
Mission Statement

In carrying out its mandate, Bowen Island Municipality will work towards conducting operations in a way that:

- Improves the economic, environmental and social well-being for present and future generations;
 - Encourages and fosters community involvement;
 - Enhances the small, friendly, caring character of the community;
 - Maintains an open, accountable and effective operation; and
 - Preserves and enhances the unique mix of natural ecosystems and green spaces that Bowen Island possesses.
-

NOTICE: That a Mayor's Task Force on Infrastructure Meeting will be held in Council Chambers on Thursday, June 13, 2024 at 3:00 PM for the transaction of business listed below. View the meeting live on our [YouTube Channel](#).



Stefania Shortt, Committee Coordinator

REVISED AGENDA

Mayor's Task Force on Infrastructure Meeting Thursday, June 13, 2024

	Page	Timing
OPENING OF COMMITTEE MEETING		3:00 PM
1. <u>APPROVAL OF AGENDA</u>		
1.1 Introduction of Late Items		
<i>Recommendation:</i> <i>That the Mayor's Task Force on Infrastructure approve the agenda for the June 13, 2024 meeting.</i>		
2. <u>ADOPTION OF MINUTES</u>		
2.1 Minutes of the May 16, 2024 Mayor's Task Force on Infrastructure Meeting	4 - 6	
<i>Recommendation:</i> <i>That the minutes of the Mayor's Task Force on Infrastructure meeting held May 16, 2024 be adopted.</i>		

3.	<u>PUBLIC COMMENTS</u>		3:05 PM
	<i>Public Comment is an opportunity for members of the Public to comment regarding items on the agenda or any other comments or issues they may wish to bring to the Committee's attention.</i>		
4.	<u>BUSINESS ARISING FROM THE MINUTES</u>		3:10 PM
4.1	Asset Management Overview (Annette Frischmann, Public Works Utilities Coordinator and Patrick Graham, Director of Engineering) - Supporting Documents - Presentation	7 - 40	(30 min)
4.2	Work Plan Discussion (Mayor Andrew Leonard)		(10 min)
5.	<u>UPDATES</u>		3:50 PM
5.1	BIM Capital Projects Update (Patrick Graham, Director of Engineering) Capital Projects BIM Webpage		(10 min)
6.	<u>NEW BUSINESS</u>		4:00 PM
6.1	Other Business		(10 min)
6.2	Move to a Closed Meeting		
	Recommendation: <i>That the Mayor's Task Force on Infrastructure move to a Closed meeting pursuant to Section 90 (1) (K) of the Community Charter:</i> 90 (1) <i>A part of a council meeting may be closed to the public if the subject matter being considered relates to [...] the following:</i> <i>(k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.</i>		
7.	<u>INFORMATION ITEMS</u>		4:10 PM
	<i>Note to members of the Public: if your correspondence is referenced in this section below and you wish to speak to the Committee regarding such, you are welcome to appear during our "Public Comment" section near the beginning of this agenda</i>		
7.1	2023 - 2026 BIM Council Strategic Plan (2024 Update)		
7.2	MTFI Terms of Reference		
7.3	Excerpts from the May 27, 2024 Regular Council Meeting re: CAO Resignation	41 - 44	

- Cove Bay and Eagle Cliff Water System Connection Loan
- Road Works Award of Tender
- Snug Cove Sewer Petition Results

8. QUESTION PERIOD

Question Period is an opportunity for members of the public to request clarification or ask a follow-up question relating to an item discussed at the meeting. Questions must relate to an item on the agenda.

9. NEXT MEETING

Thursday, July 18, 2024 at 3:00 PM in Council Chambers

10. ADJOURNMENT

4:10 PM

DRAFT

BOWEN ISLAND Municipality

Mayor's Task Force on Infrastructure Meeting

[View the Video](#)

Minutes of the **Mayor's Task Force on Infrastructure Meeting** held Thursday, May 16, 2024 at 3:00 PM via Council Chambers in Municipal Hall

COMMITTEE IN ATTENDANCE

Mayor Andrew Leonard, Chair
Councillor Tim Wake, Vice Chair
Michael Florendo
Don Nicholson
Councillor John Saunders
Liam Edwards, Chief Administrative Officer (*non-voting member*)
Patrick Graham, Director of Engineering (*non-voting member*)

STAFF IN ATTENDANCE

Stefania Shortt, Committee Coordinator

OPENING OF MEETING

The Chair called the meeting to order at 3:00 PM.

APPROVAL OF AGENDA

Introduction of Late Items

It was Moved and Seconded

That the Mayor's Task Force on Infrastructure approve the agenda for the May 16, 2024 meeting as amended. CARRIED UNANIMOUSLY

ADOPTION OF MINUTES

[Minutes](#) of the April 4, 2024 Mayor's Task Force on Infrastructure Meeting

It was Moved and Seconded

That the minutes of the Mayor's Task Force on Infrastructure meeting held April 4, 2024 be adopted as amended. CARRIED UNANIMOUSLY

PUBLIC COMMENTS

None.

UPDATES

BIM Capital Projects Update
(Liam Edwards, Chief Administrative Officer)

The Task Force reviewed the Capital Projects Status and Estimated Completion List. Discussion included:

- [Capital Projects Webpage](#)
- [Capital Projects Status and Estimated Completion List](#)

- **Bluewater Park Water System Replacement Project:** Staff speculated that the 35% discrepancy between the original estimate, on which the loan borrowing authorization process was based, and the current, more detailed design estimate, was due to unforeseen bedrock challenges and a rise in pipe pricing; he would, however, follow up with the firm for more

clarity on that gap. Discussion included approaches to resultant scope reduction and project element prioritization.

- **Multi-Use Path:** Were property acquisitions to be realized, the budget would increase significantly.
- **Community Centre:** Floors have been installed.

Participants agreed that while discussion of budget is important for transparency, financial details that could negatively impact tender competitiveness should be discussed in a closed meeting.

Cove Bay Water Treatment Plant Update

(Patrick Graham, Director of Engineering)

- [Cove Bay Water Treatment Plant Project Webpage](#)

Patrick Graham, Director of Engineering, advised that the Water Treatment Plant was in Ontario at the Purifics warehouse undergoing a factory reset, noting that while little work had been done on the equipment for the three weeks it had been there, in the past three days significant progress had been made. He further advised that the work should be complete in four weeks. Discussion included:

- Quality of water being used to test the equipment and its similarity, specifically regarding turbidity, to that from Grafton Lake;
- Purifics senior staff coming to Bowen Island for the install rendered having a BIM witness at the Ontario factory to ensure functionality unnecessary.

NEW BUSINESS

Other Business

Provided.

Move to a Closed Meeting

It was Moved and Seconded

That the Mayor's Task Force on Infrastructure move to a Closed meeting pursuant to Section 90 (1) (k) of the Community Charter:

90 (1) *A part of a council meeting may be closed to the public if the subject matter being considered relates to [...] the following:*

(k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.

CARRIED UNANIMOUSLY

INFORMATION ITEMS

[2023 - 2026 BIM Council Strategic Plan \(2024 Update\)](#)

Provided.

Excerpt from the April 22, 2024 Council Meeting Minutes re:

Public Works Yard Proposal

[Provided.](#)

QUESTION PERIOD

None.

NEXT MEETING

Thursday, June 13, 2024 at 3:00 PM

- Discuss Asset Management Planning

ADJOURNMENT

By unanimous consent, the meeting adjourned at 3:30 PM.

Certified Correct:

Mayor Andrew Leonard, Chair

Stefania Shortt, Committee Coordinator

Capital Replacement Profile Chart - Culverts

psdcitywide

Home > Assets > Asset Management Reports > Capital Replacement Profile Report > Bar Chart (Classification)

3

Default

Bowen Island Munic
afirschmann

Filter

No Filters

Category

Bridges & Culverts

Segment

Culverts

Year

2024

to

2045

Range

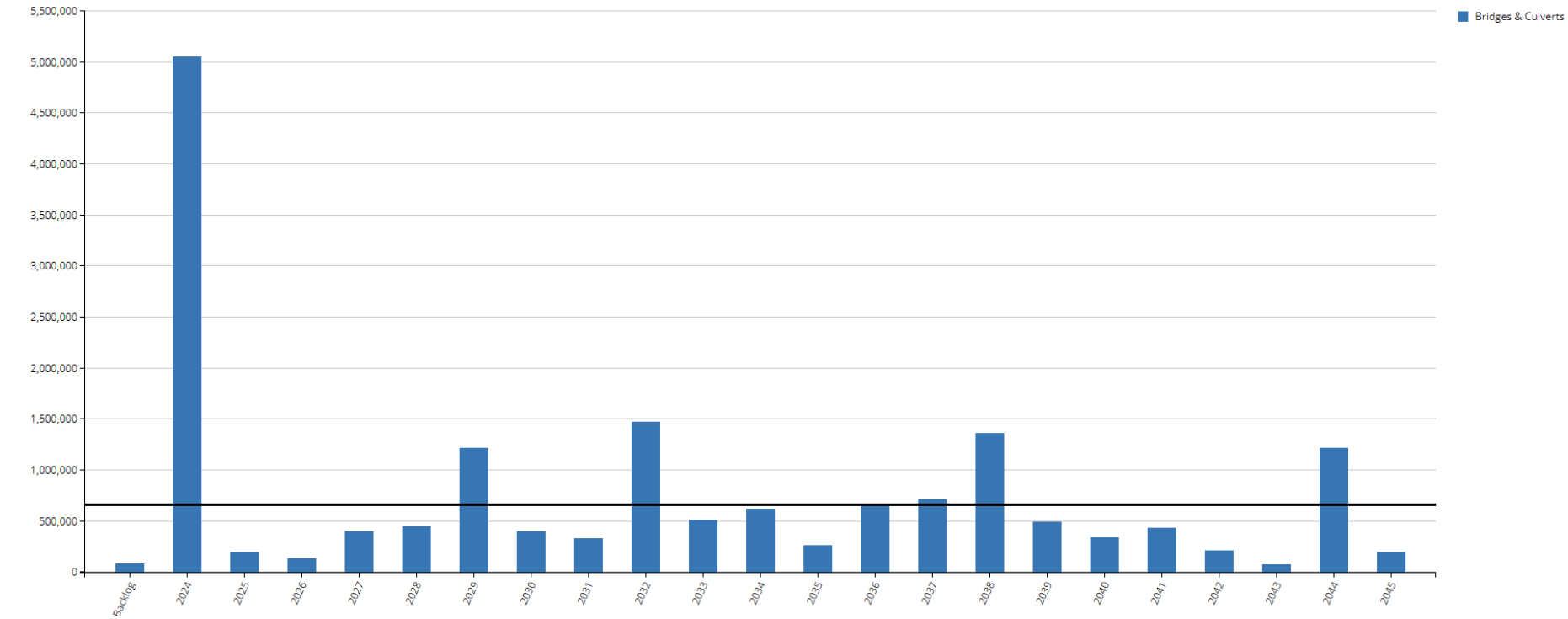
1

Year Blocks

Run Report

Classification

Category



Citywide Asset Attributes Overview – Culvert Eagle Cliff Rd.

psdcitywide

Home > Assets > Inventory > Asset 21358- Culvert - Eaglecliff Rd

3

Default

Bowen Island Municipality
rprycejones

Save

Summary

Asset Details / Flags

Classifications

Attributes41

Notes0

Attached Files0

Insurance/Warranty/Lease

Valuation

Amortization

Adjustment Summary

Additions0

Full Disposals0

Partial Disposals0

Writedowns0

Transfers0

Overrides0

Profile

Replacement Cost

Condition2

Risk

Strategy

Lifecycle Quantities

Decision Tree

Properties

Manage

Asset Log

Attributes

AttachNone Selected

Filter

Columns2

Approaches Comments

North approach on a blind hill.

Barrier Replacement Cost

-

Culvert Comments

Invert completely disintegrated. Undermining at outlet, creeping int

Culvert Rehab/Replace

Replace

Culvert Restoration Timeline

1-5 Years

CV Width (m)

0.45

Embankment Maintenance

Fix inlet erosion and outlet erosion

Embankment Material

Native Soil

Embankment Value

500

Inlet Structure Total Area (m2)

0

install_date

1977

Overall Culvert Health Index

33

Road Failure Risk Factor

3

Total Embankment Area (m2)

2

Useful Lifespan

25

Waterway Maintenance

Clean out culvert

Waterway Replacement Cost

1,000

Wearing Surface Comments

Pot holes on east side of road caused by bottom-up defects from th

Wearing Surface Rehab/Replace

Replace

Wearing Surface Restoration Timeline

1-5 Years

Year of Last Inspection

2021

Barrier Comments

Suggest barrier on east side

Barrier Value

-

Culvert Material

CSP

Culvert Replacement Cost

23,326

Culvert Value

5,832

Embankment Comments

Inlet embankment eroded into road. Outlet embankment severely €

Embankment Maintenance Timeline

1 Year

Embankment Replacement Cost

2,000

Inlet Structure Replacement Cost

-

Inlet Structure Value

-

Outlet Structure Total Area (m2)

0

Road Class

Primary

Total Assessed Value

9,484

Total Replacement Cost

35,166

Waterway Comments

Culvert is full of debris

Waterway Maintenance Timeline

Urgent

Waterway Value

500

Wearing Surface Material

Asphalt

Wearing Surface Replacement Cost

8,840

Wearing Surface Value

2,652

Citywide Asset Summary Overview – Culvert Eagle Cliff Rd.

psdcitywide

Home > Assets > Inventory > Asset 21358- Culvert - Eaglecliff Rd

3

Default

Bowen Island Municipality
afrischmann

Save

Summary

Asset Details / Flags

Classifications

Attributes41

Notes0

Attached Files0

Insurance/Warranty/Lease

Valuation

Amortization

Adjustment Summary

Additions0

Full Disposals0

Partial Disposals0

Writedowns0

Transfers0

Overrides0

Profile

Replacement Cost

Condition2

Risk

Strategy

Lifecycle Quantities

Decision Tree

Properties

Manage

Asset Log

Overview

Name

Culvert - Eaglecliff Rd

In-Service Date

1977-01-01

Historical Cost

\$0.00

Replacement Cost

\$35,166.00

Description

Estimated Useful Life

25

Year(s)

0

Month(s)

Adjusted Cost

\$0.00

Condition/Risk

Overall Projected Condition

0 - Very Poor

Risk Rating

20.09 - Very High

Asset Age

48

Year(s)

0

Month(s)

Projected Age

25

Year(s)

6

Month(s)

Age-Based Condition

0 - Very Poor

Fully Amortized Date (EOL)

2002-01-01

Service Life Remaining

(23)

Year(s)

(0)

Month(s)

Projected Service Life Remaining

(0)

Year(s)

(6)

Month(s)

Brief

Is a Primary Asset

Summary Report

Map

Thumbnail

No Thumbnail Set

Citywide Data Inventory View - Culverts

psdcitywide

Home > Assets > Inventory (2024)- Active Inventory and WIP

3

Default

CategoryBridges & Culverts

SegmentCulverts

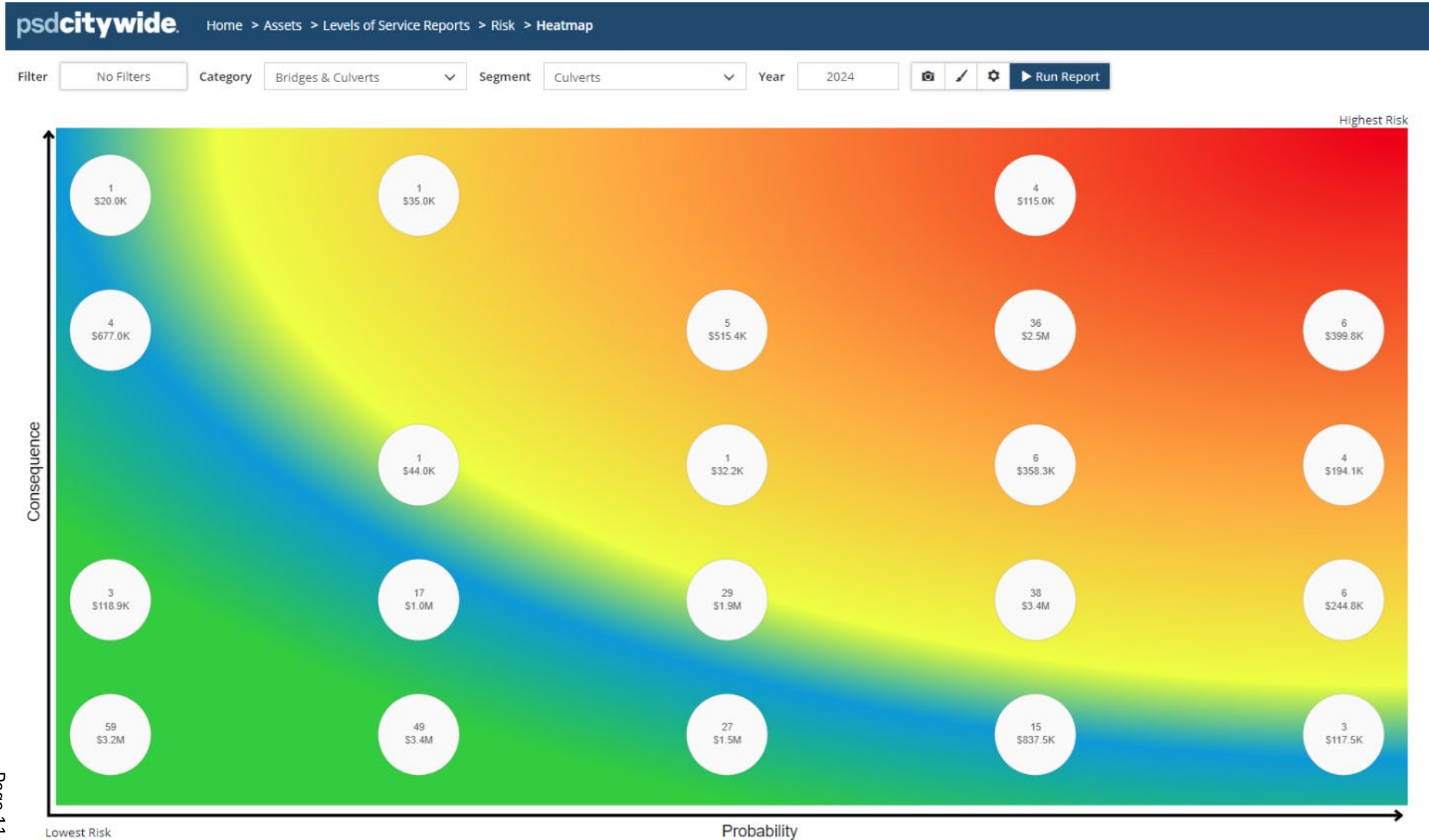
Search

Q

No Filters

Showing 323 records

Culvert Risk Report - Heatmap



Asset Management

Public Works

Overview and where we are at

June 13, 2024

BOWEN ISLAND
 **Municipality** 

Asset Management

- What is Asset Management?
- Where do we come from?
- Where are we at?
 - AM tool – Citywide AM Software
- What are the next steps?

What is an asset?



Assets provide services that create value for the community

Asset Management answers the questions:



Asset Management is...

- A process
- A journey
- An approach
- A way of doing business
- A team effort



What do people in our community want?



Safe and sustainable services in a predictable, cost-effective manner.

People don't want surprises like this

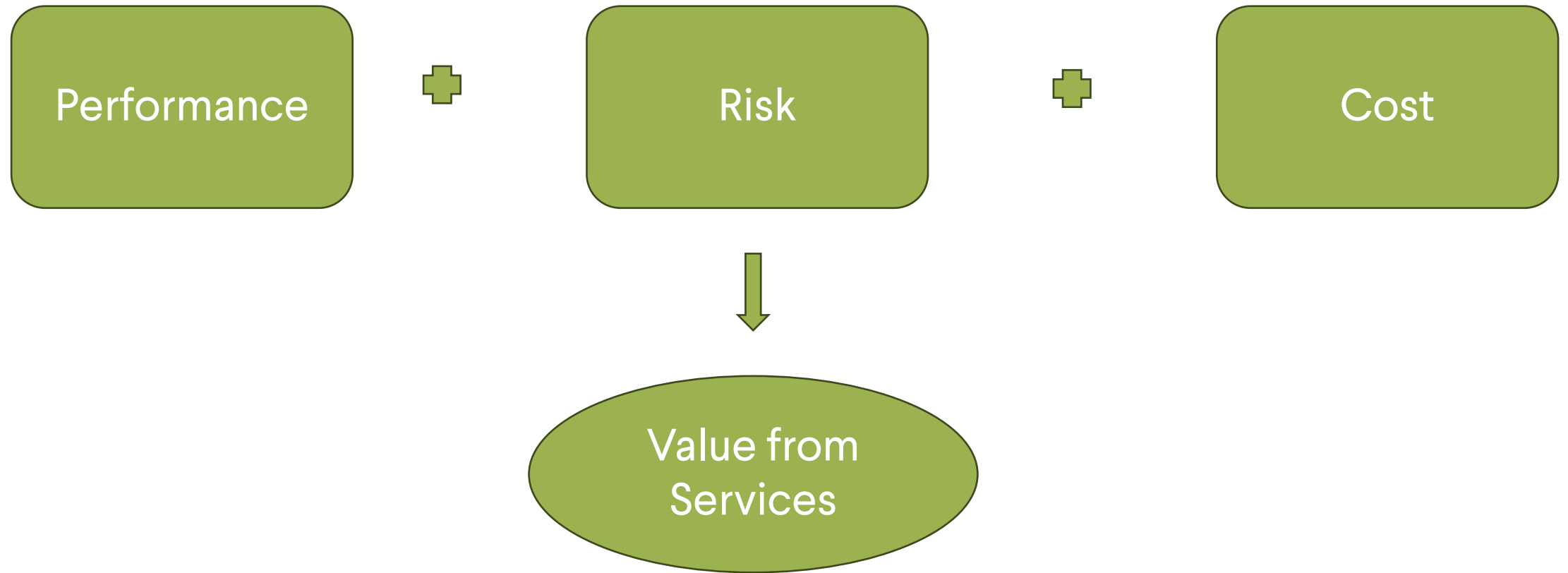


BOWEN ISLAND
🌲 Municipality 🌲

Benefits of AM to our Community



How does AM deliver value to the community?



Performance + Risk + Cost = Value from Services

Simple, right? But not easy....

AM helps us to...

- Maintain the delivery of services
- Plan for the future
- Manage risk
- Budget smartly

Where do we come from?

File Home Insert Page Layout Formulas Data Review View Automate Help Acrobat																										Comments		Sh	
Paste Cut Copy Format Painter			Times New Roman 10 A A B I U Font			Wrap Text Merge & Center Alignment			General \$ % Number			Conditional Formatting Format as Table Styles			Insert Delete Format Cells			AutoSum Fill Clear Editing			Sort & Find & Filter Select			Sensitivity Add-ins			Analyze Data Create PDF and Share link Create PDF and Share via Outlook Adobe Acrobat		
B16																													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
Asset_ID	Short_ID	Category	Asset_Type	MATERIAL	DIAMETER	HEIGHT	Community	Quantity	Length	Install_Date	Unit_Cost	Base_Life	Condition	Performance	Accuracy	Criticality	US_Invert	DS_Invert	US_Node	DS_Node	Purchase_Cost	Contract_Number	Base_Life_Optional	Optional_Renewal					
CLVR1		None	Culvert	CMP	450	0	Bowen Island	19.96	2006-01-01	0	15	Good	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10		None	Culvert	Culvert	450	0	Bowen Island	11.28	2011-01-01	0			Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10099		None	Culvert	Concrete	0	0	Bowen Island	9.14	2006-01-01	0			Good	Excellent	Excellent	Very High	0	0			0		0						
CLVR10100		None	Culvert	CMP	450	0	Bowen Island	6.06	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10101		None	Culvert	CMP	450	0	Bowen Island	4.66	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10102		None	Culvert	Other	200	0	Bowen Island	8.39	1996-01-01	0			Average	Excellent	Excellent	Very High	0	0			0		0						
CLVR10103		None	Culvert	CMP	450	0	Bowen Island	11.52	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10104		None	Culvert	CMP	600	0	Bowen Island	7.88	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10105		None	Culvert	CMP	450	0	Bowen Island	11.03	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10106		None	Culvert	CMP	450	0	Bowen Island	11.02	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10107		None	Culvert	Concrete	0	0	Bowen Island	6.06	2006-01-01	0			Good	Excellent	Excellent	Very High	0	0			0		0						
CLVR10108		None	Culvert	CMP	450	0	Bowen Island	4.65	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10499		None	Culvert	CMP	450	0	Bowen Island	9.2	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10899		None	Culvert	CMP	450	0	Bowen Island	5.85	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10900		None	Culvert	CMP	450	0	Bowen Island	13.27	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10901		None	Culvert	CMP	450	0	Bowen Island	8.86	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10902		None	Culvert	CMP	450	0	Bowen Island	9.19	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10903		None	Culvert	CMP	450	0	Bowen Island	7.07	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10904		None	Culvert	CMP	450	0	Bowen Island	4.75	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10905		None	Culvert	CMP	800	0	Bowen Island	6.12	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10906		None	Culvert	CMP	450	0	Bowen Island	3.98	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10907		None	Culvert	CMP	450	0	Bowen Island	3.79	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR10909		None	Culvert	HDPE	300	0	Bowen Island	7.04	2006-01-01	0			Good	Excellent	Excellent	Very High	0	0			0		0						
CLVR10910		None	Culvert	Concrete	750	0	Bowen Island	9.17	2006-01-01	0			Good	Excellent	Excellent	Very High	0	0			0		0						
CLVR10911		None	Culvert	CMP	600	0	Bowen Island	14.04	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR11		None	Culvert	Culvert	450	0	Bowen Island	11.06	2011-01-01	0			Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR11299		None	Culvert	CMP	450	0	Bowen Island	11.91	1996-01-01	0	15	Average	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR11699		None	Culvert	CMP	400	0	Bowen Island	8.19	1976-01-01	0	15	Very Poor	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR11700		None	Culvert	CMP	450	0	Bowen Island	10.4	2006-01-01	0	15	Good	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR11701		None	Culvert	CMP	400	0	Bowen Island	6.91	1986-01-01	0	15	Poor	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR12		None	Culvert	Culvert	450	0	Bowen Island	12.8	2011-01-01	0			Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR12099		None	Culvert	CMP	600	0	Bowen Island	9.45	1986-01-01	0	15	Poor	Excellent	Excellent	Excellent	Very High	0	0			0		0						
CLVR12100		None	Culvert	CMP	400	0	Bowen Island	9.09	1986-01-01	0	15	Poor	Excellent	Excellent	Excellent	Very High	0	0			0		0						
< > ... Roads-capPlan Bridges(0) Culverts(395) Culverts(288) Bldgs(25a) Bldgs(25) Bldgs(19) Dams(5) Sewer-hierarch(16) Sewer- ... + : <																													

Where are we at?

psdcitywide. Home > Assets

1 ▾ Default ▾ Bowen Island Municipality afrischmann ▾

Assets

- Inventory
- Upload Centre

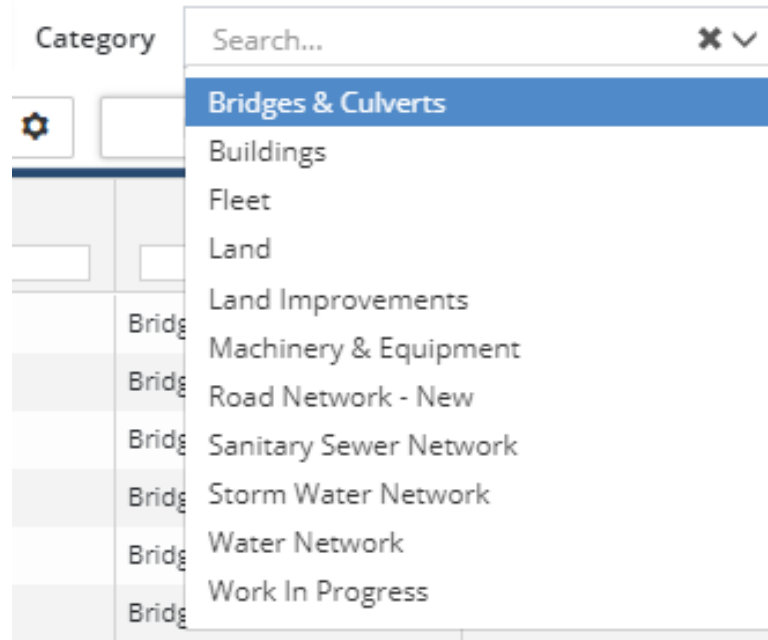
Reports

- Financial
- Asset Management
- Levels of Service

Manage

- Asset Profiles
- Maintenance Classes
- Gain/(Loss) Codes
- Coordinated IDs
- ARO Categories
- Support Tools
- Logs

Asset Categories in PSD Citywide



Asset Inventory - Culverts

psdcitywide Home > Assets > Inventory (2024)- Active Inventory and WIP Bowen Island Municipality afrischmann															
Category Bridges & Culverts Segment Culverts															
Showing 323 records															
	Asset ID	Category	Import ID	In-Service Da...	Estimated Useful ...	Initial Q...	Unit of Me...	CV Wid...	Replacement Cost	Last Condition Assessm...	Risk Rating	Projected Servic...	Culvert Material	Culvert Comments	Road Failure Risk Factor
	21353	Bridges & Culv...	CLVR34	1954-01-01	25 Years	10	Length (m)	0.45	\$40,082.00	10 - Very Poor	20.5 - Very High	(6 Months)	CSP	Invert severely corroded. Disintegration at o...	3
	21354	Bridges & Culv...	CLVR143	1990-01-01	25 Years	13	Length (m)	0.9	\$78,032.00	10 - Very Poor	19.68 - Very High	(6 Months)	CSP	Culvert inlet severely corroded. 2m of pipe fr...	3
	21355	Bridges & Culv...	CLVR162	1987-01-01	25 Years	11	Length (m)	0.6	\$43,936.00	10 - Very Poor	18.72 - Very High	(6 Months)	CSP	Culvert is severely corroded to springline. Th...	3
	21356	Bridges & Culv...	CLVR360	1990-01-01	25 Years	15	Length (m)	0.6	\$58,854.00	10 - Very Poor	19.2 - Very High	(6 Months)	Lined CSP	Severe erosion in invert. Severe pitting and s...	3
	21357	Bridges & Culv...	CLVR137	1990-01-01	25 Years	20	Length (m)	0.6	\$22,586.00	10 - Very Poor	19.68 - Very High	(6 Months)	CSP	Invert disintegrated. There is a bend in the c...	3
	21358	Bridges & Culv...	CLVR139	1977-01-01	25 Years	10	Length (m)	0.45	\$35,166.00	10 - Very Poor	20.09 - Very High	(6 Months)	CSP	Invert completely disintegrated. Underminin...	3
	21359	Bridges & Culv...	CLVR273	1991-01-01	25 Years	13	Length (m)	0.6	\$54,459.00	10 - Very Poor	18.24 - Very High	(6 Months)	CSP	Moderate to severe corrosion, pitting, sectio...	3
	21360	Bridges & Culv...	CLVR353	1963-01-01	25 Years	8	Length (m)	0.75	\$38,069.00	10 - Very Poor	19.5 - Very High	(6 Months)	CSP	Unable to fully inspect. Due to water levels. ...	3
	21362	Bridges & Culv...	CLVR19	1990-01-01	25 Years	18	Length (m)	0.9	\$128,311.00	10 - Very Poor	19.68 - Very High	(6 Months)	CSP	Invert of pipe has severe corrosion. Holes fo...	3
	21363	Bridges & Culv...	CLVR286	1990-01-01	25 Years	8	Length (m)	0.45	\$29,121.00	15 - Very Poor	6.24 - Low	9 Months	CSP	Unable to inspect.	1
	21364	Bridges & Culv...	CLVR231	1990-01-01	25 Years	13	Length (m)	0.9	\$79,498.00	10 - Very Poor	19.2 - Very High	(6 Months)	CSP	Moderate corrosion on north wall of pipe. M...	3
	21365	Bridges & Culv...	CLVR348	1980-01-01	25 Years	10	Length (m)	0.6	\$45,022.00	10 - Very Poor	18.62 - Very High	(6 Months)	CSP	Culvert outlet has completely disintegrated 0...	3
	21366	Bridges & Culv...	CLVR178	2002-01-01	25 Years	12	Length (m)	0.45	\$48,569.00	10 - Very Poor	10.81 - High	(6 Months)	CSP	Culvert has deformation throughout. 6.2m fr...	2
	21367	Bridges & Culv...	CLVR188	1990-01-01	25 Years	11	Length (m)	0.45	\$39,712.00	10 - Very Poor	10.56 - High	(6 Months)	CSP	Invert of culvert severely corroded. Unable t...	2
	21368	Bridges & Culv...	CLVR215	1980-01-01	25 Years	13	Length (m)	0.9	\$76,360.00	10 - Very Poor	20.09 - Very High	(6 Months)	CSP	Midspan deflection mid pipe, severe corrosi...	3
	21369	Bridges & Culv...	CLVR264	1999-01-01	25 Years	14	Length (m)	0.6	\$70,334.00	10 - Very Poor	19.27 - Very High	(6 Months)	CSP	Culvert to springline is severely corroded wit...	3
	21370	Bridges & Culv...	CLVR238	1990-01-01	25 Years	11	Length (m)	0.9	\$65,322.00	10 - Very Poor	23.52 - Very High	(6 Months)	CSP	Joint at 6m from outlet has shifted north. Inv...	4
	21371	Bridges & Culv...	CLVR123	1959-01-01	25 Years	12	Length (m)	0.75	\$62,373.00	50 - Fair	5.74 - Low	9 Years 6 Months	CSP	Light to medium corrosion along invert. Bitu...	1
	21372	Bridges & Culv...	CLVR249	1990-01-01	25 Years	15	Length (m)	0.9	\$85,882.00	10 - Very Poor	19.2 - Very High	(6 Months)	CSP	Invert has severe corrosion and disintegratio...	3
	21373	Bridges & Culv...	CLVR111	1990-01-01	25 Years	11	Length (m)	0.45	\$46,399.00	65 - Good	3.9 - Very Low	13 Years 3 Months	CSP	Unable to inspect invert of pipe. Visible parts...	1
	21374	Bridges & Culv...	CLVR115	1999-01-01	25 Years	10	Length (m)	0.45	\$36,566.00	10 - Very Poor	18.8 - Very High	(6 Months)	CSP	Culvert has light to severe corrosion through...	3
	21375	Bridges & Culv...	CLVR352	1980-01-01	25 Years	9	Length (m)	0.6	\$42,176.00	10 - Very Poor	19.6 - Very High	(6 Months)	CSP	Invert completely disintegrated. Needs repla...	3
	21376	Bridges & Culv...	CLVR382	1996-01-01	25 Years	17	Length (m)	0.6	\$24,180.00	10 - Very Poor	10.34 - High	(6 Months)	CSP	Invert severely corroded throughout. Damag...	2
	21377	Bridges & Culv...	CLVR151	1980-01-01	25 Years	11	Length (m)	0.6	\$45,256.00	10 - Very Poor	10.29 - High	(6 Months)	CSP	Heavy corrosion to spring line. Disintegratio...	2
	21378	Bridges & Culv...	CLVR250	1968-01-01	25 Years	13	Length (m)	0.6	\$53,526.00	10 - Very Poor	20.5 - Very High	(6 Months)	CSP	Culvert invert is severely corroded and disint...	3
	21379	Bridges & Culv...	CLVR272	1980-01-01	25 Years	12	Length (m)	2.6	\$177,015.00	10 - Very Poor	10.78 - High	(6 Months)	CSP	Light to severe corrosion throughtout pit, with...	2
	21380	Bridges & Culv...	CLVR338	1990-01-01	25 Years	10	Length (m)	0.45	\$36,566.00	10 - Very Poor	19.2 - Very High	(6 Months)	CSP	Full corrosion on inlet of pipe and disconnect...	3
	21381	Bridges & Culv...	CLVR209	2002-01-01	25 Years	20	Length (m)	0.6	\$79,544.00	45 - Fair	4.56 - Very Low	8 Years 3 Months	CSP	Impact damage to joint 0.6m from inlet. Inlet...	1
323					27 Years 6 Months	4,296.950			\$21,210,896.66	48.621	7.859	11 Years 11 Mon...			504

Asset Summary View

psdcitywide

Home > Assets > Inventory > Asset 21356- Culvert - Whitesails Drive

1

Default

Bowen Island Municipality
afrischmann

Save

Summary

Asset Details / Flags

Classifications

Attributes47

Notes0

Attached Files0

Insurance/Warranty/Lease

Valuation

Amortization

Adjustment Summary

Additions0

Full Disposals0

Partial Disposals0

Writedowns0

Transfers0

Overrides0

Profile

Replacement Cost

Condition2

Category

Life Cycle Quantities

Decision Tree

Overview

Condition/Risk

Brief

Name

Culvert - Whitesails Drive

In-Service Date

1990-01-01

Historical Cost

\$0.00

Replacement Cost

\$58,854.00

Description

Estimated Useful Life

25

Year(s)

0

Month(s)

Adjusted Cost

\$0.00

Overall Projected Condition

0 - Very Poor

Risk Rating

19.2 - Very High

Asset Age

35

Year(s)

0

Month(s)

Projected Age

25

Year(s)

6

Month(s)

Age-Based Condition

0 - Very Poor

Fully Amortized Date (EOL)

2015-01-01

Service Life Remaining

(10)

Year(s)

(0)

Month(s)

Projected Service Life Remaining

(0)

Year(s)

(6)

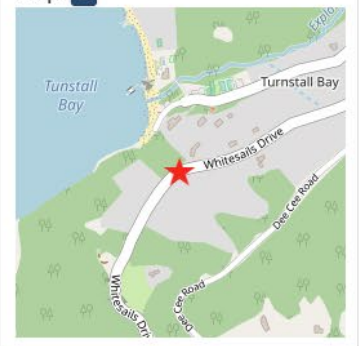
Month(s)

Is a Primary Asset

Summary Report

Map

Thumbnail



No Thumbnail Set

Page 27 of 44

Capital Replacement Profile Summary - Culverts

Filter

No Filters

Category

Bridges & Culverts

Segment

Culverts

Year

2024

to

2050

Range

1

Year Blocks



Run Report

		Backlog	Event Cost	2024	2025	2026	2027	2028	2029	2030
	Bridges & Culverts									
■	Culverts	\$85,000.00	\$23,587,202.77	\$5,054,297.00	\$195,024.00	\$139,000.00	\$399,294.00	\$457,596.00	\$1,222,760.00	\$405,181.00
	Bridges & Culverts Total	\$85,000.00	\$23,587,202.77	\$5,054,297.00	\$195,024.00	\$139,000.00	\$399,294.00	\$457,596.00	\$1,222,760.00	\$405,181.00
	Cumulative Total	\$85,000.00	\$23,587,202.77	\$5,054,297.00	\$195,024.00	\$139,000.00	\$399,294.00	\$457,596.00	\$1,222,760.00	\$405,181.00

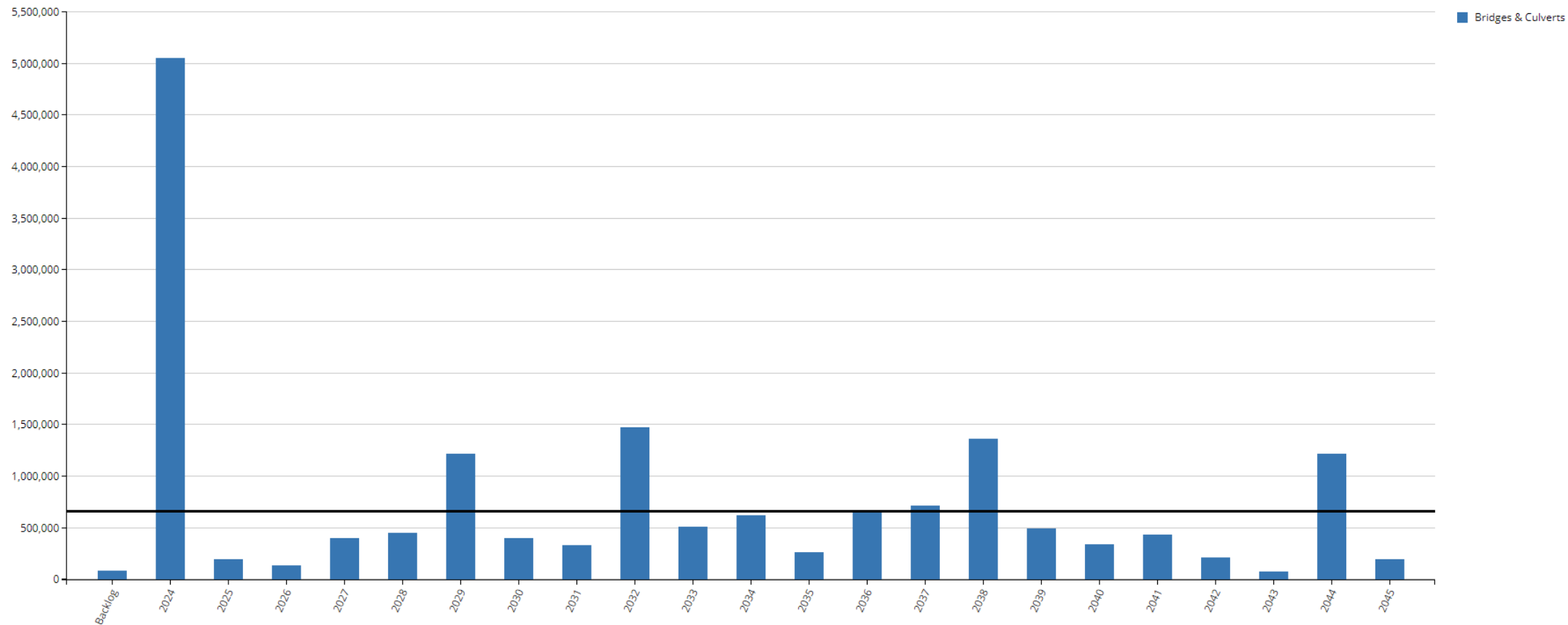
Capital Replacement Profile Detailed Report - Culverts

Citywide Export - 2024-06-07

Capital Replacement Profile Report - Culverts

	Backlog	Event Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Culverts	85,000	10,905,992	5,054,297	195,024	139,000	399,294	457,596	1,222,760	405,181	335,170	1,473,764	511,452	627,454
21353 - Culvert - Bowen Bay Rd	-	40,082	40,082	-	-	-	-	-	-	-	-	-	-
21354 - Culvert - Eaglecliff Rd	-	78,032	78,032	-	-	-	-	-	-	-	-	-	-
21355 - Culvert - Reed Rd	-	43,936	43,936	-	-	-	-	-	-	-	-	-	-
21356 - Culvert - Whitesails Drive	-	58,854	58,854	-	-	-	-	-	-	-	-	-	-
21357 - Culvert - Eaglecliff Rd	-	22,586	22,586	-	-	-	-	-	-	-	-	-	-
21358 - Culvert - Eaglecliff Rd	-	35,166	35,166	-	-	-	-	-	-	-	-	-	-
21359 - Culvert - Cowan Rd	-	54,459	54,459	-	-	-	-	-	-	-	-	-	-
21360 - Culvert - Eves Rd	-	38,069	38,069	-	-	-	-	-	-	-	-	-	-
21362 - Culvert - Miller Rd	-	128,311	128,311	-	-	-	-	-	-	-	-	-	-
21363 - Culvert - Mount Gardner Rd	-	29,121	-	29,121	-	-	-	-	-	-	-	-	-
21364 - Culvert - Windjammer Rd	-	79,498	79,498	-	-	-	-	-	-	-	-	-	-
21365 - Culvert - Rock Moyne PI	-	45,022	45,022	-	-	-	-	-	-	-	-	-	-
21366 - Culvert - Bowen Island Trunk Rd	-	48,569	48,569	-	-	-	-	-	-	-	-	-	-
21367 - Culvert - Taylor Rd	-	39,712	39,712	-	-	-	-	-	-	-	-	-	-
21368 - Culvert - Grafton Rd	-	76,360	76,360	-	-	-	-	-	-	-	-	-	-
21369 - Culvert - Cowan Point Dr	-	70,334	70,334	-	-	-	-	-	-	-	-	-	-
21370 - Culvert - Channelview Dr	-	65,322	65,322	-	-	-	-	-	-	-	-	-	-
21371 - Culvert - Adams Rd	-	62,373	-	-	-	-	-	-	-	-	-	-	62,373
21372 - Culvert - Spyglass Rd	-	85,882	85,882	-	-	-	-	-	-	-	-	-	-
21374 - Culvert - Mount Gardner Rd	-	36,566	36,566	-	-	-	-	-	-	-	-	-	-
21375 - Culvert - Adams Rd	-	42,176	42,176	-	-	-	-	-	-	-	-	-	-
21376 - Culvert - Laura Rd	-	24,180	24,180	-	-	-	-	-	-	-	-	-	-
21377 - Culvert - Creek Rd	-	45,256	45,256	-	-	-	-	-	-	-	-	-	-
21378 - Culvert - Captains Way	-	53,526	53,526	-	-	-	-	-	-	-	-	-	-
21379 - Culvert - Salal Rd	-	177,015	177,015	-	-	-	-	-	-	-	-	-	-
21380 - Culvert - Mount Gardner Rd	-	36,566	36,566	-	-	-	-	-	-	-	-	-	-
21381 - Culvert - Harbour View PI	-	79,544	-	-	-	-	-	-	-	-	-	79,544	-
21382 - Culvert - Mount Gardner Rd	-	45,897	45,897	-	-	-	-	-	-	-	-	-	-
21383 - Culvert - Windjammer Rd	-	38,312	38,312	-	-	-	-	-	-	-	-	-	-
21384 - Culvert - Eaglecliff Rd	-	34,760	-	-	-	34,760	-	-	-	-	-	-	-
21385 - Culvert - Woods Rd	-	31,026	31,026	-	-	-	-	-	-	-	-	-	-
21386 - Culvert - Adams Rd	-	180,177	180,177	-	-	-	-	-	-	-	-	-	-

Capital Replacement Profile Chart - Culverts

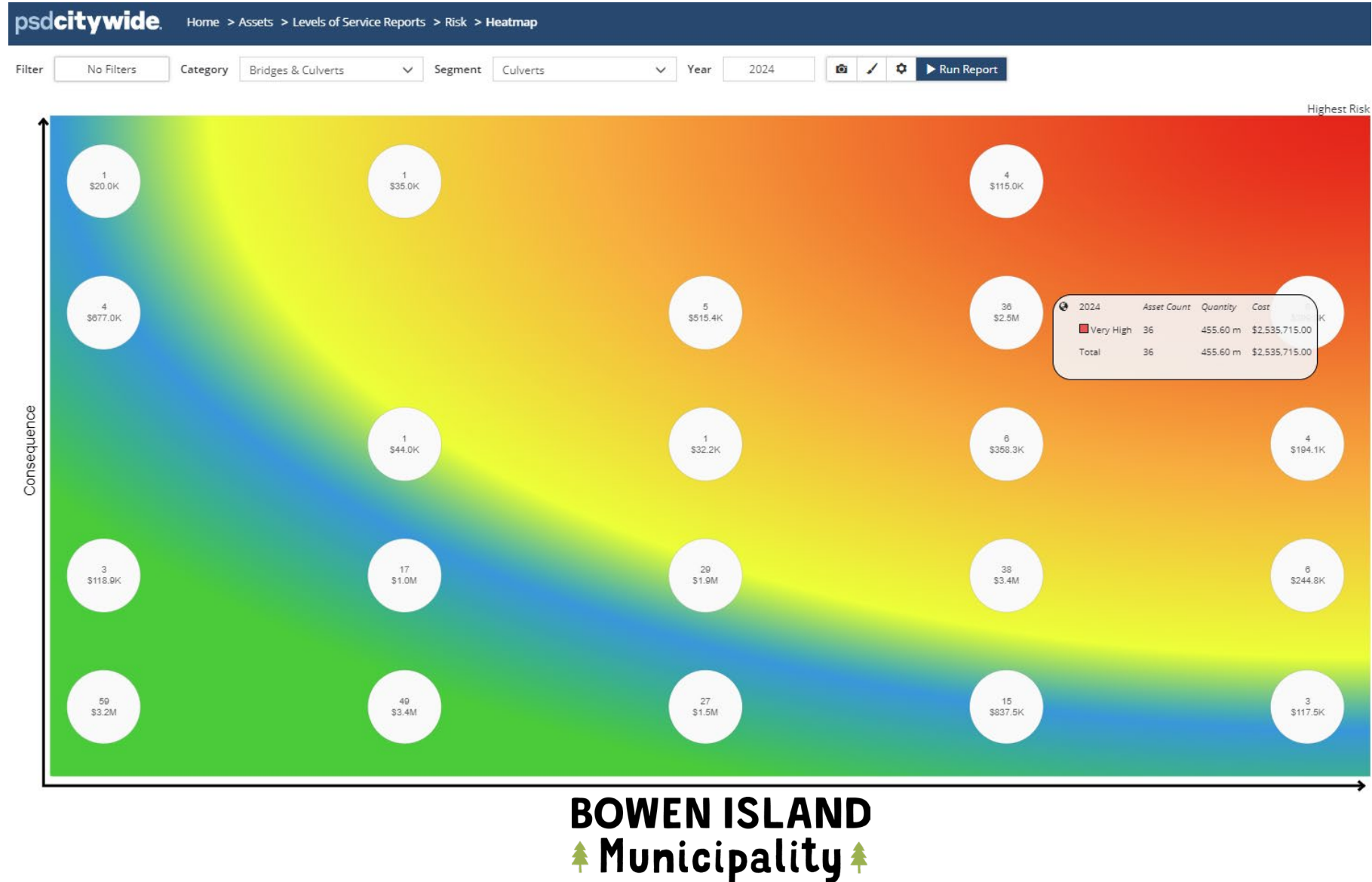


Culvert Attributes

Attributes

Attach	None Selected	Filter	Columns	2
Barrier Replacement Cost	-			
Culvert Comments	Invert of pipe has severe corrosion. Holes forming in invert of pipe and w			
Culvert Replacement Cost	83,975			
CV Width (m)	0.9			
Embankment Material	Vegetated			
Embankment Value	500			
Inlet Structure Replacement Cost	32,400			
Inlet Structure Value	16,200			
Outlet Structure Total Area (m2)	0			
Road Class	Primary			
Total Assessed Value	23,158			
Total Replacement Cost	128,311			
Waterway Comments	Undermining in the pipe at the outlet for approximately 6.2m Fence upst			
Waterway Replacement Cost	-			
Wearing Surface Comments	Light rutting in lanes			
Wearing Surface Replacement Cost	9,936			
Year of Last Inspection	2021			
Barrier Value	-			
Culvert Material	CSP			
Culvert Value	-			
Embankment Comments	Inlet embankments have severe erosion. Downstream embankment has			
Embankment Replacement Cost	2,000			
Inlet Structure Material	No Post Barrier			
Inlet Structure Total Area (m2)	10.8			
install_date	1990			
Overall Culvert Health Index	35			
Road Failure Risk Factor	3			
Total Embankment Area (m2)	2			
Useful Lifespan	25			
Waterway Material	Rock			
Waterway Value	-			
Wearing Surface Material	Asphalt			
Wearing Surface Value	6,458			

Culvert Risk Report – Heat Map

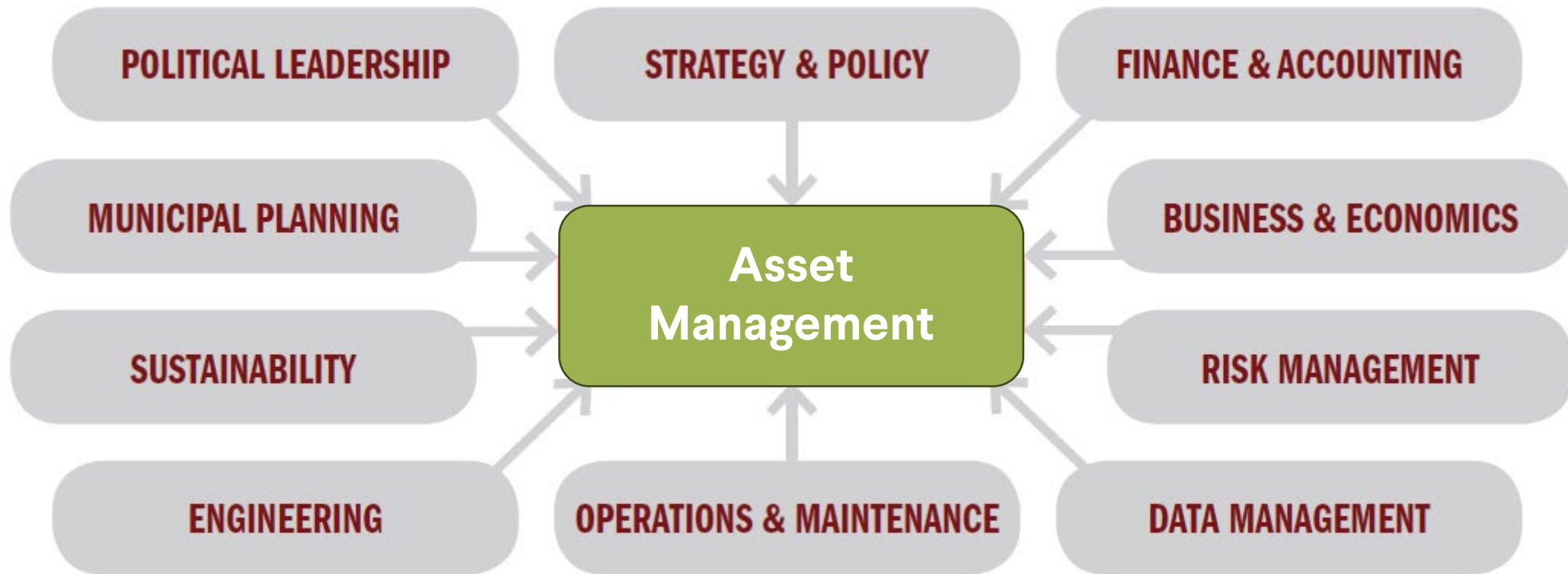


What AM challenges are we facing?

- We don't have staff dedicated exclusively to focus on AM efforts
- We don't have all the data or information we need for a solid AM basis
- We have more infrastructure deficit than we can financially resolve
- We have demands from citizens which are not always aligned with our recommendations
- We have elected officials with four-year terms such that visions may change with a significant election

How many people does this take?

- AM is much more than implementing and using an AM software:



The resource question

In-house or external expertise?

	In-house	External
Pros	Build in-house expertise and capacity	Can serve as champion and bring staff together
	Utilize internal knowledge	Benefit from experience
Cons	Not sustainable for small communities	Limited capacity to hire additional resources
	Staff turnover might result in lost knowledge of AM process	If no sustainable long-term approach is built, municipality might not be able to continue if external resources are removed

Role of Council

Council sets strategic direction

- Level of service
- Resource allocation

Role of Council

Council needs **information** about asset performance, risk and cost **to set direction**

Role of Council

Asset Management gives us the empirical evidence so we can...

- Do the right thing
- To the right asset
- At the right time

Ideas for the next steps

- AM Policy to outline commitments to best practices and continuous improvement
- AM Plan Phase 1 – Core Assets including inventory of assets, current levels of service and cost to maintain levels of service.
- AM Plan Phase 2 – same as Phase 1 for all assets
- AM Plan Phase 3 – building on Phases 1 and 2 by adding proposed levels of service and lifecycle management and financial strategy
- Plans to be updated every 5 years with annual progress updates provided to Council.

Questions?

Excerpt

From the May 27, 2024

Regular Council Meeting

CAO Update - Liam Edwards,
Chief Administrative Officer
(*verbal update*)

The CAO advised that he has tendered his resignation effective August 2024 and has taken a CAO position with the Town of Sidney.

Excerpt

From the May 27, 2024

Regular Council Meeting

Bowen Island Municipality
Loan Authorization (Cove Bay
and Eagle Cliff Water Systems
connection) Bylaw No. 565,
2022 - Sophie Idsinga,
Corporate Officer
RES#24-220

Whereas the Inspector of Municipalities provided statutory approval
of Bylaw No. 565, 2022;
Therefore be it resolved that Council reconsider and finally adopt
Bowen Island Municipality Loan Authorization (Cove Bay and Eagle
Cliff Water Systems connection) Bylaw No. 565, 2022.

Excerpt

From the May 27, 2024

Regular Council Meeting

[Award of Tender](#) for Various
Road Works - Patrick
Graham, Director of
Engineering

RES#24-248

Council sought clarification on the criteria for paving roads and requested feedback from staff as to the satisfaction with the contractor's work two years ago.

It was Moved and Seconded

That Council award Tender BIM-IT-2023-150 for Various Road Works to BA Blacktop Ltd. for an amount not to exceed \$334,326.77 excluding GST.

CARRIED UNANIMOUSLY

Excerpt

From the May 27, 2024

Regular Council Meeting

[Determination](#) of Results of
Snug Cove Sewer Outfall
Replacement Petition Against
process - Sophie Idsinga,
Corporate Officer
RES#24-241

That Council receive, for information, the results of the Snug Cove Sewer Outfall Replacement Petition Against process, as included in the Corporate Officer's staff report, dated May 14, 2024, and direct staff to forward Bylaw No.626, 2024 to the Inspector of Municipalities for approval.