communications trailer, an ATV, and a hydrant maintenance vehicle. The VFD is comprised of the Fire Chief, a Deputy Chief, three Captains, two Lieutenants, and 13 volunteer firefighters.

Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs include the Fire Hall and fire trucks. Personal gear and other equipment are not included. Values are based on quotes from recent fire truck purchases and fire hall construction undertaken by other local VFDs. This level of information provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$3,600,000

Lifecycle Period

30 years

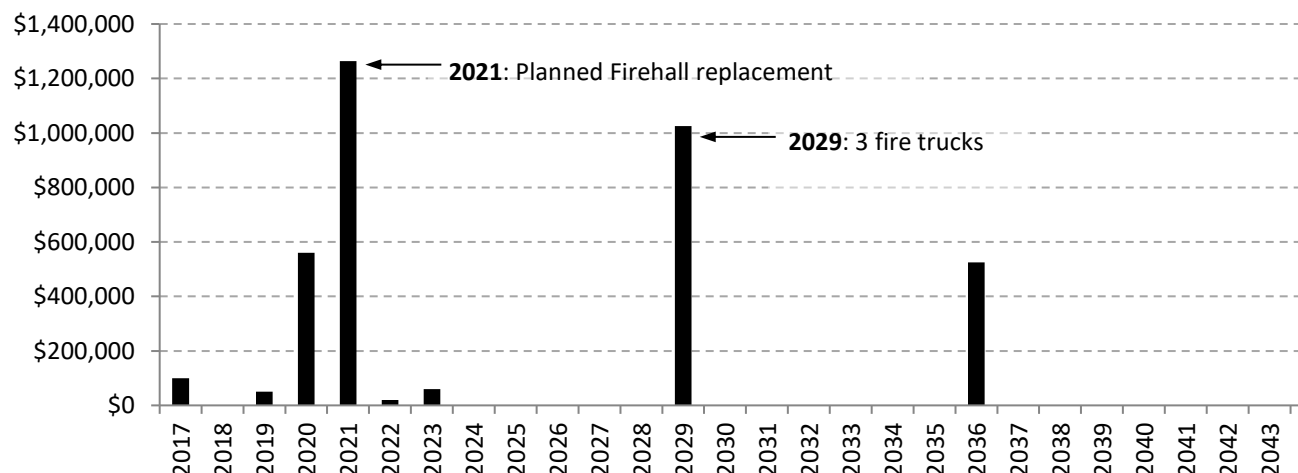
Average Useful Life of All Assets

20.8 Years

Average Annual Replacement Cost

\$175,000

Bow Horn Bay VFD: Current Replacement Costs (2017-2046)

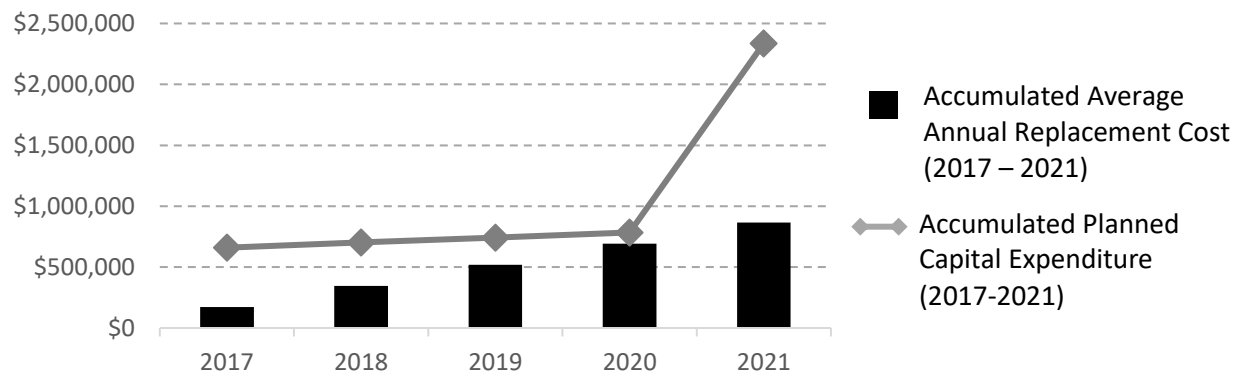




Planned Capital Expenditure & Average Annual Replacement Costs

For the Bow Horn Bay VFD there are planned capital expenditures of \$2.3 million over the 2017-2021 period, including construction of a satellite fire hall, replacement of the existing aging hall, and the purchase of a new generator.

Bow Horn Bay VFD Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

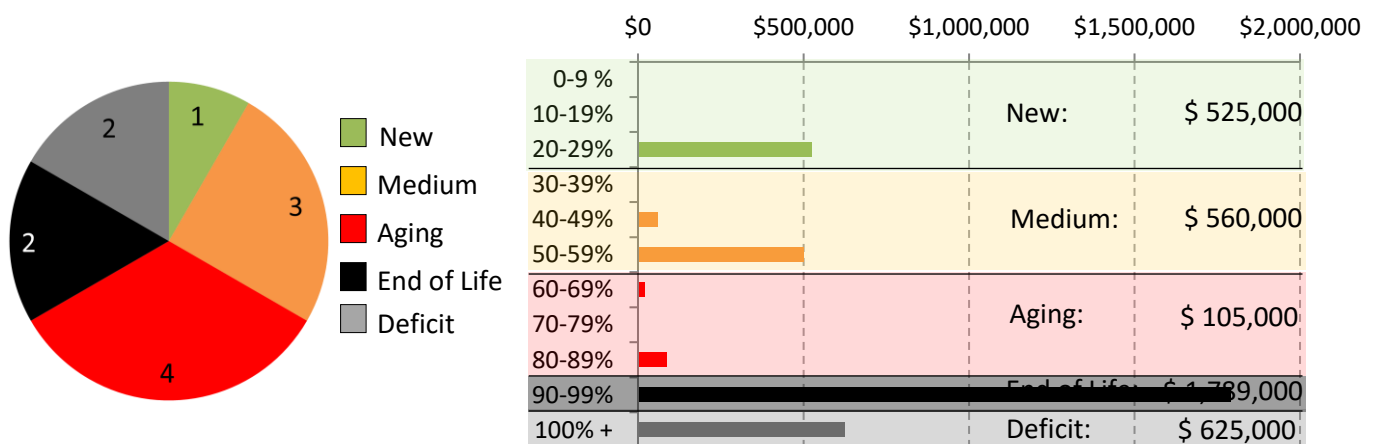
\$410,000

Age and Asset Condition

For the Bow Horn Bay VFD, 58% of all assets are in the *Medium* or *Aging* age category, resulting in a condition rating of *Good* or *Fair*. However, 67% of the value of all the assets are in the *Aging* or *End of Life* category meaning a number of the assets are at or nearing the time for replacement or renewal.

Bow Horn Bay: Total Number of Assets by Age Class

Bow Horn Bay: Total Asset Value by Age Class



2.10.3 Cassidy - Waterloo

Level of Service

The Cassidy Waterloo Fire Protection Area (FPA) of the RDN (encompassing portions of Electoral Areas A and C in the southern end of the district) does not have a VFD but is serviced under contract by the Cranberry VFD.

The RDN owns the fire hall located at Hallberg Road, which is a simple structure housing two fire trucks, namely a pumper truck and a tanker, along with hose, equipment and related firefighting gear. This is known as Fire Hall # 2

Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs are for the Fire Hall and the two trucks only. Personal gear and other equipment are not included in the asset register. Values are based quotes from recent fire truck purchases and fire hall construction undertaken by other local VFDs. This level of information provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$2,000,000

Lifecycle Period

30 years

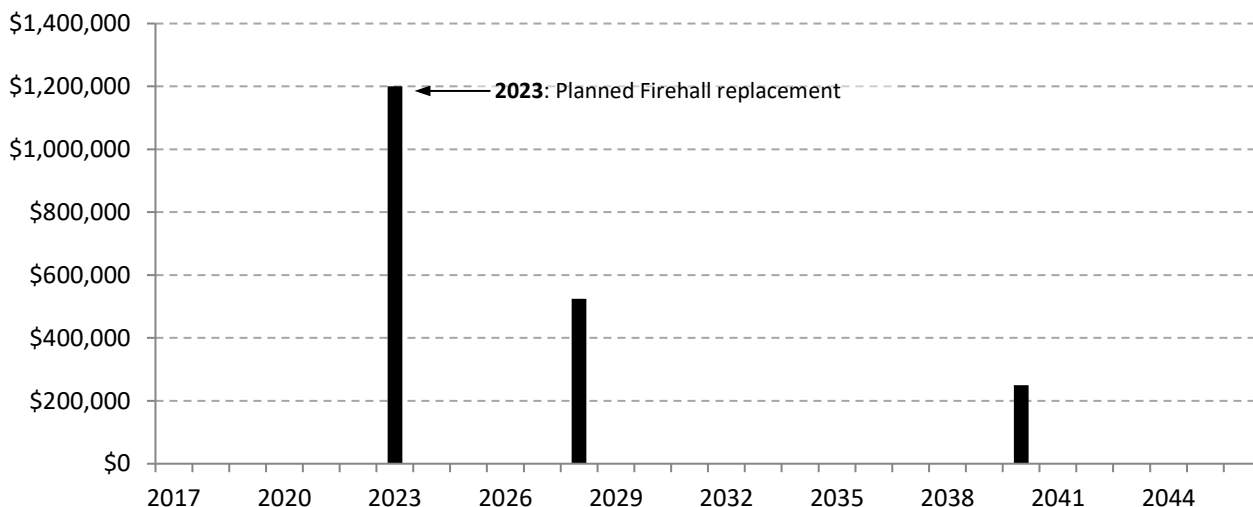
Average Useful Life of All Assets

28.3 years

Average Annual Replacement Cost

\$70,000

Cassidy Waterloo FPA: Current Replacement Costs (2017-2046)

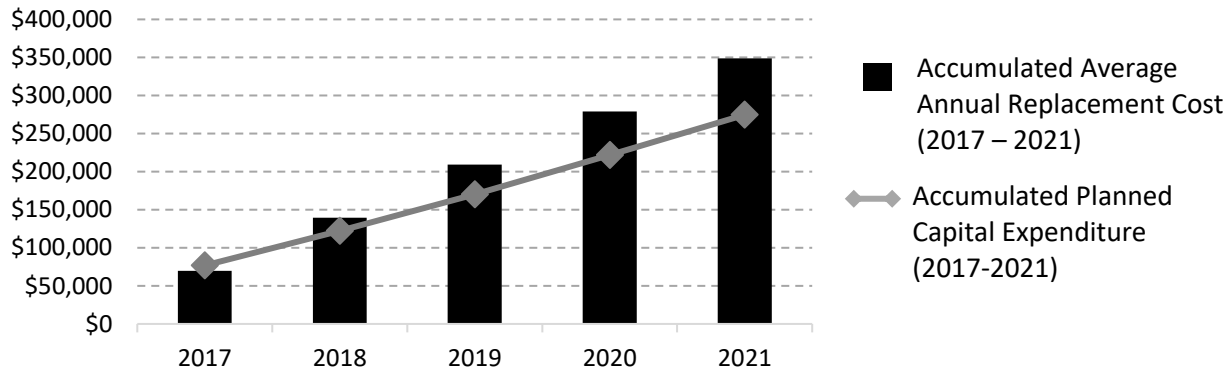




Planned Capital Expenditure & Average Annual Replacement Costs

For the Cassidy Waterloo FPA there is \$275,000 in planned capital expenditures over the 2017-2021 period. Expenses shown represent contributions to reserve funds and a portion of operating expenses dedicated to maintaining current assets. Planned capital expenditures and average annual replacement costs are very closely aligned over the 2017-2021 period.

Cassidy Waterloo FPA Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



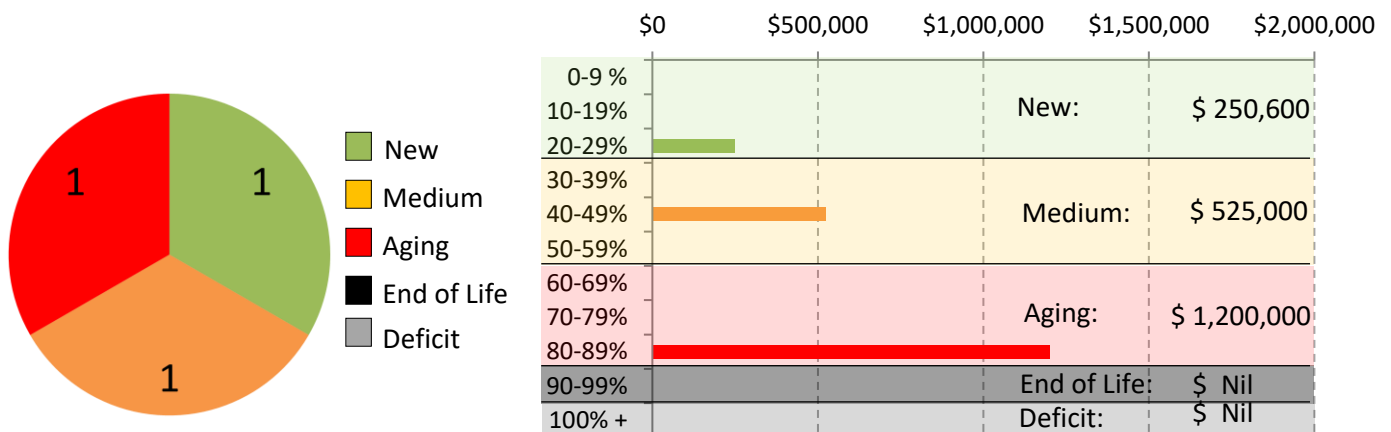
Capital Reserve Opening Balance (2018):

\$275,000

Age and Asset Condition

Asset age indicates asset condition. For the Cassidy Waterloo FPA, 66% of all assets are in the *Medium* or *Aging* age category, resulting in a condition rating of *Good* or *Fair*. However, 61% of the value of all the assets are in the *Aging* category meaning a number of the assets are at or nearing the time for replacement or renewal.

CW FPA: Total Number of Assets by Age Class CW FPA: Total Asset Value by Age Class



2.10.4 Coombs-Hilliers (CHVFD)

Level of Service

The Coombs-Hilliers Volunteer Fire Department (VFD) was established in 1965. The Coombs-Hilliers VFD operates two fire halls and provides fire suppression, medical aid and rescue services to the Coombs-Hilliers area (Electoral Area F). The fire halls are located at Ford Road (Hall # 1) and on the Alberni Highway (Hall # 2).

The department presently has eight pieces of major equipment including tanker trucks, tender and pumper apparatus, command vehicle, rescue vehicles, and an emergency response vehicle. The VFD is comprised of the Fire Chief, a Deputy Chief, two Captains, three Lieutenants, and 32 volunteer firefighters.

Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs are for two Fire Halls, major firefighting apparatus, plus firefighting gear and equipment. The asset register is considered complete and up-to-date. Values are based on recent fire truck and equipment purchases, and fire hall construction undertaken by other local VFDs. This level of information provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$4,200,000

Lifecycle Period

30 years

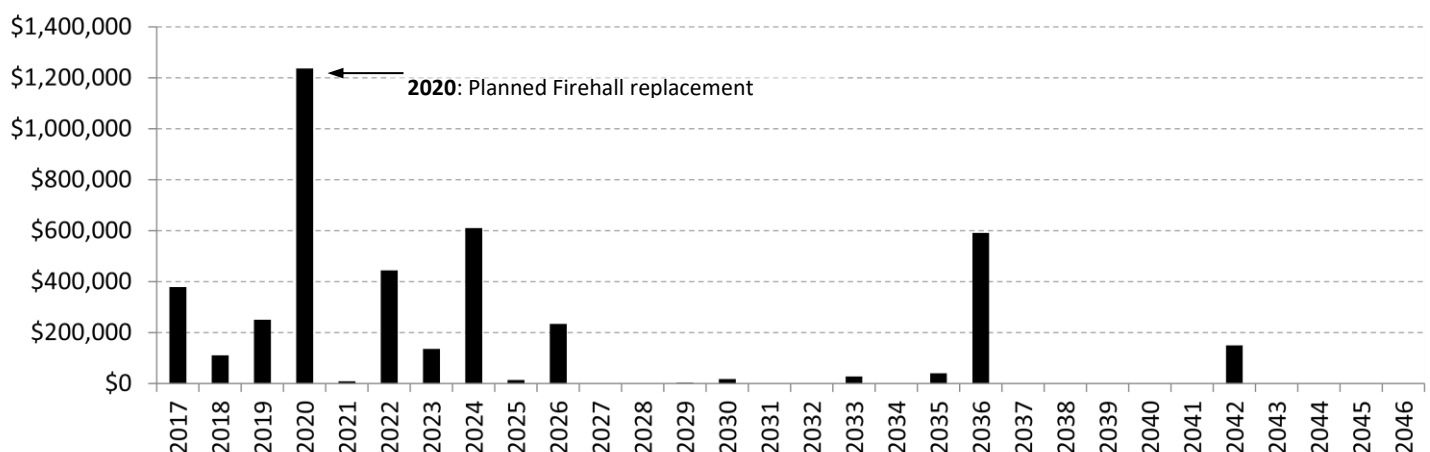
Average Useful Life of All Assets

15 years

Average Annual Replacement Cost

\$283,500

Coombs-Hilliers VFD: Current Replacement Costs (2017-2046)

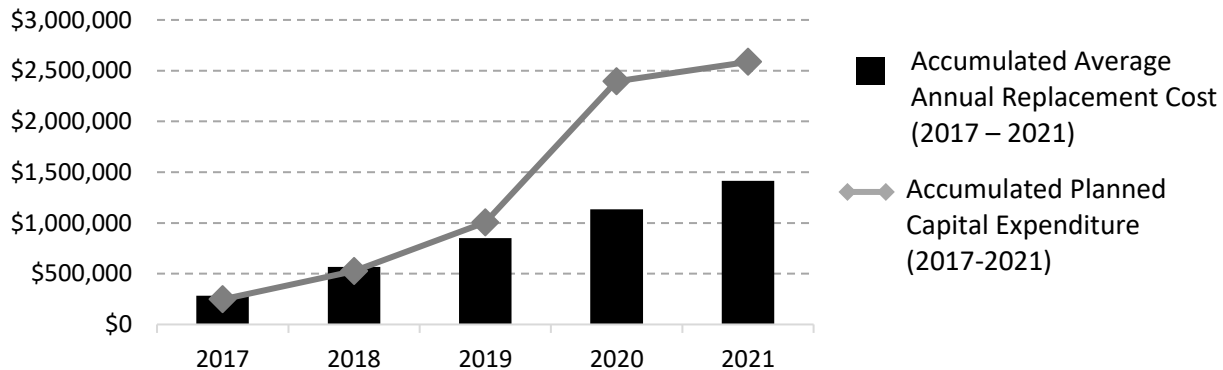




Planned Capital Expenditure & Average Annual Replacement Costs

For the Coombs-Hilliers VFD there are planned capital expenditures of \$2.6 million to replace fire hall #2, replace and refurbish three firefighting apparatus, construct two new water storage tanks, and replace the SCBA (Self Contained Breathing Apparatus) equipment over the 2017-2021 period. This level of capital expenditure is evident in the graph below.

Coombs-Hilliers VFD: Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



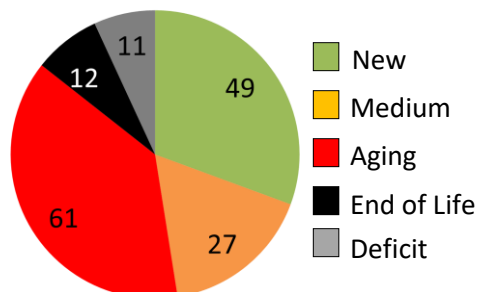
Capital Reserve Opening Balance (2018):

\$615,000

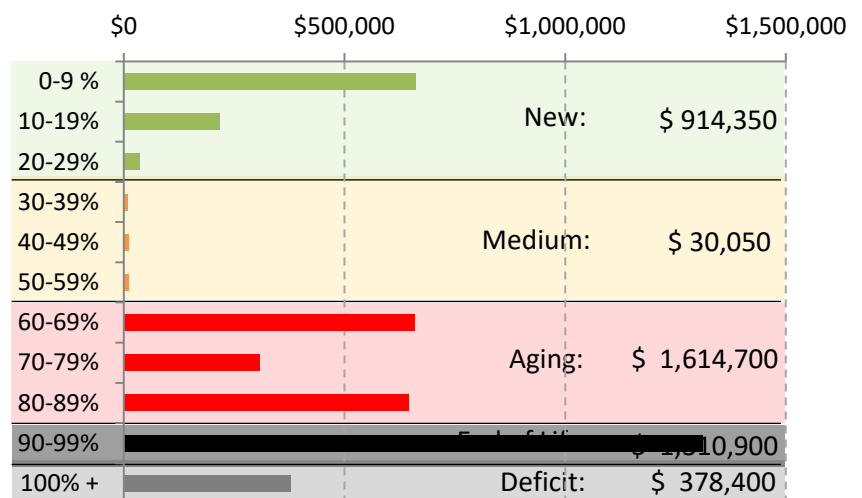
Age and Asset Condition

Asset age indicates asset condition. For the Coombs-Hilliers VFD, 48% of all assets are in the *New* or *Medium* category, resulting in a condition rating of *Very Good* or *Good*. However, 40% of the value of all the assets are in the *Aging* or *End of Life* category meaning a number of the assets are at or nearing the time for replacement or renewal.

CH VFD: Total Number of Assets by Age Class



CH VFD: Total Asset Value by Age Class



2.10.5 Dashwood

Level of Service

The Dashwood Volunteer Fire Department (VFD) was established in 1984. The Dashwood VFD operates two fire halls, and provides fire suppression, medical aid and rescue/extrication services to the Dashwood, Dunsmuir, and Meadowood communities in Electoral Areas F, G, and H. The fire halls are located at Hobbs Road (Station 61) and a secondary station at Galvin Place in the Meadowood area (Station 62).

The department presently has nine pieces of major equipment dispersed between the two halls including tanker trucks, tender and pumper apparatus, rescue vehicles, and an emergency response vehicle. The Dashwood VFD is comprised of a Fire Chief, a part-time Captain/Training Officer, one Captain, three Lieutenants, four acting Lieutenants, and 18 volunteer firefighters.

The VFD covers an area of approximately 130 km², serving about 1,700 properties with an estimated population of 3,700 citizens.

Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs are for the two Fire Halls, major firefighting apparatus, plus firefighting gear and equipment. The asset register is complete and up-to-date. Values are recent fire truck and equipment purchases, and fire hall construction undertaken by other local VFDs. This level of information provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$4,700,000

Lifecycle Period

50 years

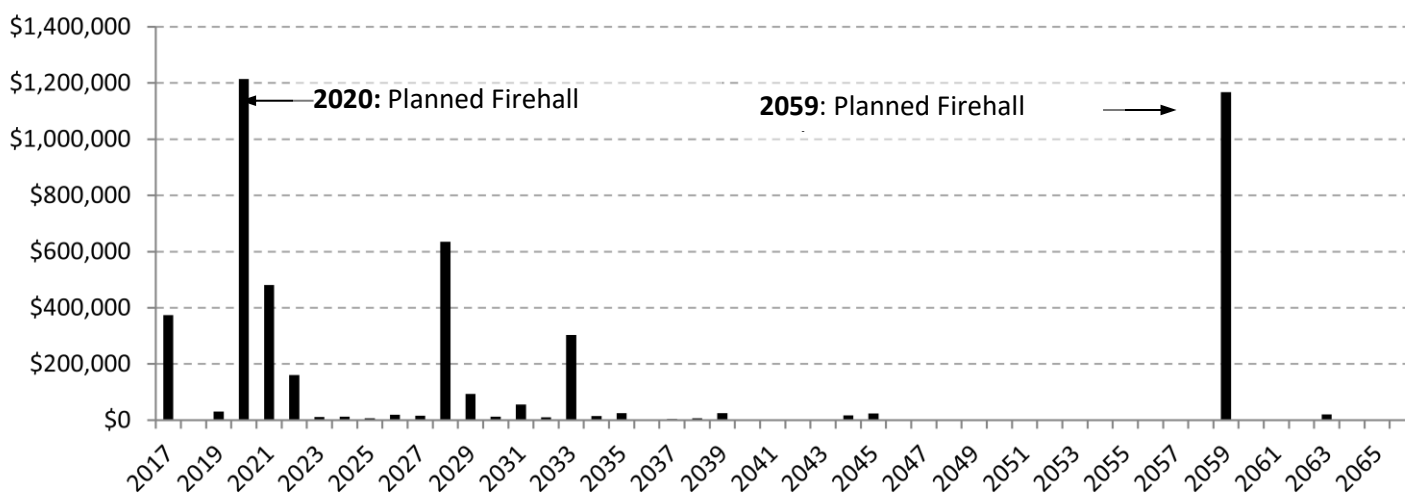
Average Useful Life of All Assets

17.6 years

Average Annual Replacement Cost

\$269,500

Dashwood VFD: Current Replacement Costs (2017-2066)

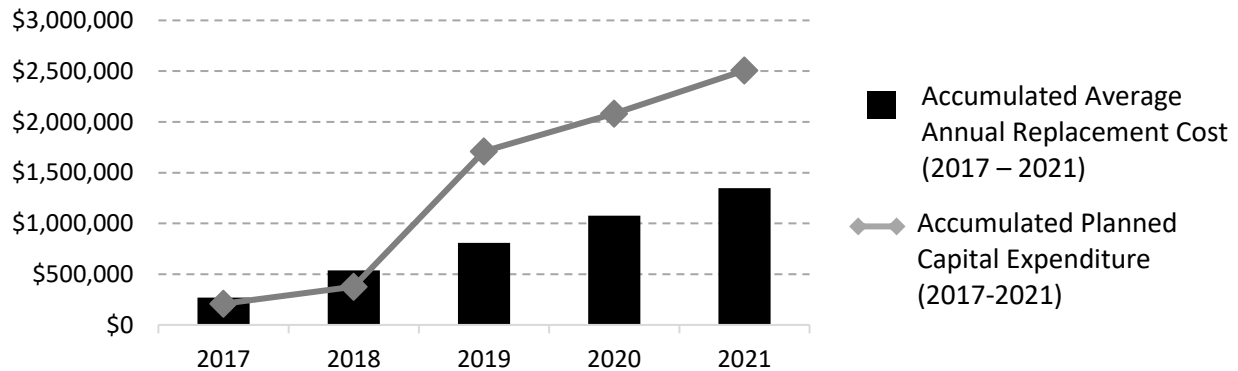




Planned Capital Expenditure & Average Annual Replacement Costs

For the Dashwood VFD there are planned capital expenditures of \$2.5 million over the next five years to seismically upgrade a fire hall (Station 61), replace two pumper trucks and a utility truck, and replace an air compressor along with some minor equipment. This level of capital expenditure is evident in the graph below.

Dashwood VFD: Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

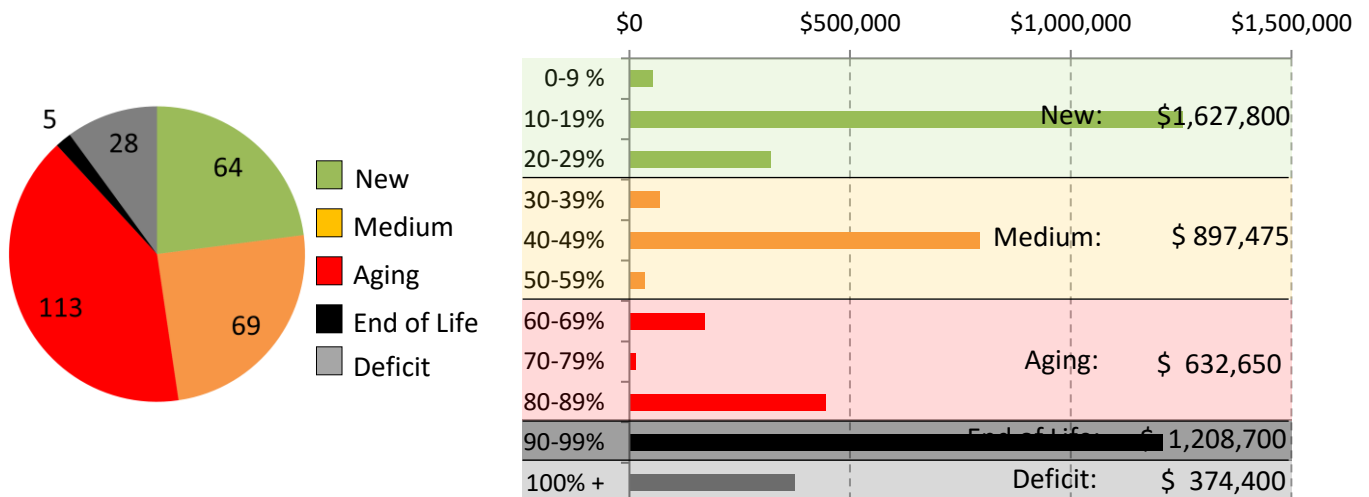
\$500,000

Age and Asset Condition

For the Dashwood VFD, 48% of all assets are in the *New* or *Medium* category, resulting in a condition rating of *Very Good* or *Good*. However, 33% of the value of all the assets are in the *End of Life* or *Deficit* category meaning a number of the assets are at the time for replacement or renewal.

Dashwood VFD: Total Number of Assets by Age Class

Dashwood VFD: Total Asset Value by Age Class



2.10.6 Errington

Level of Service

The Errington Volunteer Fire Department (VFD), which serves Electoral Area F, was first conceived in 1965 following a devastating lumber mill fire on Grafton Road. In the aftermath, a local resident personally committed equipment including a truck with 700 gallons capacity, hoses and a forestry pump to set up local firefighting capacity.

The first fire hall (still standing) was built beside the Errington War Memorial Hall, and was in use from 1968 to 1976. In 1976, Fire Hall #1 was constructed at 960 Errington Road. In 1983, construction of Fire Hall #2 commenced at 1930 Errington Road. In 1985 the training grounds beside Hall #2 was built. A four-bay addition was added to Hall #1 in 2004, while in 2006 a three-bay addition was added to Hall #2.

The department presently has eight pieces of major equipment including tanker trucks, tender and pumper apparatus, and utility vehicles. The Errington VFD is comprised of the Fire Chief, an acting Deputy Chief, two Captains, four Lieutenants, four acting Lieutenants, and 20 volunteer firefighters.

Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs are for two fire halls and major firefighting apparatus only. Personal gear and other equipment are not included in the asset registry. Values are based on recent fire truck purchases and fire hall construction undertaken by other local VFDs. This level of information provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$5,000,000

Lifecycle Period

30 years

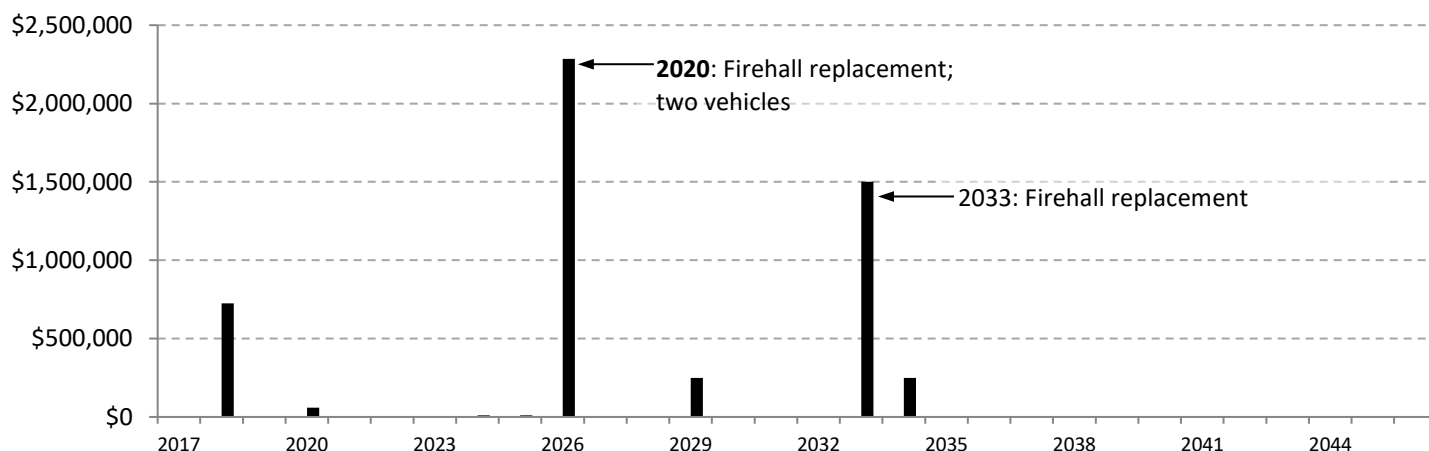
Average Useful Life of All Assets

27.7 years

Average Annual Replacement Cost

\$180,500

Errington VFD: Current Replacement Costs (2017-2046)

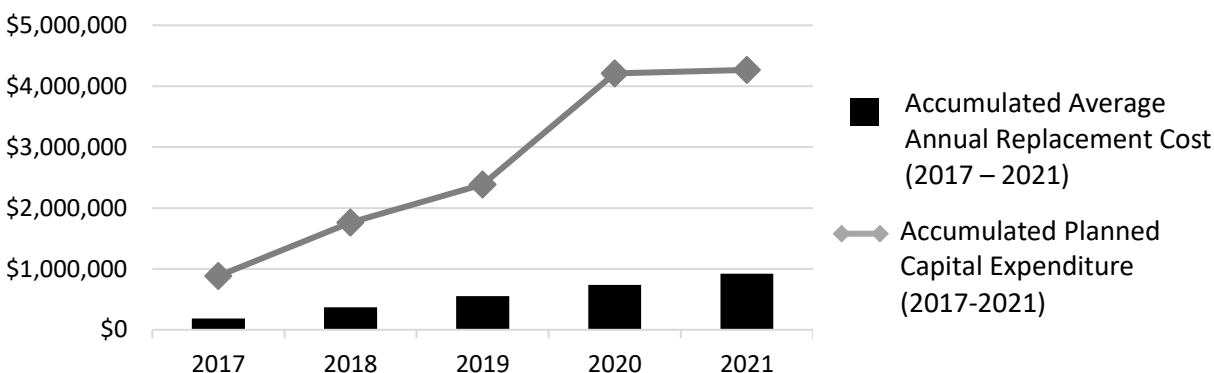




Planned Capital Expenditure & Average Annual Replacement Costs

For the Errington VFD there are planned capital expenditures of \$4.3 million over the 2017-2021 period to seismically upgrade fire hall #2, and to replace two aging fire tanker trucks. This level of capital expenditure is evident in the graph below.

Errington VFD Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

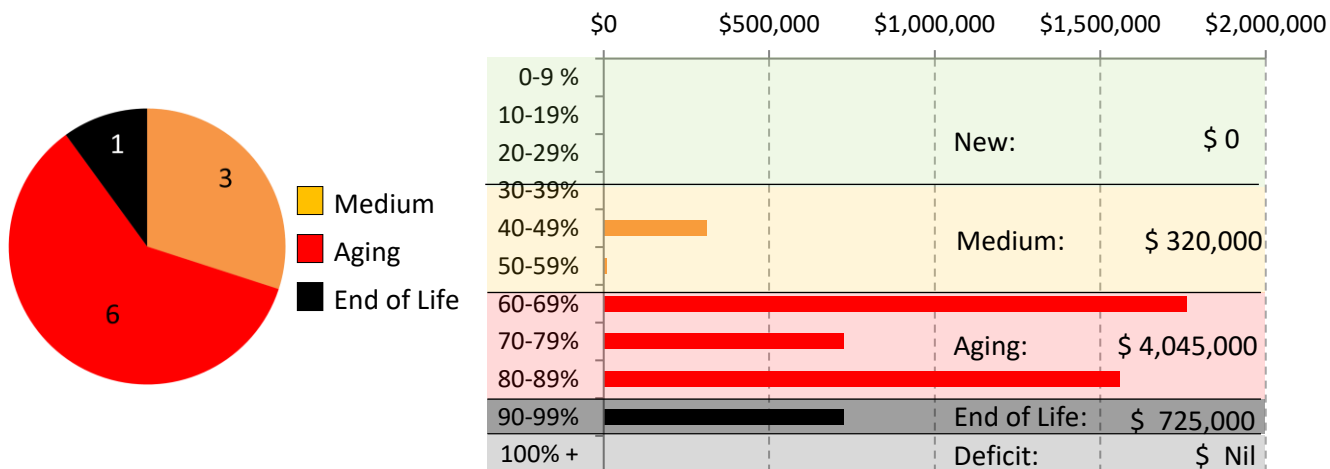
\$695,000

Age and Asset Condition

For the Errington VFD, 90% of all assets are in the *Medium* or *Aging* age category, resulting in a condition rating of *Good* or *Fair*. However, 94% of the value of all the assets are in the *Aging* or *End of Life* category meaning a number of the assets are at or nearing the time for replacement or renewal.

Errington VFD: Total Number of Assets by Age Class

Errington VFD: Total Asset Value by Age Class



2.10.7 Extension

Level of Service

The Extension Volunteer Fire Department (VFD) was established in 1985 to provide emergency response to residents of the Extension area, south of Nanaimo in Electoral Area C. The fire hall is located at Bramley Road.

The department presently has three pieces of major equipment including two firefighting trucks, and one emergency vehicle. The Extension VFD is comprised of the Fire Chief, a Deputy Chief, four Captains, 2 Lieutenants, and 20 Firefighters including recruits and juniors.

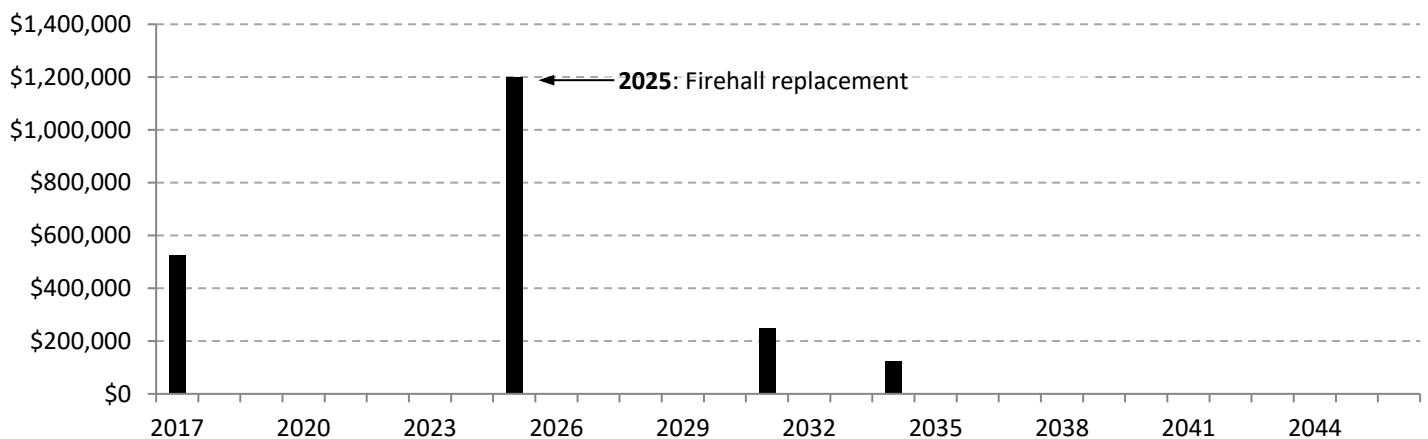
Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs are for the Fire Hall and major firefighting apparatus only. Personal gear and other equipment are not included in the asset registry. Values are based on recent fire truck purchases and fire hall construction undertaken by other local VFDs. This level of information provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 Dollars)	\$2,100,000
Lifecycle Period	30 years
Average Useful Life of All Assets	29 years
Average Annual Replacement Cost	\$73,000

Extension VFD: Current Replacement Costs (2017-2046)

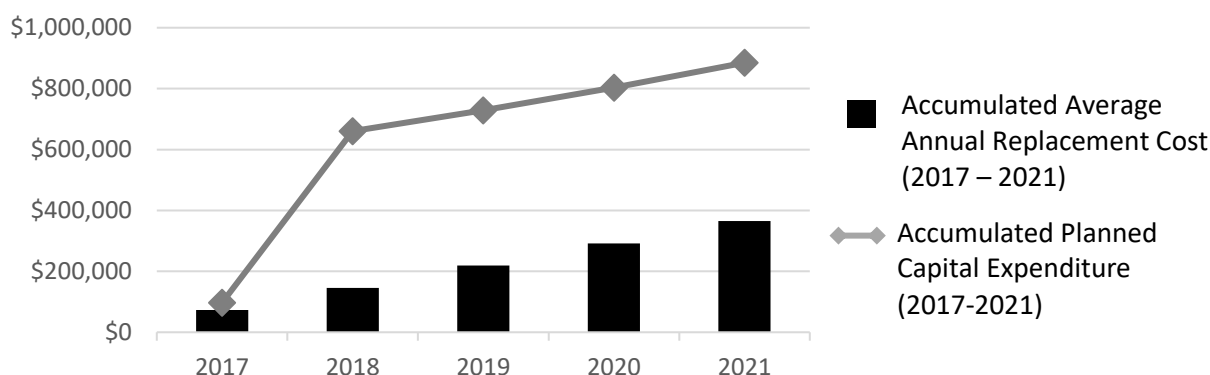




Planned Capital Expenditure & Average Annual Replacement Costs

For the Extension VFD there are planned capital expenditures of \$885,000 over the 2017-2021 period to refurbish the pumper truck. This level of capital expenditure is evident in the graph below.

Extension VFD Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

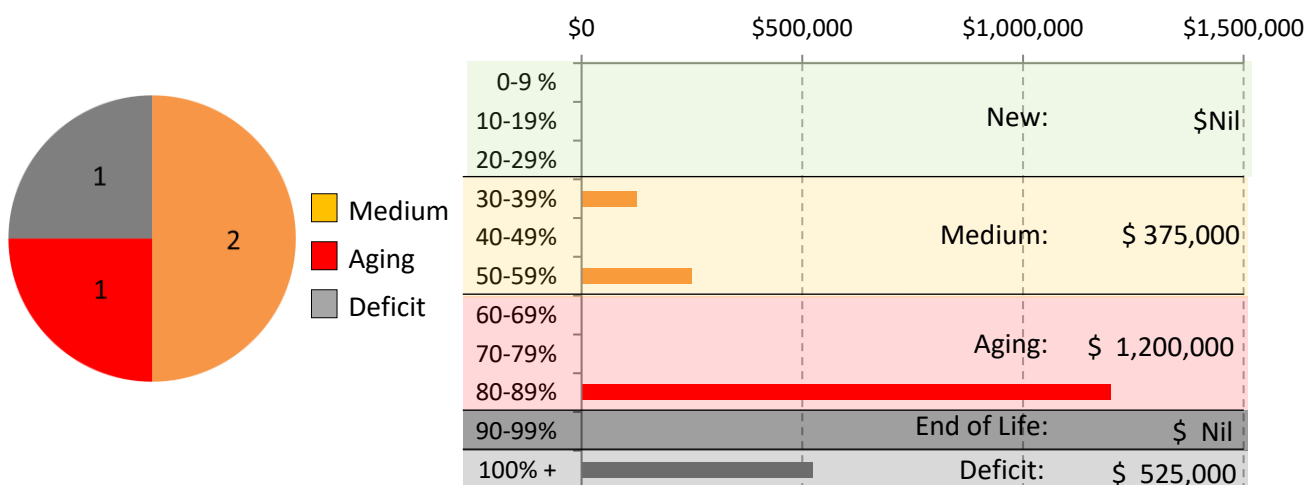
\$579,000

Age and Asset Condition

For the Extension VFD, 75% of all assets are in the *Medium* or *Aging* age category, resulting in a condition rating of *Good* or *Fair*. However, 25% of the value of all the assets are in the *Deficit* category meaning the time for replacement or renewal has arrived.

Extension VFD: Total Number of Assets by Age Class

Extension VFD: Total Asset Value by Age Class



2.10.8 Nanoose Bay

Level of Service

The Nanoose Volunteer Fire Department (VFD) was established in 1973. The VFD provides emergency response to residents of the Nanoose Bay area, (Electoral Area E), as well as the Englishman River (River's Edge) subdivision (Electoral Area G).

After operating out of a founding member's workshop/garage for two years, construction of the first fire hall was completed in 1975. In May 2013, a new fire hall was officially opened. Constructed on the site of the first hall on Nanoose Road, the facility was built to post-disaster seismic and LEED standards.

The department presently has seven pieces of major equipment including firefighting and pumper trucks, a rescue vehicle and one emergency vehicle. The Nanoose VFD is comprised of the Fire Chief, a Deputy Chief, one Training Officer, three Captains, four Lieutenants, and 24 Firefighters.

Current Replacement Costs

Data Confidence Rating: 4

Current replacement costs are for the Fire Hall and major firefighting apparatus only. Personal gear and other equipment are not included in the asset registry. Values are based on recent fire truck purchases and the recent fire hall construction. This level of information provides a high data confidence rating of '4' for current replacement costs.

Total Replacement Value (2016 Dollars)

\$7,200,000

Lifecycle Period

50 years

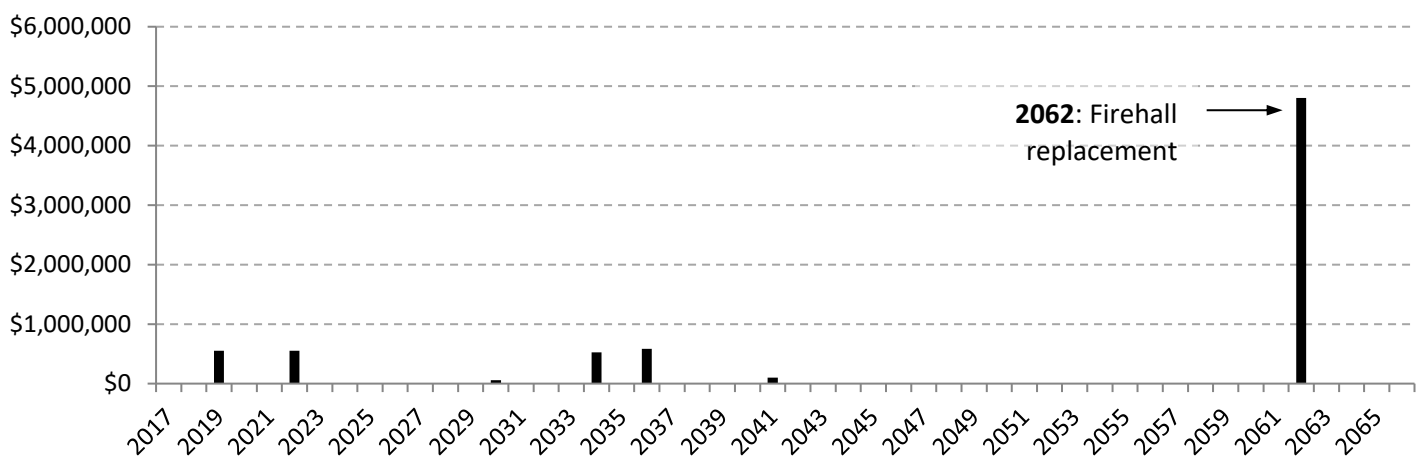
Average Useful Life of All Assets

26 years

Average Annual Replacement Cost

\$273,500

Nanoose VFD: Current Replacement Costs (2017-2066)

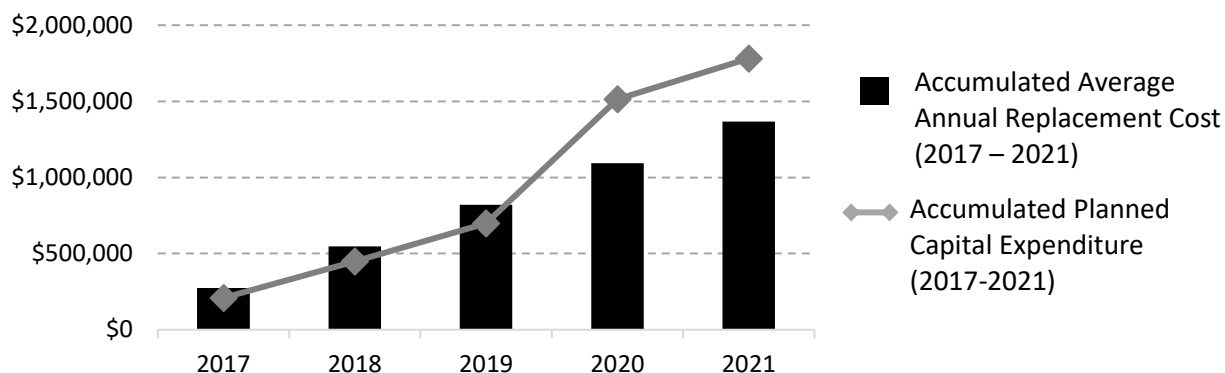




Planned Capital Expenditure & Average Annual Replacement Costs

For the Nanoose VFD there are planned capital expenditures of \$1.8 million over the 2017-2021 period to replace one pumper truck, purchase a new breathing apparatus compressor and filling station along with new air bottles, and to undertake some minor work at the hall.

Nanoose VFD Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

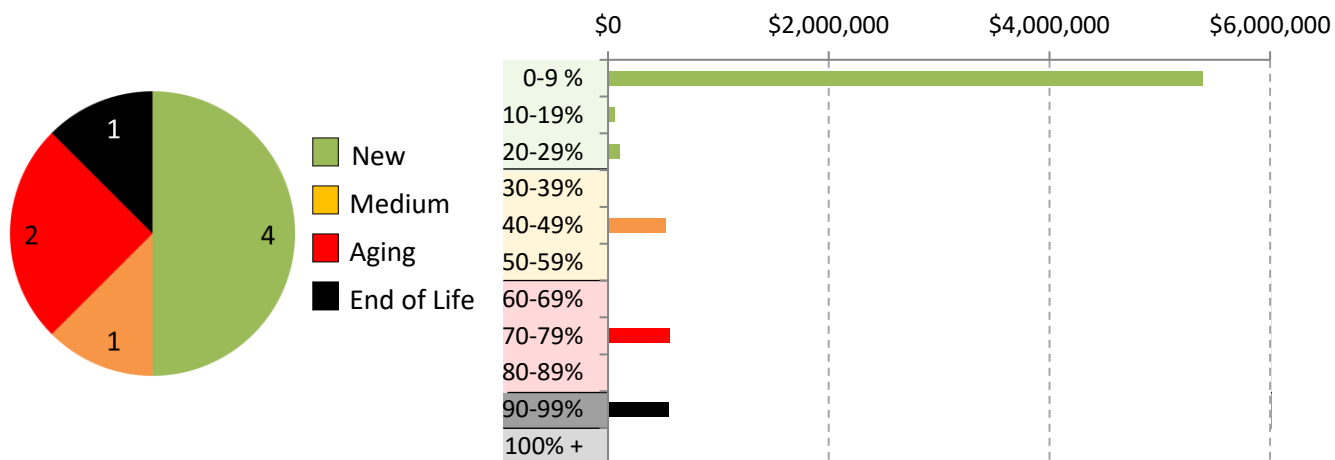
\$323,000

Age and Asset Condition

Asset age indicates asset condition. For the Nanoose VFD, 63% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. Only 8% of the value of all the assets are in the *End of Life* category meaning those assets are nearing the time for replacement or renewal.

Nanoose VFD: Total Number of Assets by Age Class

Nanoose VFD: Total Asset Value by Age Class



2.11 Emergency Planning Services

The Emergency Planning program ensures interagency operational readiness for emergency response and recovery. Within the scope of this program, the Emergency Planning department owns a Disaster Assistance trailer, several generators at local Emergency Social Service Reception Centres, and various communications equipment. Local emergency service volunteers are permitted to use and maintain these assets according to an agreement with the RDN.

Table 10 Emergency Planning Services AM Practices

AMBC Category	Summary of Current Asset Management Practice
Know Your Assets	Assets are listed on several documents and spreadsheets, including the TCA Inventory maintained by Finance.
	Assets require additional componentization to support lifecycle decision making.
	Generator usage is tracked via annual maintenance. Volunteers conduct monthly genset checks and record data in an onsite log book.
Know Your Financial Position	The estimated useful lives of most Emergency Management Program assets are less than two decades long and largely captured in the 10 year budget planning process. The Emergency Planning Program does not have replacement values for every asset in the inventory, but comprehensive replacement values are being developed.
	The RDN tracks operations and maintenance costs but has not separated operations from maintenance to support complete analysis.
	The program is funded through the general tax requisition for electoral areas only. The RDN also provides Emergency Planning services to the District of Lantzville on a contract basis.
Understand Decision-Making	The RDN manages projects, prepares budgets and trains volunteers to conduct routine checks on assets. All expenses are verified by the RDN. The Board approves all capital expenditures.
Manage Asset Lifecycle	The condition of some assets is monitored by Emergency Program volunteers with in-house systems.
	The department is responsible for emergency response, recovery, preparedness, and mitigation. This includes having emergency response assets on hand.
	Maintenance of assets is managed by volunteers where possible. Work that must be done by a specialist for insurance reasons is contracted out.
Know the Rules	Emergency service goals are laid out in the annual business plan and meet the requirements of the Emergency Program Act.
	The program is directed by provincial legislation. The Emergency Program Act outlines the responsibilities of local authorities in terms of response, mitigation, and other components of emergency programming. The Emergency Coordinator is responsible for compliance.



2.11.1 Emergency Management Program

Level of Service

The Regional District of Nanaimo's Emergency Management Program (EMP) encompasses mitigation, preparedness, response, and recovery. The Program plans and prepares communities and staff to respond to, and recover from, emergencies and major disasters.

Activities undertaken by EMP include hosting emergency preparedness events, recruiting community volunteers to assist when an emergency occurs, conducting training sessions for staff and community volunteers, attending outreach events, and maintaining Emergency Operations Centre readiness at the RDN EOC. Working closely with Emergency Management staff at the four partnering municipalities is also a priority. There are eight Emergency Reception Centres located throughout the RDN electoral areas, seven of which are equipped with emergency power generators.

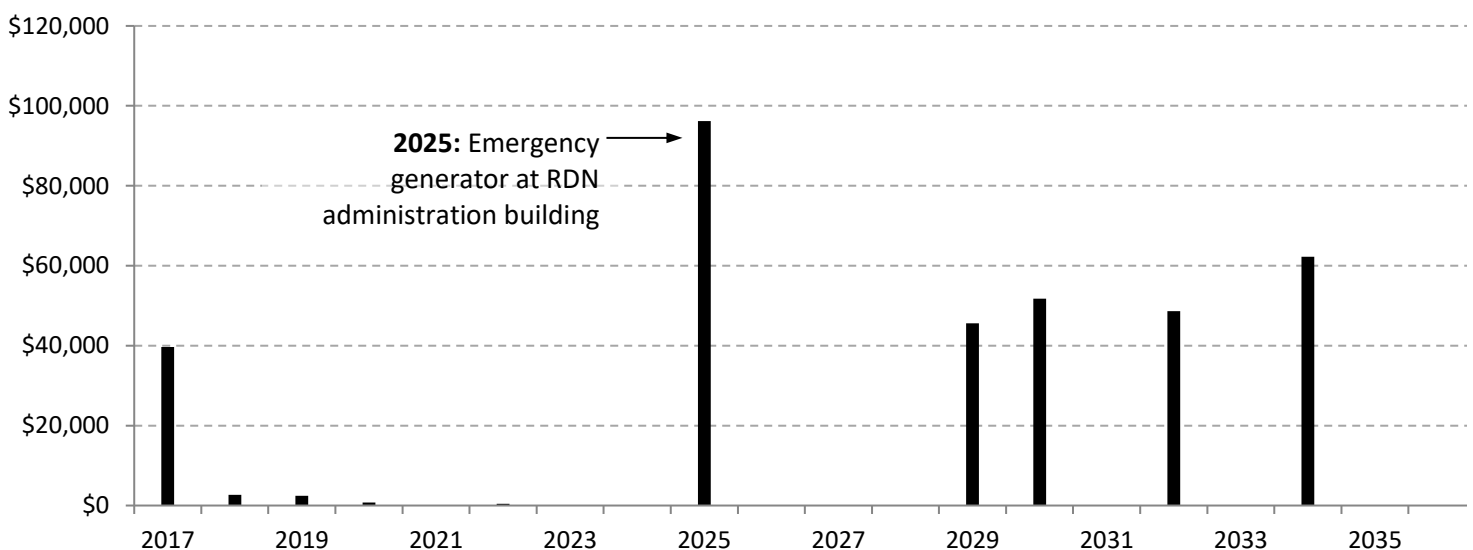
Current Replacement Costs

Data Confidence Rating: 1

Current replacement cost values for the EMP were based on inflated historic costs from the Tangible Capital Asset registry. This provides a low data confidence rating of '1' for current replacement costs.

Total Replacement Value (2016 Dollars)	\$350,000
Lifecycle Period	20 years
Average Useful Life of All Assets	13 years
Average Annual Replacement Cost	\$27,000

EMP: Current Replacement Costs (2017-2036)

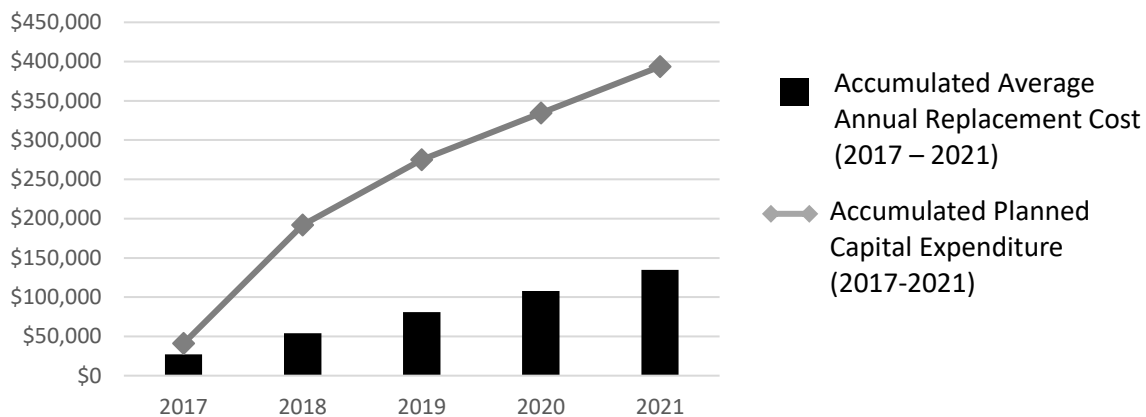




Planned Capital Expenditure & Average Annual Replacement Costs

For the EMP there are planned capital expenditures of \$89,000 over the 2017-2021 period to replace the aging communications trailer and to install a standby emergency generator.

EMP Planned Capital Expenditures & Average Annual Replacement Costs (2017-2021)



Capital Reserve Opening Balance (2018):

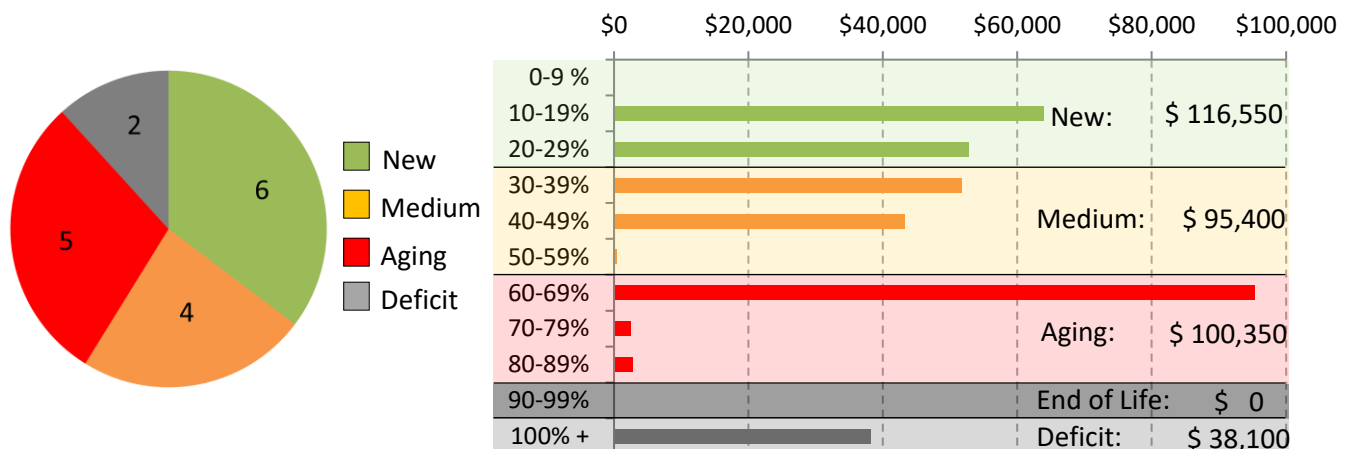
\$93,000

Age and Asset Condition

For the EMP, 59% of all assets are in the *New* or *Medium* age category, resulting in a condition rating of *Very Good* or *Good*. However, 11% of the value of all the assets are in the *Deficit* category meaning those assets are in service, but have exceeded their anticipated useful life and replacement should be imminent.

EMP: Total Number of Assets by Age Class

EMP: Total Asset Value by Age Class







3 ASSET MANAGEMENT IMPLEMENTATION FRAMEWORK

As outlined in the introduction to this Review, the three key goals for the RDN's integrated asset management program are to:

- Document current asset management practices across the full range of departments responsible for infrastructure in the RDN;
- Provide a high level overview of the state the infrastructure assets owned and managed by the RDN; and
- Outline an implementation framework to continue best practices in asset management.

To achieve these goals, this section lays out an overall implementation framework comprised of four components:

1. Continued program coordination through the RDN Asset Management Working Group;
2. Initiation of a formal Condition Assessment Framework;
3. Completion of a Comprehensive Replacement Cost Study; and
4. Investment in staff training and development.

3.1 RDN Asset Management Working Group

The RDN Asset Management Working Group is comprised of RDN staff responsible for acquisition, operation, maintenance, renewal and replacement of assets, and those departmental leaders tasked with implementing best asset management practices at the departmental level, including cultivating skills, expertise and talent in asset management practices across the organization.

The purpose of the Working Group is to:

- Improve interdepartmental asset management practices by providing a peer-to-peer forum to discuss asset management activities and initiatives, and to raise issues of concern and priorities for action;
- Ensure that essential asset management activities are implemented consistently across the organization at the departmental level;
- Improve outreach, engagement and internal capacity building with staff through training and educational opportunities; and by sharing information on current departmental asset management priorities and activities, opportunities for improvement and lessons learned; and
- Identify opportunities to reduce duplication of effort and improve organizational effectiveness and efficiency through cooperation and collaboration on asset management across the RDN, and with outside organizations.

The Working Group is to provide departmental updates to members and to report asset management activities back at departmental staff meetings. Through this process, each member of the Working Group will ensure that this Review is effectively implemented at the departmental level; that effective communication is provided to staff in representative departments; and that information updates including issues, concerns and priorities for action are communicated to the senior management team.

The Working Group is guided by a Terms of Reference that that should be reviewed and revised as needed on a three-year basis, or as otherwise recommended. The next review of the RDN Asset Management Working Group Terms of Reference should occur in 2019.

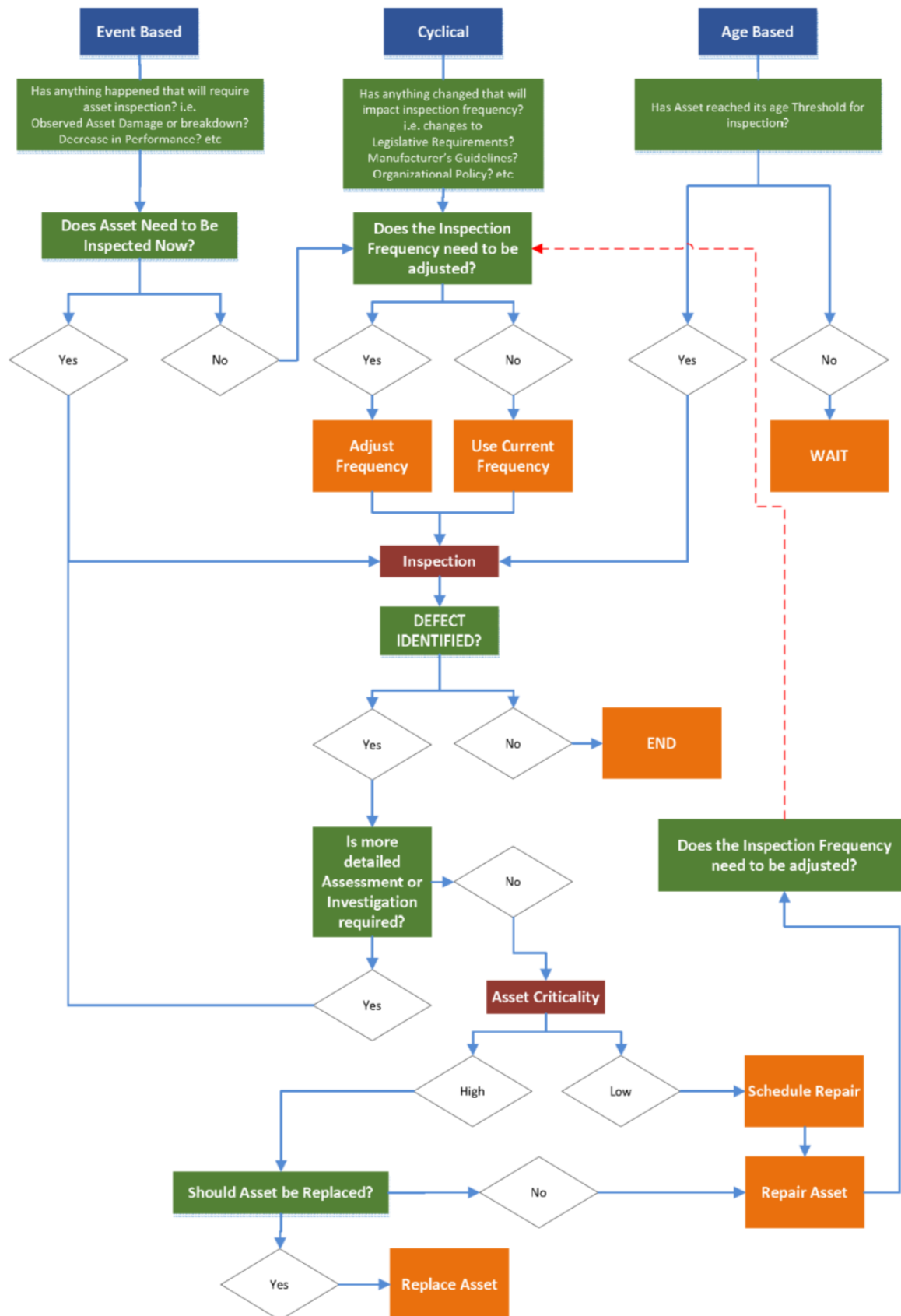
3.2 Condition Assessment Framework

In October 2017, the RDN completed a Condition Assessment Framework and Implementation Plan (Appendix 1). The Framework provides guidance on when to implement condition assessments of different assets, as well as tools to assist with condition rating. Departmental managers and members of the RDN Asset Management Working Group are to review the Condition Assessment Framework and implement condition assessment activities as appropriate in their respective departments. At a minimum, staff should initiate condition assessment activities on assets when they reach 60% of their estimated useful life, transitioning from the Medium to the Aging age category, when proxy condition automatically shifts from Good to Fair.

A simplified condition assessment framework, taken from Appendix 1, is illustrated in Figure 3.1.



Figure 3.1 Condition Assessment Framework



3.3 Comprehensive Replacement Cost Study

In 2019, the RDN will undertake a comprehensive Replacement Cost Study. The purpose of this work is to formalize an organization-wide approach to reviewing and updated current replacement costs for RDN assets. This is a major project, with \$150,000 from the Provincial Strategic Priorities Fund budgeted for its completion. The result is anticipated to be updated replacement costs with regionally accurate data, accompanied by the documented processes, procedures and responsibilities to maintain and accurate, up-to-date current replacement costs for all assets owned by the RDN. Completing the Replacement Cost Study will also lay the foundation for more precise longer-term financial planning for infrastructure renewal and replacement.

3.4 Staff Training and Development

Moving forward, an essential activity for all departments responsible for infrastructure and assets will be to invest in staff training and development. This is important for all staff, from management and senior management to operational staff, and should be considered in each annual budget for relevant departments. At a minimum, all members of the RDN Asset Management Working Group should receive training in the fundamental concepts and principles of asset management and best asset management practices in the local government context.

Through the RDN Asset Management Working group, departments will identify opportunities and ensure that staff across the organization are trained in the basic concepts of asset management as well as asset management skills specific to their respective positions.

In addition, Working Group members will be responsible for building internal capacity for asset management in their respective departments, as well as across departments. This includes taking opportunities at staff meetings to outline key asset management concepts for all staff.

Following the completion of the Comprehensive Replacement Cost study in 2019, this Asset Management Review and Implementation report will be updated an overall Asset Management Plan Implementation Framework will be developed starting in 2020 for implementation in order to improve current practices and operationalize the RDN's asset management program.

Regional District of Nanaimo

Condition Assessment Plan & Implementation Framework – User Guide



Regional District of Nanaimo

Condition Assessment Plan & Implementation Framework - User Guide

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Introduction

The objective of this guide is to detail the methodology for the consistent and repeatable measurement and reporting of the condition of the Regional District's buildings and facilities, wharves and bridges, and other assets that require condition assessments to be conducted for legislative or best practice purposes.

This guide is organized into four main sections:

- Section 1 describes the purpose and scope of this document.
- Section 2 provides an overview of the spreadsheet model including brief descriptions for each tab, each column in the asset data tabs, and instructions on how to edit data within the spreadsheet (adding removing data etc.).
- Section 3 provides an overview of how the major assets are split into asset sub-types and components, and provides instructions on how to assess and report their condition.
- Section 4 includes some example inspection forms.

1 Document Purpose & Scope

The purpose of this document is to inform the Regional District staff on how to use the condition assessment spreadsheet model, describe the condition rating methodology for buildings and facilities, and provide condition ratings for buildings, bridge structures, and pipes.

The condition assessment plan is a MS Excel spreadsheet containing a rudimentary asset inventory dataset from the District's NAMS spreadsheets. The Condition Assessment Plan enables District staff to program condition assessments on all assets that are critical to service delivery, or for long term work planning or financial forecasting purposes.

This guidance document will describe the workings of the asset condition go through each of the tabs and describe what each column is used for, and provide details of how to add or remove inventory items, change the status of assets requiring condition assessments, their inspection types, decision making options, and frequencies. The document will also describe the condition ratings for building and facilities, and the Districts pipe network, and provide example inspection forms for buildings, pipes and manholes, and bridge structures.

2 Spreadsheet Model

2.1 Overview

The spreadsheet model has 6 tabs at the bottom of the page and are described in Table 1 below:

Table 1 – Tabs in Spreadsheet

Tab Name	Description
Implementation Schedule	This tab contains a 10 year inspection program of all assets that require condition assessments.
CA Data Requirements	This tab has the implementation framework within it. The data requirement describes what data is required and why.
Process Flow	This tab contains the process flow of the drivers for condition inspections.
Lookups	<p>This tab contains the lookup codes and fields that are used to select the following:</p> <ul style="list-style-type: none"> Assessment year – This value is used to in the calculation of whether estimated useful life has been reached, or to calculate when aged based inspections are required. CA Type – This is the type of condition inspection to be conducted. CAM Code - This is used to select an applicable Condition Assessment Method for each asset type. CRM Code - This is used to select an applicable Condition Rating Methodology for each asset type. PR Code – This code provides the reason for the condition inspection. DM Code – This code is used to describe the decision making outcome from the data being collected. Frequency – This lookup field is used to select the applicable frequency of the condition assessments. Yes/No Code – The decision metrics to determine whether an asset requires a condition inspection or not High/Low Decision – Used for asset criticality ratings if appropriate.
Regional & Community Services	This tab represents a rudimentary asset inventory that has been made available for the Water, Wastewater and Solid Waste departments
Corporate Administration	This tab represents a rudimentary asset inventory that has been made available for the Corporate Administration and IT Departments
Transportation & Emergency Services	This tab represents a rudimentary asset inventory that has been made available for the Transit and Fire Protection Departments.
Parks & Recreation	This tab represents a rudimentary asset inventory that has been made available for the Parks and Recreational Services Departments.

2.2 Implementation Schedule Worksheet

The implementation worksheet provides a 10 year inspection program for all assets that have been identified as requiring condition assessments. Table 2 below describes the data and functions within each column.

Table 2 – Implementation Schedule Worksheet columns and descriptions

Column	Column Name	Description
A	CAP_Ref	This column contains a calculation script that produces a unique identifier for all assets within each asset group that require a condition inspection.
B	ID	The data within this column contains the unique identifier for each asset. This ID corresponds to the asset ID in the District Asset Registers. <i>District staff must ensure that all Asset ID attributes are populated.</i>
C	Dept	The data within this column contains a code to signify the department or service area that the asset belongs to. The column contains a lookup code to each of the Service Area Spreadsheets.
D	Service Area	The data within this column contains the service area that the asset is located in. The column contains a lookup code to each of the Service Area Spreadsheets.
E	Asset	The data within this column contains the name of the facility where the assets are situated. The column contains a lookup code to each of the Service Area Spreadsheets.
F	Assessment Type	The data within this column identifies the type of condition assessment required. The column contains a lookup code to each of the Service Area Spreadsheets.
G	Rating Method	The data within this column defines the condition rating methodology used for a particular asset. The column contains a lookup code to each of the Service Area Spreadsheets.
H	Responsibility	The data within this column defines the person responsible for organizing and or conducting the condition assessment and reporting the assessment results. The column contains a lookup code to each of the Service Area Spreadsheets.
I - R	Years	The data within this column contains the year in which the condition inspection is programmed. The columns contain a lookup that is linked to Column S.
S	Next Assmt	This column is used to determine the year in which the next condition assessment is programmed. The column contains a lookup code to each of the Service Area Spreadsheets, so it is important that the dates of next inspection are populated in each service area tab.

2.3 Service Area Worksheets

In each tab that represents the service areas is a worksheet. Table 3 describes the data and functions within each column.

Table 3 Worksheet columns and descriptions

Column	Column Name	Description
A	CAP_Ref	This column contains a calculation script that produces a unique identifier by concatenating the value within the cell and the data values from column AI.
B	Asset ID	The data within this column contains the unique identifier for each asset. This ID corresponds to the asset ID in the District Asset Registers. <i>District staff must ensure that all Asset ID attributes are populated.</i>
C	Service Area	The data within this column contains the service area that the asset is located in. This data can also be used to record asset condition by service area.
D	Asset Name	The data within this column contains the name of the facility where the assets are situated.
E	Asset Group	The data within this column contains the data for each asset by asset group. For example: buildings are an asset group that have many asset types, sub-types and components.
F	Asset Type	The data within this column contains the data for each asset by asset type. For example: buildings are an asset group that have many asset types, sub-types and components.
G	Asset Sub-type	The data within this column contains the data for each asset by asset sub-type. For example: buildings are an asset group that have many asset types, sub-types and components.
H	Component Type	The data within this column contains the data for each asset by component type. For example: buildings are an asset group that have many asset types, sub-types and components.
I	Size	This column is used for asset size.
J	Current Condition Assessment Type	The data within this column shows the current method used to assess condition of the Districts assets.
K	Current Frequency	The data within this column shows the current frequency of those inspections.
L	Current Condition Rating	The data within this column shows the current condition rating used to record asset condition where available.

M	Current Rating Type	The data within this column shows the current rating type used to report asset condition where available.
N	Notes	This column is a notes filed that has input from District staff relevant to the current condition assessments, types, ratings, and reporting where appropriate.
O	Manager	This column shows the person responsible for maintaining this condition data spreadsheet.
P	Install Year	The cells within this column contain the Install Year for each asset. <i>District staff should ensure that the values in this column are correct.</i>
Q	EUL	The cells in this column contain the Estimated Useful Life for each asset. <i>District staff should ensure that the values in this column are correct.</i>
R	Replacement Date	The cells in this column display the year of replacement for each asset. This is based on a simple calculation of adding the EUL to the install year. Cells that are highlighted in red represent values that are less than the current year. <i>District staff must ensure that all install dates and EUL attributes are populated.</i> <i>District staff must also check the install date and EUL attributes for accuracy where the sum of both attributes equal a replacement date that is less than the current year.</i>
S	Asset Criticality	The cells in this column contain a 1-High or 2-Low criticality rating for assets.
T	Condition Rating	The cells in this column are to be populated with the current condition rating value (1-5), where 1 = excellent, and 5 = very poor.
U	Need Condition Assessment?	The cells in this column contain a Yes/No decision value in a drop down menu. The user can assess whether the asset requires a condition assessment. Opus have pre populated this spreadsheet to take buildings, structures, and critical assets into account.
V	New CRM Code	The cells in this column contain the codes to select the applicable condition rating methodology for each asset in a drop down menu
W	New Condition Rating Method	The cells in this column look up the code in column U and present the name of the condition rating method to be used.
X	Condition Why Code	The cells in this column contain codes to select the primary reason why a the asset needs a condition assessment in a drop down menu
Y	Why Does Asset Need Condition Assessment?	The cells in this column look up the code in column W and present the primary reason for the condition assessment being chosen.
Z	Decision Code	The cells within this column contain the codes for the decisions that are made from the results of the condition inspections.

AA	Decision Making Process	The cells in this column look up the code in column Y and presents the description of the code. The primary reason is for works programming and repair/replacement decision making.
AB	New Condition Assessment Type	The cells within this column contain a “Cyclical” or “Age Based” condition assessment type.
AC	New CAM Code	The cells in this column contain codes to define the condition assessment method to be used for each asset.
AD	New Condition Assessment Method	The cells in this column look up the codes in column AB and present the description of the condition assessment method.
AE	Condition Frequency	The data within this column is used to specify the frequency at which each type of assessment is completed.
AF	Age Threshold	The data within this column is a percentage of useful life at which age based condition assessments could start. This field is user defined, and is editable.
AG	Year of Last Condition Assessment	This column is used to enter the last year the condition assessment was completed.
AH	Year of Next Condition Assessment	The cells in this column contain a calculation script that adds the inspection frequency to the year used in column AF, or displays the year that an age based condition assessment is to be conducted. The cells that are highlighted in red represent values that are less than the current year. Where the value is equal to the frequency of the condition assessment, the year of last inspection needs to be populated. Where the value is less than the current year, District staff are to check the install year and EUL values for accuracy.
AI	CAP_Ref Count	The first cell in this column contains a calculation script that counts and assigns a number to the asset if it is labelled as requiring a condition assessment from the value in column U. Where condition assessments are not required, the cell is left blank and is not counted. Subsequent cells in this column also use this script, but add a 1 to the calculated value to number each asset requiring a condition assessment consecutively.

2.4 Asset Inventory

The asset inventory is contained within columns A-H, and is divided into Asset groups, Asset Types, Asset Sub-types, and Components. Table 4 shows the asset groups by department.

Table 4: Asset Groups by Department

Department	Asset Groups	Department	Asset Groups
Regional & Community Utilities	Buildings	Transportation & Emergency Services	Buildings
	Fleet		Bus Shelters
	Sanitary Distribution		Bus Stops
	Sanitary Treatment		Equipment
	Solid Waste		Fleet
	Street Lighting		Wharves
	Water Distribution	Parks & Recreation	Buildings
	Water Supply		Equipment
Corporate Administration	Buildings		Fleet
	Equipment		Parks
			Trails

Within each asset group, there are multiple asset types, sub-types, and components. Table 5 provides an example of the asset types and sub-types for the building asset group.

Table 5 – Buildings: Asset Type and Sub-Type List and Definition

Asset Types	Asset Sub-Types
Substructure	<ul style="list-style-type: none"> • Foundations: Walls, columns, pilings other structural components • Basement: Materials, insulation, slab, floor underpinnings
Shell	<ul style="list-style-type: none"> • Superstructure / structural frame: columns, pillars, walls • Roof: Roof surface, gutters, eaves, skylights, chimney surrounds • Exterior: Windows, doors, and all finishes (paint, masonry) • Shell appurtenances: Balconies, fire escapes, gutters, downspouts
Interiors	<ul style="list-style-type: none"> • Partitions: walls, interior doors, fittings such as signage • Stairs: Interior stairs and landings • Finishes: Materials used on walls, floors, and ceilings

	<i>This component covers all interior spaces, regardless of use.</i>
Conveyance	<ul style="list-style-type: none"> • Elevators • Escalators • Lifts: any other such fixed apparatuses for the movement of goods or people
Plumbing	<ul style="list-style-type: none"> • Fixtures • Water distribution • Sanitary waste • Rain water drainage
HVAC	<ul style="list-style-type: none"> • Energy supply • Heat generation and distribution systems • Cooling generation and distribution systems • Testing, balancing, controls and instrumentation • Chimneys and vents
Fire Protection	<ul style="list-style-type: none"> • Sprinklers • Standpipes • Hydrants and other fire protection specialties
Electrical	<ul style="list-style-type: none"> • Electrical service & distribution • Lighting & branch wiring (interior and exterior) • Communications & security • Other electrical system-related pieces such as lightning protection, generators, and emergency lighting
Equipment	<ul style="list-style-type: none"> • Equipment related to the function of the facility, including maintenance or vehicle service equipment <p><i>For clarity, includes only items valued above \$10,000 and related to facility function</i></p>
Site	<ul style="list-style-type: none"> • Roadways/driveways and associated signage, markings, and equipment • Parking lots and associated signage, markings, and equipment • Pedestrian areas and associated signage, markings, and equipment • Site development such as fences, walls, and miscellaneous structures • Landscaping and irrigation • Site Utilities

2.5 Editing the spreadsheet

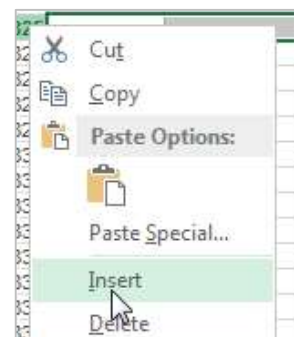
2.5.1 Adding New Inventory Data

In order to add a new asset to the asset data tables, the user can add lines using the methodology listed below:

If the assets belong in a particular service area or asset group, insert row or rows in the dataset where appropriate.

If the assets are in a new service area, add the data in at the bottom of the dataset.

Populate the columns A-P with the Asset ID, Service Area, Asset Name, Asset Group, Asset Type, Asset Sub-type, Component Type, Size, Current Assessment Type, Current Frequency, Current Condition rating, Current Rating Type, any Notes, Manager Responsible, Install Year, and EUL attribute data.



In columns Q to AG, populate all columns with necessary information either manually typing, or by highlighting cells and dragging down from the bottom right hand side of cells when the black cross icon appears to populate (use only where data is the same or where calculation scripts are used as shown). Please note that numerical fields will often increase in value when using this method. Ensure that all data in the rows is valid and save.

5			No
2011			No
2010			No
			No
			No
2017			No
2018			No

If any of the assets require a different condition assessment type, rating methodology, frequency, or decision making type, add new values in the “Lookups” tab, add a new codes as described in section 2.4.5.

2.5.2 Deleting and Asset from the list

In order to remove an asset from the list, the user can add lines using the methodology listed below:

In the department tabs, select the asset that is to be removed.

Highlight the row and right click the mouse to retrieve the options menu.

Select “delete row” to delete it.

Save spreadsheet.



2.5.3 Changing Install dates

To revise install dates for each asset, simply overwrite the year of install. The calculation scripts within the spreadsheet will automatically change the replacement date and date of next inspection.

2.5.4 Changing EUL values

To revise the EUL values for each asset, simply overwrite the year of install. The calculation scripts within the spreadsheet will automatically change the replacement date and date of next inspection.

2.5.5 Adding new lookup codes


To add new lookup codes, go to the “Lookups” tab in the workbook.

To add another Condition Assessment Method (CAM) code, add another value to the bottom of the values listed in column C, and add a description in the column next to it.

Once completed, Go into the asset worksheets and go to the top row of Column AB (CAM Code). Highlight all rows within that column and go to “data” at the top of the screen and select “Data Validation”.



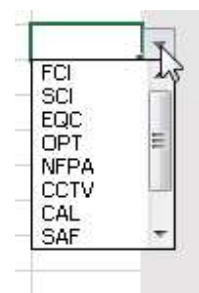
Once selected, a small pop-up screen will appear. Select the “Source” and click onto the button on the right of the selection field. This will take you to the lookups tab.

Once in the lookups tab, the column for the code will be highlighted and the data validation selection drop down will be shown. To add the new code into the data validation criteria, delete the value in the drop down and select all values in the CAM column by highlighting them. To go back to the main data validation pop-up, press the  button.



Once back in the data validation pop-up menu, select OK.

You will then be back at the asset data worksheet. In order to choose the newly added condition assessment method, select cell, and choose option from the drop down in the cell. Once chosen, the adjacent column will automatically populate with the description of the new code.



To add any other new codes, use the same process as described above.

3 Condition Ratings

3.1 Building & Building Component Condition Ratings

3.1.1 Overall Building Condition

The overall condition and component condition ratings are based on the Federal Highway Administration (FHWA) rating system for buildings and facilities. However, to achieve consistent condition rating across all asset groups, the condition rating has been reversed. The FHWA rating system was a 5-1 rating (where 5 = excellent and 1 = poor), whereas all other rating systems have a 1-5 rating (where 1=excellent and 5 = very poor). Table 6 below shows the condition rating and description used for overall condition of a building or facility.

Table 6 - General Condition Assessment Rating Scale for Buildings

Rating	Condition	Description
1	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
2	Good	Good condition, but no longer new, may have some slightly defective or deteriorated component(s), but is overall functional
3	Adequate	Moderately deteriorated or defective components; but has not exceeded useful life
4	Marginal	Defective or deteriorated component(s) in need of replacement; exceeded useful life
5	Poor	Critically damaged component(s) or in need of immediate repair; well past useful life

3.1.2 Building Component Condition

Using the FHWA methodology, and to provide the overall condition index, each building component is rated for condition. Table 7 provides the condition descriptions for all building components.

Table 7: Condition Rating Descriptions for Buildings by Asset Component

Component	Rating	Description
A. Substructure • Foundation • Basement	1: Excellent	New construction, no visible defects.
	2: Good	Minor improvement or superficial repairs needed, can be addressed through routine maintenance. No significant visible damage such as cracking, spalling, sagging, rust, or shifting.
	3: Adequate	Needs some repairs. There may be surface cracking, rust, shifting, and spalling on components. Insulation or drainage may need maintenance. Substructure is cosmetically “fair”, and functioning as designed; within useful life.
	4: Marginal	Components need extensive repair at a minimum. They show signs of significant cracking, sagging, rust, shifting, and spalling / decay. Significant insulation or drainage issues may be present. There are no apparent safety issues, however. Components are functional but have exceeded their useful lives.
	5: Poor	Components show critical defects affecting function, health, or safety. They are visibly in poor condition. They cannot be repaired; must be replaced. They have exceeded their useful life and warrant structural review.

Component	Rating	Description
B. Shell <ul style="list-style-type: none"> • Superstructure / structural frame, including columns, pillars, and walls • Roof: Roof surface, gutters, eaves, skylights, chimney surrounds • Exterior: Windows, doors, and all finishes (paint, masonry) • Shell appurtenances: Balconies, fire escapes, gutters, downspouts 	1: Excellent	New construction, no visible defects or damage.
	2: Good	Minor improvement needed; sub-components are more than five years old but are functioning without issue under routine maintenance. Only minor superficial damage or defect. No sagging, corrosion, cracking, shifting, or leaks.
	3: Adequate	Repairs are needed. Component or sub-components show signs of minor cracking, drainage issues, sagging, corrosion, or shifting. They are cosmetically “fair”, but functioning as designed.
	4: Marginal	Component or sub-components show signs of significant cracking, sagging, swelling, corrosion, leaks, or shifting. Significant repairs are needed, but there currently does not appear to be a safety issue on any single sub-component.
	5: Poor	Component or sub-components have critical defects affecting function, health, or safety. They are in visibly poor condition and must be replaced rather than repaired. They have exceeded their useful life and warrant structural review.
C. Interiors <ul style="list-style-type: none"> • Partitions: Walls, interior doors, fittings, signage • Stairs: Interior stairs and landings • Finishes: Materials used on walls, floors, and ceilings 	1: Excellent	New construction, no visible defects or damage.
	2: Good	Minor improvement needed; only shows superficial damage or defect. Minimal signs of wear, no major problems, minimal signs of deterioration. Primarily cosmetic issues with no functional impact, which can be addressed through routine maintenance.
	3: Adequate	Repairs are needed. Component or sub-components show signs of cracking, drainage issues, sagging, corrosion, or shifting. They are cosmetically “fair”, but functioning as designed.
	4: Marginal	Interior shows deterioration: cracking, sagging, swelling, corrosion, leaks, etc. Finishes are worn. Significant repairs or upgrades are needed, but there currently does not appear to be a safety issue.
	5: Poor	Component or sub-components have critical defects affecting function, health, or safety. They are in visible poor condition and must be replaced rather than repaired. They have exceeded their useful life and warrant structural review.
D. Conveyance	1: Excellent	New construction, no visible defects or damage.

Component	Rating	Description
<ul style="list-style-type: none"> • Elevators • Escalators • Lifts: any other such fixed apparatuses for the movement of goods or people 	2: Good	Minor improvement needed; only shows superficial damage or defect with no functional impact. Issues are addressed via routine maintenance.
	3: Adequate	Repairs are needed; components show signs of corrosion and damage. They are cosmetically “fair”, but functioning as intended under maintenance schedule.
	4: Marginal	Component or sub-components need extensive repair at a minimum. More substantial part replacement and/or repair is frequent. There currently does not appear to be any safety issue. Maintenance schedule is interrupted by more frequent breakdowns.
	5: Poor	Component or sub-components have critical defects affecting function. They are in visibly poor condition and must be replaced rather than repaired. Maintenance schedule is reactive rather than proactive due to frequent malfunction. Apparatuses have exceeded their useful life and warrant detailed review.
E. Plumbing <ul style="list-style-type: none"> • Fixtures • Water distribution • Sanitary waste • Rain water drainage 	1: Excellent	New construction, no visible defects or damage.
	2: Good	Minor wear and tear or superficial deterioration or defect with no functional impact typically addressed through routine maintenance. No corrosion or leaks.
	3: Adequate	Repairs are needed; some deterioration exists, such as corrosion. Repairs are typical to more intensive routine maintenance and system is functioning as designed.
	4: Marginal	Plumbing system components need extensive repair at a minimum. Currently does not appear to be any safety issue.
	5: Poor	System has defects affecting function and necessitating frequent maintenance. Plumbing is in poor condition and must be replaced rather than repaired. The system has exceeded its useful life and warrants detailed review.
F. HVAC <ul style="list-style-type: none"> • Energy supply • Heating / cooling generation and distribution systems 	1: Excellent	New construction, no visible defects or damage. Meets efficiency and capacity goals and maintains desired temperature and air quality throughout the facility.
	2: Good	Minor improvements needed, may be slightly outdated and less efficient and consistent. Minor deterioration or defect

Component	Rating	Description
<ul style="list-style-type: none"> • Testing, balancing, controls and instrumentation • Chimneys and vents 		with no functional impact typically addressed through routine maintenance.
	3: Adequate	Repairs are needed; some deterioration exists, and maintenance needs are significant. With these, the system meets needs. Still within its useful life.
	4: Marginal	System has exceeded its useful life; fails to meet standards or needs. Components need extensive repair at a minimum. Currently does not appear to be any safety issue.
	5: Poor	System is well past its useful life and has critical defects affecting function; its issues are beyond repair and warrant detailed review.
G. Fire Protection <ul style="list-style-type: none"> • Sprinklers • Standpipes • Hydrants and other fire protection specialties 	1: Excellent	New system, no visible defects or damage. Meets facility needs.
	2: Good	Minor wear and tear; system may be slightly outdated but still meets needs of facility with routine maintenance.
	3: Adequate	Repairs are needed; some deterioration exists, and maintenance needs are significant. With these, the system meets requirements. Still within its useful life.
	4: Marginal	System has exceeded its useful life; defects are critical and/or widespread; no longer meets needs or current standards and requires partial replacement at a minimum. Currently does not appear to be any safety issue.
	5: Poor	System is well past its useful life and has critical defects affecting function and ability to meet standards. Issues are beyond repair and warrant detailed review.
H. Electrical <ul style="list-style-type: none"> • Electrical service & distribution • Lighting & branch wiring (interior and exterior) • Communications & security 	1: Excellent	New system, no apparent defects. Meets facility needs.
	2: Good	Minor deterioration; system may be slightly outdated but still meets needs of facility with minimal routine maintenance. Limitation on system flexibility such as future expansion.
	3: Adequate	Repairs are needed; some deterioration exists, and maintenance needs are significant. There is limited flexibility for improvement. However, the system meets requirements and is still within its useful life.

Component	Rating	Description
<ul style="list-style-type: none"> • Other electrical system-related pieces such as lightning protection, generators, and emergency lighting 	4: Marginal	System has exceeded its useful life; defects are critical and/or widespread; no longer meets needs or current standards and requires partial replacement at a minimum. Currently does not appear to be any safety issue.
	5: Poor	System is well past its useful life and has critical defects affecting function and ability to meet standards. Issues are beyond repair and warrant detailed review.
J. Site <ul style="list-style-type: none"> • Roadways, driveways and associated signage, markings, and equipment • Parking lots and associated signage, markings, and equipment • Pedestrian areas and associated signage, markings, and equipment • Site development such as fences, walls, and miscellaneous structures • Landscaping and irrigation • Site Utilities 	1: Excellent	New construction, no apparent defects, serving the needs of the facility.
	2: Good	Minor deterioration, primarily cosmetic defects such as damaged signage or small pavement cracks, landscaping updates. Still meets needs of facility with routine maintenance.
	3: Adequate	Repairs are needed; some deterioration exists, such as signs needing replacement and pavement cracks needing fill. More routine maintenance is needed. However, site is still functioning as designed.
	4: Marginal	Site sub-components are worn and need extensive repair at a minimum. Pavement may show damage beyond what can be fixed with crack filler (over 2" wide / potholes). Signage may be outdated, fences need replacement, irrigation no longer efficient, etc.
	5: Poor	Site has critical defects affecting function, health, or safety. Issues are beyond repair and warrant detailed review.

3.2 Condition Rating Descriptions for Underground Pipes

For the underground utilities (sewer and storm), CCTV cameras are used to assess condition of the piped network. Table 8 describes the condition states using the 1-5 rating system.

Table 8: Condition states for Sewer and storm pipes

Condition Rating No.	Condition Description
1	Pipe segment has minor defects - failure unlikely in the foreseeable future.
2	Pipe segment has minor defects - pipe unlikely to fail for at least 20 years.
3	Pipe segment has moderate defects - deterioration may continue, at a ten to twenty year timeframe.
4	Pipe segment has severe defects - risk of failure within the next five to ten years.
5	Pipe segment has failed or will likely fail within the next five years - requires immediate attention.

3.3 Condition Rating Descriptions for Bridges and Structures

Bridges and other structures are rated for condition in a similar way to buildings. Each structure is divided into components. Each component will be rated for condition based on a percentage of the number of, or size of component that is in each condition state. A weighting is typically applied to each component group based on criticality. Table 9 describes the condition states using the 1-5 rating system.

Table 9: Condition states for Bridges and Structures

Condition Rating No.	Condition Description
1	Excellent Condition – as new condition
2	Good Condition - normal wear and deterioration not requiring maintenance or repair.
3	Fair Condition - minor defects, deterioration or collision damage requiring maintenance or repair.
4	Poor Condition - advanced deterioration, significant defects or collision damage requiring repairs in the next five years.
5	Very Poor Condition - serious defects, deterioration or collision damage. Imminent failure of component requiring immediate repair or replacement and/or load restrictions.

4 Example Inspection Forms

4.1 Facility Inspection Form

Inspection Date
Inspector Name
Facility/Building Name
Address/Location

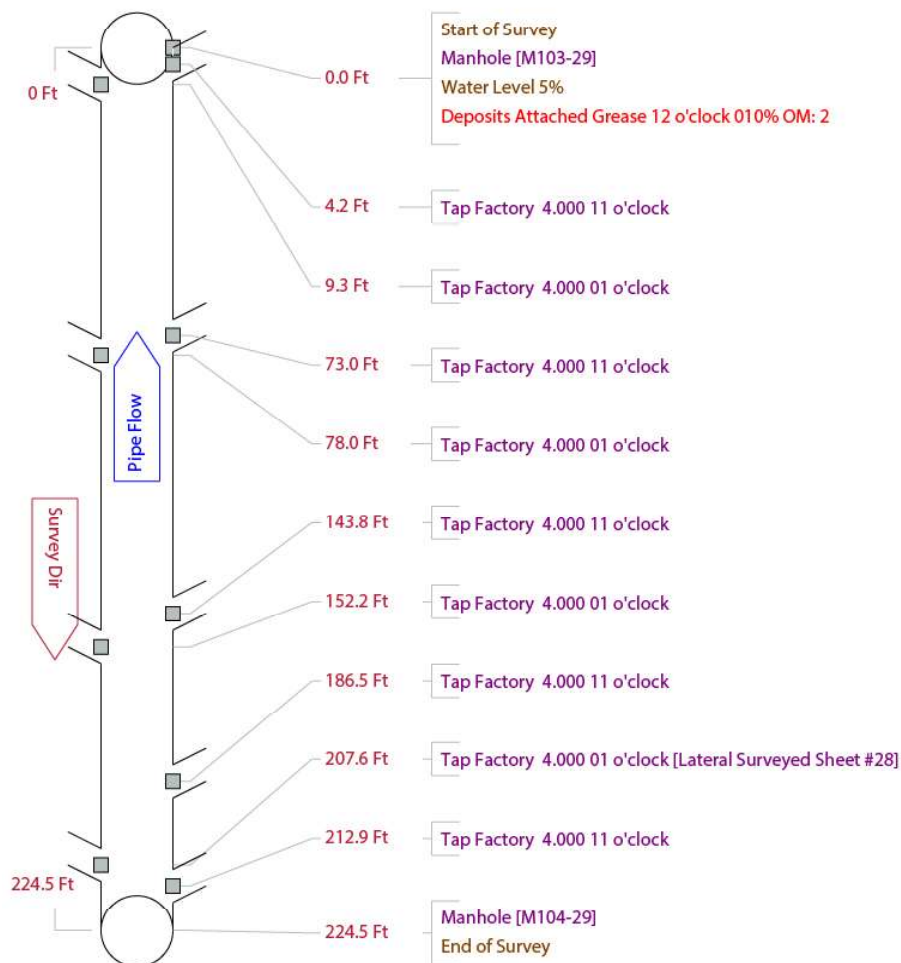
ID	Component	Asset Quantity	Unit of Measure	Percentage of Asset Quantity by Condition						Notes
				1 Excellent	2 Good	3 Adequate	4 Marginal	5 Poor	N/A	
A	Roof									
B	Shell									
C	Interior									
D	Conveyance									
E	Plumbing									
F	HVAC									
G	Fire Protection									
H	Electrical									
I	Equipment									
J	Site									

4.2 Manhole Inspection Form

Name:	Date:	Time:	Street:	House# or Cross St.
MH ID #	Asset #	Material	Rim to Invert:	Photo #s
		<input type="checkbox"/> Brick <input type="checkbox"/> Concrete <input type="checkbox"/> Polymer <input type="checkbox"/> Combination <input type="checkbox"/> Other:		
Outgoing Pipe			Incoming Pipe1	
Clock Pos: 6			Clock Pos:	
Pipe ID#:			Pipe ID#:	
TestID#:			TestID#:	
TestResult:			TestResult:	
Incoming Pipe2			Incoming Pipe3	
Clock Pos:			Clock Pos:	
Pipe ID#:			Pipe ID#:	
TestID#:			TestID#:	
TestResult:			TestResult:	
Weather		Runoff / Inflow		Infiltration
<input type="checkbox"/> Dry <input type="checkbox"/> Heavy Rain <input type="checkbox"/> Light Rain <input type="checkbox"/> Snow <input type="checkbox"/> Saturated <input type="checkbox"/> Damp <input type="checkbox"/> Very Dry		<input type="checkbox"/> None <input type="checkbox"/> Sheeting <input type="checkbox"/> Ponding <input type="checkbox"/> Inundated		<input type="checkbox"/> None <input type="checkbox"/> Stain <input type="checkbox"/> Weeping <input type="checkbox"/> Dripping <input type="checkbox"/> Gushing Component: Chimney Cone Wall Bench Channel Pipe Inlet/Outlet
MH Type	Evidence of Surcharge	Debris Deposits		Structural Defects
<input type="checkbox"/> Concentric <input type="checkbox"/> Eccentric <input type="checkbox"/> Flat Top <input type="checkbox"/> Other	<input type="checkbox"/> No <input type="checkbox"/> Yes Component: Chimney Cone Wall Bench Channel Pipe Inlet/Outlet	<input type="checkbox"/> No <input type="checkbox"/> Yes Describe: _____ Component: Chimney Cone Wall Bench Channel Pipe Inlet/Outlet		<input type="checkbox"/> No <input type="checkbox"/> Yes Describe: _____ Component: Chimney Cone Wall Bench Channel Pipe Inlet/Outlet
Flow in Upstream Pipe				
0%	10%	20%	30%	40%
50%	60%	70%	80%	90%
100%				

4.3 Pipeline Inspection Form

Setup 425	Surveyor MAD	Certificate # 03-647	System Owner Anytown, Florida
Drainage ZONE 5	Survey Customer SL77-29		
P/O # 438	Date 2007/12/03	Time 11:17	Street 16508 EAST BERRY LANE
City Anytown	Further location details		
Up M104-29	Rim to invert	Grade to invert	Rim to grade Ft
Down M103-29	Rim to invert	Grade to invert	Rim to grade Ft
Use Sanitary	Direction Upstream	Flow control Not Controlled	Media No ZONE 5 S12
Shape Circular	Height 8	Width ins	Preclean N
Material Polyvinyl Chloride	Joint length Ft	Total length 224.5 Ft	Date Cleaned
Lining	Year laid	Year rehabilitated	Length Surveyed 224.50 Ft
Purpose Maintenance Related	Cat Not known	Weather Dry	
Additional info SL77-29		Structural	O & M
Location Light Highway		Miscellaneous	Hydraulic
Project		Work Order	
Northing		Elevation	
Coordinate System		GPS Accuracy	



4.4 Bridge/Structure Inspection Form

Structure Number		Structure Name		Inspection Date (yyyy/mm/dd)	
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COMPONENT	PERCENT CONDITION RATING						INSPECTION NOTES BY COMPONENT	
	Enter % in each condition. See BM18 User Manual 15.2.2							
	E	G	F	P	V	X		N
HYDROTECHNICAL								
1 Debris Risk								
2 Channel								
3 Erosion Protection								
4 Substructure Scour								
SUBSTRUCTURE								
5 Foundation Movement								
6 Abutments								
7 Wing/Retaining Walls								
8 Embankment								
9 Footings/Piling								
10 Pier Columns/Walls/Cribs								
11 Bearings								
12 Caps								
13 Corbels								
14 Dolphins/Fenders								
SUPERSTRUCTURE								
15 Floor Beams/Transoms								
16 Stringers								
17 Girders								
18 Portals								
19 Bracing/Diaphragms								
20 Truss Chords/Arch Ribs								
21 Arch Ties								
22 Truss Diagonals								
23 Truss Rods/Verticals								Partial Inspection Notes:
24 Cables								
25 Panels								
26 Pins/Bolts/Rivets								
27 Camber/Bag								General Inspection Notes:
28 Live Load Vibration								
29 Coating (structure)								Utility Concern Notes (Contact Utility Owner):
DECK								
30 Sub Deck/Cross Ties								Urgency Rating Notes:
31 Wearing Surface								
32 Deck Joints								
33 Curbs/Wheelguards								
34 Sidewalk(s)								
35 Railings/Parapets								
36 Median Barrier								
37 Drains/Pipes								
38 Coating (Railings)								
APPROACHES								
39 Signing/Lighting								
40 Roadway Approaches								
41 Roadway Flares								

Condition Codes			
E Excellent	V Very Poor		
G Good	X Not Inspected		
F Fair	N Not Applicable		
P Poor			

For Condition Guidelines see
BM18 User Manual 15.2.2

Urgency Rating

For definition see BM18
User Manual 15.2.8
"4" and "5" rating must
be explained.



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REGIONAL DISTRICT OF NANAIMO

P O L I C Y

SUBJECT:	<i>Asset Management</i>	POLICY NO:	A2.21
		CROSS REF.:	A2.5 A2.9 A2.12
EFFECTIVE DATE:	April 26, 2016	APPROVED BY:	Board
REVISION DATE:	New Policy	PAGE:	1 OF 3

PURPOSE

To establish an organization-wide approach to managing assets to ensure that the delivery of regional services is sustained at levels expected by current and future residents; that the optimal service lives of assets are reached; and that mechanisms are in place to enable asset renewal and replacement.

DEFINITIONS

Assets

For the purpose of this policy 'Assets' are defined broadly as any item, thing or entity that has actual or potential value to the Regional District of Nanaimo (RDN), where value can be tangible or intangible, financial or non-financial, and includes consideration of risks and liabilities.

Under this definition, 'Assets' includes Tangible capital assets, including equipment, buildings, properties and other physical assets owned by RDN; natural assets within the region not owned by the RDN including watersheds, aquifers, and other natural assets that support delivery of RDN services or contribute to the wellbeing of RDN residents; and non-physical assets including leases, brands, digital assets and information, licenses, intellectual property rights, reputation, agreements, and other non-physical assets that contribute to the delivery of services by the RDN.

Asset Management

The coordinated application of sound technical, social and economic principles to organizational activities in order to realize the optimal value of assets for present and future users.

Corporate Planning Committee

A committee comprised of the senior management group of the RDN, convened and chaired by the RDN Chief Administrative Officer.

POLICY

The RDN will implement an organization-wide asset management program that promotes the application of key principles and essential asset management activities across all RDN departments. This will assist departments to follow consistent processes for the creation, operation, maintenance and disposal of assets, including recording and updating asset information. The RDN Asset Management Program (the Program) will be designed for continuous quality improvement, following the ongoing cycle of Plan, Do, Check, Act. To assist with the implementation of organization-wide asset management and for internal capacity building, the RDN will formalize an interdepartmental Asset Management Working Group (Working Group) comprised of staff tasked with representing all relevant departments in the RDN.

Key asset management principles include:

Alignment – The asset management system complements the strategic objectives of the RDN organization, conforms to relevant legislation and regulations, and is understood by staff at all levels in the organization.

Integrated – Asset planning and decision-making integrates corporate, financial, business, technical, budgetary and environmental factors.

Comprehensive - Asset planning and management examines and involves the organization as a whole, its functional interdependencies and contributions of assets within asset systems, and the management of assets across all life-cycle phases.

Systematic – Asset management follows a methodical approach that is formalized, consistent and repeatable across departments.

Risk-Based – Asset risks will be managed in consideration of attaining desired levels of service and focusing resources, expenditures and priorities based on risk, cost and benefit.

Optimal – Asset investment decisions are based on trade-offs between the competing factors of service level (including asset performance), risk and cost, measured over asset life-cycles.

Informed – Asset related decision making will be based on a full understanding of revenues and costs for acquisition, operations, maintenance, replacement, and disposal. Tradeoffs should be articulated and evaluated, and the basis for decisions recorded.

Essential Asset Management Activities include:

- Maintaining and managing assets at defined levels to support public safety, community well-being and community goals, and to fulfil Board Strategic Priorities;
- Monitoring standards and service levels to ensure that community expectations and Board goals and objectives are met;
- Reviewing business practices as they relate to asset management and adapting processes as necessary to achieve consistency in how assets are managed, and to improve overall operational effectiveness and efficiency;
- Developing and maintaining asset inventories that include a record of current replacement cost, depreciated value, replacement year and remaining useful life for all recorded assets;
- Establishing infrastructure replacement strategies based on full life-cycle costing principles;
- Planning financially for the appropriate maintenance levels of assets to deliver service levels and extend the useful life of assets;
- Planning for and providing stable long-term funding to replace, renew and dispose of assets as necessary;
- Considering and incorporating asset management into other corporate plans;
- Building capacity within the organization to ensure ongoing understanding and application of essential asset management activities and key principles;
- Consulting with stakeholders on a periodic basis, where appropriate and necessary; and
- Reporting publicly on the status and performance of work related to the implementation of the Program.

ACCOUNTABILITY

1. The RND Board of Directors is responsible for adopting the Asset Management Policy, allocating resources as required, providing high level oversight of the delivery of the organization's asset management strategy and plans, and maintaining the accountability mechanisms to ensure that organizational resources are appropriately used to address the Board's Strategic Plan and Priorities.
2. The Chief Administrative Officer (CAO) has overall responsibility for directing the development of an asset management strategy, plans and procedures, reporting on the status and effectiveness of the Program to the Board of Directors, and initiating reviews and amendments to this policy.
3. The Corporate Planning Committee has the responsibility and authority to ensure that the Program is implemented as an organizational-wide asset management program; that the

Program is consistent with legislative requirements; and to review, update and amend the Working Group Terms of Reference as necessary.

4. The Working Group has the responsibility to ensure that the Program is implemented at the departmental level, providing effective communication to staff in representative departments, and to provide updates concerning issues, concerns and priorities including recommendations for staff capacity building to the Corporate Planning Committee.
5. A Manager, appointed by the CAO is responsible for the day-to-day coordination of the Program, including promotion of the Program, providing support to departmental managers to develop asset management plans and strategies, implement required changes in organizational practices, and facilitate the continuous improvement of asset management activities.

TO: Committee of the Whole **MEETING:** March 12, 2019

FROM: Joan Michel
Parks and Trails Coordinator

SUBJECT: Ministry of Forests, Lands, Natural Resource Operations and Rural Development
Wildfire Response Agreement 2019-2022

RECOMMENDATION

That the 2019-2022 Wildfire Response Agreement with the Ministry of Forest, Lands, Natural Resource Operations and Rural Development be approved for execution.

SUMMARY

The RDN's 2016-2019 Wildfire Response Agreement with the BC Wildfire Service at the Ministry of Forest, Lands, Natural Recourse Operation and Rural Development (FLNRO) expires 31 March 2019, and the Province is requesting RDN approval of a 2019-2022 agreement – see Attachment 1.

The agreement provides for fire-fighting at RDN owned or managed parks situated outside local fire protection areas and therefore not served by fire departments. In return for an annual fee from the RDN, the BC Wildfire Service undertakes to provide necessary wildfire-fighting services at parks detailed in the agreement.

The existing 2016-2019 Wildfire Response Agreement covers wildfire-fighting services for 16 RDN parks representing 1,769 hectares, at a cost to the RDN of \$1,000 per year. The Province's updated agreement for the 2019-2022 term contains minor language changes from the existing agreement and stipulates an annual fee to the RDN of \$1,100 per year for the Province's services. Park area covered and RDN responsibilities are unchanged.

The RDN has statutory responsibility for fire-fighting on lands it owns or manages under Crown licence or lease. Since 2008, the RDN has used the Province's wildfire response agreements to manage this responsibility for lands not otherwise served by fire departments. Most industrial and other large landowners in the Province such as Island Timberlands and TimberWest also rely on wildfire response agreements. In the absence of such an agreement, the RDN would need to develop and maintain its own fire fighting capacity, or identify and engage with private sector fire fighters willing to fight fires at remote parks on a fee for service basis. In either case, and cost aside, it would not be possible to replace the capacity, services and commitments on offer from the Province through its wildfire response agreement program.

BACKGROUND

Landowners and managers have statutory obligation under the laws of British Columbia with respect to wildfire prevention, detection, control and suppression. For example, if intending to use a chainsaw for trail maintenance in a back country park, Parks Services staff must have the appropriate resources on hand to carry out initial suppression and control of a fire sparked by chain saw use. The RDN's obligation under the Wildfire Response Agreement is to undertake control as best practical until relieved by the Province.

Following the Okanagan wildfires in 2003, the Province engaged with local government and large back country landowners on improved coordination and management of wildfires. In 2008, the BC Wildfire Service implemented the wildfire response agreement program. Under these agreements, the Province assesses the risk and cost of suppressing wildfire on Crown lands as well as privately held lands not served by fire departments, takes into account any landowner contribution of fire-fighting resources, and assesses the landowner an annual fee to pay for the Province's commitment to take primary responsibility for wildfire control and suppression on the privately held or managed lands.

The RDN has participated in the wildfire response agreement program since its inception in 2008. The BC Wildfire Service has the expertise, infrastructure and response resources needed to prevent, detect, control and extinguish wildfires across the land in a coordinated and organized manner. The wildfire response agreement program maximizes use of all available landowner wildfire fighting resources and integrates those resources within the greater Wildfire Service operation in order to protect valuable public and private land assets. The agreement does not relieve landowners and managers of their statutory obligations with regard to wildfire, but recognizes the practical limitations of individual fire fighting capacity and the public's interest in containing the spread of wildfire. The primary target of the agreement is the industrial sector, and both Island Timberlands and TimberWest operate under wildfire response agreements with the Province. These agreements do not address structural fires, which remain the landowner's responsibility.

There has been no instance of wildfire in a park since the wildfire response agreement program was initiated. The RDN contributes to wildfire prevention by restricting campfires to its two campground parks, applying campfire and smoking bans during periods of high wildfire risk, communicating repeatedly about the risk of fire, and avoiding work in the woods during periods of high fire risk. Parks Services maintains a close working relationship with Coastal Fire Centre staff based in Errington who regularly visit RDN parks, help evaluate risk, and use RDN parks for wildfire risk management and fire fighting practice. At Horne Lake Regional Park where park structures and vehicles would not be addressed directly under the Wildfire Response Agreement, the RDN Parks Division maintains portable generator, water pumps, hoses and other tools for use by Park Operator personnel and RDN staff in the event of fire involving park buildings and lakefront campgrounds. The Horne Lake Park Operator has prepared an Emergency Response Plan, which has been reviewed by RDN Emergency Services and includes a section on fire.

Beyond the Wildfire Response Agreement, the RDN carries a \$2,000,000 per incident fire-fighting endorsement under its Municipal Insurance Association Liability Protection Agreement. This endorsement satisfies requirements set down by forest companies licensing RDN use of private lands for regional trail. The endorsement would come into effect in the event that it can be proved that the RDN or its authorized trail users were responsible for starting a wildfire along licensed trail.

ALTERNATIVES

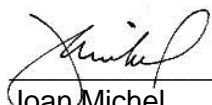
1. That the Board authorize execution of the 2019-2022 Wildfire Response Agreement.
2. That the Board provide alternative direction.

FINANCIAL IMPLICATIONS

The \$1,100 annual fee associated with the Wildfire Response Agreement is covered in the annual Regional Parks Operating budget.

STRATEGIC PLAN IMPLICATIONS

Focus On Service And Organizational Excellence - We View Our Emergency Services As Core Elements Of Community Safety



Joan Michel
jmichel@rdn.bc.ca
February 13, 2019

Reviewed by:

- C. Morrison, Manager, Emergency Services
- W. Marshall, Manager, Parks Services
- T. Osborne, General Manager, Recreation and Parks Services
- P. Carlyle, Chief Administrative Officer

Attachments:

1. Wildfire Response Agreement 2019 - 2022



Wildfire Response Agreement

FILE NO: 950-20/41111

THIS AGREEMENT DATED FOR REFERENCE THE
21ST DAY OF JANUARY, 2019.

AGREEMENT DESCRIPTION: Fire Response Services Provided in British Columbia by the Province

BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, as
represented by the **MINISTER OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS
AND RURAL DEVELOPMENT**

**BC WILDFIRE SERVICE
MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS
AND RURAL DEVELOPMENT**

By mail to:
**P.O. Box 9502 Stn. Prov. Govt.
Victoria, British Columbia
V8W9C1**

Or by hand to:
**2957 Jutland Road, 2nd Floor
Victoria, British Columbia
V8T5J9**

**Phone Number: (778) 974-5709
Facsimile Number: (250) 387-5685
Ministry Representative: Laurence Bowdige
E-mail Address: Laurence.Bowdige@gov.bc.ca**

(the "Province")

AND:

**REGIONAL DISTRICT OF NANAIMO
RECREATION & PARKS
830 W. Island Highway
Parksville, British Columbia
V9P2X4**

**Phone Number: (250) 248-3252
Facsimile Number: (250) 248-3294
Regional District Representative: Wendy Marshall
E-mail Address: wmarshall@rdn.bc.ca**

(the "Regional District")

referred herein to as "the Parties".

WHEREAS:

- A. The Regional District owns or administers certain private or public lands in the Province of British Columbia primarily for the management, use and preservation of the forest, land and water resources through sustainable forest and ecological stewardship activities;
- B. The Regional District has valuable assets that it wishes to protect from destruction by wildfire;
- C. The Regional District has certain statutory obligations under the laws of British Columbia with respect to wildfire prevention, detection, control and suppression;
- D. The Province, through the BC Wildfire Service has significant fire management expertise and fire suppression responsibilities on Crown lands and other private lands, and has therefore developed significant infrastructure and response resources to prevent, detect, control and extinguish wildfires;
- E. The Regional District wishes the Province to provide fire response services, in addition to those provided by local governments and other agencies, to protect its land and assets as well as key public environmental values;
- F. The Parties wish to enter into this Wildfire Response Agreement that constitutes a cost sharing agreement for the purpose of Section 28 of the *Wildfire Regulation*; and
- G. Each Party acknowledges the contributions of the other in preventing, detecting, and fighting wildfires and wishes to work co-operatively to meet common fire prevention goals.

NOW THEREFORE, the Parties agree as follows:

1. DEFINITIONS

In this document, the following words have the following meanings, unless the context dictates otherwise:

- a) **“Act”** means the [Wildfire Act](#) (British Columbia) as it may be amended or replaced from time to time;
- b) **“Agreement”** means the agreement between the Parties as set out herein;
- c) **“Amending Document”** means a written document signed by both Parties amending the terms of this Agreement;
- d) **“Annual Fee”** means the fee paid by the Regional District to the Province at the beginning of each Year for the Services;
- e) **“Annual Preparedness Plan”** means a document completed by the Regional District submitted on an annual basis to the Province prior to the fire season outlining operational and logistical considerations of the Regional District such as Regional District contacts, duty rosters, planned activities on the Lands and resources that may be available upon request of the Province;
- f) **“Business Day”** means a day, other than a Saturday, Sunday or statutory holiday, on which Provincial government offices are open for normal business in British Columbia;
- g) **“Fire”** means:
 - i. an unplanned fire occurring on forest or grass lands, burning forest vegetation, trees, grass, brush, heath, scrub, peat lands (wildfire); or
 - ii. an open fire set in accordance with Part 4 of the Wildfire Regulation which spreads beyond the area authorized for burning (wildfire); or
 - iii. a fire which does not spread to forest or range lands, or beyond the area authorized for burning if set under Regulation, but is now not in compliance with the Regulation (nuisance fire);
- h) **“Fire Management Plan”** means a plan developed by the Regional District to provide support to decision makers for integrated wildland fire response and resource management activities;
- i) **“Fire Response”** means all activities associated with responding to a Fire with appropriate Resources following the discovery or receipt of a report of a Fire;

- j) **“Fire Suppression”** means all activities concerned with controlling and extinguishing a Fire following its detection;
- k) **“Lands”** means the specified public and private lands (on which physical structures may exist) owned and/or managed by the Regional District and specifically identified to the Province as specified in this Agreement;
- l) **“Ministry Representative”** means the Ministry of Forests, Lands, Natural Resource Operations and Rural Development staff person appointed, or such other person as the Province may substitute at any time and immediately notify the Regional District in writing, to serve as the primary contact between the Province and the Regional District in connection with this Agreement;
- m) **“Patrol”** means to inspect a Fire perimeter to prevent escape of the Fire and/or to travel a given route to inspect, prevent, detect and suppress Fires;
- n) **“Regulation”** means the [Wildfire Regulation](#) (British Columbia) as it may be amended or replaced from time to time;
- o) **“Resources”** means the personnel and equipment available, or potentially available, for assignment to incidents or Fires;
- p) **“Services”** means the Fire Response services provided by the Province on or related to the Lands pursuant to this Agreement;
- q) **“Year”** means the twelve-month period from April 1st to March 31st.

2. TERM

- 2.01 This Agreement will take effect on the date of its execution.
- 2.02 The term of this Agreement shall end on March 31st, 2022 unless terminated by either Party in accordance with Section 6.01 of this Agreement.

3. SERVICES

- 3.01 When a Fire is discovered by or made known to the Province and threatens or has the potential to threaten the Lands, or is burning on the Lands, the Province will use its best efforts in accordance with Sections 8 and 9 of the *Act* to provide the Services to protect the Lands to the same extent and priority as on Crown lands or other lands within the jurisdiction of the Province, subject to the purposes of this Agreement, standard priority procedures and availability of Resources within British Columbia.
- 3.02 When a Fire is burning on the Lands, the Province and the Regional District will cooperate to control, suppress and extinguish it, subject to statutory obligations and responsibilities, and the terms and conditions of this Agreement.
- 3.03 At its own expense, the Province will recruit Resources within or outside British Columbia as deemed necessary by it to provide the Services.
- 3.04 When there is high current or forecasted demand on provincial Resources, the Province will prioritize the allocation and positioning of Resources, and may delay, limit, suspend or withdraw Fire Response on a Fire considered, by the Province, to be a lower priority.
- 3.05 In accordance with Ministry of Forests, Lands, Natural Resource Operations and Rural Development Policy 9.1, the Province may delay, limit, suspend or withdraw Fire Response when a Fire is located in an area, or is displaying fire behaviour, that may make it impracticable or unsafe for firefighting Resources.
- 3.06 As soon as possible following the discovery or report of a Fire, the Province will:
 - a) advise the Regional District of the Fire on the Lands and the action taken; and,
 - b) on request of the Regional District, provide supporting information regarding Fires affecting or threatening the Lands.
- 3.07 Once a Fire referred to in Section 3.01 above is extinguished, the Province may conduct an investigation and may compensate the owner of private land in accordance with Section 15 of the *Regulation* for

damage caused by the Province to the private land in carrying out fire control, or may rehabilitate land damaged by fire control in accordance with Section 17 of the *Regulation*.

- 3.08 During periods when the risk of a Fire starting and spreading is minimal (typically November to February inclusive) it is understood by the Parties that the Province has limited Resources available to respond to Fires.
- 3.09 The Province is not mandated nor does it have the skills, equipment or training to respond to non-wildfires such as those involving structures, vehicles, landfills, hazardous materials and coal or coal seams. The Province may respond at a safe distance from non-wildfires to protect the forest and range resources.
- 3.10 The Province may provide the Regional District with additional services at the Regional District's request.
- 3.11 The Province and the Regional District will meet at least once per Year to review the Year's activity.

4. OBLIGATIONS OF THE REGIONAL DISTRICT

- 4.01 The Regional District will:
 - a) where a Fire is discovered on the Lands, carry out fire control as per the *Act*, *Regulation* and Ministry of Forests, Lands, Natural Resource Operations and Rural Development Policy 9.1 as amended from time to time;
 - b) as soon as possible, advise the Province of any actions taken on a fire;
 - c) on the request of the Province and when available, provide a fire information report for the fire;
 - d) in addition to their statutory obligations and responsibilities and on the request of the Province, provide resources as identified in Schedule B to assist the Province in Fire Suppression and Patrol on the Fire. Such efforts on the part of the Regional District will be at no cost to the Province and shall not relieve the Regional District or the Province of their responsibilities as required by legislation or as contemplated by this Agreement;
 - e) notify the Province if a new industrial use is initiated upon the Lands, or if it becomes aware of any specific hazards on the Lands; and
 - f) provide, at minimum on an annual basis, an Annual Preparedness Plan as described in Schedule C or a fire pre-organization plan if available.
- 4.02 In consultation with the Province, the Regional District will use its best efforts to assist the Province in securing Resources for use in Fire Suppression on the Lands. These Resources are in addition to the statutory obligations and responsibilities of the Regional District, and the Regional District Resources described in Schedule B. Compensation for these additional Resources will be paid by the Province as outlined in the *Act*, the *Regulation*, Ministry Policy, and operating procedures and guidelines established by the Province.
- 4.03 The Regional District will assist and co-operate with the Province in any investigations including fire origin and cause investigations, settlements and claims related to this Agreement.
- 4.04 The Regional District will use all reasonable efforts to encourage its officers, directors, employees, sub-contractors and agents to provide the assistance described in Section 4.03.
- 4.05 The Regional District will, upon execution of this Agreement, provide the Province with maps in digital form (or other such format as agreed upon by the Parties) and written descriptions of the Lands.
- 4.06 Before April 1st of any subsequent Year, the Regional District will advise the Ministry Representative of any changes to the Lands and provide the Province with revised maps in digital form (or other such format as agreed upon by the Parties) and written descriptions of the Lands. The Province will, using the revised maps of the Lands, determine the extent of any changes to the Lands, and may prepare an Amending Document.
- 4.07 The Regional District may develop a Fire Management Plan that identifies critical values at risk to wildland fire on the Lands and areas where wildland fire may be beneficial or detrimental on the Lands. The plan should be reviewed and revised by the Regional District on an annual basis to identify changes

that may occur on the Lands. Where the Regional District has identified that this plan has been completed, a copy will be provided to the Province upon request.

5. ANNUAL FEE FOR PROVINCIAL WILDFIRE SERVICES

- 5.01 In consideration of the Province providing the Services, the Regional District will pay to the Province an Annual Fee equal to \$1,100 for the Lands as specified in this Agreement.
- 5.02 On execution of this Agreement, the Regional District will pay the Annual Fee to the Province in advance of the Services rendered within 30 days of transmission of the invoice from the Province to the Regional District.
- 5.03 The Annual Fee under Section 5.01 represents the total and final amount owing from the Regional District to the Province for the Services provided in each Year, regardless of the number, cause or origin of Fires that occur on the Lands, provided the Regional District or its officers, directors, employees, agents or subcontractors did not wilfully cause or contribute to the start or spread of a Fire through its own acts or omissions. In the event that the Regional District or its officers, directors, employees, agents or subcontractors, through their acts or omissions did wilfully cause or contribute to the start or spread of a Fire, the Province shall be entitled to seek cost recovery and/or administrative penalties from the Regional District in accordance with Section 25 or 27 of the *Act*.
- 5.04 Before April 1st of any subsequent Year, the Province will, using the revised maps and written descriptions of the Lands as described in Section 4.06, determine the extent of any changes to the Lands. A new Annual Fee may be determined by the Province whereby the Province will prepare an Amending Document.
- 5.05 Where any additional services are provided by the Province at the Regional District's request under Section 3.10 of this Agreement, the Province and the Regional District will agree on the services and fees for the additional works and the Regional District will compensate the Province for each individual project at the completion of the project.

6. TERMINATION

- 6.01 Either Party may terminate this Agreement for any reason, by giving written notice to the other Party before January 31st in any Year, and will be effective as of March 31st of that Year.
- 6.02 The termination of this Agreement shall not affect any:
 - a) provisions of this Agreement that are implied or expressed to operate or have effect after the termination; and
 - b) right or obligation of a Party arising under this Agreement before the termination of this Agreement.

7. MISCELLANEOUS

- 7.01 No change to this Agreement is effective unless the change is made in the form of an Amending Document.
- 7.02 Each Schedule attached to this Agreement forms an integral part of this Agreement as if set out in length in the body of this Agreement.
- 7.03 The Regional District may assign its rights under this Agreement to any subsequent owner of all or any portion of the Lands provided that such subsequent owner agrees in writing with the Province to be bound by the terms of this Agreement.
- 7.04 This Agreement shall be binding upon and shall enure to the benefit of the Province and the Regional District and their respective successors and assigns.
- 7.05 Any notice or document contemplated by this Agreement, to be effective, must be in writing and delivered as follows:
 - a) hand delivered to the Party or the specified Party representative, in which case it will be deemed to be received on the day of its delivery; or

- b) by prepaid post to the Party's address specified on the first page of this Agreement, in which case if mailed during any period when normal postal services prevail, it will be deemed to be received on the fifth Business Day after its mailing; or
 - c) delivered by courier service to the Party's address specified on the first page of this Agreement, in which case it will be deemed received on the fifth Business Day after collection by the courier service; or
 - d) by facsimile or electronic transmission to the specified facsimile number or email address on the first page of this Agreement, in which case it will be deemed to be received on the day of transmittal unless transmitted after the normal business hours of the addressee or on a day that is not a Business Day, in which cases it will be deemed to be received on the next following Business Day.
- 7.06 Nothing in this Agreement is to be construed as interfering with or fettering the exercise of discretion of any government decision maker.
- 7.07 Time is of the essence in this Agreement.
- 7.08 This Agreement will be governed by and construed in accordance with the laws of British Columbia.

8. EXECUTION AND DELIVERY

- 8.01 This Agreement may be entered into by a separate copy of this Agreement being executed by, or on behalf of, each Party and that executed copy being delivered to the other Party by a method provided for in Section 7.05 or any other method agreed to by the Parties.

The Parties have duly executed this Agreement as follows.

SIGNED AND DELIVERED on behalf of the Province by an authorized representative of the Province.	SIGNED AND DELIVERED by or on behalf of the Regional District (or by an authorized signatory of the Regional District if a corporation.)
Ian Meier A/Executive Director BC Wildfire Service	Tom Osborne General Manager Recreation and Parks Department
Dated this ____ day of _____, 2019.	Dated this ____ day of _____, 2019.

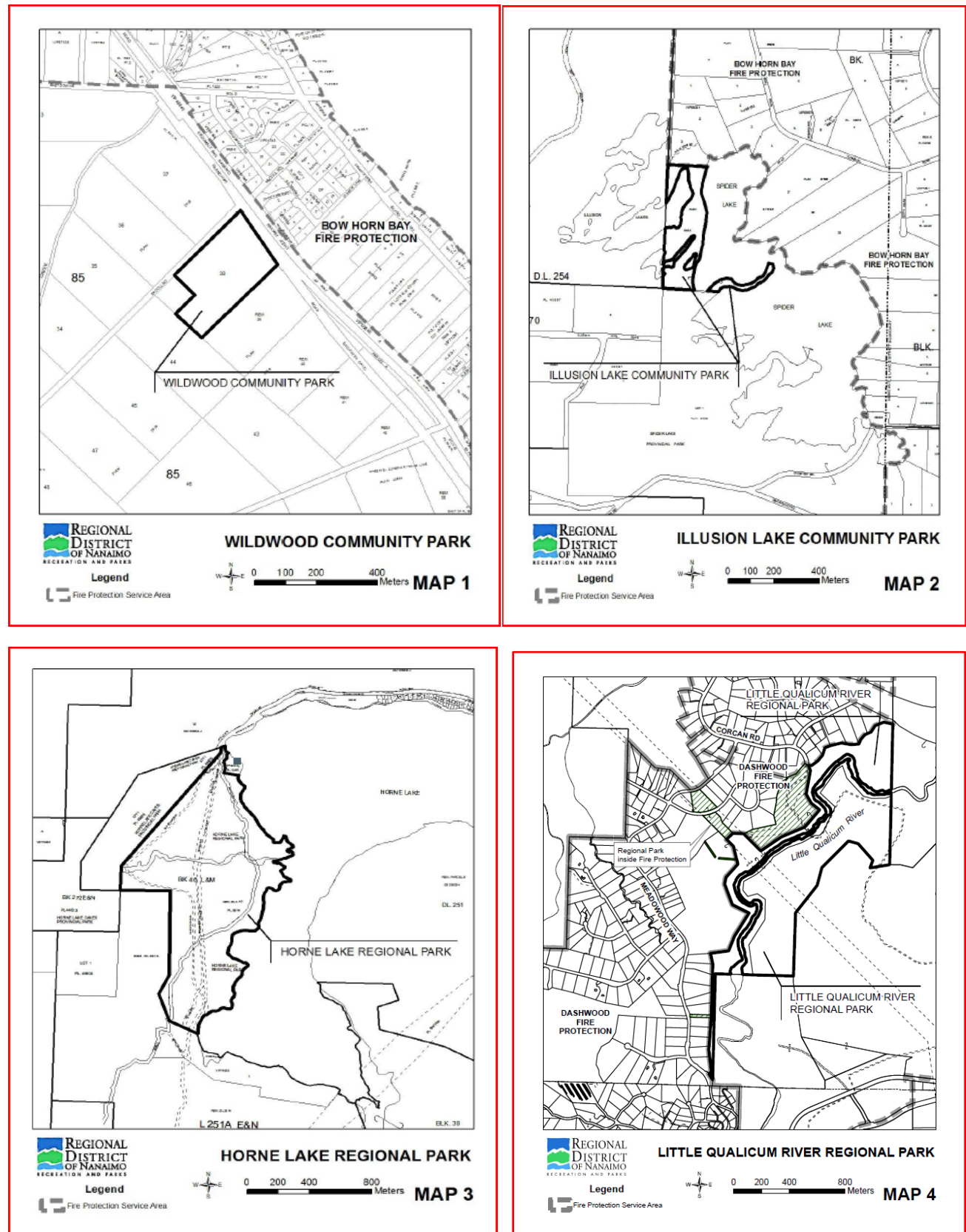


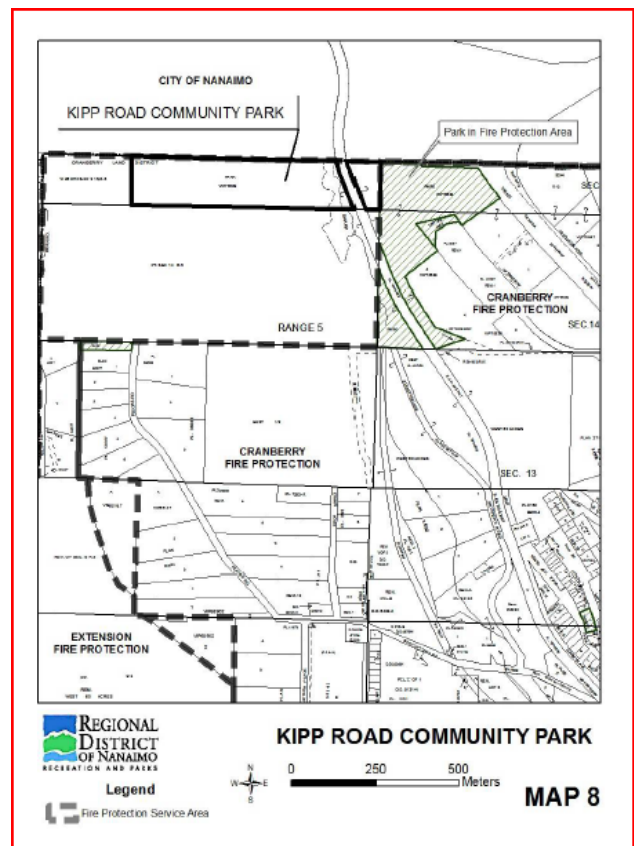
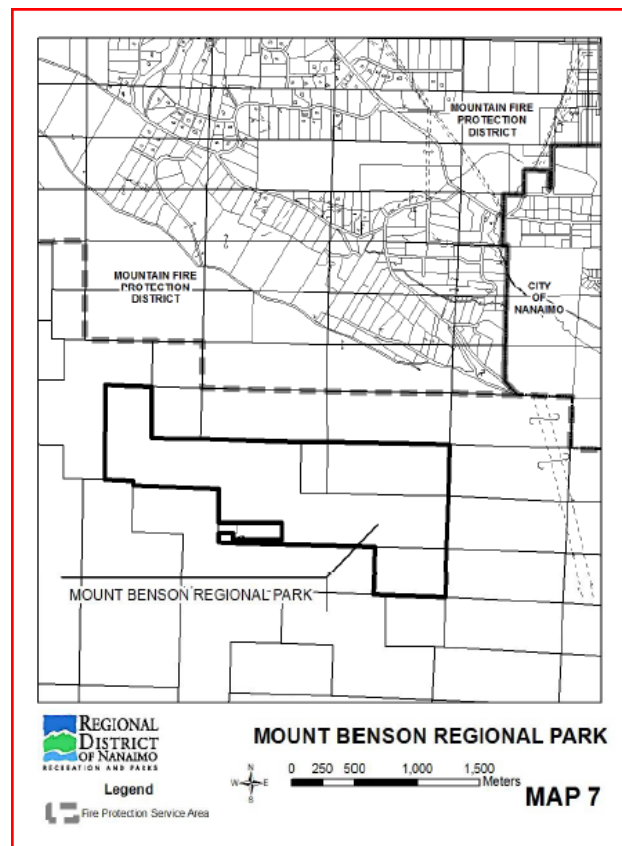
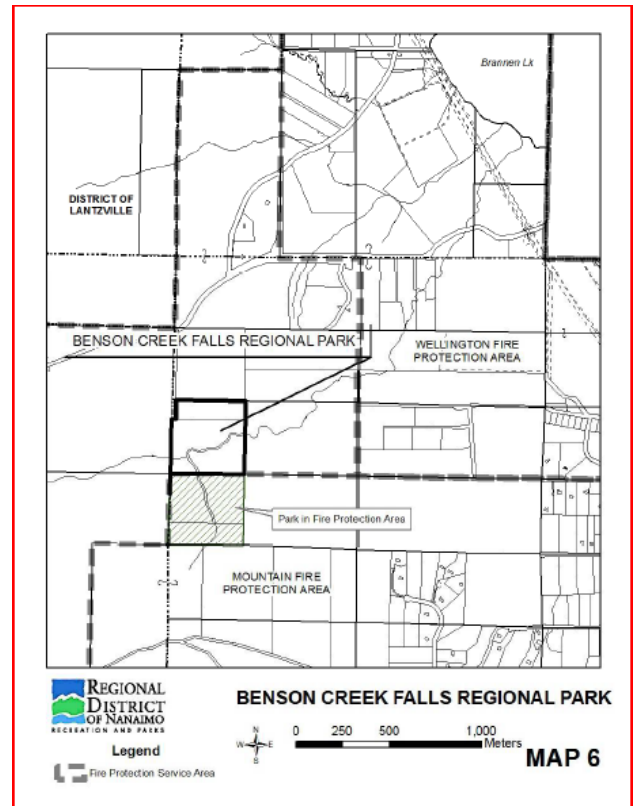
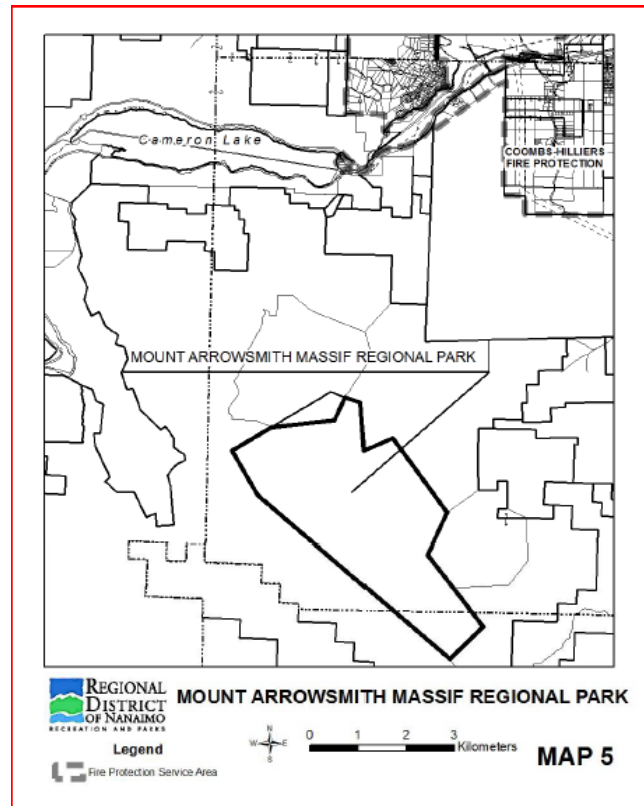
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and Rural Development

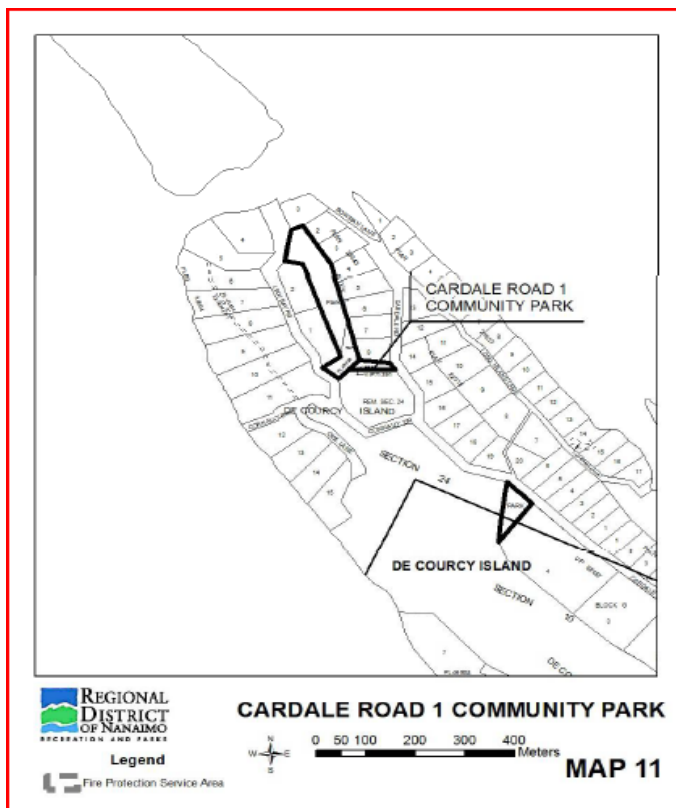
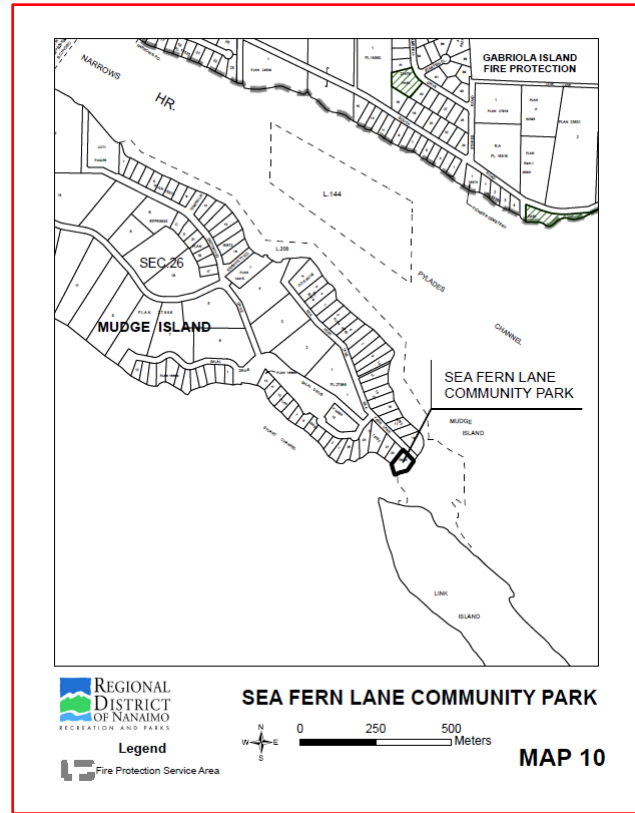
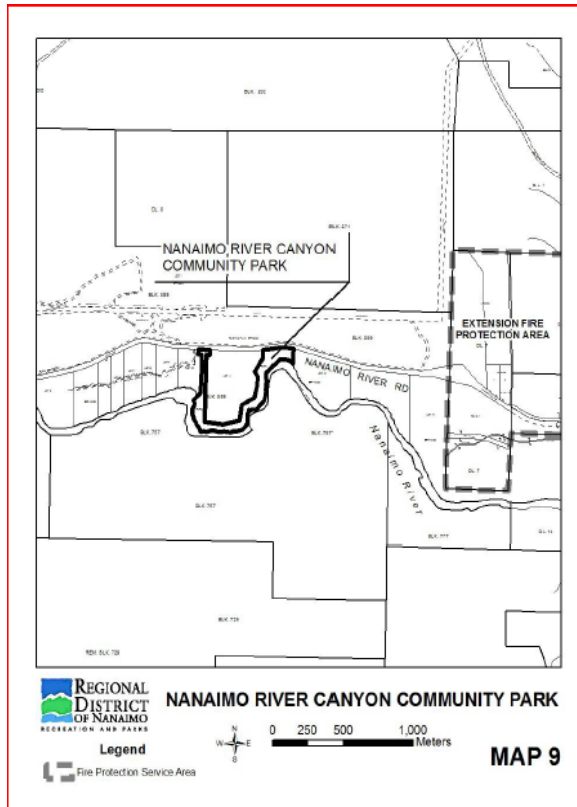
Schedule A Regional District Lands Maps

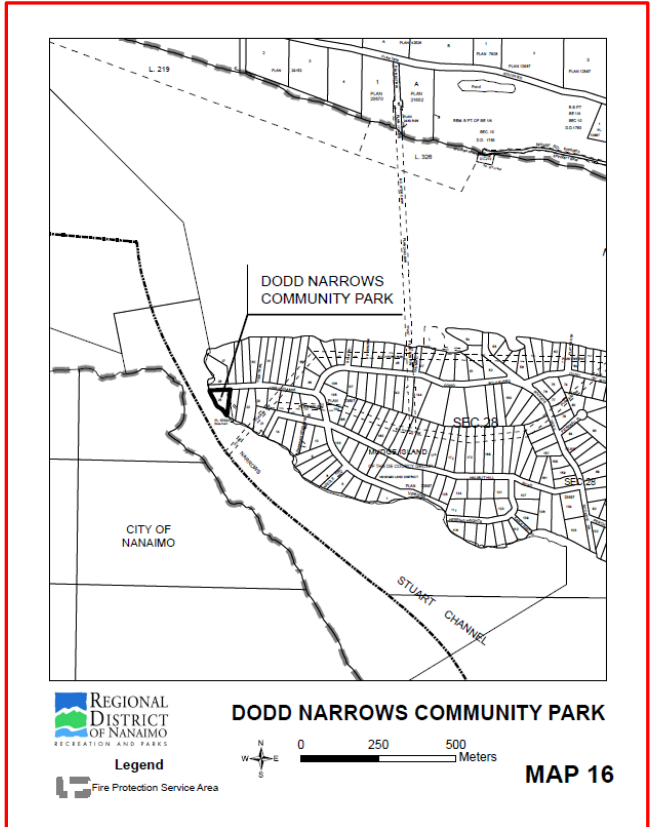
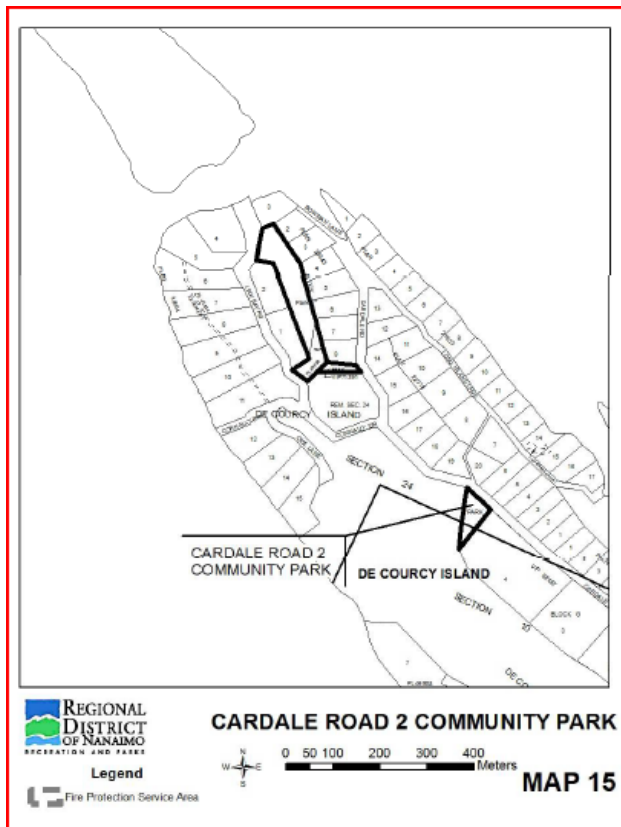
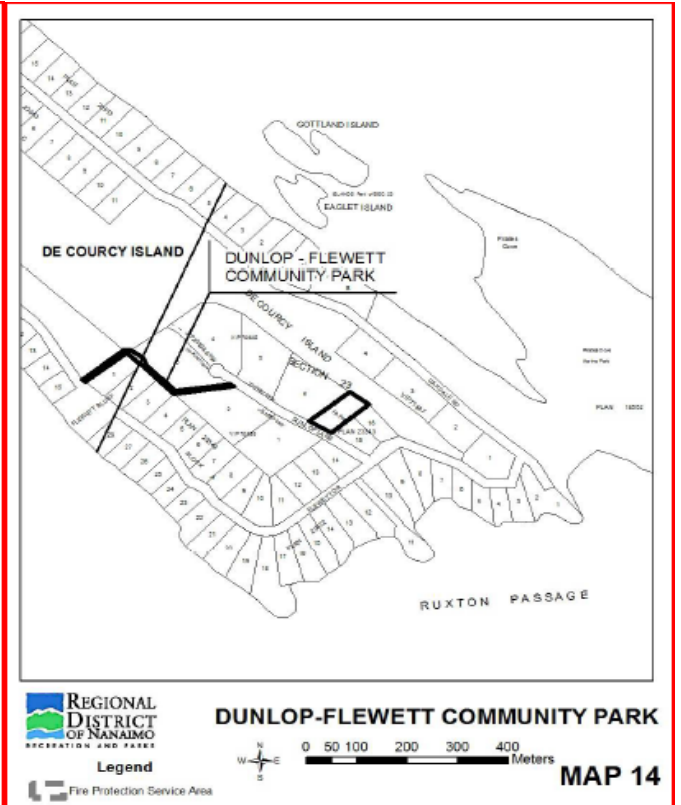
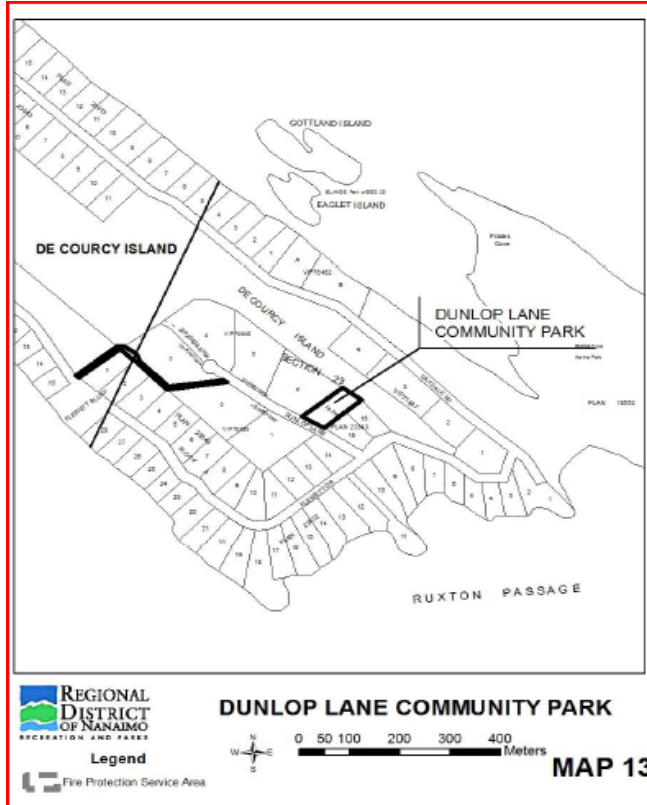
Operating Area (Park/Trail Name)	Map Number
Wildwood Community Park	1
Illusion Lake Community Park	2
Horne Lake Regional Park	3
Little Qualicum River Regional Park	4
Mount Arrowsmith Massif Regional Park	5
Benson Creek Falls Regional Park	6
Mount Benson Regional Park	7
Kipp Road Community Park	8
Nanaimo River Canyon Community Park	9
Sea Fern Lane Community Park	10
Cardale Road 1 Community Park	11
Link Bay Road Community Park	12
Dunlop Lane Community Park	13
Dunlop-Flewett Community Trail	14
Cardale Road 2 Community Park	15
Dodd Narrows Community Park	16

Total area of the Lands within this Agreement is 1,769 hectares.











Ministry of
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and Rural Development

Schedule B Regional District Resources

1. **In addition to their statutory obligations and responsibilities** the Regional District will provide the Resources identified in this Schedule, as requested by the Province, for Fire Suppression and Patrol, during periods when there is a risk of a Fire starting and spreading.
2. The Regional District Resources will be made available as and when required by the Province, at no cost to the Province.
3. The Regional District Resources must meet the applicable requirements as indicated in the WorkSafeBC Occupational Health and Safety Regulation, Policies, Guidelines and WCB Standards.
4. The Province will direct the Regional District Resources (excluding the Site Representative) regarding the type and duration of Fire Suppression activities to be undertaken on a Fire.
5. Where Regional District Lands are dispersed over a broad geographic area, Regional District Resources may be identified applicable to specific operations or geographic areas.
6. Personnel
 - a) Site Representative(s) **must** be identified:
 A Site Representative is an individual authorized to act on behalf of and make decisions for the Regional District with respect to Fire Response operations and activities.
 A Primary Site Representative will be identified by the Regional District for all Fires and will be available during periods when there is a risk of a Fire starting or spreading and able to respond to the site of a Fire when requested by the Province. Where an Annual Preparedness Plan is submitted to the Province, alternative Site Representatives with names, applicable dates and contact information may be identified to the Province in place of the Primary Site Representative.

Primary Site Representative	24 Hour Telephone Contact
RDN Emergency Program	(778) 762-3553
Alternate Contact #1 Catherine Morrison, Manager Emergency Services	(250) 713-2057
Alternate Contact #2 Doug Gardiner, Fire & Rescue Service Coordinator	(250) 802-6670
Bill Woodhouse Horne Lake Regional Park ONLY	(250) 927-4790



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Schedule C

Annual Preparedness Plan Content

1. The Regional District will prepare an Annual Preparedness Plan that provides the Province with information about the Regional District that may assist the Province in its Fire Response operations, and will be provided to the Province prior to the fire season.
2. Updates to the Annual Preparedness Plan may be requested by the Province monthly or as determined by the Province.
3. The following is a framework that may be used and provides suggestions regarding plan content.

Brief Description of the Area Under Agreement

- Location
- Geographic considerations such as significant physical separation of parcels of land

Personnel

- Duty rosters and standby personnel
- Availability of Site Representatives (including whether this will be 24/7 during the fire season or for specified hours)
- Fire crews and equipment, the dates of availability and the marshalling point(s)

Operational Considerations

- Identification of active operating areas and when the operations will be undertaken including:
 - Harvesting (including the location of any high-lead operations)
 - Road building and / or road deactivation (including blasting operations)
 - Site preparation
 - Reforestation
 - Stand treatments such as brushing, weeding, pruning
- Location of contractors and / or contracted equipment that may aid in fire suppression
 - Estimate of when they may be operating on the Lands
- If available, operational overview maps showing the planned location of high risk activities
- Location of equipment caches

Transportation Considerations

- Location of any barges, ferries or other water vessels that may aid in the ground transport of fire suppression personnel and equipment
 - Estimate of when this equipment may be available
- Location of any locked gates
 - Availability of keys
 - New gates established on the Lands and availability of new keys



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Schedule D

Digital Data Limited Use Agreement

Subject to the *Freedom of Information and Protection of Privacy Act*, the Regional District agrees to share the digital data identified in this Agreement with the Province for the ongoing purpose of implementing the Wildfire Response Agreement between the Regional District and the Province.

The provision of the digital data is subject to the following conditions:

1. Supplied data not in the public domain is provided without warranty and is the sole and exclusive property of the Regional District. The Province and contractors operating on behalf of the Province do not acquire any right, title or interest in or to the data or any portion of it or to any intellectual property or other proprietary rights related to it.
2. The Regional District data will be used only for projects undertaken by the Province unless the Regional District gives permission otherwise.
3. The Regional District's digital data will not be shared with any parties other than the Province or contractors working on behalf of the Province without the Regional District's consent.
4. The Province will ensure that all of the data and copies are stored in a secure place while in its possession, custody or control and that metadata identifying the limited use rights to the data is appended to the data.
5. Only generalized hard copy maps, generalized digital plotter files, generalized digital graphic files (such as TIFF, JPEG or PDF format files), or generalized data tables of any spatial analyses containing the Regional District's version of this data may be shared with individuals and organizations not working on behalf of the Province.
6. The Province will ensure that individuals or contractors acting on behalf of the Province are aware of, and agree in writing to, the conditions in this Agreement.

TO: Committee of the Whole**MEETING:** March 12, 2019**FROM:** Duncan Taylor
Manager, Engineering Services**FILE:** 5330-20-FCPCC EXPAN IV**SUBJECT:** French Creek Pollution Control Centre, Engineering Services

RECOMMENDATION

That the Board approve an additional \$222,172 (excluding GST) to AECOM Engineering Services contract for Thickener Facility Upgrade engineering and Landscape Architecture design.

SUMMARY

In July 2018, the Board approved the award of Detailed Engineering Services for the French Creek Pollution Control Centre (FCPCC) Stage IV Expansion and Odour Control Upgrade Project to AECOM with a contract value of \$2,506,980 (excluding GST).

At the start of the Detailed Engineering, two key tasks were undertaken for effective project design and execution:

1. Technical Design Peer Review of the preliminary design to verify design concepts and project direction.
2. Constructability Review, where the design is analyzed from a constructability aspect.

These review processes identified two additional tasks that should be included in the current detailed engineering assignment.

1. Sludge Thickener Facility Upgrade to support increased plant capacity; and
2. Landscape analysis and design recommendations to minimize the visual impact from Highway 19A.

The cost of these additional engineering services is \$ 222,172 excluding GST.

BACKGROUND

The FCPCC Stage IV Expansion will be designed to provide adequate treatment capacity for the service population to the year 2035 and it is anticipated that the expansion will be fully commissioned by early 2022. In addition, the existing plant is also in need of many upgrades to improve efficiency and replace failing infrastructure.

A process selection report for the FCPCC Stage IV Expansion was completed in 2012. This assignment provided a conceptual design and high-level cost estimate for the project. This information was used in the preliminary design assignment which the RDN Board awarded to AECOM in 2017. The preliminary design provided details and refinement of the project scope, updated engineering cost and identified future upgrades beyond the Stage IV Expansion.

In 2018, after an RFQ process, the RDN Board approved the award of the Detailed Engineering, Tendering and Construction Management Services for the Stage IV Expansion to AECOM.

At the start of the Detailed Engineering Phase of this project, two key tasks required for effective project design and execution were undertaken:

1. Technical Design Peer Review of the preliminary design to verify the design concepts and project direction.
2. Constructability Review, where the design is analyzed from a constructability aspect.

These review processes have identified several items that will improve operational and construction efficiency which will be addressed in the detailed engineering scope currently underway. The review also identified two tasks that should be considered and added to the Detailed Engineering Assignment:

1. Advancing the engineering of the Sludge Thickener Facility Upgrade which is currently identified later in our 10 year capital plan. This project will assist with solids processing capacity in the existing plant.
2. Landscape analysis and design recommendations to minimize the visual impact from Highway 19A due to the facility expansion and optimize the landscaping budgeted in the construction phase.

Sludge Thickener Facility Upgrade – Sludge thickening is a critical process unit for a conventional activated sludge wastewater treatment facility. Inadequate thickening will affect the overall plant performance by reducing the volume solids processed through the digesters. The Preliminary Engineering Phase of the project identified the need for additional sludge thickening capacity at a date behong the Stage IV Upgrade Project.

A peer review by wastewater process specialists has concluded that the schedule for this work be accelerated and included in the current Stage IV Expansion Project to eliminate process capacity limitations prior to year 2035.

Landscape Analysis and Design – The initial phase of the constructability review process has been completed. This process analyzes the design from a construction aspect to identify areas of optimization that will result in efficient construction methods and ultimately ensure that construction costs and construction scope changes are minimized.

As part of this process, preliminary construction sequencing and tree clearing schedules were reviewed. The facility expansion borders Highway 19A without a substantial vegetation buffer between the facility and this road. It is proposed that the development of a planting plan by a Landscape Architect be completed prior to the removal of any natural vegetation. This will expedite rehabilitation of vegetation along the project boundary to blend in with the existing natural vegetation.

AECOM Canada Ltd. calculated the cost associated with these additional tasks (excluding GST.)

• Thickener Facility Upgrade Engineering	\$188,172
• Landscape Analysis Design	\$ 14,000
• Contingency (10%)	<u>\$ 20,000</u>
Total	\$222,172

This amounts to a 9% increase to the current Stage IV Expansion project Detailed Engineering contract with AECOM.

ALTERNATIVES

1. Approve an additional \$222,172 (excluding GST) to the AECOM Engineering Services Contract for Thickener Facility Upgrade Engineering and Landscape Architecture design.
2. Defer the Thickener Facility Upgrade Engineering and Landscape Architecture design to a future plant upgrade project.

FINANCIAL IMPLICATIONS

Alternative 1

The increase of \$222,172 to the engineering assignment and estimated \$1,300,000 in construction costs for an additional thickener will be covered by the project contingency and not increase the overall \$32,960,000 project budget.

Alternative 2

Deferring spending of \$222,172 for additional engineering design on this project will introduce:

- a. higher future construction costs and process capacity limitations.
- b. risk of invasive plant species taking hold and affecting the visual image of the facility.

STRATEGIC PLAN IMPLICATIONS

The design and construction of the FCPCC Stage IV Expansion Project and Odour Control Upgrades directly supports the Board Strategic Priority to Focus on Organizational Excellence. This priority states that the RDN will deliver efficient, effective and economically viable services that meet the needs of the region, including funding infrastructure in support of our core services employing asset management focus.

This project supports the strategic priority to Focus on Economic Health and recognizes the importance of wastewater in supporting economic and environmental health.



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