



Notice of Meeting and Meeting Agenda Capital Regional District Board

Wednesday, June 12, 2024

1:05 PM

6th Floor Boardroom
625 Fisgard Street
Victoria, BC

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. TERRITORIAL ACKNOWLEDGEMENT

2. APPROVAL OF THE AGENDA

3. ADOPTION OF MINUTES

3.1. [24-553](#) Minutes of the May 8, 2024 Capital Regional District Board Meeting

Recommendation: That the minutes of the Capital Regional District Board meeting of May 8, 2024 be adopted as circulated.

Attachments: [Minutes - May 8, 2024](#)

3.2. [24-543](#) Minutes of May 8, 2024 Committee of the Whole meeting

Recommendation: That the minutes of the of the Committee of the Whole meeting of May 8, 2024 be adopted as circulated.

Attachments: [Minutes - May 8, 2024](#)

4. REPORT OF THE CHAIR

5. PRESENTATIONS/DELEGATIONS

5.1. Presentations

5.1.1. [24-548](#) Presentation: Vice Chair Little; Re: Ed MacGregor Memorial Bursary 2024

5.1.2. [24-549](#) Presentation: Vice Chair Little; Re: Nils Jensen Memorial Bursary 2024

5.1.3. [24-547](#) Presentation: Paul Gerrard (CRD Representative) and Elizabeth Brown (President/CEO), Victoria Airport Authority; Re: Report to Nominators

Attachments: [Presentation: VAA Report to Nominators](#)

5.2. Delegations

- 5.2.1. [24-590](#) Delegation - Dr. Philippe Lucas; Representing Biosolid Free BC: Re: Agenda Item: 7.4. Long-Term Biosolids Management Strategy
- 5.2.2. [24-591](#) Delegation - Jonathan O'Riordan; Representing Creatively United for the Planet Society: Re: Agenda Item: 7.4. Long-Term Biosolids Management Strategy

6. CONSENT AGENDA

- 6.1. [24-506](#) Ed MacGregor Memorial Bursary 2024

Recommendation: There is no recommendation. This report is for information only.

Attachments: [Staff Report: Ed MacGregor Memorial Bursary 2024](#)

- 6.2. [24-507](#) Nils Jensen Memorial Bursary 2024

Recommendation: There is no recommendation. This report is for information only.

Attachments: [Staff Report: Nils Jensen Memorial Bursary 2024](#)

- 6.3. [24-470](#) CRD Arts and Culture: 2023 Impact Report

Recommendation: That the Arts Commission recommends to the CRD Board:
That staff distribute the CRD Arts and Culture: 2023 Impact Report virtually through the CRD website and as physical copies to all councils and electoral area directors to raise awareness about the positive impact of the Arts and Culture Support Service throughout the capital region.
(NWA)

Attachments: [Staff Report: 2023 Impact Report](#)
[Appendix A: 2023 Impact Report](#)
[Appendix B: Impact Report Presentation Slides](#)
[Appendix C: 2023 List of Grant Recipients](#)

- 6.4. [24-525](#) Community Resiliency Initiative Grant: 2024 FireSmart Community Funding & Supports

Recommendation: The Electoral Areas Committee recommends to the Capital Regional District Board:
That the Capital Regional District Board support an application to the Union of British Columbia Municipalities Community Resiliency Initiative Fund for the 2024 FireSmart Community Funding and Supports. Staff are directed to apply for, negotiate, and if successful, enter into an agreement, and do all such things necessary for accepting grant funds and overseeing grant management for the proposed projects.
(NWA)

Attachments: [Staff Report: Community Resiliency Initiative Grant - 2024 FireSmart](#)
[Appendix A: 2024 FireSmart Comm'ty Funding & Supports Grant App](#)

6.5. [24-526](#) Appointment of Officers

Recommendation: The Electoral Areas Committee recommends to the Capital Regional District Board:
That for the purpose of Section 233 of the Local Government Act and Section 28(3) of the Offence Act and in accordance with Capital Regional District Bylaw No. 2681, Gray Wardle, Rachelle Norris-Jones, Levi Holland, and Michael Riggs be appointed as Bylaw Enforcement Officers.
(NWA)

Attachments: [Staff Report: Appointment of Officers](#)

6.6. [24-449](#) Hartland Public Drop-off Depot - Expanded Hours Pilot

Recommendation: There is no recommendation. This report is for information only.

Attachments: [Staff Report: Hartland Public Drop-off Depot - Expanded Hours Project](#)

6.7. [24-468](#) Increasing Direct-Current Fast-Charge/Level 3 Chargers in the Region

Recommendation: There is no recommendation. This report is for information only.

Attachments: [Staff Report: Increasing Direct-Current Fast-Charge/Level 3 Chargers in CRD](#)

6.8. [24-406](#) Biosolids Literature Review - Update

Recommendation: [At the April 17, 2024 Environmental Services Committee, the staff recommendation was not moved. Instead, an alternative committee member motion (#1) was moved followed by a motion arising (#2) and carried as follows:
The Environmental Services Committee recommends to the Capital Regional District Board:

1. Direct staff to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.
2. That staff be directed to proceed with an independent unbiased legal review of the risks associated with the land application of biosolids.

At the May 8, 2024 CRD Board meeting, the committee recommendation was amended by adding to the end of part 2 the words "and the risks associated if noncompliant with the provincial regulatory framework for biosolids" as follows:

1. Direct staff to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.
2. That staff be directed to proceed with an independent unbiased legal review of the risks associated with the land application of biosolids and the risks associated if noncompliant with the provincial regulatory framework for biosolids.

Prior to voting on the amendment, the following motion to refer back to committee was carried:

That recommendations 1 and 2 and the amendment be referred to the Environmental Services Committee.

Attached as SUPPLEMENTAL to this report is a historical timeline of the Committee's recommendations and Board resolutions on the biosolids literature and legal review. Previous Staff Reports have been attached as Supplemental Appendix A (March 13, 2024) and Supplemental Appendix B (October 13, 2023)

At the May 15, 2024 Environmental Services Committee meeting, the committee discussed the Board's referral motion, amended it further, and passed the following recommendation unanimously:]

The Environmental Services Committee recommends to the Capital Regional District Board:

1. Direct staff to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.
 2. That staff be directed to report back to the Environmental Services committee prior to proceeding with an independent unbiased legal review of:
 - a) the risks associated with the land application of biosolids that is compliant with the provincial regulatory framework; and
 - b) the risks associated if noncompliant with the provincial regulatory framework for biosolids.
- (NWA)

Attachments:

[Staff Report: Biosolids Literature Review - Update](#)

[Appendix A: Biosolids Literature Review - Terms of Reference](#)

[Supplemental: Timeline of Biosolids Literature and Legal Review - Updated](#)

[Supplemental Appendix A: Previous Staff Report March 13, 2024](#)

[Supplemental Appendix B: Previous Staff Report October 18, 2023](#)

- 6.9.** [24-517](#) Tenant Advisory Committee Terms of Reference Amendment, June 2024
- Recommendation:** The Hospitals and Housing Committee recommends to the Capital Regional District Board:
That the amended Terms of Reference for the Tenant Advisory Committee as presented in Appendix A be approved.
(NWA)
- Attachments:** [Staff Report: Tenant Advisory Cttee - ToR Amend't, June 2024](#)
[Appendix A: Tenant Advisory Committee Terms of Reference \(Redlined\)](#)
- 6.10.** [24-439](#) Provision of Park Land Requirement for Subdivision Applications SU000711 and SU000756 at That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD43782I) and Except Parts in Plans 3054 and 17721: PID: 009-499-369 - 3542 Otter Point Road
- Recommendation:** The Land Use Committee recommends to the Capital Regional District Board:
That in accordance with Section 510 of the Local Government Act, park dedication in the amount of 5% be required for the proposed subdivision of That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD43782I) and Except Parts in Plans 3054 and 17721 (the "Land"); PID: 009-499-369; except that a lesser amount may be acceptable where the owner agrees to construct a trail built to JdF Community Parks and Recreation standards prior to subdivision approval on that part of the Land that will become the Wieland Road right-of-way.
(NWP - Voting Block A: JdF EA, Colwood, Langford (Goodmanson), Metchosin, Sooke)
- Attachments:** [Staff Report: Provision of Park Land Requirement for Subdivision Applications S](#)
[Appendix A: Subject Property Map](#)
[Appendix B: Proposed Subdivision Plans SU000711 & SU000756](#)
[Appendix C: Section 510 of the LGA](#)
[Appendix D: Minutes July 30, 2019, JdF EA Parks & Recreation Advisory Comm](#)
[Appendix E: Proposal to Meet the Provision of Park Land Requirements](#)
[Appendix F: Minutes March 26, 2024, JdF EA Parks and Recreation Advisory C](#)
- 6.11.** [24-434](#) Greater Victoria Drinking Water Quality - 2023 Annual Report
- Recommendation:** The Regional Water Supply Commission recommends to the Capital Regional District Board:
That the Greater Victoria Drinking Water Quality 2023 Annual Report be approved.
(NWA)
- Attachments:** [Staff Report: Greater Victoria Drinking Water Quality - 2023 Annual Report](#)
[Appendix A: Greater Victoria Drinking Water Quality - 2023 Annual Report](#)

7. ADMINISTRATION REPORTS

7.1. [24-588](#) 2024 Performing Arts Facilities Select Committee Terms of Reference

Recommendation: 1. That the Board delegate to the Board Chair the appointment of members to the Performing Arts Facilities Select Committee.
2. That the 2024 Performing Arts Facilities Select Committee Terms of Reference be approved as presented.
(NWA)

Attachments: [Staff Report: 2024 PAFSC ToR](#)
 [Appendix A: PAFSC ToR](#)

**7.2. [24-534](#) Bylaw No. 4613 - Resale Control and Housing Agreement Rescission
Bylaw (604 Nelson Street), 2024**

Recommendation: 1) That Bylaw No. 4613, "Resale Control and Housing Agreement Rescission Bylaw (604 Nelson Street), 2024", be introduced and read a first, second and third time; and
(WA)
2) That Bylaw No. 4613 be adopted.
(WA, 2/3rds on adoption)

Attachments: [Staff Report: 604 Nelson Street Housing Agrmt Rescission Bylaw](#)
 [Appendix A: Bylaw No. 4613](#)
 [Appendix B: Minutes from Township of Esquimalt - Mar 18, 2024](#)

7.3. [24-544](#) Short-Term Biosolids Management Plan - June Update

Recommendation: There is no recommendation. This report is for information only.

Attachments: [Staff Report: Short-term Biosolids Management Plan - June Update](#)

7.4. [24-570](#) Long-Term Biosolids Management Strategy

Recommendation: That the Capital Regional District Board:

1. Approve the Long Term Biosolids Management Strategy as a portfolio of options (in alignment with the Long-Term Biosolids Management Strategy prepared by GHD, April 2024), that utilizes each option under a prioritization structure, as follows:

(a) Tier 1: Advanced thermal option: Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:

(i) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.

(b) Tier 2: Out-of-region compliance options: Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option is being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These are (in priority order):

(i) Industrial land reclamation, such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)

(ii) Forest fertilization

(iii) Production of biosolids growing medium and/or feedstock in soil production

(iv) Partnerships with established biosolids programs

(v) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option when available.

(vi) Explore partnerships with additional industrial partners interested in combustion.

(c) Tier 3: In-region contingency options: Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable and only after receiving explicit consent from the Board and consulting and engaging with any affected First Nations, should the need for Tier 3 arise.

These include (in priority order):

(i) Industrial land reclamation, such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)

(ii) Forest fertilization

(iii) Maintain the option of biosolids application in engineered cover systems and biocell at Hartland Landfill to act as an emergency support option, subject to space availability and cover needs of the Landfill;

2. Direct staff to submit the Long-Term Biosolids Management Strategy to the BC Ministry of Environment and Climate Change Strategy;

3. Direct staff to continue to explore biosolids beneficial use opportunities with those First Nations that express interest both in-region and out-of-region, and to address any concerns First Nations may have regarding the beneficial use options; and

4. Refer the staff report with the Long-Term Biosolids Management Strategy to the Core Area Liquid Waste Management Committee for information.

(WP - Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria, View Royal)

Attachments:

[Staff Report: Long-Term Biosolids Management Strategy](#)

[Appendix A: CRD Engagement Summary - Draft Long-Term Biosolids Strategy](#)

8. REPORTS OF COMMITTEES

Environmental Services Committee

- 8.1. [24-486](#) Bylaw No. 4607 - Electric Vehicles Charging and Fees Bylaw No. 1, 2024

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4607, "Electric Vehicles Charging and Fees Bylaw No. 1, 2024", be introduced and read a first, second and third time; and

(WP - All)

2. That Bylaw No. 4607 be adopted.

(WP - All, 2/3rds on adoption)

3. That Bylaw No. 4611, "Capital Regional District Ticket Information Authorization Bylaw, 1990, Amendment Bylaw No. 79, 2024", be introduced and read a first, second and third time; and

(WP - All)

4. That Bylaw No. 4611 be adopted.

(WP - All, 2/3rds on adoption)

Attachments: [Staff Report: Bylaw 4607 - Electric Vehicle Charging and Fees Bylaw](#)

[Appendix A: Bylaw No. 4607 - EV Charging & Fees](#)

[Appendix B: Bylaw No. 4611 - Ticket Information Amendment](#)

8.2. [24-484](#) Bylaw No. 4610 - Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2024

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4610, "Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2024", be read a first, second and third time; and (WP - All)
2. That Bylaw No. 4610 be adopted. (WP - All, 2/3rds on adoption)

Attachments: [Staff Report: Hartland Tipping Fee & Reg Bylaw Amendment Bylaw 4610](#)
[Appendix A: Material Stream Diversion Staff Report \(March ESC/April Board\)](#)
[Appendix B: Bylaw No. 4610](#)
[Appendix C: Redlined Consolidated Bylaw No. 3881](#)

9. BYLAWS

9.1. [24-554](#) Adoption of Bylaw No. 4572 - Management of Onsite Sewage Systems Service Establishment Bylaw, 2007, Amendment Bylaw No. 1, 2023

Recommendation: That Bylaw No. 4572, "Management of Onsite Sewage Systems Service Establishment Bylaw, 2007, Amendment Bylaw No. 1, 2023" be adopted. (NWA)

Attachments: [Bylaw No. 4572](#)

9.2. [24-559](#) Adoption of Bylaw No. 4592 - Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, Amendment Bylaw No. 8, 2024

Recommendation: That Bylaw No. 4592, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, Amendment Bylaw No. 8, 2024" be adopted. (NWA)

Attachments: [Bylaw No. 4592](#)

10. NOTICE(S) OF MOTION

11. NEW BUSINESS

12. MOTION TO CLOSE THE MEETING

12.1. [24-550](#) Motion to Close the Meeting

Recommendation: 1. That the meeting be closed for Labour Relations in accordance with Section (90)(1)(c) of the Community Charter. [1 item]
2. That the meeting be closed for Litigation in accordance with Section 90(1)(g) of the Community Charter. [1 item]
3. That the meeting be closed for Intergovernmental Negotiations in accordance with Section 90(2)(b) of the Community Charter. [2 items]

13. RISE AND REPORT

14. ADJOURNMENT

Voting Key:

NWA - Non-weighted vote of all Directors

NWP - Non-weighted vote of participants (as listed)

WA - Weighted vote of all Directors

WP - Weighted vote of participants (as listed)

Meeting Minutes

Capital Regional District Board

Wednesday, May 8, 2024

1:10 PM

**6th Floor Boardroom
625 Fisgard Street
Victoria, BC**

PRESENT

DIRECTORS: C. Plant (Chair), M. Little (Vice Chair), M. Alto, J. Bateman (for M. Tait), P. Brent, S. Brice, J. Brownoff, J. Caradonna, C. Coleman, Z. de Vries, B. Desjardins, S. Goodmanson, G. Holman, P. Jones, D. Kobayashi, C. McNeil-Smith, K. Murdoch, D. Murdock, S. Riddell (for R. Windsor), L. Szpak, D. Thompson, S. Tobias, A. Wickheim, K. Williams

STAFF: T. Robbins, Chief Administrative Officer; N. Chan, Chief Financial Officer; A. Fraser, General Manager, Integrated Water Services; L. Jones, General Manager, Parks, Recreation & Environmental Services; K. Lorette, General Manager, Planning and Protective Services; K. Morley, General Manager, Corporate Services; N. Elliot, Manager Climate Action Programs; G. Harris, Senior Manager, Environmental Protection; M. MacIntyre, Senior Manager, Regional Parks; S. May, Senior Manager Facilities Mgt. and Eng. Services; M. Lagoa, Deputy Corporate Officer; J. Dorman, Committee Clerk (Recorder)

EP - Electronic Participation

Guest(s): K. Braid, ISPOS (EP); K. Hamilton, Tavola Strategy Group (EP); D. Liddy, GHD (EP)

Regrets: Directors M. Tait, R. Windsor

The meeting was called to order at 1:08 pm.

1. TERRITORIAL ACKNOWLEDGEMENT

A Territorial Acknowledgement was provided in the preceding meeting.

2. APPROVAL OF THE AGENDA

3. ADOPTION OF MINUTES

3.1. [24-443](#) Minutes of the April 10, 2024 Capital Regional District Board Meeting

**MOVED by Director de Vries, SECONDED by Director Alto,
That the minutes of the Capital Regional District Board meeting of April 10, 2024
be adopted as circulated.
CARRIED**

4. REPORT OF THE CHAIR

Today we will have a significant discussion about biosolids and our need to submit a long-term plan to the Province by June 18, 2024. I am going to encourage us to continue that comradery we have been able to show as a board and respect the diversity of the opinions that exist on this very important topic. On May 24, 2024 we will be hosting a Transportation Workshop that will greatly influence the work we will be doing as a board and I hope that every jurisdiction can have representation. If you are unable to attend please send your alternate, staff are also welcome to attend. It will be a very unfortunate if we do not have a fulsome showing of the regions local government at this workshop. I'd like to provide a personal update; as many of you know, I have received a nomination to run in the next federal election in October 2025. I would like to inform the board and the public that it is my intention to continue to serve as an elected official until the writ is dropped, at which time, I would seek a leave of absence. I have already stated that I will not be seeking opportunity to serve as board chair in November. Directors and public are welcome to discuss this with me, if they wish. I have discussed this matter with Vice Chair Little and CRD staff and there is a general consensus that I do not need to step down at this time.

5. PRESENTATIONS/DELEGATIONS

5.1. Presentations

There were no presentations.

5.2. Delegations

**MOVED by Director McNeil-Smith, SECONDED by Director Szpak,
That a late delegation, Sgt. Scott Norris, be permitted to speak.
CARRIED**

- 5.2.1.** [24-480](#) Delegation - Andrea Miller; Resident of View Royal: Re: 6.13. Motion with Notice: Policy to Limit Bear Attractants (Director Tobias)

A. Miller spoke to Item 6.13.

- 5.2.2.** [24-481](#) Delegation - Melanie Austin; Resident of View Royal: Re: 6.13. Motion with Notice: Policy to Limit Bear Attractants (Director Tobias)

M. Austin spoke to Item 6.13.

- 5.2.3.** [24-482](#) Delegation - Dr. Philippe Lucas; Representing Biosolid Free BC: Re: Agenda Item: 7.2. Long-Term Biosolids Management Strategy

P. Lucas spoke to Item 7.2.

- 5.2.4. [24-485](#) Delegation - Jonathan O'Riordan; Mt. Work Coalition: Re: Agenda Item: 7.2. Long-Term Biosolids Management Strategy
J. O'Riordan spoke to Item 7.2.
- 5.2.5. [24-490](#) Delegation - Mollie Cameron; Representing Wild Wise: Re: Agenda Item: 6.13. Motion with Notice: Policy to Limit Bear Attractants (Director Tobias)
M. Cameron spoke to Item 6.13.
- 5.2.6. [24-493](#) Delegation - Sgt. Scott Norris; Representing BC Conservation Officer Services: Re: Agenda Item: 6.13. Motion with Notice: Policy to Limit Bear Attractants (Director Tobias)
Sgt. S. Norris spoke to Item 6.13.

6. CONSENT AGENDA

**MOVED by Director Brent, SECONDED by Director Szpak,
That consent agenda items 6.1. through 6.16. be approved.
CARRIED**

- 6.1. [24-450](#) Governance Study of Magic Lake Estates, North Pender Island

This report was received for information.
- 6.2. [24-398](#) Solid Waste Management Plan - 2023 Progress Report

This report was received for information.
- 6.3. [24-396](#) Amendment to Environmental Resource Management Capital Plan

1. That an advancement of \$500K from the 2025 Aggregate capital budget to the 2024 capital budget be approved; and
2. That the budget for the 2024 capital project Kitchen Scraps Transfer Station Relocation be increased by \$800K to ensure a contract can be awarded at the completion of the procurement process.
CARRIED
- 6.4. [24-278](#) Capital Regional District 2023 Audit Findings Report and Statement of Financial Information

That the Capital Regional District 2023 Statement of Financial Information be approved.
CARRIED
- 6.5. [24-307](#) Capital Regional District External Grants Update

This report was received for information.
- 6.6. [24-288](#) Capital Regional District External Grants 2023 Annual Report

This report was received for information.

- 6.7. [24-314](#) Royal and McPherson Theatre Services Advisory Committee Terms of Reference

That the 2024 Royal & McPherson Theatres Advisory Committee Terms of Reference attached at Appendix A be approved.
CARRIED
- 6.8. [24-355](#) First Nations Relations Operational Update

This report was received for information.
- 6.9. [24-354](#) Government-to-Government Relationship Building Initiative Summary Report

That staff incorporate the Government-to-Government Relationship Building Summary Report themes and recommendations into the development of a Reconciliation Action Plan.
CARRIED
- 6.10. [24-440](#) Juan de Fuca Water Distribution 2024 Capital Plan Amendment

Approve amending the 2024 Juan de Fuca Water Distribution Five Year Capital plan to reallocate funding for projects 16-05, 20-03, 21-02, 24-02 and 24-03 as outlined in Table 1 of the staff report and reflected in the updated Capital Plan shown in Appendix A.
CARRIED
- 6.11. [24-420](#) Regional Parks and Trails - 2023 Strategic Plan Progress Report

This report was received for information.
- 6.12. [24-404](#) Regional Parks and Trails - Compliance and Enforcement Program

That staff bring a report and recommendation to the Regional Parks Committee on formalizing an indigenous guardian program in parks at the governance level.
CARRIED
- 6.13. [24-368](#) Motion with Notice: Policy to Limit Bear Attractants (Director Tobias)

That the CRD Staff work with municipalities to develop a consistent policy and bylaw to limit attractants to prevent bear - human interaction toward an outcome of co-existence particularly in those areas frequently visited by bears.
CARRIED
- 6.14. [24-401](#) Transportation Governance Update

This report was received for information.
- 6.15. [24-402](#) Mass Transit Modelling and Climate Impacts

This report was received for information.

- 6.16. [24-427](#) Notice of Motion: BC Transit Bi-Annual Updates on Initiatives and Services (Director Plant)

That the CRD invite BC Transit representatives to present bi-annually (twice a year) to the Transportation Committee on regional and subregional initiatives and services.

CARRIED

7. ADMINISTRATION REPORTS

MOVED by Director Little, **SECONDED** by Director Brownoff,
That the meeting be closed for Intergovernmental Negotiations in accordance with Section 90(2)(b) of the Community Charter.

CARRIED

The meeting recessed and moved to the closed session at 1:30 pm.

The Capital Regional District Board rose from the closed session at 1:47 pm without report and the meeting reconvened.

- 7.1. [24-464](#) Biosolids Monthly Update - May

L. Jones spoke to Item 7.1.

Discussion ensued regarding:

- permit approval
- potential use of other facilities to process biosolids
- procurement process and contractor selection
- contractor operational update

Motion Arising:

MOVED by Director Desjardins, **SECONDED** by Director Caradonna,
That the RFP, contract and information on Lafarge and any other facilities come to the Environmental Services Committee for further understanding and review, and that this report be provided in camera if needed.

Discussion ensued regarding:

- off site thermal options
- the long-term strategy and future procurements

MOVED by Director Szpak, **SECONDED** by Director Alto,
That this item be tabled until Item 7.2. is dealt with.

CARRIED

7.2. [24-369](#) Long-Term Biosolids Management Strategy

T. Robbins and L. Jones spoke to Item 7.2.

K. Hamilton and K. Braid provided PowerPoint presentations.

Discussion ensued regarding:

- financial estimates of the various long-term options
- implications of site specific land application and impact on ground water sources
- variations in survey delivery methods and final results
- First Nations engagement and feedback
- testing of biosolids for contaminants

**MOVED by Director Caradonna, SECONDED by Director Murdoch,
That the CRD Board:**

1. Endorse the following portfolio of options in alignment with the Long-Term Biosolids Management Strategy (prepared by GHD, April 2024), utilizing each option under a prioritization structure, as follows:

(a) Tier 1: Advanced thermal option: Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:

(i) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.

(b) Tier 2: Out-of-region compliance options: Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option is being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These are (in priority order):

(i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)

(ii) Forest fertilization

(iii) Production of biosolids growing medium and/or feedstock in soil production

(iv) Partnerships with established biosolids programs

(v) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option when available.

(c) Tier 3: In-region contingency options: Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable. These include (in priority order):

(i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)

(ii) Forest fertilization

(iii) Maintain the option of biosolids application in engineered cover systems at Hartland Landfill to act as an emergency support option; subject to space availability and cover needs of the Landfill;

2. Direct staff to continue to explore biosolids beneficial use opportunities with

those First Nations that express interest both in-region and out-of-region, and to address any concerns First Nations may have regarding the beneficial use options;

3. Refer the Draft Long-Term Biosolids Management Strategy and portfolio of options to the TCAC for review and comment;

4. Post the Draft Long-Term Biosolids Management Strategy and portfolio of options on the CRD webpage for 21 days (May 13-June 3) for First Nations and public review and comment; and

5. Direct staff to bring back the comments received during the 21-day posting period from the TCAC, First Nations and public, along with a final Long-Term Biosolids Management Strategy and portfolio of options for the Board's consideration and approval at the June 12, 2024 Board meeting, for submission to the Province by June 18, 2024.

MOVED by Director Caradonna, **SECONDED** by Director Desjardins,

That the main motion be amended by adding the following to Tier 2:

(vi) Develop partnerships with additional industrial partners interested in combustion.

MOVED by Director de Vries, **SECONDED** by Director Szpak,

That the amendment be amended by striking the word "Develop" and replacing it with the word "Explore".

CARRIED

Opposed: Alto, Caradonna, Desjardins, Goodmanson, Jones, Kobayashi, Little, Thompson, Tobias, Williams

The question was call on the amendment:

That the main motion be amended by adding the following to Tier 2:

(vi) Explore partnerships with additional industrial partners interested in combustion.

CARRIED

MOVED by Director Caradonna, **SECONDED** by Director Desjardins,

That the main motion be amended to add the words "and only after receiving explicit consent from the Board and any affected First Nations, should the need for Tier 3 arise"after the word "unavailable" to c) Tier 3.

MOVED by Director de Vries, **SECONDED** by Director Coleman,

That the amendment be amended by striking the words "the Board and".

Discussion ensued regarding:

- impact of removing Board consent related to implementation of Tier 3
- participant consent on use of biosolids
- rationale for adding in-region land application as options

The question was called on the amendment to the amendment:

That the amendment be amended by striking the words "the Board and".

DEFEATED

Opposed: Alto, Brent, Brice, Bateman, Caradonna, Desjardins, Goodmanson, Holman, Jones, Kobayashi, Little, Szpak, Thompson, Tobias, Wickheim, Williams

MOVED by Director Brent, **SECONDED** by Alternate Director Bateman,
That the amendment be amended by adding the words “consulting and engaging with” after the words “Board and”.

Director Jones left the meeting at 4:00 pm.

Discussion ensued regarding:

- appropriateness and method of soliciting consent from First Nations
- reconciliation policy

Director Kobayashi left the meeting at 4:02 pm.

MOVED by Director de Vries, **SECONDED** by Director McNeil-Smith,
That the meeting be extended past the 3 hour scheduled time.
CARRIED

The question was called on the amendment to the amendment:

That the amendment be amended by adding the words “consulting and engaging with” after the words “Board and”.

CARRIED

Opposed: Alto, Bateman, Caradonna, Desjardins, Holman, Riddell, Tobias, Thompson, Williams

MOVED by Alternate Director Bateman, **SECONDED** by Director Tobias,
That the amendment be amended by adding the words “and local governments” after the words “Board and”.

Discussion ensued regarding:

- impact on jurisdictions outside the core participants
- requirements of jurisdictional consent under Provincial regulations

The question was called on the amendment to the amendment:

That the amendment be amended by adding the words “and local governments” after the words “Board and”.

DEFEATED

Opposed: Alto, Bateman, Brent, Brice, Brownoff, Caradonna, Coleman, de Vries, Desjardins, Goodmanson, Holman, Little, McNeil-Smith, Murdoch, Murdoch, Plant, Riddell, Szpak, Thompson, Wickheim

The question was called on the amendment as amended:

That the main motion be amended to add the words “and only after receiving explicit consent from the Board and consulting and engaging with any affected First Nations, should the need for Tier 3 arise” after the word “unavailable” to c) Tier 3.

CARRIED

Opposed: Wickheim

MOVED by Director Desjardins Vries, **SECONDED** by Director Caradonna,

That the main motion be amended to add the words “and biocell” after the words “engineered cover systems” to Tier 3, sub-section iii).

CARRIED

The question was called on the main motion as amended:

That the CRD Board:

1. Endorse the following portfolio of options in alignment with the Long-Term Biosolids Management Strategy (prepared by GHD, April 2024), utilizing each option under a prioritization structure, as follows:

(a) Tier 1: Advanced thermal option: Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:

(i) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.

(b) Tier 2: Out-of-region compliance options: Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option is being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These are (in priority order):

(i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)

(ii) Forest fertilization

(iii) Production of biosolids growing medium and/or feedstock in soil production

(iv) Partnerships with established biosolids programs

(v) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option when available.

(vi) Explore partnerships with additional industrial partners interested in combustion.

(c) Tier 3: In-region contingency options: Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable, and only after receiving explicit consent from the Board and consulting and engaging with any affected First Nations, should the need for Tier 3 arise.

These include (in priority order):

(i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)

(ii) Forest fertilization

(iii) Maintain the option of biosolids application in engineered cover systems and biocell at Hartland Landfill to act as an emergency support option; subject to space availability and cover needs of the Landfill;

2. Direct staff to continue to explore biosolids beneficial use opportunities with those First Nations that express interest both in-region and out-of-region, and to address any concerns First Nations may have regarding the beneficial use options;

3. Refer the Draft Long-Term Biosolids Management Strategy and portfolio of options to the TCAC for review and comment;

4. Post the Draft Long-Term Biosolids Management Strategy and portfolio of options on the CRD webpage for 21 days (May 13-June 3) for First Nations and public review and comment; and

5. Direct staff to bring back the comments received during the 21-day posting period from the TCAC, First Nations and public, along with a final Long-Term Biosolids Management Strategy and portfolio of options for the Board's consideration and approval at the June 12, 2024 Board meeting, for submission to the Province by June 18, 2024.

CARRIED

Opposed: Alto, Desjardins

7.1. [24-464](#) Biosolids Monthly Update - May

Item 7.1. was taken from the table and the question on the motion arising was called:

That the RFP, contract and information on Lafarge and any other facilities come to the Environmental Services Committee for further understanding and review, and that this report be provided in camera if needed.

CARRIED

Opposed: Szpak

Director Tobias left the meeting at 4:39 pm.

Director Murdock left the meeting at 4:40 pm.

7.3. [24-452](#) Capital Region Housing Corporation Annual General Meeting

MOVED by Director de Vries, SECONDED by Director Murdoch,
That the unanimous shareholder's resolution attached as Appendix A to the Capital Region Housing Corporation Annual General Meeting report be approved, and the Chair and Corporate Officer execute it on behalf of the Capital Regional District.

CARRIED

7.4. [24-463](#) Capital Regional District 2023 Annual Report

This report was received for information.

8. REPORTS OF COMMITTEES

Finance Committee

8.1. [24-286](#) 2025 Service and Financial Planning Guidelines

MOVED by Director Brice, SECONDED by Director Coleman,
That the service and financial planning guidelines be approved and that staff be directed to prepare the draft financial plan review based on the timeline presented.

CARRIED

- 8.2. [24-433](#) Bylaw No. 4614: 2024 to 2028 Financial Plan Bylaw, 2024, Amendment No. 1, 2024

MOVED by Director Brice, **SECONDED** by Director Little,
1. That Bylaw No. 4614, “2024 to 2028 Financial Plan Bylaw, 2024, Amendment Bylaw No. 1, 2024”, be introduced and read a first, second, and third time; and
CARRIED

MOVED by Director Brice, **SECONDED** by Director Little,
2. That Bylaw No. 4614 be adopted.
CARRIED

Environmental Services Committee

- 8.3. [24-382](#) Climate Action Strategy - 2023 Progress Report

MOVED by Director Desjardins, **SECONDED** by Director Thompson,
That staff be directed to report back on options for reducing corporate transportation and building emissions, including Capital Region Housing Corporation buildings, and advise on options for advancing a corporate and regional adaptation strategy.
CARRIED

- 8.4. [24-406](#) Biosolids Literature Review - Update

MOVED by Director Desjardins, **SECONDED** by Director Caradonna,
1. Direct staff to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.
2. That staff be directed to proceed with an independent unbiased legal review of the risks associated with the land application of biosolids.

MOVED by Director Murdoch, **SECONDED** by Director McNeil-Smith,
That the main motion be amended by adding the following words to the end of part 2: “and the risks associated if with being non-compliant with the provincial regulatory framework for biosolids”.

Director Brownoff left the meeting at 4:52 pm.

Referral motion:

MOVED by Director Desjardins, **SECONDED** by Director Brent,
That recommendations 1 and 2 and the amendment be referred to the Environmental Services Committee.
CARRIED
Opposed: Caradonna

Electoral Areas Committee

- 8.5. [24-150](#) Bylaw No. 4592 to Expand Otter Point Fire Protection and Emergency Response Local Service Area Boundary (Bylaw No. 2042)

MOVED by Director Brent, **SECONDED** by Director Holman,

1. That the attached Certificate of Results of the petitions to expand the service area boundary for the Otter Point Fire Protection and Emergency Response Service be received.

CARRIED

MOVED by Director Brent, **SECONDED** by Director Holman,

2. That Bylaw No. 4592, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, Amendment Bylaw No. 8, 2024", be read a first, second, and third time.

CARRIED

MOVED by Director Brent, **SECONDED** by Director Holman,

3. That elector approval be obtained by Electoral Area Director consent on behalf.

CARRIED

Directors Desjardins and McNeil-Smith left the meeting at 4:59 pm.

- 8.6. [24-334](#) Fire Services Governance Review Report - 2024 - 2027 Implementation Plan and Draft Bylaw 4608 to Amend Bylaw 3654 for Fire Commissions

MOVED by Director Brent, **SECONDED** by Director Holman,

1. That the 2024-2027 Fire Services Governance Review Implementation plan be approved.

CARRIED

MOVED by Director Brent, **SECONDED** by Director Holman,

2. That Bylaw No. 4608, "Fire Protection and Emergency Response Service Commissions Bylaw, 2010, Amendment Bylaw No. 2, 2024" be given first, second and third reading.

CARRIED

MOVED by Director Brent, **SECONDED** by Director Holman,

3. That Bylaw No. 4608 be adopted.

CARRIED

Motion Arising:

MOVED by Director Brent, **SECONDED** by Director Holman,

That staff review the implementation plan, consult with commissions, and report back to the Electoral Areas Committee for review in 2 years.

CARRIED

8.7. [24-237](#) Request for Inclusion of Property in the Ganges Sewer Service Area

MOVED by Director Brent, **SECONDED** by Director Holman,

1. To expand the boundary of the Ganges Sewer Local Service Area to include 105 Kilner Road;

2. The Applicant agrees to pay for all costs to include the property into the service area, and also pays the capacity purchase charge;

3. The Applicant agrees to pay all engineering, administration, permit fees, and construction costs associated with the extension of the sewer and connection to the existing sewer and the property;

CARRIED

MOVED by Director Brent, **SECONDED** by Director Holman,

4. That Bylaw 4601, "Salt Spring Island Ganges Sewerage Local Service Establishment Bylaw, 1991, Amendment Bylaw No. 14, 2024, be introduced and read a first, second and third time.

CARRIED

Director Goodmanson left the meeting at 5:02 pm.

Committee of the Whole

8.8. [24-453](#)

Board Priorities Annual Check In

MOVED by Director Thompson, **SECONDED** by Director Brent,
That the Corporate Plan be amended to include the six new initiatives.
CARRIED

MOVED by Director Thompson, **SECONDED** by Director Brent,
1. That the level of effort on Board Priorities be adjusted as directed by the Committee of the Whole.
2. That staff, through the service and financial planning processes, provide recommendations in funding, timing and service levels for 2025 in accordance with the amended direction:
a) That the CRD Board re-establish a Select Committee to determine options and recommendations related to "scaling up" regional support for performing arts facilities in the region.
b) Direct staff to report back on what more the CRD can do to achieve the stated goal of reduced greenhouse gas emissions, including but not limited to scaling up efforts using existing tools, and working with other levels of government to obtain additional tools.
c) That for the 2025 budget discussion, staff provide refined estimates of expenditures for each strategic goal.

MOVED by Director Murdoch, **SECONDED** by Director Brent,
That the main motion be amended to include as item d) "Ask staff to report back on options to develop a region-wide campaign to support increasing voter turnout in the 2026 local government elections in the CRD."

MOVED by Alternate Director Riddell, **SECONDED** by Director Thompson,
That the amendment be amended to add the words "and candidate participation" after the words "voter turnout".

Discussion ensued regarding:

- degree of staff involvement with candidates
- intent of the amendment related to diversity, equity, and inclusion

The question was called on the amendment to the amendment:

That the amendment be amended to add the words "and candidate participation" after the words "voter turnout".

CARRIED

Opposed: Brice, Murdoch, Wickheim, Williams

The question was called on the amendment as amended:

That the main motion be amended to include as item d) "Ask staff to report back on options to develop a region-wide campaign to support increasing voter turnout and candidate participation in the 2026 local government elections in the CRD."

CARRIED

The question was called on the main motion as amended:

1. That the level of effort on Board Priorities be adjusted as directed by the Committee of the Whole.
2. That staff, through the service and financial planning processes, provide recommendations in funding, timing and service levels for 2025 in accordance

with the amended direction:

- a) That the CRD Board re-establish a Select Committee to determine options and recommendations related to "scaling up" regional support for performing arts facilities in the region.
- b) Direct staff to report back on what more the CRD can do to achieve the stated goal of reduced greenhouse gas emissions, including but not limited to scaling up efforts using existing tools, and working with other levels of government to obtain additional tools.
- c) That for the 2025 budget discussion, staff provide refined estimates of expenditures for each strategic goal.
- d) Ask staff to report back on options to develop a region-wide campaign to support increasing voter turnout and candidate participation in the 2026 local government elections in the CRD.

CARRIED

Director Murdoch left the meeting at 5:15 pm.

9. BYLAWS

There were no bylaws for consideration.

10. NOTICE(S) OF MOTION

10.1. 24-509 Notice of Motion: Regional Diversity on CRD Committees and Commissions (Alternate Director Riddell)

Alternate Director Riddell provided the following Notice of Motion to be heard at the next Governance Committee meeting:

"Staff explore options to ensure that CRD Commissions and Committees reflect the diversity of our region's population, including gender diversity, to the greatest extent possible, and report back to the board with recommendations."

11. NEW BUSINESS

There was no new business.

12. MOTION TO CLOSE THE MEETING

12.1. [24-445](#)**Motion to Close the Meeting**

MOVED by Director Little, **SECONDED** by Director de Vries,

1. That the meeting be closed for Appointments in accordance with Section 90(1) (a) of the Community Charter.

CARRIED

MOVED by Director Little, **SECONDED** by Director de Vries,

2. That the meeting be closed for Employee Relations in accordance with Section 90(1)(c) of the Community Charter.

CARRIED

MOVED by Director Little, **SECONDED** by Director de Vries,

3. That the meeting be closed for the Expropriation of Land in accordance with Section 90(1)(e) of the Community Charter.

CARRIED

MOVED by Director Little, **SECONDED** by Director de Vries,

4. That such disclosures could reasonably be expected to harm the interests of the Regional District.

CARRIED

MOVED by Director Little, **SECONDED** by Director de Vries,

5. That the meeting be closed for intergovernmental negotiations in accordance with Section 90(2)(b) of the Community Charter.

CARRIED

The Capital Regional District Board moved to the closed session at 5:16 pm.

13. RISE AND REPORT

The Capital Regional District Board rose from the closed session at 5:26 pm and reported on the following:

- In accordance with the Reaching Home Community Advisory Board Terms of Reference that the following be appointed to the Reaching Home Community Advisory Board for a term to expire December 31, 2024: Filip Ani

- In accordance with Bylaw No. 3523 that the following be appointed to the Southern Gulf Islands Public Library Commission for a term to expire December 31, 2024: Werner Heinrich

- In accordance with Bylaw No. 3523 that the following be appointed to the Southern Gulf Islands Public Library Commission for a term to expire December 31, 2025: Carol Ashwell, Ellen Bourassa, Eleanor Cocker, Debbie Lesurf, Laura Vilness

- In accordance with Bylaw No. 3511 that the following be appointed to the Wilderness Mountain Water Service Commission for a term to expire December 31, 2024: Paula Twamley

- 1. The expropriation of a statutory right of way in that part of THE EAST 10 CHAINS OF THE FRACTIONAL SOUTH WEST 1/4, SECTION 12, MAYNE ISLAND, COWICHAN DISTRICT, EXCEPT PART IN PLANS 13929, 15136, 21821 AND 44664, PID: 001-181-009, comprising 0.106 hectares or 0.26 acres, more or less, shown in heavy black outline and marked as "Statutory Right of Way" on Plan EPP135102, is hereby approved; and,

2. The Corporate Officer is hereby authorized to do all acts and things, and execute all documents necessary, to carry out the expropriation.

14. ADJOURNMENT

MOVED by Director Little, SECONDED by Director Plant,
That the May 8, 2024 Capital Regional District Board meeting be adjourned at 5:27 pm.
CARRIED

CHAIR**CERTIFIED CORRECT:**

CORPORATE OFFICER

Meeting Minutes

Committee of the Whole

Wednesday, May 8, 2024

10:30 AM

**6th Floor Boardroom
625 Fisgard Street
Victoria, BC V8W 1R7**

Special Meeting - Strategic Plan

PRESENT

DIRECTORS: C. Plant (Chair), M. Little (Vice Chair), P. Brent, S. Brice, J. Brownoff, J. Caradonna, C. Coleman, B. Desjardins, S. Goodmanson (10:35 am), G. Holman, P. Jones, S. Kim (for M. Alto) (EP), D. Kobayashi, C. McNeil-Smith, K. Murdoch, S. Riddell (for R. Windsor), L. Szpak, M. Tait, D. Thompson, A. Wickheim, K. Williams

STAFF: T. Robbins, Chief Administrative Officer; N. Chan, Chief Financial Officer; A. Fraser, General Manager, Integrated Water Services; L. Jones, General Manager, Parks, Recreation & Environmental Services; K. Lorette, General Manager, Planning and Protective Services; K. Morley, General Manager, Corporate Services; C. Gilpin, Manager, Arts & Culture Support Service; F. Lopez, Manager, Strategic Planning; M. Lagoa, Deputy Corporate Officer; T. Pillipow, Committee Clerk (Recorder)

EP - Electronic Participation

Regrets: Directors M. Alto, Z. de Vries, D. Murdock, S. Tobias, R. Windsor

The meeting was called to order at 10:31 am.

1. Territorial Acknowledgement

Vice Chair Little provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by Director Kobayashi, **SECONDED** by Director Thompson,
That the agenda for the May 8, 2024 Session of the Committee of the Whole be
approved.
CARRIED

3. Presentations/Delegations

There were no presentations or delegations.

4. Special Meeting Matters

4.1. [24-453](#)**Board Priorities Annual Check In**

T. Robbins and K. Lorette presented Item 5.1.

Discussion ensued regarding:

- stakeholder consultation potential impact on parkland acquisition
- expanding the delegated authority of the SSI Local Community Commission
- legislative requirements to gain approval to establish a new service
- the objective of a Performing Arts Facilities Select Committee

Director Jones left the meeting at 11:24 am.

Motion Arising:

**MOVED by Director McNeil-Smith, SECONDED by Director Murdoch,
That the Corporate Plan be amended to include the six new initiatives.
CARRIED**

Discussion ensued regarding:

- lessons learned from alternative approval process
- exploring the establishment of an indigenous guardian program within regional parks
- addressing the increase and types of wastes in relation to population growth
- focusing on balanced representation for committee and commission appointments
- regional arts facility service and creation of select committee
- developing a clear budget for each strategic priority initiative
- progress on the board priorities and impact of adding new initiatives

Director Caradonna left the meeting at 11:50 am.

**MOVED by Director Tait, SECONDED by Director Murdoch,
The Committee of the Whole recommends to the Capital Regional District Board:
1. That the level of effort on Board Priorities be adjusted as directed by the
Committee of the Whole; and
2. That staff, through the service and financial planning processes, provide
recommendations in funding, timing and service levels for 2025 in accordance
with the amended direction.**

**MOVED by Director Murdoch, SECONDED by Director McNeil-Smith,
That the main motion be amended to include as item 2.a) "That the CRD Board
re-establish a Select Committee to determine options and recommendations
related to "scaling up" regional support for performing arts facilities in the
region."**

Discussion ensued regarding regional support for a performing arts facility.

The question was called on the amendment:

**That the main motion be amended to include as item 2.a) "That the CRD Board
re-establish a Select Committee to determine options and recommendations
related to "scaling up" regional support for performing arts facilities in the
region."
CARRIED**

Opposed: Desjardins, Holman, Kobayashi, Wickheim

MOVED by Director Thompson, **SECONDED** by Director Szpak,
That the main motion be amended to include as item 2.b) "Direct staff to report back on what more the CRD can do to achieve the stated goal of reduced greenhouse gas emissions, including but not limited to scaling up efforts using existing tools, and working with other levels of government to obtain additional tools."

CARRIED

MOVED by Director Holman, **SECONDED** by Director Kobayashi,
That the main motion be amended to include as item 2.c) "That for the 2025 budget discussion, staff provide refined estimates of expenditures for each strategic goal."

Discussion ensued regarding feasibility of aligning strategic goals with expenditures.

The question was called on the amendment:

That the main motion be amended to include as item 2.c) "That for the 2025 budget discussion, staff provide refined estimates of expenditures for each strategic goal."

CARRIED

Opposed: Brent, Desjardins, McNeil-Smith

MOVED by Director Plant, **SECONDED** by Director Thompson,
That the main motion be amended to include as item 2.d) "Ask staff to report back on options to develop a region-wide campaign to support increasing voter turnout in the 2026 local government elections in the CRD."

MOVED by Director Tait, **SECONDED** by Alternate Director Riddell,
That the amending motion be further amended to add the wording "and candidate participation" after the wording "voter turnout".

MOVED by Director McNeil-Smith, **SECONDED** by Director Brice,
That the amendment and the amendment to the amendment be referred to the next Capital Regional District Board meeting for further consideration.

CARRIED

The question was called on the main motion as amended:

The Committee of the Whole recommends to the Capital Regional District Board:

1. That the level of effort on Board Priorities be adjusted as directed by the Committee of the Whole; and
2. That staff, through the service and financial planning processes, provide recommendations in funding, timing and service levels for 2025 in accordance with the amended direction:
 - a) That the CRD Board re-establish a Select Committee to determine options and recommendations related to "scaling up" regional support for performing arts facilities in the region.
 - b) Direct staff to report back on what more the CRD can do to achieve the stated goal of reduced greenhouse gas emissions, including but not limited to scaling up efforts using existing tools, and working with other levels of government to obtain additional tools.
 - c) That for the 2025 budget discussion, staff provide refined estimates of expenditures for each strategic goal.

CARRIED

5. Motion to Report to the Board

5.1. [24-458](#) Motion to Report to the Board

MOVED by Director Thompson, **SECONDED** by Director Brent,
That the Committee of the Whole report to the Capital Regional District Board at
the May 8, 2024 regular meeting regarding Item 4.1.
CARRIED

6. Adjournment

MOVED by Director Coleman, **SECONDED** by Director Brice,
That the May 8, 2024 Committee of the Whole meeting be adjourned at 12:43 pm.
CARRIED

CHAIR

CERTIFIED CORRECT:

CORPORATE OFFICER

Report to Nominators: CRD

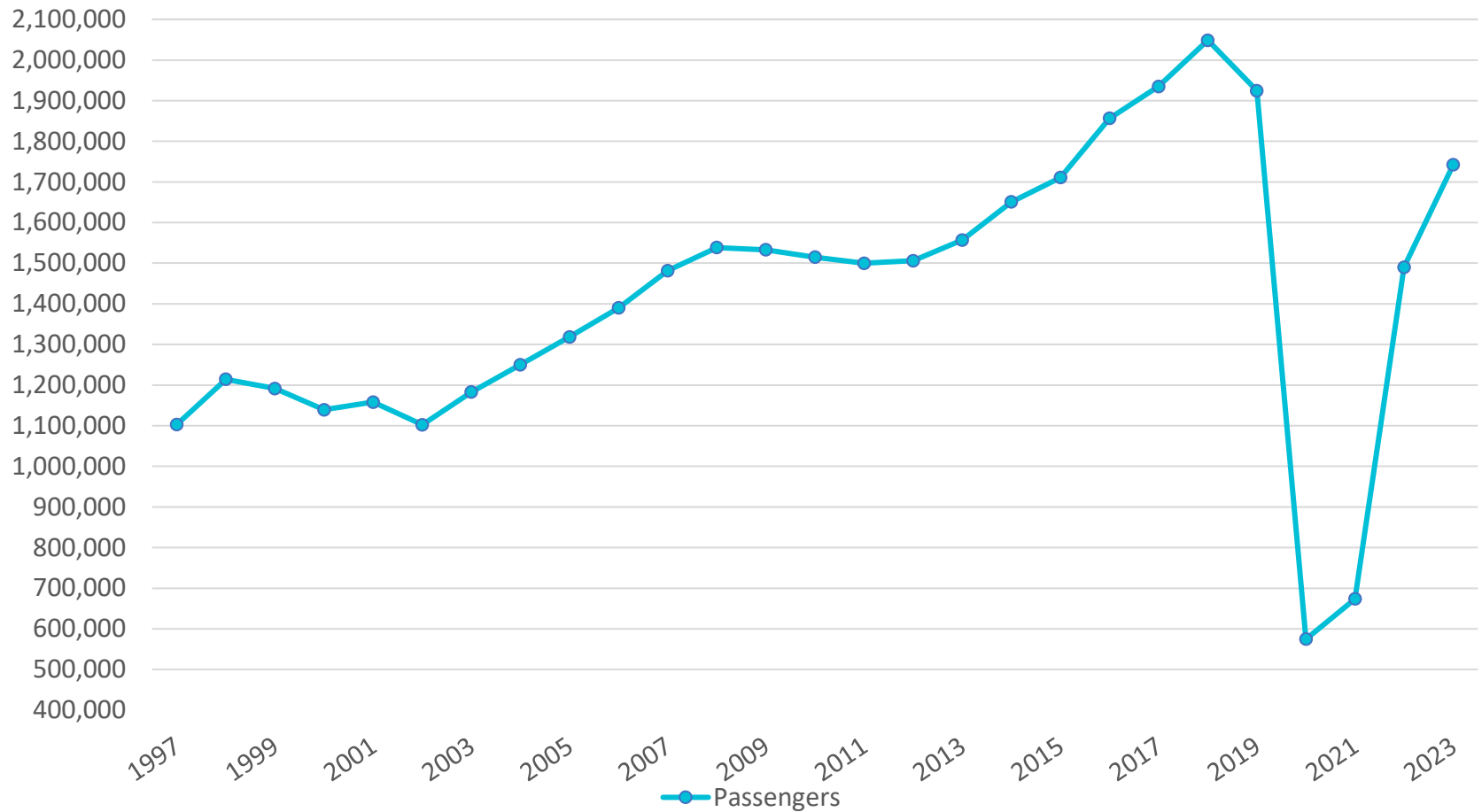
Report from the President and Chief Executive Officer
June 12, 2024



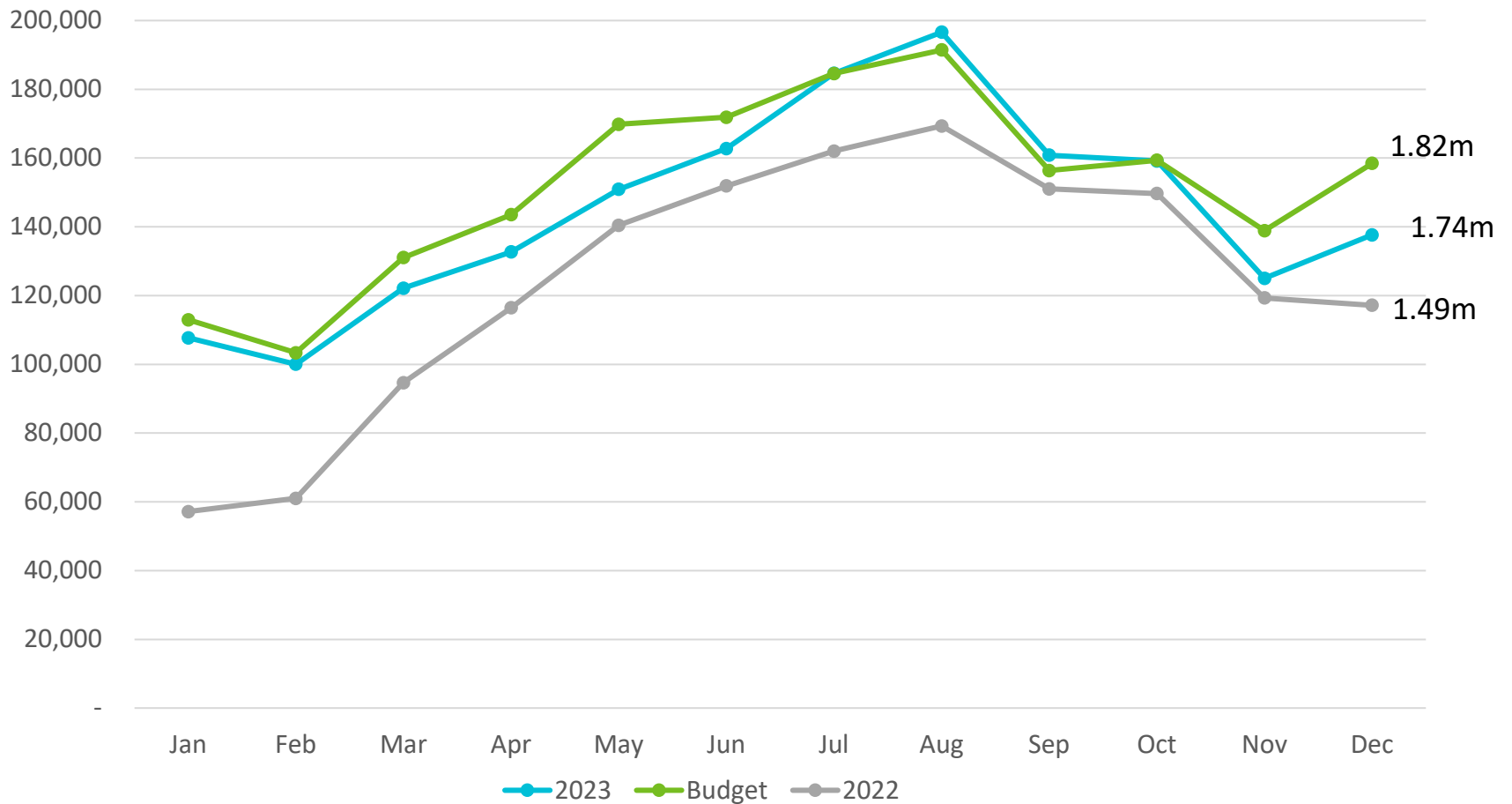
Highlights of 2023

- ✓ BC Top 100 Employers – 5th Consecutive Year!
- ✓ Welcomed Porter Airlines to the market
- ✓ Airports Council International North America recognized achievement for the Pollinator Garden
- ✓ Approval of Kothari Group proposal for the new Marriott Towne Suites
- ✓ Amazon Distribution Centre completed
- ✓ New YYJ Website and YYJ.ca
- ✓ Expanded Spinnakers Restaurant in departures and expanded operating hours of all concessions
- ✓ Added 300 more parking stalls in new lot just in time for the holidays!
- ✓ UBER entered the market adding more ground transportation options for passengers

YYJ Historical Passenger Numbers



Monthly Passengers



Challenges to Recovery

- Pilot Shortage
- Aircraft Shortage
- Air Traffic Controller Shortage
- Labour Force Costs
- Airline Consolidation or Failures



Overview of Canadian Capacity Recovery Trends

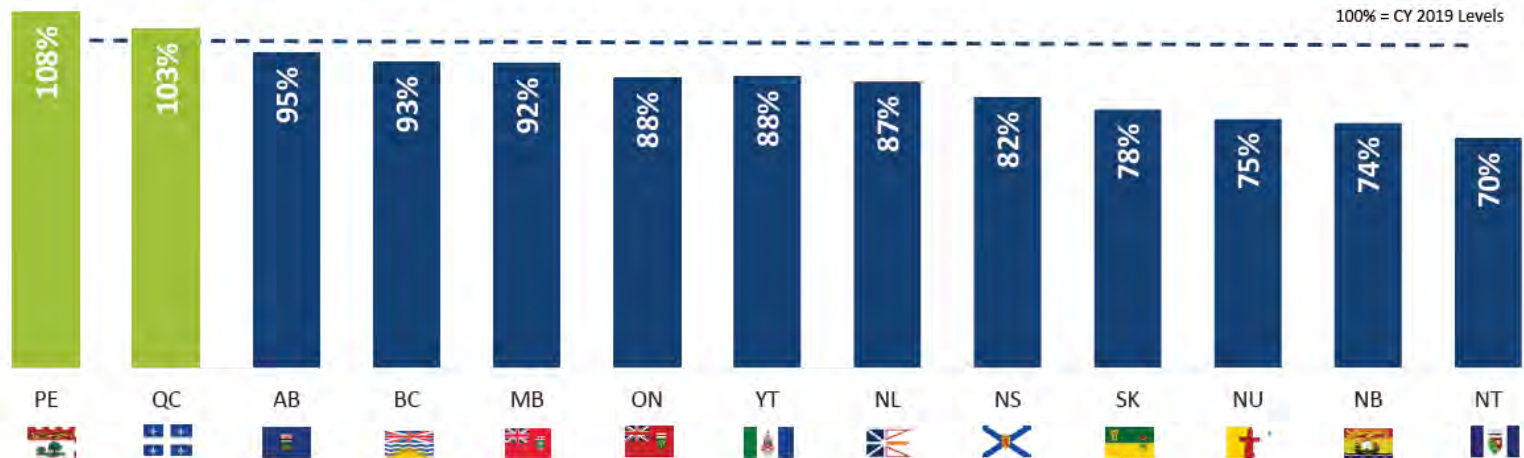
On average, Canadian air service capacity in 2023 has recovered to 91.8% of 2019 levels, though not evenly across every Province or Territory.

**CY 2023 Capacity Recovery
(versus CY 2019)**

91.8%

All Provinces

Seat Capacity Recovery by Canadian Province
CY 2023 Capacity vs CY 2019



InterVISTAS

Source: Innovata Schedules via Dilo as of Nov 2023

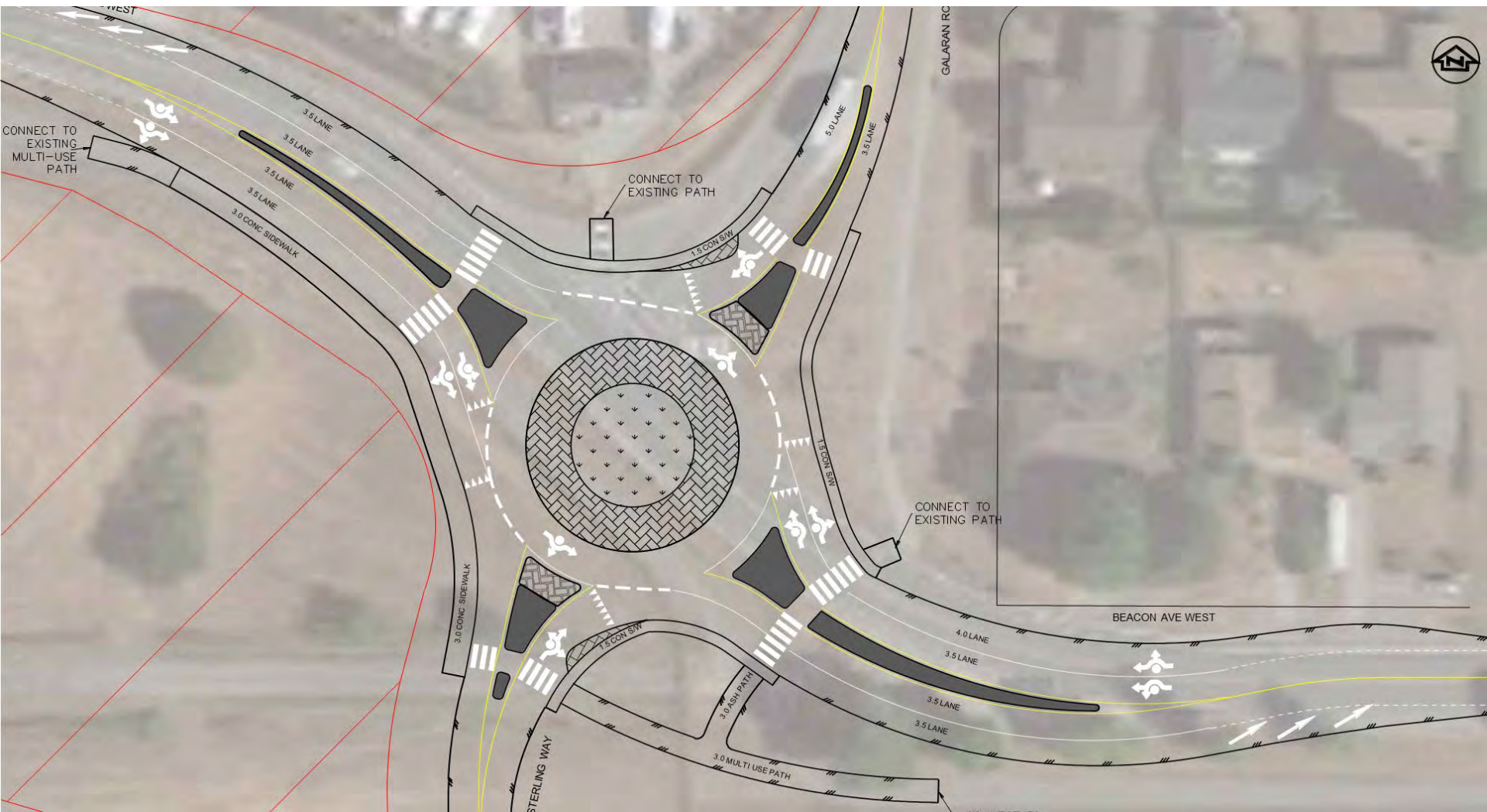
2023 Financial Report

	2023 Actual (000's)	2023 Budget (000's)	Variance (000's)
Revenue			
Aeronautical	\$ 7,533	\$ 8,744	\$ (1,211)
AIF	12,986	13,389	(403)
Concessions	13,396	13,074	322
Real estate rentals	3,819	3,763	56
Deferred capital contribution	1,179	1,172	7
Other	1,269	731	538
	40,182	40,873	(691)
Expenses			
Supplies & services	6,027.0	6,072.0	45.0
Security & terminal services	4,037.0	4,077.0	40.0
Salaries and benefits	8,205.0	8,152.0	(53.0)
AIF Administration fee	936.0	894.0	(42.0)
Property taxes	1,039.0	1,238.0	199.0
Rent	1,910.0	1,968.0	58.0
Utilities	807.0	771.0	(36.0)
Interest	-	-	-
Insurance	444.0	378.0	(66.0)
Amortization	12,046.0	12,722.0	676.0
	35,451.0	36,272.0	821.0
Net Income	\$ 4,731	\$ 4,601	\$ 130

Capital Projects in 2023



Beacon/Galaran Roundabout



Summer Parking Expansion



Common Use Self Service



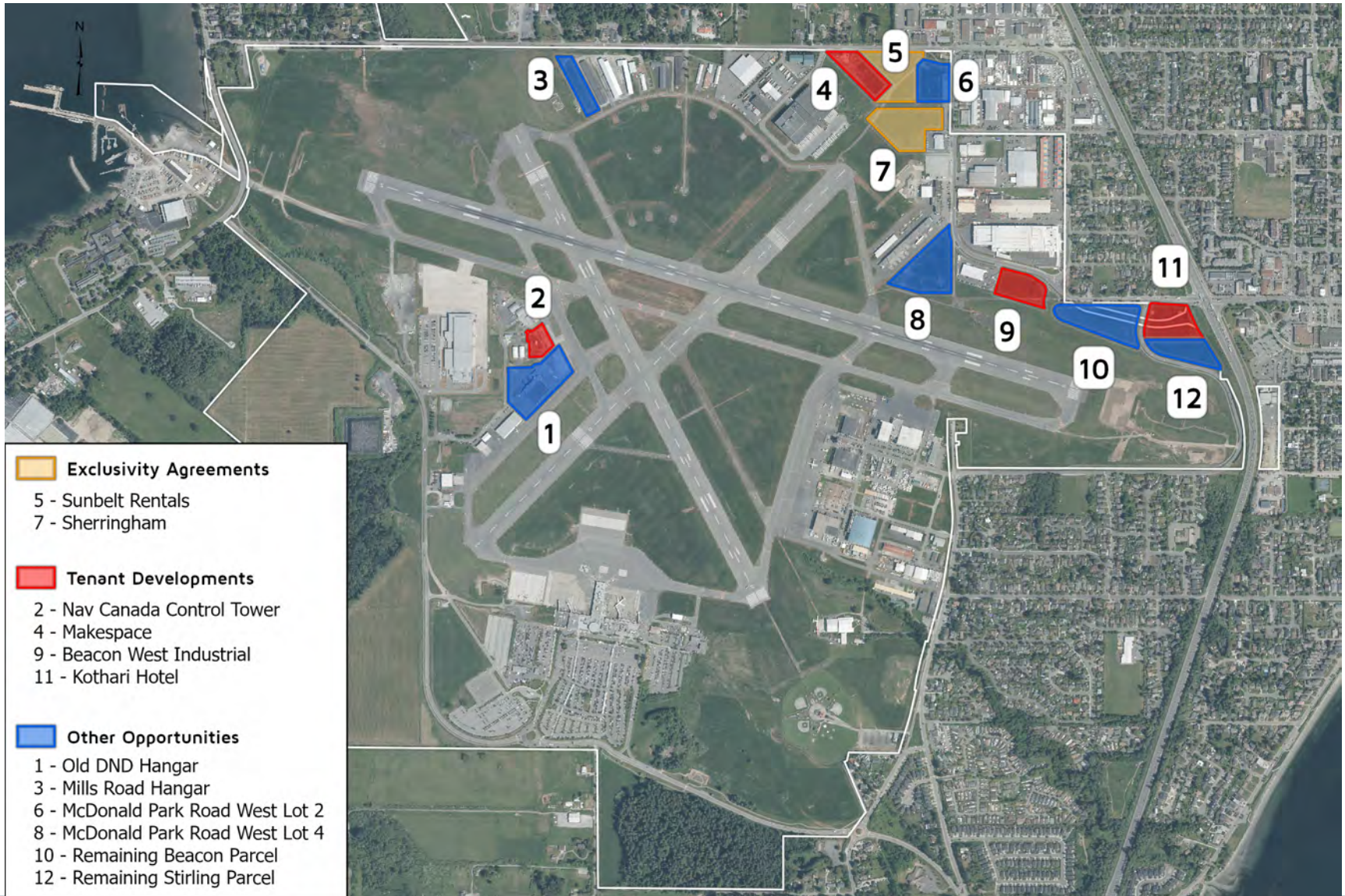
Terminal Flooring Replacement



Business Development in 2023



Land Development Roadmap



Amazon



Kothari Hotel Proposal



Operations and Sustainability



Passenger Experience

- Autism Aviation Day in partnership with the Canucks Autism Network and Air Canada Foundation
- Pet relief area that is more accessible to passengers





Sustainability

Waste Diversion – rate of 75% by 2030

Biodiversity – increase by 20%

Green House Gases – ACI Level 4 carbon neutrality by 2030

Water Quality and Conservation - reduce use by 25%



Pollinator Garden

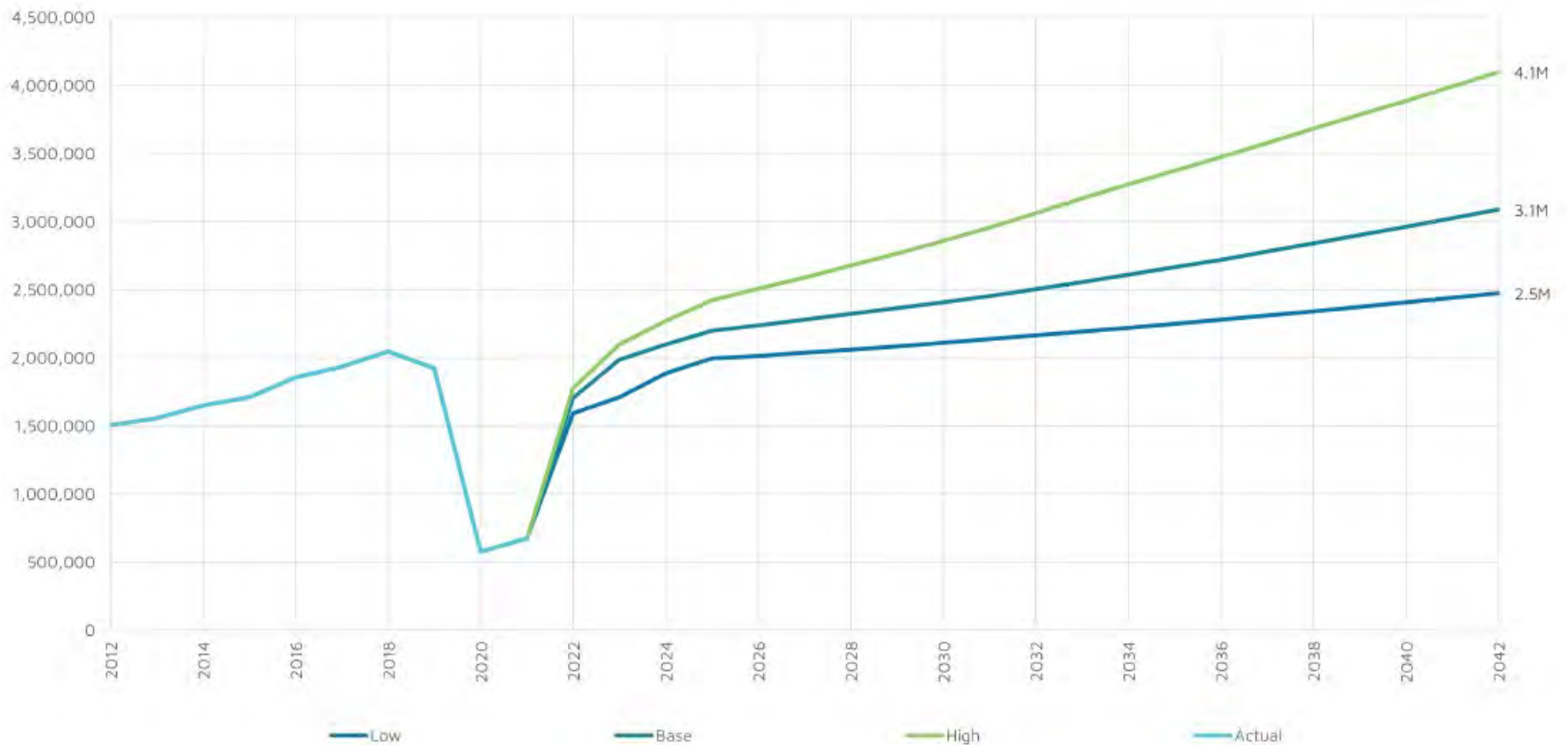


2024 Outlook



Forecast – Annual Passengers

YYJ Annual Pax



2024 and Beyond

- **Focus on Air Service Development and Passenger Growth**
- **Assess Terminal Building Needs and 20 Year Master Plan**
 - Passenger Experience**
 - Technical Innovation**
 - Infrastructure Investment**
 - Terminal Expansion**
- **Commercial Program**
- **Land Development - New Hotel, Cargo Opportunities**
- **Community Partnerships – W̱SÁNEĆ First Nations, Destination Greater Victoria, business community and tourism stakeholders**
- **Sustainability – carbon neutrality by 2030**

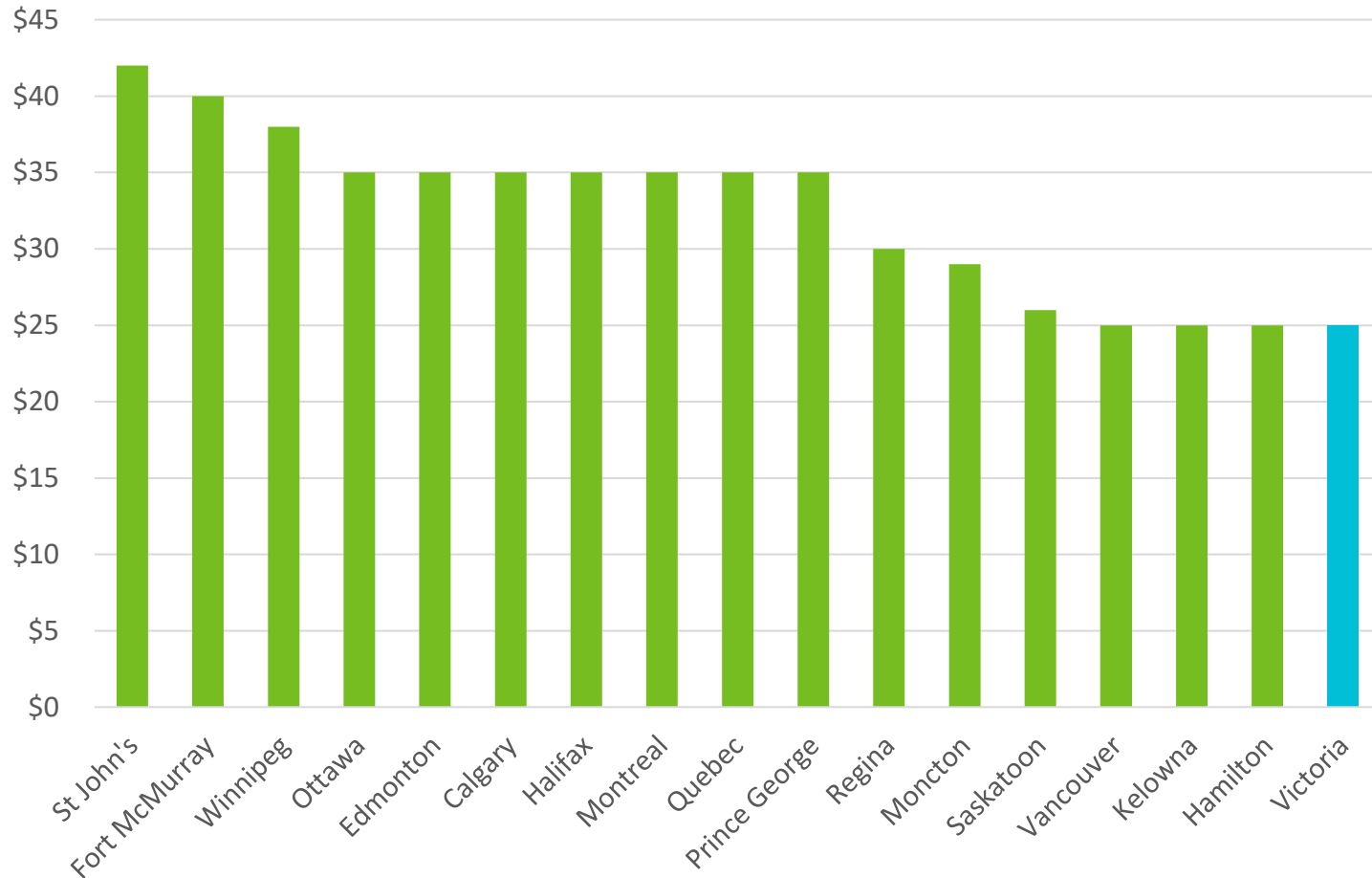
2024 Capital Projects and Big Decisions for the Future

Over \$22 million in capital projects in 2024

- Completion of Runway End Safety Area on main commercial runway
- Taxiway Rehabilitation
- Airfield Signage and lighting upgrades
- Terminal Building Roof Replacement
- Storm Water System Improvements



The Importance of the AIF



New Air Traffic Control Tower



W̱SÁNEĆ: Fostering Partnership and Reconciliation



Welcome to the Martin Mars in 2024





THANK YOU!

**REPORT TO THE CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, JUNE 12, 2024**

SUBJECT **Ed MacGregor Memorial Bursary 2024**

ISSUE SUMMARY

To announce the student selected from Sooke School District 62 to receive the Capital Regional District's 2024 Ed MacGregor Memorial Bursary.

BACKGROUND

Ed MacGregor, the first Mayor of the District of Sooke and a Capital Regional District (CRD) Director, passed away in March 2003 while in office. In April 2003 the CRD Board established a bursary fund in his memory. In the earlier years, this bursary was awarded only to students in Sooke; however, in 2008 it was recognized that bursary funds are raised by all municipalities and electoral areas within the Capital Region and in September 2008 the CRD Board amended the criteria to include the following School Districts (SD): Greater Victoria SD #61; Sooke SD #62; Saanich SD #63; and Southern Gulf Islands SD #64 on a rotating basis.

These are the criteria for awarding the Ed MacGregor Memorial Bursary:

- The bursary will be awarded annually, on a rotating basis, to a graduating Grade 12 student from one of the School Districts of Sooke, Greater Victoria, Saanich, or Gulf Islands, to assist the student in pursuing post-secondary education.
- The bursary is to be awarded on the basis of financial need.
- The participating secondary school principals will recommend which student is to receive the award.
- The bursary is to be in the amount of \$2,500 per annum.

The 2024 recipient, as chosen by the selection committee from Sooke School District 62 is Luis Almhanna.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Carolyn Jenkinson, Manager, Executive Operations
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

**REPORT TO THE CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, JUNE 12, 2024**

SUBJECT **Nils Jensen Memorial Bursary 2024**

ISSUE SUMMARY

To announce the student selected from Sooke School District 62 to receive the 2024 Nils Jensen Memorial Bursary.

BACKGROUND

Nils was a Councillor for 15 years on the Oak Bay Municipal Council before becoming the Mayor of Oak Bay in 2011, a position he held until 2018. Nils also served the broader community by acting as the Chair of the CRD Board and as Chair of the Regional Water Supply Commission for 12 years during which time he helped preserve water security for the region. In April 2022 the family of Nils Jensen established a bursary fund in his memory. This bursary will be awarded to the following School Districts (SD): Greater Victoria SD #61; Sooke SD #62; Saanich SD #63; and Southern Gulf Islands SD #64 on a rotating basis.

These are the criteria for awarding the Nils Jensen Memorial Bursary:

- The bursary will be awarded annually, on a rotating basis, to a graduating Grade 12 student from one of the School Districts of Sooke, Greater Victoria, Saanich, or Gulf Islands, to assist the student in pursuing post-secondary education.
- The bursary is to be awarded on the basis of financial need and an interest in environmental protection or water security.
- The participating secondary school principals will recommend which student is to receive the award.
- The bursary is to be in the amount of \$2,500 per annum.

The 2024 recipient, as chosen by the selection committee from Sooke School District 62 is Makayla Graham.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Carolyn Jenkinson, Manager, Executive Operations
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

**REPORT TO ARTS COMMISSION
MEETING OF WEDNESDAY, MAY 22, 2024**

SUBJECT **CRD Arts and Culture: 2023 Impact Report**

ISSUE SUMMARY

The *CRD Arts and Culture: 2023 Impact Report* has been completed and is ready for review by the CRD Arts Commission before being forwarded to the CRD Board for information, distributed to councils, and made available to the public.

BACKGROUND

Produced annually, the *CRD Arts & Culture Impact Report* provides a glimpse into the social, economic, and artistic impact of the CRD Arts & Culture Support Service. From 2018 to 2021, this report was called a Progress Report. In 2022, after an organization-wide review, it has been renamed to “Impact Report,” which more accurately reflects its purpose as an outreach initiative to show the impact of CRD arts funding. The 2023 Impact Report will be distributed widely, leveraging CRD digital platforms, including mailing lists, e-newsletters, and social media.

In the previous two years, the Arts Commission has directed staff to advance the annual Impact Report to the CRD Board to raise awareness about the positive impact the service is having across the region; that direction is now incorporated into the staff recommendation.

The 2023 Impact Report presents information through infographics, statistics, images, and storytelling around two broad themes: 1) the extensive consultation process leading to the design and production of a new strategic plan (2024-27) for the Arts and Culture Support Service, and 2) the remarkable and robust return of audiences to arts activities in the first full year after pandemic restrictions had been lifted.

ALTERNATIVES

Alternative 1

The Arts Commission recommends to the CRD Board that staff distribute the *CRD Arts and Culture: 2023 Impact Report* virtually through the CRD website and as physical copies to all councils and electoral area directors to raise awareness about the positive impact of the Arts and Culture Support Service throughout the capital region.

Alternative 2

That this report be referred back to staff for additional information.

IMPLICATIONS

Copies of the 2023 Impact Report will be distributed to councils of participating and non-participating jurisdictions, as well as the CRD Board. The report will be distributed to the regional arts community and broader public through links in the CRD Arts & Culture e-newsletter (which has over 800 subscribers), social media, and the CRD website.

To limit the environmental impact of printing, grant recipients are provided with a link to the impact report as a digital asset with the option to request a physical copy if they require it.

CONCLUSION

The 2023 Impact Report provides a glimpse into the crucial impact of CRD Arts and Culture grant funding and outreach activities. Once reviewed by the CRD Arts Commission and CRD Board, copies will be distributed to all jurisdictions and published on the CRD website.

RECOMMENDATION

The Arts Commission recommends to the CRD Board that staff distribute the *CRD Arts and Culture: 2023 Impact Report* virtually through the CRD website and as physical copies to all councils and electoral area directors to raise awareness about the positive impact of the Arts and Culture Support Service throughout the capital region.

Submitted by:	Chris Gilpin, MPA, Manager, Arts & Culture
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: *CRD Arts and Culture: 2023 Impact Report*

Appendix B: Presentation of 2023 Impact Report

Appendix C: List of 2023 Grant Recipients



2023 Impact
Report

CRD
Arts & Culture

TERRITORIAL ACKNOWLEDGMENT

The CRD conducts its business within the traditional territories of many First Nations, including but not limited to BOKÉĆEN (Pauquachin), MÁLEXEŁ (Malahat), P'a:chi:da?ah̓t (Pacheedaht), Pune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, S̓TÁUT̓W̓ (Tsawout), T'Sou-ke, W̓JOŁEŁP (Tsartlip), W̓SIKEM (Tseycum), and x̓w̓sepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.

We are committed to respectfully and appropriately engaging these First Nations in regional arts and culture strategies, decision-making and shared interests, recognizing that the attitudes, policies and institutions of colonization have changed Indigenous peoples' longstanding relationships with their artistic and cultural practices.



Organizational Overview

Capital Regional District (CRD) delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure, while continuing to provide core services to residents throughout the region.

CRD Arts and Culture Support Service (the Arts Service) is a sub-regional service supported by 9 jurisdictions providing grants to non-profit organizations for the development of local arts programming, creating artistic, social and economic benefits for the region.

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All photos within this report are provided (with our thanks) courtesy of grant recipients. Unless otherwise noted, images are of 2023 programming.

Cover: Dilly Crooner performs at **Friends of Bowker Creek Society’s** Creekside Concert in Oak Bay. Photo: Karissa Chandrakate.

Message from the Chair of the Arts Advisory Council

Each year, as I reflect on the successes of the organizations we were able to support, I am reminded of how fortunate we are to live in a region that benefits from such a robust, imaginative arts community. In 2023, this sentiment was echoed by audiences across the region, who came back after the pandemic to engage in-person with the arts in greater and greater numbers. Our arts community matched this growing enthusiasm, demonstrating a continued resiliency and dedication that was evident in a year filled with high-quality programming in all areas of artistic practice.

Over the past four years of the 2020-23 Strategic Plan, the Arts Service has been substantially improved in many ways. I'm especially proud of the important work our EDI Subcommittee has done to bring an equity, diversity, and inclusion lens to all of our granting programs, leading to multiple changes to the application and adjudication processes that have made our granting more accessible and more responsive, ultimately better supporting the full artistic and cultural potential of the region.

I am also particularly grateful to have been a part of the meaningful conversations we were able to have with the arts community over the past year as part of the consultation process for the Arts Service's new 2024-2027 strategic plan. We had the opportunity to engage with artists, advocates, and community



members – listening to their needs, concerns, and aspirations. I'm pleased to say that the insights gained from that dialogue are well-reflected in the new strategic plan, and will continue to shape how we approach our work for years to come.

In 2023, we thanked four outgoing Arts Advisory Council members for their service and have since welcomed three new members to the council who each bring their own unique background and expertise to adjudication. We are incredibly honored to have been a part of the Arts Service's many accomplishments in 2023, from developing a 2024-2027 Strategic Plan to distributing a record-high amount of funding to doubling the maximum ask amount for equity grants. We look forward to working with the Arts Commission and CRD staff to continue delivering the vital funding the arts community relies on, and to carry on the important conversations that were started last year.

Joanna **VERANO**
Chair, CRD Arts Advisory Council

Message from the Chair of the Arts Commission

This past year has been marked by a strong sense of transition and momentum as we completed our 2020-2023 strategic plan and embarked on the development of a new one. Over the last four years, the Arts Service has made significant progress toward increasing the impact of its funding across the region for the benefit of all communities, and the Arts Commission's commitment to this goal continues to be our driving force as we form our strategy for the next four.

At the outset of 2023, the newly appointed members of the Arts Commission set our sights on the future by launching an extensive community consultation process to inform the creation of a new strategic plan. Throughout the first half of the year, we were immersed in conversations with arts professionals, supporters, and audience members from across the region, whose insights have been instrumental in shaping new priorities, goals, and actions for the Arts Service. A highlight for me was emceeing the Arts Champions Summit that gathered over 100 arts leaders. The level of engagement during this process was tremendous, and the resulting 2024-2027 Strategic Plan is a reflection of our arts community's collective aspirations for a well-supported, thriving arts sector.

The Arts Commission and supporting staff are keenly aware that cultural policy cannot be formed in isolation, and requires first-hand experience of



current arts events so that we can better understand the impacts of our funding and policy decisions. With that in mind, it has been immensely rewarding to see our region's theatres, galleries, and concert halls filled with the energy and enthusiasm of in-person audiences. For me, watching this uptick of well-attended events and sold-out shows after the pandemic has reaffirmed the vital role that the arts continue to play in fostering connection, stimulating economic activity, building strong communities, and nourishing the human spirit.

As we continue to move forward with implementing the new strategic plan, I am filled with optimism for the future of the region's arts. The work we have done together over the past year has laid the groundwork to build more vibrant, resilient, and equitable communities, and a strong, well-supported arts sector that can continue to provide the inspiration so vital to fulfilling the lives of our region's residents.

Marianne **ALTO**
Chair, CRD Arts Commission

Supporting The Region's Arts

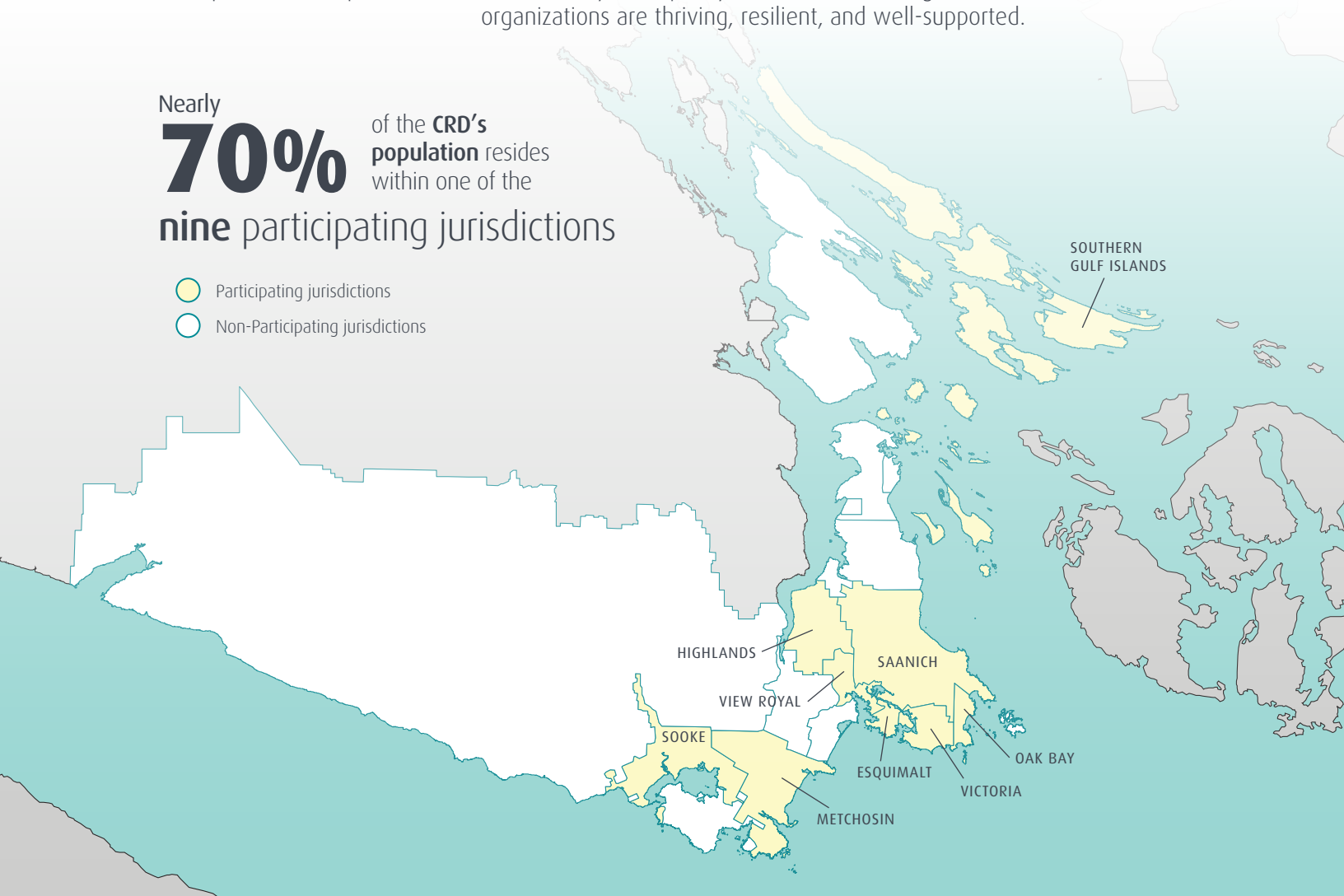
CRD Arts & Culture Support Service is a sub-regional service that distributes grants to non-profit organizations to develop local arts programming. Supported by nine jurisdictions, funding creates artistic, social and economic benefits for the region. Through outreach, the Arts Service fosters collaboration between arts organizations, funders and audiences.

Our mission: To support, champion & develop the arts.

Our vision: The arts are key drivers of community vitality, economic sustainability, and quality of life across the region, and artists and arts organizations are thriving, resilient, and well-supported.

Nearly
70% of the **CRD's population** resides within one of the
nine participating jurisdictions

-  Participating jurisdictions
-  Non-Participating jurisdictions





A crowd gathers to watch artists paint during the Trackside Paint Jam, organized by Esquimalt Community Arts Hub. Photo: Colin Smith.

Delivering on Our 2020–2023 Strategic Plan Priorities & Goals

2023 marked the end of our 2020-2023 Strategic Plan, which identified five key goals and priorities that have guided our operations and initiatives for the last four years. During that time, we've made significant progress on these goals, including these highlights:



INCREASE COMMUNITY AWARENESS

- ▶ 100% increase in grant applicants from 2020 to 2023
- ▶ Social media followers up 12%, e-newsletter subscribers up 3% since 2021
- ▶ Implemented regular information sessions, 100+ attendees to date



INCREASE PARTICIPATION AND FUNDING

- ▶ Continued to communicate benefits of the service across the region with presentations at council meetings, targeted mailings and social media content



MAKE ACCESS EQUITABLE

- ▶ Doubled the 2023 Equity Grant budget & maximum request amount
- ▶ Expanded eligibility & reduced complexity of Equity Grant applications & reporting
- ▶ Embedded more equity considerations into the application process & questions



SUSTAIN CREATIVITY

- ▶ Continued the delivery of granting programs throughout the Covid-19 pandemic
- ▶ Streamlined the application and reporting to alleviate administrative burdens



RESPOND TO GRANTING NEEDS

- ▶ Ongoing engagement with the arts sector to inform & implement necessary changes
- ▶ Record-high funding amount awarded in 2023, \$2.6 million

2023 FUNDING IMPACT

\$2.6 million
invested in arts through
our granting programs

93 grants
awarded
to local arts non-profits
& artist-led partnerships

5,297 arts
workers
employed by grant
recipients in 2023

45% increase
in Equity Grant funds
awarded over 2022

9,460+ arts
events
& performances activated
by grant recipients

928,580+
audience members,
participants & attendees

Kuba Oms performing at Cook Street Village
Block Party. Photo: Emma Rossum.

Developing a New Strategic Plan

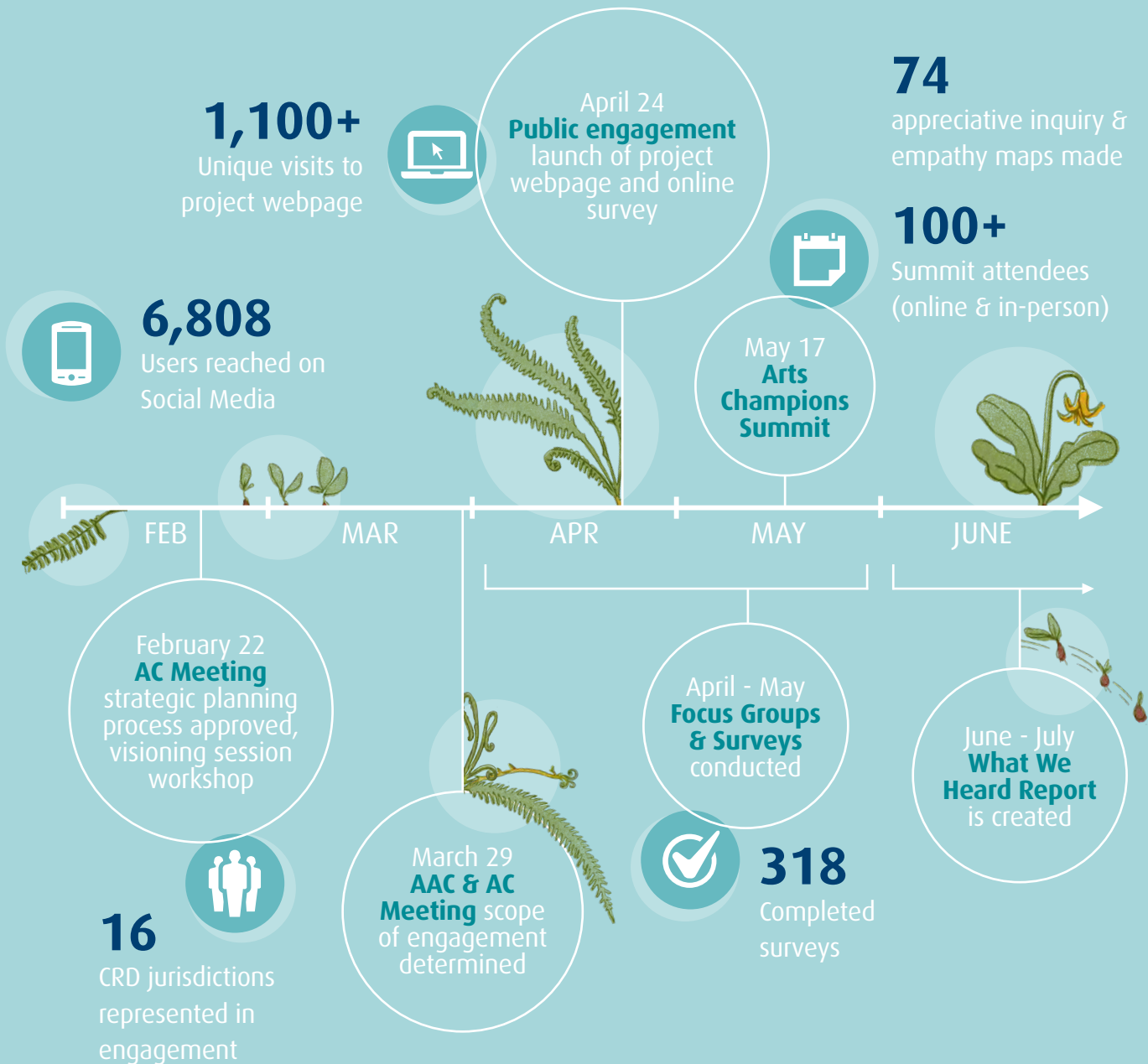
Consulting Our Community

As we wrapped up the 2020-2023 Strategic Plan, we also began looking ahead, developing a new 2024-2027 Strategic Plan, informed both by the learnings of the past four years, and from extensive community engagement with the region's arts community throughout the first half of 2023.

To ensure that the strategic planning process would be informed by community knowledge, CRD staff facilitated surveys, focus groups and an Arts Champions Summit to gather feedback about community needs and aspirations. We heard from artists, arts organizations, the Arts Advisory Council, rural arts leaders, staff from other arts funding agencies, and arts audiences, all of whom brought forward their own unique, invaluable perspectives.



A table group in discussion at the Arts Champions Summit. Photo by Dan Russek.





Arts Champions Summit promotional artwork by Ileya Iess



Above: Arts Champions Summit activity, in action. Photo by Dan Russek

What We Heard

After the engagement period concluded in the summer of 2023, we developed a **What We Heard Report**, which reflected the feedback received from the community. It laid out several key takeaways, some of which indicated that continuity with the previous strategic plan would be appropriate in certain areas:

- ▶ A regional approach to arts funding received widespread approval.
- ▶ There is a lack of awareness about which municipalities contribute to the service.
- ▶ Barriers to access funding continue to impact the arts community.
- ▶ There is a need for increases to arts programming funding.
- ▶ The arts community is experiencing growing challenges around affordability (both for individual artists and arts spaces) and infrastructure.
- ▶ There is a need to enhance opportunities for capacity-building (e.g. mentoring, organizational development, and partnerships).
- ▶ CRD Grant programs are relied upon as key supports by the arts sector - program structure is consistent with a mature and effective service.

Victoria Dragon Boat Festival
performers. Photo: Colin Smith.



The 2024–2027 Strategic Plan

In October of 2023, the Arts and Culture Support Service 2024-2027 Strategic Plan was finalized and approved by the Arts Commission. Informed by community knowledge, related CRD strategies, staff expertise and an updated vision and mission, the plan will guide our efforts over the next four years.

The 2024-2027 Strategic Plan consists of five new strategic priorities, each supported by corresponding goals and actions. The full plan, including supporting actions, can be found on our website at www.crd.bc.ca/arts.



CHAMPION – ADVOCATING FOR THE ARTS

- ▶ **Goal 1:** Scale up regional participation in the Arts Service to expand its scope and impact
- ▶ **Goal 2:** Raise awareness of the value of the arts to demonstrate how it contributes to economic sustainability, community vitality, and quality of life



CONNECT – ENHANCING COLLABORATION

- ▶ **Goal 3:** Foster collaboration and knowledge-sharing to boost organizational development
- ▶ **Goal 4:** Work collaboratively with all levels of government to connect arts organizations with support for arts spaces and other funding



CULTIVATE – DEVELOPING THE ARTS ECOSYSTEM

- ▶ **Goal 5:** Support the region's arts ecosystem to grow sustainably
- ▶ **Goal 6:** Align funding programs to respond to community needs



EXTEND – BROADENING THE SCOPE OF IMPACT

- ▶ **Goal 7:** Invest in under-served and marginalized communities to support the full artistic and cultural potential of the region.
- ▶ **Goal 8:** Reduce barriers to increase access to funding.



ENGAGE – SHARING OUR STORY AND LEARNING

- ▶ **Goal 9:** Diversify educational resources for grant applicants to enhance knowledge base
- ▶ **Goal 10:** Enhance the branding of the Arts Service to clarify its focus

THE CAPITAL REGION'S AUDIENCES ARE BOUNCING BACK

"We emerged from the pandemic lockdowns to [perform] to **sold-out houses**... we were encouraged by **great attendance** that included new members from immigrant communities from Chile, Brazil and Mexico"

– Atomic Vaudeville



Photo: Helene Cyr

Photo: Bill Cubitt



"[We] were very pleased to see an **increasing return of participants** for our Festival... We are very encouraged by this **strong response**"

– Greater Victoria Performing Arts Festival

"Last summer (2022) some audiences were still tentative to return after the pandemic. This summer **audiences were back in full force**"

– SNAFU Society of Unexpected Spectacles



Photo: Helene Cyr

photo: Jam Hamidi



"Even with the impact the Pandemic continues to have on our sector, **our audiences are expanding immensely**. A few years ago, we expected audiences in the hundreds. Now, they're in the thousands"

– Puente Theatre

Photo: Joshua Lawrence



"[We] considered this production **very successful**... We had the **entire show run sell out** over a month in advance, which helps indicate there is a need and desire for this work which we found very empowering"

– Noble Riot Dance Theatre Society

"The festival [was able to] **significantly increase audience attendance** for the 2023 Festival over the previous years attendance following the resumption of public concerts after the [pandemic]"

– Victoria Summer Music Festival



Photo: Victoria Photography Club

Photo: Jose Olan



"One of the highlights of our 2022/23 programming was Garden City Grooves Festival... the **highest attended festival to date**"

– Victoria BC Ska & Reggae Society

"**Ticket sales were stronger than expected during 2022/23.** We observed pre-pandemic audiences returning to the theatre, as well as new audiences joining our performances and programs"

– Dance Victoria



Photo: Thak Smith

Photo: Don Craig



"Last year, 50% of our single ticket buyers were new... **Post-pandemic growth trajectory is optimistic** and well above the national average"

– Belfry Theatre

Stories of Impact

The qualitative impact of funding is often most effectively conveyed through storytelling. Hear from funded organizations what they were able to accomplish with the help of CRD funding this year:



HEILSSET dancers at Campbell Bay Music Festival's WSÁNEĆ carved welcome post unveiling. Photo: Hannah Epperson.

CAMPBELL BAY MUSIC FESTIVAL

Project Grant | Southern Gulf Islands

The Campbell Bay Music Festival's Saturday Market Stage was a "highly successful and enlivening" event this year, says a representative from the festival. An audience of nearly 500 people gathered around the local agricultural hall outdoor stage to take in the remarks of indigenous elder J'SINTEN, followed by performances from local community choirs, fiddlers, music students, bluegrass bands and more.

Its success as a community event showcasing youth, local and indigenous musicians has even led to talks of making the Saturday Market Stage into its own independent event, rather than a segment of the summer festival, and opened up possibilities for increased collaboration with WSÁNEĆ musicians and artists in the community.

CINEVIC

Operating Grant | Victoria

A 2023 programming highlight, CineVic's 10th annual Short Circuit Pacific Rim Film Festival was their largest yet: "a seven-day run of in-person screenings, pitches, and artist networking events with more than 30 guest filmmakers and over 2400 total audience." The festival showcases both local and foreign artists and creators from across the Pacific Rim.

As one supporter put it, "CineVic does a wonderful job of facilitating independent film creation [and] finding the right balance of programs and support for a diverse range of indie filmmakers at all ability or experience levels."



Participants at a film production workshop presented by CineVic at Intrepid Studio. Photo: David Geiss.



Choral Evolution performing at Holy Trinity Church in Sooke. Photo: D. Titchkosky.

CHORAL EVOLUTION

Project Grant | Sooke

A highlight of Choral Evolution's Spring 2023 season was bringing on a professional bassist and a percussionist to accompany the choir at performances. The choir's newly enhanced performances were met with standing ovations and excited audience members who felt compelled to join the group themselves. "Music brings people together in wonderful ways," remarked a member whose own experience mirrored this audience-turned-member pipeline when they joined the group in 2022.

AVENTA NEW MUSIC

Operating Grant | Oak Bay

Recognized for their excellence in programming, the Globe and Mail has described Aventa Ensemble as having "a knack for putting contemporary compositions together."

This past year, the ensemble's programming highlights included the release of an album, a concert series, collaborative projects, and the development of an opera component. Showcasing local talent as well as introducing our region's audiences to visiting artists and composers, Aventa plays a vital role in the region's music community.



Aventa Ensemble performing Tremblay. Screen capture of Aventa's video recording.



Seven characters from various productions by the WONDERHEADS.
Masks: Kate Braidwood, photo: DesignEgg



Tilda (Kate Braidwood) and Wendell (Andrew Phoenix) in *The Wilds*
by WONDERHEADS. Masks: Kate Braidwood, photo: Tori Pinter

WONDERHEADS

Project Grant | Victoria

The WONDERHEADS create original productions in full-face mask, a wordless, whimsical style they describe as “visual storytelling”, or “living animation.” Full-face mask is an extremely virtuosic style of performance, and quite uncommon – the WONDERHEADS represent a very unique part of this region’s artistic community.

In 2023, the WONDERHEADS experienced a period of notable growth, touring their original stage production, *The Wilds*, across Vancouver Island, bringing the region’s arts to an even wider audience, and presenting *A WONDERHEADS Christmas Carol* for a three-week run at the Belfry theatre.

In the midst of this growth, the WONDERHEADS team looks to what’s next: “we do our best to hold that little spark cupped in our hands - the spark that started it all and asks us to explore questions about loss, love, mortality...the spark that inspires us to create with whimsy, curiosity, and playfulness...the spark that compels us to hold ourselves to the rigorous pursuit of artistic excellence... We are excited for what the future has to bring.”

We are pleased to share that the WONDERHEADS are now Operating Grant recipients as of February 2024.

HISPANIC FILM SOCIETY OF VICTORIA

Project Grant | View Royal

Self-described “promoters of inter-cultural exchanges,” the Hispanic Film Society’s mandate includes promoting Latin American and Spanish film-making, bringing the community together around a cultural event that is unique in the capital region.

In October of 2023, the Hispanic Film Society of Victoria put on the 13th Annual Latin American and Spanish Film Week at Cinecenta. The week’s events included a slate of five films, live music, salsa dancing, presentations, food tastings, poetry readings, dance performances and more. Through a partnership with the Department of Hispanic and Italian Studies at UVIC, the society was also able to expand the scope of the event to include academic presentations, broadening their reach and impact in the community.

PTARMIGAN ARTS

Operating Grant | Southern Gulf Islands

“Ptarmigan’s multi -generational music and arts programs are educational, joyful, powerful and meaningful experiences for everyone involved. Their work contributes to quality of life for everyone in our island communities” says David Howe, past CRD Director, Southern Gulf Islands.

Ptarmigan Arts provides high quality, diverse, inclusive and accessible arts programming in rural island communities that help to inspire creativity, and contribute to a sense of wellness and community belonging in an area that can often be isolated. Over the past fiscal year, Ptarmigan’s artistic programs, events and sponsorships allowed a wide variety of arts initiatives to thrive in Southern Gulf Island communities.

“Ptarmigan’s impacts are huge, ongoing and permanent,” underscores Heather Read, a Pender Island musician, “[they are] an absolute mainstay here and a major community hub... I was able to pretty much launch my career and take it to the next level because of their support.”



Salsa dancing at the Night of Latin Music with Pablo Cárdenas & the West Coast Cuban Orchestra. Photo: Dan Russek.



Community art workshop- making art with natural and recycled materials Photo: Rachel Lenkowski.

2023 Grant Recipients

EQ: Equity Grant ID: IDEA Grant INC: Incubator Grant OG: Operating Grant PG: Project Grant * new recipient



BC Accordion & Tango Society PG



Active/Passive Performance Society PG



Amber Academy Youth Fine Arts ID



Aventa Ensemble OG



BC Black History Awareness Society EQ*



Afro Latin Cultural Exchange Society PG



Art Gallery of Greater Victoria OG



Ballet Victoria OG



Belfry Theatre OG



Alter Arts Society PG



Atomic Vaudeville OG



Bayanihan Cultural & Housing Soc. EQ



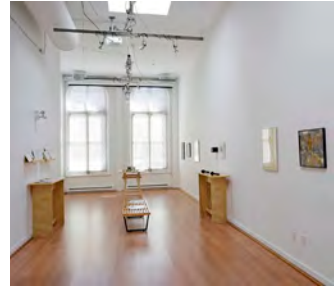
Blue Bridge Repertory Theatre PG



Bounce Performance Works [PG](#)



Choral Evolution [PG*](#)



Deluge Contemporary Art [OG](#)



Farheen Haq | Open Space [EQ](#)



Broken Rhythms [PG](#)



CineVic [OG](#)



Early Music Society of the Islands [OG](#)



Fifty Fifty Arts Collective [PG](#)



Campbell Bay Music Festival [PG](#)



Cook Street Village Business Association [IDEA*](#)



Embrace Arts Foundation [PG](#)



Flamenco de la Isla [PG](#)



Caravan World Rhythms [PG](#)



Dance Victoria [OG](#)



Esquimalt Community Arts Hub [PG](#)



Friends of Bowker Creek [IDEA](#)



Galiano Conservancy Association [IDEA*](#)



Greater Victoria Youth Orchestra [OG](#)



Hispanic Film Society of Victoria [PG](#)



International Tea Appreciation Society [IDEA*](#)



Galiano Island literary Festival [PG*](#)



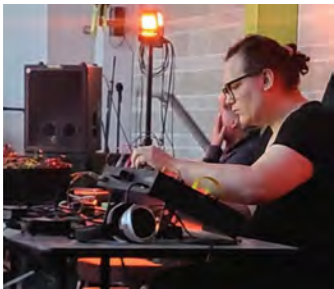
Hapax Theatre [PG](#)



Impulse Theatre [PG](#)



Intrepid Theatre [OG](#)



Garden City Electronic Music [PG](#)



Harmony Project Sooke [IDEA](#)



India Canada Cultural Association of Victoria [PG](#)



James Bay Community School [IDEA*](#)



Greater Victoria Performing Arts Festival [OG](#)



Haus of Owl Creation Lab [INC*](#)



Integrate Art Society [PG](#)



Jewish Community Centre of Victoria [IDEA](#)



John Aitken | Ptarmigan Arts [EQ](#)



Ministry of Casual Living [PG](#)



Pacific Opera Victoria [OG](#)



SNAFU Society of Unexpected Spectacles [OG](#)



Kaleidoscope Theatre for Young People [OG](#)



Monoceros Education Society [EQ](#)



Ptarmigan Arts [OG](#)



Sooke Arts Council [PG](#)



Kara Stanton | Integrate Art Society [EQ](#)★



Noble Riot Dance Theatre [PG](#)



Puente Theatre [OG](#)



Sooke Community Choir [PG](#)



MediaNet [OG](#)



Open Space [OG](#)



SingYourJoy Young Adult Chorus [PG](#)



Southern Gulf Island Community Resource Centre [IDEA](#)



Story Theatre [OG](#)



Theatre SKAM [OG](#)



Victoria Arts Council [OG](#)



Victoria Choral Society [PG](#)



Suddenly Dance Theatre [PG](#)



Three on a Tree Productions Society [PG](#)



Victoria Baroque [OG](#)



Victoria Conservatory of Music [OG](#)



The Other Guise Theatre [PG](#)✳️



Vancouver Island Visual Arts Society [INC](#)✳️



Victoria BC Ska & Reggae Society [OG](#)✳️



Victoria Downtown Residents Association [IDEA](#)✳️



Theatre Inconnu [OG](#)



Veselka Ukrainian Dance [PG](#)



Victoria Children's Choir [OG](#)



Victoria Dragon Boat Festival [EQ](#)✳️



Victoria Festival of Authors [PG](#)



Victoria On Stage [OG](#)



Victoria Summer Music Festival [PG](#)



Wisser Developments Society [IDEA*](#)



Victoria Film Festival [OG](#)



Victoria Philharmonic Choir [PG](#)



Victoria Symphony [OG](#)



Wonderheads [PG](#)



Victoria Jazz Society [OG](#)



Victoria Poetry Project [PG](#)



Westshore Community Concert Band [PG*](#)



Xchanges Gallery & Studios [PG](#)



Victoria Native Friendship Centre [EQ](#)



Victoria Shakespeare Society [OG](#)



William Head on Stage [PG](#)



Yellowhouse Arts Centre [PG](#)

Image Credits & Attributions

Active/Passive Performance Society | Adam Startin performing at Active/Passive Vol.5. Photo: Dayna Szyndrowski.

Afro Latin Cultural Exchange Society | Afro beat group lead by Bonifacio at the Saturday night gala. Photo: Dominic Tioseco.

Alter Arts Society | MC & Drag performer Peaches and Screams perches on the stage. Photo: Colin Smith.

Amber Academy Youth Fine Arts | Society logo.

Art Gallery of Greater Victoria | Beading workshop with Connie Paul. Photo: Natalie Rollins.

Atomic Vaudeville | Kathleen Greenfield & Loreto Espinoza in *Pandemonium: Fear Freedom*. Photo: Helene Cyr.

Aventa Ensemble | Aventa records Gilles Tremblay's *Solstices*. Screen capture provided by Aventa.

Ballet Victoria | *Peter Pan*. Photo: Gail Takahashi.

Bayanihan Cultural & Housing Society | Society logo.

BC Accordion & Tango Society | Payadora Tango Ensemble. Photo: Alex Richardson (2022 programming).

BC Black History Awareness Society | The Function Headliner crowd/performer. Photo: Femi (@indulgentimages).

Belfry Theatre | Jenny Brizard & Matthew G. Brown in *Intimate Apparel* by Lynn Nottage. Photo: David Cooper.

Blue Bridge Repertory Theatre | Danica Charlie and Lucy McNulty in *Goodnight Desdemona (Good Morning Juliet)* by Ann-Marie McDonald. Photo: Jam Hamidi.

Bounce Performance Works | Promotional artwork for *Dracula Trilogy of Terror* adaptation by Brian Richmond.

Broken Rhythms | *Knotted* by Dyana Sonik-Henderson. Photo: Helene Cyr.

Campbell Bay Music Festival | HELI,SET dancers at the pole unveiling. Photo: Hannah Epperson.

Caravan World Rhythms | Trichy Sankaran performing with ensemble at Artsprint theatre. Photo: Robert Benaroya.

Choral Evolution | Full choir performance. Photo: D. Titchkosky.

CineVic | Filmmaker Q&A at the 12th annual Short Circuit Pacific Rim Film Festival. Photo: David Geiss

Cook Street Village Business Association | Cook Street Village Block Party. Photo: Emma Rossum.

Dance Victoria | Ballet Edmonton with Victoria Symphony in *LeQuattro*. Photo: Peter Pkorny.

Deluge Contemporary Art | *An un-containing of things—a fluttering, a dispersal, a profusion* installation by Fred Douglas,

curated by Nellie Lamb. Photo: Deluge Contemporary Art.

Early Music Society of the Islands | Consone String Quartet, quartet music on original instruments. Photo: John Fitzmaurice.

Embrace Arts Foundation | Briny. Photo: Tristan Tjosvold.

Esquimalt Community Arts Hub | Trackside Paint Jam artist painting. Photo: Colin Smith.

Farheen Haq & Open Space | Drawing images based on riverside meditation (2022 programming). Photo: Farheen Haq.

Fifty Fifty Arts Collective | Laura Rosengren exhibition. Photo: Laura Rosengren (2022 programming).

Flamenco de la Isla | Event at bandshell. Photo: Amity Skala.

Friends of Bowker Creek | TEALIYE/Brianna Bear at the Creekside Concert in Oak Bay. Photo: Karissa Chandrakate.

Galiano Conservancy Association | Harpist Mary Greenwood playing in 2023 Musical Walkalong. Photo: Andy Beers.

Galiano Island Literary Festival | Cedar Bowers, Geoff Inverarity, Giselle Vriesen & Kate Hennessey panel. Photo: Donna Usher.

Garden City Electronic Music | Isles (Grace Workman) (no comms form).

Greater Victoria Performing Arts Festival | Accordion player at Woodwinds Highlights Concert. Photo: Alyssa Hanke.

Greater Victoria Youth Orchestra | Summer Strings rehearsal at Philip T. Young Recital Hall at UVIC. Photo: Stefan Shandro.

Hapax Theatre | Society logo.

Harmony Project Sooke | *Music Reader* class Philharmonic Orchestra concert. Photo: Sheila Whincup.

Haus of Owl Creation Lab | *EMBER* poetry workshop with poet Xiao Yue Shan. Photo: Cole Jackson.

Hispanic Film Society of Victoria | Cinecenta's marquee for Latin American & Spanish Film Week. Photo: Dan Russek.

Impulse Theatre Society | Co-creator & performer Andrew Barret in *Soft Spaces*. Photo: Mackenzie Lawrence

India Canada Cultural Association of Victoria | 2019 programming photo.

Integrate Art Society | 2022 programming. Rose Cortez in *I Would Art Installation*, Photo: Venn de la Lune Photography

International Tea Appreciation Society | Society logo.

Intrepid Theatre Company Society | *Passenger Seat* by Library Performance Collective (Vancouver). Photo provided by artists.

James Bay Community School | Society logo.

Jewish Community Centre of Victoria | The 2023 marquee outside the Vic Theatre. Photo: Deborah Bricks.

John Aitken & Ptarmigan Arts | *Living on Unceded Land: A Settler's Perspective*. Screen capture provided by Johnny Aitken.

Kaleidoscope Theatre for Young People | Krystle Pederson as Grandmother Moon in *Frozen River*. Photo: Leif Norman.

Kara Stanton & Integrate Arts Society | Society logo.

Media Net | *The Story of the Dancing Heart* by Samay Arcentales Cajas. Still provided by Samay Arcentales Cajas.

Ministry of Casual Living | Teresa Vander Meer-Chassé's *Sisoo Oma Tjitske shah kut, sh'kut tuuk delt'al*. Photo: Ashley Ohtsijah Hall.

Monoceros Education Society | Queer Crafternoon artists: Claire, Sansal, Cameron, Erin, Luca, Lee. Photos: Celeste.

Noble Riot Dance Theatre | Kayla Henry, Alia Saurini, & Finley Rose in *Luminaries*, choreographed by Kayla Henry & Christina Medina. Photo: Joshua Lawrence.

Open Space | Tania Willard in *Daydreamer's Tea Service*. Photo: Armena Sharmin.

Pacific Opera Victoria | Co-creator, composer, & tenor Isaiah Bell in *The Book of My Shames*. Photo: Dahlia Katz.

Ptarmigan Arts | Community art workshop - making art with natural and recycled materials. Photo: Rachel Lenkowski.

Puente Theatre | Mirelle Fynes, Loreto Espinoza & Heather Watt in *GORGO* by Niah Davis. Photo: Jessica Burr.

SingYourJoy Young Adult Chorus | Performance at the Cridge Centre. Photo: SingYourJoy.

SNAFU Dance Theatre | William Robertson as *Vulture* in *New Earth Bandits*. Photo: Helene Cyr.

Sooke Arts Council | SAC President Sherry Robb painting the background.

Sooke Community Choir | Spring Sing Out with Sooke elementary school choirs. Photo: Sooke Community Choir.

Southern Gulf Island Community Resource Centre | BC World Music Collective Concert. Photo: Southern Gulf Island Community Resource Centre.

Story Theatre | Erica Petty's *Sound Garden*, 2022 Wee Peeks residency with Impulse Theatre. Photo: Impulse Theatre.

Suddenly Dance Theatre | Hoyeon Kim & Jung ah Chung in LUCKY MAYBE: HAENYEO episode 3. Photo: Miles Lowry.

The Other Guise Theatre | Skatepark shenanigans. Photo: Matthew Payne.

Theatre Inconnu | Cast of *The Black Rider; The Casting of the Magic Bullets* by Tom Waits & William S. Burroughs. Photo: Clayton Jevne.

Theatre SKAM | Loreto Espinoza and Jeni Luther in *Suitable Transpo: A Junk Puppet Spectacle* by Kathleen Greenfield at SKAMPede 2023. Photo: Haida Davies-McDermott.

Three on the Tree Productions Society | Stock image.

Vancouver Island Visual Arts Society | Emilie "Bertie" Berthiaume exhibition *Repos*, curated by Laveen Gammie. Photo: Laveen Gammie.

Veselka Ukrainian Dance | L'viv Hopak, *Lesia & the Giant Cherry*. Photo: Mitch Mihalynuk (2022 programming).

Victoria Arts Council | Untitled painting as seen on the VAC Old Town Billboard, Ingrid Mesquita / Victoria Arts Council.

Victoria Baroque | Summer Baroque Intensive Orchestra and vocalists. Photo: Kyrn Basu.

Victoria BC Ska & Reggae society | *Chali 2na & the House of Vibe* at Victoria Ska & Reggae Festival 2023. Photo: Rob Porter, RMS Media.

Victoria Children's Choir | Season Finale Concert: *Songs of Love and Light*. Photo: Meghan Robertson.

Victoria Choral Society | Stock image.

Victoria Conservatory of Music | Veselka Ukrainian dancers join the BC Fiddle Orchestra & Daniel Lapp on stage. Photo: Mark Nicol.

Victoria Downtown Residents Association | Tasha Cadence performs at Music in the Park in Cridge Park. Photo: James Davis.

Victoria Dragon Boat Festival | Performer at Victoria Dragon Boast Festival. Photo: Colin Smith.

Victoria Festival of Authors | Panelists & audience members at the beginning of Forest Poet/Tree Walk. Photo: Mike Andrew McLean.

Victoria Film Festival | Two young volunteers working at a screening. Photo provided by Victoria Film Fest.

Victoria Jazz Society | *Fantastic Negrito* at BC Smoke Shop Harbour Blues 'n Roots Festival 2023. Photo: Doug Featherston.

Victoria Native Friendship Centre | Society Logo.

Victoria On Stage | Dan Comeau as Plankton in *The SpongeBob Musical*. Photo provided by Victoria on Stage.

Victoria Philharmonic Choir | VPC choir. Photo: Megan Mather.

Victoria Poetry Project | Winnipeg Poet Laureate performing at Victorious Voices finals. Photo: Johnny McRae.

Victoria Shakespeare Society | Ciarán Volke & Michelle Naidu in *All's Well That Ends Well*. Photo: Lara Eichhorn.

Victoria Summer Music Festival Society | Victoria Summer Music

Festival Opening Concert 2023. Photo: Victoria Photography Club.

Victoria Symphony | Victoria Symphony performs at the 2023 Symphony in the Summer Festival. Photo: Kevin Light.

Westshore Community Concert Band | Concert. Photo: Marii

William Head on Stage | *Eavesdrop Café* Set. Photo provided by William Head on Stage.

Wiser Developments Society | Stock Image.

WONDERHEADS | *LOON*, the story of a man who falls in love with the moon. Photo & mask: Kate Braidwood.

Xchanges Gallery and Studios | Regan Rasmussen *Safety Within* exhibition. Photo provided by Xchanges.

Yellowhouse Art Centre Society | Dominic Conway of *Malleus Trio* in concert. Photo: Gord Gibbs.



ARTS ADVISORY COUNCIL

Arms-length volunteer group, responsible for adjudicating grants and providing advice to the Arts Commission

Cris Caravaca	Christina Haska
Rachel Ditor	Ari Hershberg
Sue Donaldson (Funding Chair)	Sarah Reid
Richard Gale	Joanna Verano (Chair)
Will Greaves	

ARTS COMMISSION

Elected representatives from participating jurisdictions, responsible for support and development of regional arts

ESQUIMALT	Duncan Cavens
HIGHLANDS	Karel Roessingh
METCHOSIN	Sharie Epp
OAK BAY	Carrie Smart
SAANICH	Colin Plant
SOOKE	Dana Lajeunesse
S. GULF ISLANDS	Paul Brent
VICTORIA	Marianne Alto (Arts Commission Chair)
VIEW ROYAL	Gery Lemon

CRD STAFF

Administers programs & provides support for regional arts decision making

Abby Gibbs	Heather Heywood
Chris Gilpin	Erin Sterling





Bassist & Vocalist Nik West jumps into the air on the TD Main Stage at Bullen Park, Esquimalt, during TD JazzFest 2023, put on by **Victoria Jazz Society**. Photo: Tony Kwon



Capital Regional District

625 Fisgard Street
Victoria, BC V8W 2S6
250.360.3215

www.crd.bc.ca/arts
[@crdartsculture](https://www.instagram.com/crdartsculture)

2023 Impact
Report

CRD
Arts & Culture



2023 FUNDING IMPACT

\$2.6 million
invested in arts through
our granting programs

93 grants
awarded
to local arts non-profits
& artist-led partnerships

45% increase
in Equity Grant funds
awarded over 2022

9,460+ arts
events
& performances activated
by grant recipients

Kuba Oms performing at Cook Street
Village Block Party. Photo: Emma Rossum.

Community Engagement



100+

Summit attendees
(online & in-person)



74

appreciative inquiry &
empathy maps made



1,100+

Unique visits to
project webpage



318

Completed Surveys



Arts Champions Summit promotional artwork by Leya Tess

A vibrant scene from the Victoria Dragon Boat Festival. In the foreground, a large, colorful dragon head is being held up by performers. The dragon has a yellow and green face with large eyes, and its body is covered in red and yellow scales. A woman in a white t-shirt and orange headband is holding one of the poles supporting the dragon. In the background, other performers and spectators are visible, along with a stone bridge and a building. A green tent with the 'fairway market' logo is also present.

Victoria Dragon Boat Festival
performers. Photo: Colin Smith.

The 2024–2027 Strategic Plan

NEW MISSION

To support, champion & develop the arts.

NEW VISION

The arts are key drivers of community vitality, economic sustainability, and quality of life across the region, and artists and arts organizations are thriving, resilient, and well-supported.

THE CAPITAL REGION'S AUDIENCES ARE BOUNCING BACK

"One of the highlights of our 2022/23 programming was Garden City Grooves Festival... the **highest attended festival to date**"

– Victoria BC Ska & Reggae Society



Photo: Jose Olan



photo: Jam Hamidi

"Even with the impact the Pandemic continues to have on our sector, **our audiences are expanding immensely**. A few years ago, we expected audiences in the hundreds. Now, they're in the thousands"

– Puente Theatre



Ptarmigan Arts Community art workshop- making art with natural and recycled materials. Photo: Rachel Lenkowski.

Stories of Impact

AVENTA NEW MUSIC

Showcasing local talent while bringing visiting artists & composers to the region.

CAMPBELL BAY MUSIC FESTIVAL

Community event showcasing youth, local, and indigenous musicians.

CHORAL EVOLUTION

Enhancing performances & bringing people together through music.

CINEVIC

10th annual Short Circuit Pacific Rim Film Festival - the largest yet.

HISPANIC FILM SOCIETY

13th annual Latin American & Spanish Film Week - unique in the region.

PTARMIGAN ARTS

Inspiring creativity, promoting community wellbeing, and launching arts careers.

WONDERHEADS

A year of notable growth, bringing a unique style of performance to the region and beyond.



Bassist & Vocalist Nik West jumps into the air at JazzFest 2023. Photo: Tony Kwon

Thank you!

FOR JOINT DISCUSSION:



What from the report stands out as something we should highlight more in our communications?



What trends you are seeing in the impact of CRD arts funding or in the arts sector itself?

CRD ARTS & CULTURE

2023 Operating Grant Recipients

* first time recipient

ANNUAL	
Atomic Vaudeville	\$25,000
Aventa Ensemble	\$22,930
CineVic	\$23,000
Early Music Society	\$12,000
Greater Victoria Performing Arts Festival	\$8,000
Greater Victoria Youth Orchestra	\$8,000
Kaleidoscope Theatre	\$56,800
MediaNet	\$19,000
Open Space	\$87,930
Ptarmigan Arts	\$19,400
Puente Theatre	\$32,800
Runnymede Enchantment Society (Deluge)	\$38,210
SNAFU Dance Theatre	\$14,500
Story Theatre	\$40,000
Theatre Inconnu	\$27,500
Theatre SKAM	\$40,800
Victoria Arts Council	\$24,000
Victoria Baroque Players	\$9,550
*Victoria BC Ska & Reggae	\$25,000
Victoria Children's Choir	\$13,930
Victoria On Stage	\$21,500
Victoria Shakespeare Society	\$20,000
Subtotal	\$589,850

MULTIYEAR	
Art Gallery of Greater Victoria	\$448,000
Ballet Victoria	\$47,700
Belfry Theatre	\$229,000
Dance Victoria	\$68,900
Intrepid Theatre	\$112,000
Pacific Opera Victoria	\$234,450
Victoria Conservatory of Music	\$55,000
Victoria Film Festival	\$47,170
Victoria Jazz Society	\$66,800
Victoria Symphony	\$407,400
Subtotal	\$1,716,420

**Operating Grant
Total: \$2,306,270**

CRD ARTS & CULTURE

2023 Project Grant Recipients

* first time recipient

JANUARY	
Active Passive Performance	\$6,000
Afro Latin Cultural Exchange	\$8,250
Alter Arts Society	\$8,000
Blue Bridge Repertory Theatre	\$9,600
Campbell Bay Music Festival	\$6,000
Caravan World Rhythms	\$12,000
*Choral Evolution Society	\$3,000
Esquimalt Community Arts Hub	\$5,625
Fifty Fifty Arts Collective	\$6,375
Flamenco de la Isla Society	\$5,700
Garden City Electronic Music	\$12,000
Hapax Theatre	\$3,350
View Royal Hispanic Film Society of Victoria	\$4,000
Impulse Theatre Society	\$10,000
Noble Riot Dance Theatre Society	\$7,500
Suddenly Dance Theatre	\$7,500
Three on a Tree	\$2,300
Victoria Festival of Authors Society	\$12,000
Victoria Summer Music Festival	\$4,150
Wonderheads Theatre Society	\$6,650
Subtotal	\$140,000

APRIL	
BC Accordion & Tango	\$5,000
Bounce Performance Works	\$9,000
Broken Rhythms	\$5,000
Embrace Arts	\$9,250
*Galiano Literary Festival	\$8,000
India Canada Cultural Assn	\$8,000
Integrate Art Society	\$8,000
Ministry of Casual Living	\$12,000
Sing Your Joy	\$3,500
Sooke Arts Council	\$5,000
Sooke Community Choir	\$2,075
*The Other Guise Theatre	\$10,000
Veselka Ukrainian Dance	\$2,000
Victoria Choral Society	\$6,000
Victoria Philharmonic Choir	\$8,000
Victoria Poetry Project	\$7,500
*Westshore Community Concert Band	\$2,075
William Head on Stage	\$12,000
Xchanges	\$10,000
Yellowhouse Arts	\$10,000
Subtotal	\$142,400

**Project Grant
Total: \$282,400**

CRD ARTS & CULTURE

2023 Equity, Incubator & IDEA Grants Recipients

* first time recipient

EQUITY	
Bayanihan Cultural & Housing Society	\$5,000
*BC Black History Awareness Society	\$8,000
Integrate Art Society Kara Stanton	\$8,000
Monoceros Education Society	\$8,000
Open Space Farheen Haq	\$5,000
Ptarmigan Arts Society John Aitken	\$5,000
*Victoria Dragon Boat Festival	\$8,000
Victoria Native Friendship Centre	\$8,000
Subtotal	\$55,000

INCUBATOR	
*Haus of Owl	\$5,000
*Vancouver Island Visual Arts Society	\$5,000
Subtotal	\$10,000

IDEA	
Amber Academy Youth Fine Arts	\$3,000
*Canadian International Tea Appreciation Society	\$3,000
*Cook St. Village Association	\$3,000
Friends of Bowker Creek Society	\$1,000
*Galiano Conservancy Association	\$3,000
Harmony Project Sooke	\$3,000
*James Bay Community School	\$3,000
Jewish Community Centre of Victoria	\$3,000
Southern Gulf Island Community Resource Centre	\$3,000
*Victoria Downtown Residents Association	\$3,000
*Wiser Developments Society	\$3,000
Subtotal	\$31,000

**Equity, Incubator & Idea
Grants Total: \$96,000**

**2023 CRD Arts & Culture Grant Total:
\$2,684,670**



Making a difference...together

REPORT TO ELECTORAL AREAS COMMITTEE MEETING OF WEDNESDAY, JUNE 12, 2024

SUBJECT **Community Resiliency Initiative Grant: 2024 FireSmart Community Funding & Supports**

ISSUE SUMMARY

The Capital Regional District (CRD) assists Electoral Area (EA) communities in reducing their wildfire risk through first responder coordination, public education, emergency planning, and agency cross-training. The CRD is applying to the Union of British Columbia Municipalities (UBCM) for funding to increase EA community wildfire resiliency activities (Appendix A). UBCM requires that all grant applications be accompanied by a motion of support from the local government.

BACKGROUND

UBCM provides funding for a range of community-based projects, including wildfire preparedness. A 2024 grant opportunity is available to support local governments as they build local capacity. The FireSmart Community Funding & Supports program supports activities that reduce community risk from wildfire. As part of the application process, UBCM requires a motion of support to receive and manage grant funding.

Protective Services staff have engaged with EA fire departments, emergency programs, local FireSmart committees, and community stakeholders to inform this grant application. Effective wildfire preparedness programs include seven FireSmart disciplines: education, vegetation management, legislation and planning, development considerations, interagency cooperation, cross-training, and emergency planning.

The CRD has applied for this grant to improve wildfire resiliency in rural EA communities through:

- a FireSmart public education campaign,
- an expanded wood chipping program that provides accessible alternatives to burning,
- a home FireSmart assessment program conducted by local qualified assessors,
- a FireSmart rebate program for residents, and
- dedicated wildfire training for first responders.

If the proposal is approved by UBCM, most grant funding would flow to local volunteers, firefighters and residents. The grant supports payments to community volunteers and contract positions such as the CRD FireSmart Coordinator. Funds would be distributed roughly evenly between EAs and spent over the coming year. Due to the elevated risk of wildfire, the Regional District is eligible for \$200,000 in base funding and each EA is eligible for an additional \$50,000. It is the intention of the CRD Protective Services team to apply for the maximum in each category for an approximate total of \$350,000.

ALTERNATIVES

Alternative 1

The Electoral Areas Committee recommends to the Capital Regional District Board: That the Capital Regional District Board support an application to the Union of British Columbia Municipalities Community Resiliency Initiative Fund for the 2024 FireSmart Community Funding and Supports. Staff are directed to apply for, negotiate, and if successful, enter into an agreement, and do all such things necessary for accepting grant funds and overseeing grant management for the proposed projects.

Alternative 2

That staff be directed to not submit the grant application to the Union of British Columbia Municipalities Community Resiliency Initiative FireSmart Community Funding & Supports program.

IMPLICATIONS

Alignment with Board & Corporate Priorities

Emergency planning and training activity funded by this grant would enhance the CRD's ability to prepare for, mitigate, respond to, and recover from an environmental or climate related disaster.

Alignment with Existing Plans & Strategies

Capacity generated by this grant is aligned with existing emergency preparedness and strategies.

Financial Implications

The grant funding will have no impact on annual core CRD fire department or emergency program service budgets and the requisition revenue. But if the grant application is successful, the additional funding will provide an opportunity for additional projects that increase community resilience to wildfire, such as homeowner education and wood chipping events.

Intergovernmental Implications

A portion of this grant application is ear-marked to support the Island Trust's effort to establish a Development Permit Area. This cross-jurisdiction collaboration supports intergovernmental alignment and coordination.

Service Delivery Implications

Additional capacity funded through this grant would enhance service support capability to the CRD during an emergency or disaster.

CONCLUSION

The CRD supports community wildfire preparedness in its EAs. The UBCM FireSmart Community Funding & Supports funding stream is an important resource to build wildfire resilience in the capital region. If supported by the Board, UBCM will consider the CRD's grant application.

RECOMMENDATION

The Electoral Areas Committee recommends to the Capital Regional District Board:

That the Capital Regional District Board support an application to the Union of British Columbia Municipalities Community Resiliency Initiative Fund for the 2024 FireSmart Community Funding and Supports. Staff are directed to apply for, negotiate, and if successful, enter into an agreement, and do all such things necessary for accepting grant funds and overseeing grant management for the proposed projects.

Submitted by:	Shawn Carby, CD, BHSc, MAL, Senior Manager, Protective Services
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer
Concurrence:	Ted Robbins, Chief Administrative Officer

ATTACHMENTS

Appendix A: 2024 FireSmart Community Funding and Supports Grant Application

Community Resiliency Investment Program

2024 FireSmart Community Funding and Supports

Allocation-based Funding Worksheet

The 2024 FireSmart Community Funding and Supports program will have an open intake. Funding permitting, eligible recipients can submit one funding request between **October 1, 2023 and September 30, 2024**.

First Nations and local governments with a higher risk of wildfire, generally demonstrated by WUI Risk Class 1 to 3, that have a FireSmart Position, participate in a Community FireSmart and Resiliency Committee and have an acceptable Community Wildfire Resiliency Plan/Community Wildfire Protection Plan are eligible to receive FireSmart Community Funding and Supports funding for FireSmart activities only through the allocation-based program.

Please complete and return the worksheet with all required attachments. **Eligible recipients are not required to submit a full Application-based funding package.**

If you have any questions, contact cri@ubcm.ca or (604) 270-8226 ext. 220.

SECTION 1: Recipient Information

First Nation or Local Government full name:
Capital Regional District

File number*:
LGPS-10828

* Refer to the LGPS Online Application Form submission confirmation email.

SECTION 2: For Regional District Recipients Only

- 1. Electoral Areas.** Please identify which electoral areas you would like to receive allocation-based funding for:

Juan de Fuca, Salt Spring Island, Southern Gulf Islands.

Note: In order to receive an additional \$50,000 per electoral area, electoral areas must meet the risk class and eligibility criteria identified in Questions 2 and 4.

SECTION 3: Wildfire Risk & Additional Evidence

- 2. A. WUI Wildfire Risk Class.** Provide the WUI Risk Class (1 – 5) for the general area of interest of your community, including the WUI polygon name, from the risk class map. Refer to Appendix 2 of the [Allocation-based Funding Program and Application Guide](#).

Risk Class: Port Renfrew RC: 5; Jordan River RC: 2; Langford RC: 1; Ganges RC: 5

WUI Polygon name: Port Renfrew; River Jordan; Langford (East Sooke, Malahat, Otter Point, Shirley, etc.); Ganges.

Note: for regional districts only, please provide the risk class and WUI polygon name for each electoral area identified in Question 3.

B. Additional Evidence. If local assessments provide additional evidence of higher wildfire risk than the WUI Risk Class, provide specific evidence of wildfire risk (reference to specific page of a CWRP/CWPP).

Each of the three CWRPs the CRD commissioned for the electoral areas (Juan de Fuca, Salt Spring Island, Southern Gulf Islands), identified the wildfire risk as "moderate" for their respective areas.

The "Local Wildfire Risk Summary" can be found on the specific pages of the CWRPs as follows:

Juan de Fuca: pg. 69

Salt Spring Island: pg. 69

Southern Gulf Islands: pg. 78

SECTION 4: FireSmart Components and Eligibility Criteria

- 3. Progress to Date.** If you were approved for funding under previous rounds of the FireSmart Community Funding & Supports program, please provide the status of the previous project(s).

2021 project: EA FireSmart Program Initiation Project. Complete

2022 project: Education, Chipping, Assessments, and Rebates. Complete

2023 project: Education, Chipping, Assessments, and Rebates. 90% complete

Refer to the Allocation-based Funding Program and Application Guide for reporting requirements for previous projects.

- 4. Required FireSmart Components.** To be eligible for allocation-based funding, all recipients must have the following FireSmart components developed and active in their community.

CWRPs and CWPPs must be complete and acceptable to the BCWS, FNESS and/or, where applicable, BC Parks. To be considered acceptable, CWRPs must be developed in accordance with the template and guidance document and must include assessment and identification of FireSmart and fuel management priorities.

☒ FireSmart Position: FireSmart Coordinator: In place since CRD FireSmart Program inception in 2021. Duties include:

Education

- Support the development of a detailed communications strategy for FireSmart.
- Distribute FireSmart materials through community partners and online.

Community Planning

- Support neighbourhoods to apply for FireSmart Canada Neighbourhood Recognition, including by supporting facilitation and FireSmart events.

Interagency co-operation

- Coordinate FireSmart initiatives between electoral areas and external partners as applicable, such as by representing the CRD in working groups or committees.

FireSmart Implementation

- With homeowners' consent:
 - o Conduct Home Ignition Zone Assessments for residential properties or homes.
 - o Help communities develop FireSmart Neighbourhood Plans.
- Coordinate chipping days or bin programs to facilitate vegetative debris disposal.

Administration

- Report on program implementation, progress, and community feedback regarding FireSmart to the Emergency Planning Coordinator and Manager, Emergency Services.

Protective Services staff work with adjacent CRD departments to perform the following FireSmart program support functions:

Development considerations

- Comment on wildfire issues within a development permit process on behalf of the Protective Services department.

Emergency planning

- Provide comments on wildfire issues during emergency plan and response preparation.

Administration

- Prepare grant applications.

☒ Community Wildfire Resiliency Plan or CWPP (if not previously submitted to UBCM, submit plan): Each electoral area (Juan de Fuca, Salt Spring Island, Southern Gulf Islands) had its own CWRP commissioned and delivered in 2023-Feb-23.

☒ Community FireSmart & Resiliency Committee: In place at local community and fire department levels. The CRD also participates in a regional level Community FireSmart & Resilience Committee that includes several local authorities in the capital region.

If you do not have one or more of the required FireSmart components in place, please provide a clear rationale: n/a

Note: for regional districts only, please provide information on required FireSmart components for each electoral area identified in Question 1.

SECTION 5: Allocation-based Funding Submission Requirements

Only complete submissions will be considered for funding.

Submissions	Related Attachments (as required)
Allocation-based Funding Worksheet	☐ If available, workplans, budgets or other documents with information on anticipated FireSmart activities ☐ Completed CWPP or CWRP (if not previously submitted)

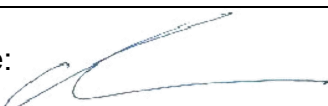
Prior to commencing FireSmart activities (as required)	☐ Approval from SPCO (if applying for Phase 2, 3 or 4) for FireSmart structure protection equipment ☐ Completed FireSmart Assessment(s) for eligible FireSmart Projects for Critical Infrastructure ☐ Completed FireSmart Assessment(s) for eligible FireSmart Projects for Community Assets ☐ Completed Prescription Checklist <u>and</u> FireSmart Assessment(s) for eligible FireSmart Projects for Culturally Significant Sites ☐ Completed Prescription Checklist <u>and</u> FireSmart Assessment(s) for eligible FireSmart Projects for Green Spaces ☐ In cases where critical infrastructure, community assets or culturally significant sites are located on Provincial Crown Land confirmation that the proposed activities are supported will be required from Provincial Crown Land Manager (BC Parks, Mountain Resort Branch, Natural Resource District and/or Recreation Sites and Trails) at the time of application submission.
For CWRP updates only <i>Recipients with an acceptable plan that would like to amend/develop a CWRP must contact UBCM before commencing the project.</i>	☐ PDF map <u>and</u> Google Earth compatible KML file, at appropriate scale, outlining the area of interest and eligible WUI ☐ In cases where the eligible WUI is outside of the AOI, confirmation that the proposed risk assessments activities are supported will be required <u>at the time of application submission</u> from Provincial Crown Land Manager (BC Parks, Mountain Resort Branch, Natural Resource District and/or Recreation Sites and Trails), other land managers (e.g., Indigenous Services Canada, local government) and/or First Nations (where overlap on reserves and/or traditional territories may exist). ☐ In cases where the eligible WUI includes Private Managed Forest Land (PMFL), confirmation that the proposed risk assessments activities are supported will be required <u>at the time of application submission</u> from the PMFL.
For Fuel Management only	Refer to the Application-based program. Worksheet 2 can be submitted with the Allocation-based Funding Worksheet or at a later date.
For Additional Funding for Recipients Impacted by 2023 Wildfires only	Refer to the Appendix 3. Worksheet 4 can be submitted with the Allocation-based Funding Worksheet or at a later date.
Resolution	☐ Council, Board or Band Council resolution, indicating support for the current proposed activities and willingness to provide overall grant management

SECTION 6: Signature – This worksheet is required to be signed by an authorized representative of the recipient (*i.e., staff member or elected official*). Please note all materials will be shared with the Province of BC, First Nations' Emergency Services Society and the BC FireSmart Committee.

I certify that to the best of my knowledge: (1) all information is accurate, (2) the area covered by the proposed project is within the recipient's jurisdiction (or appropriate approvals are in place) and (3) it is understood that this project may be subject to a compliance audit under the program.

Further, for all funded activities, I certify that, to the best of my knowledge: all funded activities will meet eligibility and funding requirements as defined in the [Allocation-based Funding Program and Application Guide](#).

Further, for FireSmart Positions, I certify that: (1) I have read and understand the recommended Job Description(s) and (2) the primary focus of the position is to support eligible FireSmart activities but that other activities related to emergency management (*i.e.*, EOC, ESS, evacuations), structural fire and/or forestry (*i.e.*, Indigenous Guardians) are eligible as no more than 20% of job duties.

Name: Corey Anderson	Title: Manager, Emergency Programs
Signature:  <i>A certified digital or original signature is required.</i>	Date: 2024-May-23

**Documents should be submitted as Word, Excel, or PDF files.
Total file size for email attachments cannot exceed 20 MB.**

**All documents should be submitted to Local Government Program Services,
Union of BC Municipalities by e-mail: cri@ubcm.ca.**

Please note “2024 CRI-Allocation-based” in the subject line

**REPORT TO ELECTORAL AREAS COMMITTEE
MEETING OF WEDNESDAY, JUNE 12, 2024**

SUBJECT Appointment of Officers

ISSUE SUMMARY

This report is to update bylaw enforcement appointments to reflect staff changes in the Capital Regional District (CRD) Bylaw and Animal Care Services Division.

BACKGROUND

Pursuant to Section 233 of the *Local Government Act* and Section 28(3) of the *Offence Act* and in accordance with CRD Bylaw No. 2681, the Electoral Areas Committee must from time to time make resolutions for persons in new positions.

ALTERNATIVES

Alternative 1

The Electoral Areas Committee recommends to the Capital Regional District Board:
That for the purpose of Section 233 of the *Local Government Act* and Section 28(3) of the *Offence Act* and in accordance with Capital Regional District Bylaw No. 2681, Gray Wardle, Rachelle Norris-Jones, Levi Holland, and Michael Riggs be appointed as Bylaw Enforcement Officers.

Alternative 2

That this report be referred back to staff for further information based on Electoral Areas Committee direction.

IMPLICATIONS

Service Delivery Implications

These appointments ensure consistent bylaw enforcement in the CRD Bylaw and Animal Care Services Division.

CONCLUSION

The bylaw enforcement appointments reflect staff changes in the CRD Bylaw and Animal Care Services Division.

RECOMMENDATION

The Electoral Areas Committee recommends to the Capital Regional District Board:
That for the purpose of Section 233 of the *Local Government Act* and Section 28(3) of the *Offence Act* and in accordance with Capital Regional District Bylaw No. 2681, Gray Wardle, Rachelle Norris-Jones, Levi Holland, and Michael Riggs be appointed as Bylaw Enforcement Officers.

Submitted by:	Shawn Carby, CD, BHSc, MAL, Senior Manager Protective Services
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager Planning & Protective Services
Concurrence:	Ted Robbins, Chief Administrative Officer

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, MAY 15, 2024**

SUBJECT Hartland Public Drop-off Depot – Expanded Hours Pilot

ISSUE SUMMARY

To provide an update on a pilot to expand the hours at the Hartland public drop-off depot to increase access and divert recyclable materials from Hartland Landfill.

BACKGROUND

The Hartland public drop-off depot has seen an increase in customers using the pay-by-weight bin area and the recycling/household hazardous waste area. This can lead to long line-ups on Hartland Avenue, particularly at peak times (Mondays and Fridays from 9 a.m. to 12 p.m., Saturdays from 11 a.m. to 2 p.m., and any morning following a holiday). New material bans on clean and treated wood waste and asphalt shingles, coming into effect at Hartland Landfill in 2024, may further increase the demand at the public drop-off depot.

The 2022 Solid Waste Stream Composition Study identified that 47% of garbage sent to Hartland Landfill could have been diverted through existing reuse, recycling or energy recovery programs in the community, including through the Hartland public drop-off depot.

To address levels of service, staff developed an Internal Business Case, and through the 2024 financial plan process, the Capital Regional District (CRD) Board approved a pilot project to trial increasing access to the public drop-off depot at Hartland. The objectives of the pilot project include:

- increasing diversion rates for materials accepted at Hartland's public drop-off depot, which will help decrease the amount of recyclable material ending up in the garbage and assist the region in reducing waste by one-third
- decreasing the amount of traffic at the Hartland public drop-off depot during peak depot hours
- receiving feedback from the public to inform whether the pilot will be a permanent service

Starting Saturday, June 15, 2024, the hours at the Hartland public drop-off depot will be extending on Saturdays for three additional hours for a one-year pilot period. Below is a table showing the changes to the Hartland hours.

Current Hartland Public Drop-Off Depot Hours	New (Pilot) Hartland Public Drop-Off Depot Hours beginning June 15
Weekdays: 9 a.m. to 5 p.m.	unchanged
Saturdays: 7 a.m. to 2 p.m.	Saturdays: 7 a.m. to 5 p.m.
Sundays and statutory holidays: closed	unchanged

Only residents and small commercial vehicles under 5,500 GVW are eligible to access the public drop-off depot at Hartland Landfill. The hours for commercial customers accessing the auto scales

and active face will also extend to 5 p.m. on Saturdays. The site will remain closed for all customers on Sundays and statutory holidays.

Hartland customers and neighbours will be notified of the expanded hours pilot through an information bulletin, along with paid media, social media, printed materials, the Rethink Waste newsletter and online content. Staff will also provide an update to members of the Local Government Waste Reduction Working Group and to the Solid Waste Advisory Committee.

Staff will seek public input on the pilot project from Hartland customers and neighbours via a Checkbox Survey and the CRD's Infoline at infoline@crd.bc.ca. Scale data will be evaluated to determine if customers are utilizing the depot during the expanded hours. Scale data will also be used to determine if there is an increase in the quantity of materials being dropped off. Results of the pilot will inform whether staff recommend extending the pilot hours to become a permanent service. Pending customer uptake and survey results on the increased Saturday hours, staff may pilot additional opening hours during the one-year pilot.

CONCLUSION

Beginning June 15, 2024, the Capital Regional District will be piloting expanded hours at the Hartland public drop-off depot. The pilot is being conducted in response to increased demand at the public drop-off depot and new material bans coming into effect in 2024. During the one-year pilot, the Hartland public drop-off depot will extend the opening hours to 5 p.m. on Saturdays. The hours for commercial customers accessing the auto scales and active face will also be extended to 5 p.m. on Saturdays. Results of the pilot will inform whether staff recommend extending the pilot period hours to become a permanent service.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, MAY 15, 2024**

SUBJECT **Increasing Direct-Current Fast-Charge/Level 3 Chargers in the Region**

ISSUE SUMMARY

To report back on the potential to increase the number of direct-current fast-charge (DCFC)/Level 3 Electric Vehicle (EV) charging ports as part of the Capital Regional District (CRD) Public Electric Charging Network Project funded by Investing in Canada Infrastructure Program – Clean BC Communities Fund (ICIP-CCF).

BACKGROUND

The CRD EV Infrastructure Roadmap (2021) identifies key roles for the CRD in supporting the electrification of transportation, including to:

- pursue regional infrastructure funding
- support planning and coordination onsite selection
- engage with BC Hydro on infrastructure planning

On February 14, 2024, staff were directed by the Board to enter into a shared-cost agreement and begin implementing the CRD Public Electric Charging Network Project, funded by ICIP-CCF. This project has now been publicly announced and will support the installation of approximately 576 Level 2 and 20 DCFC EV charging ports in approximately 80 public locations across the capital region. The CRD is undertaking regional coordination and close partnerships with local governments in the region, including the City of Victoria, which will manage up to 424 of the Level 2 and all 20 of the DCFCs planned under this project.

Upon signing of the funding agreement, staff were also to explore the potential to increase the number of DCFC ports as part of this program funding and report back. While it has been confirmed that there is no opportunity to increase the number of DCFC ports as part of the CRD Public Electric Charging Network Project due to significant capital and operational cost requirements to support DCFC ports, staff are actively working with BC Hydro to identify and facilitate site selections for public DCFC installations across the region.

In August 2023, the CRD Climate Action service entered into a memorandum of understanding agreement (MOU) with the EV Charging Infrastructure team at BC Hydro. This MOU commits the CRD and BC Hydro to build on our existing working relationship and to explore and undertake a variety of transportation electrification initiatives. BC Hydro has a provincial mandate to install over three thousand DCFC ports across the province by 2030 to support electrification of transportation.

To date, the primary initiative under this MOU has been to advance BC Hydro built, branded, owned and operated public DCFC EV charging hubs on CRD property, and on public and/or private property. Staff have been leveraging regional coordination and partnerships with local governments and property owners in the region to identify sites, coordinate introductions and to support feasibility analysis to increase the number of DCFC chargers in the region.

Sites that are eligible for consideration must have appropriate parking space to support a minimum of four DCFC ports in rural areas and a minimum of eight DCFC ports in urban areas. Level 2 chargers may be included in the site design as well. These sites should be appropriately lighted, have clear lines of sight from the road, be publicly accessible, and be located near amenities for public use. The property can be publicly or privately owned, so long as the owner is willing to enter into a 10-year license of occupation agreement with BC Hydro to host the charging infrastructure. To prevent monopoly, BC Hydro is limited to a certain number of charging hub sites in each municipality, calculated by population. These limits are set by the Province.

To date, seven potential DCFC charging sites in the Core, Saanich Peninsula, Salt Spring Island and West Shore sub-regions have been identified. Notably, the City of Colwood has entered into an agreement with BC Hydro to install 12 DCFC ports and eight Level 2 ports at the Colwood Park and Ride. This site is currently in the detailed design stage and it is anticipated for the first phase to be built by the end of 2024. Two other sites in Sooke and on Salt Spring Island for four DCFC ports each have also reached the signed agreement stage and are entering into detailed design. All other sites are at varying stages of feasibility and design work to determine eligibility by BC Hydro and site hosts. Capital and operational costs of charging infrastructure installed under this program will be fully funded by BC Hydro. Charging infrastructure will be the property of BC Hydro, including any associated operating revenue and costs.

CONCLUSION

The CRD has entered into a shared-cost agreement with Investing in Canada Infrastructure Program – Clean BC Communities Fund for the CRD Public Electric Charging Network Project to fund the installation of 576 Level 2 charging ports and 20 direct-current fast-charge (DCFC) ports across the region. CRD staff are actively working with BC Hydro Electric Vehicle Charging Infrastructure staff to identify potential sites for additional DCFC infrastructure, with seven sites at various stages of feasibility and design work.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Nikki Elliott, BES, MPA, Manager, Climate Action Programs
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, APRIL 17, 2024**

SUBJECT **Biosolids Literature Review – Update**

ISSUE SUMMARY

To provide the Environmental Services Committee with an update on the proposal for an independent academic review of the risks and benefits of biosolids land application.

BACKGROUND

At the August 9, 2023 Capital Regional District (CRD) Board meeting, staff were directed to *report back with a proposal that CRD Environment Service fund University of Victoria or other suitable independent academic institution to prepare a review: a) of available literature, to determine whether there are validated examples and/or peer reviewed papers assessing the risks and benefits of the application of biosolids on environmental and human health, and b) based on this and on The Precautionary Principle, whether CRD may have a legal liability for such application.*

At the October 18, 2023 Environmental Services Committee meeting, staff presented a proposal for an academic institution to conduct a literature review. At that time, the provincial government's Technical Working Group (TWG) was expected to issue a report on its review of the *Organic Matter Recycling Regulation* in late 2023. Given the upcoming report, the committee passed the following motion: *That the committee postpone discussion on this item until the January 2024 committee meeting.* Staff have been receiving semi-regular status updates from the TWG Secretariat and other provincial staff.

The TWG consists of academics, consulting practitioners, and representatives from federal, various provincial and local governments. The TWG is effectively undertaking the same literature review exercise that the CRD Board requested. The final TWG meeting was held at the end of September 2023 and a summary report of its findings and recommendations was initially expected by the end of November 2023 at the earliest. At the February 14, 2024 CRD Board meeting, staff reported that the TWG report was delayed "to the end of Q1 2024."

At the March 13, 2024 Board meeting, staff reported that the report had been delayed again until Q2 2024. Staff were then directed to reinitiate the process of authorizing the literature review by the following motion: *Given delays to provincial reporting on Organic Matter Recycling Regulation, and the Board's previous direction to initiate an academic analysis, that the Board direct staff to move forward with a third-party academic review of the scientific literature on the uses and impacts of biosolids.*

Staff have reconfirmed the interest of only one of the three independent academic institutions initially willing to undertake the literature review, which is the Toronto Metropolitan University (TMU) Department of Chemistry and Biology, led by Dr. Lynda McCarthy. The intended lead author from University of Victoria Department of Engineering and Computer Science (civil engineering) has since gone on leave and the author from The University of Washington College of the Environment has not yet responded. The TMU team has a confirmed lead author who will rely on support from various co-authors.

Any literature review is expected to take at least two to three months to organize and complete. The review would be guided by the Terms of Reference (Appendix A).

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the CRD Board:

That staff be directed to proceed with an academic review of the risks and benefits of biosolids land application with the team from Toronto Metropolitan University, with a budget not to exceed \$40,000.

Alternative 2

The Environmental Services Committee recommends to the CRD Board:

That an academic review of the risks and benefits of biosolids land application be reconsidered after the provincial technical working group has completed its review of Organic Matter Recycling Regulation and released its report.

IMPLICATIONS

Financial Implications

Costs for the proposed biosolids literature review will be approximately \$40,000 and can be covered by existing Core Area wastewater and biosolids budgets.

CONCLUSION

The CRD Board directed staff to reinitiate consideration of an additional literature review of biosolids land application, given the recent delays in reports supporting the current BC Organic Matter Recycling Regulation review. Staff have reconfirmed that a knowledgeable, independent academic institution is available to complete this review. The review is expected to take at least three months to administer and complete.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:

That staff be directed to proceed with an academic review of the risks and benefits of biosolids land application with the team from Toronto Metropolitan University, with a budget not to exceed \$40,000.

Submitted by:	Glenn Harris, Ph.D., R.P. Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P. Eng., Acting General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: Biosolids Literature Review – Terms of Reference

BIOSOLIDS LITERATURE REVIEW**TERMS OF REFERENCE****April 2024**

BACKGROUND

In 2011, the Capital Regional District (CRD) Board passed a resolution to ban the land application of biosolids from CRD facilities primarily due to concerns about the potential human and environmental risks of contaminants therein. This ban ended a small CRD program that distributed lime-stabilized Class A biosolids (as defined under the BC Organic Matter Recycling Regulations [OMRR]) from a sub-regional wastewater treatment plant to the general public and local landscaping businesses. In 2020, the CRD commissioned a new wastewater treatment plant that substantially increased the volume of Class A biosolids produced annually to approximately 3,600 tonnes. Biosolids management options were subsequently introduced.

As per BC Ministry of Environment and Climate Change Strategy (ENV) expectations, Canadian Council of Ministers of the Environment guidance, and CRD commitments under its Core Area Liquid Waste Management Plan, the CRD is required to beneficially use all biosolids output. In BC, biosolids land application is regulated under OMRR. A long-term biosolids management plan is currently under development and is due to ENV by June 2024.

Currently, CRD Class A biosolids are being managed under a short-term biosolids management plan (2020-2025), with the primary beneficial use options being incineration as an alternative fuel in a cement manufacturing plant in Richmond, BC, and integration with landfill cover systems as contingencies. When neither of these options are available, landfilling biosolids at the regional landfill has been the only alternative. However, in 2023, given significant operational and logistical challenges with the short-term options, the CRD Board amended its position to allow for limited non-agricultural land application of biosolids as a contingency option. The CRD has secured the use of biosolids for industrial land reclamation at a quarry near Cassidy, BC. CRD staff continue to seek additional short-term beneficial use contingency options that meet Board limits, in order to limit or avoid landfilling of biosolids when the other options are not available.

As part of development of the CRD's long-term biosolids management plan, the CRD has external technical advice that recommends that land application be included in a portfolio of options to ensure program redundancy and resiliency. Land application is typically the most reliable and cost-effective beneficial use option. However, there continue to be concerns raised about the potential human health and environmental risks associated with biosolids land application.

In response to these concerns, raised both in the CRD and elsewhere in the province and around the world, ENV convened a technical working group to review the OMRR to ensure it remains protective of human health and the environment. A summary report is expected in Q2 2024. In the meantime, the CRD Board is seeking its own independent literature review on the risks and benefits of biosolids land application.

PURPOSE

The purpose of the literature review is to provide the Board and general public a summary of the human health and environmental risks, and benefits of the land application of CRD Class A biosolids.

AUTHOR(S) QUALIFICATIONS

The author(s) undertaking the literature review must include at least one tenured faculty member from an independent academic institution(s) with expertise and experience in assessing human health and environmental risk, knowledge of biosolids land application practices, and an understanding of contaminant fate and impact. Additional co-authors with relevant expertise can be included if a team approach is taken.

SCOPE

The literature review must:

- Build on previous literature reviews through a comprehensive scan of up-to-date primary scientific literature and other relevant studies.
- Consider environmental conditions typical of BC's south coastal region.
- Assess the human health and environmental risks of legacy contaminants, and those of emerging concern, that are potentially found in biosolids.
- Summarize contaminant concentrations in biosolids relative to levels of exposure in general society.
- Discuss the limitations of extrapolating lab-based toxicity testing to observations in the environment.
- Summarize areas of uncertainty in biosolids land application risk, including a summary of relevant techniques for evaluating and addressing uncertainty.
- Summarize biosolids land application techniques that can reduce risk and/or address uncertainty.
- Briefly summarize risks and concerns that have resulted in land application bans elsewhere.
- Briefly summarize risks and benefits of longstanding land application programs elsewhere.
- Assess the overall risks of biosolids land application considering the intent of the Precautionary Principle (Rio Declaration, 1992 and subsequent derivations).

The CRD will provide the author(s) with a summary of the known contaminant concentrations in CRD Class A biosolids and a list of the potential land application opportunities that have been identified as the long-term biosolids management plan is being developed.

The literature review author(s) are not expected to undertake new scientific experiments as part of this project.

DELIVERABLES

The literature review must provide a comprehensive and up-to-date summary of the human health and environmental risks, and benefits, of biosolids land application. It must include an executive summary and/or conclusions section that is understandable by a non-technical general public.

TIMELINE

The literature review must be completed within three months of project commencement.

BUDGET

The literature review will have a maximum budget of \$40,000.

SUPPLEMENTAL: Timeline of Biosolids Literature and Legal Review

May 8, 2024 – Capital Regional District Board:

8.4. [24-406](#) *Biosolids Literature Review – Update*

MOVED by Director Desjardins, SECONDED by Director Caradonna,

1. Direct staff to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.
2. That staff be directed to proceed with an independent unbiased legal review of the risks associated with the land application of biosolids.

MOVED by Director Murdoch, SECONDED by Director McNeil-Smith,

That the motion be amended by adding to the end of part 2 the words **“and the risks associated if noncompliant with the provincial regulatory framework for biosolids”**.

MOVED by Director Desjardins, SECONDED by Director Brent,

That recommendations 1 and 2 and the amendment be referred to the Environmental Services Committee.

CARRIED

Opposed: Caradonna

April 17, 2024 – Environmental Services Committee:

6.3. [24-406](#) *Biosolids Literature Review - Update*

Staff Report Recommendation:

The Environmental Services Committee recommends to the CRD Board: That staff be directed to proceed with an academic review of the risks and benefits of biosolids land application with the team from Toronto Metropolitan University, with a budget not to exceed \$40,000.

At the April 17, 2024 Environmental Services Committee, the staff recommendation was not moved. Instead, an alternative committee member motion (#1) was moved followed by a motion arising (#2) and carried as follows:

The Environmental Services Committee recommends to the Capital Regional District Board:

1. **Direct staff to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.**
2. **That staff be directed to proceed with an independent unbiased legal review of the risks associated with the land application of biosolids.**

March 20, 2024 – Environmental Services Committee:

6.5. [24-318](#) *Third-party Academic Review of the Scientific Literature on the Uses and Impacts of Biosolids - Verbal Update*

L. Hutcheson presented Item 6.5. for information. Discussion ensued on the following:

- timeline on analysis, scope and delivery
- UVic environmental interest group

March 13, 2024 – CRD Board:

7.2. [24-242](#) *Biosolids Monthly Update – March (for information)*

Motion Arising #1:

MOVED by Director Caradonna, SECONDED by Director Tobias,

Given delays to provincial reporting on Organic Matter Recycling Regulation of B.C. (OMRR) and the Board's previous direction to initiate an academic analysis, that the Board direct staff to move forward with a third-party academic review of the scientific literature on the uses and impacts of biosolids.

CARRIED

Opposed: de Vries, Kobayashi, Little

Motion Arising #2:

MOVED by Director Caradonna, SECONDED by Alternate Director Armour,

That the Board direct staff and the Chair to write to request a meeting with the Minister of Environment and Climate Change Strategy to discuss an extension on finalizing the CRD's long-term biosolids management plan.

CARRIED

see Appendix A

January 17, 2024 – Environmental Services Committee:

There was no biosolids item on January agenda.

October 18, 2023 – Environmental Services Committee:

6.1. [23-707](#) *Proposal For Academic And Legal Reviews Of Biosolids Land Application*

MOVED by Director Holman, SECONDED by Director Kobayashi,

The Environmental Services Committee recommends to the Capital Regional District Board:

That academic and legal reviews of the risks and benefits of biosolids land application be reconsidered after the provincial technical working group has completed its review of the Organic Matter Recycling Regulation and released its report. (no vote due to postponement)

MOVED by Director Tait, SECONDED by Director Caradonna,

That the committee postpone discussion on this item until the January 2024 committee meeting.

CARRIED

see Appendix B

August 9, 2023 – CRD Board:

8.1. [23-456](#) *Notice of Motion: Academic Review - Land Application of Biosolids (Director Desjardins)*

The question was called on the main motion as amended:

MOVED by Director Desjardins, SECONDED by Director Williams,

That staff report back with a proposal that CRD Environment Service fund University of Victoria or other suitable independent academic institution to prepare a review:

a) of available literature, to determine whether there are validated examples and/or peer reviewed papers assessing the risks and benefits of the application of biosolids on environmental and human health, and

b) based on this and on The Precautionary Principle, whether CRD may have a legal liability for such application.

CARRIED

Opposed: McNeil-Smith, Murdoch

July 12, 2023 – CRD Board:

8.3. [23-456](#) *Notice of Motion: Academic Review - Land Application of Biosolids (Director Desjardins)*

MOVED by Director de Vries, SECONDED by Director Tait,

That agenda Items 8.3., 8.4., 8.10., and 8.11. be postponed to the next meeting of the CRD Board.

CARRIED

June 21, 2023 – Environmental Services Committee:

7.1. [23-456](#) *Notice of Motion: Academic Review - Land Application of Biosolids (Director Desjardins)*

MOVED by Director Caradonna, SECONDED by Director Tobias,

That same day consideration be applied to the Notice of Motion.

CARRIED

MOVED by Director Desjardins, SECONDED by Director Tobias,

That the Environmental Services Committee recommends to the Capital Regional District Board:

That staff report back with a proposal that CRD Environment Service fund University of Victoria or other suitable independent academic institution to prepare a review:

a) of available literature, to determine whether there are validated examples and/or peer reviewed papers assessing the risks of the application of biosolids on environmental and human health, and

b) based on this and on The Precautionary Principle, whether CRD may have a legal liability for such application. The institution may receive submissions from the public.

CARRIED

REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, MARCH 13, 2024

SUBJECT Biosolids Monthly Update – March

ISSUE SUMMARY

To update the Board on the status of the short-term options for biosolids management, as well as progress on the development of the Long-term Biosolids Management Plan and the advanced thermal pilot project.

BACKGROUND

Since the commissioning of the core area wastewater treatment project in 2020, the Capital Regional District (CRD) has been responsible for the beneficial reuse of Class A biosolids produced at the Residuals Treatment Facility. Currently, the CRD is operating under a five-year Short-term Biosolids Management Plan, with the primary beneficial use options being incineration as an alternative fuel in a cement manufacturing plant in Richmond, BC, industrial land reclamation at a quarry near Cassidy, BC, and integration with landfill cover systems as contingencies. When none of these options are available, landfilling biosolids at Hartland Landfill is the only alternative. In 2011, the Board banned the land application of biosolids; however, in 2023, given the operational and logistical challenges with the short-term plan, the Board amended its position to allow non-agricultural land application of biosolids as a contingency option. Staff continue to seek additional short-term beneficial use contingency options consistent with CRD Board direction (short-term, out-of-region and non-agricultural land application options).

The CRD is also required to develop a Long-term Biosolids Management Plan by June 2024. Plan development will include input from the Technical and Community Advisory Committee (TCAC), First Nations engagement and public consultation.

Short-term Plan Implementation

Cement Kiln: The Lafarge facility experienced a mechanical failure of the receiving silo in November 2023, and has been in a winter maintenance shutdown since February 10. Staff anticipate the first shipment of biosolids in 2024 to be March 12.

Landfilling: Currently, all biosolids are being landfilled, as no other short-term management options are available. In February, 332 tonnes of biosolids were landfilled. Landfilling is not a beneficial use, as per provincial and federal expectations, and continues to consume valuable airspace at the landfill.

Land Reclamation in Cassidy, BC: A blend of biosolids and sand is currently being stored by the land owner under cover on the Cassidy site, pending regulatory approval for mixing with other organics and placement of biosolids growing medium, in accordance with the Organic Matter Recycling Regulation and approvals under the *Mines Act*. Reclamation of the quarry will be carried out in phases, and there is a short-term limit on the quantity of biosolids that can be received at this time. This limit was met in early January; therefore, shipping of biosolids to the quarry has been paused until the material on site is mixed and placed under the facility's reclamation plan.

Second Quarry Site in the Regional District of Nanaimo, BC: As reported last month, the CRD has been approached by a site operator of a second gravel quarry within the Regional District of Nanaimo (RDN) to receive CRD Class A biosolids for site reclamation. The RDN Board Chair has since sent correspondence on behalf of the RDN Board, dated February 29, 2024, that requests *the CRD Board of Directors cease considering land application within the RDN as a viable option for biosolids generated in the Capital Region*. The letter indicates that the RDN is pursuing its Biosolids Beneficial Use Plan that incorporates land application and is concerned that the CRD's activities may limit RDN's options as its population continues to grow.

Unless directed otherwise, staff will continue to explore this opportunity with the site operator and will report back to the Board before any contracts are entered into.

Long-term Planning

Public Engagement: Public engagement on the Long-term Biosolids Management Plan was launched January 11, 2024 and closed March 6, 2024. The consultant will prepare a "What We Heard" report, which will inform a staff report introducing a draft long-term management plan for the April 10 CRD Board meeting. The engagement included background information and multiple opportunities to provide feedback, all of which are available via the CRD's Get Involved engagement platform (<https://getinvolved.crd.bc.ca/biosolids>). The CRD hosted a virtual open house on February 20, 2024, and included presentations from CRD staff and the technical consultant, as well as a moderated question and answer period. There were approximately 55 participants and 175 questions/comments submitted, of which more than 100 questions were answered. A recording of the event is available on the engagement website. The TCAC is also reviewing the available beneficial reuse options and providing input at its meeting this month.

First Nations Engagement: Staff have retained an engagement consultant to conduct First Nations engagement on long-term biosolids management options and planning. The consultant has experience working with Indigenous communities in BC and anticipates completing First Nations engagement parallel to the public engagement process. In-person and virtual open houses are scheduled for late March with 18 First Nations.

Advanced Thermal Technology Demonstration Plant: A Request for Proposals (RFP) for a technical advisor to support CRD staff in developing terms and technical requirements closed on March 11. The subsequent RFP for the demonstration plant is expected to be issued in Q2, with a preferred proponent selected in Q3/Q4 2024.

Organic Matter Recycling Regulation Technical Working Group Review: In 2023, the provincial Ministry of Environment and Climate Change Strategy conducted a review of the Organic Matter Recycling Regulation, including an evaluation of emerging contaminants of concern in the context of land application. The report was anticipated in late 2023, but staff have been advised that the date has been delayed again until Q2 of 2024. The Ministry has not altered its regulatory direction at this time.

CONCLUSION

The Capital Regional District (CRD) continues to implement the Short-term Biosolids Management Plan while also developing the draft long-term plan. The short-term program has experienced operational challenges and has inadequate contingency capacity consistent with CRD Board policy to ensure the beneficial use of biosolids. The CRD has exhausted its contingency options under the Short-term Biosolids Management Plan and is currently landfilling biosolids contrary to provincial regulatory direction.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P. Eng., Acting General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, OCTOBER 18, 2023**

SUBJECT **Proposal For Academic And Legal Reviews Of Biosolids Land Application**

ISSUE SUMMARY

To provide the Environmental Services Committee with a proposal for independent academic and legal reviews of the risks and benefits of biosolids land application.

BACKGROUND

At the August 9, 2023 Capital Regional District (CRD) Board meeting, staff were directed to “*report back with a proposal that CRD Environment Service fund University of Victoria or other suitable independent academic institution to prepare a review: a) of available literature, to determine whether there are validated examples and/or peer reviewed papers assessing the risks and benefits of the application of biosolids on environmental and human health, and b) based on this and on The Precautionary Principle, whether CRD may have a legal liability for such application.*”

Staff have confirmed that there are at least three independent academic institutions willing to undertake the literature review: the University of Washington College of the Environment, the Toronto Metropolitan University Department of Chemistry and Biology, and the University of Victoria Department of Engineering and Computer Science (civil engineering).

The terms of reference for the literature review would consider the following:

- Previous literature reviews.
- Risks and concerns that have resulted in land application bans elsewhere.
- Impacts of long-standing land application programs elsewhere.
- Contaminant concentrations in biosolids relative to levels of exposure in general society.
- Extrapolating lab-based toxicity testing to observations in the environment.
- Acknowledgement of uncertainty (e.g., toxicity and environmental fate of emerging substances and microplastics, contaminant mixture effects, etc.).
- Techniques for evaluating and addressing uncertainties.
- Affirming the intent of the Precautionary Principle.

Biosolids land application is regulated under the BC Organic Matter Recycling Regulation (OMRR). The BC Ministry of Environment and Climate Change Strategy convened a Technical Working Group (TWG) in October 2022 to undertake a comprehensive review of OMRR to ensure it remains protective of human health and the environment. The TWG consists of academics, consulting practitioners, and representatives from federal, various provincial and local governments. TWG is effectively undertaking the same literature review exercise that the CRD Board requested. They had their last meeting at the end of September 2023 and expect to release a summary report of their findings and recommendations by the end of November 2023 at the earliest. A similar timeline of a number of months would be expected if CRD staff were to fund an independent academic review.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board: That academic and legal reviews of the risks and benefits of biosolids land application be reconsidered after the provincial technical working group has completed its review of the Organic Matter Recycling Regulation and released its report.

Alternative 2

The Environmental Services Committee recommends to the Capital Regional District Board:

1. That staff be directed to proceed with an academic review of the risks and benefits of biosolids land application; and
2. That staff be directed to proceed with a legal opinion related to potential liabilities for the regional government.

Alternative 3

That this report be referred back to staff for additional information.

IMPLICATIONS

Financial Implications

Costs for the proposed biosolids literature review and legal opinion will be approximately \$35,000 and can be covered by existing Core Area wastewater and biosolids budgets. However, if staff are directed to proceed with the literature review, it will likely be redundant with the expected findings of the provincially led OMRR TWG. A legal review could be undertaken independently of the literature review and would likely cost approximately \$10,000-\$15,000, depending upon the instruction letter.

Social Implications

The upcoming consultation on biosolids long-term management will help determine the public's perspectives on all options, including any land application risks and benefits that are identified by an independent review or the provincial efforts to re-evaluate OMRR. Public information on these risks and benefits is currently available.

Legal Implications

Any legal opinion would be specific to the CRD and based on biosolids generated in the capital region, not on biosolids generally, as the facts and assumptions would need to be defined and applicable to the region's risk profile.

The legal opinion could wait until after the independent literature review or provincial OMRR findings are released or could be initiated immediately.

CONCLUSION

The Environmental Services Committee (ESC) directed staff to investigate and propose additional scientific and legal reviews in support of the long-term biosolids planning. Staff identified possible

options for ESC to consider but also identified a current provincial process that is addressing the scientific issues. A legal review would be specific to regional concerns; results from the provincial review of the Organic Matter Recycling Regulation and upcoming public consultation may inform any concerns regarding liability.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board: That academic and legal reviews of the risks and benefits of biosolids land application be reconsidered after the provincial technical working group has completed its review of the Organic Matter Recycling Regulation and released its report.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

REPORT TO HOSPITALS AND HOUSING COMMITTEE MEETING OF WEDNESDAY, JUNE 05, 2024

SUBJECT Tenant Advisory Committee Terms of Reference Amendment, June 2024

ISSUE SUMMARY

Terms of Reference (ToR) serve to clarify the mandate, responsibility, and procedures for the Tenant Advisory Committee (TAC) and provide a point of reference and guidance for the members. The ToR for the TAC require updating and will be sent to the members for their information and reference.

BACKGROUND

At the April 11, 2018, Capital Regional District (CRD) Board meeting, it was determined that a TAC be established through the CRD's Hospitals and Housing Committee (HHC). The purpose of the TAC is to promote effective communication, engagement, and collaboration between the Capital Region Housing Corporation (CRHC) and its tenants, and provide information, feedback and advice regarding tenant-related policies and programs to support healthier and more livable communities.

The proposed revision to the ToR, detailed in Appendix A, reflects a strategic adjustment to synchronize meeting frequency to operational capacities. The update notes that meetings will convene up to four times annually, optimizing alignment with organizational resources.

ALTERNATIVES

Alternative 1

The Hospitals and Housing Committee recommends to the Capital Regional District Board: That the amended Terms of Reference for the Tenant Advisory Committee as presented in Appendix A be approved.

Alternative 2

That the Tenant Advisory Committee Terms of Reference Amendment report be referred back to staff for amendment based on Hospitals and Housing Committee direction.

IMPLICATIONS

Service Delivery Implications

The amendment being advanced through this staff report is an administrative update that reflects the evolving role of the TAC. As the CRHC continues to grow and the tenant populations within properties operated by the CRHC continue to evolve, the demands on available staff capacity are expected to increase. The staff currently supporting the activities of the TAC are those same staff who support vulnerable tenancies and work to organize and facilitate in-building community-minded events. Through the pandemic there was limited opportunity to host tenant events at the various properties, but 2024 is expected to present new opportunities to bring households together.

Hospitals and Housing Committee – June 5, 2024
Tenant Advisory Committee Terms of Reference Amendment, June 2024

Staff do not anticipate any significant change in the nature of TAC engagement due to the hosting of “up to four times per year”, which is a change from the previous language of “4-8 times per year”.

Through 2024, staff will look to the evolving needs of the tenant populations and will explore alternative ways to use existing and limited staff capacity to engage tenants more effectively and may return to the HHC with recommendations related to the ongoing role of the TAC.

CONCLUSION

The revised TAC ToR will enhance alignment with both staff capacity and operational realities.

RECOMMENDATION

The Hospitals and Housing Committee recommends to the Capital Regional District Board:
That the amended Terms of Reference for the Tenant Advisory Committee as presented in Appendix A be approved.

Submitted by:	Don Elliot, BA, MUP, Senior Manager, Regional Housing
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: Tenant Advisory Committee Terms of Reference (redlined)

Terms of Reference



Tenant Advisory Committee

PREAMBLE

The Capital Regional District (CRD) Tenant Advisory Committee is an advisory committee established by the Hospitals and Housing Committee to promote effective communication, engagement and collaboration between the Capital Region Housing Corporation (CRHC) and its tenants, and provide information, feedback and advice regarding tenant related policies and programs to support healthier and more livable communities.

The Committee's official name is to be:

Tenant Advisory Committee

1.0 PURPOSE

- a) The purpose of the Tenant Advisory Committee (TAC) through the Hospitals and Housing Committee is to:
 - i. recommend priorities for the Service Plan based on operational considerations;
 - ii. identify and raise trends, and recommend proposals to improve tenant satisfaction;
 - iii. provide input in the development of Tenant Engagement Plans as necessary; and
 - iv. provide feedback into the tenant related policies.

2.0 RELATIONSHIP TO THE CRHC

- a) The TAC will report through the Hospitals and Housing Committee. The General Manager, Planning and Protective Services, or delegate, will act as a staff liaison to attend TAC meetings, represent the CRHC and provide effective communication between the TAC and the CRHC.
- b) The TAC will present an annual report to the Hospitals and Housing Committee and may be requested to attend additional Hospital and Housing Committee meetings at the request of the Chair.

3.0 MEMBERSHIP, SELECTION AND TERM

- a) The Committee will consist of up to nine members including:
 - i. The Chair of the CRD Hospitals and Housing Committee, or delegate, who will act as Co-Chair of the TAC; and
 - ii. Up to eight members who are tenants in good standing with the CRHC and who have experience and knowledge of affordable housing issues and/or community development and their initiatives. One of the tenant members will be elected to the position of Co-Chair of the TAC.

- b) Other members of the Hospitals and Housing Committee may attend TAC meetings as non-voting members.
- c) Tenant member positions will be advertised and a nominations committee will select applicants through an interview process for recommendation to the General Manager, Planning and Protective Services.
- d) Membership of the TAC will be recommended by the General Manager, Planning and Protective Services, to the Capital Regional District Board each year for approval.
- e) Tenant members will serve a two-year term on the TAC with the option to serve a second two-year term only. After serving four years a two-year break must be taken before a tenant may re-apply to sit on the TAC.
- f) The Chair of the Hospitals and Housing Committee is appointed annually by the CRD Chair and may serve one or more terms as Co-Chair of the TAC as an extension of that appointment.

4.0 PROCEDURES

- a) The TAC will meet ~~up to four~~ ~~4-8~~ times per year. Dates of meetings will be set at the beginning of the year based on recommendations of the General Manager, Planning and Protective Services and the Chair of the Hospitals and Housing Committee. Any additional meetings will be at the call of the Co-Chairs.
- b) TAC members are expected to attend meetings to the best of their ability. Should a member miss two consecutive meetings without any communication they will be asked by the Co-Chairs to resign their seat and the vacant position will be advertised for the duration of the term.

5.0 BUDGET

- a) Subject to CRHC Board approval, an annual budget may be available to cover costs related to the administration and logistical support for convening meetings throughout the year.
- b) Members of the TAC will be reimbursed for out of pocket expenses as aligned with the CRD expense reimbursement policies and procedures.

6.0 RESOURCES AND SUPPORT

- a) The General Manager, Planning and Protective Services, or delegate, is the primary contact for the Committee. Regional Housing staff will provide secretarial and administrative support. Minutes and agendas are prepared and distributed by the Regional Housing Division.



Making a difference...together

REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE MEETING OF TUESDAY, MAY 21, 2024

SUBJECT **Provision of Park Land Requirement for Subdivision Applications SU000711 and SU000756 at That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD43782I) and Except Parts in Plans 3054 and 17721: PID: 009-499-369 – 3542 Otter Point Road**

ISSUE SUMMARY

To consider options for the provision of park land pursuant to Section 510 of the *Local Government Act* (LGA) regarding a 6-lot conventional subdivision in Otter Point.

BACKGROUND

The 15 ha subject property is located at 3542 Otter Point Road in Otter Point, and is zoned Rural Residential 2 (RR-2) and Rural Industrial (M-RU) by the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040 (Appendix A). The Otter Point Official Community Plan, Bylaw No. 3819 (the OCP), designates portions of the subject property as watercourse & wetland and commercial & industrial development permit areas.

The CRD has received a referral from the Ministry of Transportation and Infrastructure (MoTI) for a 6-lot fee simple subdivision application (SU000711) and a subsequent 4-lot bare land strata subdivision application (SU000756) (Appendix B). Since 3 or more parcels will be created, the smallest of which is less than 2 ha, the provision of park land is required in accordance with Section 510 of the LGA (Appendix C).

The subject property was rezoned from Rural (A) to RR-2 and M-RU in 2021 to permit a range of light industrial to general industrial uses in addition to the continued operation of an existing sawmill. During rezoning process, the application was referred to the Juan de Fuca Electoral Area Parks and Recreation Advisory Commission for consideration (the "Commission"). At its meeting of July 30, 2019, the Commission recommended support of the proposed rezoning subject to the provision of a trail along the Wieland Road right-of-way at the time of subdivision (Appendix D). The landowner now proposes to meet the Commission's interest in park expressed at the time of rezoning and the requirements of Section 510 of the LGA by constructing a trail that completes the Wieland trail, which extends from William Simmons Park to Kemp Lake Road, on a portion of land that will become part of the Wieland Road right-of-way upon completion of the 6-lot subdivision (Appendix E).

At its meeting of March 26, 2024, the Commission considered the landowner's proposal and its earlier recommendation in 2019 related to the rezoning application (Appendix F).

ALTERNATIVES

Alternative 1

The Land Use Committee recommends to the Capital Regional District Board:

That in accordance with Section 510 of the *Local Government Act*, park dedication in the amount of 5% be required for the proposed subdivision of That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD43782I) and Except Parts in Plans 3054 and 17721 (the "Land"); PID: 009-499-369; except that a lesser amount may be acceptable where the owner agrees to construct a trail built to JdF Community Parks and Recreation standards prior to subdivision approval on that part of the Land that will become the Wieland Road right-of-way.

Alternative 2

That the application be referred back to staff for more information.

IMPLICATIONS

Legislative Implications

Section 510 of the *LGA* requires the provision of park land at the time of subdivision where three or more additional lots are created, and the smallest lot being created is 2 ha or less. Where a regional district provides a community park service and an official community plan contains policies and designations respecting the location and types of future parks, the owner may be required to provide either land or cash-in-lieu at the discretion of the local government. The area of land to be provided may not exceed 5% of the land being subdivided.

If an owner is to provide cash-in-lieu, the value of the land is based on the average market value of all land in the proposed subdivision calculated as that value would be on the date that a proposed subdivision receives preliminary approval before any works or services are installed, or a value agreed upon by the parties. Any money received for park land must be deposited in a reserve for the purpose of acquiring park lands.

Land Use Implications

The OCP includes policies and objectives related to parks and trails. Should the application be approved, provision of parkland is required under Section 510 of the *LGA*. Five percent of the 15 ha land area is equal to 0.75 ha. In absence of an appraisal that follows provincial guidelines and regulations, the 2024 assessed land value is \$749,000.00; with \$37,450.00 being 5% of this value.

The Commission considered subdivision application SU000711 at its meeting of March 26, 2024, and passed the following Motion.

MOVED by Commissioner Braunschweig, **SECONDED** by Commissioner McKay that the Juan de Fuca Electoral Area Parks and Recreation Advisory Commission recommends to the Juan de Fuca Land Use Committee that a trail be constructed to JdF Community Parks and Recreation standards for the proposed 6-lot subdivision (SU000711) and 4 lot bare land strata subdivision (SU000756) of That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD 43782I) and Except Parts in Plans 3054 and 17721, as outlined in the proposal submitted by the landowner, dated March 14, 2024.

CARRIED

In accordance with Section 3.2.6 of the Otter Point OCP, the provision of park land prioritizes an extensive network of multi-use trails that support recreation and connect to bus stops, parks and to the District of Sooke. With a primary focus on safety, these connections encourage trails that separate motorized vehicles from horses, pedestrians, and cyclists. The proposed trail through the Wieland Road public right-of-way intends to follow the direction provided by the Commission and meet the goals and objectives of the OCP for park land. The applicant would also be responsible for constructing a trail as a condition of CRD sign-off to MoTI advising that all subdivision requirements have been met. Staff recommend considering the Commission's advice for this subdivision application.

CONCLUSION

The applicant proposes to subdivide an existing 15 ha split-zoned parcel to create 6 RR-2 zoned lots and 4 M-RU zoned lots. The Commission considered the applications at its meeting of March 26, 2024, and recommended accepting the construction of a trail within the future Wieland Road public right-of-way. Staff recommend that park land dedication in the amount of 5% be provided, except that a lesser amount may be accepted where the owner agrees to construct a trail to CRD standards as a condition of the CRD's sign-off to MoTI, prior to final approval of the subdivision.

RECOMMENDATION

The Land Use Committee recommends to the Capital Regional District Board:

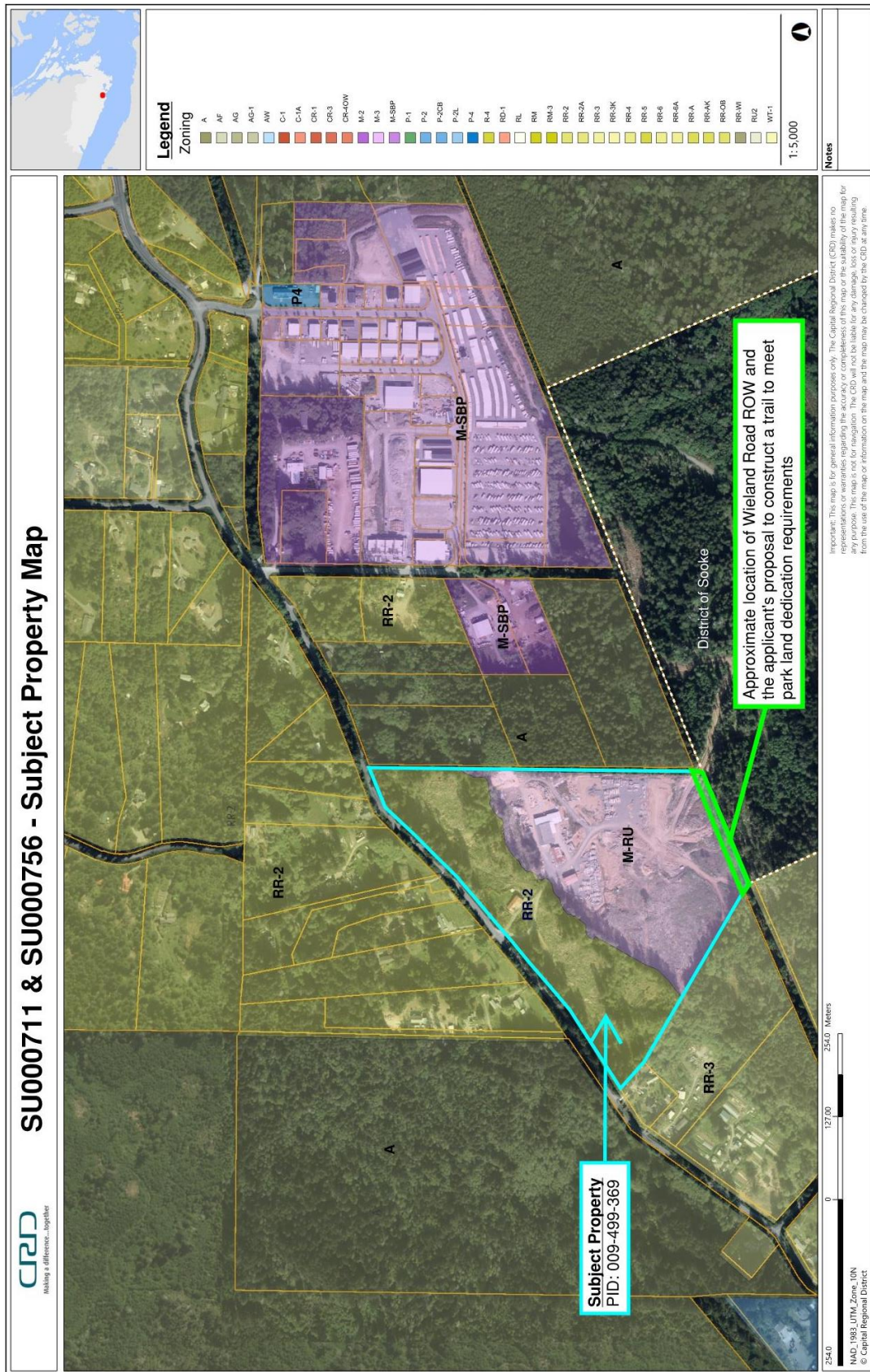
That in accordance with Section 510 of the *Local Government Act*, park dedication in the amount of 5% be required for the proposed subdivision of That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD43782I) and Except Parts in Plans 3054 and 17721 (the "Land"); PID: 009-499-369; except that a lesser amount may be acceptable where the owner agrees to construct a trail built to JdF Community Parks and Recreation standards prior to subdivision approval on that part of the Land that will become the Wieland Road right-of-way.

Submitted by:	Iain Lawrence, RPP, MCIP, Senior Manager, Juan de Fuca Local Area Services
Concurrence:	Kevin Lorette, P.Eng, MBA, General Manager, Planning & Protective Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

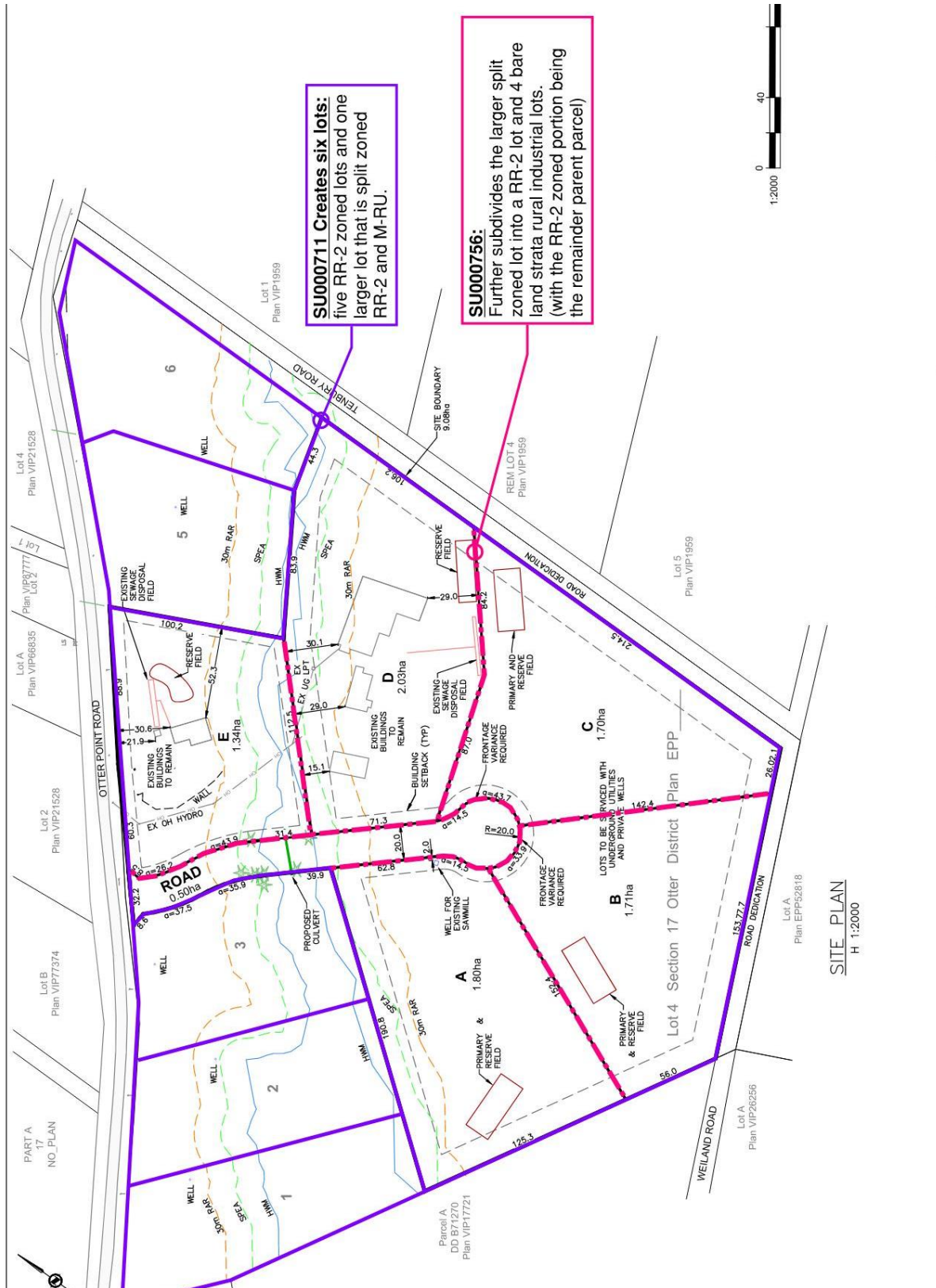
ATTACHMENTS

- Appendix A: Subject Property Map
- Appendix B: Proposed Subdivision Plans SU000711 & SU000756
- Appendix C: Section 510 of the *LGA*
- Appendix D: Minutes from the July 30, 2019, Juan de Fuca Electoral Area Parks and Recreation Advisory Commission Meeting
- Appendix E: Proposal to Meet the Provision of Park Land Requirements
- Appendix F: Minutes from the March 26, 2024, Juan de Fuca Electoral Area Parks and Recreation Advisory Commission Meeting

Appendix A: Subject Property Map



Appendix B: Proposed Subdivision Plans SU000711 & SU000756



Appendix C: Section 510 of the LGA

Requirement for provision of park land or payment for parks purposes

- 510** (1) Subject to this section and section 516 (3) (h) and (4) [*phased development agreement rules*], an owner of land being subdivided must, at the owner's option,
- (a) provide, without compensation, park land of an amount and in a location acceptable to the local government, or
 - (b) pay to the municipality or regional district an amount that equals the market value of the land that may be required for park land purposes under this section as determined under subsection (6) of this section.
- (2) Despite subsection (1),
- (a) if a regional district does not provide a community parks service, the option under subsection (1) (b) does not apply and the owner must provide land in accordance with subsection (1) (a), and
 - (b) subject to paragraph (a), if an official community plan contains policies and designations respecting the location and type of future parks, the local government may determine whether the owner must provide land under subsection (1) (a) or money under subsection (1) (b).
- (3) Subsection (1) does not apply to the following:
- (a) subject to subsection (4), a subdivision by which fewer than 3 additional lots would be created;
 - (b) a subdivision by which the smallest lot being created is larger than 2 hectares;
 - (c) a consolidation of existing parcels.
- (4) Subsection (1) does apply to a subdivision by which fewer than 3 additional lots would be created if the parcel proposed to be subdivided was itself created by subdivision within the past 5 years.
- (5) The amount of land that may be required under subsection (1) (a) or used for establishing the amount that may be paid under subsection (1) (b) must not exceed 5% of the land being proposed for subdivision.
- (6) If an owner is to pay money under subsection (1) (b), the value of the land is whichever of the following is applicable:
- (a) if the local government and the owner agree on a value for the land, the value on which they have agreed;
 - (b) the average market value of all the land in the proposed subdivision calculated
 - (i) as that value would be on the date of preliminary approval of the subdivision or, if no preliminary approval is given, a date within 90 days before the final approval of the subdivision,
 - (ii) as though the land is zoned to permit the proposed use, and
 - (iii) as though any works and services necessary to the subdivision have not been installed.
- (7) If an owner and a local government do not agree on the average market value for the purpose of subsection (6), it must be determined in the manner prescribed in the regulations that the minister may make for this purpose.

- (8) If an area of land has been used to calculate the amount of land or money provided or paid under this section, that area must not be taken into account for a subsequent entitlement under subsection (1) in respect of any future subdivision of the land.
- (9) Subject to subsection (11), the land or payment required under subsection (1) must be provided or paid to a municipality or regional district as follows
 - (a) subject to paragraph (b), before final approval of the subdivision is given;
 - (b) if the owner and the local government enter into an agreement that the land or payment be provided or paid by a date specified in the agreement, after final approval of the subdivision has been given.
- (10) Notice of an agreement under subsection (9) (b) must be filed with the registrar of land titles in the same manner as a notice of a permit may be filed and section 503 *notice of permit on land title* applies.
- (11) Despite subsection (9), the minister may, by regulation,
 - (a) authorize the payment that may be required by this section to be made by instalments, and
 - (b) prescribe the conditions under which instalments may be paid.
- (12) If land is provided for park land under this section, the land must be shown as park on the plan of subdivision.
- (13) Section 107 [*deposit in land title office operates to dedicate and vest park land*] of the *Land Title Act* applies to park land referred to in subsection (12), except that,
 - (a) in the case of land within a municipality, title vests in the municipality, and
 - (b) in the case of land outside a municipality, title vests in the regional district if it provides a community parks service.
- (14) If an owner pays money for park land under this section, the municipality or regional district must deposit this in a reserve fund established for the purpose of acquiring park lands.

Appendix D: Minutes from the July 30, 2019, Juan de Fuca Electoral Area Parks and Recreation
Advisory Commission Meeting



**Minutes of a Meeting of the
Juan de Fuca Electoral Area Parks and Recreation Advisory Commission
Held Tuesday, July 30, 2019 at the Juan de Fuca Local Area Services Building,
3 – 7450 Butler Road, Otter Point, BC**

PRESENT: S. Jorna (Chair), V. Braunschweig, B. Croteau, J. Gaston,
Director M. Hicks, A. Marchand, A. Sielopp, P. Sloan
Staff: D. Closson, Manager, Juan de Fuca Parks and Recreation;
E. Taylor, Planner; W. Miller, Recorder
PUBLIC: 1

The meeting was called to order at 3:00 pm

1. Approval of the Agenda

MOVED by Commissioner Croteau, **SECONDED** by Commissioner Sielopp that the agenda be approved, as amended, to add a presentation from the Friends of Coppermine Park Society under New Business.

CARRIED

2. Adoption of the Minutes of May 28, 2019

MOVED by Commissioner Croteau, **SECONDED** by Commissioner Sielopp that the minutes from the meeting of May 28, 2019, be adopted.

CARRIED

3. Chair's Report

None.

4. Director's Report

Director Hicks reported that Wally Vowles has stepped down as Alternate Director and that Dan Quigley now fills the position. Director Hicks relayed that he anticipates attending future meetings of the Commission.

5. Delegation – Juan de Fuca Community Planning

a) Zoning and Official Community Plan Amendment Application RZ000267 - That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD43782I) And Except Parts in Plans 3054 And 17721 (3542 & 1-3542 Otter Point Road)

Emma Taylor spoke to the staff report to the Juan de Fuca Land Use Committee and the request to rezone a 5 ha portion of the subject property from Rural A to Rural Residential 2 (RR-2) to allow a five lot rural residential subdivision, to rezone a 6 ha area to a new Industrial Sawmill (M-3) zone, and to rezone a 4 ha portion to a new Industrial Aquaculture (M-4) zone. An amendment to the Otter Point Official Community Plan (OCP) is also proposed to designate portions of the property as Watercourses & Wetland Areas and Commercial & Industrial development permit areas.

Emma Taylor confirmed that the agent for the application was present and directed attention to the policies in the Otter Point OCP for parks and natural areas for the Commission's consideration.

PREC-227576723-462

Juan de Fuca Electoral Area Parks and Recreation
Advisory Commission Meeting Minutes
July 30, 2019

2

The Chair reported that staff and members of the Commission attended the two subject properties being considered for rezoning on July 29.

Commission comments included:

- the Commission holds a licence of occupation over Wieland Road for trail use
- the subject property interrupts the trail
- extension of the gazetted road or establishment of a statutory right-of-way over the subject property would provide an alternative transportation route from William Simmons Memorial Park to Kemp Lake Road to Crown lands to the west

Emma Taylor responded to questions from the Commission advising that

- the obligation for formal park land dedication in accordance with Section 510 of the *Local Government Act (LGA)* would be at the time of subdivision, should the rezoning application proceed
- the applicant has submitted a subdivision application
- the applicant is aware of the licence of occupation
- the rezoning application has been referred to agencies for comment
- agency comments will be shared with the applicant and considered by the Land Use Committee

Director Hicks stated that, should a route be secured over the subject property, gas tax funds could be utilized to support construction of a trail.

Staff presented photos from the July 29 site visit.

Commission comments included:

- it is understood that the property owner wants to be able to access the adjacent private property to the south as part of the sawmill operation
- measures would need to be in place to ensure the safety of all users
- proposed route would be screened by trees
- the proposed route would benefit the community of Otter Point

Emma Taylor responded to a question from the Commission advising that a combination of land and cash can be considered at the time of subdivision to meet the requirements of Section 510 of the *LGA*.

MOVED by Director Hicks, **SECONDED** by Commissioner Sloan that the Commission supports the rezoning application with establishment of a trail for continuation of Wieland Road at the time of subdivision.

Staff responded to a question from the Commission advising that the application will also be considered by the Otter Point Advisory Planning Commission.

The Chair called the question.

CARRIED

Appendix E: Proposal to Meet the Provision of Park Land Requirements

Conditions provided by landowner on March 14, 2024

The landowner is offering to construct the Weiland Road Trail to satisfy Section 510 of the *LG Act*. The offer is made with the following understanding:

- Trail construction will occur during the summer of 2024, and will be completed by September 30, 2024.
- The trail work includes approximately 180 m of trail along the south boundary of the property, approximately 305 m of trail to the west, and approximately 320 m of trail to the east. Total length is approximately 805 m.
- The trail will be constructed in conformance with the Juan de Fuca Electoral Area Community Park Trail Standards (Type 2). The trail work will include grading, cut and fill slopes, ditching and culverts, granular trail structure and finish, and appropriate seeding. The work does not include retaining walls, timber cribbed steps or boardwalks.
- Split rail fencing, imported topsoil and landscaping plants (if required or desired) will be by others after the trail work is accepted by the CRD.
- Managing off site issues including DP's, RAPR, sensitive ecosystems, neighbor communications etc. will be by the CRD.
- JEA will provide site boundary flagging, trail layout and periodic construction inspection.
- CRD will provide construction inspection as it feels appropriate, and will provide final review and acceptance of the trail works.

Appendix F: Minutes from the March 26, 2024, Juan de Fuca Electoral Area Parks and Recreation
Advisory Commission Meeting

Juan de Fuca Electoral Area Parks and Recreation Advisory Commission
March 26, 2024

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East Sooke – Copper Mine

- it was reported that an inquiry was received from a member of the public questioning if a park permit grants exclusive use of the park
- it was reported that a comment was received from another member of the public regarding park users using the parking at the community hall, which can be an issue when there is an event at the hall

Don Closson reported that a park permit does not imply or allow exclusive use of a park; however, portions of a park can be portioned off for a private event or function, such as a picnic shelter.

Commission discussion ensued regarding opportunities to improve parking at Copper Mine Park including removing brush and laying gravel on the road right-of-way to promote forward parking along Copper Mine Road.

Don Closson stated that he was not aware of any parking issues and that he is available to discuss the matter further with the member of the public.

Shirley – Sheringham Point Trail

- three large trees have fallen and small tree cutting work requires clean up

Don Closson reported that staff will address the trail this spring.

Shirley – Priest Cabin

- support was forwarded for installation of signage to mark the junction to the Matterhorn

Don Closson reported that staff are still working on the full sign package.

7. Delegation - Juan de Fuca Community Planning

a) Subdivision Application SU000711 & SU000756 - That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD 43782I) and Except Parts in Plans 3054 and 17721

Don Closson spoke to the staff memo provided by Community Planning regarding a referral received from the Ministry of Transportation and Infrastructure for a 6-lot conventional subdivision application (SU000711) and a subsequent 4-lot bare land strata subdivision application (SU000756) at 3542 Otter Point Road. The Commission considered the rezoning application submitted to permit subdivision at its meeting of July 20, 2019. At that meeting, the Commission recommended support of the rezoning if a trail connecting Wieland Road is provided at the time of subdivision.

The landowner proposes to meet section 510 of the *Local Government Act* by constructing a trail that connects through Wieland Road, on a portion of land that will become a part of the public right-of-way.

It was confirmed that the agent for the application was present.

Don Closson responded to questions from the Commission advising that the CRD would:

- allow for trail crossing by the applicant for industrial purposes
- be responsible for trail construction within the Watercourses and Wetlands Areas Development Permit Area

Juan de Fuca Electoral Area Parks and Recreation Advisory Commission
March 26, 2024

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- be responsible for landscaping except that larger cleared areas will be allowed to regenerate naturally

The agent stated that the industrially zoned lots are designated an Industrial Development Permit Area and, as such, a degree of screening will be required.

MOVED by Commissioner Braunschweig, **SECONDED** by Commissioner McKay that the Juan de Fuca Electoral Area Parks and Recreation Advisory Commission recommends to the Juan de Fuca Land Use Committee that a trail be constructed to JdF Community Parks and Recreation standards for the proposed 6-lot subdivision (SU000711) and 4 lot bare land strata subdivision (SU000756) of That Part of Section 17, Otter District, Lying East of Otter Point Road, Except Parcel C (DD 43782I) and Except Parts in Plans 3054 and 17721, as outlined in the proposal submitted by the landowner, dated March 14, 2024.

CARRIED

**REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, MAY 15, 2024**

SUBJECT **Greater Victoria Drinking Water Quality – 2023 Annual Report**

ISSUE SUMMARY

To present the Greater Victoria Drinking Water Quality 2023 Annual Report to the Regional Water Supply Commission prior to submission to the provincial regulator.

BACKGROUND

The Capital Regional District (CRD) undertakes a comprehensive water quality monitoring program as part of its multi-barrier approach to provide a safe drinking water supply to the region. The Water Quality Monitoring Program reports water trends on a regular basis to the Regional Water Supply Commission, along with a comprehensive annual report for each calendar year. The Greater Victoria Drinking Water Quality 2023 Annual Report is attached as Appendix A. Water suppliers in BC are responsible for monitoring and providing an annual report to the provincial regulator (i.e., Island Health). To assist in meeting these responsibilities, the CRD has prepared this report, which will be distributed to Island Health and all municipal water purveyors and posted on the CRD website.

ALTERNATIVES

Alternative 1

The Regional Water Supply Commission recommends to the CRD Board:
That the Greater Victoria Drinking Water Quality 2023 Annual Report be approved.

Alternative 2

That the Regional Water Supply Commission direct staff to provide further information.

IMPLICATIONS

Environmental & Climate Implications

The report indicates that our source water remains in good condition and there is excellent drinking water quality in all system components of the Greater Victoria Drinking Water System. The system is monitored for physical, chemical, and biological water quality parameters. All trends are stable and indicate good conditions overall. 2023 brought a few unexpected operational challenges with potential significant water quality impacts. In September, a Main #4 leak on the Saanich Peninsula was detected that required an immediate and complex repair within a short time window. The repair was successfully completed without any water quality adverse events. In October, CRD staff detected roof leaks at the CRD Mount Tolmie Supply Storage Reservoir. Short-term leak repairs were completed and work is ongoing for a long-term rehabilitation of this facility. Water quality monitoring has ensured that the drinking water quality was never compromised throughout these procedures.

Monitoring results indicate the CRD continues to meet guidelines for maintaining an unfiltered source water supply. Further monitoring within the distribution systems also indicates a good

balance between managing bacterial growth and ensuring good water quality with low concentrations of disinfection byproducts. CRD staff are involved in several provincial and federal technical and scientific committees and are therefore able to continually apply leading edge expertise and technology in monitoring and decision-making for protecting the drinking water quality in the region.

Financial and Regulatory Implications

The reporting function is included within the overall budget for the Water Quality Monitoring Program. This task ensures there is adequate information to inform and work with Island Health officials, meet provincial regulatory requirements and federal guidelines, and ensure CRD staff have sufficient information to maintain proper oversight of the water supply system.

The CRD continues to provide compliance monitoring of the municipal systems within the region to deliver effective and efficient oversight for both monitoring and reporting of water quality within the overall distribution system. Responsibility for any issues that may arise in the municipal infrastructure remains with local governments.

Social Implications

The full disclosure of water quality monitoring data maintains public confidence that the CRD is effectively managing the regional drinking water supply. The data and reports are available online through the CRD public website. Staff respond directly to any customer concerns and questions, and work with CRD operational staff, municipal staff, small system operators and Island Health officials to ensure good communication and support for the overall system.

CONCLUSION

The Water Quality Monitoring Program remains an essential component in the delivery of a safe drinking water supply to the region. Monitoring results summarized in the Greater Victoria Drinking Water Quality 2023 Annual Report indicate good water quality overall, with the low risks associated with the unfiltered source water being well managed by the CRD's multi-barrier approach. Once the report is approved by the Board, it will be submitted to Island Health, as per the requirement under the BC Drinking Water Protection Act.

RECOMMENDATION

The Regional Water Supply Commission recommends to the Capital Regional District Board:
That the Greater Victoria Drinking Water Quality 2023 Annual Report be approved.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P. Eng., Acting General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: Greater Victoria Drinking Water Quality – 2023 Annual Report



Greater Victoria Drinking Water Quality 2023 Annual Report

Parks & Environmental Services Department

Environmental Protection



Prepared By

Water Quality Program

Capital Regional District

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May 2024

Greater Victoria Drinking Water Quality 2023 Annual Report

EXECUTIVE SUMMARY

This report provides the annual overview of the Capital Regional District (CRD) Water Quality Monitoring program and 2023 water quality results within the Greater Victoria Drinking Water System (GVDWS) and its individual system components (see Map 1). The results indicate that Greater Victoria's drinking water continues to be of good quality and is safe to drink.

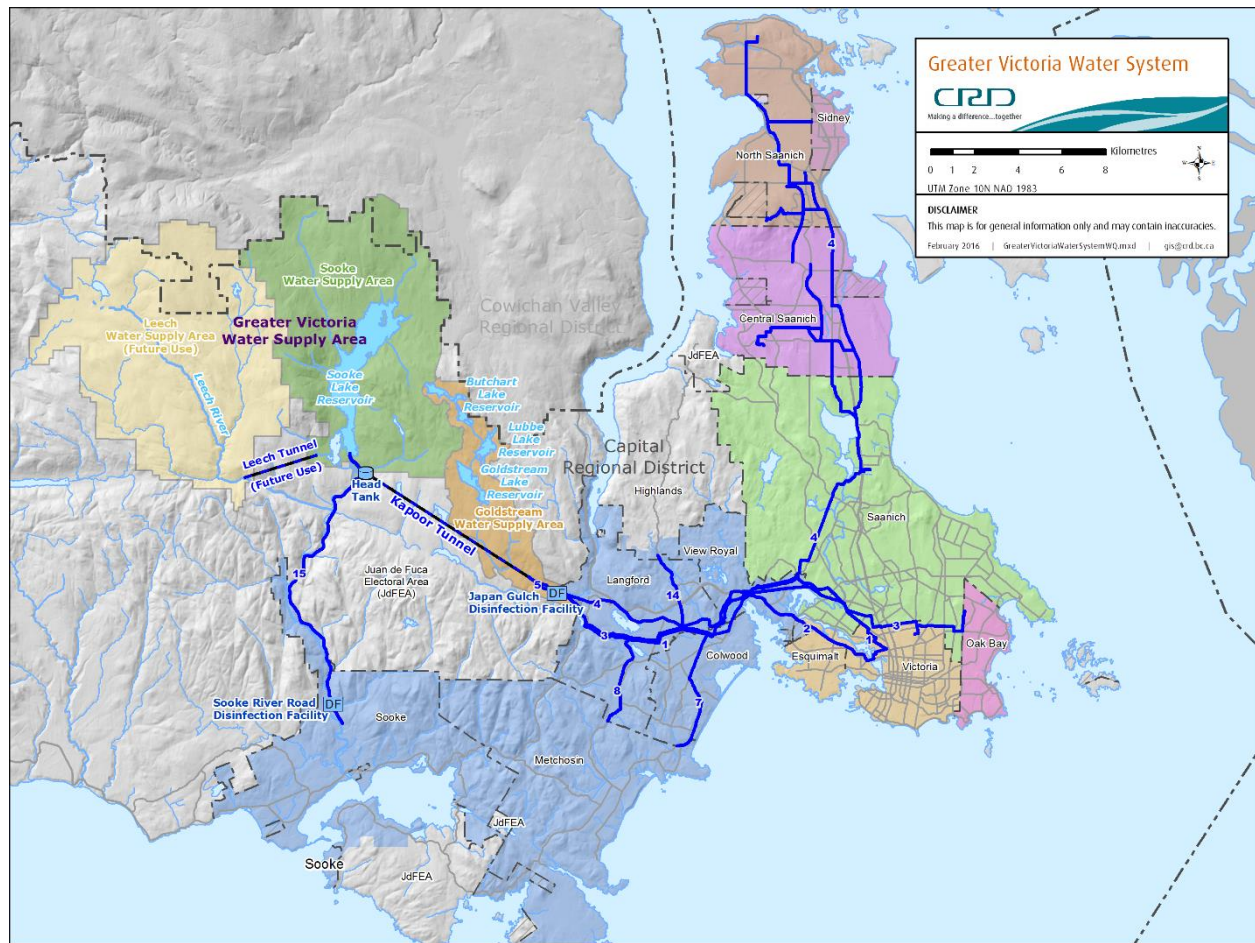
The monitoring program is designed to meet the requirements of the provincial regulatory framework, which is defined by the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation*, and to follow the federal guidelines for drinking water quality.

The approximately 11,000 hectares of the Sooke and Goldstream watersheds comprise the source of our regional drinking water supply area. Water flows from the reservoirs to the Sooke and Goldstream water treatment plants and then through large-diameter transmission mains and a number of storage reservoirs into eight different distribution systems, which in turn deliver the drinking water to the consumers. The monitoring program covers the entire system to anticipate any issues (i.e., source water monitoring), ensure treatment is effective (i.e., monitoring at the treatment facilities), and confirm a safe conveyance of the treated water to customers (i.e., transmission and distribution system monitoring). It also enables CRD staff to address any concerns or questions by the general public. The program adopts a multiple-lines-of-evidence approach (biological, chemical and physical) to ensure all aspects of water quality are considered. The program is comprehensive, collecting approximately 6,000 samples and conducting approximately 60,000 individual analyses annually. The results are discussed with Island Health, which oversees compliance with drinking water standards, and with CRD operations and municipal staff, who rely on the information to properly operate and maintain the system components.

The source water reservoirs, with established and intact ecosystems, provide raw water of excellent and stable water quality that can be utilized unfiltered for the preparation of potable water. Water quality monitoring in the watersheds serves several purposes: 1) to verify that the CRD continues to comply with the criteria for an unfiltered surface water source; 2) to understand the quality of the water flowing into the reservoirs; 3) to ensure that staff are aware of the presence and absence of water quality-relevant organisms, including specific pathogens in the lakes, prior to any treatment; 4) to confirm that the water quality parameters remain within the effectivity range of the disinfection treatment; and 5) to detect any taste and odour or other aesthetic concerns that could then pass through the system.

This annual water quality report separates the water system components that are the CRD's responsibility from system components that are the responsibility of the municipalities. The CRD provides water quality sampling and testing services for compliance purposes to all municipal water systems. Each water distribution system was assessed for compliance with the regulatory requirements. This annual report contains the compliance summary for the CRD and municipal water distribution systems in the GVDWS.

MAP 1. Greater Victoria Drinking Water System



**Greater Victoria Drinking Water Quality
2023 Annual Report**

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Greater Victoria Drinking Water Quality 2023 Annual Report

1.0 INTRODUCTION

This report is the annual overview of the results from water quality samples collected in 2023 from the Greater Victoria Drinking Water System (GVDWS) (see Map 1). The report summarizes data from the Capital Regional District (CRD) owned and operated water infrastructure that includes the source reservoirs, the Regional Transmission System and the Juan de Fuca Water Distribution System, as well as data from the municipal distribution systems. Monthly and weekly summary reports on water quality data are posted on the CRD's website at: <https://www.crd.bc.ca/about/data/drinking-water-quality-reports>.

2.0 WATER SYSTEM DESCRIPTION

In 2023, the GVDWS supplied drinking water to approximately 412,500 people and is the third-largest drinking water system operating in British Columbia. It comprises two separate service areas:

1. The **Goldstream Service Area** that supplies water to approximately 395,000 people in Victoria, Saanich, Oak Bay, Esquimalt, Central Saanich, North Saanich, Sidney, Highlands, Colwood, Langford and Metchosin via the Goldstream Water Treatment Plant.
2. The **Sooke Service Area** that supplies water to approximately 17,500 people in Sooke and East Sooke via the Sooke River Road Water Treatment Plant.

2.1 Source Water Systems

Drinking water for the GVDWS comes from protected watersheds called the Greater Victoria Water Supply Area (see Map 1). This CRD-owned and managed area, which is approximately 20,500 hectares in size, is located about 30 km northwest of Victoria and encompasses about 98% of the Sooke Lake, 98% of the Goldstream Lake and 92% of the Leech River catchment areas. The Goldstream and Sooke watersheds, with 11,000 ha area, comprise the active water supply area, whereas 9,500 ha of the Leech watershed are currently inactive and designated for future water supply.

Goldstream Service Area

The five reservoirs in the supply area have been used as a source of drinking water since the early 1900s. The Sooke Lake Reservoir, the largest of the reservoirs, is the primary water source for this system, supplying typically between 98% and 100% of Greater Victoria's drinking water. In 2023, Sooke Lake Reservoir supplied 100% of the source water. The four reservoirs in the Goldstream system (Butchart, Lubbe, Goldstream and Japan Gulch) are typically off-line and are used only as a backup water supply. Controlled releases from the Goldstream watershed provide water for salmon enhancement in the lower Goldstream River. The Leech River watershed does not yet contribute to the water supply for the GVDWS.

Water at the southern end of Sooke Lake Reservoir enters two of the variable depth gates in the intake tower and is screened through a stainless-steel travelling screen (openings of 0.5 mm). From the intake tower, the water passes through two 1,200 mm-diameter pipelines to the head tank and then through the 8.8 km-long, 2.3 m-diameter Kapoor Tunnel and then into 1,525 mm- and 1,220 mm-diameter pipes connecting the Kapoor Tunnel to the Goldstream Water Treatment Plant, where it is disinfected.

During occasional brief periods of use (typically used only when the Kapoor Tunnel is out of service for inspection by CRD staff), water in the Goldstream Watershed is released from Goldstream Reservoir and flows down the upper reaches of Goldstream River into Japan Gulch Reservoir. Water from Japan Gulch Reservoir enters the Japan Gulch intake tower through a low-level and a high-level intake, passing through a 14-mesh, stainless steel screen and is then carried in a 1,320 mm-diameter pipe into the Goldstream Water Treatment Plant.

Sooke Service Area

Drinking water for the Sooke Service Area is only supplied from Sooke Lake Reservoir but travels a different route. This water is passed through a 14.5 km-long (9 miles), 600 mm-diameter PVC and ductile iron pipe from a point just above the head tank to the Sooke River Road Water Treatment Plant. The Sooke Service Area has no backup water source.

2.2 Water Disinfection

The drinking water of the GVDWS is only treated by a multi-stage disinfection process. Further treatment such as filtration is not required due to compliance with the BC Ministry of Health requirements for a Filtration Exemption (Drinking Water Treatment Objectives for Surface Water Supplies in BC). A Filtration Exemption is also supported by meeting the USEPA requirements under the Surface Water Treatment Rules for unfiltered water systems. The disinfection process in the GVDWS is both simple and effective and uses two water treatment plants to provide disinfected drinking water to the two main service areas.

Both water treatment plants utilize the same disinfection concepts and process methods. The Goldstream Water Treatment Plant uses delivered liquid sodium hypochlorite and liquid ammonia for the disinfection process and still has the old chlorine gas injection plant as a backup system. The Sooke River Road Water Treatment Plant generates sodium hypochlorite on site and injects delivered liquid ammonia to achieve the disinfection effect.

At both water treatment plants, the water passes through a three-part disinfection process in sequential order - two primary disinfection steps that provide disinfection of the water entering the system, followed by a secondary disinfection step that provides continuing disinfection throughout the transmission system and the distribution systems:

1. **UV Disinfection.** Ultraviolet (UV) disinfection provides the first step in the primary disinfection process (disinfection of the raw source water entering the plants) and inactivates parasites, such as *Giardia* and *Cryptosporidium* [3-log (99.9%) inactivation], as well as reducing the level of bacteria in the water. Based on the consistently applied high UV dosage at the Goldstream plant (50-90 mJ/cm²), it can be assumed that it is also effective in inactivating certain viruses (66-99% rotavirus inactivation). The newer Sooke River Road Water Treatment Plant applies a much lower dosage of UV (15-25 mJ/cm²), in accordance with the Operating Permit requirements and current industry standards.
2. **Free Chlorine Disinfection.** Free chlorine disinfection provides the second step in the primary disinfection process, using a free chlorine dosage of approximately 1.5-2.5 mg/L and a minimum of 10-minute (depending upon flow) contact time between the free chlorine and the water. By achieving the minimum CT of 12 (chlorine concentration multiplied by contact time) at all times, the free chlorine disinfection step inactivates bacteria and provides a 4-log (99.99%) reduction of viruses.
3. **Ammonia Addition.** The secondary disinfection process consists of the addition of ammonia to form chloramines at a point downstream where the water has been in contact with the free chlorine for approximately 10 minutes or more. The ammonia is added at a ratio of approximately one part ammonia to four-five parts chlorine. In the water, these chemicals combine to produce a chloramine residual (measured as total chlorine). Monochloramine is the desired residual product, which typically represents 90% of the total chlorine when leaving the plants. This residual remains in the water and continues to protect the water from bacterial contamination (secondary disinfection), as it travels throughout the pipelines of the distribution systems.

In East Sooke, at the Iron Mine Reservoir, the CRD re-chloraminates the water to boost the chlorine residual provided to the extremities of that system. In Metchosin, at Rocky Point Reservoir, the CRD maintains another re-chloramination station, which has not been in service for approximately eight years. It has been deemed unnecessary for maintaining adequate residuals. Currently, there are no provisions to re-chloramine the water at the far reaches of the distribution system on the Saanich Peninsula; however, emergency re-chlorination stations are provided at Upper Dean Park Reservoir and Deep Cove pump station, supplying Cloake Hill Reservoir. These re-chlorination stations are able to add free chlorine to the system if the total chlorine residuals were to drop to inadequate levels or during water quality emergencies.

2.3 CRD Transmission System

The CRD Transmission System comprises a number of large-diameter transmission mains and several connected supply storage reservoirs. Almost all of the supply storage reservoirs are on the Saanich Peninsula, leaving the Core Area municipalities without any supply storage. Using a series of large-diameter transmission mains, the CRD supplies treated water to its downstream customers. These large-diameter transmission mains are sorted into three sections:

1. Regional Transmission System, that supplies the Westshore and the Core Area municipalities, and up to the Saanich Peninsula boundary;
2. The Saanich Peninsula Trunk Water Distribution System that receives water at two points on the Saanich Peninsula from the Regional Transmission System and supplies it to the three municipalities and other customers on the Saanich Peninsula; and
3. The Sooke Supply Main.

2.3.1 Regional Transmission System

The CRD currently uses seven large-diameter transmission mains to supply drinking water to the municipal distribution systems in the Goldstream Service Area. These transmission mains range in diameter from 1,525 mm (60") down to 460 mm (18") and transfer water from the Goldstream Water Treatment Plant to the distribution systems listed in Section 2.4.

- Main #1 is a 1,067 mm-diameter (42") cement mortar-lined, welded steel pipe that starts at the Humpback pressure regulating valve (PRV) below the Humpback Reservoir Dam and ends at the David Street vault. This transmission main provides water primarily to the City of Victoria, but also services portions of Saanich and the Westshore communities.
- Main #2 is a 780 mm-diameter (31") steel and ductile iron pipe, which starts at the Colwood overpass and runs primarily through View Royal, Esquimalt and Vic West along the Old Island Highway and Craigflower Road. Main #2 joins Main #1 at the David Street vault after crossing the Bay Street Bridge. This supply main is 7.6 km in length and provides water to View Royal, Victoria and Esquimalt.
- Main #3 is primarily a 990 mm-diameter (39") steel pipe that supplies water from the Humpback PRV and terminates at the CRD's Mt. Tolmie Reservoir. There are several sections in this line that include 1,220 mm-diameter (48") and 810 mm-diameter (32") pipes. The 810 mm-diameter pipe terminates at the Oak Bay meter vault. This supply main is 21.3 km in length and provides water to the Westshore communities, Saanich, Victoria and Oak Bay.
- Main #4, a high-pressure transmission main, is primarily a 1,220 mm-diameter (48") welded steel pipe that supplies water from the Goldstream Water Treatment Plant primarily to Saanich and the Saanich Peninsula. There are two small sections of 1,320 mm (52") and 1,372 mm (54") reinforced concrete pipe. This transmission main is 26.2 km in length and terminates near the Saanich-Central Saanich boundary, where it transfers water to the 762 mm (30") trunk main, which extends to McTavish Reservoir. It supplies the municipalities on the Saanich Peninsula and to Bear Hill Reservoir and Hamsterly pump station, near Elk Lake.
- Main #5 is a 1,524 mm-diameter (60") pipe that connects the Kapoor Tunnel via the Goldstream Water Treatment Plant to the Humpback PRV just below the old Humpback Reservoir dam. It is approximately 1.6 km in length and provides water to mains #1 and #3.
- Main #7 is a 610 mm-diameter (24") steel pipe that runs from Goldstream and Whitehead Road to Metchosin and Duke Road. It is 4 km in length and provides water to portions of Colwood, Langford and Metchosin.
- Main #8 is a 457 mm-diameter (18") steel and asbestos cement pipe that runs from Glen Lake School, primarily along Happy Valley Road to Happy Valley and Glen Forest Way. It is 3.6 km in length and provides water to Langford, Colwood and Metchosin.

There are three active inter-connections between the high-pressure Main #4 and the low pressure mains #1 and #3, where water can be transferred from Main #4 to the other two mains via PRV stations. These stations are located at Watkiss Way, Millstream at Atkins, at Goldstream/Veteran's Memorial Parkway, and Burnside at Wilkinson Road. There is also a series of inter-connections between mains #1 and #3, with the major inter-connections being at Price, Station, Tillicum and Dupplin roads.

2.3.2 Saanich Peninsula Trunk Water Distribution System

The Saanich Peninsula Trunk Water Distribution System receives water at two points on the Saanich Peninsula from the Regional Transmission System and supplies it to four customers on the Saanich Peninsula: the municipalities of Central Saanich, North Saanich, Sidney and the Agricultural Research Station. Several First Nations distribution systems are supplied via a short proxy-connection by either the Central Saanich or North Saanich municipality.

The Saanich Peninsula Trunk Water Distribution System is comprised of 46 km of transmission mains, including the 762 mm (30") Bear Hill Main, the 400 mm (16") Martindale Main, the 300 to 400 mm (12"-16") Dean Park Main and the 250-500 mm (10-20") Saanich Peninsula mains.

The McTavish Reservoir is the terminus of the Regional Transmission System and Main #4, a 610 mm-diameter (24") concrete cylinder pipe). The Saanich Peninsula Trunk Water Distribution System begins with pipes from or bypassing McTavish Reservoir, which then continue further along the peninsula. In the vicinity of the airport at Mills Road, the main from McTavish Reservoir reduces from a 500 mm (20") to a 406 mm-diameter (16") asbestos cement pipe that terminates at the Deep Cove pump house. A dedicated 300 mm-diameter (12") ductile iron (DI) supply main from Deep Cove pump station transitions at the end of Hillgrove Road to 250 perm/PVC pipe just before it connects with Cloake Hill Reservoir. A 457 mm-diameter (18") AC pipe along Mills Road connects the trunk main to the northwest end of the Sidney Distribution System.

The CRD also operates five major pumping stations located at Hamsterly, Lowe Road, Dean Park Lower, Dean Park Middle and Deep Cove, along with one minor pumping station located at Dawson Upper Reservoir, which are all considered part of the transmission system.

2.3.3 Sooke Supply Main

The Sooke Drinking Water Service Area is supplied by Main #15, a 600 mm pipe (upper section, PVC; lower high-pressure section, ductile iron) that conveys raw water from Sooke Lake Reservoir to the Sooke River Road Water Treatment Plant. Main #15 feeds directly into the Sooke Distribution System downstream of the water treatment plant.

2.3.4 Supply Storage Reservoirs

A number of supply storage reservoirs are considered part of the transmission system, even though most of them technically operate as a distribution reservoir with all of its typical functions: balancing, fire and emergency storage.

The only CRD-owned and operated transmission system storage reservoir in the Regional Transmission System is:

- Mt. Tolmie Reservoir, a two-cell concrete in-ground reservoir, 27,300 m³ (6M gallon), located on Mt. Tolmie, at the terminus of Main #3 near the Oak Bay-Saanich boundary.

Haliburton Reservoir, a one-cell concrete in-ground reservoir, 22,700 m³ (5M gallon), located off Haliburton Road in Saanich, has been disconnected from the system (off Main #4) and is empty. It is anticipated that this reservoir will not be used for drinking water purposes again.

The CRD-owned and operated transmission system storage reservoirs in the Saanich Peninsula Trunk Water Distribution System are:

- Bear Hill Reservoir, a two-cell concrete above-ground reservoir, 4,546 m³ (1M gallon), located on Bear Hill in Saanich.
- Cloake Hill Reservoir, a one-cell, 4,546 m³ (1M gallon) reservoir located on Cloake Hill in North Saanich.
- Dawson Upper Reservoir, a one-cell, 455 m³ (100,000 gallon) reservoir located off Benvenuto Avenue in Central Saanich.
- Dean Park Lower Reservoir, a two-cell concrete above-ground reservoir, 4,546 m³ (1M gallon), located beside Dean Park Road in North Saanich.
- Dean Park Middle Reservoir, two cylindrical concrete above-ground tanks, 2,730 m³ (600,000 gallon), located near the bottom of Dean Park in North Saanich.
- Dean Park Upper Reservoir, a two-cell concrete partly in-ground reservoir, 4,546 m³ (1M gallon), located near the top end of Dean Park in North Saanich.
- McTavish Reservoir, a two-cell concrete in-ground reservoir, 6,820 m³ (1.5M gallon), located on the south side of McTavish Road in North Saanich.

2.4 Distribution Systems

The GVDWS contains eight individual distribution systems. Six distribution systems are separately owned and operated by the municipalities of Central Saanich, North Saanich, Oak Bay, Saanich, Sidney and Victoria. Victoria owns and operates the distribution system in Esquimalt. Two distribution systems are owned by the CRD and operated by the CRD Integrated Water & Infrastructure Services Department. These latter two systems include the combined distribution system in the Westshore communities of Langford, Colwood, Metchosin, View Royal and a small portion of the Highlands, and a separate system supplying water to Sooke and parts of East Sooke. Each distribution system owner/operator is defined as a water supplier and is responsible for providing safe water to their individual customers and meeting all the requirements under the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation*.

2.4.1 Juan de Fuca Water Distribution System – CRD

In 2023, water was supplied to the Juan de Fuca Water Distribution System primarily from mains #1 and #3. In this report, the Juan de Fuca Water Distribution System does not include Sooke. For Sooke/East Sooke, see Section 2.4.2 Sooke/East Sooke Distribution system below. Parts of Langford and View Royal were supplied from Main #4. The development at Bear Mountain in Langford was supplied by Main #4. The Westhills development, serviced by its own privately-operated distribution system, was supplied via mains #1 and #3. In the Juan de Fuca Water Distribution System, water flowed generally in a northerly and southerly direction away from the supply mains. The federal William Head Institution and the Beecher Bay meter vault are located at the southern extremities of this system.

The Juan de Fuca Water Distribution System includes the following distribution reservoirs:

- Bear Mountain Reservoir #1, a two-cell, 1,250 m³ (275,000 gallon) reservoir located on the lower slopes of the Bear Mountain development in Langford.
- Deer Park Reservoir, a one-cell, 1,657 m³ (365,000 gallon) reservoir located downstream of Rocky Point Reservoir re-chloramination station near the extremity of the water system off of Deer Park Trail in Metchosin (new in 2022).
- Fulton Reservoir, a two-cell, 4,580 m³ (1,007,459 gallon) reservoir located at the end of Fulton Road in Colwood.

- Peacock Reservoir, a two-cell, 583.8 m³ (128,420 gallon) reservoir located north of the Trans-Canada Highway off of Peacock Place in Langford.
- Rocky Point Reservoir, a three-cell, 546 m³ (120,000 gallon) reservoir located near the end of Rocky Point Road in Metchosin.
- Skirt Mountain Reservoir, a three-cell, 6,525 m³ (1,435,300 gallon) reservoir located near the top of Skirt Mountain in the Bear Mountain development in Langford.
- Stirrup Place Reservoir, a two-cell, 242 m³ (53,300 gallon) reservoir located off of Stirrup Place Road in Metchosin.
- Walfred Reservoir, a three-cell, 560 m³ (123,180 gallon) reservoir located on Triangle Mountain in Colwood.
- Flint North Reservoir, currently one-cell steel tank with area for proposed and future tanks (current cell 2,750 m³ (605,000 gallons), (new in 2023).

2.4.2 Sooke/East Sooke Distribution System – CRD

The Sooke/East Sooke Distribution System begins downstream of the Sooke River Road Water Treatment Plant, at the end of Main #15 on Sooke River Road, where the ammonia storage and metering building is located. The primary water supply main to the community follows Sooke River Road downstream and splits at Milne's Landing going east toward Saseenos and west toward the central area of Sooke. Two underwater pipelines across Sooke Basin supply East Sooke. Sunriver Estates came on-line in 2006 and is serviced by a 300 mm (12") pipeline on Phillips Road and the Sunriver Reservoir complex consisting of a two-cell concrete plus a one-cell steel tank. In 2020, the water main along West Coast Road was extended to connect the formerly self-sufficient Kemp Lake Waterworks District to the Sooke/East Sooke Distribution System. At this most western extremity of the Sooke/East Sooke Distribution system, the CRD now supplies bulk water to the Kemp Lake District. The CRD infrastructure ends with a meter station on West Coast Road before a Kemp Lake District-owned and operated pump station supplies their distribution system.

The Sooke/East Sooke Distribution System includes the following distribution reservoirs:

- Coppermine Reservoir, a one-cell concrete partly in-ground reservoir, 455 m³ (100,000 gallon), located off of Coppermine Road in East Sooke.
- Helgesen Reservoir, a four-cell concrete partly in-ground reservoir, 6,973 m³ (1,533,850 gallon), located at the west end of Helgesen Road in Sooke.
- Henlyn Reservoir, a one-cell steel tank tower, 224 m³ (49,270 gallon), located off of Henlyn Drive in Sooke.
- Silver Spray Reservoir, a two-cell cylindrical concrete tank, 841 m³ (185,000 gallon), located off of Silver Spray Drive in East Sooke.
- Sunriver Reservoir, a two-cell concrete above-ground reservoir, 1,800 m³ (395,944 gallon) plus a single cell 1,355 m³ (300,000 gallon) steel tank (new in 2022), located off of Sunriver Way in Sooke.

2.4.3 Central Saanich Distribution System – District of Central Saanich

In 2023, drinking water was supplied to the Central Saanich Distribution System via ten pressure zones (seven off the Bear Hill main and three off the Martindale Valley main). The Bear Hill main supplied the Tanner Ridge area by direct feed, the central area in one pressure zone through three PRVs, the Saanichton area in two pressure zones through two PRVs, the Brentwood Bay area, and the Tsartlip First Nation through a PRV. Five smaller pressure zones served the rest of Central Saanich. Dawson Upper Reservoir (CRD-owned and operated) supplied a small area of higher elevation residences in Brentwood Bay. Martindale metering station supplied an agricultural area in the southeast corner of the municipality. The Island View Road area was supplied by the Lochside metering station. The Mount Newton metering

station provided water to the northeast corner and to the Tsawout First Nation lands. A municipally-owned pump station on Oldfield Road serviced a small area in the southwest corner.

Bear Hill Reservoir (CRD-owned and operated) has the largest service population in Central Saanich, providing approximately 80% of the Central Saanich's water. It is the primary supply to most of Central Saanich (south of Haldon Road), including Brentwood Bay.

The Central Saanich Distribution System has technically no balancing, fire or emergency storage, but relies on the CRD Transmission System infrastructure to provide this. One CRD-owned reservoir (Dawson Upper) in Central Saanich, that is considered part of the transmission system, functions as a distribution reservoir for the Central Saanich Distribution System.

2.4.4 North Saanich Distribution System – District of North Saanich

In 2023, drinking water was supplied to the North Saanich Distribution System from a number of points along the Saanich Peninsula Trunk Water Distribution System. This included Dean Park via the Lowe Road pump station, Dean Park pump stations and Dean Park Reservoirs (all CRD-owned and operated), Deep Cove/Lands End area via connections upstream of the Deep Cove pump station, Cloake Hill Reservoir via Deep Cove pump station (all CRD-owned and operated), and Swartz Bay. In the North Saanich Distribution System, Cloake Hill Reservoir (CRD-owned and operated) was the largest pressure zone. Water flowed generally in an easterly direction through the Dean Park pressure zone, northwest into the Deep Cove/Lands End area and northeast to the Swartz Bay area. Dean Park Upper Reservoir (CRD-owned and operated) supplied a small portion of the Dean Park Estates.

The North Saanich Distribution System has technically no balancing, fire or emergency storage, but relies on CRD Transmission System infrastructure to provide this. Several CRD-owned reservoirs in North Saanich, which are considered part of the transmission system, function as distribution reservoirs for the North Saanich Distribution System.

North Saanich provides water to the Victoria Airport Authority via the water main on the south side and the east side of the airport. As water quality in the airport distribution system falls under federal jurisdiction, it was not monitored by the CRD in 2023 and is, therefore, not included in this report.

2.4.5 Oak Bay Distribution System – District of Oak Bay

In 2023, drinking water was supplied to the Oak Bay Distribution System at Lansdowne and Foul Bay roads from Main #3. The water flowed in a west to east direction across Lansdowne with north and south branches. Oak Bay conveys water via a 406 mm main, which crosses Oak Bay diagonally from northwest to southeast. Water was distributed from the north end to the south end via the 406 mm main. Oak Bay has an outer loop flow on Beach Drive to the Victoria boundary. The Oak Bay Distribution System has no balancing, fire or emergency storage and the CRD Transmission System infrastructure has limited provisions for this.

Oak Bay used four local pressure zones supplied by booster pumps. Sylvan Lane pump station supplied the Barkley-Sylvan area; Plymouth supplied the north Henderson area; Foul Bay supplied the south Henderson area; and Uplands pump station (seasonal) supplied the Uplands area. There are two inter-connections with the Victoria/Esquimalt Distribution System, which are normally closed, but can be used in emergencies.

2.4.6 Saanich Distribution System – District of Saanich

In 2023, drinking water was supplied to the Saanich Distribution System at a number of points from the CRD's transmission mains. Water was supplied from Main #1 at Dupplin, Wilkinson and Marigold, Holland/Burnside and Admirals/Burnside; from Main #3 at Douglas, Tillicum, Admirals, Shelbourne, Richmond, Foul Bay, Mt. Tolmie and Maplewood pump house; and from Main #4 at Burnside, Blue Ridge, Roy Road, Markham, Layritz, Cherry Tree Bend and Sayward. In the Saanich Distribution System, water flowed generally in a northerly direction from mains #1 and #3 and both east and west from Main #4.

There are four major pumping systems in the Saanich Distribution System. Maplewood pumps water north from Main #3, ending in the Gordon Head area. Cherry Tree Bend pumps from Main #4 to Wesley Reservoir

and the west central high elevation area. The Mt. Tolmie/Plymouth pump station pumps water from Main #3 and the CRD Mt. Tolmie Reservoir to Saanich's Mt. Tolmie Reservoir and the Gordon Head area via a 610 mm-diameter (24") main.

Water from Sayward supplies the north end of the Saanich Distribution System via Main #4 with a southerly flow through Cordova Bay. Saanich also has a number of other small pressure zones controlled by pump stations.

The Saanich Distribution System includes some storage for balancing, fire and emergency purposes. The following distribution reservoirs are owned and operated by Saanich:

- Hartland Reservoir, a one-cell, 769 m³ (170,000 gallon) reservoir located on Hartland Road in Saanich. This new one-cell steel tank reservoir was constructed in 2020 to replace the smaller old reservoir.
- Mt. Tolmie Reservoir (Saanich), a one-cell, 4,545 m³ (1M gallon) reservoir located on the east side of the summit of Mt. Tolmie near Cromwell Reservoir in Saanich.
- Rithet Reservoir, a one-cell, 16,807 m³ (3.7M gallon) reservoir located at the end of Perez Drive in Broadmead in Saanich.
- Wesley Reservoir, a two-cell, 3,182 m³ (700,000 gallon) reservoir located at the end of Wesley Road on Haliburton Ridge in Saanich.

2.4.7 Sidney Distribution System – Township of Sidney

In 2023, drinking water was supplied to the northern portion of the Sidney Distribution System from the 457 mm CRD transmission main on Mills Road from upstream of the Deep Cove pump station. The southern portion of the distribution system is supplied from a 300 to 400 mm ductile iron main that is connected to the CRD Transmission System and McTavish Reservoir. Within the Sidney Distribution System, water flowed generally from the west via Mills Road and from the south via McTavish Reservoir and met in the middle of the distribution system, with approximately 60% of the water coming from the Mills Road supply.

The Sidney Distribution System has no balancing, fire or emergency storage, but rather relies on the CRD Transmission System infrastructure to provide this.

2.4.8 Victoria/Esquimalt Distribution System – City of Victoria/Township of Esquimalt

Note: The City of Victoria also owns and operates the Water Distribution System in the Township of Esquimalt.

In 2023, drinking water was supplied to the Victoria/Esquimalt Distribution System from mains #1 and #2 at David Street/Gorge Road and David Street/Rock Bay Avenue. From these supply points, the system divides into several smaller looped water mains within the distribution system. Water was also supplied to Victoria from Main #3 at Cook Street/Mallek Crescent, Somerset Street/Tolmie Avenue, Douglas Street/Tolmie Avenue and Shelbourne/North Dairy. In general, water flows from a north to south direction.

Water was supplied at multiple locations to Vic West and Esquimalt from Main #2. These locations include Tyee Road/Bay Street, Burleith Crescent/Craigflower Road, Garthland Road/Craigflower Road and Admirals Road/Maple Bank Road.

The Victoria/Esquimalt Distribution System has no balancing, fire or emergency storage and the CRD Transmission System infrastructure has limited provisions for this.

3.0 MULTIPLE BARRIER APPROACH TO WATER QUALITY

The CRD and the municipalities that operate their distribution systems use a multiple barrier approach to prevent the drinking water in the GVDWS from becoming contaminated. Multiple barriers can include procedures, operations, processes and physical components. In a drinking water system, any individual contamination barrier used in isolation has an inherent risk of failure and may result in contamination of the drinking water. However, if a number of individual barriers are used together in combination with each other and, especially if they are arranged so that they complement each other, these multiple barriers are a very powerful means of preventing drinking water contamination. All CRD-owned and operated, and most other large drinking water utilities, use the multiple barrier approach to prevent drinking water contamination. The exact types and applications of barriers are unique for each system, to address the system-specific risks.

The following barriers are used in the GVDWS to prevent the drinking water from becoming contaminated:

1. **Good Water System Design.** Good water system design is one of the preeminent barriers to drinking water contamination, as it allows all of the other components within the water system to operate in an optimal fashion and does not contribute to the deterioration of the quality of the drinking water contained within the system. Good water system design includes such aspects as: drinking water treatment plants that are easy to operate; piping appropriately sized to the number of users being supplied; and the use of appropriate pipe materials. All new designs are designed by qualified professionals registered in BC, reviewed and approved by qualified CRD or municipal staff, and approved and permitted by a Public Health Engineer from Island Health. This acts as a multiple check on good system design.
2. **Source Water Protection.** The CRD uses what is considered the ultimate source water protection: ownership of the catchment (watershed) lands surrounding the source reservoirs. This land area is called the Greater Victoria Drinking Water Supply Area. Within this area, no public access, commercial logging, farming, mining or recreation is permitted, and no use of herbicides, pesticides or fertilizers is allowed. This source water protection barrier eliminates many of the organic and inorganic chemicals that can contaminate the source water and virtually eliminates the potential for human disease agents being present. Very few drinking water utilities in Canada and the United States can claim this type of protection. In addition, the CRD Watershed Protection Division operates a complete and comprehensive watershed management program that provides additional protection to the quality of Greater Victoria's source water.
3. **Water Treatment/Disinfection.** The GVDWS is an unfiltered drinking water system that continues to meet the provincial, as well as the stringent United States Environmental Protection Agency (USEPA) criteria, to remain an unfiltered surface water supply. The treatment process consists of primary disinfection (ultraviolet light and free chlorine) of the raw source water entering the treatment plant, and secondary disinfection (chloramination) that provides a disinfectant residual throughout the transmission and distribution systems. Although the water treatment barrier used in Greater Victoria is not as rigorous as that provided by most drinking water utilities using a surface water supply, the microbiological quality of the source water is exceptionally good and the chief medical health officer for Island Health has approved this treatment process as providing safe drinking water for the public.

In 2022, the CRD released the new Regional Water Supply Master Plan, which identified the need for additional water treatment, in the form of filtration, to increase resiliency from future water quality risks. In February 2024, the Chief Medical Health Officer for Island Health issued a statement concurring with the requirement for water filtration in the mid-to-long term perspective.
4. **Distribution System Maintenance.** All water suppliers in the GVDWS provide good distribution system maintenance, including activities such as annual water main flushing, hydrant maintenance, valve exercising, leak detection, and reservoir cleaning and disinfection. This barrier helps to promote good water quality within the distribution systems.
5. **Infrastructure Replacement.** The timely replacement of aging water system infrastructure is an important mechanism to prevent the deterioration of water quality in the pipes and provides a continual renewal of the water system. The CRD's water infrastructure replacement program is informed by its asset management system thereby ensuring that critical components are replaced before their end of service life.

6. **Well Trained and Experienced Staff.** All water system operators must receive regular training and be certified to operate water system components. In addition, the laboratory staff cannot analyze drinking water samples in accordance with the *BC Drinking Water Protection Regulation* unless the laboratory has been inspected by representatives of the BC Ministry of Health and issued an operating certificate. CRD and municipal staff meet these requirements.
7. **Cross Connection Control.** Cross connection control provides a barrier to contamination by assisting in the detection of conditions that have the potential to introduce contaminants into the drinking water from another type of system. Therefore, in cooperation with the other water suppliers, in 2005, the CRD implemented a regional Cross Connection Control Program throughout the GVDWS. 2008 saw the implementation of the first CRD Cross Connection Control Bylaw for the GVDWS. This bylaw was reviewed and updated last in 2019 to its current form as CRD Bylaw No. 3516.
8. **Water Quality Monitoring.** Rigorous water quality monitoring can be considered a barrier not only because it verifies the satisfactory operation of other barriers and detects contaminations quickly, but comprehensive monitoring data may also allow water suppliers to see trends and react proactively, before a contamination occurs. The CRD has designed and executes a comprehensive water quality monitoring program for the GVDWS that collects daily bacteriological samples across the entire region for compliance purpose (on CRD water infrastructure and in the municipal water distribution systems). This CRD water quality monitoring program tests for water quality parameters beyond the legislated requirements to verify good drinking water quality in the GVDWS.

4.0 WATER QUALITY REGULATIONS

The CRD and the municipal water suppliers in the GVDWS must comply with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation*. The regulation stipulates the following water quality and sampling criteria for water supply systems:

- No detectable *Escherichia coli* (*E.coli*) per 100 mL
- At least 90% of samples have no detectable total coliform bacteria per 100 mL and no sample has more than 10 total coliform bacteria per 100 mL
- 5,000-90,000 population served: one sample per month per 1,000 population served
- >90,000 population served: 90 + 1 samples per month per 10,000 in excess of 90,000 population served

In addition to the aforementioned water quality monitoring criteria by the *Drinking Water Protection Regulation*, as due diligence to ensure public safety and maintain public trust, the CRD Water Quality Monitoring Program also uses the much larger group of water quality parameters listed in the current version of the *Guidelines for Canadian Drinking Water Quality* (the Canadian guidelines) for compliance purposes. These limits are provided in Appendix A, Tables 1 to 5, under the column titled 'Canadian Guidelines'. The water quality limits in the Canadian guidelines¹ fall into one of the following five categories:

1. **Maximum Acceptable Concentration.** This is a health-related limit and lists the maximum acceptable concentration (MAC) of a substance that is known or suspected to cause adverse effects on health. Thus, an exceedance of a MAC can be quite serious and requires immediate action by the water supplier.
2. **Aesthetic Objectives.** These limits apply to certain substances or characteristics of drinking water that can affect its acceptance by consumers or interfere with treatment practices for supplying good quality drinking water. These limits are generally not health related, unless the substance is well above the aesthetic objectives (AO).
3. **Parameters without Guidelines.** Some chemical and physical substances have been identified as not requiring a numerical guideline because data currently available indicate that it poses no health

¹ (see: <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html>)

risk nor aesthetic problem at the levels currently found in drinking water in Canada. These substances are listed as 'No Guideline Required' in Appendix A, Tables 1 to 5.

4. **Archived Parameters.** Guidelines are archived for parameters that are no longer found in Canadian drinking water supplies at levels that could pose a risk to human health, including pesticides that are no longer registered for use in Canada, and for mixtures of contaminants that are addressed individually. Some of these parameters are still being included in the current water quality monitoring program because the analytical laboratory includes them in their scans. These parameters are listed as 'Guideline Archived' in Appendix A, Tables 1 to 5.
5. **Operational Guidance.** The limit was established based on operational considerations and listed as an operational guidance value. For example, the limit for aluminum is designed to apply only to drinking water treatment plants using aluminum-based coagulants.

It should be noted that not all of the water quality parameters analyzed by the CRD Water Quality Monitoring Program have the Canadian guidelines' limits, since some of these parameters are used for operational purposes. Where the Canadian guidelines are silent for a particular parameter, the limit for that parameter is left blank in Appendix A, Tables 1 to 5.

In addition to the Canadian provincial regulations and federal guidelines, on a voluntary basis, the CRD also complies with most of the USEPA rules and regulations. Some of the limits in the USEPA rules are used as the basis for the CRD's water treatment goals.

The GVDWS, as an unfiltered surface water system, must meet the provincial Drinking Water Treatment Objectives for Surface Water Supplies in BC, which includes similar criteria as the conditions for filtration exemption in the Canadian guidelines. In summary, the applicable criteria are:

- 4-log inactivation of viruses (met with chlorination)
- 3-log removal or inactivation of parasites (*Giardia* and *Cryptosporidium*) (met with UV disinfection)
- Two forms of disinfection (UV and chlorination)
- Water entering disinfection facilities has average daily turbidity <1 nephelometric turbidity unit (NTU) and not more than two days/year with an average daily turbidity of >5 NTU
- No *E. coli* or total coliform in treated water
- A watershed control program to minimize fecal, parasite and viral contamination of source water (in place)
- Detectable disinfectant residual in distribution system
- *E. coli* in source water ≤ 20 CFU/100 mL

5.0 OPERATIONAL CHANGES AND EVENTS – CRD SYSTEMS

5.1 Use of Goldstream Water

In 2023, the Goldstream Supply System was not used at all. A Kapoor Tunnel inspection project, necessitating a switch to the Goldstream Supply System, was not scheduled for 2023. The last time this project was conducted was in 2017. Throughout 2020, the Goldstream System remained filled and ready for emergency use.

5.2 Main #4 Leak

At the beginning of September 2023, operators reported a suspected leak on the transmission Main #4 just upstream of McTavish Reservoir on the Saanich Peninsula. Further investigations confirmed a leak on this 610 mm reinforced concrete pipe section. This pipe section is critical for supplying McTavish Reservoir, which supplies the municipalities of North Saanich and Sidney, including the communities of the Tseycum and Pauquachin First Nations. A complete failure or a prolonged outage of this Main #4 section could have depressurized these distributions systems, leaving thousands of residents without water supply. It would have also led to a Boil Water Advisory once water supply was restored with all the associated costs and efforts to flush these systems and reconfirm safe drinking water conditions. Therefore, the CRD had to devise and implement an alternate water supply to McTavish Reservoir via Upper Dean Park Reservoir, then properly isolate the compromised Main #4 section, carefully excavate the leak site and then make the necessary pipe repairs within a short time window. All this was successfully accomplished between September 7 and September 13. A set of two post-repair bacteriological samples provided evidence that the repair measures did not introduce any contamination into the piping system. Throughout this event, residents were asked to conserve water and may have experienced some reduced water pressure, but drinking water service was continually provided to all residents.

5.3 Mt. Tolmie Reservoir Roof Leaks

On October 24, Saanich and CRD operators detected a corroded roof vent on the CRD Mt. Tolmie Reservoir. Further investigations found more roof vents in bad condition, which could cause surface water from the top of the reservoir to leak into the reservoir and potentially contaminate the drinking water. The CRD Mt. Tolmie Reservoir supplies the Saanich Mt. Tolmie Reservoir, which supplies large portions of the Saanich distribution system. The leaky roof vents were immediately replaced, and extra bacteriological samples did not detect any drinking water contamination. The affected cell of the two-cell Mt. Tolmie Reservoir was then isolated and drained for cleaning and inspection. During the post-cleaning inspection of the reservoir inside, several cracks and small holes were detected in the concrete roof slab. Any obvious leaks and holes were immediately repaired and sealed so that this cell could be operated again without putting the safety of the drinking water at risk. But CRD staff and its assisting consultant concluded that further and more comprehensive sealing and rehabilitation measures will be required to ensure the long-term integrity of this facility. A subsequent inspection of the other reservoir cell found similar issues and addressing these will be part of a more comprehensive Mt. Tolmie Reservoir rehabilitation project in 2024.

5.4 E. coli Positive Result in Central Saanich Distribution System

On June 12, 2023, one sample from Armwell Drive/Aston End in Central Saanich tested positive for *E.coli* bacteria: 2 CFU/100 mL. The total coliform concentration in the same sample was 118 CFU/100 mL. Emergency response procedures were followed and Island Health was notified. The resample and extra samples from up and downstream were free of total coliform and *E.coli* bacteria. An investigation revealed that someone had deposited a bag with dog feces inside the valve box where the sample was taken from. This was most likely the source of contamination on the sampling port and therefore not a contamination of the drinking water in the water system. Sampling staff were instructed to verify adequate conditions for a representative sample at the sampling location.

5.5 Weather Conditions

Figure 1 shows the Sooke Lake Reservoir water levels in 2023 compared to previous years. As in 2019 and 2022 before, the reservoir did not reach full capacity until the end of December. That is three out of the last five years that the reservoir has not been at 100% capacity at the beginning of a new year. While this

did not have any adverse operational impact – on the contrary, from an engineering and dam safety perspective, this is desirable – but it does indicate a trend towards drier fall weather and later reservoir recharge. Following the 2022 drought conditions with a much-delayed onset of the reservoir recharge, Sooke Lake only reached the full service level on March 21, 2023. It remained full and spilled until May 2, 2023. With drier and warmer weather after that, the reservoir levels continuously receded throughout the summer and fall and reached their lowest level on October 23, 2023 with 63.9%. A slow reservoir recharge followed, with the reservoir levels reaching 82.3% on December 31. This was almost identical to the end of 2022 and reflects the impact of the summer-fall drought conditions in back-to-back years.

However, the prolonged drought in the fall did not have any measurable adverse water quality impacts on Sooke Lake Reservoir.

5.6 Chlorine Dosage

In 2023, the CRD Integrated Water & Infrastructure Services Department did make some minor adjustments to the chlorine dosage rate at both plants, based on daily or weekly monitoring results. The objective for the chlorine dosage has been to dose sufficiently for adequate primary and secondary disinfection, while minimizing the amount of chemicals added. Critical for proper primary disinfection is achieving the required CT (Concentration x Contact Time), which was consistently achieved in 2023 at both plants. Critical for adequate secondary disinfection is achieving a high ratio of Total Chlorine/Monochloramine. The Goldstream Water Treatment Plant consistently achieved ratios of >90%. The Sooke River Road Water Treatment Plant generally achieved ratios of 85-95%.

5.7 CRD Reservoir Maintenance

CRD water system operators have followed the reservoir cleaning schedule developed through the reservoir review project led by the CRD Water Quality Operations Section. This schedule is based on a thorough water quality data review for each CRD-owned and operated transmission or distribution reservoir and is regularly updated based on new data and information. Following this cleaning schedule has resulted in improved water quality conditions and operational efficiencies in a number of reservoirs.

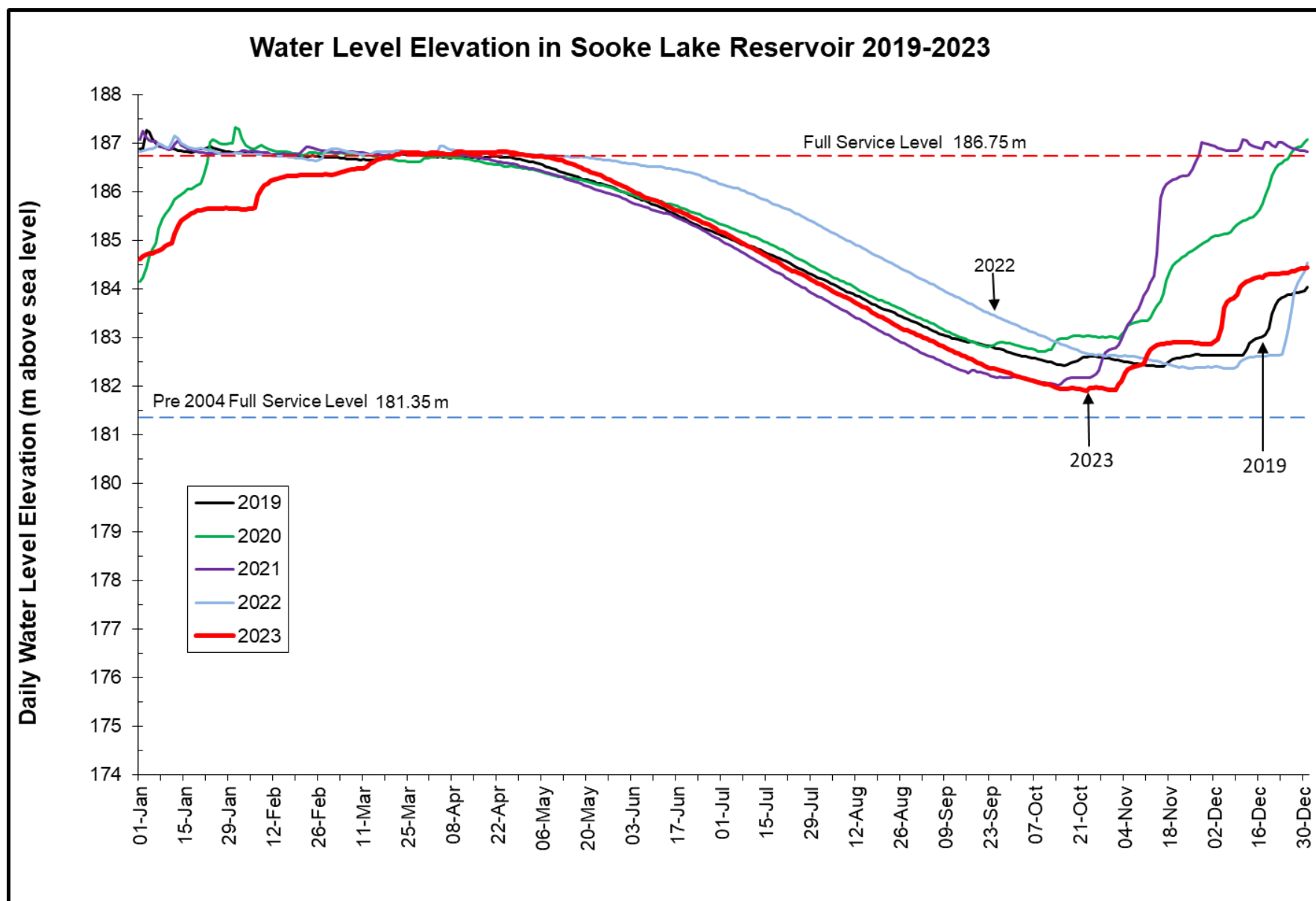


Figure 1 Water Level Elevation in Sooke Lake Reservoir 2019-2023

6.0 WATER QUALITY MONITORING

The Water Quality Program, as delivered by the Water Quality Operations, Cross Connection Control and Laboratory Services divisions (all within the CRD Parks & Environmental Services Department), is responsible for the collection, analysis and reporting of water quality information in all CRD-owned and operated portions of the GVDWS from the source reservoirs to the point of delivery (typically the water meter) to each consumer. While the municipal water suppliers are responsible for water quality and any potential corrective measures within their particular distribution system, CRD staff provide water sampling and testing for regulatory compliance monitoring to these municipalities.

The CRD Water Quality Program has dedicated professional staff who are trained to collect water samples from source water and treated water sampling locations across the region, as well as technical staff trained to analyze and interpret water quality data in support of operational decisions. The CRD Laboratory is certified for a number of water quality test methods and is staffed with highly-trained laboratory technicians. The CRD Aquatic Ecology Laboratory has professional staff specialized to analyze phyto- and zooplankton in lake water, periphyton communities in lakes and streams, to test for cyanotoxins and understand the source water limnology. The Cross Connection Control division includes certified plumbing and cross connection control inspectors, as well as staff trained to process data in order to administer the requirements of the BC Building Code and the CRD Cross Connection Bylaw No. 3516.

6.1 CRD Water Quality Monitoring Program

The CRD Water Quality Monitoring Program consists of the following three components that provide direction for the collection and analysis of water quality samples from the water systems:

- **Compliance Monitoring:** The goal of the compliance monitoring is to ensure that water quality from source to consumer meets the relevant drinking water regulations and guidelines. Island Health, as the provincial regulator, has issued the CRD two operating permits (for CRD water infrastructure in the Goldstream Service Area and in the Sooke Drinking Water Service Area). These operating permits require, in addition to the water quality and sampling criteria, as per the *Drinking Water Protection Regulation*, continuous monitoring of turbidity. The CRD Water Quality Operations Section, therefore, conducts bacteriological monitoring on the raw water entering the treatment plants, treated water after leaving the plants, at the first customer sampling locations, sampling locations on the large transmission mains and sampling locations in the CRD-owned distribution systems, including distribution reservoirs. Bacteriological samples are collected at a frequency that meets the regulatory requirements and provides a consistent and day-to-day system-wide water quality oversight. Continuous turbidity monitoring, as per operating permits, is accomplished by on-line turbidity meters (monitored via Supervisory Control and Data Acquisition (SCADA)) at each water treatment plant (at each plant: two analyzers in line to provide redundancy). Part of the compliance monitoring program are the services provided by the CRD to the municipal water suppliers where CRD staff collect and analyze bacteriological samples from inside the municipal water distribution systems, report monthly results on the CRD website and include the results and findings in this annual report.

Island Health has granted the GVDWS an exemption from filtration treatment, the conventional water treatment requirement for surface water source users in BC, based on the evidence of year-round high source water quality. However, it expected that the CRD closely monitors a number of water quality parameters, in addition to the criteria listed in the regulations and in the operating permits. As a result, the CRD has included in its compliance monitoring program a number of water quality parameters that are regularly tested on the raw, as well as on the treated water to verify compliance with the Canadian guidelines and USEPA rules and regulations. Such parameters in the raw water include parasites, organic and inorganic compounds, including metals and various water chemistry and physical parameters. On the treated water, these include disinfection byproducts, metals and water chemistry and physical parameters that are used to verify good drinking water quality.

- **Aquatic Ecology Monitoring:** The goal of the aquatic ecology monitoring is to understand and document the components that affect or may affect the natural cycles of the source streams and reservoirs. The source reservoirs and streams in the Greater Victoria Water Supply Area (see Map 1) are monitored according to the recommendations by the CRD Aquatic Ecology Section, as there are no legislated requirements for either sampling frequency or parameter selection for these water bodies. It is, however, important for the CRD, as the supplier of unfiltered surface water, to have a comprehensive understanding of the natural processes taking place in the source waters and potential implications for the drinking water quality in the GVDWS. Depending on the season, the source lakes and their tributaries are sampled at a frequency ranging from quarterly to weekly for parameters, such as algal species, distribution and concentrations, zooplankton species and concentrations, chlorophyll-a concentrations and nutrient concentrations. Additional samples may be collected based on risk management decisions, for instance, as a response to severe weather conditions or unusual observations.
- **Operational Water Quality Monitoring:** The CRD Water Quality Monitoring Program provides an audit function on all water quality-related aspects of the GVDWS, including performance monitoring of the treatment plants and distribution systems. Specific sampling and testing occurs to support operational decisions by the CRD and municipal system operators. Daily field tests of chloramine residual concentrations are conducted to verify the efficiency of the secondary disinfection region-wide. A number of qualitative (e.g., taste and odour) and quantitative tests [e.g., heterotrophic plate count (HPC), turbidity] are regularly performed on samples across the region to verify the need for specific system maintenance. The customer inquiry program is also part of this monitoring program component, as a water quality complaint or observation by the public can give clues to ongoing system issues or identify water quality risks in the system. Water samples are occasionally collected from taps within individual houses or facilities, in response to inquiries from customers about the quality of water being received at their address.

The CRD Water Quality Monitoring Program also monitors for emerging contaminants that may be highlighted by Health Canada, industry associations such as BCWWA, CWWA or other agencies as a possible risk to public health and drinking water safety. Sometimes, media attention to a certain water quality topic increases customers' desire for additional data and information. Such monitoring may then occur adhoc and temporary, or long-term in the regular sampling plans.

- **Drinking Water Safety Plan:** In 2018, the CRD Water Quality Operations division developed a Drinking Water Safety Plan, following the principle of a method developed by the Alberta Ministry of Environment for all drinking water systems in Alberta. This plan is a comprehensive water quality risk assessment and registry in the GVDWS. Identified risks have been documented and are being tracked as the CRD Integrated Water Services Department addresses them. At the end of 2023, the Drinking Water Safety Plan included 23 High Risks and 181 Moderate Risks to water quality; 23 and 171 respectively in 2022, for comparison.

6.2 Sampling Plans

The efforts to collect the required number of samples for the CRD Water Quality Monitoring Program are organized in three distinct sampling plans:

1. The **Watershed Sampling Plan** manages the sampling frequency, schedule and parameter list for the source water lakes and tributaries and is based on an up-to-date risk to water quality assessment. Sooke Lake Reservoir is sampled from a boat at three dedicated lake sampling stations from weekly in the summer to bi-weekly in the winter (see Figure 2). Goldstream Reservoir is sampled monthly from a boat at two dedicated lake sampling stations. Tributary creeks to Sooke Lake Reservoir are sampled monthly near their mouths. Significant tributary lakes in the Sooke Lake watershed, as well as Butchart Lake and Japan Gulch Reservoir in the Goldstream System, are sampled quarterly by boat. The Leech watershed is currently sampled monthly in four different locations, following a more comprehensive sampling/testing project in 2019-2020.

2. The **Treatment Plant Sampling Plan** includes the daily samples collected at the Goldstream Water Treatment Plant and the two first customer locations (for mains #4 and #5), the weekly samples collected at the Sooke River Road Water Treatment Plant and the Sooke first customer location. This plan is designed to verify adequate treatment at both treatment plants and to detect unusual water quality conditions, before they spread across the systems.
3. The **Transmission and Distribution System Sampling Plan** is a designed sampling plan that manages sampling at approximately 200 permanent sampling stations across the GVDWS, including all municipal systems. These permanent sampling stations are installed on transmission mains, storage reservoirs, distribution mains, booster pump stations and meter or valve stations. The plan is designed to achieve an evenly distributed two-week rotation for most sampling stations, while providing a representative snapshot of the entire Goldstream Service Area on each business day. The Sooke Drinking Water Service Area is sampled once per week. Samples collected on the daily runs, as part of this plan, are primarily used for compliance monitoring, but also for operational purposes.

When total coliform-positive bacteriological results are found in a CRD-owned system, CRD sampling staff resample those locations and, depending upon the situation, may direct CRD operators to flush the affected mains and/or drain and clean affected storage reservoirs. Consecutive total coliform positive results in one or more locations trigger the emergency response procedures. When total coliform-positive bacteriological results are found in a municipal system, the CRD sampling staff resample those locations and notify the municipal operators of the results. If a sample tests positive for *E.coli*, Island Health is notified immediately, and emergency response procedures are followed.

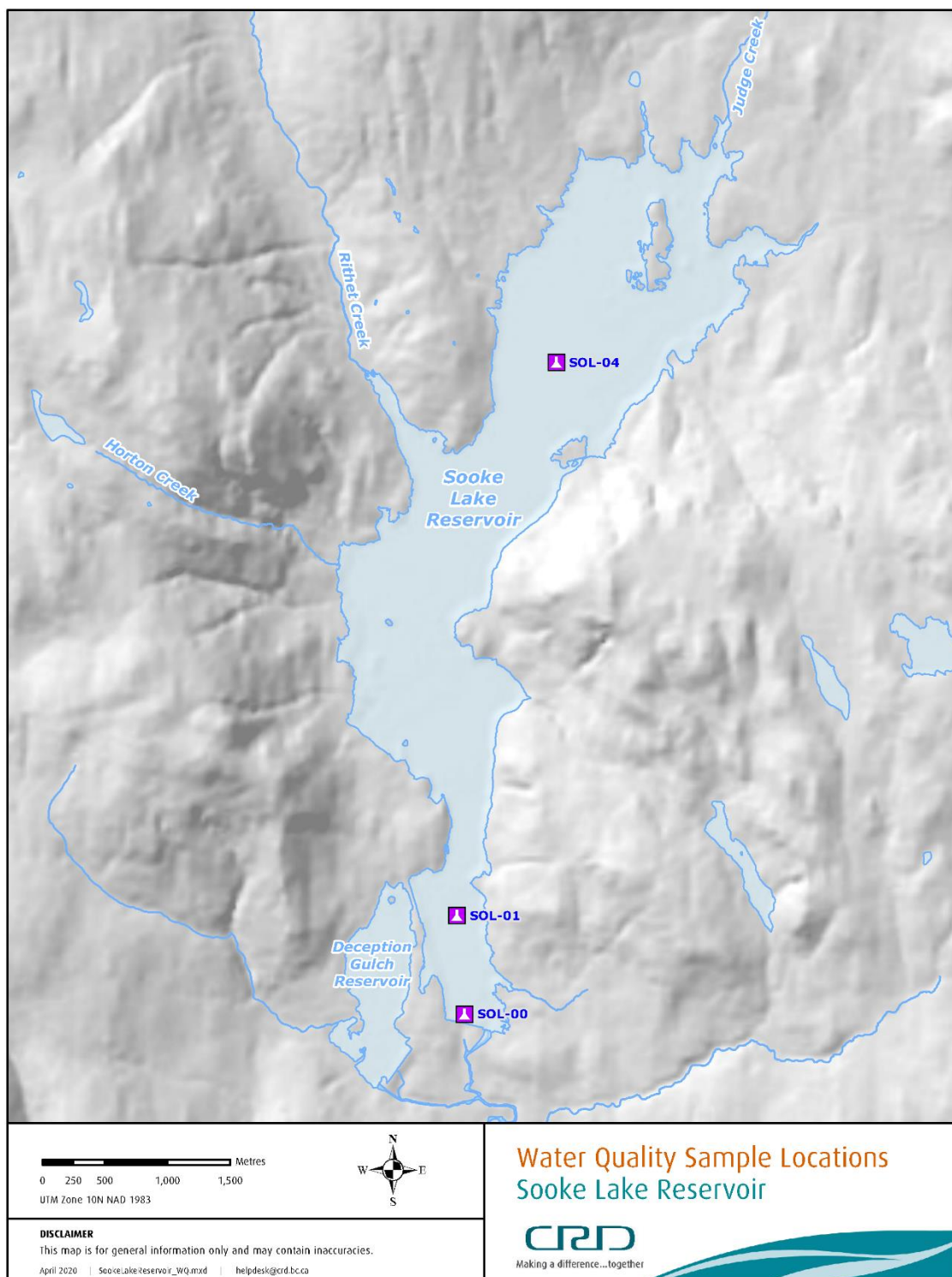


Figure 2 Sooke Lake Reservoir Water Sampling Stations

6.3 Bacteriological Analyses

Outlined below are descriptions of bacteriological parameters used in the CRD Water Quality Monitoring Program and the regulatory limits that were in place in 2023.

Total Coliform Bacteria

Total coliforms. The total coliform group of bacteria include those found in high numbers in human and animal intestinal (fecal) wastes and can found in water that has been contaminated with fecal material. However, total coliforms are also environmentally ubiquitous (found naturally in water, soil, vegetation); thus, in the absence of *Escherichia (E.) coli*, the presence of total coliforms may indicate surface water infiltration, biofilm sloughing, or the presence of decaying organic matter. The total coliform bacteria group is used as an indicator for treatment adequacy and microbial conditions in drinking water systems because of its superior survival characteristics.

Test Method. In 2023, total coliform bacteria were analyzed at the CRD Water Quality Laboratory using the membrane filtration method and Chromocult Coliform Agar incubated at 36-38°C for 21-24 hours. Test results were reported as colony-forming units (CFU) per 100 millilitres (mL) of water. Methods employing defined substrate technology rely on the fact that coliforms possess the enzyme β -galactosidase, which cleaves a chromogenic substrate, thus releasing a chromogen (coloured compound) that can be measured. In compliance with regulations, the CRD Water Quality Monitoring Program tests for total coliforms to ensure treatment efficacy and to monitor intrusion of organisms into the system post-treatment.

Regulatory Limits. Based on the requirements in the *Drinking Water Protection Regulation* and the *Guidelines for Canadian Drinking Water Quality*, the maximum acceptable concentration for the GVDWS is summarized as follows:

- *No sample should contain more than 10 total coliform organisms per 100 mL.*
- *No consecutive sample from the same site should show the presence of coliform organisms.*
- *Not more than 10% of the samples based on a minimum of 10 samples should show the presence of coliform organisms.*

Escherichia coli

E. coli. *E. coli* is the most common member of the total coliform group and is found in very high numbers in the feces of human beings and warm-blooded animals. *E. coli* does not originate from the environment and can be measured easily and quickly in water, making it an ideal indicator for detecting fecal contamination. Although most members of this species are considered harmless, some strains of *E. coli* can be pathogenic. The presence of *E. coli* in water indicates recent fecal contamination and the possible presence of intestinal disease-causing bacteria, viruses and protozoa. The absence of *E. coli* in drinking water generally indicates that the water is free of intestinal disease-causing bacteria.

Test Method. In 2023, *E.coli* was analyzed by the CRD Water Quality Laboratory using the membrane filtration method and Chromocult Coliform Agar incubated at 36-38°C for 21-24 hours. Test results were reported as CFU per 100 mL of water. The *E. coli* test measures bacteria possessing the enzymes β -galactosidase and β -glucuronidase.

Regulatory Limits. In disinfected drinking water, the maximum acceptable concentration of *E. coli* (both federal and provincial limits) is zero *E. coli* per 100 mL.

Heterotrophic Plate Count Bacteria

Heterotrophic Plate Count. Microorganisms, such as bacteria, moulds, and yeasts that require organic carbon for growth, are known as heterotrophs and many bacteria associated with drinking water systems are heterotrophs. Heterotrophic plate count (HPC) bacteria are used to monitor trends in water treatment and distribution systems. Under increasing nutrient conditions and/or a reduction in the concentration of chlorine residual, the heterotrophic bacteria are usually the first group to increase and provide an early

warning of the potential regrowth of coliforms. In addition, an increase in HPC bacteria in the distribution system will promote more rapid decomposition of chloramines. The CRD Water Quality Monitoring Program uses HPC to monitor treatment efficacy at the disinfection plants and to track the decline in chlorine residuals in the distribution system and storage reservoirs.

Test Method. In 2023, Samples were analyzed for HPC by the CRD Water Quality Laboratory using membrane filtration onto R2A medium and incubated at 21-28°C for seven days. HPC can be measured in several different ways; in this test method, the low incubation temperature and long incubation time improves the recovery of stressed and chlorine-tolerant bacteria. HPC testing was carried out on raw water samples, and water leaving the treatment plant, and treated water samples with low chlorine residual levels (below 0.2 mg/L).

Regulatory Limits. There is no federal or provincial regulatory limit for heterotrophic bacteria in drinking water. However, the US EPA Surface Water Treatment Rule considers 500 CFU/mL of heterotrophic bacteria as an indicator for a “detectable chlorine residual” when using membrane filtration onto Standard Methods Agar incubated at 35°C for 48 hours. Therefore, in the absence of a Canadian regulatory limit, the CRD Water Quality Monitoring Program uses the US EPA value as a monitoring criterion to trigger site-specific operational measures for assessing and mitigating drinking water quality.

6.4 Certification and Audits

To ensure that analytical testing is carried out to the highest possible standard, the CRD Water Quality Laboratory participates in several types of external quality assurance and quality control (QA/QC) programs, in addition to rigorous internal QA/QC procedures that are included as part of the methodology and are a normal component of good laboratory practice.

6.4.1 Certification

All laboratories analyzing drinking water samples for total coliforms and *E. coli* according to the Drinking Water Protection Act/Regulation are required by the Province of BC to be approved in writing by the Provincial Health Officer. Laboratory approval requires both an approval certificate and a proficiency testing certificate, as noted below:

- **Water Bacteriology Testing Laboratory Approval Certificate.** This certificate is issued by the BC Provincial Health Officer for bacteriological testing of drinking water in the Province of BC. This certificate is renewed every three years via an on-site inspection (audit) of the analytical laboratory.
- **Clinical Microbiology Proficiency Testing Program Certificate of Participation.** This certificate is issued by the Advisory Committee for Water Bacteriology Laboratories, which is operated by the Department of Pathology and Laboratory Medicine at the University of British Columbia. Satisfactory performance is required to maintain laboratory certification. Three rounds of proficiency tests are carried out per year.

6.4.2 Accreditation

In 2017, the CRD Water Quality Laboratory attained accreditation to the global ISO/IEC 17025 standard used by testing and calibration laboratories. The accreditation has management, quality and technical requirements. Accreditation is maintained by successful reassessment every two years by an accrediting body (Canadian Association for Laboratory Accreditation; CALA) and satisfactory participation in an external proficiency testing program for all methods (two rounds per year). The CRD Water Quality Lab was last assessed in 2023.

7.0 WATER QUALITY RESULTS

The overview results of the 2023 CRD Water Quality Monitoring Program for the GVDWS are provided below. Water quality data are listed in Appendix A (Tables 1, 2 and 3). Note that the median (middle value between the high and low) is used in these tables rather than the average value, as the median eliminates the effect of extreme values (very high or very low) on the average value and provides a more realistic representation of typical conditions.

7.1 Source Water Quality Results

Total Coliform Bacteria (TC). Similar to previous years, the raw (untreated) source water entering both plants exhibited generally very low concentration of total coliform bacteria, with some increased concentrations between July and October when the Sooke Lake south basin was destratified and, therefore, fully mixed with warm water (Figure 3). Compared to previous years, Sooke Lake Reservoir experienced an atypical total coliform concentration drop during August followed by a slightly higher than usual concentration peak during September. While total coliform concentrations in the raw water never reached the Operational Alert Level of 1,000 CFU/100 mL, a peak concentration of 770 CFU/100 mL was recorded on September 6, 2023. This was likely a seiche-related total coliform spike as they occur occasionally during the summer and early fall period when stratification and weather conditions are favourable for such an event.

With 243 samples from water entering the Goldstream Water Treatment Plant analyzed in 2023, the total coliform concentration ranged from 0-770 CFU/100 mL, with a median value of 5 CFU/100 mL (Appendix A, Table 1).

The United States Environmental Protection Agency (USEPA) *Surface Water Treatment Rule* for avoiding filtration has a non-critical total coliform criteria of maximum 100 CFU/100 mL at the 90th percentile of a six-month sample set. The 90th percentile of total coliform concentrations in the raw water between January and June 2023 was 6 CFU/100 mL, and between July and December 2023, it was 250 CFU/100 mL. Therefore, the source water was compliant with this non-critical USEPA filtration exemption criteria in the first half of 2023 but not in the second half. This is a typical pattern for Sooke Lake Reservoir and indicates a vulnerability of the water quality with rising temperatures due to climate change.

E. coli Bacteria. During three decades of monitoring bacteria within the GVDWS, it has been found that virtually 100% of the fecal coliform bacteria detected in the source water and the distribution system are *E. coli*. In 2023, as in previous years, the low detection of *E. coli* bacteria indicated that the raw water entering the Goldstream Water Treatment Plant from Sooke Lake Reservoir was good quality source water and complied with the primary criteria in the USEPA *Surface Water Treatment Rule* to remain an unfiltered drinking water supply (Figure 4).

In 2023, about 6.1% of the 243 samples collected from the raw source water contained *E. coli* and those that were positive for *E. coli* had levels well below 20 CFU/100 mL. The concentration ranged from 0-1 CFU/100 mL, with a median value of 0 CFU/100 mL. The low occurrence, as well as the low concentrations of *E. coli* bacteria in Sooke Lake, are in line with long-term historical bacteria concentrations. These results do not indicate a particular source of *E. coli* bacteria, but rather point to low levels of naturally occurring fecal matter in a healthy and unproductive aquatic ecosystem. The few sporadic *E. coli* hits are typically the result of the rainfall and runoff into Sooke Lake, which transported organic matter accumulated in the watershed to the lake. The lack of any extreme rainfall and runoff events during 2023 is likely the reason for even lower *E. coli* occurrences and concentrations (Figure 4). In years with a Kapoor Tunnel Inspection Project, a slight *E. coli* concentration increase in mid-December can be attributed to the supply from the Goldstream System. In 2023, the Goldstream System was not used as a drinking water source.

Giardia and Cryptosporidium Parasites. In 2023, parasite samples were collected nine times as part of the CRD's routine monitoring program. This sampling frequency was set after an evaluation of long-term data showed extremely low detection of these organisms. The nine parasite samples were collected from the raw water sampling location at the Goldstream Water Treatment Plant and shipped for analysis to an external laboratory. It should be noted that the efficiency of the analysis for detecting *Giardia*, and especially

Cryptosporidium, is quite low (typically in the 15-25% range).

In 2023, no *Giardia* cysts and no *Cryptosporidium* oocysts were detected in all samples on the raw water entering the Goldstream Water Treatment Plant. The 10-year median value for total *Giardia* cyst and total *Cryptosporidium* oocyst concentrations is 0/100 L; however, historical data shows that occasionally very low concentrations of parasites can be found in the raw water from Sooke Lake. While these are extremely low values for a surface water supply, the addition of UV disinfection provides assurance that no infective parasites can enter the GVDWS.

The treatment target specified by the Canadian federal and provincial regulations, as well as the USEPA *Surface Water Treatment Rule*, require 3-log (99.9%) parasite inactivation to meet the filtration exemption criteria for surface water systems. Both CRD disinfection facilities provide UV treatment that, in conjunction with the CRD's drinking watershed management concept, is able to meet these targets and, therefore, adequately protects the public from waterborne parasitic illnesses.

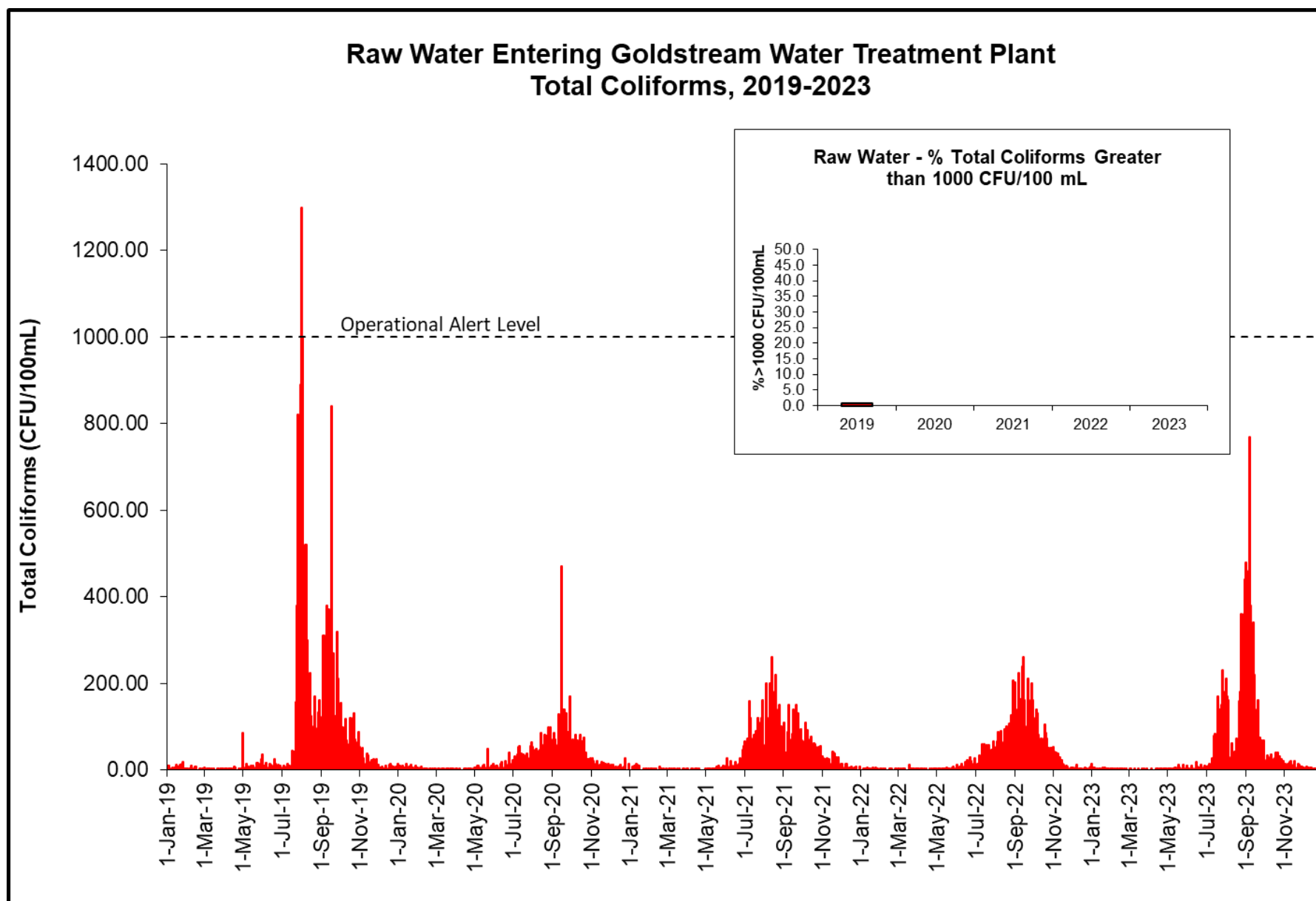


Figure 3 Raw Water Entering Goldstream Water Treatment Plant Total Coliforms 2019-2023

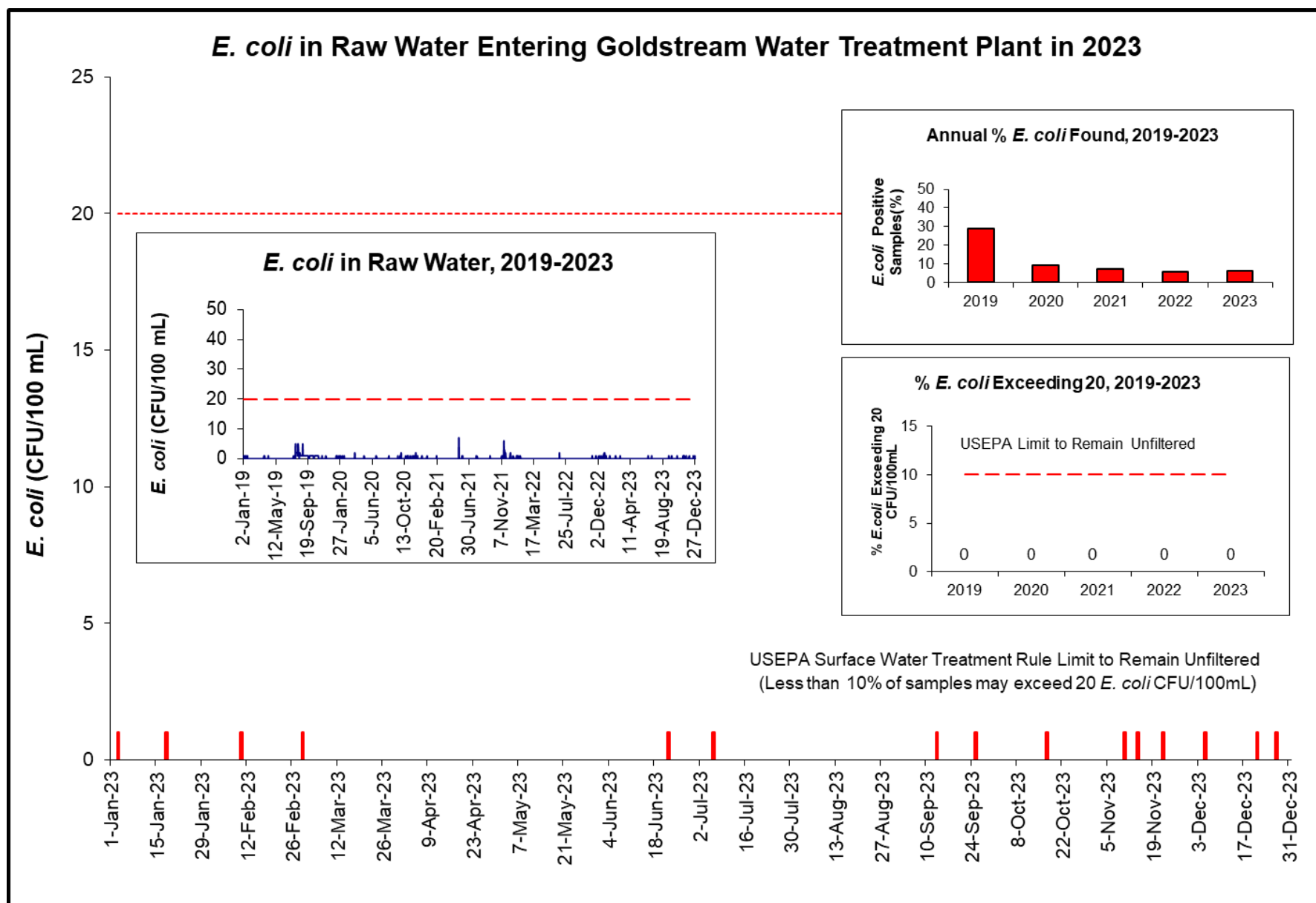


Figure 4 *E. coli* in Raw Water Entering Goldstream Water Treatment Plant in 2023

Algae – Sooke Lake Reservoir (SOL). For most of 2023, the algal dynamics were generally in line with the long-term trend. During the spring and summer, the algal density was slightly above average, with the typical spring peak occurring slightly earlier (Figure 5, Figure 6 and Figure 7). While the algae concentrations during the spring period were still generally in line with the long-term historical trend, the summer period exhibited notably higher algal concentrations compared to the long-term average trendline. This was more pronounced in 2023 but already visible in a few previous summers. There appears to be a trend towards generally higher algal activity between July and October. The increase is approximately 100% compared to the long-term average. While this increase seems significant, the overall summer algae concentration of 1,000 NU/mL or less is still low and well below bloom conditions for any algae species. While the typical spring peak in algae concentrations is due to favourable environmental conditions such as warming water and increased sunshine, coupled with the availability of freshly introduced nutrients after the reservoir recharge, the increased summer algae concentrations could be due to a growing influence of climate change associated with warmer water temperatures. Algae have a remarkable ability to quickly adapt to environmental factors, such as temperature, nutrient availability and light intensity. However, no actual bloom of a specific algae species occurred in Sooke Lake Reservoir in 2023, which demonstrates the robustness of an intact ecosystem with a balanced and diverse algae population.

Sooke Lake exhibited, as in previous years, a high algal diversity, ranging from green algae to diatoms, with some taxa that could potentially have adverse impact on water quality (Figure 8, Figure 9 and Figure 10). For example, the potential cyanotoxin producer *Dolichospermum/Anabaena* spp. was present in Sooke Lake during most months in 2023, in particular during the warm water season. But the highest cell count recorded was only around 23.3 cells/mL in July 2023, which was well below the critical threshold recommended by Health Canada (2017), (i.e., 2,000 cells/mL).

Other algae species can cause adverse taste and odour (T&O) and filter clogging when in bloom. Figures 11 to 13 illustrate the cell concentrations of the five algal taxa with such impact potential. In these figures, diatoms (*Asterionella formosa*, *Cyclotella* spp.) and golden algae (*Uroglena* sp., *Dinobryon* spp.) showed the highest cell counts in spring and early summer, whereas photosynthetic cryptophyte density peaked in the fall. In 2023, the highest cell counts of these algae species were still well below the suggested thresholds at which they normally cause T&O or filter clogging issues. Only *Uroglena* sp. has caused in Greater Victoria unpleasant fishy/metallic taste and odour problems in the past even when present only in low concentrations.

Throughout the year, abundant populations of small-sized flagellates (~ 5 microns, possibly the green flagellates *Pedinomonas* spp.), and single cells of golden algae (~ 6 microns) were recorded. Due to their small size, they only contribute insignificantly to the total algal biomass in the reservoir and for consistency with historical data, they were excluded in the analyses and the presented composition graphs below.

There were no algae-related water quality concerns in 2023.

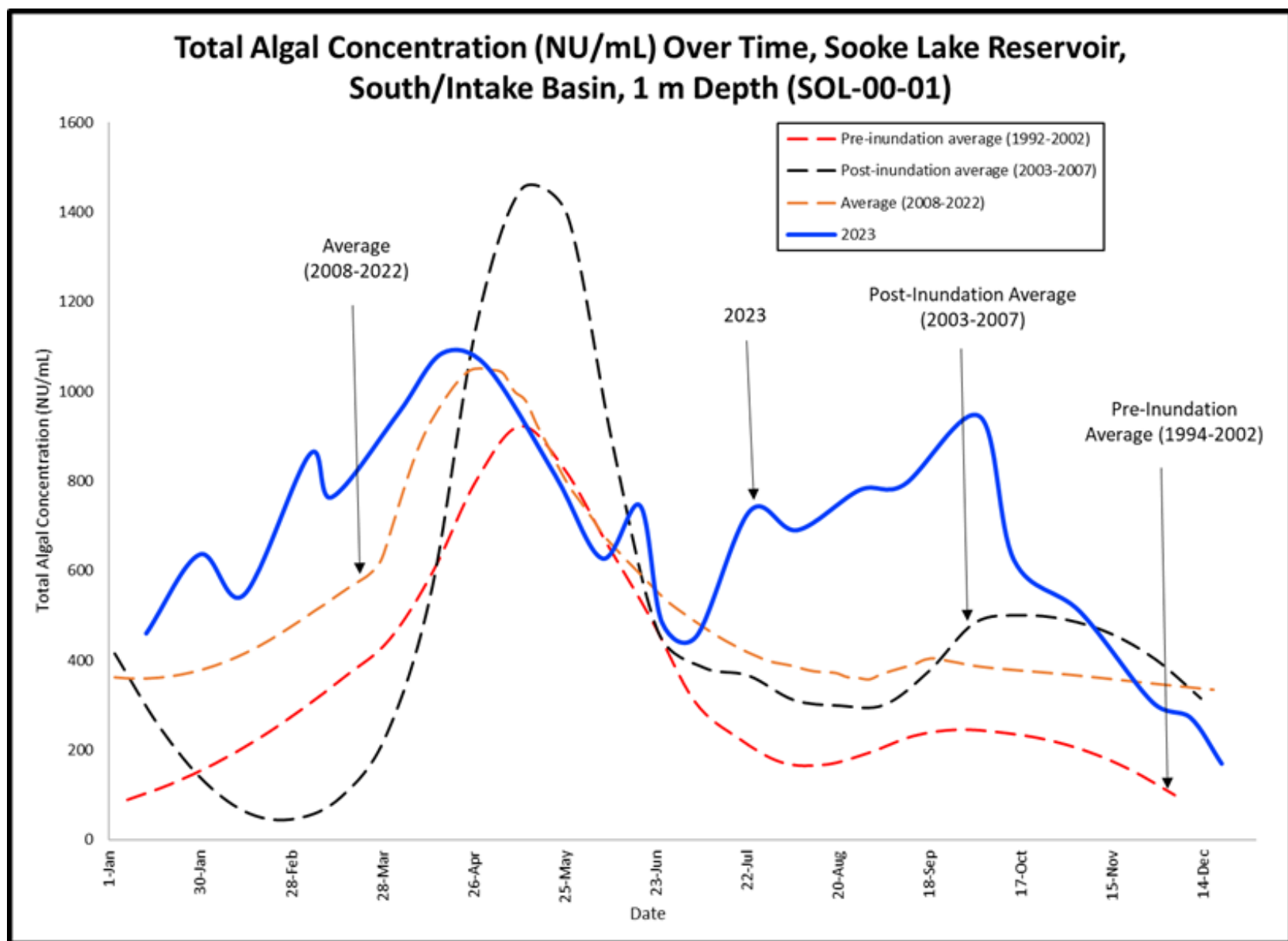


Figure 5 Total Algal Concentration (natural units/mL) Over Time, Sooke Lake Reservoir, South/Intake Basin, 1 m depth (SOL-00-01)

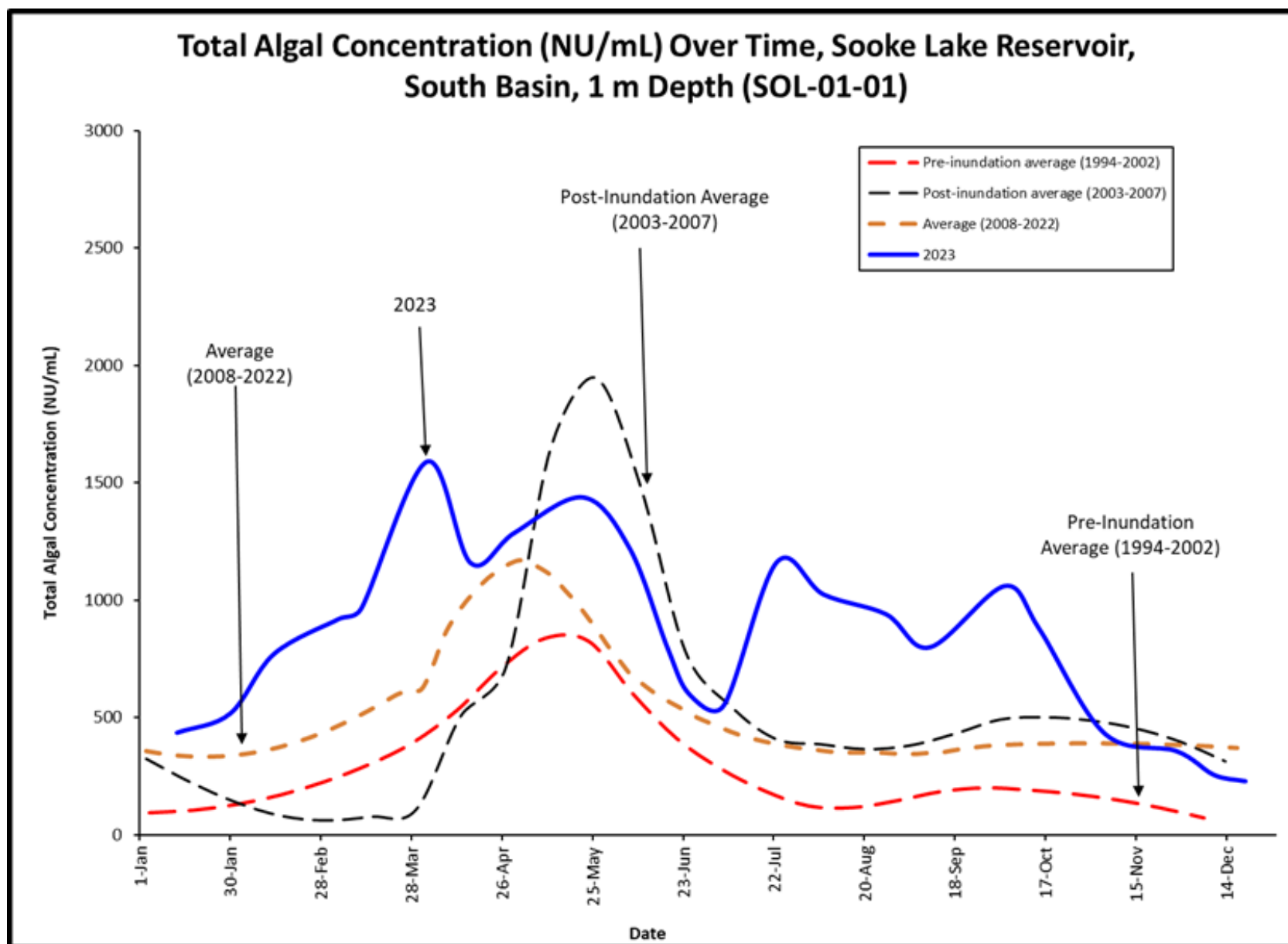


Figure 6 Total Algal Concentration (natural units/mL) Over Time, Sooke Lake Reservoir, South Basin, 1 m depth (SOL-01-01)

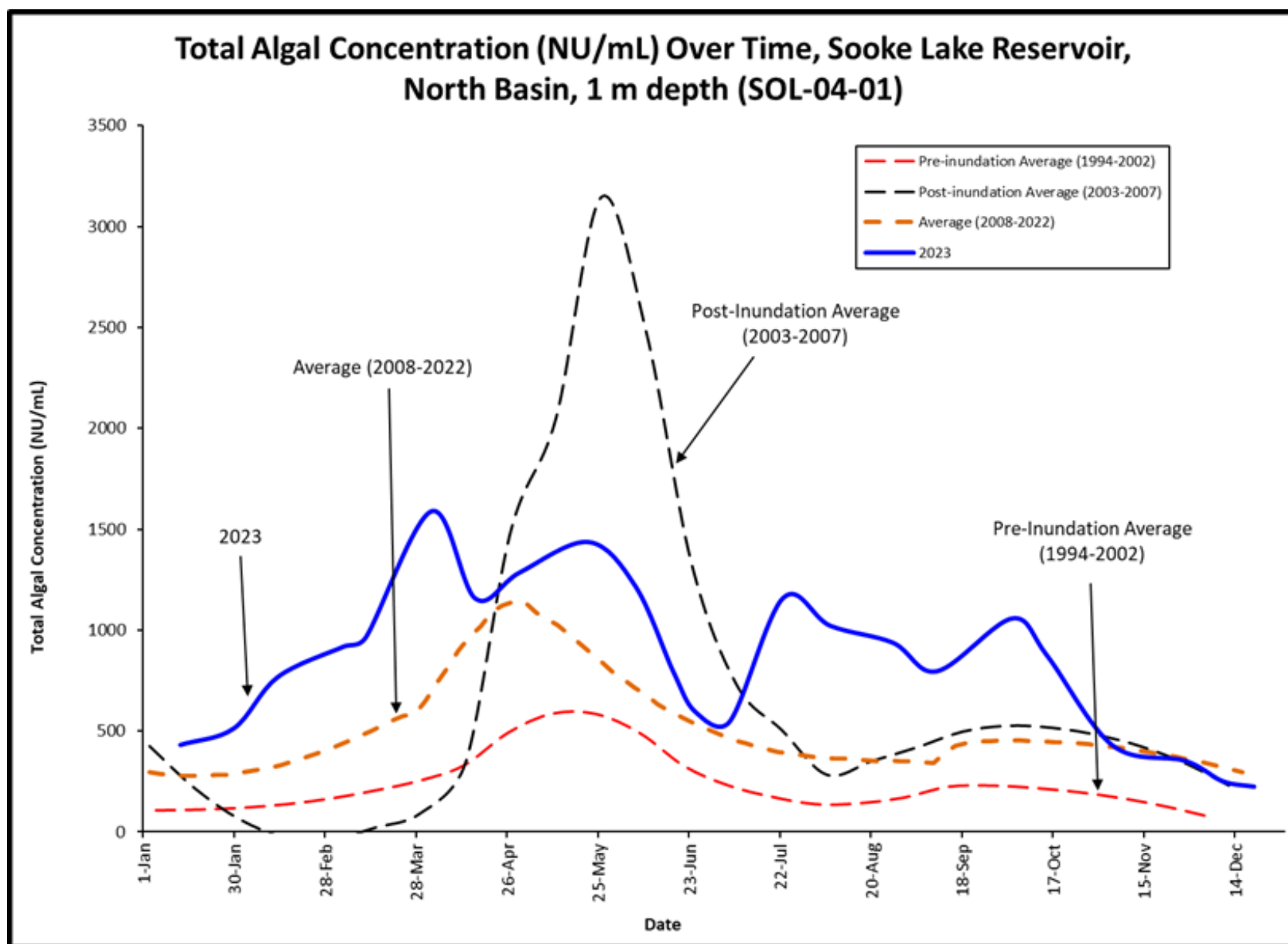


Figure 7 Total Algal Concentration (natural units/mL) Over Time, Sooke Lake Reservoir, North Basin, 1 m depth (SOL-04-01)

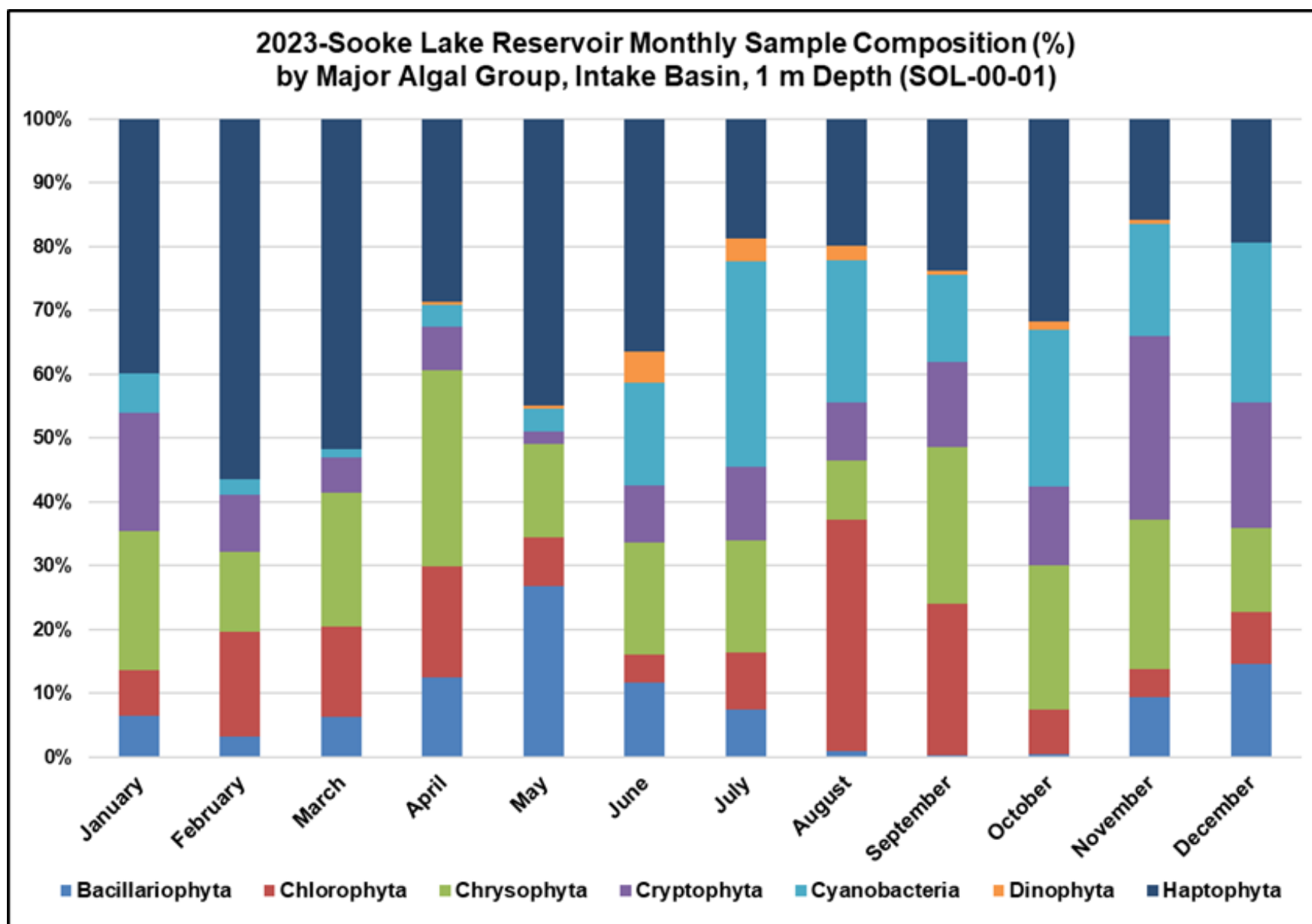


Figure 8 Monthly Abundance Percent of Different Algal Groups, Intake Basin, 1 m depth, SOL-00-01, 2023

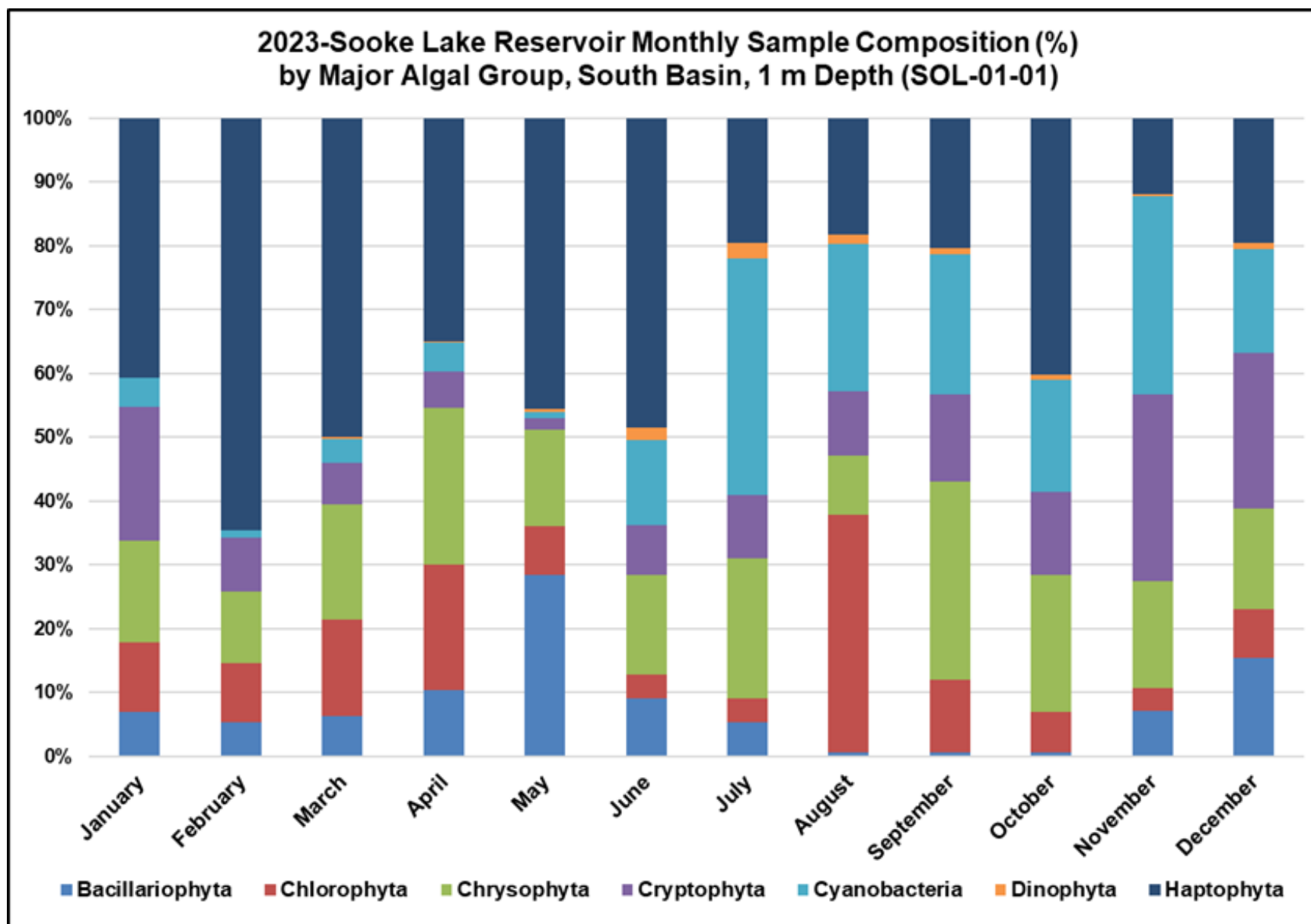


Figure 9 Monthly Abundance Percent of Different Algal Groups, South Basin, 1 m depth, SOL-01-01, 2023

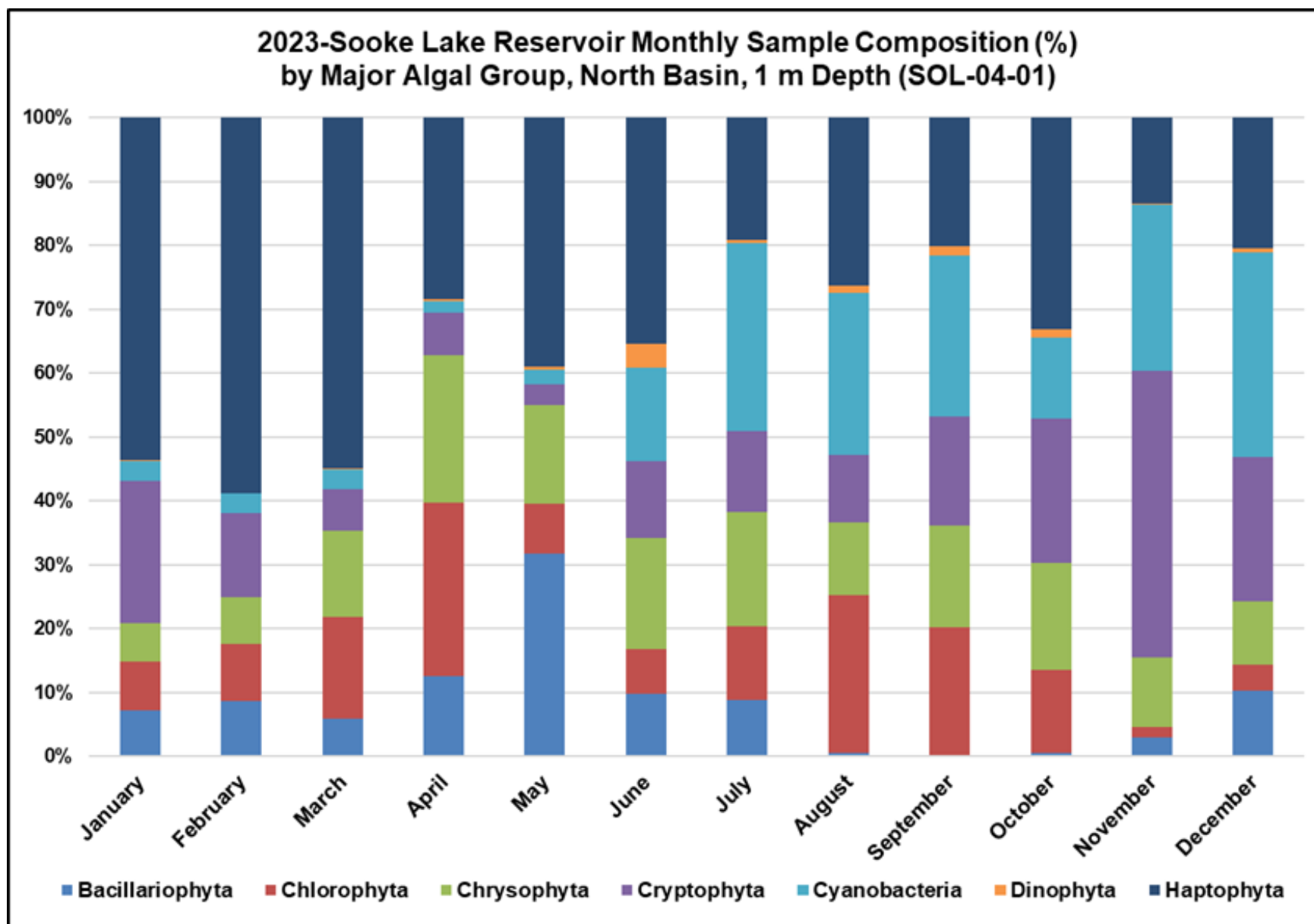


Figure 10 Monthly Abundance Percent of Different Algal Groups, North Basin, 1 m depth, SOL-04-01, 2023

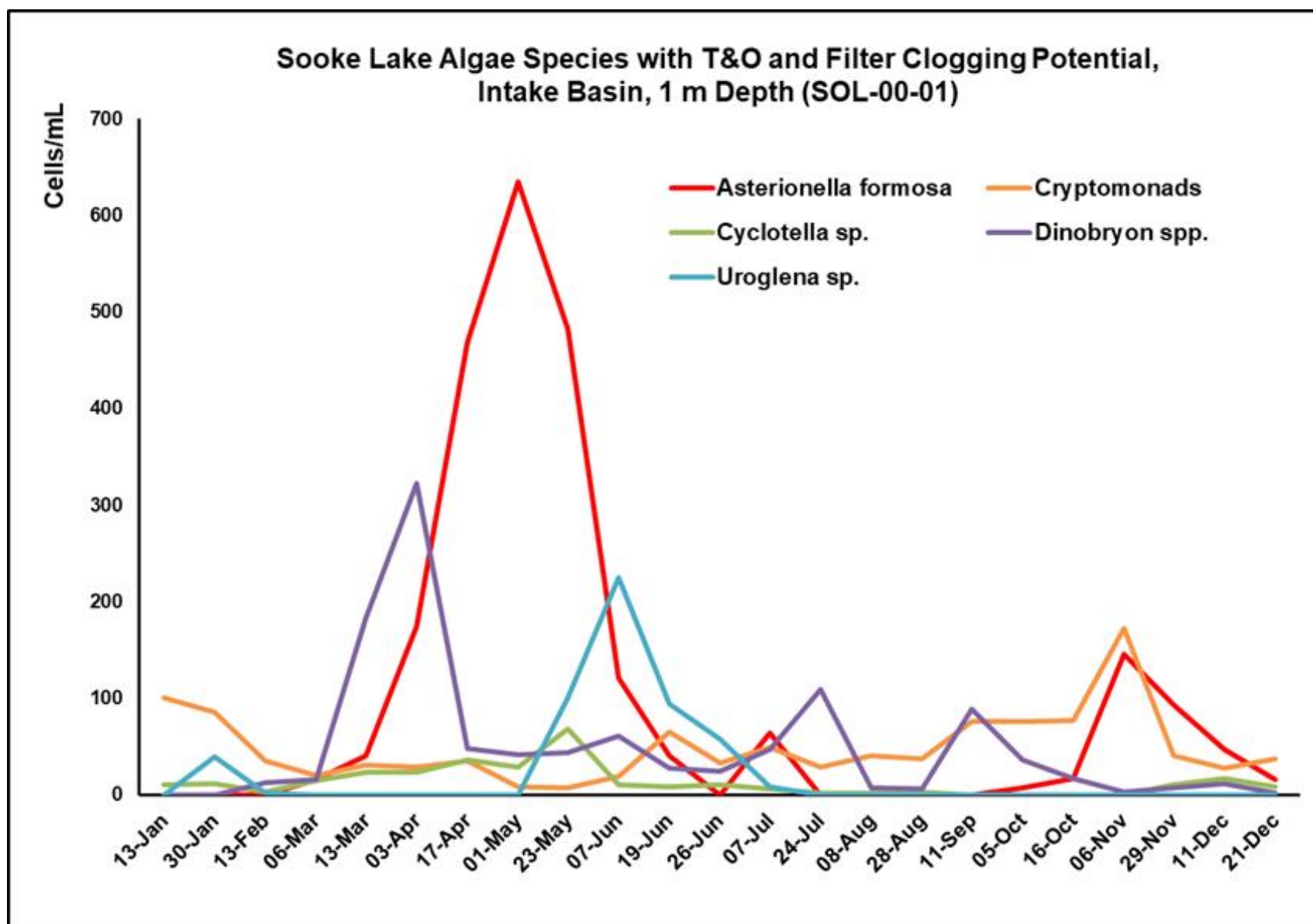


Figure 11 Sooke Lake Algae Species with T&O and/or Filter Clogging Potential, Intake Basin, 1 m depth, SOL-00-01, 2023

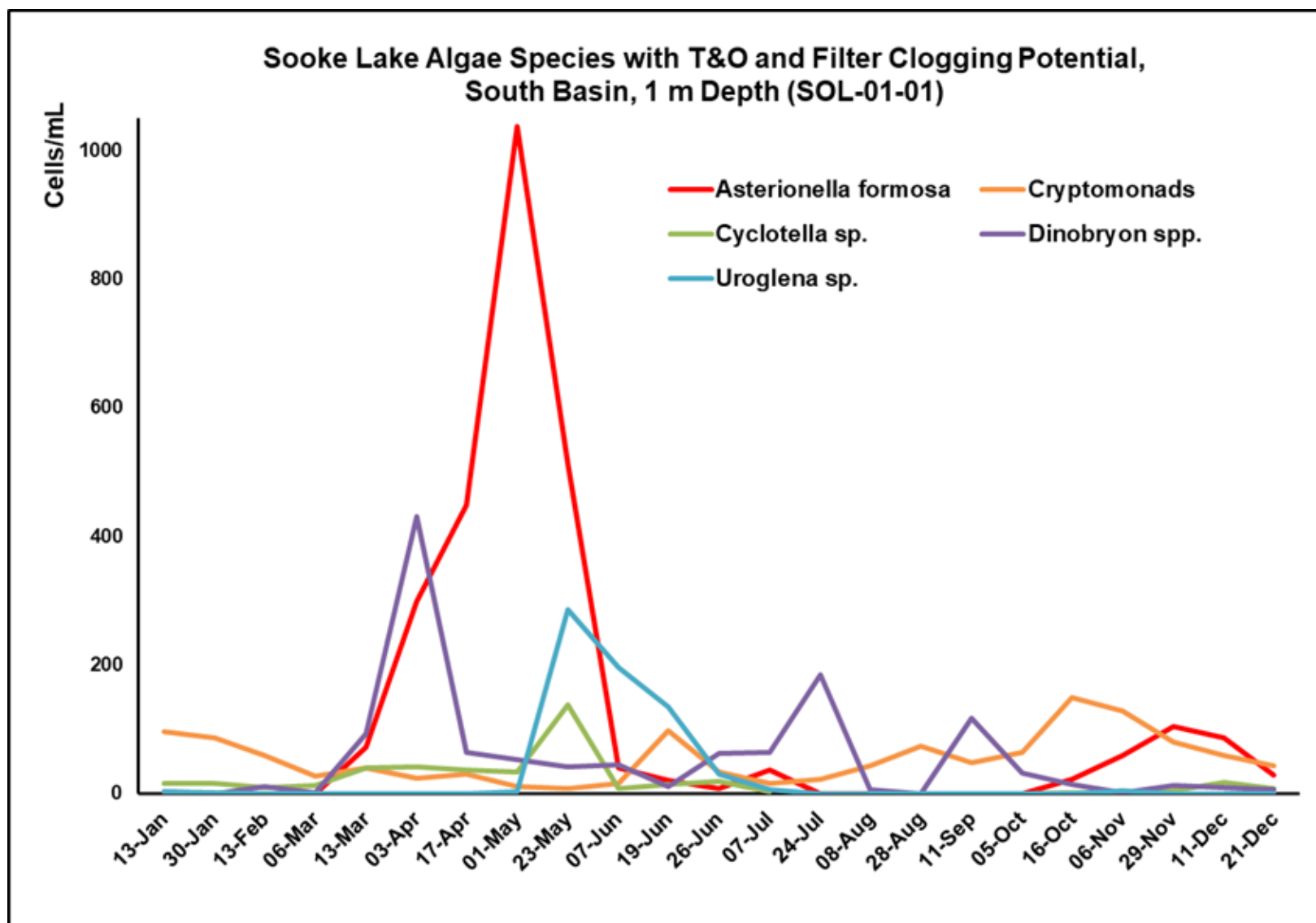


Figure 12 Sooke Lake Algae Species with T&O and/or Filter Clogging Potential, South Basin, 1 m depth, SOL-01-01, 2023

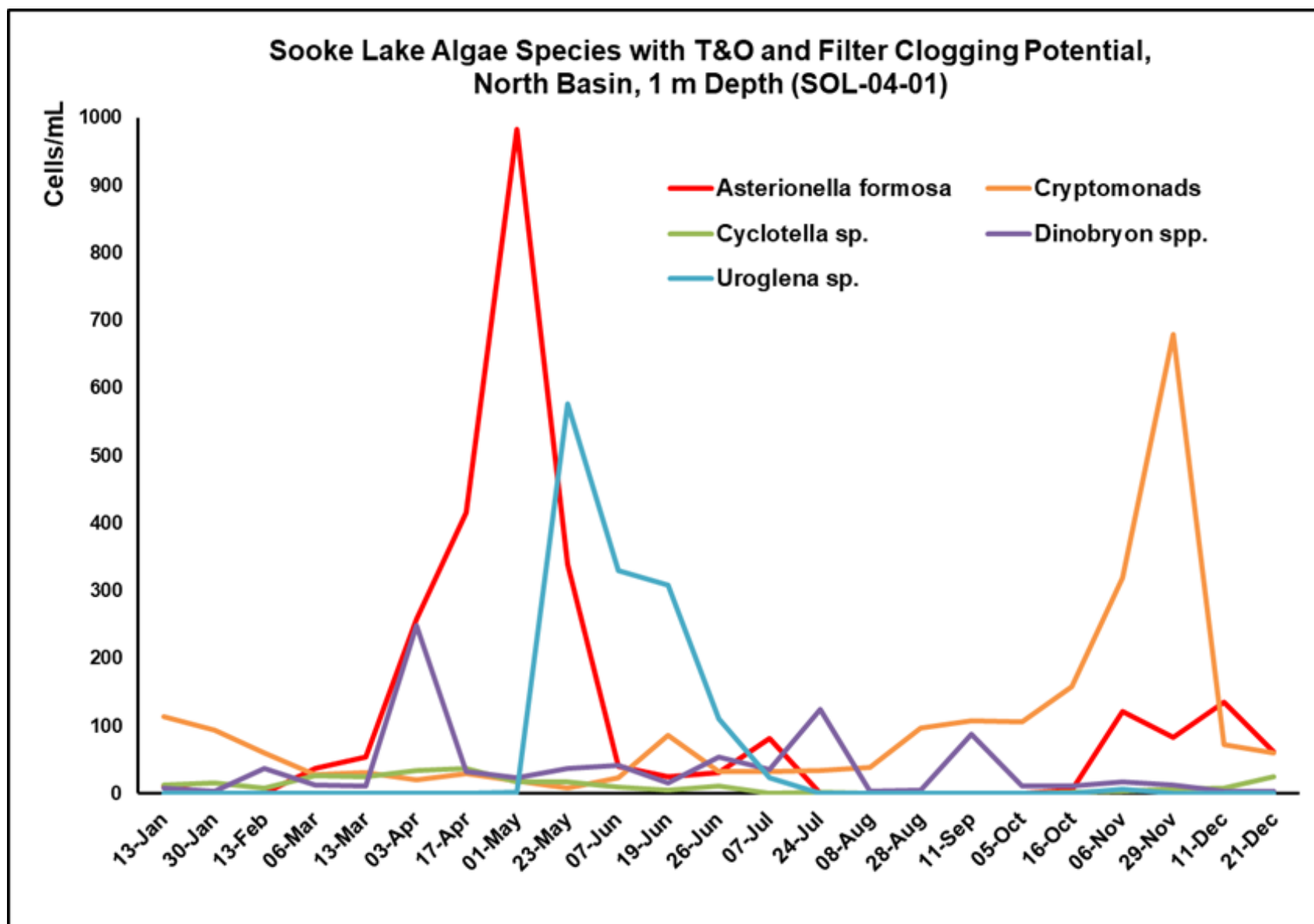


Figure 13 Sooke Lake Algae Species with T&O and/or Filter Clogging Potential, North Basin, 1 m depth, SOL-04-01, 2023

Zooplankton – Sooke Lake Reservoir (SOL). Zooplankton play an important role as an intermediate trophic stage, ensuring the energy flow from primary producers to higher trophic levels, e.g., macroinvertebrates, fish and other aquatic animals in aquatic ecosystems. Previous studies have shown that fish in Sooke Lake Reservoir predominantly rely on zooplankton for forage. Because of this important biological role, the CRD has included a regular zooplankton analysis to its source water monitoring program. Zooplanktonic species themselves can be herbivores, carnivores or omnivores. Studies have shown that any change of zooplankton species composition or densities or both could influence not only the trophic structure, but also physiochemical parameters in the ecosystems. There are three main zooplankton groups: Rotifera, Copepoda and Cladocera. Other aquatic invertebrates found in the collected samples included water mites, insect larvae, and rarely nematodes. In the ecosystems, phytoplankton are considered as a main food source for zooplankton and, therefore, phytoplankton dynamics can significantly reflect the changes of zooplankton and *vice versa*. The peak of zooplankton abundance normally occurs after the peak of phytoplankton. In general, zooplankton tend to have higher density during the spring-to-fall period than in winter.

In Sooke Lake Reservoir, zooplankton mainly consist of Rotifera and Copepoda, although Cladocera taxa, such as *Daphnia* spp., can be occasionally recorded. In 2023, these three main zooplankton groups were recorded in Sooke Lake. Rotifera was the most dominant group. Abundances of Rotifera and Copepoda were consistent with the long-term trends. Cladocera zooplankton, on the other hand, was less common and only observed in some discrete samples and was therefore excluded from the analysis.

As rotifers are considered one of the main food sources for copepods, these two groups might show opposite abundance trends. Zooplankton dynamics in Sooke Lake are also regulated by other higher trophic organisms, such as macroinvertebrates and fish.

Zooplankton trends in Sooke Lake Reservoir are typical of ecological succession models. 2023 zooplankton activity was consistent with long-term trends (Figure 14 to 19).

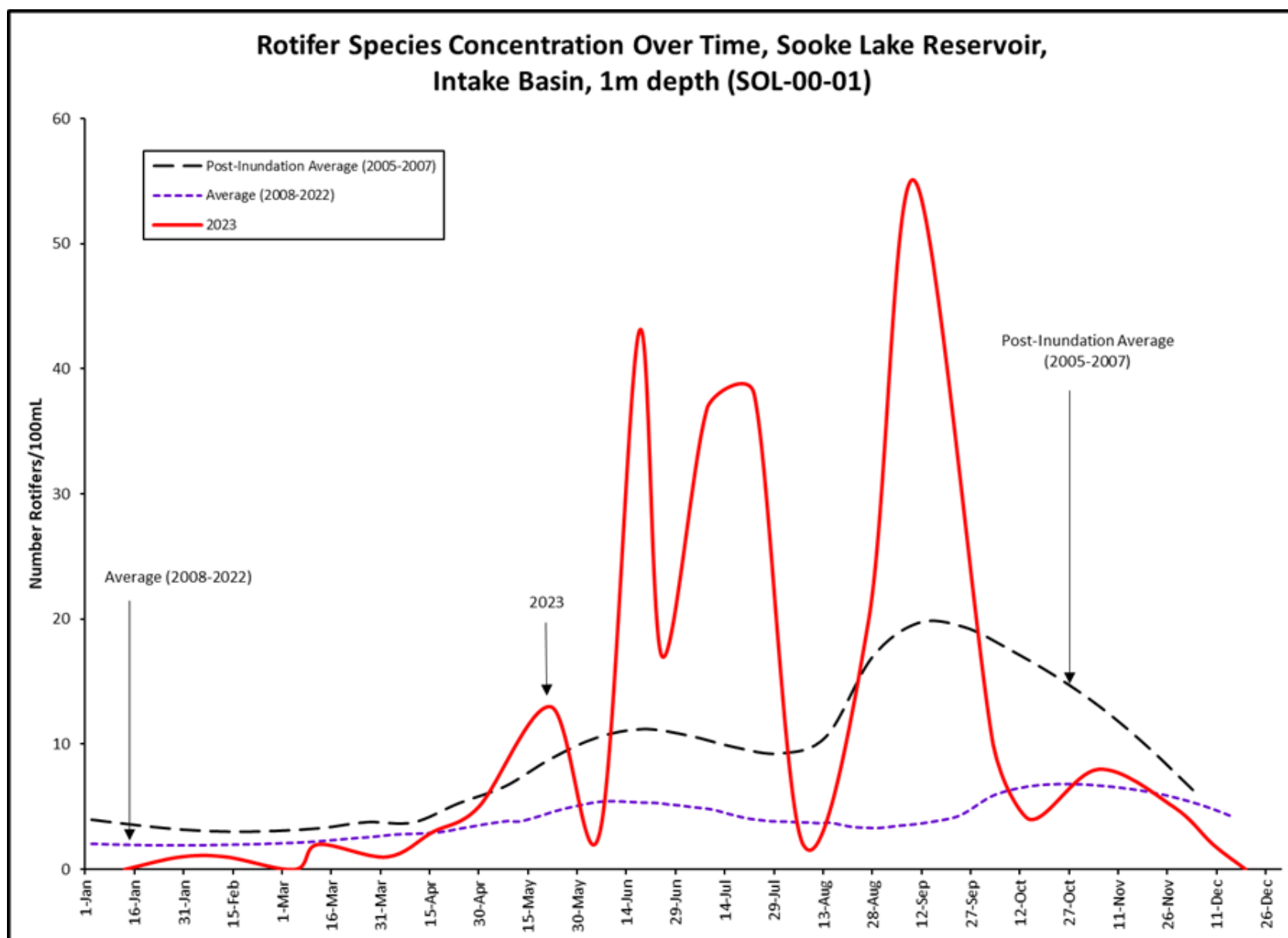


Figure 14 The Total Number of Rotifers Over Time, Sooke Lake Reservoir, Intake Basin, 1 m depth (SOL-00-01)

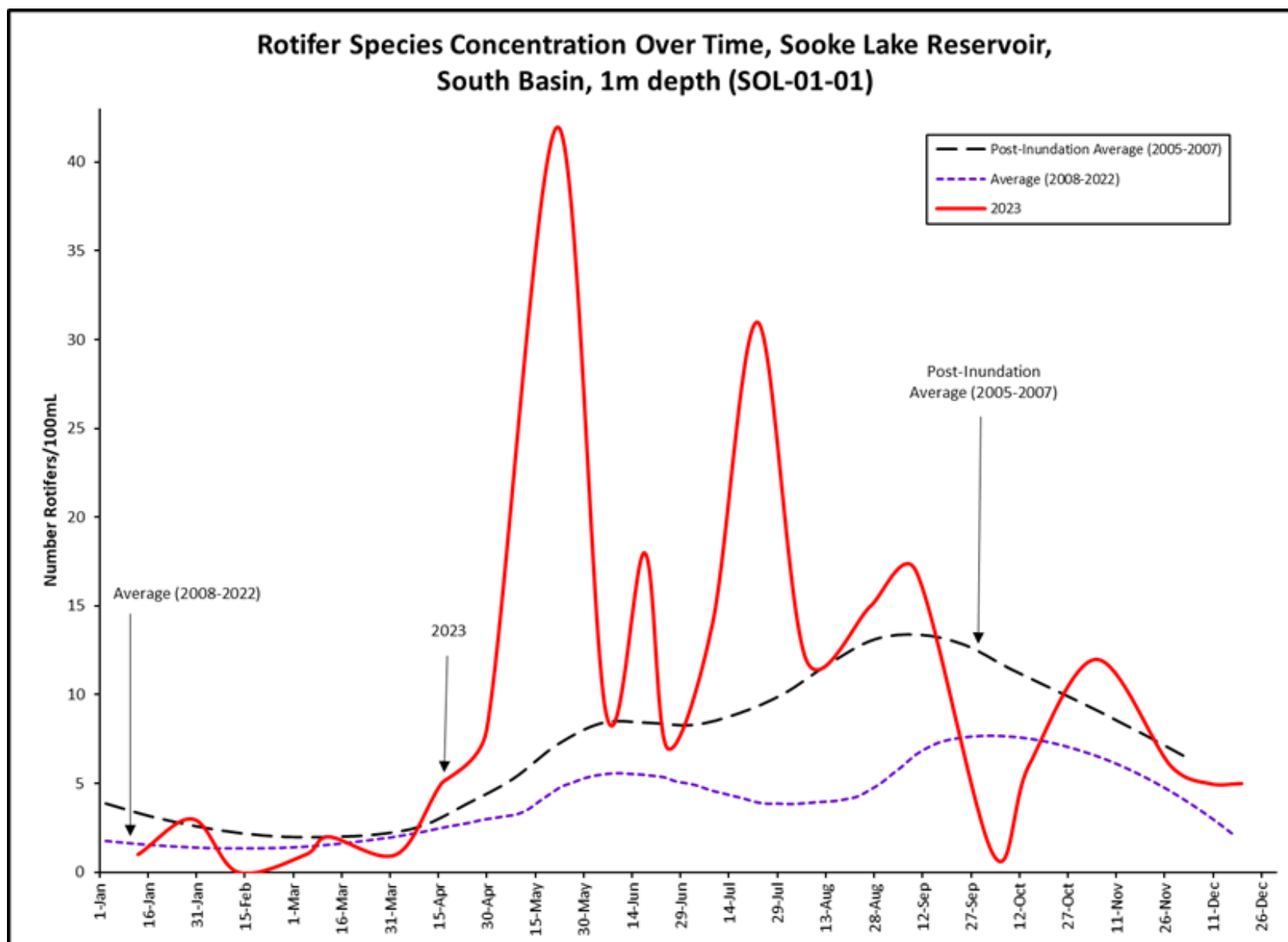


Figure 15 The Total Number of Rotifers Over Time, Sooke Lake Reservoir, South Basin, 1 m depth (SOL-01-01)

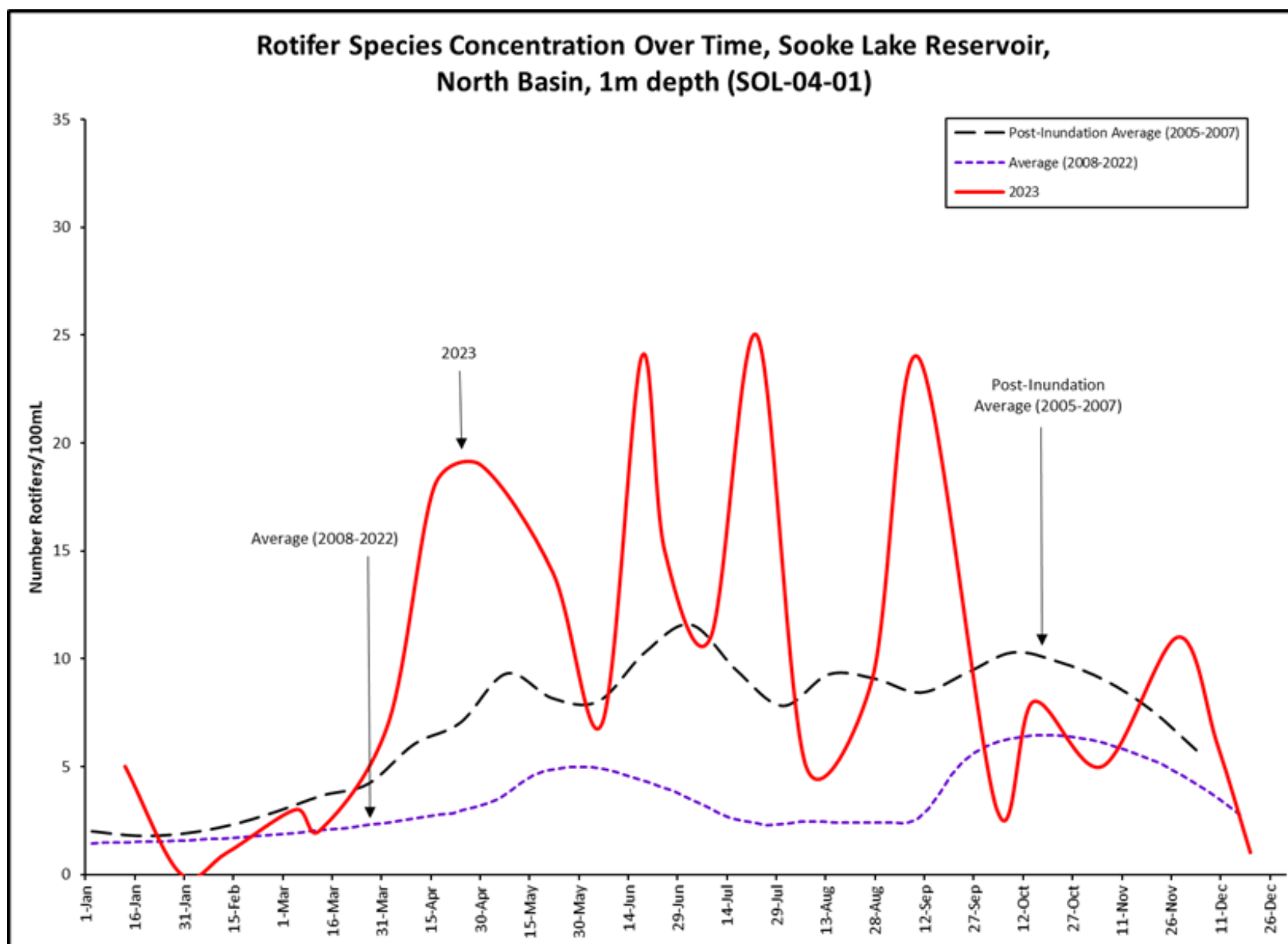


Figure 16 The Total Number of Rotifers Over Time, Sooke Lake Reservoir, North Basin, 1 m depth (SOL-04-01)

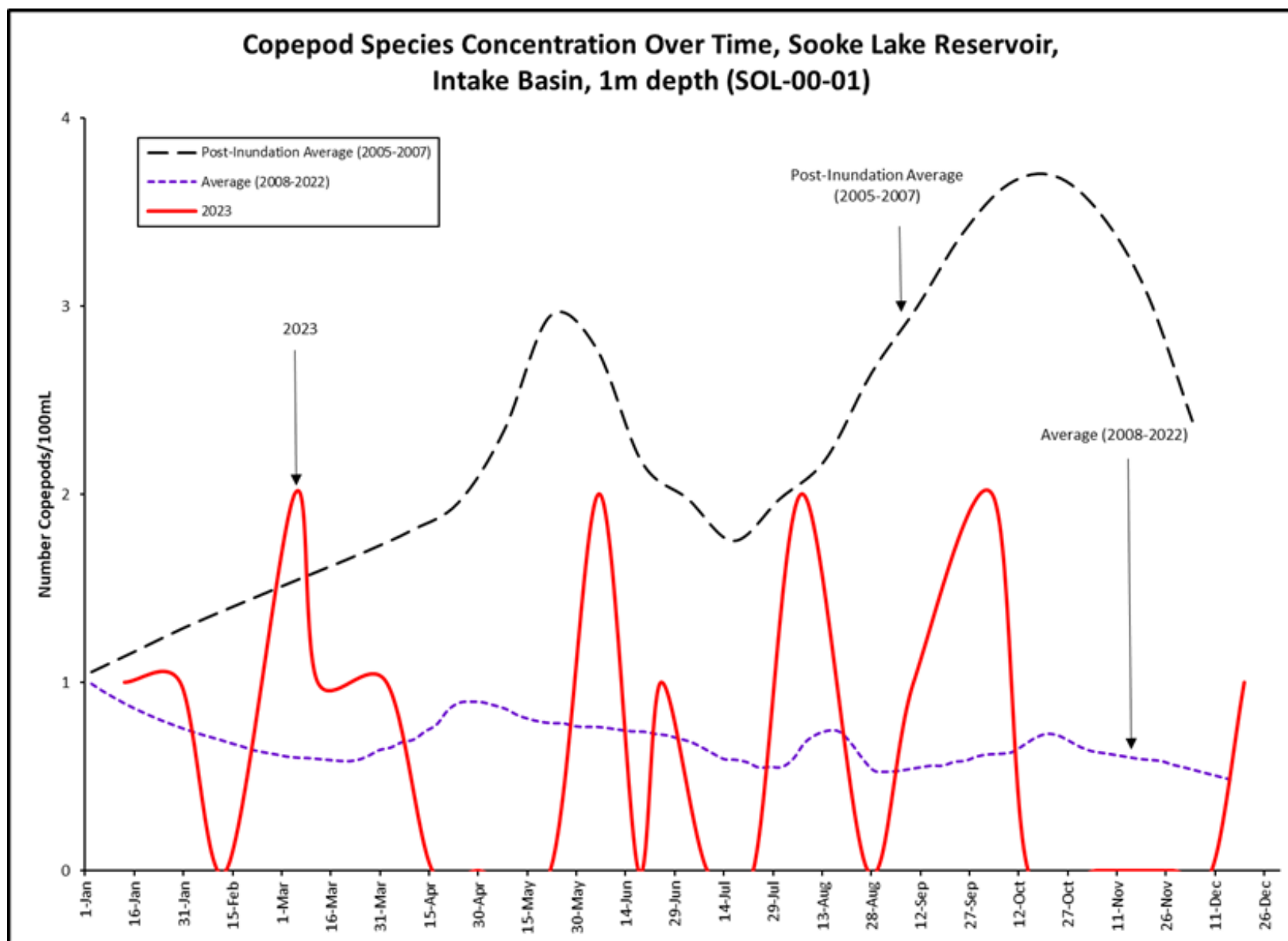


Figure 17 The Total Number of Copepods Over Time, Sooke Lake Reservoir, Intake Basin, 1 m depth (SOL-00-01)

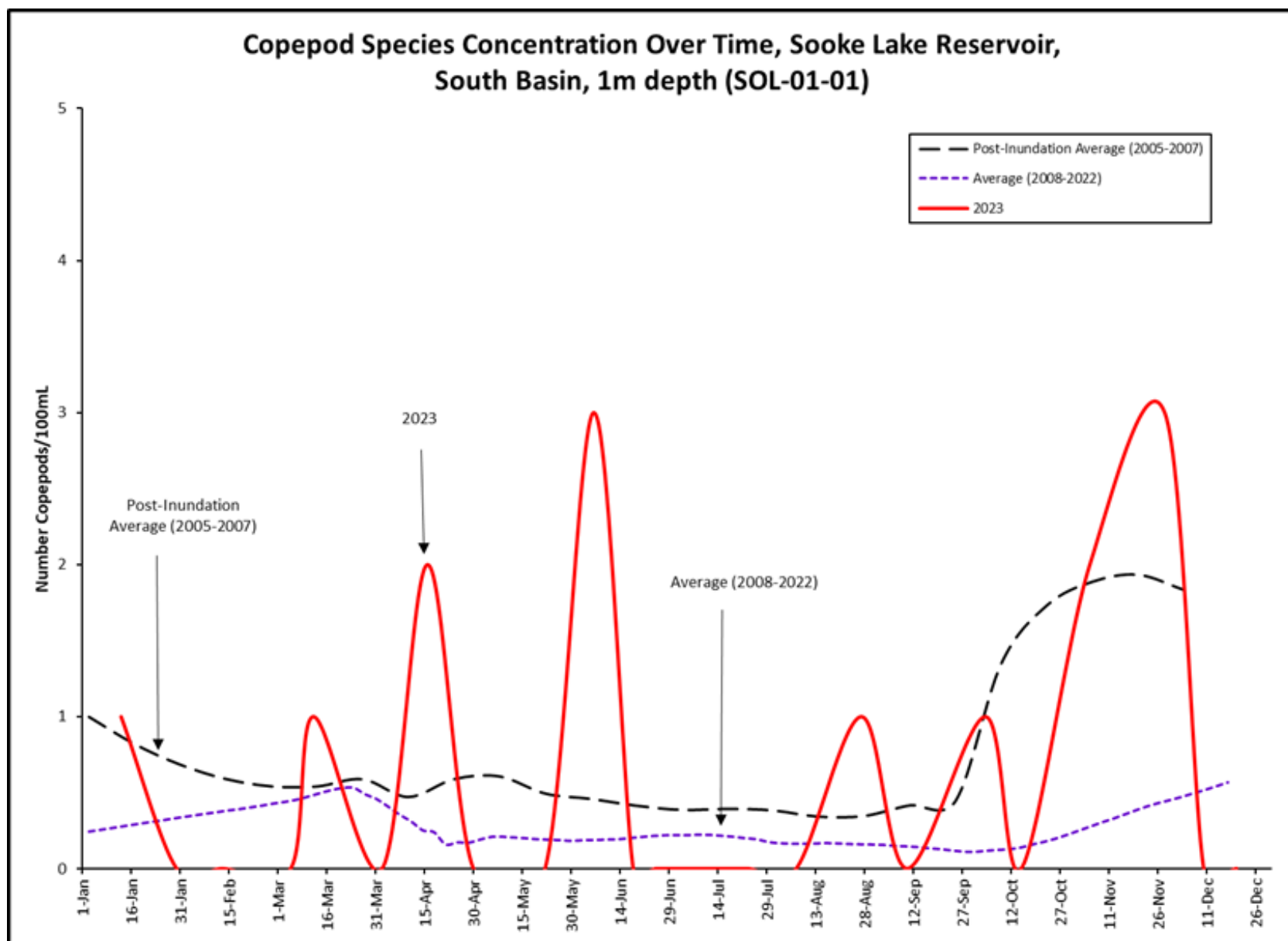


Figure 18 The Total Number of Copepods Over Time, Sooke Lake Reservoir, South Basin, 1 m depth (SOL-01-01)

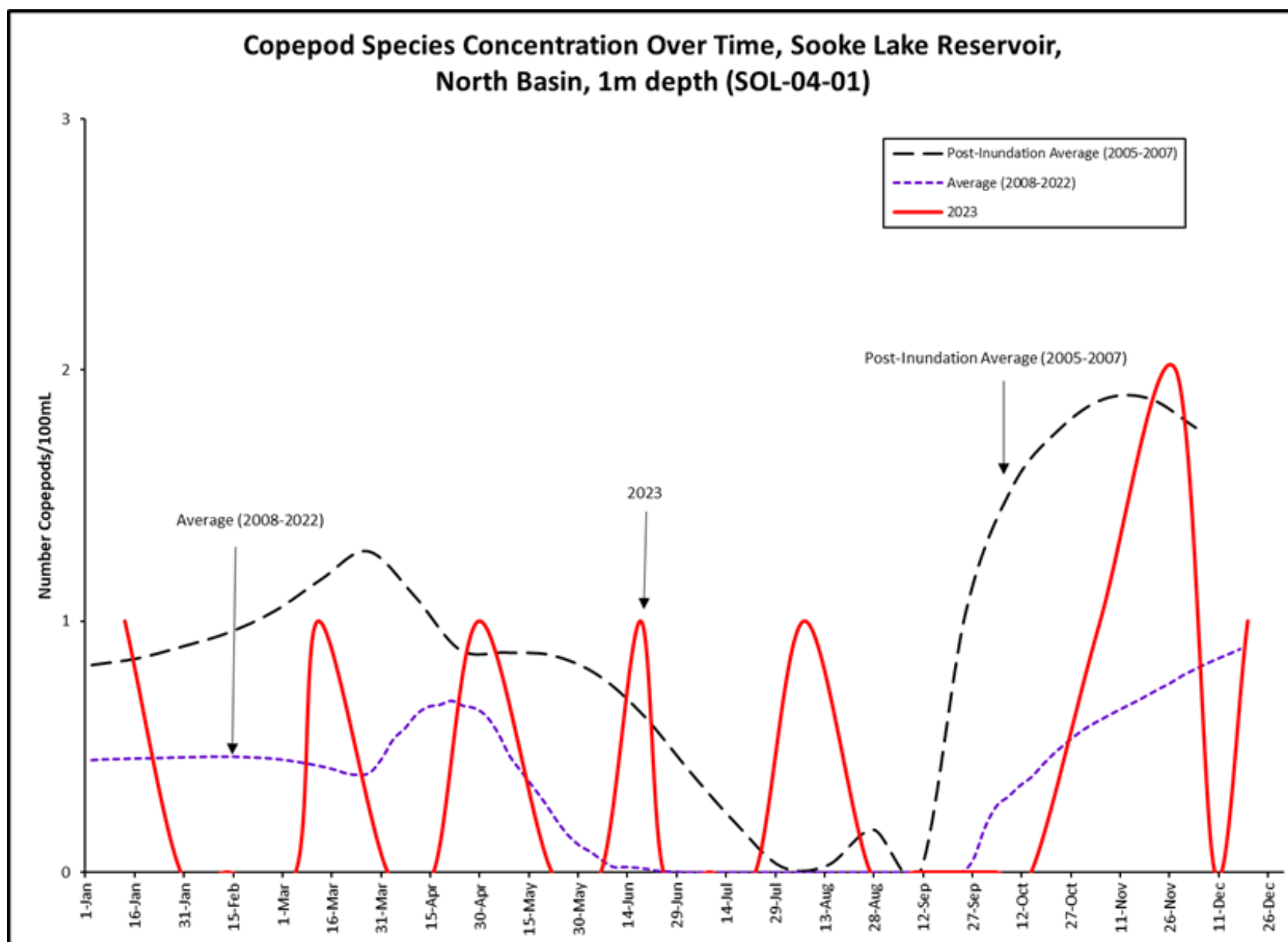


Figure 19 The Total Number of Copepods Over Time, Sooke Lake Reservoir, North Basin, 1 m depth (SOL-04-01)

Stratification: The 2023 thermal stratification pattern in Sooke Lake Reservoir was consistent with historical trends, as stratification occurred during spring, summer and early fall months. This phenomenon happens when the water column is divided in three layers from top to bottom, including: *epilimnion* (atop, warm, circulating and fairly turbulent), *metalimnion* (characterized by a steep thermal gradient or rapid temperature change) and *hypolimnion* (bottom, denser and colder water with little temperature change). The stratification reflects the vertical heat distribution in the water column and, therefore, might have a significant association with the dynamics of plankton communities. The stratified layers can function as barriers for exchanging of heat, chemicals, and nutrients, whereas mixing events could release nutrients from bottom and therefore favour algal growth, as often seen in the fall. CRD Water Quality staff use a lake profiler with a temperature probe to create a vertical temperature profile once per month at the three usual Sooke Lake sampling stations (Intake Basin, South Basin and North Basin). By 2024, thermistor chains installed in various locations in the lake will provide an even more refined understanding of the reservoir's stratification processes.

In 2023, Sooke Lake started to stratify slightly earlier than in colder 2022 spring, approximately in early April. By the end of April 2023, both the South and North Basin were fully stratified. The Intake Basin remained stratified until mid-August when the hypolimnion was depleted due to the continuous deep-water extraction. The South Basin began to de-stratify by approximately mid-October and was fully mixed in early November. The North Basin retained its stratification until approximately mid-December. These are patterns typical for Sooke Lake Reservoir. More detailed data from advanced monitoring methods will allow a deeper and more refined stratification analysis in the future, which will also aid in developing a 3D hydrodynamic model of Sooke Lake Reservoir.

Turbidity. The turbidity is continuously measured at both water treatment plants and at the Sooke Lake intake tower, but also sampled and lab tested daily from the Goldstream Water Treatment Plant and weekly at the Sooke River Road Water Treatment Plant. Figure 20 shows that the source water turbidity was consistently well under 1 NTU throughout 2023. 2023 marks the first year in decades when peak demand and high flows due to outdoor water demand did not cause a turbidity excursion at the Goldstream Treatment Plant. These very high peak flows, in particular on Wednesday mornings, used to mobilize sediments in the mains downstream of the Kapoor Tunnel and caused short-period turbidity excursions to above 1 NTU, which were reported to Island Health. In 2020, the CRD introduced an annual springtime flushing and cleaning procedure of the Main #4 and #5 upstream of the Goldstream Treatment Plant and this procedure has been able to reduce the sediment load in these pipes so that no turbidity excursion was recorded in 2023.

The CRD also plans to implement changes to the Water Conservation Bylaw and the associated watering rules in 2024 to reduce peak water demands. This should further mitigate the risk of turbidity excursions caused by sediment mobilization upstream of the treatment plant.

Overall, Sooke Lake water was very clear in 2023, and turbidity of the raw water was at no time a factor of concern to the drinking water quality in the GVDWS.

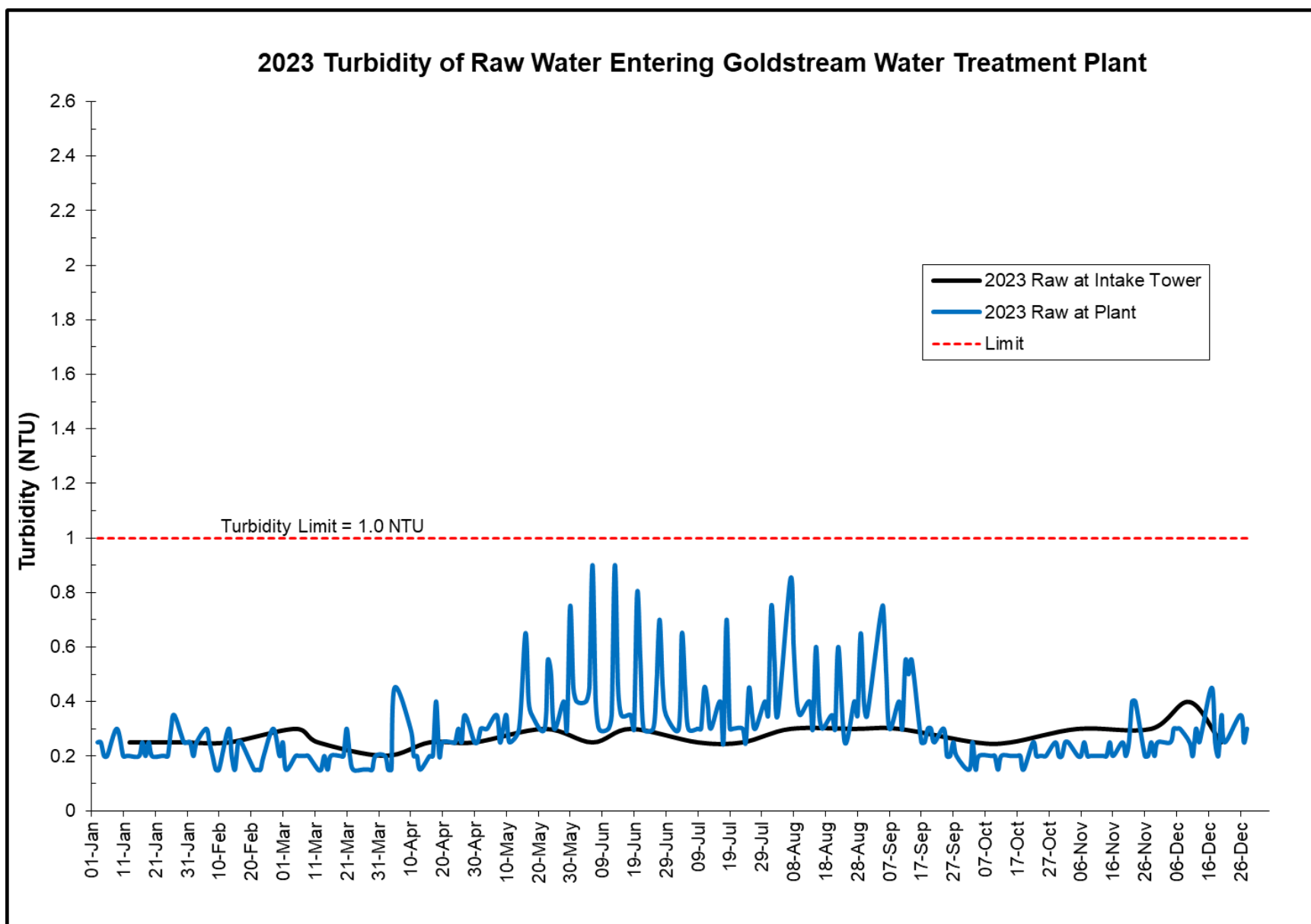


Figure 20 2023 Turbidity of Raw Water Entering Goldstream Water Treatment Plant (from Grab Sampling)

Raw Water Temperature. Cool water is beneficial in a distribution system because it reduces the potential for losses of chlorine residual and regrowth of bacteria. Warm water can also facilitate undesired chemical and biochemical processes during water treatment and in the piping system. It is also unpleasant for customers to consume warm tap water. For these reasons, the Canadian guidelines suggest a temperature limit of 15°C as an aesthetic objective.

In contrast to 2022, the temperature of the water entering the Goldstream Water Treatment Plant in 2023 was closely following the long-term average trend line as in previous years (Figure 21). In general, water temperatures were slightly cooler than the long-term trend throughout most of the year except for the peak summer season between July and September when higher than average temperatures were recorded. The unusually warm December also reflected on the water temperatures entering the plant; water temperatures in December were higher than the long-term trend. The raw water entering both treatment plants exceeded the 15°C guideline limit between the end of July and middle of October. This is approximately the same duration of exceedance as in previous years. The maximum (weekly average) temperature peak exceeded 18°C again after a lower peak in 2022.

The usage of the lowest intake gates during the summer led to the depletion of the cool water stored in the hypolimnion water column of the reservoir's south basin. This occurred approximately in mid-July and can be seen as a sharp incline in temperature at that time in Figure 21. The cool water stored in the hypolimnion of the much deeper north basin is currently inaccessible for the CRD with the existing infrastructure.

High raw water temperatures during the summer are not a new problem for the CRD. Before the expansion of the Sooke Lake Reservoir in 2004, the water temperature entering the plant reached 15°C as early as mid-June. Warmer and longer summers, as a result of climate change, will likely exacerbate this problem in the future.

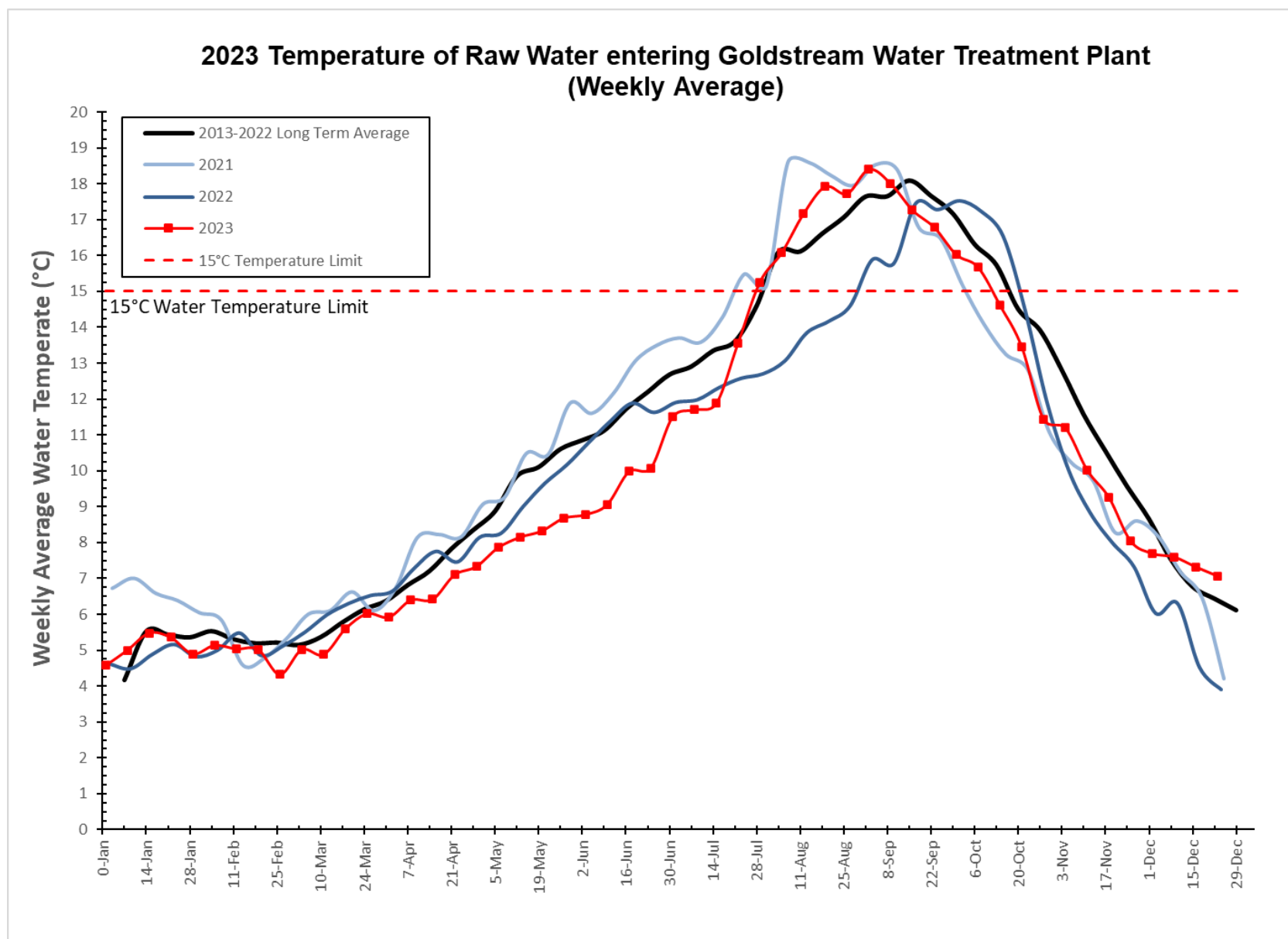


Figure 21 2023 Temperature of Raw Water Entering Goldstream Water Treatment Plant (Weekly Average)

Physical/Chemical Parameters. The raw water entering the Goldstream Water Treatment Plant had the following physical and chemical characteristics:

- Median pH: 7.3
- Median CaCO₃ Hardness: 16.60 mg/L
- Median Alkalinity: 15.0 mg/L
- Median Colour: 5.0 TCU
- Median Total Organic Carbon: 1.80 mg/L
- Median Conductivity (25°C): 42.10 µS/cm

The values of the parameters above are consistent with those of previous years.

Inorganics/Metals. Table 1 in Appendix A lists all the inorganic and metal parameters tested in the source water in 2023. Two low concentration hits for Chromium and Mercury were recorded in separate samples throughout the year. The registered concentrations are well below the health guidelines but any detections of heavy metals concentrations in Sooke Lake are very rare and unusual. Isolated hits like that for parameters with very low laboratory detection limits do occasionally occur and are likely due to a laboratory or sampling error. It is important to analyze results within a possible contamination context or reasonable trend. Overall, no concerning levels or trends have been detected.

Organics/Radionuclides. Table 1 in Appendix A lists all the organic radiological parameters tested in the source water in 2023. Most of them were not detected or were in insignificant concentrations. These results confirm the high level of protection from any anthropogenic impacts on the supply watershed.

Emerging Contaminants.

- Per- and Polyfluoroalkyl Substances (PFAS): CRD staff have been testing the raw water entering the Goldstream Water Treatment Plant two times per year since December 2020 for PFAS parameters. Since December 2023, all PFAS tests were conducted with a lower lab detection limit of 2 ng/L and following the proposed new Health Canada guidelines and USEPA method 537.1 that includes a total of 28 individual PFAS parameters. Results are compared to a MAC of 30 ng/L for the sum of all these 28 tested parameters. All tests to date yielded non-detectable results. Currently, with a protected watershed, the only pathway for PFAS to enter the source water is via rain and air. As there is currently no industrial PFAS emitter in the region or in British Columbia, this will guarantee very low, or as currently non-detectable, PFAS concentrations in the source water.

Several adhoc PFAS tests were also conducted on treated water samples from customer taps in the distribution systems. A few samples recorded results with low concentrations of a certain PFAS compound. The concentrations found were well below the current MAC. CRD staff plan to do more PFAS testing in the distribution systems in 2024.

- Microplastics: The CRD has not been testing the raw water entering the Goldstream WTP for microplastics because there are no commercial laboratories in Canada performing this analysis yet. Also, Health Canada and other regulatory agencies have not yet formulated any health guidelines for microplastic concentrations. The state of California has developed a standard operating procedure that will allow the state to begin issuing laboratory accreditation to qualified labs. CRD Water Quality staff continue to investigate this emerging issue and will conduct testing when feasible.

Nutrients. Figure 22 to 25 show the total nitrogen and the total phosphorus concentrations in both the south and north basins at 1 m depths in Sooke Lake Reservoir. Total phosphorus concentrations at both stations trended near or below the long-term average. In both lake basins, the total phosphorus concentration dropped at times near to levels of the detection limit of 1 µg/L, which indicates that biological activity in the lake used up almost all available phosphorus nutrients. The lack of phosphorus at the end of spring and summer was a result of increased algal activity prior to these periods. A slightly higher phosphorus input during March and April through rain and runoff events may have facilitated a higher algal productivity during the summer of 2023. Nitrogen concentrations have been consistent with the long-term

average trend. The majority of this nitrogen was present in the form of organic nitrogen and likely remained available for biological uptake due to the growth limitation dictated by the lack of phosphorus. This confirms previous conclusions that Sooke Lake Reservoir is extremely phosphorus limited.

In general, the nutrient concentrations confirm the ultra-oligotrophic status (extremely unproductive, phosphorus limited) of Sooke Lake Reservoir, which is positive for a drinking water supply source.

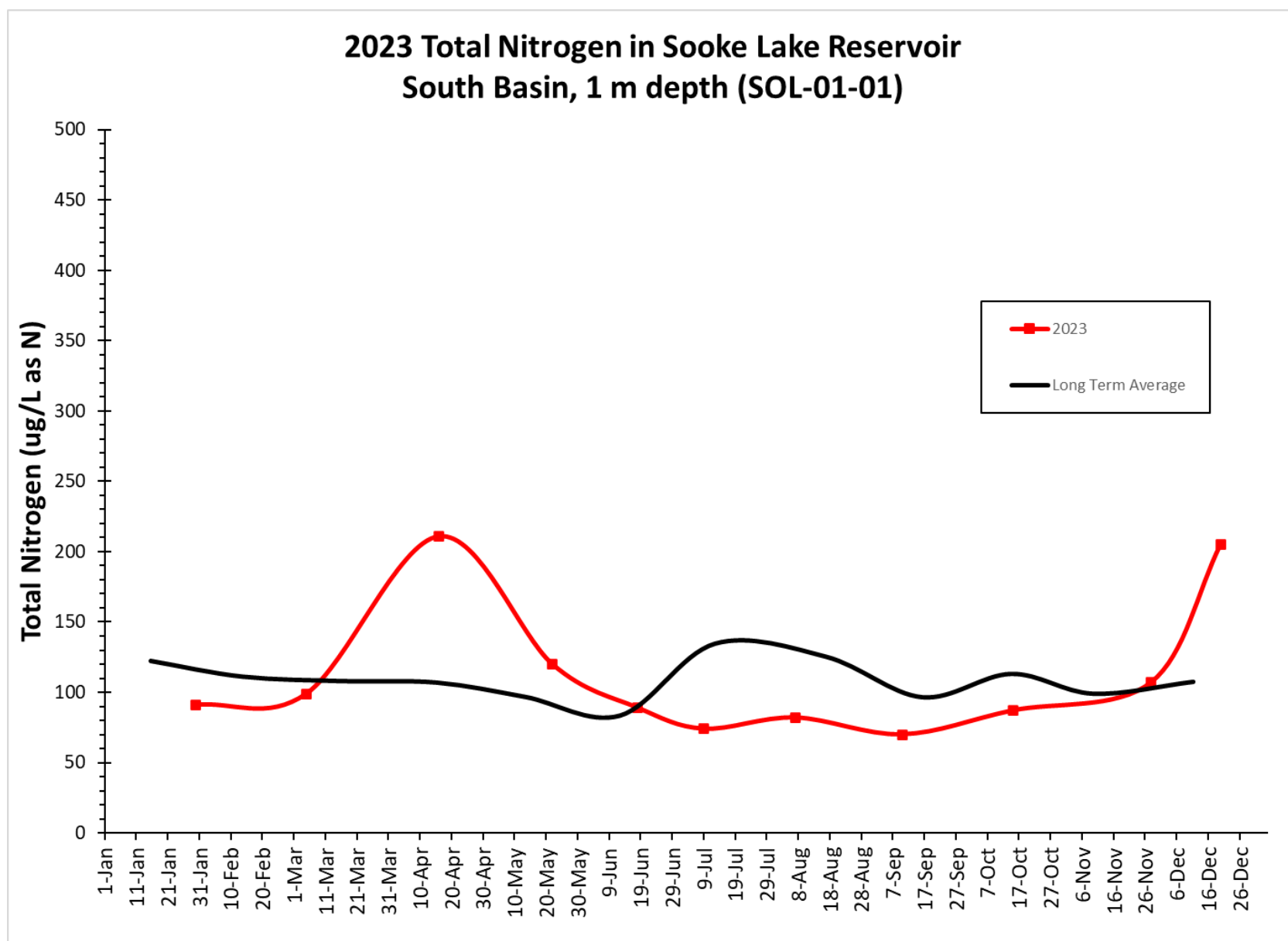


Figure 22 Total Nitrogen in Sooke Lake Reservoir, South Basin, 1 m depth (SOL-01-01)

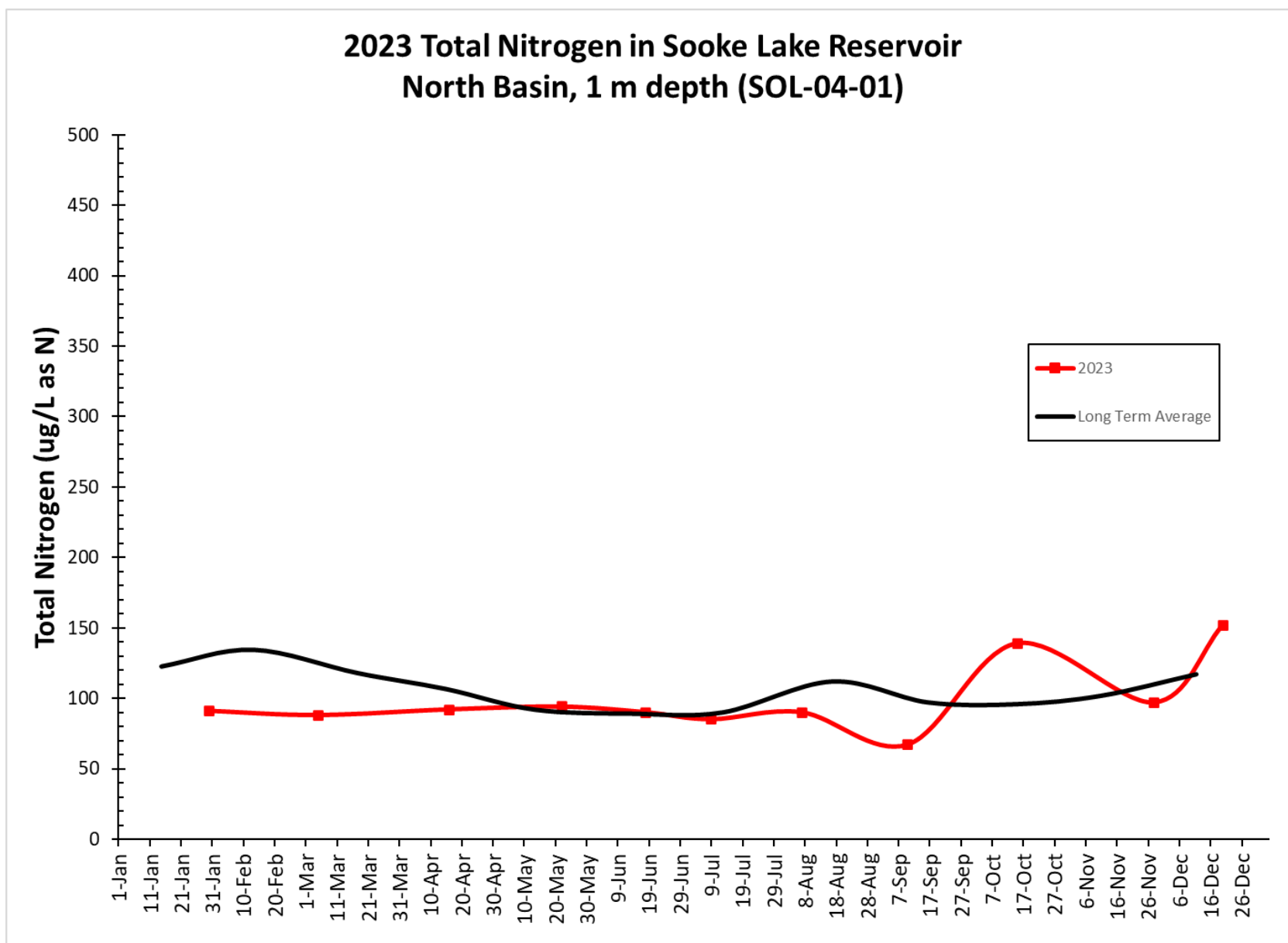


Figure 23 Total Nitrogen in Sooke Lake Reservoir, North Basin, 1 m depth (SOL-04-01)

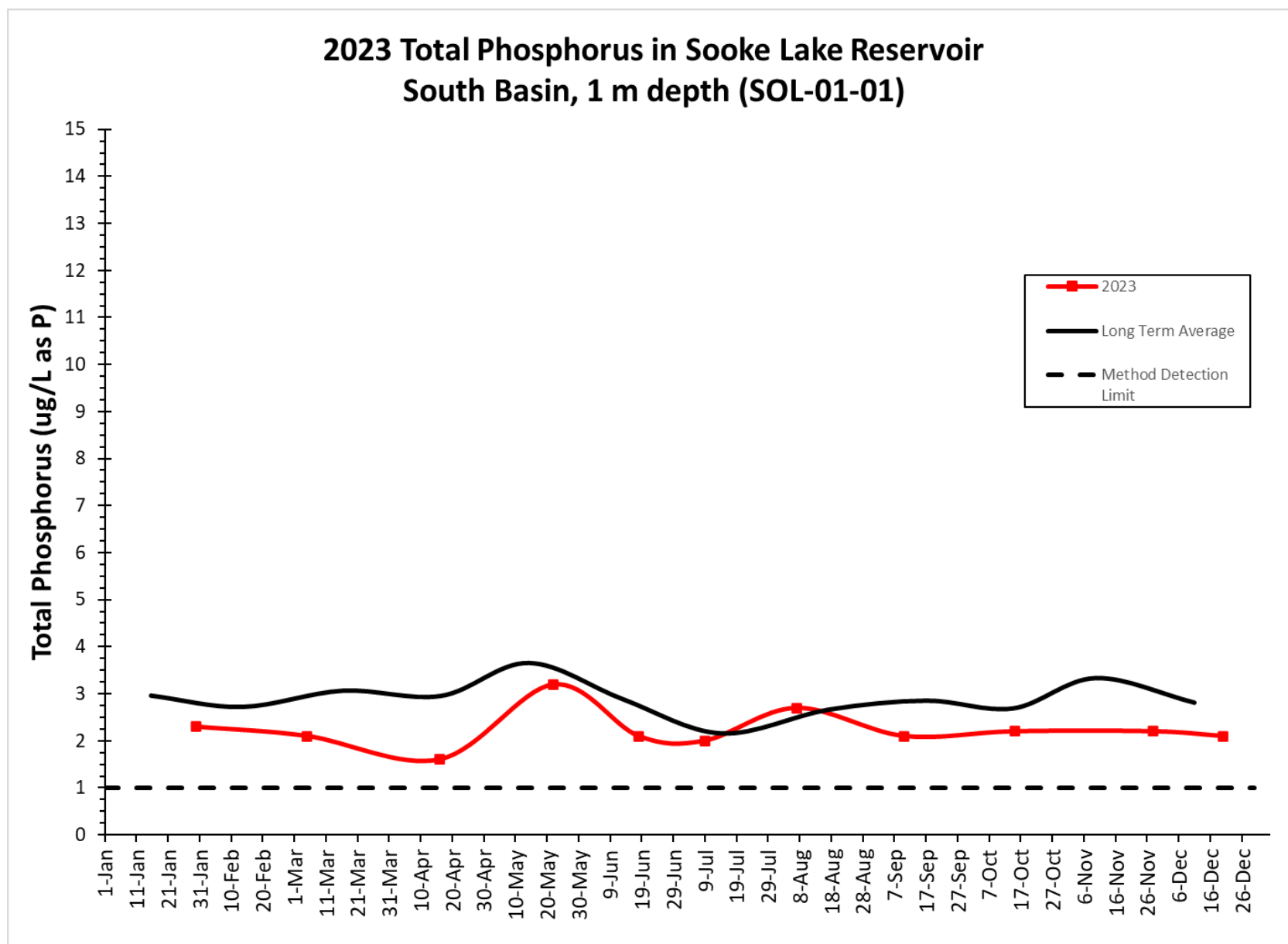


Figure 24 Total Phosphorus in Sooke Lake Reservoir, South Basin, 1 m depth (SOL-01-01)

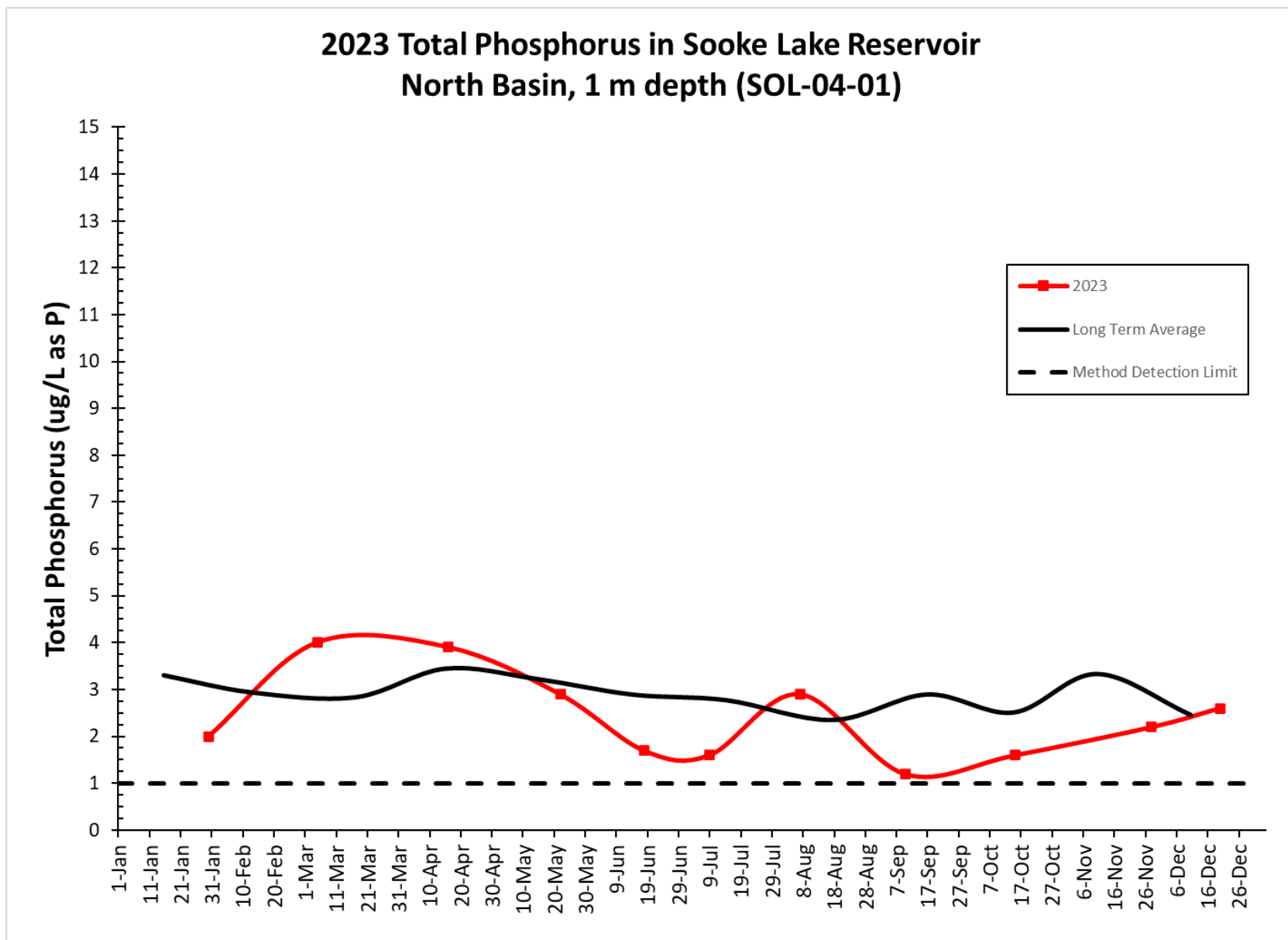


Figure 25 Total Phosphorus in Sooke Lake Reservoir, North Basin, 1 m depth (SOL-04-01)

7.2 Treatment Monitoring Results

The following sections summarize the water quality data collected and analyzed to monitor and verify the effectiveness of the disinfection process at both CRD disinfection facilities in the GVDWS.

7.2.1 Goldstream Water Treatment Plant

Bacteriological Results after UV Treatment. Figure 26 shows the results from 242 samples collected and analyzed just downstream of the UV reactors. The results indicate that the UV treatment is capable of greatly reducing the *E.coli* and total coliform concentrations. On very few occasions, seven in all of 2023, and only in very low concentrations, have total coliform bacteria been found downstream of the UV treatment. The UV treatment is followed up by chlorination disinfection, designed to kill viruses and bacteria. These multiple disinfection stages are important components of the multi-barrier concept, which eliminates the reliance on only one module to achieve compliance.

Turbidity. The Goldstream Water Treatment Plant experienced zero adverse turbidity events in 2023.

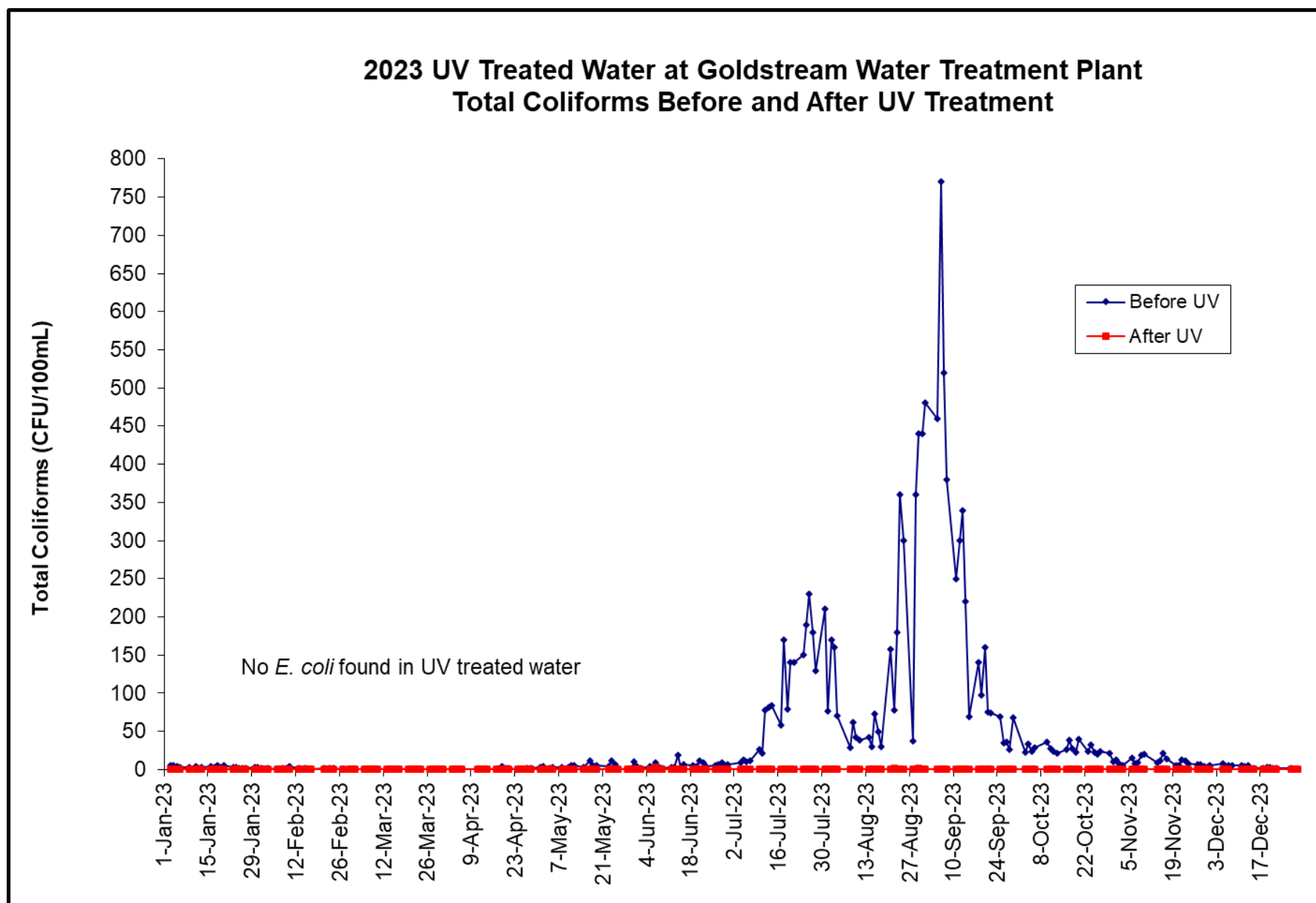


Figure 26 2023 UV Treated Water at Goldstream Water Treatment Plant Total Coliforms Before and After UV Treatment

Treated Water at Both First Customer Sampling Locations. The data collected from the two treated water sampling locations near the first customers below the Goldstream Water Treatment Plant (one at Main #4 and one at Main #5) indicated that the bacteriological quality of the disinfected water was good in all months of 2023 (Figure 27 and Appendix A, Table 2). In total, 243 samples were collected from the Main #4 first customer location and 234 samples from the Main #5 first customer location, for a combined total of 477 samples.

There were only nine total coliform-positive samples from both sampling stations throughout the year. Six positive samples registered at the Main #5 first customer sampling station and three at the Main #4 station. Two results had high total coliform concentrations (May 30: 510 CFU/100 mL; August 2: 121 CFU/100 mL). For all positive results, no subsequent resample was positive for total coliform bacteria. It is therefore very unlikely that these positive results were caused by an actual contamination in the water but rather caused by sampling or lab errors.

The few total coliform-positive results remained well under 10% of the monthly totals at both first customer locations. Two of the positive results were in exceedance of the 10 CFU/100 mL total coliform limit, as per *Drinking Water Protection Regulation*. The negative resample results ruled out a breach in the system and any real contamination of the treated water. While the regulations require 90% of all monthly samples in the entire system to be free of total coliform bacteria, the CRD monitors the first customer locations based on even more stringent criteria, where water quality is gauged on the bacteriological results of these two first customer locations only.

The total chlorine residual ranged from 1.70 - 2.31 mg/L (Appendix A, Table 2), with a median value of 2.06 mg/L (Figure 27).

The treated water leaving the Goldstream Water Treatment Plant had the following physical and chemical characteristics:

- Median pH: 7.5
- Median Alkalinity: 16.90 mg/L
- Median Colour: <2.0 TCU
- Median Total Organic Carbon: 1.80 mg/L
- Median Conductivity (25°C): 53.00 µS/cm
- Median Turbidity: 0.25 NTU

The values of the parameters above are consistent with those of previous years.

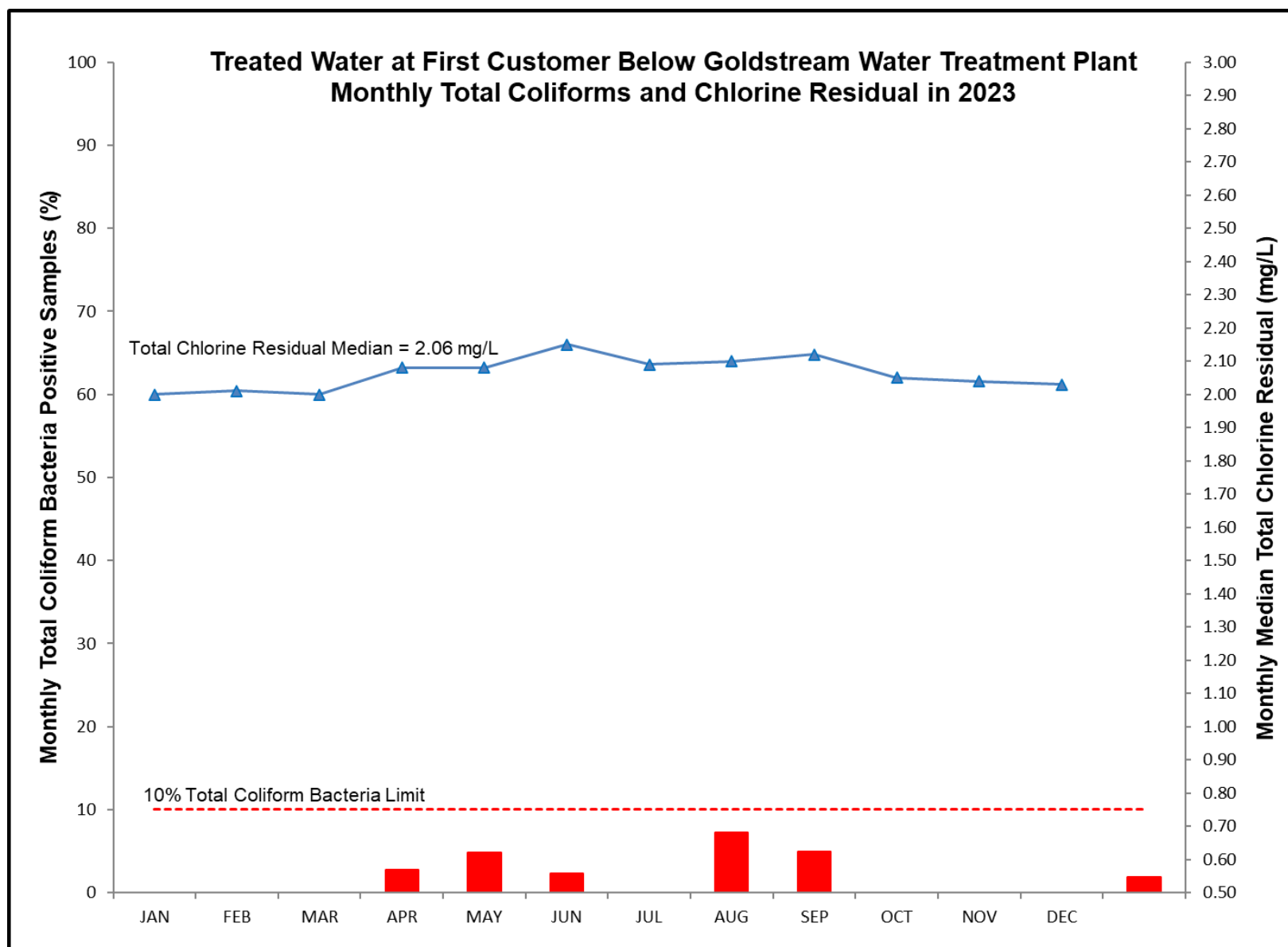


Figure 27 Treated Water at First Customer Locations below Goldstream Water Treatment Plant; Monthly Total Coliforms and Chlorine Residual in 2023

7.2.2 Sooke River Road Water Treatment Plant

Bacteriological Results after UV Treatment. Figure 28 shows the results from 37 samples collected and analyzed just downstream of the UV reactors. The results indicate that the UV treatment is capable of greatly reducing the *E. coli* and total coliform concentrations. There was no occasion when total coliform bacteria been found downstream of the UV treatment. This is evidence of a very effective UV disinfection stage at this plant. The UV treatment is followed up by chlorination disinfection, designed to kill viruses and bacteria. These multiple disinfection stages are important components of the multi-barrier concept, which eliminates the reliance on only one module to achieve compliance.

Turbidity. The Sooke River Road Water Treatment Plant experienced zero adverse turbidity events in 2023.

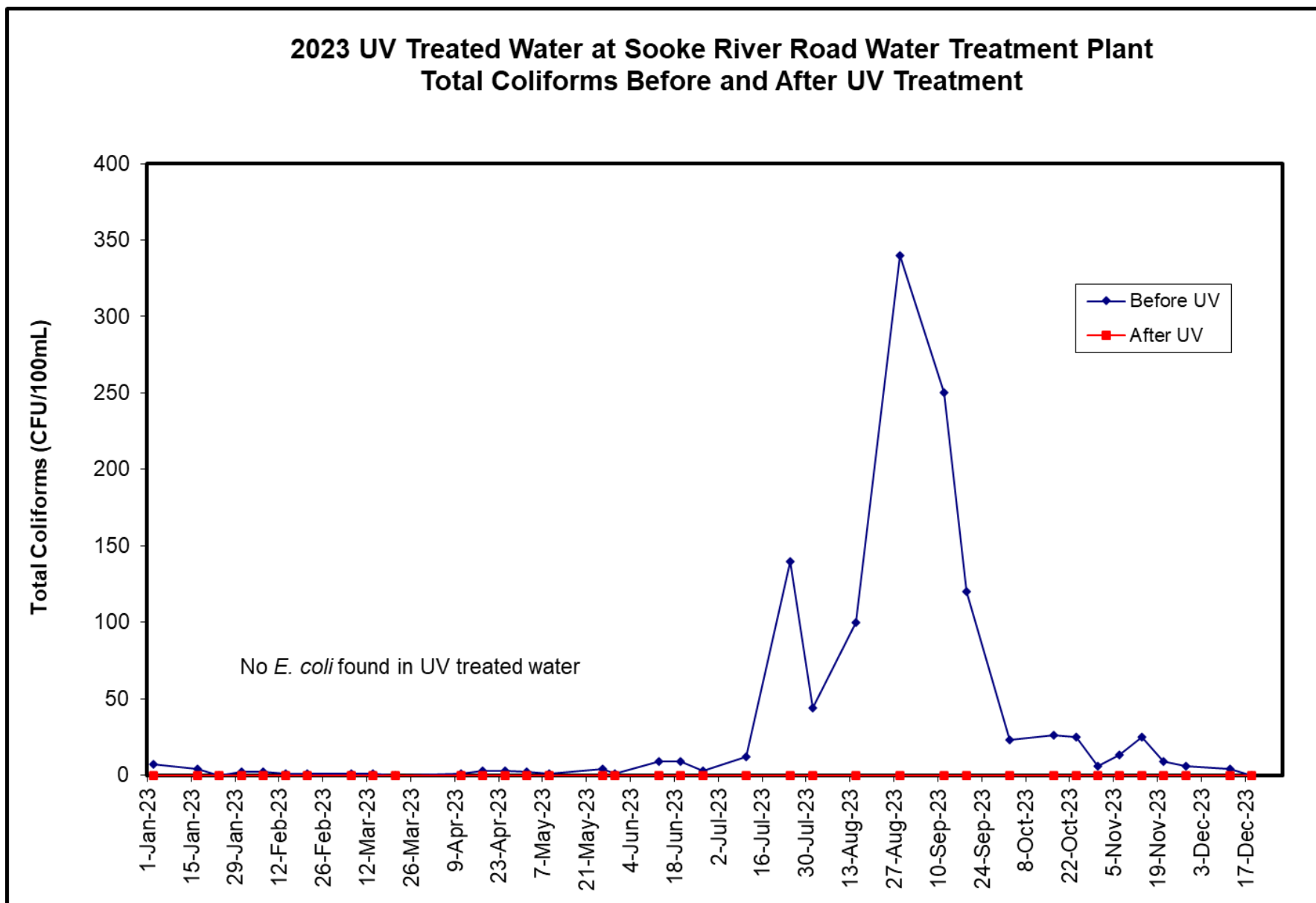


Figure 28 2023 UV Treated Water at Sooke River Road Water Treatment Plant Total Coliforms Before and After UV Treatment

Treated Water at First Customer. The data collected from the treated water sampling location near the first customer below the Sooke River Road Water Treatment Plant indicated that the bacteriological quality of the disinfected water was good in all months of 2023 (Figure 29).

No total coliform bacteria were detected in all 38 samples from this sampling station in 2023.

With no total coliform positive results in 2023, this part of the system was in full compliance with the *Drinking Water Protection Regulation*. While the regulations require 90% of all monthly samples in the entire system to be free of total coliform bacteria, the CRD monitors the first customer locations based on even more stringent criteria, where water quality is gauged on the bacteriological results of this first customer locations only.

The total chlorine residual ranged from 1.63 - 2.28 mg/L with a median value of 2.03 mg/L.

The treated water leaving the Sooke River Road Water Treatment Plant had the following physical and chemical characteristics:

- Median pH: 7.7
- Median Alkalinity: 16.60 mg/L
- Median Colour: <2.0 TCU
- Median Conductivity (25°C): 57.40 µS/cm
- Median Turbidity: 0.25 NTU

The values of the parameters above are consistent with those of previous years.

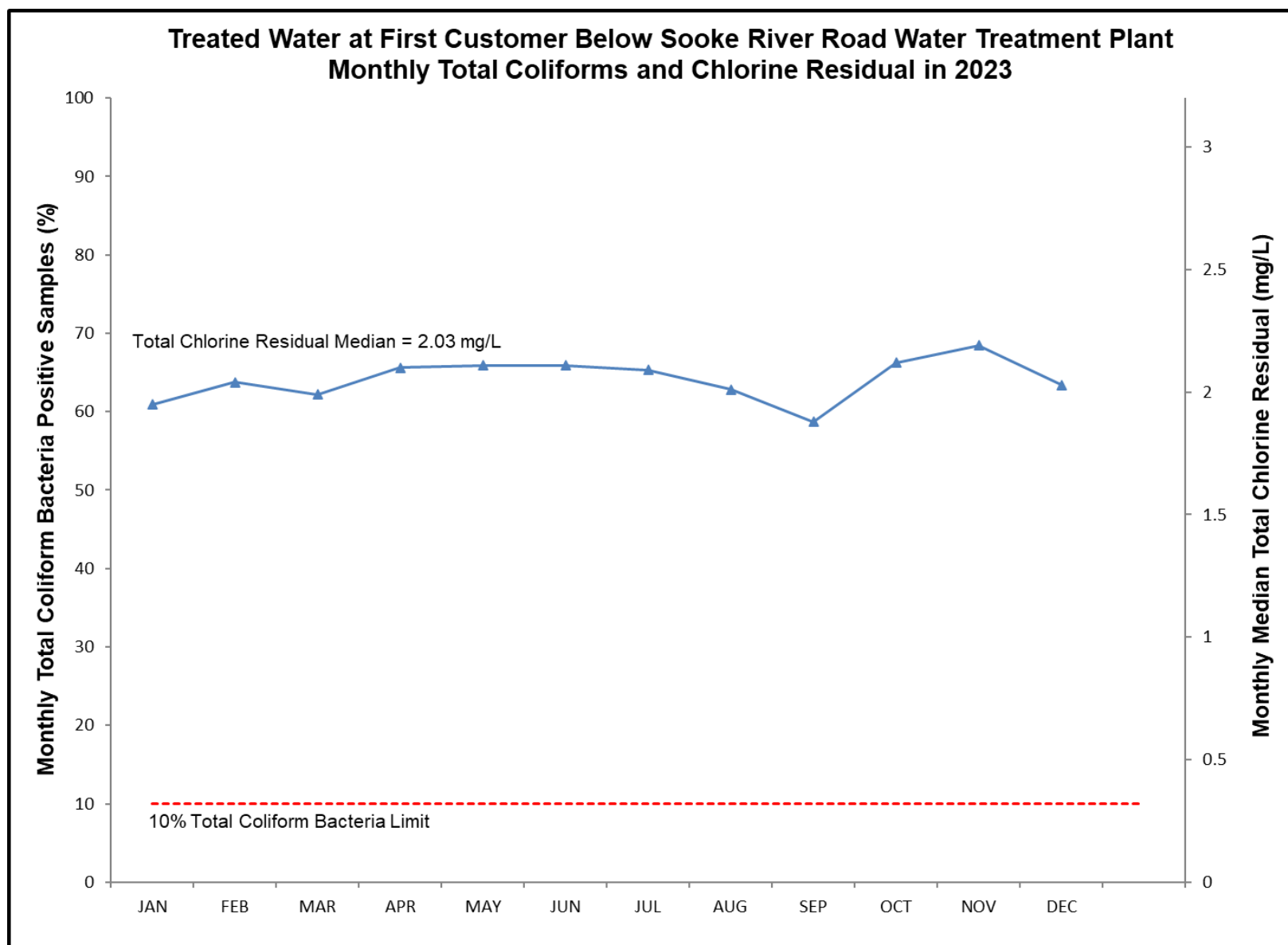


Figure 29 Treated Water at First Customer below Sooke Rover Road Water Treatment Plant, Monthly Total Coliforms and Chlorine

7.3 CRD Transmission System Results

The following sections summarize the water quality data collected and analyzed for monitoring and verifying the safety of the drinking water conveyed through the transmission system before it reaches the municipal distribution systems. Bacteriological results of the samples collected in the transmission system are considered for compliance purposes. There is no applicable requirement for monthly sample numbers for a transmission system. The number of samples collected monthly from the CRD Transmission System infrastructure was based on a water quality risk assessment and based on professional judgement.

7.3.1 Transmission Mains

The CRD transmission mains were sampled in 19 different sampling locations. The sampling locations for CRD transmission mains also include the Main #4 and Main #5 first customer sampling stations. In 2023, a total of 879 bacteriological and 843 water chemistry samples were collected and analyzed.

Bacteriological Results. Figure 30 and Table 1 show the results from 879 CRD transmission main samples collected and analyzed in 2023. The results (no *E. coli* and few total coliform bacteria detected) indicate that the water delivered through the transmission mains was bacteriologically safe. This system complied with the 10% total coliform-positive limit for all months. Four samples, two each in May and August, exceeded the 10 CFU/100 mL total coliform concentration threshold. There were no consecutive positive samples in 2023.

There were no *E. coli* or total coliform positive samples in 2023.

Chlorine Residual. Table 1 and Figure 30 demonstrate that the annual median total chlorine concentration in the transmission mains was 1.79 mg/L and, therefore, provided for adequate secondary disinfection within the transmission system and within most areas of the downstream municipal distribution systems.

Water Temperature. The annual median water temperature in the transmission mains was 9.3°C, with monthly medians ranging between 5.3°C (February) and 17.6°C (September) (Table 1). Based on these results, the water temperatures in the transmission mains were slightly higher than in 2022 but comparable to previous years.

Table 1 2023 Bacteriological Quality of the CRD Transmission Mains

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E. coli</i> (CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC > 0	Resamples TC > 0	Samples TC > 10	Samples > 0	Samples Collected	Samples > 1 NTU	Median mg/L as	Median °C
JAN	77	0	0.0	0	0	0	43	1	1.78	5.5
FEB	69	0	0.0	0	0	0	37	0	1.77	5.3
MAR	78	0	0.0	0	0	0	48	0	1.77	5.6
APR	69	2	2.9	0	0	0	38	0	1.77	6.8
MAY	76	2	2.6	0	2	0	44	0	1.77	8.6
JUN	77	1	1.3	0	0	0	43	0	1.83	10.0
JUL	72	1	1.4	0	0	0	40	0	1.82	12.3
AUG	78	3	3.8	0	2	0	43	0	1.80	17.0
SEP	68	2	2.9	0	0	0	38	0	1.88	17.6
OCT	72	0	0.0	0	0	0	42	0	1.76	14.9
NOV	77	0	0.0	0	0	0	43	0	1.81	10.2
DEC	66	0	0.0	0	0	0	37	0	1.84	7.8
Total:	879	11	1.3	0	4	0	496	1	1.79	9.3

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit
 > = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Disinfection Byproducts. The CRD collected six sets of samples for a disinfection byproduct analysis from a transmission main at Mills Road. The annual average total trihalomethane (TTHM) and annual average total haloacetic acid (HAA) concentrations were 19.7 and 14.4 µg/L, respectively, well below the MAC (TTHM = 100 and HAA = 80 µg/L) stipulated in the Canadian guidelines. These annual averages are in-line with the historical disinfection byproduct concentrations. At the beginning of 2021, the GVDWS was switched to free chlorine for about one month, which resulted in higher disinfection byproduct concentrations (see [2021 Annual Report](#)). While this was a short-term effect and concentrations remained below the health limits, these results have demonstrated the importance of using chloramines for secondary disinfection for the purpose of disinfection byproduct management. This sampling location was also sampled and tested for the disinfection byproduct Nitrosodimethylamine (NDMA), a newly listed parameter that is classified as “probably carcinogenic” by Health Canada and associated with disinfection using chloramines. The Canadian guidelines MAC for NDMA is 40 ng/L. All NDMA results at this location were below the detection limit of 1.9 ng/L.

This was the only transmission main where disinfection byproduct samples were collected (bi-monthly). The CRD disinfection byproduct monitoring focuses on locations with higher potential for disinfection byproduct formation, such as system extremities with high water age or areas downstream of re-chlorination stations (free chlorine).

Metals. The CRD Water Quality Monitoring Program for the CRD Transmission System included regular metals tests in three strategic locations, where the water transitions from the CRD Transmission System to a downstream distribution system. In particular, the CRD pays attention to metals commonly found in drinking water, such as iron, manganese, copper and lead. All metal results were below the Canadian guideline.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Physical/Chemical Parameters. The drinking water in the regional transmission mains had the following physical and chemical characteristics:

- Median pH: 7.5
- Median CaCO₃ Hardness: 16.6 mg/L
- Median Alkalinity: 16.90 mg/L
- Median Colour: <2.00 TCU
- Median Turbidity: 0.25 NTU
- Median Conductivity (25°C): 53.00 µS/cm

Compliance Status. The transmission mains of the CRD Transmission System were in compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation*, except for May and August, with four total coliform-positive results in exceedance of 10 CFU/100 mL. Immediate resamples following these results were negative for total coliform bacteria and did, therefore, confirm the safety of the drinking water.

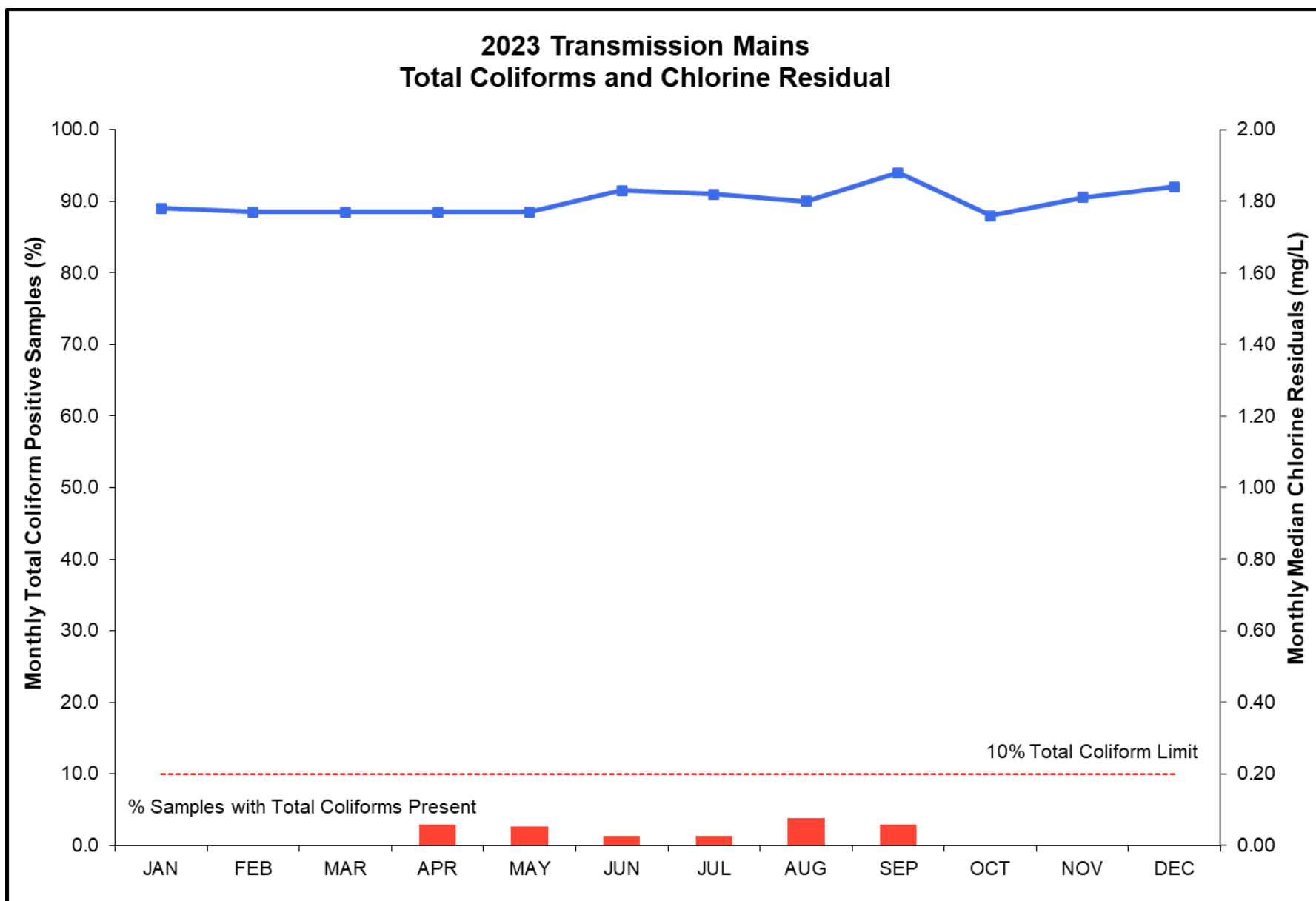


Figure 30 Transmission Mains Total Coliforms and Chlorine Residual in 2023

7.3.2 Supply Storage Reservoirs

The CRD supply storage reservoirs were sampled in seven different sampling locations. In 2023, a total of 171 bacteriological and 67 water chemistry samples were collected and analyzed.

Bacteriological Results. Typically, storage reservoirs are vulnerable to bacteria regrowth and potential contamination, due to the long retention times and generally lower chlorine residual concentrations. Because of the higher risks to water quality in reservoirs compared to pipes, the CRD typically monitors the water quality closely in all of its storage reservoirs and follows a rigorous maintenance schedule at these facilities.

Figure 31 and Table 2 show the 2023 results from the samples on the CRD supply storage reservoirs that are considered part of the CRD Transmission System. No total coliform bacteria were found in any sample from the supply storage reservoirs in 2023. This system therefore complied with the 10% total coliform-positive limit and the 10 CFU/100 mL maximum limit for all months.

There were no *E. coli* or total coliform positive samples in 2023.

Table 2 2023 Bacteriological Quality of Storage Reservoirs

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E.coli</i> (CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10	Samples >0	Samples Collected	Samples >1 NTU	Median mg/L as CL ₂	Median ° C
JAN	14	0	0.0	0	0	0	1	0	1.62	6.2
FEB	14	0	0.0	0	0	0	1	0	1.57	6.3
MAR	16	0	0.0	0	0	0	2	0	1.63	5.9
APR	13	0	0.0	0	0	0	1	0	1.70	7.3
MAY	9	0	0.0	0	0	0	1	0	1.57	9.8
JUN	14	0	0.0	0	0	0	1	0	1.68	10.8
JUL	15	0	0.0	0	0	0	1	0	1.57	14.2
AUG	17	0	0.0	0	0	0	1	0	1.48	17.8
SEP	14	0	0.0	0	0	0	0	0	1.67	17.7
OCT	15	0	0.0	0	0	0	2	0	1.42	15.0
NOV	14	0	0.0	0	0	0	2	0	1.59	11.4
DEC	16	0	0.0	0	0	0	1	0	1.67	8.7
Total:	171	0	0.0	0	0	0	14	0	1.61	10.3

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*; Cl₂ = chlorine, NTU = Nephelometric turbidity unit
> = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Chlorine Residual. Table 2 and Figure 31 indicate that the median total chlorine concentration in the storage reservoirs ranged from 1.42-1.70 mg/L, with an annual median total chlorine concentration of 1.61 mg/L. These results demonstrate adequate secondary disinfection within the Supply Storage Reservoirs.

Water Temperature. The annual median water temperature in the storage reservoirs was 10.3°C, with monthly medians ranging between 5.9°C (March) and 17.8°C (August) (Table 2).

Disinfection Byproducts. The CRD collected a total of 30 samples for a disinfection byproduct analysis. The samples were collected at two storage reservoirs in the CRD Transmission System (Cloake Hill and Upper Dean Park reservoirs). Upstream of both locations, the CRD maintains a re-chlorination station that can boost free chlorine concentrations, if the residuals fall below 0.2 mg/L. While this procedure is rarely exercised, any free chlorine concentration can lead to an increase in disinfection byproduct formation. The annual average TTHM and HAA concentrations were 18.3 and 15.8 µg/L at Cloake Hill and 18.0 and 5.4 µg/L at Upper Dean, respectively, well below the MAC (TTHM = 100 and HAA = 80 µg/L) stipulated in the Canadian guidelines. These annual averages are in-line with historical disinfection byproduct concentrations. At the beginning of 2021, the GVDWS was switched to free chlorine for about 1 month, which resulted in higher disinfection byproduct concentrations (see [2021 Annual Report](#)). While this was a short-term effect and concentrations remained below the health limits, these results have demonstrated the importance of using chloramines for secondary disinfection for the purpose of disinfection byproduct management. In nine out of ten samples, the NDMA concentrations at both locations were below the detection limit (1.9 ng/L). One sample from Upper Dean Park reservoir recorded a very low NDMA concentration of 2.1 ng/L. All NDMA results were therefore well below the Canadian guideline MAC of 40 ng/L.

Physical/Chemical Parameters. The drinking water in the regional supply storage reservoirs had the following physical and chemical characteristics in 2023:

- Median pH: 7.5
- Median Alkalinity: 16.9 mg/L
- Median Colour: <2.0 TCU
- Median Turbidity: 0.25 NTU
- Median Conductivity (25°C): 53.00 µS/cm

Metals. No data for 2023.

Nitrification. Nitrification occurs in many chloraminated water systems. It is a complex bacteriological process in which ammonia is oxidized initially to nitrite and then to nitrate and is caused by two groups of bacteria that have low growth rates relative to other bacteria. Water temperature seems to be a critical factor for nitrification in distribution systems, as it has been almost exclusively associated with warm water temperatures. Nitrification is also associated with high water age (reservoirs, dead ends, low-flow pipes) and with sediment biofilms.

Monitoring for nitrifying bacteria directly is inefficient; however, the extent of nitrification in the distribution system can be monitored by measuring chlorine residuals and nitrite (also nitrate, free ammonia). When the chlorine residuals drop (in the absence of any pipe break or plant disinfection failure), accompanied by increases of nitrite, then nitrification is occurring. Since Greater Victoria's source water has no background nitrite, the presence of nitrite in the distribution system is the best indicator of nitrification.

The control of nitrification in a chloraminated distribution system involves limiting the excess free ammonia leaving the disinfection plant, maintaining an adequate chlorine residual throughout the distribution system, minimizing water age in storage facilities and in the low-flow areas of the distribution system, and maintaining annual flushing routines to limit the accumulation of sediment and biofilm in the distribution system piping. CRD Water Quality Operations staff, in conjunction with Integrated Water Services Department Operations and Engineering staff, are undertaking projects to optimize the reservoir and pipe-cleaning schedules to address nitrification and other water quality affecting processes throughout the

distribution systems. The new hypochlorite plant at the Goldstream Water Treatment Plant has improved the chemical dosing system and reduced the potential for free ammonia in the treated water.

CRD Water Quality Operations staff will be conducting a nitrification study in the GVDWS in 2024-2025 to determine the extent of occurrence, possible water quality or operational impacts and potential mitigation.

Compliance Status. The CRD-owned and operated supply storage reservoirs in the CRD Transmission System were in full compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation*.

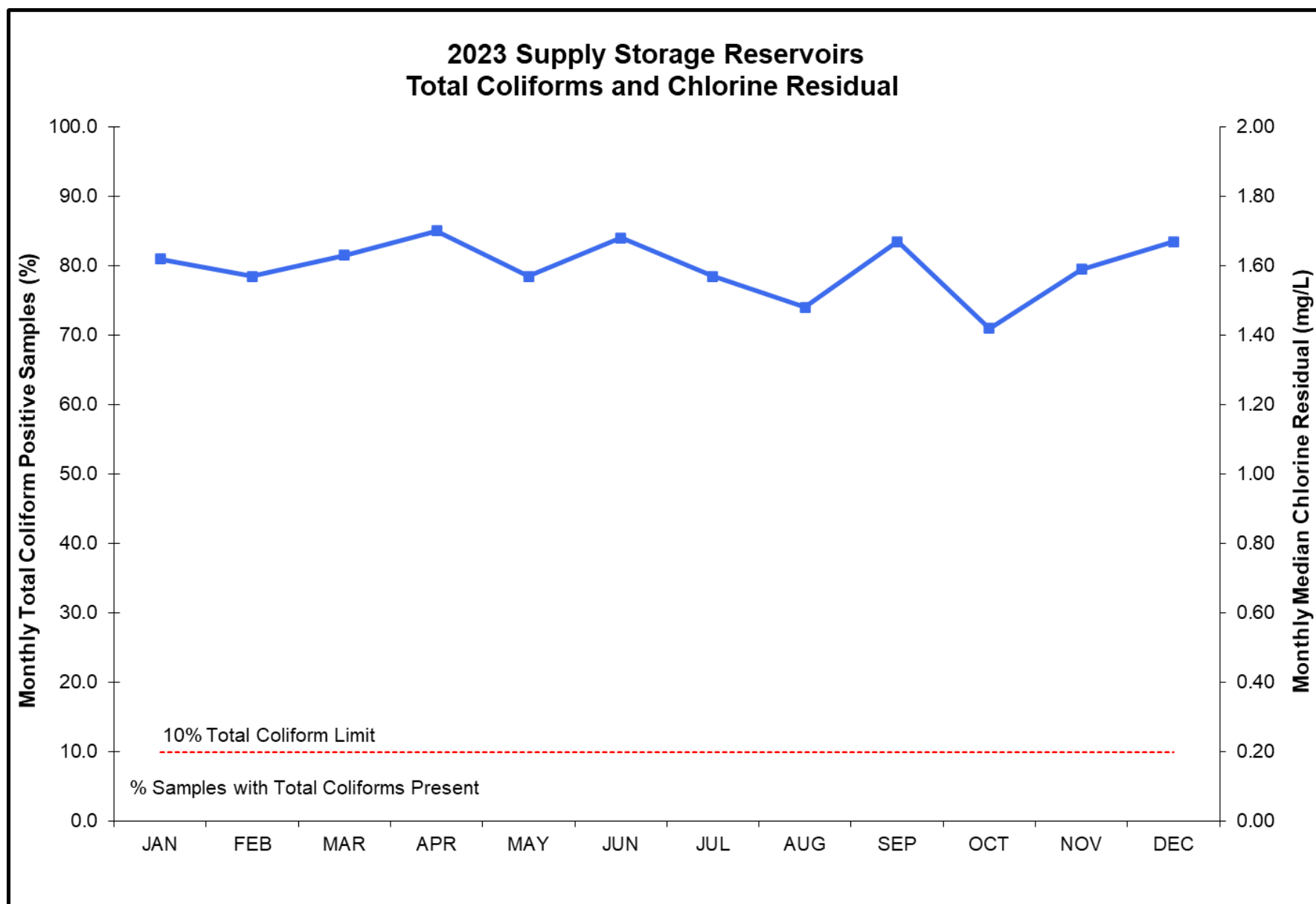


Figure 31 Supply Storage Reservoirs Total Coliforms and Chlorine Residual in 2023

7.4 Distribution System Results

The following sections summarize the water quality monitoring results within the various distribution systems and indicate the compliance status of each system.

7.4.1 Juan de Fuca Water Distribution System – Westshore Municipalities (Owned and Operated by the CRD)

In 2023, 37 distribution system sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in the Westshore system.

Sample Collection. In 2023, 1039 bacteriological and 217 water chemistry samples were collected from the Juan de Fuca Water Distribution System (Table 3). Based on current population data for the Westshore municipalities, 82 samples are required for bacteria testing each month. Table 3 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. Total coliforms were found in 14 samples throughout the year. All resamples, immediately collected after a total coliform positive result, were free of total coliform bacteria. Four samples exceeded the 10 CFU/100 mL total coliform concentration threshold (one in April, three in May). This system complied with the 10% total coliform-positive limit for all months of the year during 2023. The annual total coliform positive percentage was well below the 10% limit at 1.3% (Table 3).

There were no *E. coli*-positive samples in 2023.

Table 3 2023 Bacteriological Quality of the Juan de Fuca Distribution System – Westshore Municipalities (CRD)

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E. coli</i> CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10		Samples Collected	Samples >1 NTU	Median mg/L as CL2	Median °C
JAN	71	0	0.0	0	0	0	6	0	1.36	6.7
FEB	79	0	0.0	0	0	0	8	3	1.31	6.8
MAR	78	0	0.0	0	0	0	6	1	1.45	7.1
APR	84	1	1.2	0	1	0	5	0	1.47	8.6
MAY	101	5	5.0	0	3	0	4	0	1.42	11.7
JUN	98	1	1.0	0	0	0	5	0	1.50	13.5
JUL	82	0	0.0	0	0	0	5	0	1.50	15.4
AUG	98	1	1.0	0	0	0	6	0	1.27	18.2
SEP	83	1	1.2	0	0	0	2	0	1.36	18.1
OCT	86	0	0.0	0	0	0	5	0	1.48	14.8
NOV	96	5	5.2	0	0	0	5	0	1.33	10.8
DEC	83	0	0.0	0	0	0	5	0	1.38	8.7
Total:	1039	14	1.3	0	4	0	62	4	1.40	11.3

Notes:

TC = Total Coliforms, *E. coli* = Escherichia coli, CL2 = chlorine, NTU = Nephelometric turbidity unit
 > = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Chlorine Residual. The annual median chlorine residual in the Westshore municipalities of the Juan de Fuca Water Distribution System was 1.40 mg/L (Table 3). The lowest monthly median was in February (1.31 mg/L) and the maximum monthly median was in June and July (1.50 mg/L) (Figure 32, Table 3).

Water Temperature. The annual median water temperature in the Juan de Fuca Water Distribution System was 11.3°C, with monthly medians ranging between 6.7°C (January) and 18.2°C (August) (Table 3).

Disinfection Byproducts. One location in the Juan de Fuca Water Distribution System had 18 samples collected for disinfection byproducts. The annual average TTHM and haloacetic acid (HAA5) concentrations in six samples each were 14.0 µg/L and 7.3 µg/L, respectively, far below the Canadian guideline MAC (TTHM = 100; HAA5 = 80). In two of six samples, the NDMA concentrations were below the detection limit of 1.9 ng/L. Four samples registered low NDMA concentrations of up to 6.3 ng/L, well below the Canadian guideline MAC of 40 ng/L.

Physical/Chemical Parameters. The drinking water in the Westshore municipalities of the Juan de Fuca Water Distribution System had the following physical and chemical characteristics in 2023:

- Median pH: 7.5
- Median CaCO₃ Hardness: 17.4 mg/L
- Median Alkalinity: 16.70 mg/L
- Median Colour: 3.0 TCU
- Median Conductivity (25°C): 54.90 µS/cm
- Median Turbidity: 0.25 NTU

Four samples between February and March exhibited an elevated turbidity of > 1 NTU (Table 3). These isolated cases were likely related to the ongoing annual water main flushing program and do not indicate inferior drinking water quality in general.

Metals. One sampling station in this system was sampled for metals bi-monthly. All metals were below the Canadian guideline limits.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Asbestos. A CTV news report in March 2023 pointed to a potential health concern when consuming drinking water supplied by asbestos cement water mains (AC pipes). CRD staff received several inquiries upon this media report. Until that time, the CRD had never tested the drinking water for asbestos fibers based on Health Canada's risk assessment, which does not consider ingesting asbestos fibers through drinking water consumption a health risk. Health Canada has therefore no guideline for asbestos concentrations in drinking water. However, the USEPA stipulates a limit of 7M fibers of >10 microns per liter. In order to provide some baseline data, CRD Water Quality staff identified four areas in the CRD Juan de Fuca Water Distribution System with a high density of AC water mains, sampled these areas and submitted the samples to one of the few commercial water laboratories accredited for asbestos analysis (Mississauga, Ontario). The results show that fibers > 10 microns were non-detected in all four samples. The lab did report some fibers in the size range between 5 to 10 microns within two of the four samples. The concentrations of the smaller fibers were low with 0.8M and 0.25M per liter as compared to the USEPA limit of 7M fibers (albeit for larger fibers). Based on these results and Health Canada's silence on a health guideline for drinking water in Canada, the CRD considers this a low health risk.

Compliance Status. The Westshore municipalities of the Juan de Fuca Water Distribution System were in compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation* in 2023 except for April and May, with four total coliform-positive results in exceedance of 10 CFU/100 mL. In all of these cases, immediate resamples confirmed the safety of the drinking water.

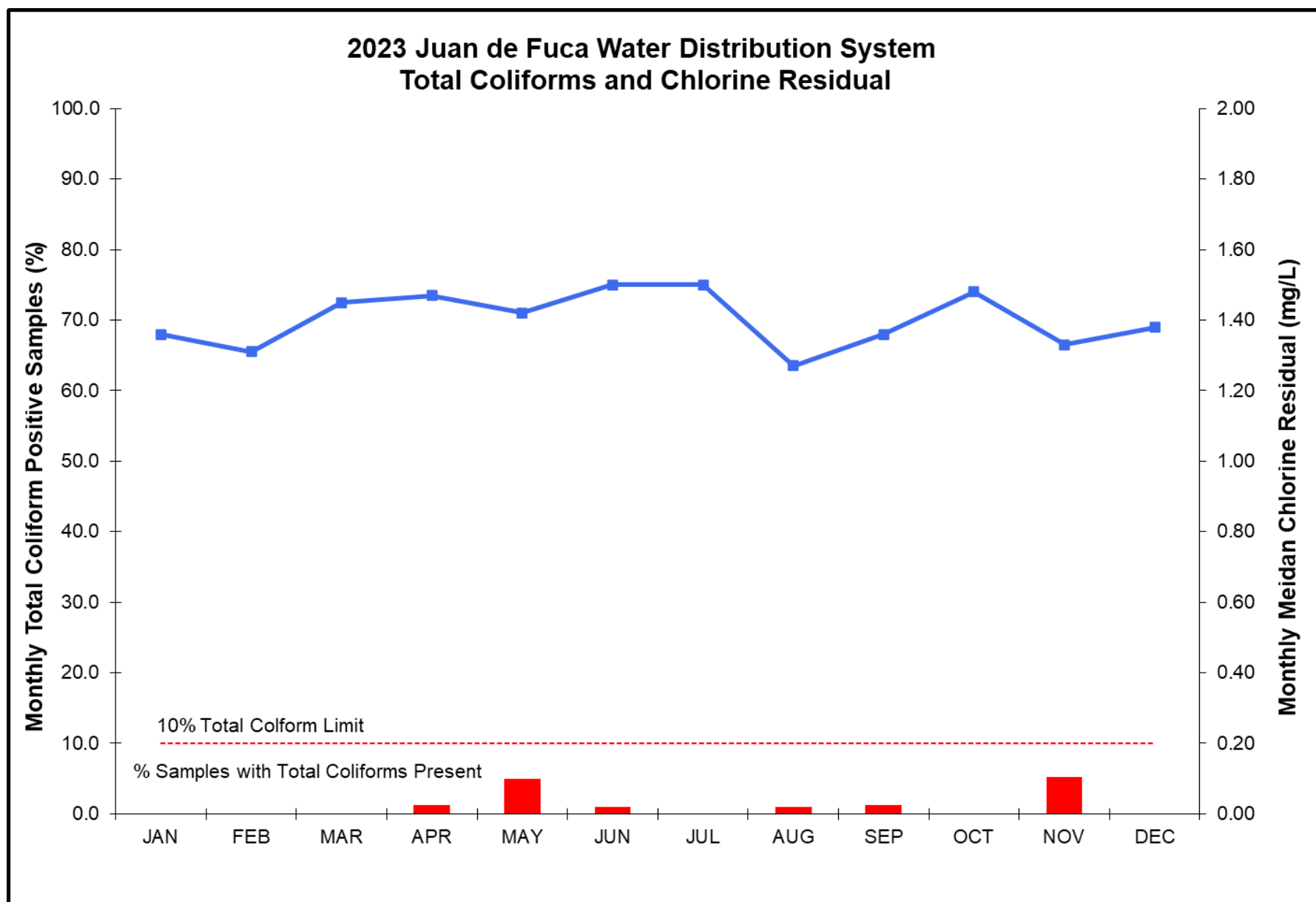


Figure 32 Juan de Fuca – Westshore Distribution System Total Coliforms and Chlorine Residual in 2023

7.4.2 Sooke/East Sooke Distribution System (Owned and Operated by the CRD)

In 2023, 20 sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in Sooke/East Sooke system. Half of all Sooke/East Sooke sampling stations were typically sampled once per week for a bi-weekly sampling frequency of all stations.

Sample Collection. In 2023, 404 bacteriological and 196 water chemistry samples were collected from the Sooke/East Sooke Distribution System (Table 4). Based on current population data for the District of Sooke, 17 samples are required for bacteria testing each month. Table 4 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. No total coliform bacteria were found in any sample throughout the year. This system therefore complied with the 10% total coliform-positive limit and the 10 CFU/100 mL maximum limit for all months (Table 4).

No *E. coli* bacteria were found in any sample collected in 2023 (Table 4).

Table 4 2023 Bacteriological Quality of the Sooke/East Sooke Distribution System (CRD)

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E.coli</i> CFU/100mL	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10		Samples Collected	Samples >1 NTU	Median mg/L as CL2	Median °C
JAN	36	0	0.0	0	0	0	8	0	1.28	7.1
FEB	33	0	0.0	0	0	0	7	0	1.17	6.9
MAR	40	0	0.0	0	0	0	9	0	1.11	6.8
APR	28	0	0.0	0	0	0	6	0	1.28	8.7
MAY	38	0	0.0	0	0	0	8	0	1.32	12.3
JUN	36	0	0.0	0	0	0	8	0	1.16	14.1
JUL	28	0	0.0	0	0	0	5	0	1.18	16.1
AUG	36	0	0.0	0	0	0	7	0	1.08	18.4
SEP	26	0	0.0	0	0	0	6	0	1.17	17.7
OCT	40	0	0.0	0	0	0	9	0	0.91	14.3
NOV	37	0	0.0	0	0	0	8	0	1.22	10.7
DEC	26	0	0.0	0	0	0	7	0	1.28	8.9
Total:	404	0	0.0	0	0	0	88	0	1.18	11.5

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit
> = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Chlorine Residual. The annual median chlorine residual in the Sooke/East Sooke Distribution System was 1.18 mg/L (Table 4, Figure 33). The lowest monthly median was in October (0.91 mg/L), and the maximum monthly median was in May (1.32 mg/L). The Sooke/East Sooke system performed in 2023 better than in previous years in terms of maintaining good chlorine residuals during the early fall period when the chlorine demand is highest due to warm water conditions.

Water Temperature. The annual median water temperature in the Sooke/East Sooke Distribution System was 11.5°C, with monthly medians ranging between 6.8°C (March) and 18.4°C (August) (Table 4).

Disinfection Byproducts. One location in the Sooke distribution system had 18 samples collected for disinfection byproducts. The annual average TTHM and HAA5 concentrations from six samples each were 29.3 and 21.2 µg/L, respectively, far below the Canadian guideline MAC (TTHM = 100; HAA5 = 80). In three out of six samples, the NDMA concentrations were below the detection limit of 1.9 ng/L, 3 samples registered low concentrations of up to 3 ng/L, well below the Canadian guideline MAC of 40 ng/L.

Physical/Chemical Parameters. The drinking water in the Sooke/East Sooke Distribution System had the following physical and chemical characteristics:

- Median pH: 7.6
- Median CaCO₃ Hardness: 17.0 mg/L
- Median Colour: <2.0 TCU
- Median Alkalinity: 16.50 mg/L
- Median Turbidity: 0.25 NTU
- Median Conductivity (25°C): 57.70 µS/cm

Metals. The CRD Water Quality Monitoring Program for the Sooke/East Sooke system included bi-monthly metal tests in two strategic locations in 2023: first customer sampling station on Sooke River Road, and Whiffen Spit Road. All metallic parameters, including lead, were well below the Canadian guideline limits.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Compliance Status. The Sooke/East Sooke Distribution System was in full compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation* in 2023.

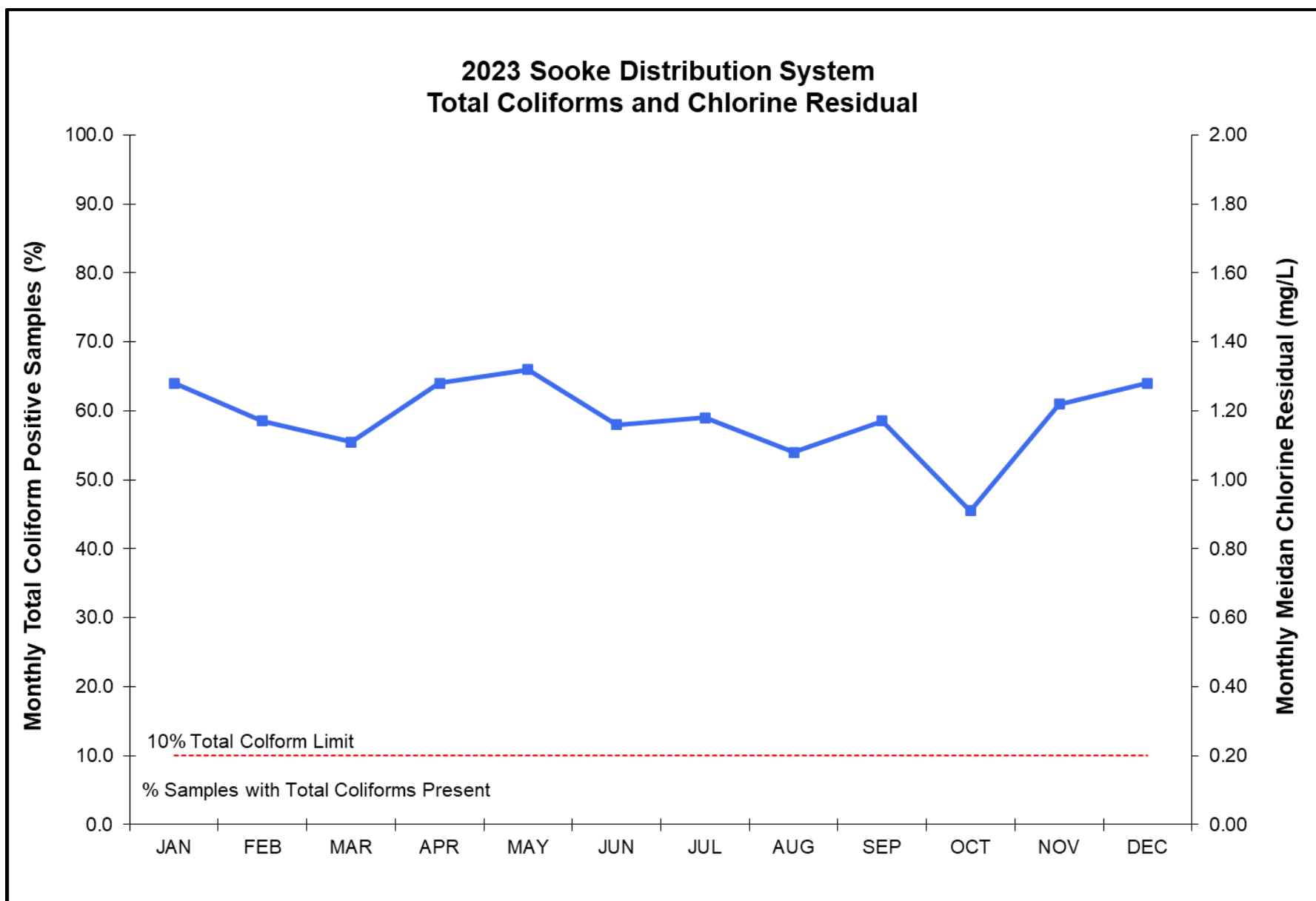


Figure 33 Sooke/East Sooke Distribution System Total Coliforms and Chlorine Residual in 2023

7.4.3 Central Saanich Distribution System (Owned and Operated by the District of Central Saanich)

In 2023, 11 sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in the Central Saanich Distribution System. Central Saanich sampling stations are part of the daily distribution sampling runs by CRD staff.

Sample Collection. In 2023, 270 bacteriological and 197 water chemistry samples were collected from the Central Saanich Distribution System (Table 5). Based on current population data for the District of Central Saanich, 17 samples are required for bacteria testing each month. Table 5 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. Total coliforms were found in two samples throughout the year. One sample, on June 12, 2023, exceeded the 10 CFU/100 mL total coliform concentration threshold. The same sample also contained *E. coli* bacteria (see below). All resamples, immediately collected after a total coliform positive result, were free of total coliform bacteria. This system complied with the 10% total coliform-positive limit for all months of the year during 2023. The annual total coliform positive percentage was well below the 10% limit at 0.7% (Table 5).

One sample collected on June 12, 2023, at the Armwell & Aston sampling station tested positive for *E. coli* bacteria. The lab recorded 2 CFU/100 mL *E. coli* and 118 CFU/100 mL total coliform bacteria in this one sample (Table 5). Emergency response procedures were activated, an investigation started and a number of resamples were collected and analyzed immediately. All resamples were negative for indicator bacteria, chlorine residuals were adequate, and no evidence of an actual drinking water contamination was found. The investigation concluded that a bag of dog feces someone had deposited near the sampling port likely contaminated the sampling infrastructure, which led to a contamination of the sample taken from that port. It is nearly impossible that this could have caused a contamination of the drinking water in the distribution system.

Chlorine Residual. The annual median chlorine residual in the Central Saanich Distribution System was 1.63 mg/L (Table 5). The lowest monthly median was in November (1.49 mg/L) and the maximum monthly median was in July (1.74 mg/L) (Figure 34, Table 5).

Water Temperature. The annual median water temperature in the Central Saanich Distribution System was 11.6°C, with monthly medians ranging between 7.3°C (February) and 18.5°C (August) (Table 5).

Table 5 2023 Bacteriological Quality of the Central Saanich Distribution System

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E. coli</i> (CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10	Samples >0	Samples Collected	Samples >1 NTU	Median mg/L as CL ₂	Median °C
JAN	23	1	4.3	0	0	0	8	0	1.63	7.7
FEB	23	0	0.0	0	0	0	10	0	1.63	7.3
MAR	23	0	0.0	0	0	0	9	0	1.64	7.3
APR	21	0	0.0	0	0	0	7	2	1.63	8.6
MAY	23	0	0.0	0	0	0	9	1	1.65	11.4
JUN	26	1	3.8	0	1	1	9	0	1.72	13.3
JUL	23	0	0.0	0	0	0	9	0	1.74	16.0
AUG	21	0	0.0	0	0	0	7	0	1.63	18.5
SEP	20	0	0.0	0	0	0	9	0	1.68	18.3
OCT	21	0	0.0	0	0	0	9	0	1.56	15.4
NOV	23	0	0.0	0	0	0	10	0	1.49	11.7
DEC	23	0	0.0	0	0	0	8	0	1.60	9.2
Total:	270	2	0.7	0	1	1	104	3	1.63	11.6

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit
> = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Disinfection Byproducts. No data for 2023.

Physical/Chemical Parameters. The drinking water in the Central Saanich Distribution System had the following physical and chemical characteristics in 2023:

- Median pH: 7.6
- Median Turbidity: 0.25 NTU
- Median Colour: <2.0 TCU
- Median Alkalinity: 17.00 mg/L
- Median Conductivity (25°C): 53.60 µS/cm

Three samples in April and May exhibited an elevated turbidity of > 1 NTU (Table 5). All three adverse samples came from the same sampling station at 1701 Verling Avenue, which is prone to accumulating sediments in the long sampling line. Hence, this sampling line requires extensive flushing before sample collection, and sampling staff were reminded of this again.

Metals. No data for 2023.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Compliance Status. The Central Saanich Distribution System was in compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation* in 2023 except for June, with one *E. coli* positive and a total coliform-positive result in exceedance of 10 CFU/100 mL. However, an investigation concluded that this single adverse event was not an actual contamination of the drinking water but the result of a contaminated sample.

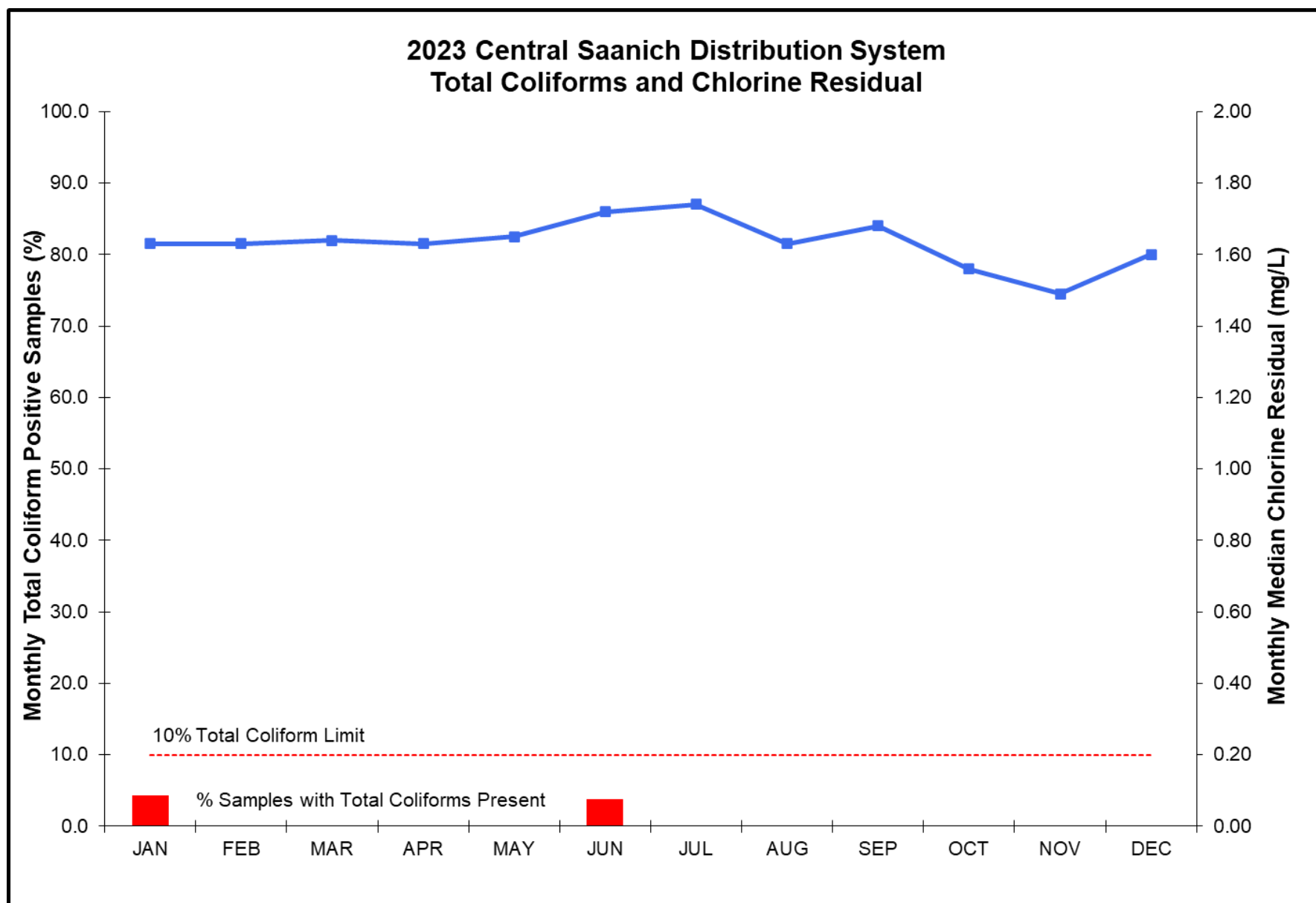


Figure 34 Central Saanich Distribution System Total Coliforms and Chlorine Residual in 2023

7.4.4 North Saanich Distribution System (Owned and Operated by the District of North Saanich)

In 2023, eight sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in the North Saanich Distribution System. North Saanich sampling stations are part of the daily distribution sampling runs by CRD staff.

Sample Collection. In 2023, 226 bacteriological and 73 water chemistry samples were collected from the North Saanich Distribution System (Table 6). Based on current population data for the District of North Saanich, 13 samples are required for bacteria testing each month. Table 6 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. There was only one total coliform-positive sample in 2023 (Table 6). The resample following the total coliform positive hit tested negative for total coliform bacteria. No sample exceeded the 10 CFU/100 mL total coliform concentration threshold. This system complied with the 10% total coliform-positive limit for all months. The annual total coliform positive percentage was well below the 10% limit at 0.4% (Table 6).

None of the samples contained *E. coli* in 2023 (Table 6).

Table 6 2023 Bacteriological Quality of the North Saanich Distribution System

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E.coli</i> CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10	Samples >0	Samples Collected	Samples >1 NTU	Median mg/L as CL2	Median ° C
JAN	19	0	0.0	0	0	0	1	0	1.28	7.8
FEB	19	0	0.0	0	0	0	1	0	1.40	7.3
MAR	19	0	0.0	0	0	0	1	0	1.36	7.5
APR	16	0	0.0	0	0	0	1	0	1.44	8.7
MAY	21	1	4.8	0	0	0	1	0	1.52	11.3
JUN	20	0	0.0	0	0	0	1	0	1.53	13.6
JUL	19	0	0.0	0	0	0	2	0	1.52	15.7
AUG	18	0	0.0	0	0	0	1	0	1.48	18.1
SEP	17	0	0.0	0	0	0	1	0	1.44	18.1
OCT	18	0	0.0	0	0	0	1	0	1.32	15.3
NOV	21	0	0.0	0	0	0	3	0	1.13	11.9
DEC	19	0	0.0	0	0	0	1	0	1.33	9.6
Total:	226	1	0.4	0	0	0	15	0	1.42	11.6

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit
 > = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Chlorine Residual. The annual median chlorine residual in the North Saanich Distribution System was 1.42 mg/L (Table 6). The lowest monthly median was in November (1.13 mg/L) and the maximum monthly median was in June (1.53 mg/L) (Figure 35, Table 6).

Water Temperature. The annual median water temperature in the North Saanich Distribution System was 11.6°C, with monthly medians ranging between 7.3°C (February) and 18.1°C (August/September) (Table 6).

Disinfection Byproducts. No data in 2023.

Physical/Chemical Parameters. The drinking water in the North Saanich Distribution System had the following physical and chemical characteristics in 2023:

- Median pH: 7.9
- Median Colour: 3.0 TCU
- Median Turbidity: 0.25 NTU
- Median Alkalinity: 17.10 mg/L
- Median Conductivity (25°C): 54.30 µS/cm

Metals. No data in 2023.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Compliance Status. The North Saanich Distribution System was in full compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation* in 2023.

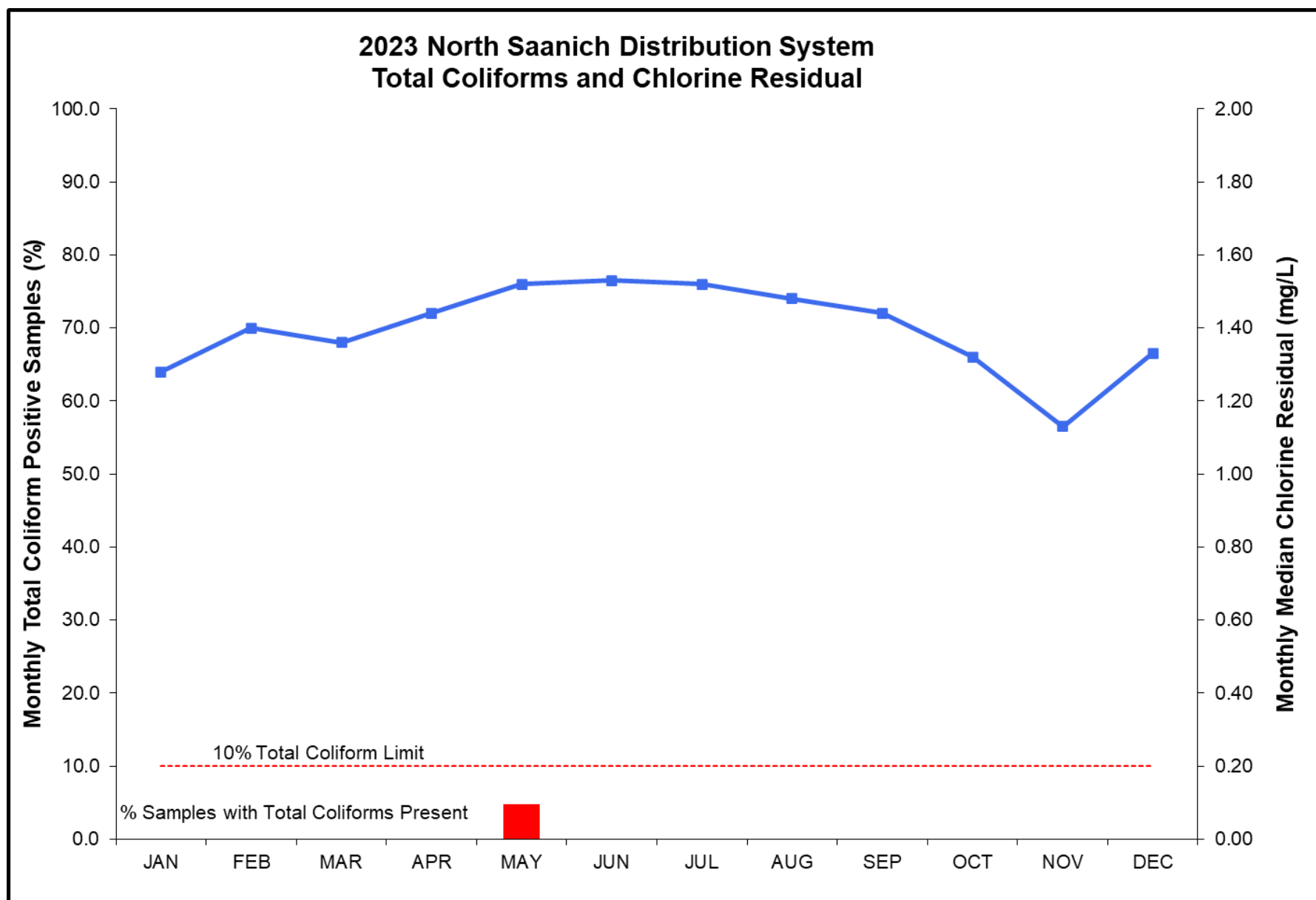


Figure 35 North Saanich Distribution System Total Coliforms and Chlorine Residual in 2023

7.4.5 Oak Bay Distribution System (Owned and Operated by the District of Oak Bay)

In 2023, eight sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in the Oak Bay Distribution System. Oak Bay sampling stations are part of the daily distribution sampling runs by CRD staff.

Sample Collection. In 2023, 284 bacteriological and 140 water chemistry samples were collected from the Oak Bay Distribution System (Table 7). Based on current population data for the District of Oak Bay, 20 samples are required for bacteria testing each month. Table 7 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. No total coliform bacteria were found in any sample throughout the year. This system therefore complied with the 10% total coliform-positive limit and the 10 CFU/100 mL maximum limit for all months (Table 7).

No *E. coli* bacteria were found in any sample collected in 2023 (Table 7).

Chlorine Residual. The annual median chlorine residual in the Oak Bay Distribution System was 1.68 mg/L (Table 7). The lowest monthly median was in November (1.61 mg/L) and the maximum monthly median was in May (1.79 mg/L) (Figure 36).

Water Temperature. The annual median water temperature in the Oak Bay Distribution System was 11.3°C, with monthly medians ranging between 7.1°C (January/February) and 19.3°C (August) (Table 7).

Table 7 2023 Bacteriological Quality of the Oak Bay Distribution System

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E.coli</i> CFU/100mL Samples >0	Turbidity		Chlorine Residual Median mg/L as CL ₂	Water Temp. Median °C
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10		Samples Collected	Samples >1 NTU		
JAN	23	0	0.0	0	0	0	2	0	1.68	7.1
FEB	22	0	0.0	0	0	0	3	0	1.67	7.1
MAR	25	0	0.0	0	0	0	4	1	1.67	7.8
APR	22	0	0.0	0	0	0	2	0	1.70	9.2
MAY	27	0	0.0	0	0	0	2	0	1.79	10.9
JUN	24	0	0.0	0	0	0	2	0	1.76	12.8
JUL	23	0	0.0	0	0	0	3	0	1.67	16.0
AUG	22	0	0.0	0	0	0	2	0	1.70	19.3
SEP	22	0	0.0	0	0	0	1	0	1.77	18.8
OCT	26	0	0.0	0	0	0	3	0	1.62	15.7
NOV	24	0	0.0	0	0	0	4	0	1.61	11.7
DEC	24	0	0.0	0	0	0	2	0	1.67	9.3
Total:	284	0	0.0	0	0	0	30	1	1.68	11.3

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit
> = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Disinfection Byproducts. No data for 2023.

Physical/Chemical Parameters. The drinking water in the Oak Bay Distribution System had the following physical and chemical characteristics:

- Median pH: 8.0
- Median Alkalinity: 17.10 mg/L
- Median Turbidity: 0.25 NTU
- Median Conductivity (25°C): 54.50 µS/cm
- Median Colour: <2.0 TCU

One sample in March exhibited an elevated turbidity of > 1 NTU (Table 7). This isolated case may have been caused by water main flushing or other operational activities and does not indicate inferior drinking water quality in general.

Metals. No data in 2023.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Compliance Status. The Oak Bay Distribution System was in full compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation* in 2023.

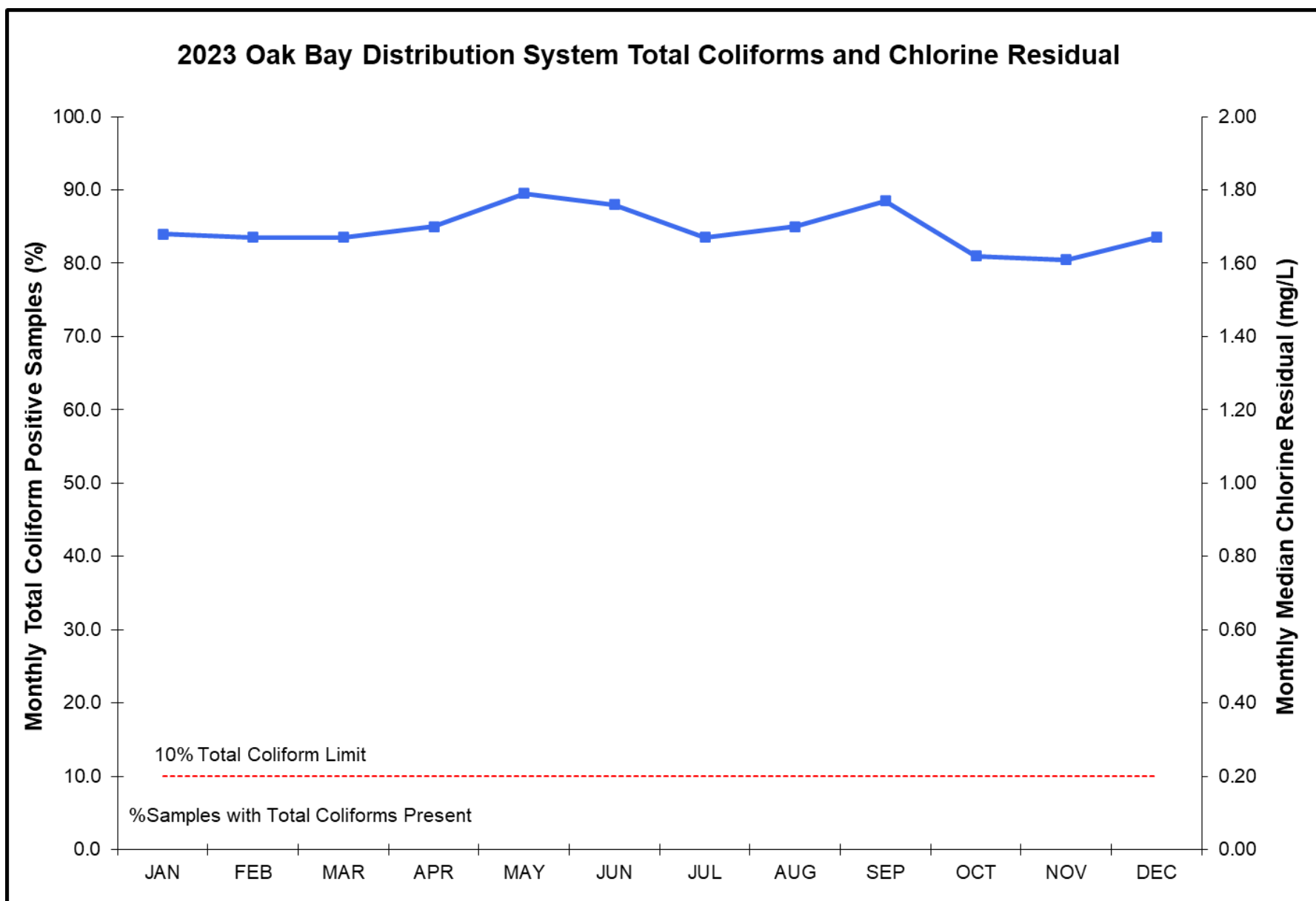


Figure 36 Oak Bay Distribution System Total Coliforms and Chlorine Residual in 2023

7.4.6 Saanich Distribution System (Owned and Operated by the District of Saanich)

In 2023, 65 sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in the Saanich Distribution System. Saanich sampling stations were part of the daily distribution sampling runs by CRD staff and a weekly run by Saanich staff.

Sample Collection. In 2023, 1,168 bacteriological and 163 water chemistry samples were collected from the Saanich Distribution System (Table 8). Based on current population data for the District of Saanich, 94 samples are required for bacteria testing each month. Table 8 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. Only two total coliform-positive results were recorded throughout the year. There were no consecutive positive samples in 2023. No sample exceeded the 10 CFU/100 mL total coliform concentration limit. This system complied with the 10% total coliform-positive limit for all months. The annual total coliform positive percentage was well below the 10% limit, at only 0.2% (Table 8).

No *E. coli* bacteria were found in any sample collected in 2023 (Table 8).

Chlorine Residual. The annual median chlorine residual in the Saanich Distribution System was 1.62 mg/L (Table 8). The lowest monthly median was in October/November (1.54 mg/L) and the maximum monthly median was in June (1.74 mg/L) (Figure 37).

Water Temperature. The annual median water temperature in the Saanich Distribution System was 11.2°C, with monthly medians ranging between 7.0°C (February) and 18.5°C (September) (Table 8).

Table 8 2023 Bacteriological Quality of the Saanich Distribution System

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E.coli</i> (CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10		Samples Collected	Samples >1 NTU	Median mg/L as CL ₂	Median °C
JAN	95	0	0.0	0	0	0	5	0	1.61	7.3
FEB	96	0	0.0	0	0	0	4	0	1.56	7.0
MAR	98	0	0.0	0	0	0	5	0	1.60	7.1
APR	95	0	0.0	0	0	0	4	0	1.64	8.8
MAY	99	0	0.0	0	0	0	4	0	1.68	11.1
JUN	98	0	0.0	0	0	0	3	0	1.74	12.6
JUL	96	1	1.0	0	0	0	4	0	1.71	15.6
AUG	96	0	0.0	0	0	0	3	0	1.69	18.4
SEP	96	1	1.0	0	0	0	2	0	1.63	18.5
OCT	98	0	0.0	0	0	0	6	0	1.54	15.6
NOV	103	0	0.0	0	0	0	5	0	1.54	11.3
DEC	98	0	0.0	0	0	0	4	0	1.58	9.0
Total:	1168	2	0.2	0	0	0	49	0	1.62	11.2

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit
> = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Disinfection Byproducts. No data for 2023.

Physical/Chemical Parameters. The drinking water in the Saanich Distribution System had the following physical and chemical characteristics in 2023:

- Median pH: 7.9
- Median Alkalinity: 17.0 mg/L
- Median Turbidity: 0.25 NTU
- Median Conductivity (25°C): 54.20 µS/cm
- Median Colour: 2.5 TCU

Metals. No data in 2023.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Compliance Status. The Saanich Distribution System was in full compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation* in 2023.

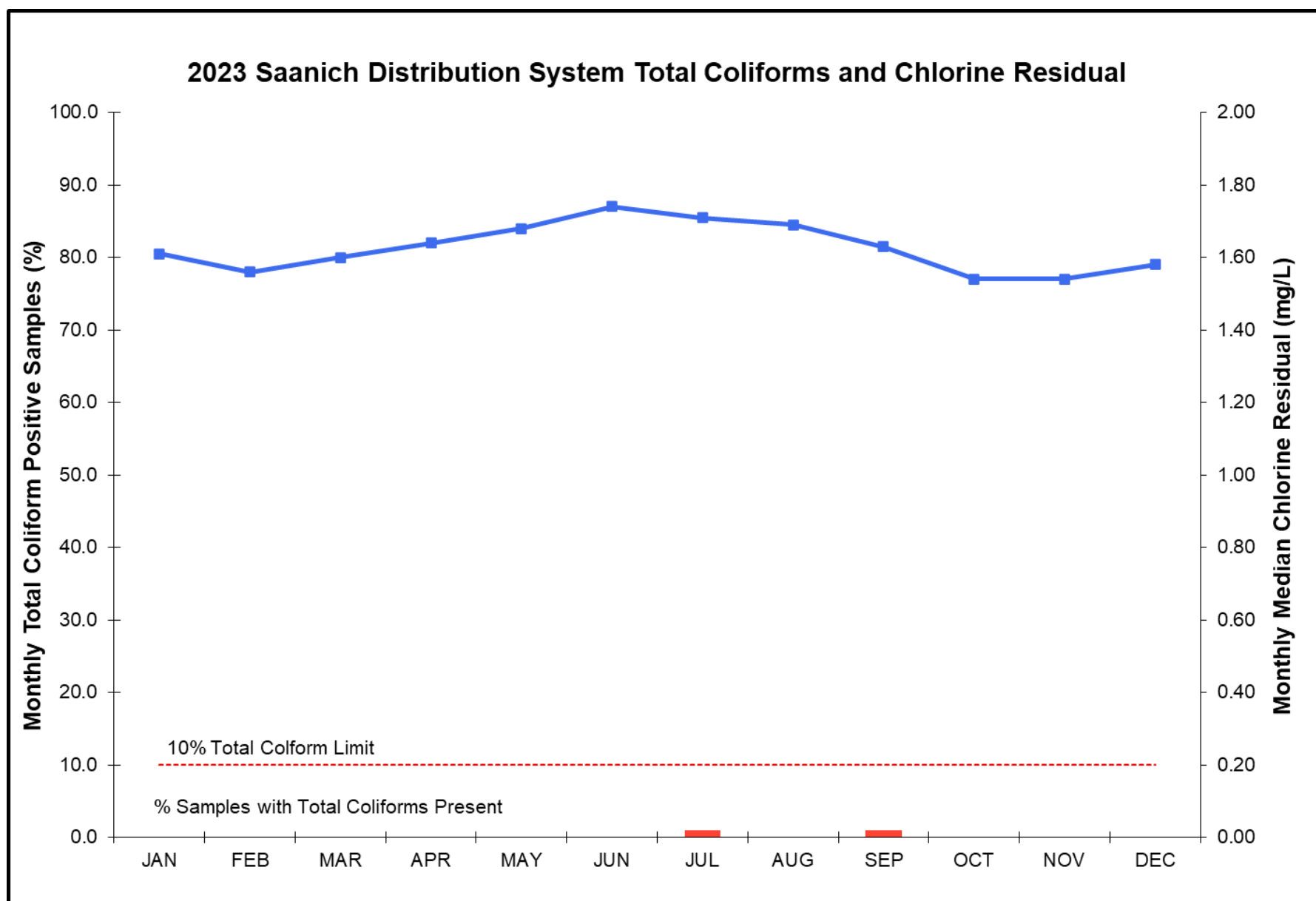


Figure 37 Saanich Distribution System Total Coliforms and Chlorine Residuals in 2023

7.4.7 Sidney Distribution System (Owned and Operated by the Town of Sidney)

In 2023, seven sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in the Sidney Distribution System. Sidney sampling stations are part of the daily distribution sampling runs by CRD staff.

Sample Collection. In 2023, 203 bacteriological and 70 water chemistry samples were collected from the Sidney Distribution System (Table 9). Based on current population data for the Town of Sidney, 14 samples are required for bacteria testing each month. Table 9 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. No total coliform bacteria were found in any sample throughout the year. This system therefore complied with the 10% total coliform-positive limit and the 10 CFU/100 mL maximum limit for all months (Table 4).

No sample tested positive for *E. coli* in 2023 (Table 9).

Chlorine Residual. The annual median chlorine residual in the Sidney Distribution System was 1.58 mg/L (Table 9). The lowest monthly median was in November (1.44 mg/L) and the maximum monthly median was in July (1.63 mg/L) (Figure 38).

Water Temperature. The annual median water temperature in the Sidney Distribution System was 11.9°C, with monthly medians ranging between 7.1°C (January) and 18.5°C (September) (Table 9).

Table 9 2023 Bacteriological Quality of the Sidney Distribution System

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E. coli</i> (CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10	Samples >0	Samples Collected	Samples >1 NTU	Median mg/L as CL ₂	Median ° C
JAN	17	0	0.0	0	0	0	1	0	1.60	7.1
FEB	16	0	0.0	0	0	0	2	0	1.61	7.3
MAR	18	0	0.0	0	0	0	1	0	1.55	7.5
APR	15	0	0.0	0	0	0	1	0	1.54	8.9
MAY	18	0	0.0	0	0	0	1	0	1.59	11.8
JUN	19	0	0.0	0	0	0	1	0	1.60	13.5
JUL	16	0	0.0	0	0	0	1	0	1.63	15.0
AUG	15	0	0.0	0	0	0	1	0	1.51	18.2
SEP	16	0	0.0	0	0	0	1	0	1.55	18.5
OCT	17	0	0.0	0	0	0	2	0	1.56	16.2
NOV	18	0	0.0	0	0	0	1	0	1.44	12.0
DEC	18	0	0.0	0	0	0	1	0	1.61	9.3
Total:	203	0	0.0	0	0	0	14	0	1.58	11.9

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit
> = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Disinfection Byproducts. No data for 2023.

Physical/Chemical Parameters. The drinking water in the Sidney Distribution System had the following physical and chemical characteristics in 2023:

- Median pH: 7.9
- Median Alkalinity: 16.80 mg/L
- Median Turbidity: 0.25 NTU
- Median Conductivity (25°C): 53.50 µS/cm
- Median Colour: <2.0 TCU

Metals. No data in 2023.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Compliance Status. The Sidney Distribution System was in full compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation*.

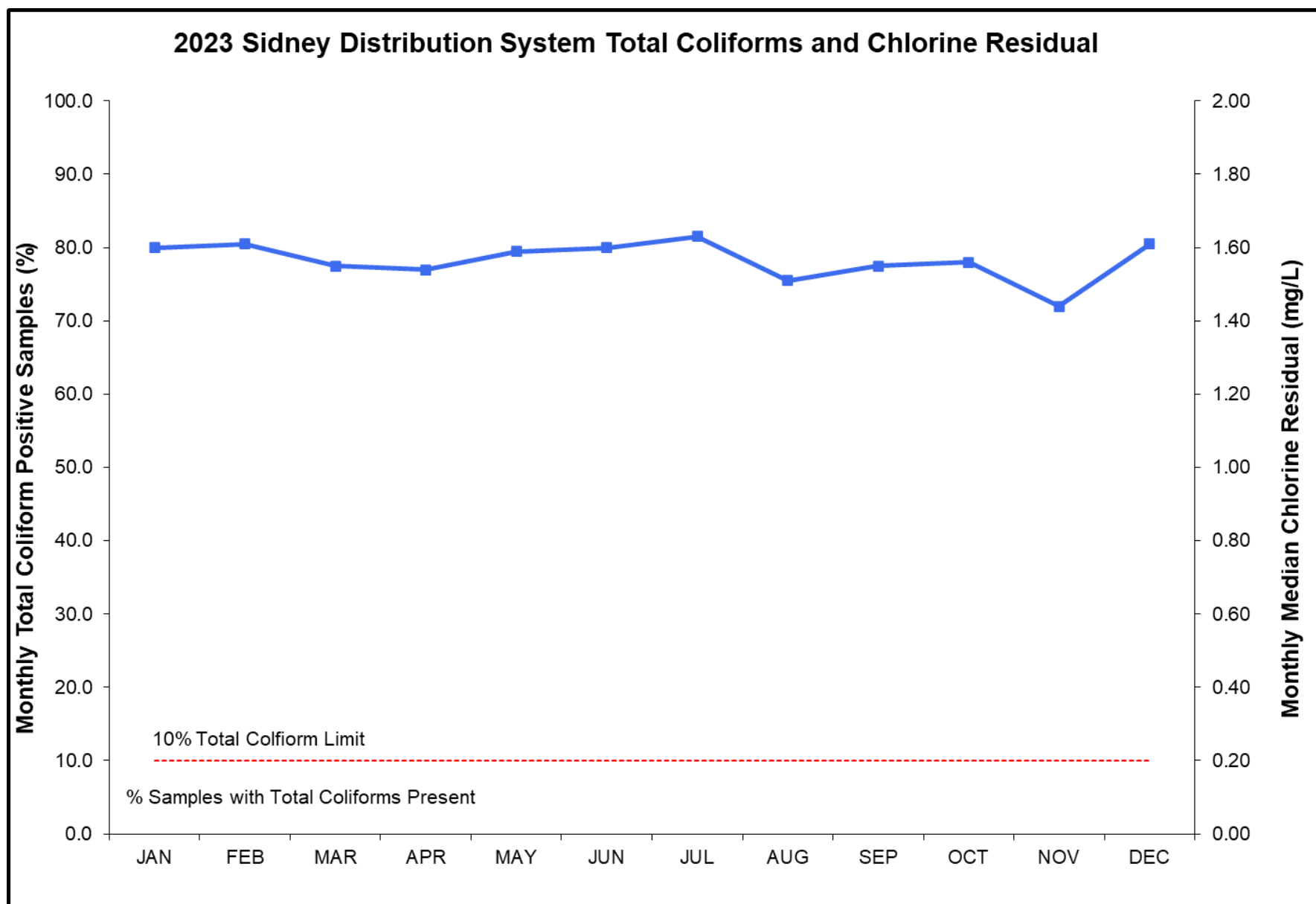


Figure 38 Sidney Distribution System Total Coliforms and Chlorine Residuals in 2023

7.4.8 Victoria/Esquimalt Distribution System (Owned and Operated by the City of Victoria)

In 2023, 16 sampling locations were used by the CRD Water Quality Monitoring Program to monitor the bacteriological quality of the water in the Victoria/Esquimalt Distribution System. Victoria/Esquimalt sampling stations are part of the daily distribution sampling runs by CRD staff.

Sample Collection. In 2023, 1,200 bacteriological and 194 water chemistry samples were collected from the Victoria/Esquimalt Distribution System (Table 10). Based on current population data for Victoria and Esquimalt, 93 samples are required for bacteria testing each month. Table 10 shows the number of monthly samples collected and analyzed for compliance.

Bacteriological Results. Only three total coliform-positive results were recorded throughout the year. There were no consecutive positive samples in 2023. No sample exceeded the 10 CFU/100 mL total coliform concentration limit. This system complied with the 10% total coliform-positive limit for all months. The annual total coliform positive percentage was well below the 10% limit, at only 0.3% (Table 10).

No *E. coli* was detected in any sample in 2023 (Table 10).

Chlorine Residual. The annual median chlorine residual in the Victoria/Esquimalt Distribution System was 1.65 mg/L (Table 10). The lowest monthly median was in August (1.57 mg/L) and the maximum monthly median was in April (1.68 mg/L) (Figure 39).

Water Temperature. The annual median water temperature in the Victoria/Esquimalt Distribution System was 12.4°C, with monthly medians ranging between 7.0°C (February) and 19.8°C (August) (Table 10).

Table 10 2023 Bacteriological Quality of the Victoria Distribution System

Month	Samples Collected	Total Coliforms (CFU/100mL)				<i>E.coli</i> (CFU/100mL)	Turbidity		Chlorine Residual Median mg/L as CL ₂	Water Temp. Median °C
		Samples TC > 0	Percent TC>0	Resamples TC > 0	Samples TC > 10		Samples Collected	Samples >1 NTU		
JAN	96	1	1.0	0	0	0	6	0	1.64	7.3
FEB	102	0	0.0	0	0	0	7	0	1.65	7.0
MAR	95	0	0.0	0	0	0	6	0	1.67	7.7
APR	94	0	0.0	0	0	0	6	0	1.68	9.6
MAY	107	0	0.0	0	0	0	8	0	1.67	13.2
JUN	105	0	0.0	0	0	0	6	0	1.67	14.5
JUL	95	0	0.0	0	0	0	6	0	1.60	17.1
AUG	104	1	1.0	0	0	0	3	0	1.57	19.8
SEP	97	0	0.0	0	0	0	5	0	1.66	19.0
OCT	103	1	1.0	0	0	0	8	0	1.56	15.7
NOV	105	0	0.0	0	0	0	8	0	1.61	11.6
DEC	97	0	0.0	0	0	0	6	0	1.65	9.3
Total:	1200	3	0.3	0	0	0	75	0	1.65	12.4

Notes:

TC = Total Coliforms, *E. coli* = *Escherichia coli*, Cl₂ = chlorine, NTU = Nephelometric turbidity unit
> = Greater than, mg/L = milligrams per litre, °C = degrees Celsius

Disinfection Byproducts. No data for 2023.

Physical/Chemical Parameters. The drinking water in the Victoria/Esquimalt Distribution System had the following physical and chemical characteristics in 2023:

- Median pH: 7.8
- Median Alkalinity: 17.00 mg/L
- Median Turbidity: 0.25 NTU
- Median Conductivity (25°C): 54.10 µS/cm
- Median Colour: <2.0 TCU

Metals. No data in 2023.

The Greater Victoria pH & Corrosion Study completed in 2021 concluded that metal corrosion and lead leaching in the public piping systems, as well as in the vast majority of private plumbing systems, is not an issue in the Greater Victoria Drinking Water System.

Compliance Status. The Victoria/Esquimalt Distribution System was in full compliance with the *BC Drinking Water Protection Act* and *Drinking Water Protection Regulation*.

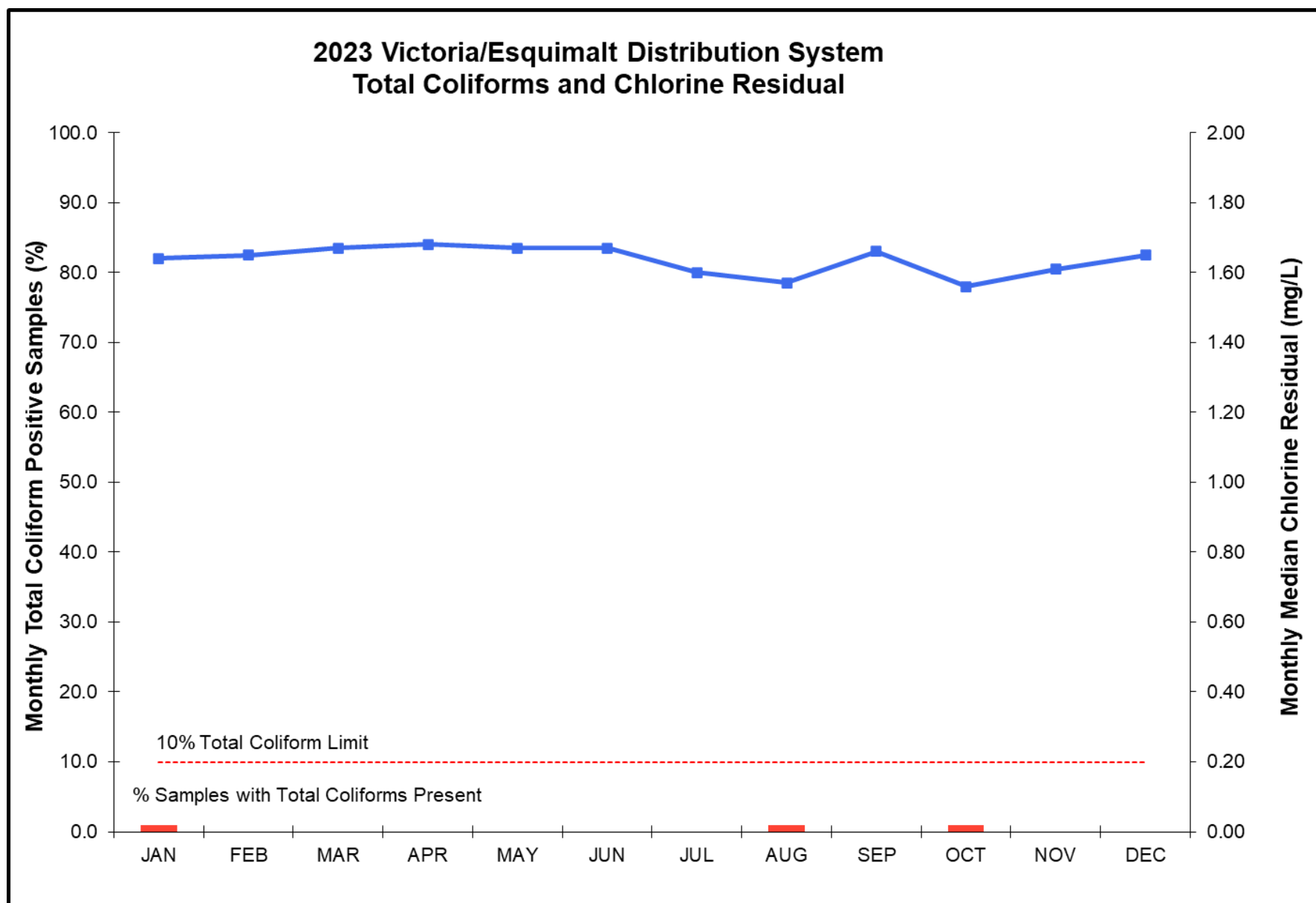


Figure 39 Victoria/Esquimalt Distribution System Total Coliforms and Chlorine Residuals in 2023

7.5 Water Quality Inquiry Program

Records of customer inquiries, including complaints about drinking water quality, have been maintained since 1992. Records indicate that 2023 was typical of previous years with no one category represented proportional over another. Figure 40 depicts the distribution of topics and categories of received customer inquiries in 2023.

15% of customer inquiries that CRD staff received were from people concerned about the general safety of their drinking water. These concerns were addressed individually and, in general, most customers are content to know that CRD staff are actively sampling both the source water and the treated drinking water being delivered to their homes. For those people wanting to know more about the composition of their drinking water, they were either provided with the annual tables or directed to the CRD website.

Coloured water inquiries encompassed 15%. Sediments in pipes can become stirred up during periods of water main flushing activities (January-May, September-December) in the distribution systems, fire hydrant inspections and other operational duties that may change the speed or the direction of the water flow. During such operational procedures, customers may experience over a short time cloudy or coloured water at their taps. CRD proactively communicates large and scheduled procedures, such as the annual water main flushing program, to customers in newspapers and social media. Coloured water can also be caused by seasonal source water quality events. Water can be tinged green in the spring due to an increase in algal activity or tinged yellow in the fall due to tannins in the leaves that have dropped.

Customer inquiries regarding water pressure, service line leaks and water meter inquiries are directed to the Integrated Water & Infrastructure Services' operators. Similarly, customers requesting information on how and where to have their water tested are provided with contact information for external laboratories.

Throughout the year, several inquiries or complaints regarding taste and odour were received. Taste and odour complaints vary from concerns about chlorine to stale, musty, metallic and/or fishy characteristics. There are a variety of reasons for taste and odour issues. High chlorine taste and odour could be due to high water demand or the annual flushing program. Other tastes and odours observed may be due to natural fluctuations in the source water algal communities or areas in the distribution system that have a higher water age.

CRD staff have communicated regularly with Island Health hospital facility management staff to provide useful water quality information to these facilities. No hospital staff complaints or concerns were raised in 2023.

Metals inquiries, primarily lead, comprised 6% of customer inquiries. External laboratory information is provided to customers who would like to have a test completed at their private home. CRD staff also provided information to customers inquiring about the potential for lead in their tap water and recommended steps to take to verify lead levels at the tap. This includes support to customers in interpreting tap sample results.

Newly emerging topics in customer inquiries were related to potential contamination of the drinking water with microplastics and forever chemicals (per- and polyfluoroalkyl substances (PFAS)), both topics that have had a strong presence in the media recently. A few questions to staff were also related to a potential addition of fluoride to the drinking water, with some customers strongly against and some in favour.

2023 Customer Inquiries Summary

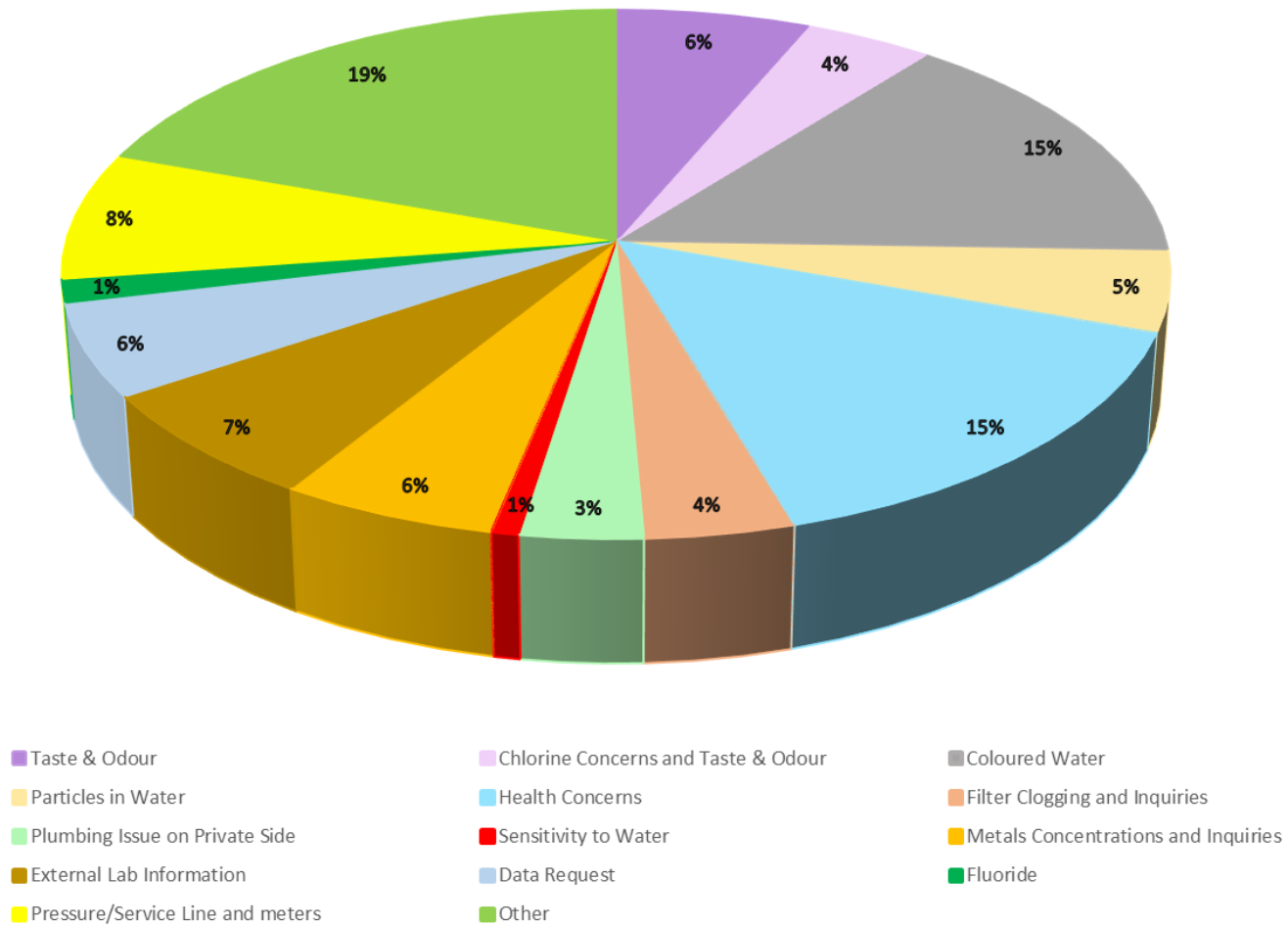


Figure 40 Summary of Customer Inquiries Categories in 2023

7.6 Cross Connection Control Program

The CRD Cross Connection Control Program (CCC) was implemented in 2005, based on an Order by the Chief Medical Health Officer from Island Health. Since then, it has become exemplary for an effective and efficient cross connection control program in Canada. Operating under Cross Connection Control Bylaw No. 3516, this program has been referenced as an example of industry standards in the water and wastewater industry, and recently mentioned in the British Columbia Water and Wastewater Association (BCWWA) Watermark magazine.

The program is an important component of the multi-barrier concept in the Greater Victoria Drinking Water System. Working alongside Island Health, 13 municipalities and participating electoral areas, the objective of this program is to identify, eliminate and prevent cross connections within the Greater Victoria Drinking Water System that could lead to drinking water contaminations.

CRD CCC staff take an active and leading role in the industry to promote cross connection control science and practice and to inform existing industry standards and regulatory requirements. In 2023, CRD CCC staff participated in several industry committees, outreach events and most notably hosting the annual CRD Municipal Inspectors Roundtable event in February 2023.

The program meets its objectives by enforcement of backflow prevention requirements referenced in the *BC Building Code* and is described by the Canadian Standard Association's CSAB64 series. This is achieved through regulatory inspections, management of a backflow assembly registry, enforcing required testing and public education. In 2023, more than 800 facility audits of 327 moderate and 504 severe hazard facilities were conducted by the inspections team. Audit requirements achieved a 96% compliance rate. Continued focus was also on construction sites and agricultural connections. The program processed 20,010 assembly test report submissions. Of these, 12,006 (60%) were processed in through the CRD CCC online portal and the remaining 8,004 (40%) were manually entered from paper test report submissions, achieving an overall 74% compliance rate. With a planned "Get On The Portal" campaign in 2024, staff expect higher test compliance and a phasing-out of paper submissions.

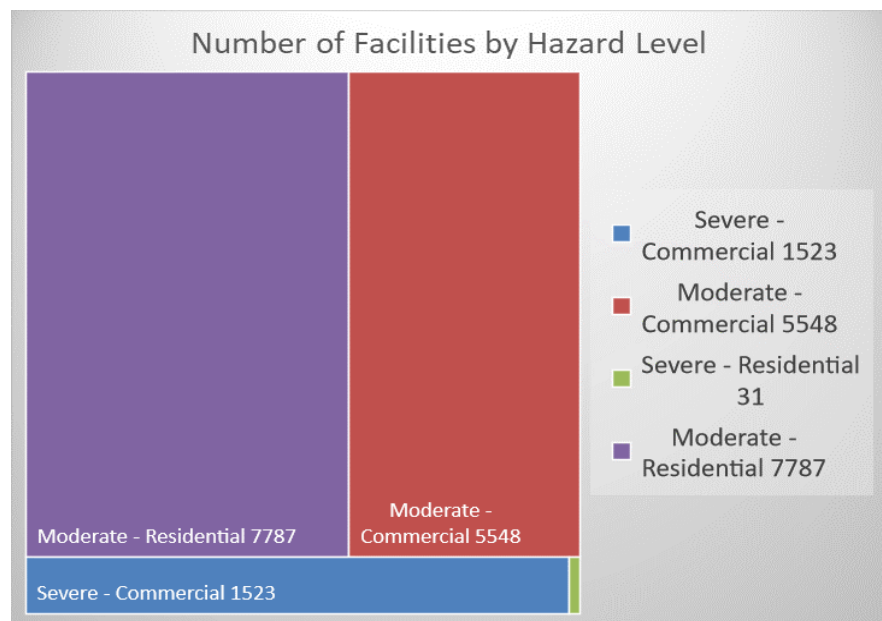


Figure 41 Facilities of Different Hazard Levels in Greater Victoria

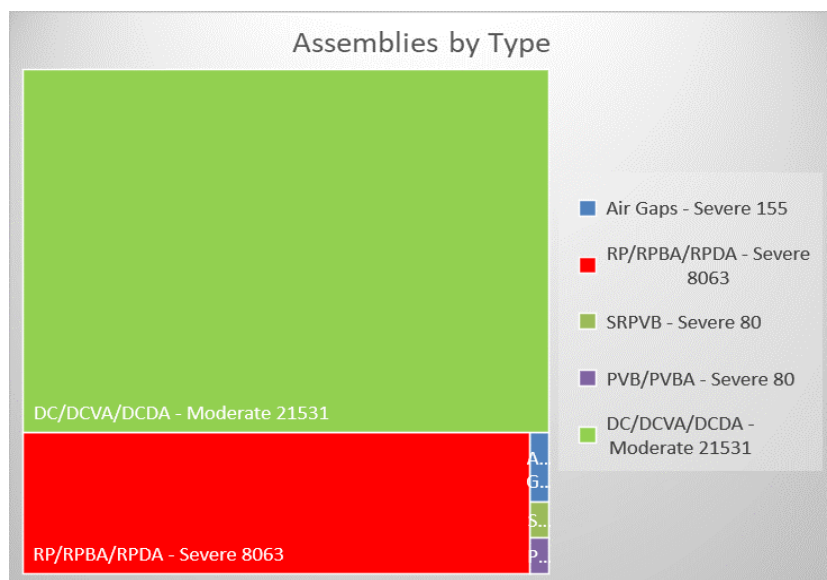


Figure 42 Backflow Devices in Greater Victoria according to their Type and Hazard Category

In 2023, three cross connection related incidents were reported. These were all related to improperly installed lawn irrigation systems and were addressed by the respective municipal staff in collaboration with CRD CCC staff.

In 2023, the CRD completed a study on all bulk water connections to the CRD Transmission System to identify potential backflow risks. As per Bylaw No. 3516, all connections to CRD water mains shall be protected against backflow risks. This is consistent with requirements of many other large water suppliers in North America (e.g., Metro Vancouver, Seattle Public Utilities, Massachusetts Water Resource Utility, San Francisco Public Utilities Commission). An inventory of all known connections was created and all connections were ranked according to their risk to water quality in the supply system. Several high-risk connections were identified for upgrades to mitigate the backflow and water quality risk. The identified high-risk connections were added to the Drinking Water Safety Plan risk registry and will be addressed in the near future through the CRD Integrated Water & Infrastructure Services operations and/or capital programs.

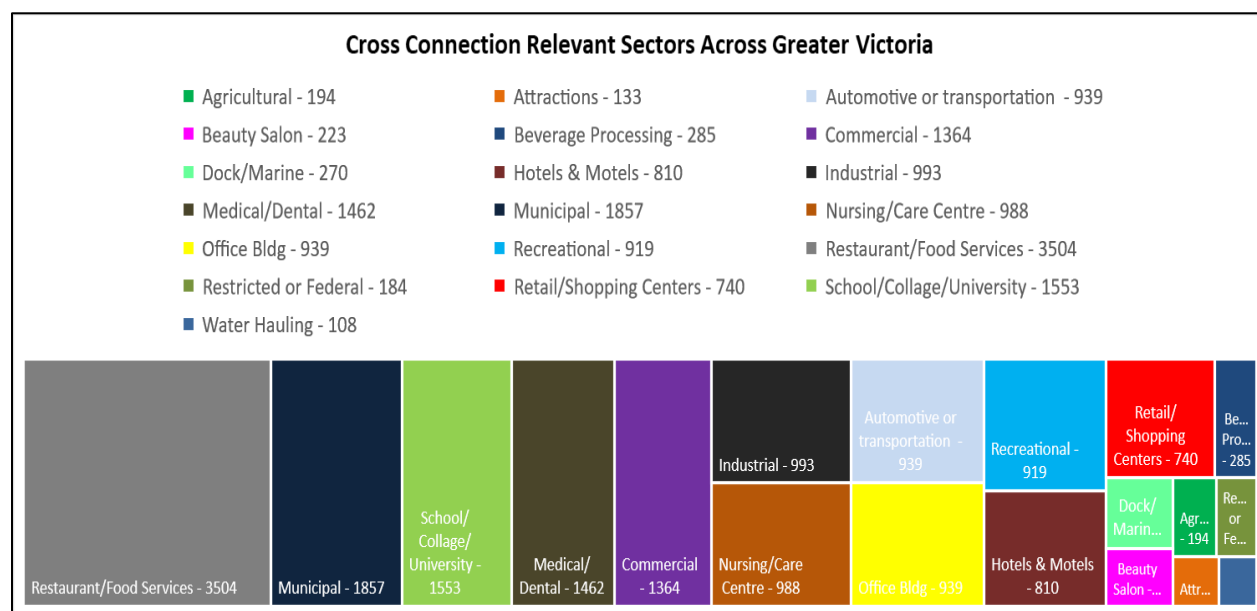


Figure 43 Cross Connection Relevant Sectors Across Greater Victoria

8.0 CONCLUSIONS

1. The water quality data collected in 2023 indicates that the drinking water in Greater Victoria was of good quality and safe to drink. The drinking water temperature exceeded the aesthetic objective of 15°C between the end of July and the middle of October. This is the only parameter that system-wide did not meet water quality criteria listed in the *Guidelines for Canadian Drinking Water Quality*. This exceedance does have some minor operational implications for the local water suppliers and the temporary unpleasant experience for the customers.
2. Greater Victoria continues to enjoy a water supply in which *Giardia* and *Cryptosporidium* parasites are well below the levels commonly considered by the health authorities to be responsible for disease outbreaks. For many years, including 2023, all tests conducted on Sooke Lake samples did not detect any *Giardia* and *Cryptosporidium*.
3. The bacteriological quality of the raw source water was excellent in 2023. Total coliform concentrations during the summer months were naturally elevated but very low during the rest of the year. The total coliform summer concentrations in 2023 were slightly higher than in previous summers. This seasonal increase in bacteria load had no impact on the treated water quality. *E. coli* bacterial levels in the raw source water were very low for the entire year.
4. One sample from a Central Saanich sampling station tested positive for *E. coli* bacteria on June 12, 2023. Following emergency response procedures, including follow-up sampling/testing and an investigation, concluded that no actual drinking water contamination had occurred but that the sampling infrastructure was contaminated by dog feces. While it is impossible to completely prevent such a rare incident, there is virtually no chance that this could lead to a contamination of the drinking water in the system.
5. Consumers in the GVDWS received drinking water that had very low disinfection byproducts. Overall levels of trihalomethanes and haloacetic acids remain well below the Canadian guideline limits and the USEPA limits. The newly-monitored disinfection byproduct, Nitrosodimethylamine, was, if detected at all, only in concentrations well below the current MAC in the Canadian guidelines.
6. The CRD tested the source water for emerging contaminants such as 28 PFAS compounds and did not have any detections at detection limits of 2 ng/L. A few sporadic PFAS tests in the distribution systems detected some very low concentrations of one included compound. The found concentrations were well below the current health limits. More tests on the treated water will be conducted in 2024.
7. In response to several customer inquiries following a CTV media report in March 2023, CRD staff tested several water samples from asbestos cement water mains for asbestos fiber concentrations and either found none or only insignificant numbers and sizes of asbestos fibers. Health Canada does not have a drinking water guideline for asbestos fibers due to the low health risk from ingestion.
8. The algal activity in 2023 was in line with the long-term average trend in Sooke Lake Reservoir. The species that were active, and relatively abundant in 2023, belonged to known and low-risk algal species. Cyanobacteria, with the potential to produce harmful cyanotoxins under bloom conditions, were present, as usual, throughout the year. However, a stable and nutrient-poor ecosystem, such as the Sooke Lake Watershed, does not provide conditions needed for cyanobacteria or other adverse algal blooms with serious implications for the drinking water quality. These natural nutrient-poor conditions limit the biological productivity in Sooke Lake Reservoir, which is very favourable for a drinking water source.
9. CRD staff had to deal with a few operational challenges with water quality impact potential, such as the Main #4 and the Mt. Tolmie Reservoir leak repairs. Careful consideration of any water quality risks during planning of any procedure, as well as water quality monitoring during and after repair activities, has ensured that the safety of the drinking water remained protected and the risk to public health was low. Island Health was informed and consulted during these events.

10. The number of water quality inquiries and complaints received by CRD staff in 2023 was comparable to previous years. Staff noticed more inquiries about emerging contaminants, such as PFAS, asbestos or microplastics, that were subject of several recent media reports.
11. The CRD Transmission System, the CRD Juan de Fuca systems, and Central Saanich were not in full compliance with the *BC Drinking Water Protection Regulation*, due to samples containing total coliform concentrations higher than the limit of 10 CFU/100 mL. Central Saanich was also not in full compliance with the *BC Drinking Water Protection Regulation* due to an *E. coli* positive result. In all cases, no evidence of an actual drinking water contamination was found and it was concluded that no risk to public health existed.
12. The CRD Supply Storage Reservoirs, CRD Sooke/East Sooke, Sidney, Sidney, North Saanich, Saanich, Oak Bay and Victoria/Esquimalt systems were in full compliance with the *BC Drinking Water Protection Regulation*.
13. All systems did meet the monthly sampling requirements, as per *BC Drinking Water Protection Regulation*.
14. The analytical results in all CRD and municipal water systems show that the drinking water was of good quality and was safe for consumption at all times throughout 2023.

APPENDIX A
TABLE 1. 2023 UNTREATED (RAW) WATER QUALITY ENTERING GOLDSTREAM WATER TREATMENT PLANT
(Guideline values provide reference only for untreated water)

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Physical Parameters										
Alkalinity, Total	mg/L	14.95	14	13.8	16.2		15.3	137	8.84 - 19.1	12/year
Carbon, Dissolved Organic	mg/L as C	1.9	11	1.1	2.1		1.7	116	< 0.5 - 4	12/year
Carbon, Total Organic	mg/L as C	1.80	11	1.60	2.10	Guideline Archived	1.83	117	0.82 - 3.9	12/year
Colour, True	TCU	5	52	< 2	8	≤15 AO	6.2	515	< 2 - 19	52/year
Conductivity @ 25 C	uS/cm	42.05	52	39	46.6		42.25	512	28.2 - AD 62.9	52/year
Hardness as CaCO ₃	mg/L	16.6	5	16	18.2	No Guideline Required	17.2	124	6.95 - 20.9	6/year
pH	pH units	7.255	56	6.9	7.7	7.0 - 10.5 AO	7.28	544	6.45 - 7.94	52/year
Tannins and Lignins	mg/L	< 0.2	2	< 0.2	< 0.2	Guideline Archived	< 0.2	22	< 0.1 - 0.38	2/year
Total Dissolved Solids	mg/L	28.00	11	22.00	38.00	≤500 AO	26.8	113	<10 - 58	12/year
Total Suspended Solids	mg/L	< 1	11	< 1	< 1.3		<1.0	116	0.1 - < 4	12/year
Total Solids	mg/L	34.00	11	18.00	50.00		28	109	1.7 - 110	12/year
Turbidity, Grab Samples	NTU	0.25	239	0.15	0.9	1.0 MAC	0.3	2,418	0.15 - 3.1	250/year
Ultraviolet Absorption, 5 cm	Abs.@254 nm	0.242	51	0.186	0.31		0.258	503	0.133 - 88.2	52/year
Ultraviolet Transmittance	%	89	51	86.4	92		88.8	503	0.20 - 94.4	52/year
Water Temp., Grab Samples	degrees C	8.6	240	4.1	20.5	≤15 AO	10.2	2,471	2.7 - 21.0	250/year
Non-Metallic Inorganic Chemicals										
Bromide	ug/L as Br	< 0.01	4	< 0.01	0.012		< 0.01	51	1.1e-005 - 0.013	4/year
Chloride	mg/L as Cl	1.95	4	1.7	2.9	≤ 250 AO	2.4	28	< 0.045 - < 10	4/year
Cyanide	mg/L as Cn	< 0.0005	4	< 0.0005	< 0.0005	0.2 MAC	< 0.0005	28	< 0.0005 - < 0.006	4/year
Fluoride	mg/L as F	< 0.05	4	< 0.05	< 0.05	1.5 MAC	0.024	29	< 0.007 - < 0.05	4/year
Iodide, dissolved	mg/L as I	< 0.1	2	< 0.1	< 0.1		< 0.1	12	< 0.1 - < 0.1	4/year
Nitrate, Dissolved	ug/L as N	< 20	11	< 20	37	45,000 MAC	< 20	109	0.3 - 46.4	12/year
Nitrite, Dissolved	ug/L as N	< 5	11	< 5	< 5	3,000 MAC	< 5	108	< 0.3 - < 10	12/year
Nitrate + Nitrite	ug/L as N	< 20	11	< 20	37		< 20	110	0.3 - 46.4	12/year
Nitrogen, Ammonia (Total)	ug/L as N	< 15	11	< 15	< 15	No Guideline Required	< 15	114	0.079 - 130	12/year
Nitrogen, Total Kjeldahl	ug/L as N	98	11	70	170		103	109	52.4 - 820	12/year
Nitrogen, Total	ug/L as N	100	11	75	170		114.5	114	49.4 - 610	12/year
Phosphate, Ortho, Dissolved	ug/L as P	< 1	11	< 1	1.7		< 3	110	0.1 - 24.3	12/year
Phosphate, Total, Dissolved	ug/L as P	1.5	11	< 1	3.1		2.17	113	0.35 - 31	12/year
Phosphate, Total	ug/L as P	3.20	11	1.90	7.80		3.05	114	<1.0 - <10	12/year
Silica	mg/L as SiO ₂	4.6	11	4.1	4.9		4.09	101	2.96 - 5.6	12/year
Silicon	ug/L as Si	2120	5	1770	2240		1910	77	681 - 2520	6/year
Sulphate	mg/L as SO ₄	1.1	11	< 1	1.6	≤ 500 AO	1.5	113	< 0.5 - < 10	12/year

Appendix A, Table 1 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Sulphide	mg/L as H ₂ S	< 0.0018	11	< 0.0018	< 0.0018	≤ 0.05 AO	< 0.0018	24	< 0.0018 - < 0.0019	12/year
Sulphur	mg/L as S	< 3	5	< 3	< 3		< 3	76	< 3 - < 3	6/year
Metallic Inorganic Chemicals										
Aluminum	ug/L as Al	10.6	5	3.4	20.5	2900 MAC / 100 OG	15.1	77	3.9 - 52.3	6/year
Antimony	ug/L as Sb	< 0.5	5	< 0.5	< 0.5	6 MAC	< 0.5	77	< 0.5 - < 5	6/year
Arsenic	ug/L as As	< 0.1	5	< 0.1	< 0.1	10 MAC	< 0.1	77	< 0.1 - 0.24	6/year
Barium	ug/L as Ba	3.7	5	3.4	3.7	2000 MAC	3.8	77	1.6 - 5.3	6/year
Beryllium	ug/L as Be	< 0.1	5	< 0.1	< 0.1		< 0.1	77	< 0.1 - < 10	6/year
Bismuth	ug/L as Bi	< 1	5	< 1	< 1		< 1	77	< 1 - < 10	6/year
Boron	ug/L as B	< 50	5	< 50	< 50	5000 MAC	< 50	77	< 50 - < 50	6/year
Cadmium	ug/L as Cd	< 0.01	5	< 0.01	< 0.01	7 MAC	< 0.01	77	< 0.01 - 0.07	6/year
Calcium	mg/L as Ca	4.91	5	4.63	5.37	No Guideline Required	4.93	77	2.06 - 6.13	6/year
Chromium	ug/L as Cr	< 1	5	< 1	5.1	50 MAC	< 1	77	< 1 - < 1	6/year
Cobalt	ug/L as Co	< 0.2	5	< 0.2	< 0.2		< 0.5	77	< 0.2 - < 0.5	6/year
Copper	ug/L as Cu	0.86	5	0.75	1.74	2000 MAC / ≤ 1000 AO	1.28	77	0.46 - 13.9	6/year
Iron	ug/L as Fe	21.9	5	12.3	58.2	≤ 300 AO	24	77	12 - 217	6/year
Lead	ug/L as Pb	< 0.2	5	< 0.2	< 0.2	5 MAC	< 0.2	77	< 0.2 - 0.3	6/year
Lithium	ug/L as Li	< 2	5	< 2	< 2		< 5	58	< 2 - 10.4	6/year
Magnesium	mg/L as Mg	1.07	5	1.05	1.16	No Guideline Required	1.17	77	0.439 - 1.42	6/year
Manganese	ug/L as Mn	4.5	5	1.7	14.5	120 MAC / ≤ 20 AO	4.8	77	1.4 - 81.8	6/year
Mercury, Total	ug/L as Hg	< 0.0019	5	< 0.0019	0.0055	1.0 MAC	< 0.01	76	< 0.0019 - < 10	6/year
Molybdenum	ug/L as Mo	< 1	5	< 1	4.9		< 1	77	< 1 - < 1	6/year
Nickel	ug/L as Ni	< 1	5	< 1	21.5		< 1	77	< 1 - < 1	6/year
Potassium	mg/L as K	0.135	5	0.125	0.141		0.134	77	0.081 - 0.214	6/year
Selenium	ug/L as Se	< 0.1	5	< 0.1	< 0.1	50 MAC	< 0.1	77	< 0.1 - < 0.1	6/year
Silver	ug/L as Ag	< 0.02	5	< 0.02	0.071	No Guideline Required	< 0.02	77	< 0.02 - 0.066	6/year
Sodium	mg/L as Na	1.61	5	1.56	1.68	≤ 200 AO	1.68	77	0.651 - 2.91	6/year
Strontium	ug/L as Sr	14.5	5	13.7	16.1	7000 MAC	15.2	77	6.3 - 21.8	6/year
Thallium	ug/L as Tl	< 0.01	5	< 0.01	< 0.01		< 0.01	77	< 0.01 - < 0.05	6/year
Tin	ug/L as Sn	< 5	5	< 5	< 5		< 5	77	< 5 - < 5	6/year
Titanium	mg/L as Ti	< 5	5	< 5	< 5		< 5	77	< 5 - < 5	6/year
Uranium	ug/L as U	< 0.1	5	< 0.1	< 0.1	20 MAC	< 0.1	77	< 0.01 - < 0.1	6/year
Vanadium	ug/L as V	< 5	5	< 5	< 5		< 5	77	<5 - <5	6/year
Zinc	ug/L as Zn	< 5	5	< 5	< 5	≤ 5000 AO	< 5	77	<5.0 - 82.9	6/year
Zirconium	ug/L as Zr	< 0.1	5	< 0.1	< 0.1		< 0.5	77	<0.1 - <0.5	6/year

Appendix A, Table 1 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Microbial Parameters										
Coliform Bacteria										
Coliforms, Total	Coliforms/100 mL	5	243	< 1	770		10	2,421	0 - G 24200	250/year
E. coli	E. coli/100 mL	< 1	242	< 1	1		< 1	2,424	0 - 13	250/year
Heterotrophic / Other Bacteria										
Hetero. Plate Count, 28C (7 day)	CFU/1 mL	360	240	18	1300		330	2,305	< 1 - 7200	250/year
Cyanobacterial Toxins										
Anatoxin a	ug/L	Analyzed as required - last analyzed in 2005					Analyzed as required - last analyzed in 2005			
Microcystin-LR	ug/L	Analyzed as required - last analyzed in 2011				1.5 MAC (Total Microcystins)	Analyzed as required - last analyzed in 2011			
Parasites										
Cryptosporidium, Total oocysts	oocysts/100 L	< 0.1	8	< 0.1	< 0.1	Zero detection desirable	< 0.1	90	<1 - 2	8/year
Giardia, Total cysts	cysts/100 L	< 0.1	8	< 0.1	< 0.1	Zero detection desirable	<0.1	90	<1 - 2	8/year
Radiological Parameters										
Gross alpha radiation	Bq/L	0.02	1	0.02	0.02	0.5 (Screening Value)	0.025	14	< 0.02 - 0.06	2/year
Gross beta radiation	Bq/L	0.04	1	0.04	0.04	1.0 (Screening Value)	< 0.02	14	< 0.02 - 0.11	2/year
Iodine-131	Bq/L	< 0.4	1	< 0.4	< 0.4	6 Bq/L	< 0.2	14	< 0.1 - < 0.4	Special
Cesium-137	Bq/L	< 0.1	1	< 0.1	< 0.1	10 Bq/L	< 0.2	14	< 0.04 - < 0.2	Special
Organic Parameters										
Pesticides/Herbicides										
1,4-DDD	ug/L	<0.001	2	<0.001	<0.001	Guideline Archived	< 0.001	8	< 0.001 - < 0.005	2/year
1,4'-DDE	ug/L	<0.001	2	<0.001	<0.001	Guideline Archived	< 0.001	8	< 0.001 - < 0.005	2/year
1,4'-DDT	ug/L	<0.001	2	<0.001	<0.001	Guideline Archived	< 0.001	8	< 0.001 - < 0.005	2/year
2,4,5-T	ug/L	< 0.08	2	< 0.08	< 0.08	Guideline Archived	< 0.08	19	<0.08 - <1	2/year
2,4,5-TP (Silvex)	ug/L	< 0.08	2	< 0.08	< 0.08	Guideline Archived	0.3	14	<0.01 - <1.0	2/year
2,4-D (2,4-Dichlorophenoxyacetic acid)	ug/L	< 0.05	2	< 0.05	< 0.05	100 MAC	< 0.1	14	< 0.05 - < 1	2/year
2,4-D (BEE)	ug/L	< 0.5	2	< 0.5	< 0.5		< 2	25	< 0.5 - < 2	2/year
2,4-DP (Dichlorprop)	ug/L	< 0.08	2	< 0.08	< 0.08		< 0.08	18	<0.08 - <1.0	2/year
4,4'-DDD	ug/L	< 0.001	2	< 0.001	< 0.001	Guideline Archived	< 0.001	8	<0.001 - <0.005	2/year
4,4'-DDE	ug/L	< 0.001	2	< 0.001	< 0.001	Guideline Archived	< 0.001	8	<0.001 - <0.005	2/year
4,4'-DDT	ug/L	< 0.001	2	< 0.001	< 0.001	Guideline Archived	< 0.001	8	<0.001 - <0.005	2/year
Alachlor	ug/L	Not analyzed in 2023				Guideline Archived	< 0.5	4	< 0.5 - < 0.5	2/year
Aldicarb	ug/L	< 0.1	2	< 0.1	< 0.1	Guideline Archived	< 0.1	20	< 0.1 - < 5	2/year
Aldrin	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	19	< 0.003 - < 0.005	2/year
Aldrin + Dieldrin	ug/L	< 0.003	3	< 0.003	< 0.005	Guideline Archived	< 0.003	13	< 0.003 - < 0.005	2/year
Atrazine	ug/L	< 0.05	2	< 0.05	< 0.05	5 MAC	< 0.1	20	< 0.05 - < 1	2/year
Azinphos-methyl	ug/L	< 0.2	2	< 0.2	< 0.2	Guideline Archived	< 0.2	6	< 0.2 - < 0.2	2/year
BHC (alpha)	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	19	< 0.003 - < 0.005	2/year

Appendix A, Table 1 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
BHC (beta)	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	19	< 0.003 - < 0.005	2/year
BHC (delta)	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	19	< 0.003 - < 0.5	2/year
Bendiocarb	ug/L	< 0.1	2	< 0.1	< 0.1	Guideline Archived	< 0.1	20	< 0.1 - < 2	Irregular
Bromacil	ug/L	< 0.05	2	< 0.05	< 0.05		< 0.1	18	< 0.05 - < 0.1	2/year
Bromoxynil	ug/L	< 0.02	2	< 0.02	< 0.02	30 MAC	< 0.1	18	< 0.02 - < 0.1	2/year
Captan	ug/L	< 0.1	2	< 0.1	< 0.1		< 0.1	15	< 0.003 - < 1	2/year
Carbaryl	ug/L	< 0.1	2	< 0.1	< 0.1	Guideline Archived	< 0.1	20	< 0.1 - < 5	2/year
Carbofuran	ug/L	< 0.1	2	< 0.1	< 0.1	Guideline Archived	< 0.1	20	< 0.1 - < 5	2/year
Chlordane (alpha)	ug/L	< 0.003	2	< 0.003	< 0.003	Guideline Archived	< 0.003	18	< 0.003 - < 0.005	2/year
Chlordane (gamma)	ug/L	< 0.003	2	< 0.003	< 0.003	Guideline Archived	< 0.003	18	< 0.003 - < 0.005	2/year
Chlorpyrifos (Dursban)	ug/L	< 0.01	2	< 0.01	< 0.01	90 MAC	< 0.01	20	< 0.0008 - < 2	2/year
Chlorothalonil	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	16	< 0.003 - < 0.05	2/year
Cyanazine (Bladex)	ug/L	< 0.05	2	< 0.05	< 0.05	Guideline Archived	< 0.1	19	< 0.05 - < 5	2/year
Demeton	ug/L	< 2	2	< 2	< 2		< 2	14	< 2 - < 2	2/year
Diazinon	ug/L	< 0.02	2	< 0.02	< 0.02	Guideline Archived	< 0.02	21	< 0.002 - < 2	2/year
Dicamba	ug/L	< 0.005	2	< 0.005	< 0.005	110 MAC	< 0.006	20	< 0.005 - < 1	2/year
Diclofop-methyl	ug/L	< 0.05	2	< 0.05	< 0.05	Guideline Archived	< 0.05	17	< 0.0007 - < 0.9	2/year
Dichlorvos	ug/L	< 2	2	< 2	< 2		< 2	18	< 2 - < 2	2/year
Dieldrin	ug/L	< 0.002	2	< 0.002	< 0.002		< 0.002	19	< 0.002 - < 0.005	2/year
Dimethoate	ug/L	< 0.05	2	< 0.05	< 0.05	20 MAC	< 0.05	6	< 0.05 - < 0.05	2/year
Dinoseb (DNBP)	ug/L	< 0.02	2	< 0.02	< 0.02	Guideline Archived	< 0.05	8	< 0.02 - < 0.05	2/year
Diquat	ug/L	< 7	2	< 7	< 7	50 MAC	< 7	19	< 7 - < 350	2/year
Endosulfan I	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	18	< 0.003 - < 0.005	2/year
Endosulfan II	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	18	< 0.003 - < 0.005	2/year
Endosulfan Sulphate	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	19	< 0.003 - < 0.005	2/year
Endosulfan (Total)	ug/L	< 0.003	3	< 0.003	< 0.005		< 0.003	17	<0.003 - <0.005	2/year
Endrin	ug/L	< 0.005	2	< 0.005	< 0.005	Guideline Archived	< 0.005	19	< 0.005 - < 0.005	2/year
Endrin Aldehyde	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	20	< 0.003 - < 0.005	2/year
Endrin Ketone	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	19	< 0.003 - < 0.005	2/year
Ethion	ug/L	< 1	2	< 1	< 1		< 1	6	< 1 - < 1	2/year
Parathion Ethyl	ug/L	Not analyzed in 2023					<1	13	<1.0 - <2.0	2/year
Fenchlorophos (Ronnel)	ug/L	< 2	2	< 2	< 2		< 2	19	< 0.5 - < 2	2/year
Fenthion	ug/L	< 1	2	< 1	< 1		< 1	19	< 0.5 - < 1	2/year
Fonofos	ug/L	< 2	2	< 2	< 2		< 2	19	< 0.5 - < 2	2/year
Glyphosate	ug/L	< 10	2	< 10	< 10	280 MAC	< 10	20	< 10 - < 10	2/year
Heptachlor	ug/L	< 0.003	2	< 0.003	< 0.003	Guideline Archived	< 0.003	19	< 0.003 - < 0.005	2/year
Heptachlor Epoxide	ug/L	< 0.003	2	< 0.003	< 0.003	Guideline Archived	< 0.003	19	< 0.003 - < 0.005	2/year
Imazapyr	ug/L	< 0.1	2	< 0.1	< 0.1		< 0.1	14	< 0.1 - < 0.1	2/year
IPBC	ug/L	< 0.1	2	< 0.1	< 0.1		< 0.1	14	< 0.1 - < 0.1	2/year

Appendix A, Table 1 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Malathion	ug/L	< 0.05	2	< 0.05	< 0.05	190 MAC	< 0.05	21	< 0.002 - < 2	2/year
MCPA	ug/L	< 0.02	2	< 0.02	< 0.02	350 MAC	< 0.03	27	< 0.02 - < 2	2/year
MCPP	ug/L	0.29	4	< 0.08	< 0.5		< 2	18	< 0.08 - < 2	2/year
Methoxychlor	ug/L	< 0.003	2	< 0.003	< 0.003	Guideline Archived	< 0.003	18	< 0.003 - < 0.01	2/year
Methyl Parathion	ug/L	< 2	2	< 2	< 2	Guideline Archived	< 2	20	< 0.1 - < 2	2/year
Metolachlor	ug/L	< 0.05	2	< 0.05	< 0.05	Guideline Archived	< 0.1	20	< 0.05 - < 5	2/year
Metribuzin (Sencor)	ug/L	< 0.1	2	< 0.1	< 0.1	80 MAC	< 0.1	20	< 0.0004 - < 5	2/year
Mevinphos	ug/L	< 2	2	< 2	< 2		< 2	18	< 0.5 - < 2	2/year
Mirex	mg/L	< 0.003	2	< 0.003	< 0.003	Guideline Archived	< 0.003	19	< 0.003 - < 0.005	2/year
Nitrilotriacetic acid (NTA)	ug/L	< 0.05	2	< 0.05	< 0.05	400 MAC	< 0.05	19	< 0.05 - 0.099	Irregular
Oxychlordane	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	15	< 0.003 - < 0.005	2/year
Parathion	ug/L	<0.05	2	< 0.05	<0.05	Guideline Archived	< 0.05	25	< 0.0004 - < 2	2/year
Paraquat (ion)	ug/L	< 1	2	< 1	< 1	Guideline Archived	< 1	19	< 1 - < 1	2/year
Permethrin	ug/L	< 0.05	2	< 0.05	< 0.05		< 0.04	16	< 0.0005 - < 3.3	2/year
Phorate (Thimet)	ug/L	< 0.05	2	< 0.05	< 0.05	Guideline Archived	< 0.05	20	< 0.0003 - < 1	2/year
Phosmet	ug/L	< 2	2	< 2	< 2		< 2	19	< 0.5 - < 2	2/year
Picloram	ug/L	< 0.08	2	< 0.08	< 0.08	Guideline Archived	<0.1	20	<0.08 - <5.0	2/year
Prometryn	ug/L	< 1	2	< 1	< 1		< 1	17	< 0.25 - < 1	Irregular
Simazine	ug/L	< 0.05	2	< 0.05	< 0.05	Guideline Archived	< 0.1	20	< 0.05 - < 2	2/year
Tebuthiuron	ug/L	< 0.1	2	< 0.1	< 0.1		< 0.1	14	< 0.1 - < 0.1	2/year
Temephos	ug/L	Not analyzed in 2023				Guideline Archived	< 10	5	< 10 - < 10	2/year
Terbufos	ug/L	< 0.05	2	< 0.05	< 0.05	Guideline Archived	< 0.05	21	< 0.0002 - < 1	2/year
Toxaphene	ug/L	< 0.2	2	< 0.2	< 0.2	Guideline Archived	< 0.2	8	< 0.2 - < 0.2	2/year
Trifluralin	ug/L	< 0.05	2	< 0.05	< 0.05	Guideline Archived	< 0.05	21	< 0.0003 - < 5	2/year
Polycyclic Aromatic Hydrocarbons (PAH's)										
Acenaphthene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.04	21	< 0.01 - < 0.2	2/year
Acenaphthylene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.04	21	< 0.01 - < 0.2	2/year
Anthracene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.01	21	< 0.01 - < 0.1	2/year
Benzo(a)anthracene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.01	21	< 0.01 - < 0.1	2/year
Benzo(a)pyrene	ug/L	< 0.005	2	< 0.005	< 0.005	0.04 MAC	< 0.005	21	< 0.005 - < 0.05	2/year
Benzo(b)fluoranthene	ug/L	Not analyzed in 2023				Guideline Archived	< 0.04	14	< 0.01 - < 0.2	2/year
Benzo(g,h,i)perylene	ug/L	< 0.02	2	< 0.02	< 0.02	Guideline Archived	< 0.04	21	< 0.02 - < 0.2	2/year
Benzo(b&j)fluoranthene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.01	4	< 0.01 - < 0.04	2/year
Benzo(k)fluoranthene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.04	21	< 0.01 - < 0.2	2/year
Chrysene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.02	21	< 0.01 - < 0.15	2/year
Dibenz(a,h)anthracene	ug/L	< 0.02	2	< 0.02	< 0.02	Guideline Archived	< 0.02	20	< 0.003 - < 0.2	2/year
Fluoranthene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.02	21	< 0.01 - < 0.1	2/year
Fluorene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.03	21	< 0.01 - < 0.15	2/year
Indeno(1,2,3-c,d)pyrene	ug/L	< 0.02	2	< 0.02	< 0.02	Guideline Archived	< 0.05	20	< 0.02 - < 0.3	2/year

Appendix A, Table 1 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Naphthalene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.1	20	< 0.01 - < 2.5	2/year
Phenanthrene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	< 0.03	21	< 0.01 - < 0.15	2/year
Pyrene	ug/L	< 0.01	2	< 0.01	< 0.01	Guideline Archived	0.027	21	< 0.01 - < 0.15	2/year
Volatile Hydrocarbons	ug/L	< 300	4	< 300	< 300	Guideline Archived	< 300	27	< 300 - < 300	2/year
Phenols										
2,3,4,5-Tetrachlorophenol	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	15	< 0.1 - < 1	2/year
2,3,4,6-Tetrachlorophenol	ug/L	< 0.5	2	< 0.5	< 0.5	Guideline Archived	< 0.5	18	< 0.1 - < 1	2/year
2,3,5,6-Tetrachlorophenol	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	15	< 0.1 - < 1	2/year
2,4,6-Trichlorophenol	ug/L	< 0.5	2	< 0.5	< 0.5	5.0 MAC and ≤ 2.0 AO	< 0.1	21	< 0.1 - < 2	2/year
2,4-Dichlorophenol	ug/L	< 0.5	2	< 0.5	< 0.5	Guideline Archived	< 0.1	7	< 0.1 - < 0.5	2/year
2,4-Dimethylphenol	ug/L	< 2.5	2	< 2.5	< 2.5		<0.05	19	<0.05 - <10.0	2/year
2,4-Dinitrophenol	ug/L	< 6.5	2	< 6.5	< 6.5		< 1.3	21	< 0.05 - < 26	2/year
2-Chlorophenol	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.1	21	< 0.1 - < 2	2/year
2-Nitrophenol	ug/L	< 2.5	2	< 2.5	< 2.5		< 0.5	15	< 0.5 - < 2.5	2/year
4,6-Dinitro-2-Methylphenol	ug/L	< 2.5	2	< 2.5	< 2.5		< 0.5	21	< 0.5 - < 10	2/year
4-Chloro-3-Methylphenol	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.2	15	< 0.2 - < 1	2/year
4-Nitrophenol	ug/L	< 2.5	2	< 2.5	< 2.5		< 0.5	21	< 0.5 - < 10	2/year
Alpha-Terpineol	ug/L	< 5	2	< 5	< 5		< 1	21	< 1 - < 20	2/year
Pentachlorophenol	ug/L	< 0.5	2	< 0.5	< 0.5	60 MAC and ≤ 30 AO	< 0.1	21	< 0.1 - < 2	2/year
Phenol	ug/L	< 1.5	6	< 1.5	< 2.5	Guideline Archived	< 1.5	25	< 0.5 - < 10	2/year
Polychlorinated Biphenyls (PCBs)										
PCB-1016	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	17	< 0.00005 - < 0.0001	Irregular
PCB-1221	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	17	< 0.00005 - < 0.0001	Irregular
PCB-1232	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	17	< 0.00005 - < 0.0001	Irregular
PCB-1242	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	17	< 0.00005 - < 0.0001	Irregular
PCB-1248	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	17	< 0.00005 - < 0.0001	Irregular
PCB-1254	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	17	< 0.00005 - < 0.0001	Irregular
PCB-1260	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	18	< 0.00005 - < 0.0001	Irregular
PCB-1262	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	11	< 0.00005 - < 0.0001	Irregular
PCB-1268	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	11	< 0.00005 - < 0.0001	Irregular
Total PCBs	ug/L	< 0.00005	2	< 0.00005	< 0.00005	Guideline Archived	< 0.00005	17	< 0.00005 - < 0.0001	Irregular
Other Synthetic Chemicals										
1,1,1-Trichloroethane	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	21	< 0.5 - < 0.5	2/year
1,1,1,2-Tetrachloroethane	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	21	< 0.5 - < 0.5	2/year
1,1,2,2-Tetrachloroethane	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	20	< 0.5 - < 0.5	2/year
1,1,2-Trichloroethane	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	21	< 0.5 - < 0.5	2/year
1,1-Dichloroethane	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	21	< 0.5 - < 0.5	2/year
1,1-Dichloroethene (1,1-Dichloroethylene)	ug/L	< 0.5	2	< 0.5	< 0.5	14 MAC	< 0.5	18	< 0.5 - < 0.5	2/year

Appendix A, Table 1 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
1,2,3-Trichlorobenzene	ug/L	< 2	2	< 2	< 2		< 2	19	< 2 - < 2	2/year
1,2,4-Trichlorobenzene	ug/L	< 2	2	< 2	< 2		< 2	21	< 0.04 - < 2	2/year
1,2-Dibromoethane	ug/L	< 0.2	2	< 0.2	< 0.2		< 0.2	19	< 0.2 - < 0.2	2/year
1,2-Dichlorobenzene	ug/L	< 0.5	2	< 0.5	< 0.5	Guideline Archived 5.0 MAC	< 0.5	21	< 0.5 - < 0.5	2/year
1,2-Dichloroethane	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	21	< 0.5 - < 0.5	2/year
1,2-Dichloroethene (cis)	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
1,2-dichloroethene (trans)	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
1,2-Dichloropropane	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	21	< 0.5 - < 0.5	2/year
1,2-Diphenylhydrazine	ug/L	< 0.05	2	< 0.05	< 0.05		< 0.01	21	< 0.01 - < 0.2	2/year
1,3-Dichlorobenzene	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.5	20	< 0.5 - < 0.5	2/year
1,3-Dichloropropene (cis)	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
1,3-Dichloropropene (trans)	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
1,4-Dichlorobenzene	ug/L	< 0.5	2	< 0.5	< 0.5	5.0 MAC and ≤ 1.0 AO	< 0.5	21	< 0.5 - < 0.5	2/year
2,4-Dinitrotoluene	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.25	21	< 0.05 - < 1.3	2/year
2,6-Dinitrotoluene	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.05	21	< 0.05 - < 1	2/year
2-Chloronaphthalene	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.05	21	< 0.05 - < 1	2/year
1-Methylnaphthalene	ug/L	< 0.01	2	< 0.01	< 0.01		< 0.01	10	< 0.01 - < 0.05	2/year
2-Methylnaphthalene	ug/L	< 0.01	2	< 0.01	< 0.01		< 0.03	21	< 0.01 - 0.16	2/year
3,3'-Dichlorobenzidene	ug/L	< 0.5	2	< 0.5	< 0.5		< 0.1	20	< 0.1 - < 2	2/year
4-Bromophenyl-phenylether	ug/L	< 0.05	2	< 0.05	< 0.05		< 0.01	21	< 0.01 - < 0.2	2/year
4-Chlorophenyl-phenylether	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.25	21	< 0.05 - < 1	2/year
Atrazine	ug/L	< 0.05	2	< 0.05	< 0.05	5.0 MAC	< 0.1	20	< 0.05 - < 1	2/year
Benzene	ug/L	< 0.4	4	< 0.4	< 0.4	5.0 MAC	< 0.4	29	< 0.4 - < 0.4	2/year
Benzidine	ug/L	Not analyzed in 2023					< 10	9	< 10 - < 50	2/year
Bis(-2-chloroethoxy) methane	ug/L	Not analyzed in 2023					< 0.25	1	< 0.25 - < 0.25	2/year
Bis(-2-chloroethyl) ether	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.05	21	< 0.05 - < 1	2/year
Bis(2-chloroisopropyl) ether	ug/L	Not analyzed in 2023					< 0.25	1	< 0.25 - < 0.25	2/year
Bis(2-ethylhexyl) phthalate	ug/L	< 5	2	< 5	< 5	Guideline Archived	1.7	21	< 1 - < 20	2/year
Bromodichloromethane	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
Bromobenzene	ug/L	< 2	2	< 2	< 2		< 2	17	< 2 - < 2	2/year
Bromoform	ug/L	< 1	2	< 1	< 1		< 1	20	< 1 - < 1	2/year
Bromomethane	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 2.5	2/year
Butylbenzyl phthalate	ug/L	Not analyzed in 2023				Guideline Archived	< 0.5	15	< 0.5 - < 2.5	2/year
Carbon Tetrachloride (Tetrabromomethane)	ug/L	< 0.5	2	< 0.5	< 0.5	2.0 MAC	< 0.5	21	< 0.5 - < 0.5	2/year
Chloroform	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
Chloroethane	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
Chloromethane	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
Desethyl Atrazine	ug/L	< 0.05	2	< 0.05	< 0.05		< 0.1	13	< 0.05 - < 0.5	2/year

Appendix A, Table 1 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Dibromochloromethane	ug/L	< 1	2	< 1	< 1		< 1	21	< 1 - < 1	2/year
Dichlorodifluoromethane	ug/L	< 2	2	< 2	< 2		< 2	19	< 2 - < 2	2/year
Dichloromethane	ug/L	< 2	1	< 2	< 2	50 MAC	< 2	20	< 2 - < 2	2/year
Diethyl phthalate	ug/L	< 0.25	2	< 0.25	< 0.25	Guideline Archived	0.0755	20	< 0.05 - 1	2/year
Dimethyl phthalate	ug/L	< 0.25	2	< 0.25	< 0.25	Guideline Archived	< 0.05	20	< 0.05 - < 1	2/year
Di-n-butyl phthalate	ug/L	6.25	2	< 2.5	< 10	Guideline Archived	0.93	19	< 0.05 - < 10	2/year
Di-n-ocyl phthalate	ug/L	< 0.25	2	< 0.25	< 0.25	Guideline Archived	< 0.05	20	< 0.05 - < 1	2/year
Diuron	ug/L	< 0.1	2	< 0.1	< 0.1	Guideline Archived	< 0.1	18	< 0.1 - < 10	2/year
Ethylbenzene	ug/L	< 0.4	4	< 0.4	< 0.4	140 MAC and ≤ 1.6 AO	< 0.4	29	< 0.4 - < 0.4	2/year
Formaldehyde	ug/L	< 10	1	< 10	< 10	No Guideline Required	< 10	19	< 10 - < 10	2/year
Hexachlorobenzene	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	20	< 0.003 - < 0.5	2/year
Hexachlorobutadiene	ug/L	0.375	4	< 0.25	< 0.5		< 0.25	29	< 0.004 - < 1	2/year
Hexachlorocyclopentadiene	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.05	22	< 0.01 - < 1	2/year
Hexachloroethane	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.05	22	< 0.003 - < 1	2/year
Isophorone	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.05	21	< 0.05 - < 1	2/year
Methyltertiarybutylether (MTBE)	ug/L	< 4	4	< 4	< 4	15 AO	< 4	35	< 0.5 - < 4	2/year
Monochlorobenzene	ug/L	< 0.5	2	< 0.5	< 0.5	Guideline Archived	< 0.5	21	< 0.5 - < 0.5	2/year
N-Nitrosodimethylamine (NDMA)	ug/L	< 1	2	< 1	< 1	0.04 MAC	< 0.2	17	< 0.2 - < 1	2/year
Nitrobenzene	ug/L	< 0.25	2	< 0.25	< 0.25		< 0.05	21	< 0.05 - < 1	2/year
N-nitroso-di-n-propylamine	ug/L	< 1	2	< 1	< 1		< 1	4	< 1 - < 4	2/year
N-nitrosodiphenylamine	ug/L	< 1	2	< 1	< 1		< 1	4	< 1 - < 4	2/year
Octachlorostyrene	ug/L	< 0.003	2	< 0.003	< 0.003		< 0.003	20	< 0.003 - < 0.005	2/year
Styrene	ug/L	0.45	4	< 0.4	< 0.5		< 0.5	29	< 0.4 - < 0.5	2/year
Tetrachloroethene	ug/L	< 0.5	2	< 0.5	< 0.5	10 MAC	< 0.5	21	< 0.5 - < 0.5	2/year
Toluene	ug/L	< 0.4	4	< 0.4	< 0.4	60 MAC and ≤ 24 AO	< 0.4	29	< 0.4 - < 0.4	2/year
Triallate	ug/L	< 0.05	2	< 0.05	< 0.05	Guideline Archived	< 0.05	20	< 0.0003 - < 5	2/year
Trichloroethylene	ug/L	< 0.5	2	< 0.5	< 0.5	5.0 MAC	< 0.5	18	< 0.5 - < 0.5	2/year
Trichlorofluoromethane	ug/L	< 4	2	< 4	< 4		< 4	20	< 4 - < 4	2/year
Trichlorotrifluoroethane	ug/L	< 2	2	< 2	< 2		< 2	14	< 2 - < 2	2/year
Vinyl Chloride (Chloroethene)	ug/L	< 0.5	2	< 0.5	< 0.5	2.0 MAC	< 0.5	21	< 0.5 - < 0.5	2/year
o-Xylene	ug/L	< 0.4	4	< 0.4	< 0.4		< 0.4	29	< 0.4 - < 0.4	2/year
m&p-Xylene	ug/L	< 0.4	4	< 0.4	< 0.4		< 0.4	28	< 0.4 - < 1	2/year
Xylenes (Total)	ug/L	< 0.4	4	< 0.4	< 0.4	90 MAC and ≤ 20 AO	< 0.4	28	< 0.4 - < 0.4	2/year
Miscellaneous										
Perfluoropentanoic Acid (PFPeA)	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorohexanoic Acid (PFHxA)	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluoroheptanoic Acid (PFHpA)	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorooctanoic Acid (PFOA)	ng/L	< 2	2	< 2	< 2	200 MAC	< 20	5	< 2 - < 20	2/year
Perfluorononanoic Acid (PFNA)	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year

Appendix A, Table 1 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Perfluorododecanoic acid (PFDoA)	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorodecanoic Acid (PFDA)	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluoroundecanoic Acid (PFUnA)	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorotridecanoic Acid	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorotetradecnoic Acid	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorobutanesulfonic Acid	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluoropentanesulfonic Acid	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorohexanesulfonic Acid	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluoroheptanesulfonic Acid	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorooctanesulfonic Acid	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorononane sulfonic Acid (PFOS)	ng/L	< 2	2	< 2	< 2	600 MAC	< 20	5	< 2 - < 20	2/year
Perfluorodecanesulfonic Acid (PFDS)	ng/L	< 2	2	< 2	< 2		< 20	5	< 2 - < 20	2/year
Perfluorooctane Sulfonamide (PFOSA)	ng/L	< 4	2	< 4	< 4		< 20	5	< 4 - < 20	2/year
4:2 Fluotelomer Sulfonic Acid	ng/L	< 4	2	< 4	< 4		<20	5	< 4 - < 20	2/year
6:2 Fluotelomer Sulfonic Acid	ng/L	< 4	2	< 4	< 4		<20	5	<4 - < 20	2/year
8:2 Fluotelomer Sulfonic Acid	ng/L	< 4	2	< 4	< 4		<20	5	< 4 - < 20	2/year

Notes: mg/L = milligrams per litre; ug/L = micrograms per litre; ND = Not Detected; CFU = Colony Forming Units; NTU = Nephelometric Units; TCU = True Colour Units; AO = Aesthetic Objective; MAC = Max. Acceptable Conc.; Median = middle point of all values

APPENDIX A
TABLE 2. 2023 TREATED WATER QUALITY AFTER GOLDSTREAM WATER TREATMENT PLANT

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Physical Parameters										
Alkalinity, Total	mg/L	16.85	14	15.7	18.3		13.6	121	6.92-18.1	12/year
Carbon, Dissolved Organic	mg/L	2	11	1.5	2.2		1.77	102	< 0.5-370	12/year
Carbon, Total Organic	mg/L	1.8	11	1.6	2	Guideline Archived	1.80	102	0.93 - 4.99	12/year
Colour, True	TCU	< 2	52	< 2	17	≤ 15 AO	3.65	446	< 1.4-10	52/year
Conductivity @ 25 C	uS/cm	52.95	52	47.4	58		46.3	444	31.1-98.6	52/year
Hardness as CaCO ₃	mg/L	16.6	11	15.6	18.3	No Guideline Required	17.2	133	12-22.1	12/year
Odour	Odour Profile	1	239	1	1	Inoffensive	1	2,047	1-1	250/year
pH	pH units	7.535	56	7.3	8.2	7.0-10.5 AO	7.1	467	6.54-8.24	52/year
Taste	Flavour Profile	1	238	1	1	Inoffensive	1	2,036	1-1	250/year
Total Dissolved Solids	mg/L	30	11	26	50	≤500 AO	28.00	102	<10 - 78.0	12/year
Total Suspended Solids	mg/L	< 1	11	< 1	2.4		< 1	101	0.1-10.9	12/year
Total Solids	mg/L	36	11	24	78		32.00	98	<1 - 110	12/year
Turbidity, Grab Samples	NTU	0.25	240	0.15	0.85	1.0 MAC	0.3	2,100	0.14-6.3	250/year
Water Temp., Grab Samples	degrees C	8.7	240	4	20.5	≤ 15 AO	10.5	2,103	2.5-21.1	250/year
Non-Metallic Inorganic Chemicals										
Bromate	mg/L as BrO3	< 0.0095	11	< 0.0095	< 0.0095	0.01 MAC	< 0.0095	22	< 0.0095-0.011	12/year
Bromide	ug/L as Br	0.0185	4	< 0.01	0.046		< 0.01	40	1.8e-005-0.043	4/year
Chloride	mg/L as Cl	4.05	4	3.8	4.8	≤ 250 AO	4.2	27	< 0.045-< 10	4/year
Chlorate, dissolved	mg/L as ClO2	< 0.1	11	< 0.1	< 0.1	1 MAC	< 0.1	28	< 0.1-< 0.1	4/year
Chlorite, dissolved	mg/L as ClO3	Not analyzed in 2023				1 MAC	< 0.1	10	< 0.1-< 0.1	12/year
Cyanide	mg/L as Cn	< 0.0005	4	< 0.0005	< 0.0005	0.2 MAC	< 0.0005	26	< 0.0005-< 0.006	4/year
Fluoride	mg/L as F	< 0.05	4	< 0.05	< 0.05	1.5 MAC	<0.02	27	<0.02 - <0.05	4/year
Nitrate, Dissolved	ug/L as N	< 20	11	< 20	38	45000 MAC	< 20	98	< 0.02-47.5	12/year
Nitrite, Dissolved	ug/L as N	< 5	11	< 5	< 5	3000 MAC	< 5	97	< 0.3-5	12/year
Nitrate + Nitrite	ug/L as N	< 20	11	< 20	38	-	< 20	98	2.9-47.5	12/year
Nitrogen, Ammonia (Total)	ug/L as N	250	11	190	330	No Guideline Required	200	102	0.11-760	12/year
Nitrogen, Total Kjeldahl	ug/L as N	378	11	302	430		359	97	74-950	12/year
Nitrogen, Total	ug/L as N	400	11	302	468		357.5	102	75.6-976	12/year
Phosphate, Ortho, Dissolved	ug/L as P	< 1	11	< 1	1.8		< 3	98	0.1-6.2	12/year
Phosphate, Total, Dissolved	ug/L as P	1.7	11	< 1	2.9		2.75	102	0.8 - 18	12/year
Phosphate, Total	ug/L as P	2.9	11	< 1	5		2.89	102	<1 - 14	12/year
Silica	mg/L as SiO2	4.5	11	4.1	4.9		4.12	92	2.91-5.2	12/year
Silicon	ug/L as Si	2020	11	1780	2280		1960	103	1400-2740	12/year
Sulphate	mg/L as SO4	1.1	11	< 1	1.5	≤ 500 AO	1.485	100	0.8-< 10	12/year
Sulphide	mg/L as H2S	< 0.0018	11	< 0.0018	0.015	≤ 0.05 AO	< 0.0018	24	< 0.0018-0.027	12/year

Appendix A, Table 2 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Sulphur	mg/L as S	< 3	11	< 3	< 3		< 3	103	< 3-< 3	12/year
Metallic Inorganic Chemicals										
Aluminum	ug/L as Al	12.6	11	3.6	22.7	2900 MAC / 100 OG	16.4	103	4.5-67.7	12/year
Antimony	ug/L as Sb	< 0.5	11	< 0.5	< 0.5	6 MAC	< 0.5	103	< 0.02-< 0.5	12/year
Arsenic	ug/L as As	< 0.1	11	< 0.1	< 0.1	10 MAC	< 0.1	103	0.04-0.17	12/year
Barium	ug/L as Ba	3.5	11	3.4	4.1	2000 MAC	3.8	103	3.3-4.8	12/year
Beryllium	ug/L as Be	< 0.1	11	< 0.1	< 0.1		< 0.1	102	< 0.01-< 0.1	12/year
Bismuth	ug/L as Bi	< 1	11	< 1	< 1		< 1	103	< 0.005-< 1	12/year
Boron	ug/L as B	< 50	11	< 50	< 50	5000 MAC	< 50	103	< 10-50	12/year
Cadmium	ug/L as Cd	< 0.01	11	< 0.01	< 0.01	7 MAC	< 0.01	103	< 0.005-< 0.1	12/year
Calcium	mg/L as Ca	4.78	11	4.66	5.42	No Guideline Required	4.9	103	4.18-6.82	12/year
Chromium	ug/L as Cr	< 1	11	< 1	< 1	50 MAC	< 1	103	< 0.1-1.2	12/year
Cobalt	ug/L as Co	< 0.2	11	< 0.2	< 0.2		< 0.2	103	0.023-< 0.5	12/year
Copper	ug/L as Cu	1.51	11	1.08	2.37	2000 MAC / ≤ 1000 AO	10.5	103	1.03-202	12/year
Iron	ug/L as Fe	17	11	10.5	67	≤ 300 AO	25.1	103	11.5-198	12/year
Lead	ug/L as Pb	< 0.2	11	< 0.2	< 0.2	5 MAC	< 0.2	103	0.017-0.92	12/year
Lithium	ug/L as Li	< 2	11	< 2	< 2		< 5	65	< 0.5-13.5	12/year
Magnesium	mg/L as Mg	1.08	11	0.966	1.21	No Guideline Required	1.14	103	0.146-1.41	12/year
Manganese	ug/L as Mn	2.7	11	1.6	24.6	120 MAC / ≤ 20 AO	< 4.6	103	1.4-51.1	12/year
Mercury, Total	ug/L as Hg	< 0.0019	11	< 0.0019	0.0038	1.0 MAC	< 0.002	101	< 0.0019-< 10	12/year
Molybdenum	Ug/L as Mo	< 1	11	< 1	< 1		< 1	103	< 0.05-< 1	12/year
Nickel	mg/L as Ni	< 1	11	< 1	2		< 1	103	0.206-1.6	12/year
Potassium	mg/L as K	0.132	11	0.118	0.14		0.134	103	0.111-0.216	12/year
Selenium	ug/L as Se	< 0.1	11	< 0.1	0.21	50 MAC	< 0.1	103	< 0.04-< 0.1	12/year
Silver	ug/L as Ag	< 0.02	11	< 0.02	< 0.02	No Guideline Required	< 0.02	103	< 0.005-0.058	12/year
Sodium	mg/L as Na	3.53	11	3.25	4.17	≤ 200 AO	1.72	103	1.39-3.56	12/year
Strontium	ug/L as Sr	14.5	11	13.6	16.6	7000 MAC	15.1	103	13-19.7	12/year
Thallium	ug/L as Tl	< 0.01	11	< 0.01	< 0.01		< 0.01	103	< 0.002-< 0.05	12/year
Tin	ug/L as Sn	< 5	11	< 5	< 5		< 5	103	< 0.2-< 5	12/year
Titanium	ug/L as Ti	< 5	11	< 5	< 5		< 5	103	< 0.05-< 5	12/year
Uranium	ug/L as U	< 0.1	11	< 0.1	< 0.1	20 MAC	< 0.1	103	0.004-< 0.1	12/year
Vanadium	ug/L as V	< 5	11	< 5	< 5		< 5	103	< 0.2-< 5	12/year
Zinc	ug/L as Zn	< 5	11	< 5	< 5	≤ 5000 AO	< 5	103	0.37-54.1	12/year
Zirconium	ug/L as Zr	< 0.1	11	< 0.1	< 0.1		< 0.1	103	< 0.1-< 0.5	12/year
Microbial Parameters										
Coliform Bacteria										
Coliforms, Total	CFU/100 mL	< 1	243	< 1	55	0 MAC	<1	2,115	<1 - 200	250/year
E. coli	CFU/100 mL	< 1	242	< 1	< 1	0 MAC	<1	2,114	<1 - <1	250/year

Appendix A, Table 2 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Heterotrophic/Other Bacteria										
Hetero. Plate Count, 28C (7 day)	CFU/1 mL	< 10	240	< 10	60		< 10	1,972	<1 - 770	250/year
Disinfectants										
Disinfectants										
Total Residual Chlorine	mg/L as Cl ₂	2.04	237	1.7	2.25	No Guideline Required	1.86	917	0.8 - 2.33	250/year
Monochloramine	mg/L as Cl ₂	1.95	237	1.59	2.22	No Guideline Required	1.72	902	0-2.17	250/year

Notes: mg/L = milligrams per litre; ug/L = micrograms per litre; ND = Not Detected; CFU = Colony Forming Units; NTU = Nephelometric Units; TCU = True Colour Units; AO = Aesthetic Objective; MAC = Max. Acceptable Conc.; Median = middle point of all values

APPENDIX A
TABLE 3. 2023 TREATED WATER QUALITY AFTER SOOKE RIVER ROAD WATER TREATMENT PLANT

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Physical Parameters										
Alkalinity, Total	mg/L	16.6	15.0	15.3	18		16.3	101	7.1-19	12/year
Colour, True	TCU	< 2	37.0	< 2	7	≤ 15 AO	3	291	1-11.3	52/year
Conductivity @ 25 C	uS/cm	57.4	38.0	53.6	61.3		56.5	287	26.4-71.6	52/year
Hardness as CaCO ₃	mg/L	16.75	6.0	14.8	18.1	No Guideline Required	16.5	43	15.1-23.9	6/year
Odour	Flavour Profile	1	38.0	1	1	Inoffensive	1	303	1-1	52/year
pH	pH units	7.67	35.0	7.1	8	7.0-10.5 AO	7.505	286	7-8.32	52/year
Taste	Flavour Profile	1	38.0	1	1	Inoffensive	1	304	1-2	52/year
Turbidity, Grab Samples	NTU	0.25	38.0	0.15	0.5	1 MAC	0.28	315	0.15 - 0.95	52/year
Water Temp., Grab Samples	degrees C	9.65	38.0	4.7	17.6	≤ 15 AO	11	317	1.19-20	52/year
Microbial Parameters										
Coliform Bacteria										
Coliforms, Total	CFU/100 mL	< 1	38.0	< 1	< 1	0 MAC	0	319	<1 - 1	52/year
<i>E. coli</i>	CFU/100 mL	< 1	38.0	< 1	< 1	0 MAC	0	320	<1 - <1	52/year
Heterotrophic Bacteria										
<i>Hetero. Plate Count, 28C (7 day)</i>	CFU/1 mL	< 10	38.0	< 10	20		< 10	276	<1 - 210	52/year
Disinfectants										
Disinfectants										
Total Residual Chlorine	mg/L as Cl ₂	1.2	402.0	0.02	2.1	No Guideline Required	1.84	150	1.27-2.4	52/year
Monochloramine	mg/L as Cl ₂	1.945	36.0	1.53	2.14	No Guideline Required	1.655	150	1.15-2.16	52/year
Metallic Inorganic Chemicals										
Aluminum	ug/L as Al	9.35	6.0	4.4	11.7	2900 MAC / 100 OG	13.9	43	5.3-22.7	6/year
Antimony	ug/L as Sb	< 0.5	6.0	< 0.5	< 0.5	6 MAC	< 0.5	43	< 0.5-< 0.5	6/year
Arsenic	ug/L as As	< 0.1	6.0	< 0.1	< 0.1	10 MAC	< 0.1	43	< 0.1-< 0.1	6/year
Barium	ug/L as Ba	3.55	6.0	3.2	3.8	2000 MAC	3.7	43	3.3-4.2	6/year
Beryllium	ug/L as Be	< 0.1	6.0	< 0.1	< 0.1		< 0.1	43	< 0.1-< 0.1	6/year
Bismuth	ug/L as Bi	< 1	6.0	< 1	< 1		< 1	43	< 1-< 1	6/year
Boron	ug/L as B	< 50	6.0	< 50	< 50	5000 MAC	< 50	43	< 50-< 50	6/year
Cadmium	ug/L as Cd	< 0.01	6.0	< 0.01	< 0.01	7 MAC	< 0.01	43	< 0.01-0.015	6/year
Calcium	mg/L as Ca	4.84	6.0	4.29	5.29	No Guideline Required	4.84	45	4.31-7.67	6/year
Chromium	ug/L as Cr	< 1	6.0	< 1	5	50 MAC	< 1	43	< 1-< 1	6/year
Cobalt	ug/L as Co	< 0.2	6.0	< 0.2	< 0.2		< 0.2	43	< 0.2-< 0.5	6/year
Copper	ug/L as Cu	26.7	6.0	23.2	41.8	2000 MAC / ≤ 1000 AO	29.2	43	10.9-80.4	6/year
Iron	ug/L as Fe	19.35	6.0	12.2	30.3	≤ 300 AO	24	43	12-53	6/year

Appendix A, Table 3 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Lead	ug/L as Pb	< 0.2	6.0	< 0.2	0.25	5 MAC	< 0.2	45	< 0.2-0.64	6/year
Lithium	ug/L as Li	< 2	6.0	< 2	< 2		< 2	25	< 2-< 5	6/year
Magnesium	mg/L as Mg	1.14	6.0	0.982	1.2	No Guideline Required	1.14	43	1-1.34	6/year
Manganese	ug/L as Mn	2.85	6.0	1.7	5	120 MAC / ≤ 20 AO	3.4	43	1.3-10	6/year
Mercury, Total	ug/L as Hg	< 0.0019	6.0	< 0.0019	0.002	1.0 MAC	< 0.002	43	< 0.0019-< 0.01	6/year
Molybdenum	ug/L as Mo	< 1	6.0	< 1	4.7		< 1	43	< 1-< 1	6/year
Nickel	ug/L as Ni	< 1	6.0	< 1	20.3		< 1	43	< 1-< 1	6/year
Potassium	mg/L as K	0.1415	6.0	0.139	0.146		0.131	43	0.115-0.247	6/year
Selenium	ug/L as Se	< 0.1	6.0	< 0.1	< 0.1	50 MAC	< 0.1	43	< 0.1-0.1	6/year
Silver	ug/L as Ag	< 0.02	6.0	< 0.02	< 0.02	No Guideline Required	< 0.02	43	< 0.02-< 0.02	6/year
Sodium	mg/L as Na	4.355	6.0	4.17	4.72	≤ 200 AO	4.38	43	3.24-7.02	6/year
Strontium	ug/L as Sr	14.95	6.0	13.4	16.4	7000 MAC	14.6	43	13.2-17.1	6/year
Thallium	ug/L as Tl	< 0.01	6.0	< 0.01	< 0.01		< 0.01	43	< 0.01-< 0.05	6/year
Tin	ug/L as Sn	< 5	6.0	< 5	< 5		< 5	43	< 5-< 5	6/year
Titanium	ug/L as Ti	< 5	6.0	< 5	< 5		< 5	43	< 5-< 5	6/year
Uranium	ug/L as U	< 0.1	6.0	< 0.1	< 0.1	20 MAC	< 0.1	43	< 0.1-< 0.1	6/year
Vanadium	ug/L as V	< 5	6.0	< 5	< 5		< 5	43	< 5-< 5	6/year
Zinc	ug/L as Zn	< 5	6.0	< 5	< 5	≤ 5000 AO	< 5	43	< 5-79.4	6/year
Zirconium	ug/L as Zr	< 0.1	6.0	< 0.1	< 0.1		< 0.1	43	< 0.1-< 0.5	6/year

Notes: mg/L = milligrams per litre; ug/L = micrograms per litre; ND = Not Detected; CFU = Colony Forming Units; NTU = Nephelometric Units; TCU = True Colour Units; AO = Aesthetic Objective; MAC = Max. Acceptable Conc.; Median = middle point of all values

APPENDIX A
TABLE 4. 2023 TREATED WATER QUALITY TRANSMISSION / DISTRIBUTION SYSTEMS GOLDSTREAM SERVICE AREA

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Metals										
Mercury, Total	ug/L as Hg	< 0.0019	24	< 0.0019	0.0022	1 MAC	< 0.002	160	< 0.0019-< 0.01	24/year
Aluminum	ug/L as Al	11.1	25	5.2	14.2	2900 MAC / 100 OG	14.1	177	5-61	24/year
Antimony	ug/L as Sb	< 0.5	25	< 0.5	< 0.5	6 MAC	< 0.5	177	< 0.5-5.59	24/year
Arsenic	ug/L as As	< 0.1	25	< 0.1	0.24	10 MAC	< 0.1	177	< 0.1-1.55	24/year
Barium	ug/L as Ba	3.6	25	1.6	3.9	2000 MAC	3.8	177	2.8-4.7	24/year
Boron	ug/L as B	< 50	25	< 50	< 50	5000 MAC	< 50	177	< 50-50	24/year
Cadmium	ug/L as B	< 0.01	25	< 0.01	0.019	7 MAC	< 0.01	177	< 0.01-0.468	24/year
Chromium	ug/L as Cr	< 1	25	< 1	< 1	50 MAC	< 1	177	< 0.1-1.3	24/year
Copper	mg/L as Cu	4.75	25	1.12	23.1	2000 MAC / 1000 AO	22.4	177	0.66-12400	24/year
Iron	ug/L as Fe	18.4	25	8.2	36.8	300 AO	25.2	177	11.3-359	24/year
Lead	ug/L as Pb	< 0.2	25	< 0.2	0.32	5 MAC	0.34	325	< 0.2-1570	24/year
Manganese	ug/L as Mn	3	25	1.8	5.8	120 MAC / 20 AO	4.1	177	1.4-35.1	24/year
Selenium	ug/L as Se	< 0.1	25	< 0.1	< 0.1	50 MAC	< 0.1	177	< 0.1-< 0.1	24/year
Strontium	ug/L as Sr	15.2	25	13.5	20.1	7000 MAC	15.1	177	11.1-18.8	24/year
Uranium	ug/L as U	< 0.1	25	< 0.1	< 0.1	20 MAC	< 0.1	177	< 0.1-< 0.1	24/year
Zinc	ug/L as Zn	< 5	25	< 5	12.7	≤ 5000 MAC	< 5	177	< 5-1660	24/year
Sodium	mg/L as Na	3.5	25	1.93	3.94	≤ 200 AO	1.76	176	1.46-13	24/year
Disinfection Byproducts Parameters										
Nitrosamines										
N-Nitrosodiethylamine	ng/L	< 1.9	22	< 1.9	< 2		< 1.9	121	0.000375-3.8	24/year
N-Nitrosodimethylamine	ng/L	< 1.9	22	< 1.9	6.3	40 MAC	< 2	127	0.235-4.9	24/year
N-Nitroso-di-n-butylamine	ng/L	< 1.9	22	< 1.9	< 2		< 2	116	< 0.157-42	24/year
N-nitroso-di-n-propylamine	ng/L	< 1.9	22	< 1.9	< 2		< 2	107	< 0.0671-< 2.2	24/year
N-Nitrosoethylmethylanine	ng/L	< 1.9	22	< 1.9	< 2		< 1.9	115	0-< 2.2	24/year
N-Nitrosomorpholine	ng/L	< 1.9	22	< 1.9	< 2		< 1.9	116	0.00102-4.6	24/year
N-nitrosopiperidine	ng/L	< 1.9	22	< 1.9	< 2		< 2	114	< 0.0357-< 10	24/year
N-Nitrosopyrrolidine	ng/L	< 1.9	22	< 1.9	< 2		< 2	115	< 0.0662-< 8	24/year
Haloacetic Acids (HAAs)										
Total Haloacetic Acids	ug/L	9.75	24	< 5	20	80 MAC	15	190	4.23-104	24/year
Monobromoacetic Acid (MBAA)	ug/L	< 5	24	< 5	< 5		< 5	191	< 0.2-15.04	24/year
Dichloroacetic Acid (DCAA)	ug/L	9.65	24	< 5	13		8.4	191	0.98-30	24/year
Trichloroacetic Acid (TCAA)	ug/L	< 5	24	< 5	7.3		6.4	191	1.3-56	24/year
Bromochloroacetic Acid (BCAA)	ug/L	< 5	24	< 5	< 5		< 5	191	< 0.2-11.63	24/year
Dibromoacetic Acid (DBAA)	ug/L	< 5	24	< 5	< 5		< 5	191	< 0.2-5.6	24/year

Appendix A, Table 4 continued

PARAMETER	2023 ANALYTICAL RESULTS					CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Monochloroacetic Acid (MCAA)	ug/L	< 5	24	< 5	< 5		< 5	191	0.2-< 5	24/year
Trihalomethanes (TTHMs)										
Total Trihalomethanes	ug/L	17.5	24	12	27	100 MAC	19	194	6.9-77.9	24/year
Bromodichloromethane	ug/L	1.75	24	< 1	3.8		2	17	1.2-2.9	24/year
Bromoform	ug/L	< 1	24	< 1	< 1		< 1	194	< 0.1-< 2	24/year
Chlorodibromomethane	ug/L	< 1	24	< 1	< 1		< 1	194	< 0.1-< 3	24/year
Chloroform	ug/L	16	24	10	23		17	194	6.9-77.9	24/year

Notes: mg/L = milligrams per litre; ug/L = micrograms per litre; ND = Not Detected; CFU = Colony Forming Units; NTU = Nephelometric Units; TCU = True Colour Units; AO = Aesthetic Objective; MAC = Max. Acceptable Conc.; Median = middle point of all values

APPENDIX A
TABLE 5. 2023 TREATED WATER QUALITY DISTRIBUTION SYSTEM SOOKE SERVICE AREA

PARAMETER		2023 ANALYTICAL RESULTS				CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	Target Sampling Frequency
				Minimum	Maximum				Minimum - Maximum	
Metals										
Mercury, Total	ug/L as Hg	< 0.0019	6	< 0.0019	0.0021	1 MAC	< 0.002	42	< 0.0019-< 0.05	6/year
Aluminum	ug/L as Al	8.05	6	4.6	11.6	2900 MAC / 100 OG	14.4	42	4.9-242	6/year
Antimony	ug/L as Sb	< 0.5	6	< 0.5	< 0.5	6 MAC	< 0.5	42	< 0.5-< 0.5	6/year
Arsenic	ug/L as As	< 0.1	6	< 0.1	< 0.1	10 MAC	< 0.1	42	< 0.1-< 0.1	6/year
Barium	ug/L as Ba	3.65	6	3.3	4.2	2000 MAC	3.7	42	3.2-4.6	6/year
Boron	ug/L as B	< 50	6	< 50	< 50	5000 MAC	< 50	42	< 50-< 50	6/year
Cadmium	ug/L as B	< 0.01	6	< 0.01	0.011	7 MAC	< 0.01	42	< 0.01-0.018	6/year
Chromium	ug/L as Cr	< 1	6	< 1	< 1	50 MAC	< 1	42	< 1-< 1	6/year
Copper	mg/L as Cu	9.345	6	6.16	10.6	2000 MAC / 1000 AO	6.18	42	2.93-31.7	6/year
Iron	ug/L as Fe	41.2	6	25.4	89.8	300 AO	40.4	42	19.5-91.5	6/year
Lead	ug/L as Pb	0.29	6	< 0.2	0.68	5 MAC	< 0.2	43	< 0.2-0.79	6/year
Manganese	ug/L as Mn	2.85	6	2	6	120 MAC / 20 AO	2.8	49	< 0.01-1760	6/year
Selenium	ug/L as Se	< 0.1	6	< 0.1	< 0.1	50 MAC	< 0.1	41	< 0.1-< 0.1	6/year
Strontium	ug/L as Sr	15.65	6	14.9	17.6	7000 MAC	18.3	41	15.8-21.5	6/year
Uranium	ug/L as U	< 0.1	6	< 0.1	< 0.1	20 MAC	< 0.1	42	< 0.1-< 0.1	6/year
Zinc	ug/L as Zn	< 5	6	< 5	5.6	≤ 5000 MAC	< 5	42	< 5-21.1	6/year
Sodium	mg/L as Na	4.36	6	3.97	4.66	≤ 200 AO	4.35	41	3.36-6.08	6/year
Disinfection By-products Parameters										
Nitrosamines										
N-Nitrosodiethylamine	ng/L	< 1.9	5	< 1.9	< 2		< 2	33	6.25e-005-3.22	6/year
N-Nitrosodimethylamine	ng/L	< 2	5	< 1.9	3	40 MAC	< 2	34	< 1-4.3	6/year
N-Nitroso-di-n-butylamine	ng/L	< 1.9	5	< 1.9	< 2		< 2	30	< 0.268-< 3	6/year
N-nitroso-di-n-propylamine	ng/L	<1.9	5	<1.9	<2		<2	29	<0.019 - <2.1	6/year
N-Nitrosoethylmethylanine	ng/L	< 1.9	5	< 1.9	< 2		< 2	30	< 0.082-< 2.1	6/year
N-Nitrosomorpholine	ng/L	< 1.9	5	< 1.9	< 2		< 2	31	< 0.257-< 6.6	6/year
N-nitrosopiperidine	ng/L	< 1.9	5	< 1.9	< 2		< 2	30	< 0.0806-< 25.9	6/year
N-Nitrosopyrrolidine	ng/L	< 1.9	5	< 1.9	< 2		< 2	30	< 0.0806-< 141	6/year
Haloacetic Acids (HAAs)										
Total Haloacetic Acids	ug/L	21.5	6	17	25	80 MAC	26	34	16-34	6/year
Monobromoacetic Acid (MBAA)	ug/L	< 5	6	< 5	< 5		< 5	34	< 5-< 5	6/year
Dichloroacetic Acid (DCAA)	ug/L	12	6	9.4	15		13	34	9.3-19	6/year
Trichloroacetic Acid (TCAA)	ug/L	9.65	6	7.3	10		12	34	7-18	6/year
Bromochloroacetic Acid (BCAA)	ug/L	< 5	6	< 5	< 5		< 5	34	< 5-< 5	6/year
Dibromoacetic Acid (DBAA)	ug/L	< 5	6	< 5	< 5		< 5	34	< 5-< 5	6/year

Appendix A, Table 5 continued

PARAMETER		2023 ANALYTICAL RESULTS				CANADIAN GUIDELINES	TEN YEAR RESULTS (2013-2022)			Target Sampling Frequency
Parameter Name	Units of Measure	Median Value	Samples Analyzed	Range		≤ = Less than or equal to	10 Year Median	Samples Analyzed	Range	
				Minimum	Maximum				Minimum - Maximum	
Monochloroacetic Acid (MCAA)	ug/L	< 5	6	< 5	< 5		< 5	34	< 5-< 5	6/year
Trihalomethanes (TTHMs)										
Total Trihalomethanes	ug/L	29	6	24	36	100 MAC	32	34	24-49	6/year
Bromodichloromethane	ug/L	2.65	6	2.2	5		2.85	34	< 1-4.4	6/year
Bromoform	ug/L	< 1	6	< 1	< 1		< 1	34	< 1-< 1	6/year
Chlorodibromomethane	ug/L	< 1	6	< 1	< 1		< 1	34	< 1-< 1	6/year
Chloroform	ug/L	25.5	6	22	31		29.5	34	21-45	6/year

Notes: mg/L = milligrams per litre; ug/L = micrograms per litre; ND = Not Detected; CFU = Colony Forming Units; NTU = Nephelometric Units; TCU = True Colour Units; AO = Aesthetic Objective; MAC = Max. Acceptable Conc.; Median = middle point of all values

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, JUNE 12, 2024**

SUBJECT **2024 Performing Arts Facilities Select Committee Terms of Reference**

ISSUE SUMMARY

This report is to provide the 2024 Performing Arts Facilities Select Committee (PAFSC) updated Terms of Reference for the Committee's review.

BACKGROUND

On May 8, 2024, the Capital Regional District (CRD) Board passed a motion:

That the CRD Board re-establish a Select Committee to determine options and recommendations related to “scaling up” regional support for performing arts facilities in the region.

To implement this direction from the CRD Board, staff have drafted a proposed terms of reference for a re-established PAFSC (Appendix A).

ALTERNATIVES

Alternative 1

1. That the Board delegate to the Board Chair the appointment of members to the Performing Arts Facilities Select Committee.
2. That the 2024 Performing Arts Facilities Select Committee Terms of Reference be approved as presented.

Alternative 2

That this report be referred back to staff for additional information.

IMPLICATIONS

Alignment with Board & Corporate Priorities

In the CRD Corporate Plan (2023-2026), initiative 10b-2 states the CRD will “Scale up regional support for performing art facilities within the region.” Relaunching the PAFSC with these terms of reference advances that initiative.

Financial Implications

To achieve the scope and purpose outlined in these terms of reference, certain staff support and financial allocation will be necessary. These supports are modeled on the previous PAFSC. In 2021, CRD Board approved \$150,000 for the Feasibility Fund to support the work of the previous PAFSC (in 2021 and 2022). The unspent portion of that Feasibility Fund was returned by way of negative requisition in Budget 2024.

A new allocation to the Feasibility Fund to support PAFSC, like the one that supported the previous PAFSC, has been included in the planning for Budget 2025. As with the previous PAFSC, public engagement may be necessary. A consultant would be engaged to design and facilitate the process and report on outcomes. Costs for a limited region-wide public engagement process is estimated to be \$50,000. Staff support for research, planning and policy development will be provided by the Arts and Culture Division with administrative support from Legislative Services. Staff support is estimated at \$20,000 in 2024 (to be recovered as part of Budget 2025) and \$62,000 in 2025.

CONCLUSION

After their annual strategic check-in, the CRD Board directed staff to take steps to re-establish a PAFSC. Staff have prepared draft terms of reference for the proposed Select Committee as the first step of its relaunch.

RECOMMENDATION

1. That the Board delegate to the Board Chair the appointment of members to the Performing Arts Facilities Select Committee.
2. That the 2024 Performing Arts Facilities Select Committee Terms of Reference be approved as presented.

Submitted by:	Chris Gilpin, MPA, Manager, Arts & Culture
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: 2024 Performing Arts Facilities Select Committee Terms of Reference

Terms of Reference



PERFORMING ARTS FACILITIES SELECT COMMITTEE

PREAMBLE

Acting on a Board motion, the Performing Arts Facilities Select Committee is established by the CRD Board to determine options and recommendations related to scaling up regional support for performing arts facilities in the region.

The Select Committee's official name is to be:

Performing Arts Facilities Select Committee

1.0 PURPOSE

The mandate of the Committee is to:

- a) Hold discussions on the region's performing arts facilities.
- b) Clarify the jurisdictional responsibilities related to regional as compared to local performing arts facilities.
- c) Provide recommendations to the CRD Board on options related to scaling up regional support for performing arts facilities in the region.

2.0 ESTABLISHMENT AND AUTHORITY

- a) The Board Chair will appoint the Committee Chair and Committee members.
- b) The Committee will make recommendations to the Board for consideration.

3.0 COMPOSITION

- a) The Chair, Vice-Chair and Committee members are appointed annually by the Board Chair.
- b) Committee members will be comprised of up to 12 CRD Directors providing regional representation as deemed appropriate by the Board Chair. Directors appointed to the Select Committee may have their Alternates attend in their place.
- c) The CRD Board Chair is an ex officio member of the Committee.

4.0 PROCEDURES

- a) The Committee shall meet at the call of the Committee Chair.
- b) The Committee Chair shall determine the agenda or meetings in consultation with staff and any Committee member may request that a matter be placed on the agenda.

5.0 RESOURCES AND SUPPORT

- a) The CFO/General Manager, Finance and Technology, will provide strategic support and act as a liaison.

- b) Minutes and agendas are prepared and distributed by the Corporate Services Division.
- c) The Arts and Culture Division will provide subject matter expertise and additional administrative support as required.



Making a difference...together

REPORT TO CAPITAL REGIONAL DISTRICT BOARD MEETING OF WEDNESDAY, JUNE 12, 2024

SUBJECT **Bylaw No. 4613 - Resale Control and Housing Agreement Rescission Bylaw (604 Nelson Street), 2024**

ISSUE SUMMARY

The Capital Regional District (CRD) needs to approve a bylaw that discharges a Housing Agreement and restrictive covenant taken under Bylaw No. 4500 because the developer-initiated affordable housing proposed for 604 Nelson Street is not advancing. Bylaw No. 4613, "A Bylaw to Authorize Discharge of a Housing Agreement (604 Nelson Street)" is attached to this staff report as Appendix A.

BACKGROUND

The CRD's Regional Housing Division, through discussions with the Township of Esquimalt and Nelson Esquimalt Developments Ltd. (the Developer), agreed to enter into a Housing Agreement and restrictive covenant for 10 below-market resale units as part of a 109 residential strata unit development and one commercial unit development located at 604 Nelson Street in the Township of Esquimalt.

At its July 13, 2022, meeting, the CRD Board adopted Bylaw No. 4500, "Resale Control and Housing Agreement Bylaw (604 Nelson Street), to secure certain affordable housing in perpetuity, where perpetuity is 99 years or destruction of the building, whichever is longer". To support the Township of Esquimalt, the CRD entered into a Housing Agreement, restrictive covenant, and option to purchase such units with the CRD to administer resales of 10 below-market units within the development. A Housing Agreement is a statutory restriction on use set out under the *Local Government Act* and requires a bylaw amendment and consent of the owner in order to modify or change. These affordable resale Housing Agreements typically require resale of units at below-market rates of anywhere between 20% to 10%. The CRD's agreements are joined with a restrictive covenant, rent charge, and option to purchase to ensure compliance and purchaser awareness of terms.

Nelson Esquimalt Developments Ltd. has informed the CRD and Township of Esquimalt that the development as originally proposed will not advance. The Township of Esquimalt and the Developer have agreed to terms on a new Housing Agreement Bylaw which includes affordable rental options as part of the development. In order for the two parties to advance with the new agreement, the CRD needs to first discharge Bylaw No. 4500. The minutes from the March 18, 2024, meeting of the Corporation of the Township of Esquimalt where, under item 24-123, the Housing Agreement Bylaw and Rezoning Application was given first, second, and third reading is attached as Appendix B.

ALTERNATIVES

Alternative 1

- 1) That Bylaw No. 4613, "Resale Control and Housing Agreement Rescission Bylaw (604 Nelson Street), 2024", be introduced and read a first, second and third time; and
- 2) That Bylaw No. 4613 be adopted.

Alternative 2

That this report be referred back to staff for additional information based on Capital Regional District Board direction.

IMPLICATIONS

Service Delivery Implications

This decision will relieve the CRD and the property owner of the obligations in the Housing Agreement and restrictive covenant. It is consistent with the Township of Esquimalt's request and the current goals of the affordable home ownership program, which exists only to support regional housing service participants in administering Housing Agreements.

While it is disappointing the affordable units cannot be feasibly constructed by the developer, it is worth noting that the current affordable home ownership agreement only exists as the Township of Esquimalt encouraged it as part of the development in 2022. Changing market conditions are a known issue and concern with this program, as they also effect the ability of owners to resell properties and the ability of future purchasers to get financing to purchase even "affordable" units.

While the CRD Board is the ultimate authority and could choose to leave the Housing Agreement and restrictive covenant on title, this would not be in keeping with the goals of the affordable home ownership program, which exists only to support local governments in administering Housing Agreements. It would also not be in keeping with past practice, which has permitted discharge or abandonment of charges where projects cannot proceed (typically where rezoning is not granted).

Legal Implications

The *Local Government Act* requires any change or modification to a Housing Agreement to be done by bylaw. Adopting Bylaw No. 4613 permits the Housing Agreement to be discharged and that the Chair, Corporate Officer, or Chief Administrative Officer may sign instruments related to the discharge and take any actions necessary and incidental to affect the discharge.

CONCLUSION

The CRD agreed to enter into a Housing Agreement to administer resales of below market housing units. The project will not advance, and the Township of Esquimalt has approved that the CRD discharge the Housing Agreement and restrictive covenant.

RECOMMENDATION

- 1) That Bylaw No. 4613, "Resale Control and Housing Agreement Rescission Bylaw (604 Nelson Street), 2024", be introduced and read a first, second and third time; and
- 2) That Bylaw No. 4613 be adopted.

Submitted by:	Don Elliott, BA, MUP, Senior Manager, Regional Housing
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Bylaw No. 4613

Appendix B: Minutes from the Corporation of the Township of Esquimalt, heard March 18, 2024

**CAPITAL REGIONAL DISTRICT
BYLAW NO. 4613**

**A BYLAW TO AUTHORIZE DISCHARGE OF A HOUSING AGREEMENT
(604 NELSON STREET)**

WHEREAS:

- A. The owner of lands legally described as 004-930-941 Lot B, Suburban Lot 37, Esquimalt District, Plan 11993; PID: 005-398-860 Lot 1, Suburban Lot 45, Esquimalt District, Plan 9871; and PID: 005-398-991 Lot 2, Suburban Lots 37 and 45, Esquimalt District, Plan 9871 Except Part in Plan 16394, known as 604 Nelson Street, which is the consolidation of 602 Nelson Street, 608 Nelson Street, and 612 Nelson Street, desired to develop such lands in the Township of Esquimalt to provide, among a strata development of market housing, 10 units of affordable housing consisting of one studio, six one-bedroom and three two-bedroom units;
- B. Under the *Local Government Act*, RSBC 2015, c 1, section 483, the Capital Regional District entered into a housing agreement and *Land Title Act*, RSBC 1996, c 250 restrictive covenant under Bylaw No. 4500, "Resale Control and Housing Agreement Bylaw (604 Nelson Street), 2022", to secure the affordable housing;
- C. The owner has informed the Township of Esquimalt that the affordable housing component will not proceed as the building is now to be operated as a rental, with some affordable rental units secured by agreement with the Township of Esquimalt. At its open meeting on March 18, 2024, the Township of Esquimalt endorsed discharge of the housing agreement and restrictive covenant;
- D. The Capital Regional District Board wishes to permit discharge of the housing agreement and restrictive covenant;

NOW THEREFORE, the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. The Capital Regional District is authorized to discharge the *Local Government Act* section 483 housing agreement and *Land Title Act* section 219 covenant authorized by Bylaw No. 4500, "Resale Control and Housing Agreement Bylaw (604 Nelson Street), 2022" (the "Housing Agreement").
2. The Chief Administrative Officer is authorized to execute the Housing Agreement discharge and the Corporate Officer is authorized to discharge the Notice of the Housing Agreement.
3. Bylaw No. 4500, "Resale Control and Housing Agreement Bylaw (604 Nelson Street), 2022", is repealed.

4. This Bylaw may be cited for all purposes as "Resale Control and Housing Agreement Rescission Bylaw (604 Nelson Street), 2024".

READ A FIRST TIME THIS	12 th	day of	June,	2024
READ A SECOND TIME THIS	12 th	day of	June,	2024
READ A THIRD TIME THIS	12 th	day of	June,	2024
ADOPTED THIS		day of		20__

CHAIR

CORPORATE OFFICER



CORPORATION OF THE TOWNSHIP OF ESQUIMALT

Minutes - Final Council

Municipal Hall
1229 Esquimalt Road
Esquimalt, B.C. V9A 3P1

Monday, March 18, 2024

7:00 PM

Esquimalt Council Chambers

Present: 7 - Mayor Barbara Desjardins
Councillor Ken Armour
Councillor Andrea Boardman
Councillor Duncan Cavens
Councillor Jacob Helliwell
Councillor Tim Morrison
Councillor Darlene Rotchford

Staff: Dan Horan, Chief Administrative Officer
Deb Hopkins, Director of Corporate Services/Corporate Officer
Bill Brown, Director of Development Services
Joel Clary, Director of Engineering & Public Works
Ian Irvine, Director of Financial Services & IT
Matt Furlot, Fire Chief
Alex Tang, Planner
Mikaila Montgomery, Planner
Sarah Holloway, Deputy Corporate Officer/Recording Secretary

1. CALL TO ORDER

Mayor Desjardins called the Regular Council meeting to order at 7:00 PM.

Councillor Boardman acknowledged that we are on the unceded territory of the Songhees and Esquimalt Nations. We thank them for caring for this land and look forward to working with them in partnership as we continue to build this great township together.

2. INTRODUCTION OF LATE ITEMS

1) [24-164](#) Late Correspondence

1) Item 7.4 - Development Variance Permit Application - 500 Park Place,
Staff Report No. DEV-24-020

- Mike and Joan Mayer, received March 14, 2024
- Maureen and William Sherlock, received March 18, 2024

3. APPROVAL OF AGENDA

Moved by Councillor Morrison, seconded by Councillor Boardman: That the agenda be approved with the inclusion of the late items. Carried Unanimously.

4. ADOPTION OF MINUTES

- 1) [24-154](#) Minutes of the Regular Council meeting held on February 26, 2024
- 2) [24-155](#) Minutes of the Regular Council meeting held on March 4, 2024

Moved by Councillor Rotchford, seconded by Councillor Cavens: That the minutes of the Regular Council meeting held on February 26, 2024, and the minutes of the Regular Council meeting held on March 4, 2024 be adopted as circulated. Carried Unanimously.

**5. BYLAWS FOR ADOPTION OR FIRST AND SECOND READING
THAT ARE SUBJECT TO A PUBLIC HEARING*****For Adoption***

- 1) [24-142](#) Rezoning Application - 884 Lampson St Amendment Bylaw Adoption - Staff Report No. DEV-24-022

Moved by Councillor Helliwell, seconded by Councillor Cavens: That Council adopt Zoning Bylaw, 1992, No. 2050, Amendment Bylaw, No. 3098 which amends Zoning Bylaw, 1992, No. 2050, by changing the zoning designation of the subject parcels illustrated within Schedule A of Amendment Bylaw No. 3098 from RS-1 [Single Family Residential], RD-3 [Two Family/Single Family Residential] and RD-1 [Two Family Residential] to CD No. 155 [Comprehensive Development District No. 155]. Carried Unanimously.

6. PUBLIC INPUT ON AGENDA ITEMS 7, 8, 9 AND 10

Item 7. 2) Housing Agreement Bylaw and Rezoning Application - 602, 608, 612 & 618 Nelson Street and 1319, 1331 & 1347 Sussex Street, Staff Report No. DEV-24-011 AND Item 7. 5) Bike Lane Street Sweeper - Contract Award and Snow Clearing, Staff Report No. EPW-24-005

Doug Scott, resident, expressed approval for the Nelson Street development but was not in support of the exemption for the parking spaces as it is already difficult to find street parking. The resident was also not supportive of the street sweeper for the bicycle lanes and felt that if the lanes were not divided by the concrete bollards a regular street sweeper would suffice.

Item 7. 2) Housing Agreement Bylaw and Rezoning Application - 602, 608,

612 & 618 Nelson Street and 1319, 1331 & 1347 Sussex Street, Staff Report
No. DEV-24-011

Tella Olser, resident, spoke on the issues with dust mitigation from the adjacent project currently under construction and also owned by Aquila Pacific, and requested more information on how to manage complaints should a developer not be in compliance with the mitigation. The resident also raised concerns with shadowing as the Lighthouse development which is next to the Nelson Street development has already reduced sunlight in their garden.

A resident [Name not Provided], spoke in frustration with the increase of noise, dust, garbage and construction work occurring on Sunday nights until 10 PM. The resident requested that one day a week without construction disturbance would be appreciated, as there needs to be a level of respect for those that are living with the disruption in the community.

Mayor Desjardins informed the public that an amendment to the Maintenance of Property and Nuisance Regulation Bylaw would be returning to Council for final reading in May and will further regulate the days and times for allowable construction noise.

Kim Belfontaine, resident, spoke in support of the development due to the 26 units of affordable housing and 15 units of accessible housing remaining in perpetuity, the increase in commercial space, the parking being underground, the community green space of 5000 square feet with a south facing playground, that both the Advisory Planning Commission and Design Review Committee recommended their support to Council, and the value of the amenity package.

7. STAFF REPORTS

- 1) [24-161](#) Request to Postpone Consideration of Applications Related to 900 Carlton Terrace & 900 Esquimalt Road to April 8, 2024, Staff Report No. ADM-24-017

Moved by Councillor Morrison, seconded by Councillor Rotchford: That Council further postpone consideration of the Development Permit and Development Variance Permit applications at 900 Carlton Terrace and 900 Esquimalt Road until April 8, 2024. Carried Unanimously.

- 2) [24-123](#) Housing Agreement Bylaw and Rezoning Application – 602, 608, 612 & 618 Nelson Street and 1319, 1331 & 1347 Sussex Street, Staff Report No. DEV-24-011

Alex Tang, Planner, presented a PowerPoint and informed Council of the following corrections:

- In Schedule A of the Housing Agreement Bylaw, 2024, No. 3127, under section 1.2 the duplicate definition of “Affordable Rent” should be deleted and in section 2.4.C, the word strata should be replaced with rental.
- In both the Zoning Bylaw, 1992, No. 2050, Amendment Bylaw, 2024, No. 3126 and the Section 219 Covenant the park dedication should be reduced from 465 square metres to 425 square metres.
- Added in the Section 219 Covenant should be a \$250,000 contribution towards a new traffic signal on Esquimalt Road and Nelson Street, and a one metre right of way on Nelson Street.

The applicant is requesting a change in zoning from a mix of RM-1 [Multiple Family Residential] and CD-150 [Commercial-Residential Mixed Use] to Comprehensive Development District No. 164. This change is required to accommodate the proposed 12-storey, 314-unit, multiple family purpose built rental residential building including 352 m² [3791 ft²] of commercial space.

The Planner responded to questions from Council.

Harsimer Rattan of Aquila Pacific, the applicant, presented a PowerPoint and responded to questions from Council.

Council comments included the following:

- It is recognized that the amount of construction in the neighbourhood has been a disruption for the community, but once complete the area will be transformed and offer services that were not available prior.
- The development is supportable due to the affordable and accessible units guaranteed in the housing agreement, and the location being both on a bus route and close to amenities.
- The trade off for the lower height of 12 storey's is the amount of massing and the high Floor Area Ratio (FAR).
- It is acknowledged that although the affordable and accessible units will be kept in perpetuity due to the housing agreement, that this will still not be accessible to all residents who are displaced. A discussion is needed on an approach on how to maintain housing for lower income residents in the Township.
- The park will add much needed green space to the neighbourhood and will be accessible to the public along Esquimalt Road.
- The shadowing will fall mainly on the Navy Base property due to the positioning of the building.

Moved by Councillor Morrison, seconded by Councillor Rotchford: That Council give first, second, and third reading to Housing Agreement Bylaw, 2024, No. 3127 as amended by revising Schedule A in section 1.2 by deleting the duplicate definition of “Affordable Rent” and in

section 2.4.C, by replacing the word strata with rental. Carried Unanimously.

Council discussion continued:

- The green space dedicated as a municipal park and public right of way is an asset to the municipality and its residents.
- The park will be as prominent as Memorial Park on Esquimalt Road. Should the plan to transition a part of Sanders Road to parkland go ahead, the area will have a nice balance of density and green space.
- The lack of parking is of concern due to the density and lack of customer parking for businesses. Commercial owners should be consulted on the impact that parking variances have on their viability.
- A strong Transportation Demand Management plan would have brought a balance to the amount of parking variances.
- There will be access to a MODO vehicle across from the development.
- The overall plan for the development and its benefits outweigh any of the parking concerns.

Moved by Councillor Morrison, seconded by Councillor Cavens: That Council give first, second, and third reading to Zoning Bylaw, 1992, No. 2050, Amendment Bylaw, 2024, No. 3126 as amended by reducing the park dedication from 465 square metres to 425 square metres. Carried Unanimously.

3) [24-126](#) Grant Application - Cybersecurity Tabletop Exercise, Staff Report FIN-24-008

The Director of Financial Services and IT introduced the report to Council.

Moved by Councillor Armour, seconded by Councillor Helliwell: That Council direct staff to submit a grant application for \$7,000 to the Community Emergency Preparedness Fund - Emergency Operations Centres Equipment and Training Stream and authorize staff to execute any agreements related to a successful grant application, as outlined in Staff Report No. FIN-24-008. Carried Unanimously.

4) [24-125](#) Development Variance Permit Application - 500 Park Place, Staff Report No. DEV-24-020

Mikaila Montgomery, Planner, presented a PowerPoint and responded to questions from Council.

The application is for a variance to Zoning Bylaw, 1992, No. 2050 to accommodate the development of Esquimalt's new Public Safety Building. The request is for a variance to the south setback, the height, and the parking requirement.

Mackenzie Sinclair and Carly Abrahams, applicants presented a Powerpoint and responded to questions from Council.

Council comments included the following:

- There should be parking for all Municipal staff as some reside further away from work and others work a variety of shifts. Parking alternatives should be discussed at another time.
- The variance is minor and the Advisory Planning Commission recommended approval therefore it is supportable.

Moved by Councillor Rotchford, seconded by Councillor Armour: That Council approve Development Variance Permit No. DVP00144 and direct staff to register the notice on the title of the property. Carried Unanimously.

5) [24-147](#) Bike Lane Street Sweeper - Contract Award and Snow Clearing, Staff Report No. EPW-24-005

The Director of Engineering and Public Works introduced the report and responded to questions from Council.

Council commented that although snow is not a frequent occurrence the street sweeper can assist in clearing of the leaves which can be slippery, so will be a benefit.

Moved by Councillor Cavens, seconded by Councillor Helliwell: That Council:

- a) award a contract to Cubex Ltd. in the amount of \$247,015.73, excluding GST, for a bike lane street sweeper with snow blade; and
- b) direct staff to update the Salting/Sanding/Snow Clearing Council Policy No. E&PW - 08 to include up to 3" of snow clearing in protected bike lanes;

as described in Staff Report EPW-24-005. Carried Unanimously.

6) [24-148](#) Wurtele Place Residential Parking Only, Staff Report No. EPW-24-006

The Director of Engineering and Public Works introduced the report and responded to questions from Council.

Council comments were directed to all of the Residential Parking request Staff Reports:

- The current bylaw complaint process is not working so the plan to provide permits is welcome.
- The issue of enforcement should be discussed further to reduce complaints as it is difficult to manage the issues after hours.
- Residential Only Parking and the provision of permits will not solve the parking challenges that affect visitors, delivery vehicles and commercial

patrons. The parking strategy will hopefully outline some ideas to address the parking needs in the community.

- In fairness to the applicants the process can not be changed midstream.
- The requests for Residential Only Parking highlight the problem areas in the Township.

Moved by Councillor Morrison, seconded by Councillor Armour: That Council approve the implementation of Traffic Order 1346 for "Residential Parking Only" signage to be installed on the south side of Wurtele Place commencing 9m west of the intersection of Wurtele Place and Lampson Street and extending west to the terminus of Wurtele place, as set out in EPW-24-006. Carried.

In 6 - Councillor Armour, Councillor Boardman, Councillor
Favour: Cavens, Councillor Helliwell, Councillor Morrison, and
Councillor Rotchford

Opposed: 1 - Mayor Desjardins

7) [24-149](#) Fleming Street Residential Parking Only, Staff Report No. EPW-24-007

Moved by Councillor Morrison, seconded by Councillor Armour: That Council approve the implementation of Traffic Order 1347 for "Residential Parking Only" signage be installed on both sides of Fleming Street commencing 9m north of the intersection of Fleming Street and Colville Road and extending north 74m on the eastside of Fleming Street and 83m on the west side of Fleming Street as set out in EPW-24-007. Carried with Mayor Desjardins Opposed.

In 6 - Councillor Armour, Councillor Boardman, Councillor
Favour: Cavens, Councillor Helliwell, Councillor Morrison, and
Councillor Rotchford

Opposed: 1 - Mayor Desjardins

8) [24-150](#) Dunsmuir Road Residential Parking Only, Staff Report No. EPW-24-008

Moved by Councillor Morrison, seconded by Councillor Armour: That Council approve the implementation of Traffic Order 1348 for "Residential Parking Only" signage to be installed on both sides of Dunsmuir Road commencing 9m east of the intersection of Dunsmuir Road and Macaulay Street and extending east to 9m west of the intersection of Dunsmuir Road and Head Street as set out in EPW-24-008. Carried with Mayor Desjardins Opposed.

In 6 - Councillor Armour, Councillor Boardman, Councillor
Favour: Cavens, Councillor Helliwell, Councillor Morrison, and
Councillor Rotchford

Opposed: 1 - Mayor Desjardins

- 9) [24-151](#) Highrock Avenue School Zone, Staff Report No. EPW-24-009

The Director of Engineering and Public Works introduced the report and responded to questions from Council.

Moved by Councillor Armour, seconded by Councillor Rotchford: That Council approve the implementation of Traffic Order 1349 for "School Zone" on both sides of Highrock Avenue commencing at the west boundary of Lot 35, Plan 12875 to the west boundary of Lot 6, Plan 32271 and rescind Traffic Order 971, as set out in EPW-24-009. Carried Unanimously.

8. **BYLAW READINGS NOT SUBJECT TO A PUBLIC HEARING**

- 1) [24-152](#) Speed Limit Reduction Implementation, Staff Report No. EPW-24-004

The Director of Engineering and Public Works introduced the report and responded to questions from Council.

Council comments included the following:

- The majority of the Township's streets are 40 km/hour so the recommendation will provide some consistency and clarity.
- Historically the mindset has been that roads belong to cars, but pedestrians and cyclists are now being recognized as shared users so their safety needs should be addressed.
- Prior to adoption the Navy Base and the graving dockyard should be notified to provide communications to their staff members.
- The speed limit reduction implementation has been a regional approach and is in alignment with our neighbouring municipalities in the Capital Regional District.

Moved by Councillor Cavens, seconded by Councillor Morrison: That Council:

- a) give first, second and third readings to the Streets and Traffic Regulation Bylaw, 2017, No. 2898, Amendment Bylaw, 2024, No. 3134; and
- b) direct staff to implement speed limit signage on major roads, collector roads, and gateway signage for local roads; as described in Staff Report EPW-24-004. Carried Unanimously.

9. **REPORTS / MINUTES FROM COMMITTEES**

- 1) [24-160](#) Recommendations from the Committee of the Whole Meeting held March 11, 2024

Moved by Councillor Armour, seconded by Councillor Rotchford: That the recommendations from the Committee of the Whole Meeting of March 11, 2024 be ratified:

1. Liquor License Application - 505 Park Place, Staff Report No. DEV-24-016

"That the Committee of the Whole recommend to Council that the application for a Liquor Primary License at 101-505 Park Place (Saxe Point Public House) be supported as the location is appropriate, this use has long been planned at this site, and the applicant has sufficiently addressed noise concerns."

2. Budget 2024 Options Analysis, Staff Report No. FIN-24-005

"That the Committee of the Whole recommends to Council that staff be directed to prepare the financial plan bylaw that reflects a revenue increase of 7.72%, aligning with the priorities, initiatives and levels of service articulated by Council."

3. 2024-2028 Financial Plan Policies and Objectives, Staff Report FIN-24-006

"That the Committee of the Whole recommends to Council that staff be directed to include a 1% annual cumulative increase to infrastructure reserve transfers in an updated Revenue, Tax, and Financial Sustainability Policy document and prepare a separate Reserve Fund Policy for Council's approval."

4. Discussion Related to Small Scale Multi-Unit Housing Zoning Bylaw Amendments

"That Committee of the Whole recommend to Council that Staff prepare Zoning Bylaw amendments incorporating the Committee's comments to accommodate the Provincial Small-Scale Multi-Unit Housing (SSMUH) legislation as required of all BC municipalities by the Housing Statutes (Residential Development) Amendment Act, 2023 (Bill 44), and that these amendments be referred to the Advisory Planning Commission and APC Design Review Committee for feedback. Carried Unanimously.

10. COMMUNICATIONS

For Council's Consideration

- 1) [24-158](#) Email from Victoria and Vancouver Island Greek Community Society (V&VIGCS) dated March 11, 2024
Re: Greek Independence Day Proclamation and Light Up.

Moved by Councillor Armour, seconded by Councillor Morrison: That Council proclaim March 25, 2024 as Greek Heritage Day and that the Archie Browning Sports Centre and Waterpark be illuminated with blue & white lights.

Carried Unanimously.

11. PUBLIC COMMENT PERIOD

Doug Scott, resident, expressed that the number of parking spaces exempted for developments is causing a lack of parking and penalizing those who don't have permits such as employees of businesses, delivery vehicles and residential guests.

Marie Fidoie, resident, thanked Council for the progress on the Active Transportation Plan, such as the the pedestrian controled lights on Lyall Street, the improved safety with the installment of bike lanes with buffers on Lampson Street, and the speed limit change.

Lynda O'Keefe, resident, requested that the streets be swept of the small gravel that is occurring from road works and construction. The resident also expressed disappointment with residents not picking up after their pets.

12. ADJOURNMENT

Moved by Councillor Rotchford, seconded by Councillor Helliwell: That the Regular Council meeting be adjourned at 8:54 PM. Carried Unanimously.

MAYOR BARBARA DESJARDINS

THIS 8TH DAY OF APRIL, 2024

DEB HOPKINS,
CORPORATE OFFICER
CERTIFIED CORRECT

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, JUNE 12, 2024**

SUBJECT **Short-term Biosolids Management Plan – June Update**

ISSUE SUMMARY

To provide a monthly update to the Board on the status of the short-term options for biosolids management, as well as progress on the advanced thermal pilot project. An update on the Long-term Biosolids Management Strategy will be reported under separate cover.

BACKGROUND

The Capital Regional District (CRD) has been responsible for the beneficial use of Class A biosolids produced at the Residuals Treatment Facility since the commissioning of the core area wastewater treatment project in 2020. Currently, the CRD is operating under the Short-term Biosolids Management Plan (2020-2025), with the primary beneficial use options being incineration as an alternative fuel in a cement manufacturing plant in Richmond, BC, and integration with landfill cover systems as contingencies. When neither of these options are available, landfilling biosolids at Hartland Landfill has been the only alternative. In 2011, the CRD Board passed a resolution to ban the land application of biosolids from CRD facilities; however, in 2023, given the operational and logistical challenges with the short-term plan, the CRD Board amended its position to allow limited non-agricultural land application of biosolids as a contingency option. The CRD has secured the use of biosolids for industrial land reclamation at a quarry near Cassidy, BC. Staff continue to seek additional short-term beneficial use contingency options, in order to limit or avoid landfilling of biosolids when the other options are not available.

The CRD is also required to submit a Long-term Biosolids Management Strategy to the Province by June 18, 2024. Plan development has included input from the Technical and Community Advisory Committee, First Nations engagement and public consultation.

Short-term Biosolids Management Plan Implementation

Land Reclamation in Cassidy, BC: The quarry received the majority of biosolids produced in May. Biosolids are blended with sand and are being stored by the landowner under cover, pending regulatory approval for mixing and placement of biosolids growing medium, in accordance with the *Organic Matter Recycling Regulation* and approvals under the *Mines Act*. The quarry has capacity to accept 2,000 cubic metres in 2024 and received approximately 1,000 cubic metres through May. Staff anticipate that at the current rate of use, this contingency option will not be available after July 2024 until their existing stockpiles are blended and placed as final reclamation cover.

Cement Kiln in Richmond, BC: An equipment malfunction in April prevented any transports for the majority of May; one delivery was achieved at the end of May but again equipment issues forced the shut-down of the silo to receive biosolids. Repairs are expected to be completed mid-June. CRD and LaFarge senior staff will be meeting in June to discuss next steps to improve the reliability and resilience of the current process.

Landfilling at Hartland Landfill: There was no landfilling of biosolids through April and May, and staff anticipate sufficient capacity at the Cassidy quarry site through June to avoid landfilling. Landfilling is not a beneficial use, as per provincial regulations, and consumes valuable airspace at the landfill.

Provincial (Organic Matter Recycling Regulation) Technical Working Group Review: In 2023, the provincial Ministry of Environment and Climate Change Strategy conducted a review of the Organic Matter Recycling Regulation, including an evaluation of emerging contaminants of concern in the context of land application. The Province has not released the Technical Working Group's report nor commented on the OMRR review at this time. The Board considered its own literature review of current science and a legal review of land application risks to the CRD at its May 8 meeting. The Environmental Services Committee will receive updates on these tasks in the coming months.

CONCLUSION

The Capital Regional District continues to implement the Short-term Biosolids Management Plan while also finalizing a Long-term Biosolids Management Strategy. The short-term program continues to experience operational challenges and there is insufficient contingency capacity to ensure the sustainable beneficial use of biosolids, which prevents reliable regulatory compliance. Staff are currently exploring additional contingency options to support implementation of both the short-term and long-term plans.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, JUNE 12, 2024**

SUBJECT Long-Term Biosolids Management Strategy

ISSUE SUMMARY

The Capital Regional District (CRD) is required to submit a long-term biosolids management strategy to the BC Ministry of Environment and Climate Change Strategy (ENV) by June 18, 2024 as a requirement of the CRD's commitments under the Core Area Liquid Waste Management Plan (CALWMP).

BACKGROUND

Regulatory and Technical Considerations

Since the commissioning of the core area wastewater treatment project in 2020, the Capital Regional District (CRD) has been responsible for management of the Class A biosolids produced from the Residuals Treatment Facility (RTF). This new function requires a management plan that demonstrates beneficial use to the provincial regulator. In 2019, the Minister of Environment and Climate Change Strategy approved the short-term CRD Biosolids Beneficial Use Strategy, forming part of the CALWMP (Amendment 11) with the following conditions:

- (a) The CRD must include land application in the options analysis and conduct consultation for the long-term biosolids strategy that is intended to be implemented by January 1, 2025.
- (b) Options considered should include a range of beneficial uses including, but not limited to: forestry (for example: fertilizer/soil conditioner), reclamation (for example: mines), landfill closure and agriculture.
- (c) The consultation process must include citizens, local government and Indigenous communities within the CRD.

In preparation to meet the provincial requirement, the CRD retained a technical consultant who provided a long-term biosolids management options analysis report, which was presented to the Environmental Services Committee in July 2023. In addition to including the options analysis, the report contained an updated review of international biosolids management practices and a summary and evaluation of the advanced thermal (gasification and pyrolysis) pilots procured in 2022.

First Nation Consultation

The CRD undertook a First Nations engagement process that began in February of this year and will continue beyond the submission of the long-term strategy. Nineteen First Nations were included in the established contact list. The engagement sessions were followed up with an invitation to meet directly with individual nations and to continue open dialogue and discussion moving forward at any time. The Board received an update on May 8 and will continue to be updated as these conversations occur.

As directed by the Board, the CRD continues to explore beneficial use opportunities with those Nations that express interest both in-region and out-of-region. The CRD continues to listen to any

concerns Nations may have regarding the beneficial use options and is committed to working with individual Nations to address their concerns.

Public Consultation

The formal public consultation period began January 11, 2024. The process included an interactive website that solicited and posted email questions, media releases, print ads, online and representative surveys, and a Virtual Open House. The CRD also convened a Technical and Community Advisory Committee (TCAC), starting in October 2023, to provide consultation advice and input regarding biosolids management and beneficial use. A detailed account of what we heard was presented at the May 8 Board meeting.

Proposed Strategy

Based on:

- the Minister of Environment and Climate Change Strategy's direction and provincial requirements
- the CRD Board's ban of the land application of biosolids in the CRD
- the feedback received in the various public engagement processes detailed above
- the technical recommendations provided by GHD in order to develop a robust program that is flexible and provides redundancy in order to minimize operational and compliance risks
- the CRD's goal to have a strategy that:
 - utilizes the existing RTF infrastructure and Class A biosolids already being produced but also prioritizes implementing advanced thermal technology infrastructure
 - minimizes negative impacts on the natural environment
 - protects the health and safety of the public and workers involved in biosolids operations
 - is cost effective, while balancing all of the above considerations

the Long Term Biosolids Management Strategy proposes procuring a portfolio of options in alignment with the technical assessment and utilizing each option under a prioritization structure, summarized as follows:

- **Tier 1: Advanced thermal option**
Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers.
- **Tier 2: Out-of-region compliance options**
Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing options are being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region.
- **Tier 3: In-region contingency options**
Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable.

CONSULTATION UPDATES

Opportunities for feedback on the proposed Long-Term Biosolids Management Strategy were provided to the public, First Nations and the Technical and Community Advisory Committee (TCAC). Results are summarized below.

First Nations Consultation Summary

The CRD reached out to all First Nations from the initial engagement period to invite submissions on the draft Strategy that the Board endorsed on May 8 and that had been referred out for comment. Staff received correspondence from two First Nations, themes included request for more information on the thermal processing project, implications of land application and where the biosolids may be applied under tiers 2 and 3. Staff are working with each nation individually, addressing their concerns and will continue to engage more specifically if land application options under Tier 3 (in-region, contingency options) become feasible.

As directed by the Board on May 8, staff will continue to explore beneficial use opportunities with those Nations that express interest both in-region and out-of-region. The CRD will also listen to any concerns Nations may have regarding the beneficial use options and is committed to working with individual Nations to address their concerns.

Public Consultation Summary

The Draft Long-term Biosolids Management Strategy and portfolio of options were available for public review and comment from May 13 to June 3 on the CRD digital engagement platform [GetInvolved.crd.bc.ca/biosolids](https://getinvolved.crd.bc.ca/biosolids). The CRD used a media release, newsletters and social media to inform the public about the draft strategy and how to share their feedback.

Comments were collected and reviewed to ensure that personal information could be redacted. A total of 232 comments were received and common themes were identified. 18 comments indicated a preference for land application. 190 comments indicated a preference for thermal options or opposition to land application. 101 comments received followed a similar format.

The Engagement Summary Report outlining the process and complete list of comments is attached as Appendix A.

Technical and Community Advisory Committee Consultation Summary

The Technical and Community Advisory Committee (TCAC) met on May 22, 2024 to discuss the draft Long-Term Biosolids Beneficial Use Strategy and resultant Board motions. In general, the TCAC had no significant comments or concerns with the proposed strategy.

Based on the above, staff are not recommending changes to the strategy be made, and that the plan be submitted to province as per the tiered portfolio of options endorsed by the Board on May 8, 2024.

ALTERNATIVES

Alternative 1

That the CRD Board:

1. Approve the Long Term Biosolids Management Strategy as a portfolio of options (in alignment with the Long-Term Biosolids Management Strategy prepared by GHD, April 2024), that utilizes each option under a prioritization structure, as follows:
 - (a) **Tier 1: Advanced thermal option:** Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:
 - (i) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.

- (b) **Tier 2: Out-of-region compliance options:** Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option is being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These are (in priority order):
- (i) Industrial land reclamation, such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
 - (ii) Forest fertilization
 - (iii) Production of biosolids growing medium and/or feedstock in soil production
 - (iv) Partnerships with established biosolids programs
 - (v) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option when available.
 - (vi) Explore partnerships with additional industrial partners interested in combustion.
- (c) **Tier 3: In-region contingency options:** Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable and only after receiving explicit consent from the Board and consulting and engaging with any affected First Nations, should the need for Tier 3 arise.

These include (in priority order):

- (i) Industrial land reclamation, such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
 - (ii) Forest fertilization
 - (iii) Maintain the option of biosolids application in engineered cover systems and biocell at Hartland Landfill to act as an emergency support option, subject to space availability and cover needs of the Landfill;
2. Direct staff to submit the Long-Term Biosolids Management Strategy to the BC Ministry of Environment and Climate Change Strategy;
 3. Direct staff to continue to explore biosolids beneficial use opportunities with those First Nations that express interest both in-region and out-of-region, and to address any concerns First Nations may have regarding the beneficial use options; and
 4. Refer the staff report with the Long-Term Biosolids Management Strategy to the Core Area Liquid Waste Management Committee for information.

Alternative 2

That the CRD Board provide alternative direction to staff regarding the Long-Term Biosolids Management Strategy

IMPLICATIONS

Climate Action Implications

All beneficial reuse long-term biosolids management options have potential greenhouse gas (GHG) emission implications. Land application options have higher emissions the further away the land application sites are, due to transportation requirements. However, these could be offset by the enhanced GHG sequestration within the soils following land application. Thermal and advanced thermal options result in direct GHG emissions to the atmosphere, in addition to transportation-related emissions. Advanced thermal options partially mitigate GHG emissions with sequestration in biochar. Respondents to both the Ipsos representative survey and the CRD

survey indicated that “Environmental Impacts (air, water and soil contaminants)” were the most important consideration when planning for the beneficial use of biosolids. Costs, climate/GHG emissions and community impacts (truck traffic, odour and noise emission, dust) were less important.

Environmental Implications

Under the Canadian governance framework, provincial and federal regulators and agencies are responsible to ensure that biosolids reuse options are safe for the intended purposes and protective of human health and the environment when produced and used in accordance with regulations. Agencies assess the risks and benefits associated with specific resources and products and recommend policies that are incorporated into regulatory frameworks, which are evaluated on a regular and ongoing basis. Current regulations support the beneficial use of biosolids, including all of the options considered by the technical consultant.

All options have some level of risks and benefits. Advanced thermal technologies with biosolids feedstock are not yet commercially proven in Canada or the United States. Thermal options have the benefit of reduced (but not eliminated) contaminant levels in end-products. Despite concerns about risks associated with contaminants for land application options, the most significant land application risks are associated with over fertilization (too many nutrients). Both sets of risks can be mitigated by following properly-designed land application plans and complying with the OMRR. Land application options have the benefit of recycling nutrients, enhancing plant growth and offsetting use of commercial GHG-intensive fertilizers.

Community concerns around the land application of biosolids are largely based on the presence, or suspected presence, of unregulated organic chemical compounds, commonly referred to as “contaminants of emerging concern” (CECs). CECs include Volatile and Semi-Volatile Organic Compounds (VOC & SVOC), Per and Polyfluoroalkyl substances (PFAS), Polybrominated flame retardants (PBDE), dioxins, pharmaceuticals and personal care products (PPCP) and microplastics. There is concern that biosolids with detectable levels of unregulated CECs could impact soil quality, surface water or groundwater.

In recent years, there has been an increased interest in PFAS and their effects on human and environmental health. PFAS are a class of over 4,700 substances that do not occur naturally. PFAS make products non-stick, water repellent and fire resistant, and are found in a wide range of consumer and industrial products, including cookware, food packaging, clothing and firefighting foams. PFAS are sometimes referred to as “forever chemicals” because the molecules are characterized by a chain of strong fluorine-carbon bonds, which result in highly stable and long-persisting chemicals. Exposure to sufficient concentrations of PFAS is associated with an increased risk of cancer, increased cholesterol levels, and can affect the immune system.

In June 2022, ENV released the Organic Matter Recycling Regulation Project Update, which contained some discussion of CECs. “Due to advances in analytical chemistry, the ability to measure CECs has generally outpaced the ability to understand the impacts of CECs on human health and the environment. For this reason, the impacts of CECs in biosolids and wastewater treatment discharges is the subject of ongoing scientific research.” The ENV intends to add the authority for a director to require the testing of biosolids for CECs but does not intend to regulate the concentration of CECs in biosolids. ENV advocates for a prevention-first approach to reducing CECs in biosolids by implementing source control measures to discourage the discharge of certain wastes to the system.

On May 19, 2023, the Canadian Food Inspection Agency (CFIA) proposed an interim standard for PFAS in biosolids used in Canada as fertilizers. The CFIA worked with Environment and Climate Change Canada, Health Canada and provincial partners to assess an appropriate standard for PFAS. The proposed standard will protect human health by preventing the small proportion of biosolids products that are heavily impacted by industrial inputs from being applied to agricultural land in Canada. The proposed standard is 50 ppb PFOS (one type of PFAS). The concentration of PFOS in CRD biosolids is under the proposed standard at approximately 6 ppb (ng/g) (based on two samples). For comparison, a 2020 study found that the PFOS concentration in household dust was 100 ppb (100ng/g).

Financial Implications

The proposed portfolio includes options with a range of costs per tonne. Land application and conventional thermal options are approximately the same, at less than \$500 per tonne. Advanced thermal options are more expensive at up to \$4,500 per tonne; there is significant uncertainty regarding capital and operating costs for a permanent advanced thermal facility at this time, as well as the potential for revenue generation from advanced thermal synthetic gas, bio-oil and biochar end-products and a current lack of demonstrated facilities for cost comparisons. However, this information will be ascertained through the development of the demonstration plant initiative.

Service Delivery Implications

A portfolio of options is required to ensure redundancy and resiliency of the biosolids management strategy. Previous experience with the CRD, as well as a jurisdictional review, has indicated that relying on a single or very few options and single contingency is not suitable to maintain service delivery and regulatory compliance. Based on the consultation feedback, as well as concerns raised previously by the Board, a portfolio of beneficial use options that includes reclamation of industrial lands and forest fertilization, but excludes direct application to agricultural lands is considered prudent. Use of biosolids as an alternative fuel in the current short-term plan will also be carried over as an option in the long-term strategy.

Although the long-term strategy is to address biosolids produced by the Core Area wastewater service, the RTF was designed to receive and process residual solids from the Saanich Peninsula, Sooke and Gulf Island wastewater treatment plants. Once the RTF receiving station is operational, staff will work with the Saanich Peninsula Wastewater Commission to update the Saanich Peninsula Liquid Waste Management Plan accordingly.

Alignment with Board and Corporate Priorities

The recommended Long-Term Biosolids Management Strategy aligns with the 2023-2026 CRD Corporate Plan goal of *Management of wastewater and treatment residuals*, and the initiative to *Develop and implement a long-term Biosolids Management Plan*. The Strategy also supports the initiative under this goal to *Update the Liquid Waste Management Plans for the Saanich Peninsula and Core Area* with regards to complying with the commitment to beneficially use the biosolids generated from the wastewater treatment plants.

First Nations Implications

First Nations are seeking a more respectful, reciprocal government-to-government relationship with the CRD related to service delivery and service delivery impacts in their traditional territories.

As described above, First Nations consultation on the Long-Term Biosolids Management Strategy is ongoing. The CRD will continue to explore beneficial use opportunities with those Nations that express interest. The CRD will also listen to any concerns Nations may have regarding the beneficial use options and is committed to working with individual Nations to address their concerns.

Intergovernmental Implications

Due to the nature of some of the beneficial use options and in order to have a portfolio of options that ensures redundancy and flexibility, it is not unusual for local governments to have biosolids management programs that extend beyond the jurisdictional boundaries of the local government in terms of processing and end use, particularly in areas that are more urban and those that produce larger volumes of biosolids.

Social Implications

Based on all public and TCAC engagement, there is majority support for prioritizing a range of beneficial use options, including advanced and conventional thermal options and land application options. Both the representative survey and TCAC recommendations were in close alignment, with industrial land reclamation and forest fertilization having the strongest support. However, the voluntary survey showed more support for advanced thermal options, although some forms of land application still had support. The differences between the representative and voluntary survey results were likely due to the advocacy and efforts of a few special interest groups that are known to be opposed to land application options. Moving forward, additional public and stakeholder consultation, as required by the provincial regulator on a project-by-project basis, will be conducted.

CONCLUSION

The CRD is required to submit a Long-Term Biosolids Management Strategy to the provincial regulator by June 18, 2024, as part of the CRD's commitments under the Core Area Liquid Waste Management Plan.

The Long-Term Biosolids Management Strategy consists of a portfolio of options that seeks to ensure continuous regulatory compliance (that reliably avoids landfilling) while actively seeking innovative solutions to execute the Board's vision of eliminating all forms of land application. The tiered approach considers First Nations and public input and proposes an optimal approach to utilizing options currently available in the biosolids management market.

RECOMMENDATION

That the Capital Regional District Board:

1. Approve the Long Term Biosolids Management Strategy as a portfolio of options (in alignment with the Long-Term Biosolids Management Strategy prepared by GHD, April 2024), that utilizes each option under a prioritization structure, as follows:
 - (a) **Tier 1: Advanced thermal option:** Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:

- (i) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.
- (b) **Tier 2: Out-of-region compliance options:** Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option is being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These are (in priority order):
 - (i) Industrial land reclamation, such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
 - (ii) Forest fertilization
 - (iii) Production of biosolids growing medium and/or feedstock in soil production
 - (iv) Partnerships with established biosolids programs
 - (v) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option when available.
 - (vi) Explore partnerships with additional industrial partners interested in combustion.
- (c) **Tier 3: In-region contingency options:** Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable and only after receiving explicit consent from the Board and consulting and engaging with any affected First Nations, should the need for Tier 3 arise.

These include (in priority order):

- (i) Industrial land reclamation, such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
 - (ii) Forest fertilization
 - (iii) Maintain the option of biosolids application in engineered cover systems and biocell at Hartland Landfill to act as an emergency support option, subject to space availability and cover needs of the Landfill;
2. Direct staff to submit the Long-Term Biosolids Management Strategy to the BC Ministry of Environment and Climate Change Strategy;
 3. Direct staff to continue to explore biosolids beneficial use opportunities with those First Nations that express interest both in-region and out-of-region, and to address any concerns First Nations may have regarding the beneficial use options; and
 4. Refer the staff report with the Long-Term Biosolids Management Strategy to the Core Area Liquid Waste Management Committee for information.

Submitted by:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: CRD Engagement Summary – Draft Long-term Biosolids Management Strategy (June 2024)

Engagement Summary

Draft Long-term Biosolids Management Strategy



Capital Regional District | June 2024

Background

The Capital Regional District (CRD) is required to submit a Long-term Biosolids Management Strategy to the BC Ministry of Environment and Climate Change Strategy by June 18, 2024 with the expectation that all biosolids be beneficially used through a range of options, in accordance with provincial regulation.

The CRD Board endorsed a draft strategy on May 8, 2024 that includes a portfolio of options to be utilized under a prioritization structure.

The Draft Long-term Biosolids Management Strategy and portfolio of options were available for public review and comment from May 13 to June 3, 2024. Feedback received during this time is being presented to the CRD Board for consideration as part of the final review and approval process.

Engagement Methods

“Get Involved” Website

The CRD uses its digital engagement site [GetInvolved.crd.bc.ca](https://getinvolved.crd.bc.ca) to share details of the draft Long-term Biosolids Management Strategy and invite feedback. Comments were collected using an online form and reviewed to ensure that personal information could be redacted.

During the feedback period, approximately 1177 visits resulted in three levels of participation:

- Aware (visited at least one page): 913 participants.
- Informed (downloaded documents, visited multiple pages): 459 participants.
- Engaged (shared comments or asked questions): 203 participants.

Media

An information bulletin was sent to media on May 13, 2024, following the CRD Board endorsement of the draft Long-term Biosolids Management Strategy. The bulletin highlighted the portfolio of options, next steps and how to share feedback.

Agenda items from the Board meeting and links for more information were included in the Board Highlights e-

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

newsletter sent to subscribers in May. The Chair also highlighted the biosolids long-term plan and next steps in his monthly CFAF update in May.

- Info Bulletin: [The CRD invites public feedback on the Long-term Biosolids Management Strategy](#)
- [CRD Board Highlights: May 2024](#)

Local media coverage:

- [Times Colonist](#) May 19, 2024
- [Oak Bay News](#) May 13, 2024
- [CFAF Interview](#) May 8, 2024

Social Media

Staff scheduled a series of posts on social media schedule between May 13 to June 3 to promote engagement on the Long-term Biosolids Management Strategy. Each post included a call to action to learn more and share feedback on the Get Involved website. Staff responded to questions received through social media about the Long-term Biosolids Management Strategy when appropriate.

- **Facebook** posts resulted in approximately 7,524 impressions (number of times people saw a post) with a 2.32% engagement rate (percentage of people who clicked, liked, shared or commented).
- X posts resulted in approximately 2,814 impressions with a 1.78% engagement rate.
- **LinkedIn** posts resulted in approximately 2,501 impressions with a 5.67% engagement rate.
- **Instagram** posts reached approximately 1,194 people with an engagement rate of 1.59%.

Responses

The following comments were received by the CRD via an online comment form and are provided to the Board as part of the final Long-term Biosolids Management Strategy review and approval process.

The Long-term Biosolids Management Strategy also received comments from the Peninsula Biosolids Coalition in

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

a letter sent on June 4, and two letters sent directly to the CRD Board email portal. These letters have been added to this report.

A total of 232 comments were received and common themes were identified. 18 comments indicated a preference for land application. 190 comments indicated a preference for thermal options or opposition to land application. 101 comments received followed a similar format.

Date received	Please provide your feedback on the strategy.
2024/05/13 – 6:45pm	There should be no distinction between in- and out-of-region land application options. As per the outcome of the surveys, ALL land application options should be pursued. The stricter requirements for in-region demonstrate NIMBY-ism and a double standard by our politicians. Listen to the survey outcomes.
2024/05/13 – 6:48pm	Our CRD politicians are dishearteningly presenting a NIMBY perspective by calling for more strict criteria for in vs out of region land application options. The surveys indicated public support for all land application options in and out of region options. Listen to the surveys, not the misinformed politicians (misinformed in continuing to support local land application ban).. Land application can be done safely even when considering contaminants.
2024/05/13 – 7:16pm	Any thermal option ("advanced" or otherwise) will have direct GHG implications. Land application options should be the priority instead. Shame on CRD politicians for not allowing in region options while allowing non-restricted out of region land application. Land application should be UNRESTRICTED no matter where.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/05/ 14 – 3:22pm	This public comment process is a joke and comes nowhere close to meeting provincial requirements for consultation with the public on a long term waste management plan. That said, the first two options make sense. Continued spreading of biosolids at Hartland is going to lead to significant longterm health and environmental impacts owing to bioaccumulation of "forever chemicals" that are present in small amounts in biosolids. While present in small amounts, continued application of 10 tonnes a day to the filling face of Hartland is an irresponsible practice. There should be no land application in region including at Hartland. There should be a full explanation of what went wrong with the Lafarge option where the biosolids were to be burned as fuel, and an effort made to find other similar facilities to Lafarge to take the biosolids as fuel. Lafarge is far from being the only facility that could take them in the interim while the gasifier is being built. If no out of region solution, like Lafarge, can be found, the biosolids should be biocelled and stored until they can be safely removed and destroyed when the pyrolysis process becomes available. This should not be at Hartland which is already under strain.
2024/05/ 14 – 7:28pm	Tiers should be reversed with priority being in region land application, followed by out of region land application, and and thermal option only if no other solutions are available.
2024/05/ 15 – 4:51pm	I find it interesting that Technical and Public Advisory Committee as well as the general public do not support the CRD Board's ill conceived land application ban, however the CRD intends to continue down a path that will cost the taxpayer unnecessary millions for an uncertain and unproven technology, which (if successful) will pump huge amounts of carbon dioxide directly into the atmosphere during a climate crisis.
2024/05/ 17 – 3:42pm	In region contingency options should take priority before out of region options. We process it here, we should manage and re-use it here. Being a sustainable community includes managing our waste within the community, not burdening other communities with it.
2024/05/ 19 – 6:20am	Please keep biosolids out of the forest. Do not apply it as forest fertilizer, as described in tier two of the board's strategy. Using biosolids as fuel has productive value. Using biosolids as forest fertilizer would only meddle with forest ecology as it is processed and not derived from the forest.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/05/19 – 8:06am	I strongly disagree with dumping biosolids due to the health risks of spreading pollutants such as hormones and medicines passed through human waste. Also the risk of bacteria, virus's, such as MSRA, protozoa, microplastics, etc.
2024/05/19 – 8:59am	As a resident near the Hartland Landfill I am concerned that the strategies will affect the ground water. Many of the near by residents are on a well and have their own septic systems. It seems like all this sewage passing us by will ultimately affect us and we aren't able to use the sewage system ourselves. Its only fair that this project hook up all the surrounding homes to the sewage system since we have to pay for our septic upkeep and CRD costs. I also think this project should hook us up to city water so that we are not always worried about contamination.
2024/05/19 – 1:50pm	Stop being political hypocrites.... land application should be freely done both in and out of region. There should not be more stringent criteria for in region.
2024/05/19 – 2:33pm	Definitely don't put biosolids on agricultural fields. CRD should find some way to detoxify the waste.
2024/05/19 – 3:08pm	do not pour dangerous, forever chemical solids on top of landfill. Find a safer way to store for as long as needed.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/05/19 – 4:32pm	We need to fast track the biochar/energy production option. There should be enough data from Australia & elsewhere that we do not need to "reinvent the wheel". There already working plants -why do we need our own "demo" ? Surely Synagro can contribute to the process- they are planning similar facility in US ? Maybe Fortis can get involved. Maybe a joint venture with Australian partner. The prospect of using tier 2 & 3 options for the next 8-10 years to dispose of 10 tons a day poses too many environmental /legal liability /staff time-logistical risks. Lets make the CRD an environmental leader in this field with Provincial/Federal support & create some internationally exportable Canadian expertise. Lets do a REALISTICALLY costed full production facility analysis in the next year & present it to CRD tax payers. Thank you & good job on the what we heard report.
2024/05/19 – 5:48pm	Please read the article from this link. https://biochartoday.com/2024/01/01/micropollutants-in-biochar-produced-from-sewage-sludge-a-systematic-review-on-the-impact-of-pyrolysis-operating-conditions/#:~:text=Biochar%2C%20a%20charcoal-like%20material%20produced%20from%20organic%20waste%2C,harmful%20micropollutants%20in%20biochar%20derived%20from%20sewage%20sludge.
2024/05/19 – 6:03pm	Bio solids should not be spread on land outside of the landfill site. Lands they might be spread upon have an unknown future and the waste could have long term negative impacts. Perhaps they could be shipped to Drax in the UK so they can burn it for electricity generation instead of burning wood pellets from BC's old growth forests. Seriously, generating energy from the waste could be the best solution.
2024/05/20 7:19am	I am always amazed at how little attention decision-makers give to the consequences of their actions. Nobody looks at 'the big picture' - just the political consequences of not responding to 'Mr Floatie.' The biosolid issue should have been part of the planning process from the beginning of the decision of land-based sewage treatment. Decisions made in haste reverberate into the future ... now no one wants the 'products' of the sewage decision. Rightly so, given the presence of 'forever chemicals.' The (provincial) political decision to "build, build, build!" will bring more people to the Island, will create an ever-increasing supply of unwanted PFAS-contaminated 'biosolids.' We are destroying the natural environment which is the foundation for life, and drowning in our own waste. Shitty situation.

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2024/05/
21 –
11:59am

The only option that makes sense for many reasons is the "Tier 1" Advanced Thermal Option. All other management options outlined in the CRD's long term strategy involved land application of the toxic sludge that is referred to as biosolids. The persistence of "forever chemicals" such as PFASs and the other 80,000 chemicals found in sewage sludge is just too dangerous for humans, livestock and the natural environment. Many other countries and US states have now banned the land application of sewage sludge after learning the hard way that there are so many negative impacts of this approach. Please use common sense, listen to the public who have elected you to make sound decisions on our behalf. Surely you were alarmed at the news that Synagro is being sued in Texas because of the deleterious effects from their sale of biosolids to farmers there. No land application of biosolids!

2024/05/
21 –
4:14pm

Dear CRD Board,

Thank you for considering my feedback on the draft long-term biosolids management strategy. After reviewing the GHD Technical Memo on the Long-Term Biosolids Beneficial Use Strategy, I have some concerns regarding the selection of "advanced thermal options."

While these options may offer benefits, they also come with significant drawbacks and uncertainties:

1. High CAPEX and OPEX: The capital investment and energy-intensive pre-drying process associated with these options can be cost-prohibitive.
2. Undetermined End Use: The utilization of bio-oil, ash, and biochar remains uncertain and subject to market demand.
3. Controversial Impact: The agricultural and global warming effects of biochar land application are still debated.
4. Contaminant Reduction Uncertainty: The level of reduction and environmental fate of contaminants are not well-defined.
5. Technological Readiness: Pyrolysis and gasification have low technological readiness levels.
6. CCME Guideline Concerns: These thermal processes may conflict with the CCME beneficial use guideline due to negative energy balances and limited residuals recovery opportunities.

I recommend considering alternative approaches, such as thermal hydrolysis or hydrothermal processes. These options could offer lower costs, reduced energy input, and more clearly defined beneficial-use products. Additionally, I noticed that the previous survey lacked questions about people's familiarity with biosolids management technologies. Including such questions would provide valuable insights.

Thank you for your attention to this matter.

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2024/05/
21 –
7:17pm

Just no biosolids on farm/agricultural land.

2024/05/
21 –
8:44pm

It is hypocritical for the CRD to rank in-region land application of biosolids as the last resort (tier 3), while placing out of region land application in the tier 2 ranking. Some out of region biosolids land application may be reasonable, but only if the CRD is willing to land apply biosolids within the CRD first. Therefore the CRD should prioritize in region land application, ranking this option as tier 2. Similarity, all other management options that are explored for CRD generated biosolids should prioritize in-region management that is complemented by out of region beneficial uses. Combustion options that do not have a net environmental benefit should not be considered for CRD biosolids. The cost estimate of each management option should be visible to CRD residents, since the cost will be passed onto tax payers.

2024/05/
22 –
11:42am

Is the CRD Board's position that the provincial government (Ministry of Environment) is knowingly poisoning people and the environment in order to allow municipal governments to save money? I'm curious as to why the Board doesn't seek advice from experts in this field, and continues to rely solely on the opinions of concerned citizens with no education or experience in environmental science or resource management.

2024/05/
22 –
12:22pm

CRD staff has indicated that the cost of a temporary demonstration facility for "advanced thermal" technology is approximately \$10 million dollars. If the trial successfully processes all of the biosolids produced for 15 months, the per tonne cost is close to \$2500/tonne. This is more than 100 times higher than the per tonne cost of the existing land application options employed by all other Regional Districts in BC. What is the CRD Board thinking?

2024/05/
23 –
6:28am

We do not want that garbage here, it should be taken care of from where ever they take it from

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2024/05/23 – 7:10am	Disposing city waste in the country is as bad as pumping raw sewage into the ocean. The solution is to make it someone else's problem. The contract for the job should not have been awarded if they didn't have a proper way to dispose of the material..
2024/05/23 8:05am	The thermal plant should have been constructed at the same time as the waste disposal plant. It is unfortunate it was not built as needed but typical of politics and short term thinking. There are many of these thermal plants operating around the world. The need for a 2 year trial is inappropriate, it seems that the right people are not working for the CRD and the right politicians are not making the right decisions to run this issue to ground. The thermal plant should have been phase 1 construction as the treatment plant was built. The CRD should immediately adopt an appropriate sized, proven technology plant and begin construction. A 2 year pilot is a waste of time, there many types of waste to energy plants in Europe, I am sure CRD engineers have multiple options for consideration. Please stop the analysis paralysis.
2024/05/23 – 9:08am	We in Jordan River are against any biosolid land application here or anywhere. Thanks for listening [REDACTED NAMES]

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2024/05/
23
10:28am

The Tier-1 Advanced thermal option is far superior to the Tiers-2 and -3 options. Construction of an advanced thermal processing facility for CRD sewage treatment of biosolids into biochar should proceed as quickly as possible. Also, planning and development should proceed expeditiously for facilities for accepting and using all the biochar produced by the CRD. This biochar should be used only in ways that have positive environmental and climate effects (carbon sequestration), e.g. a substitute for construction materials such as concrete and tar.

The only Tier-2 measures that should be allowed are supplying biosolids for alternative fuel combustion and for supplying biochar production facilities outside the CRD. CRD biosolids should not be used for agriculture, industrial reclamation or forest fertilizer applications because of the threat of environmental contamination.

Tier-3 should be for emergency situations only and should comprise the provision of specifically constructed containment facilities to securely and safely store thermally processed biosolids until they can be further processed into biochar per Tier 1.

2024/05/
23 –
4:00pm

Absolutely NO. No to all of it. The simple fact that this waste will contain absolutely everything that is put into the waste system including chemicals, drugs, effluent, detergents, microplastics and so much more is a deterrent in its own right. Undetermined chemicals mixed together to create new unknown chemical compounds... microplastics... pharma drugs... etc. This is going to be dispersed onto land that surrounds the South Islands main drinking water source (Sooke Lake and all of it's surrounding watershed tributaries)! Does the CRD have an exact knowledge of groundwater flow patterns? This has the potential to affect those on well water in addition to municipal water distributed from Sooke Lake. The 'potential' for this to happen alone should be sufficient deterrent to proceed! Our drinking water is our lifeline. Not to mention the adverse effect on wildlife flora and fauna. There are hundreds of micro-biomes on the Island, all of them will be affected in different ways either directly or indirectly by this. How they will be affected is merely speculation, truly unknown, and the resulting "we warned against this" will be words uttered far too late. Other municipalities around Canada use waste treatment plants and other methods to process waste that are non-threatening to the environment. Stop this absurdity before irreparable damage is done! Our forests and Island environments are doing just fine without human waste being sprayed/dumped all over them...

We can put people on the moon, rovers on distant planets, but are unable to solve the challenge of what to do with human waste on Vancouver Island without risking our potable water supply and a very delicate ecosystem made up of hundreds of fragile micro-biomes! Think about that for a minute. NO to this absurdity!

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2024/05/23 – 4:44pm	I personally feel that if this is to be performed, you are solely responsible for harming future generations. Not only human, but flora, fauna, mamilian, insects and avians to name a few. If what is found in water from human waste is any testiment to what will leach in to ground water, water sheds and tables, thus reaching spawning streams and other sources, it will cause irreparable damage that cannot be un done. Shame on whatever 'science' you are basing this proposal upon. It's an absolute disgrace that this is even considered. Please, never, ever do this. We need to leave a better earth for future generations, and by spreading biosolids, you are guaranteeing a wasteland. Literally.
2024/05/23 – 4:46pm	Biosolids are an added nutrient to the environment and many countries promote their use.
2024/05/23 – 5:43pm	Please keep Victoria's bio solids in Victoria. Don't risk know and possibly more unknown risks/hazzards to spoil our forests and possibly react our Juan de Fuca strait. Thousands of flora and fauna are existing happily and we don't need city biosolids trucked here. Make Victoria produce the planned bio solid product and sell it as planned. Too many risks for no gain.
2024/05/23 – 7:21pm	We should find alternative to spreading biosolids into rural lands! This could seriously harm the wildlife and the drinking water of those on wells.
2024/05/23 – 8:04pm	I feel this is the wrong way of dealing with this. I draw my water directly from Demamiel creek, spreading the bio solids in the hills above my residence will contaminate this creek and effect the salmon bearing stream and my water along with the residents in my neighborhood! Not to mention that this is in the area of the Victoria watershed also! This is a very bad plan and they should look into a better way of dealing with the biosolids. This should not be spread in the hills of a watershed and above residential areas

Draft Long-term Biosolids Management Strategy



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[illegible]

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2024/05/
24 –
11:45am

Strategy Seems reasonable. But am worried that the land fill/spreading options may end up being implemented if adequate energies/funds are not devoted to other utilisation measures

2024/05/
24 –
12:18pm

using metchisin land for biowaste. This is a biodiversity hub that needs to be managed for its Keystone species and not a dumping ground.

2024/05/
24 –
12:27pm

I strongly oppose the distribution of biosolids on land. Now, with human waste laden with antibiotics and other drugs, as well as forever chemicals, it would be ludicrous to imagine that it would benefit life on land. It should not be spread anywhere: not on farmland and not on forests. Yes, it might speed up forest growth for the timber industry, but at the expense of contaminating all of our ecosystems for all time. Go the route of gasifying and creating biochar. A clean, usable product that will actually benefit this place we call home.

2024/05/
24 –
1:54pm

The only disposal of biosolids that I approve of is gasification. All efforts should be made to have this option be realized more quickly and at a lower cost. I believe this will be possible if you focus on just this one option. When you consider cost, please deduct the value of the usable energy produced by gasification. Maybe we can profit by turning poop into product. Spreading biosolids on the ground is absolutely out. I'm sure you know that the toxins will leach out of the dangerous dung and into the streams and aquifers. What's worse than what might be in regular human waste is what hospitals and industry put down the sewer drain. Can you imagine? Here's the rule: If you wouldn't eat or drink it, don't put it on the land, anywhere.

2024/05/
24 –
6:13pm

Are there no facilities nearby that we can ship to for transition to fuel while we build out Tier 1 option? There would be a revolution if attempts were made to spread it in the watershed of all the people and businesses in non core CRD lands,

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2024/05/
25 –
4:25pm

We have flagged the issue of Biosolids for some time now and when I attended the CRD meeting in January 2024 I started to feel very uncomfortable about the path of the CRD. Since January we have spoken to many people in our community who are quite rightly aghast when they realize the dangers that spreading Biosolids creates and the plans of the CRD to include surface application to lands in the Juan de Fuca rural resource land areas as part of their regional strategy. BC and Canada do not have standards for Biosolids and science tells us that regardless of standards there is no safe level of containments within Biosolids that permit safe spreading. The toxic materials in Biosolids occur largely due to the presence of Plastics and Pharmaceuticals which have been ingested and then flushed down the local sewers. Simple drying, as is done now at Hartland Landfill does not remove these toxic substances. The dried Biosolids, if dumped anywhere, can and will find their way in to our lands and water and all animals. Wind born dust can easily scatter the poisons ten kilometers from the source point. Rain and snowmelt can dissolve them and carry the poisons into the soil, the interflow water level and into streams, lakes, rivers and most dangerously into the underground aquifers from which so many of us draw our drinking water. The only safe technological approach to clean Biosolids that I have seen is complete burning (pyrolysis). The resulting biochar substance is as clean and inert as we can currently expect. Starting now the CRD is moving to this conclusion, I think, and yet they drag their feet with a study of the process, building of a pilot plant, and then upgrading it to a full size plant to handle the Biosolid product. This, we can expect to take them seven to ten years to complete and in the meantime their plans follow that when they need to get rid of the biosolids they always have the option of dumping it on forested lands well outside the inner urban core of municipalities. Even if our local governments in Metchosin, Sooke, and the Juan de Fuca were given a vote on the plan they would not be able to over come the votes of the other municipalities who only rational is "out of sight, out of mind". Biosolids are dangerous. They can poison and kill animals, birds, fish, humans, and contaminate and kill plants and farm produce by the use of water from local wells. Once polluted we cannot rectify our aquifers. We will be without water. Residents strongly support the ban against dumping any biosolids, anywhere, anytime. Thank you,

2024/05/
25 –
6:18pm

Is it intentional that this box is so difficult for the the public to find to comment ? There is no defined safe limit for PFASs and other "forever plastics" anywhere in the world to show if the PFASs and other plastics found in the CRD Biosolids are safe to spread or not, so a plan to spread this is unethical, dangerous and potentially criminal. If we the public know about the hazards, one would think "the experts" on CRD staff, the consultants and the Board know. So NO to spreading biosolids. Thank you.

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2024/05/26 – 7:24am	I am vehemently against the land application of biosolids. It is untenable in my view to compromise the productive capacity of our soils and compromise our watersheds. The issue is not the human waste, although this would require proper handling. The issue is the other contents of this waste. Micro plastics and more end up in the biosolids. One of my biggest concerns are the PFAS chemicals -also called forever chemicals, that are unfortunately found in common household products like non-stick pans, cosmetics, stain removers and cleaners. There are over 9,000 of these compounds. They are proven to cause cancer, and birth defects among other ailments. These are found in the biosolids and they never go away. Testing for PFAS is very costly and complicated. The only regional solution that I recommend is to incinerate our waste. It is very costly, but this is the price of maintaining our health, and the health of our soils and the ocean. A medium to longterm solution is to ban these chemicals at the source. We have no need of PFAS chemicals in our homes, nor do we need persistent pollutants in the products we use in our homes. If we could garner support at the provincial and federal level, pressure could be applied to manufacturers to only use biosolid-safe ingredients in their products. The issue can be revisited when we can guarantee that the land application of biosolids won't contaminate our soils and our people. Until then, I remain vehemently opposed to the land application of biosolids.
2024/05/26 – 3:20pm	I definitely want to see the ban on land application of biosolids in the CRD maintained. That is, I do not want any biosolids used in land applications in the CRD - or anywhere else.
2024/05/26 – 3:34pm	I do not believe that "nutritive value in biosolids outweighed the land contamination risks" for land application use of biosolids. That assessment is based on a perspective that contamination is understood and predictable. Have a real-time conversation with anyone who has ever suffered from PFAS contamination and see how the perspective of nutritive value outweighing the negative impacts of contamination is transaction-centric, not human-/environment-centric. Please maintain the ban on land application of biosolids!
2024/05/26 – 9:44pm	I am no expert in biosolids (aka bio sludge). I do appreciate that the local food I eat is effected by the quality of our soils. Any decision to add the toxicity of biosludge to the soil my food is grown in is insane. I am sure the CRD is not looking for a nomination for membership in the reckless endangerment club. Safety of our food supply simply cannot be compromised.

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2024/05/27 – 5:15pm	Under no circumstances should biosolids be used on our soils, especially after hearing of the legal case in the US concerning hazardous materials found in biosolids by the same company considered by the CRD. To have not had a clear plan for the disposal of this waste right from the start, is where the negligence began.
2024/05/28 – 8:52am	Fossil fuel free thermal conversion, using the latest carbon free technology, is the only way to go. It's the best long term solution that takes into account our region's need to reduce our carbon footprint and stop destroying forests for landfills.
2024/05/28 – 9:45am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:03am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:06am	I strongly support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:09am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:11am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 10:13am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:15am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:19am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:21am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland. It is crucial to avoid incineration or combustion of fossil fuels.
2024/05/28 – 10:22am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:22am	I support biosolid disposal in the kindest way not to impact our planet
2024/05/28 – 10:25am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 10:27	I support using new technologies or incineration or fossil fuels or biogas or LNG for the thermal conversion of biosolids to eliminate all toxic chemicals. I do not support the continued ban on all land application of biosolids in the CRD, especially at Hartland. The CRD needs to have the possibility to install a plant of its choice to manage our waste, and we need to give them the tools and support to do so. I trust in a sustainable, long term and affordable solution will be sought and found.
2024/05/28 – 10:28	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:46am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:54am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:00am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:01am	1. I support using technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil-free energy. 2. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/
28 –
11:05am

For Health and community safety concerns, I adamantly oppose any land use applications of biosolids.

2024/05/
28 –
11:06am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
11:10am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
11:17am

My first wish, expressed only "in general", is to close loops. Thus i would see human waste reintroduced into human sustenance. I understand this isn't feasible on account of challenges of source control and specific considerations like pharmaceuticals. So next best loop closure is to return biosolids to the biosphere. Your blended growing media for reclamation sounds GREAT as well as silviculture with safeguards. Then IF biosolids can be used as fuels, displacing other fuels, OK. But the very last choice should be using other fuels to incinerate biosolids. I want to add: while we here focus on biosolids I hope that liquid "waste" receives as much attention in terms of beneficial use.

2024/05/
28 –
11:21am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
11:23am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 11:25am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:26am	We support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:33am	I support thermal conversion of biosolids, toward production of nontoxic biochar. I believe this needs to be accomplished without the use of fossil fuels. Thank you.
2024/05/28 – 11:41am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 11:44am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:53am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:58am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 12:09pm
I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/28 – 12:11pm
Before it was relabeled as "biosolids" this material was referred to as sewage sludge.....
It is nasty toxic material and should not be used anywhere in the CRD

2024/05/28 – 12:15
I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/28 – 12:30pm
support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/28 – 12:43pm
I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/28 – 12:48pm
Toxic biosolids from Victoria's sewage treatment plant are a public health threat. I call for the CRD and Province of British Columbia to adopt thermal conversion as the only safe and viable solution. Our safety should be paramount.

2024/05/28 – 1:07pm
I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/05/28 – 1:11pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:26pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:28pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:33pm	I am in favour of the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:42pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 1:58pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 2:30pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/05/28 – 2:37pm	I support a CRD demonstration project that will use gasification or pyrolysis technology to process biosolids to produce energy and biochar. I support the continued ban on all land application of biosolids in the CRD; including burying in 'Biocells' or use as landcover at Hartland.
2024/05/28 – 2:41pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 2:51pm	No incineration. Use biosolids for energy through gasification.
2024/05/28 – 2:53pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/
28 –
3:24pm

I DO NOT support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I DO support the continued ban on all land application of biosolids in the CRD, including at Hartland.

Sierra Club-Supported Report:

AN INDUSTRY BLOWING SMOKE—10 reasons why Gasification, Pyrolysis & Plasma Incineration are not “green solutions”

<https://www.no-burn.org/wp-content/uploads/2021/03/BlowingSmokeReport-1.pdf>

The only solution—see "Living Downstream" documentary, interviewing Retired BC Cancer Agency Senior Scientist Researcher Dr. John Spinelli.

Free-stream it with your GVPL library card—<https://www.hoopladigital.com/title/11043083> Trailer—

<https://www.youtube.com/watch?v=z2UsmBqYpwo> About film—

<https://web.archive.org/web/20230528204824/https://www.livingdownstream.com/about-film>

Don't test toxins on the public, in our lungs, bodies, air, water or soil. Keep the toxins out of the biosolids in the first place. Hold The Province and Ottawa accountable for this by binding them to The Precautionary Principle—<https://www.sehn.org/precautionary-principle-understanding-science-in-regulation>.

"If we can stop cancer [and Parkinson's and Alzheimer's] before it begins, why don't we?" —Kristina Marusic, "A New War on Cancer—The Unlikely Heroes Revolutionizing Prevention"—<https://www.kristinamarusic.com/>

2024/05/
28 –
3:29pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy

2024/05/
28 –
3:30pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/
28 –
3:30pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
3:51pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use biochar and fossil fuel free energy.

I support the continued ban on all land application of class A biosolids in the CRD, including at Hartland

2024/05/
28 –
4:04pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
4:20pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
4:47pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
5:13pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
5:26pm

I support using new technologies that DO NOT involve incineration or fossil fuels for the thermal conversion of biosolids.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/
28 –
5:26pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
I am astonished that we are still having this discussion. Biosolids do NOT belong anywhere in a dump!

2024/05/
28 –
5:35pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
28 –
5:43pm

So Duh

Engagement Summary

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2024/05/28 – 7:18pm	As most biosolids in low industrial environments across North America have been shown to contain low concentrations of potentially toxic components, most land applications in the short term are likely to show very limited impacts, positive or negative. In the short term it seems likely that Biosolids applied to forest or park lands, especially recent cuts, may well enhance the organic matter regime. My concern is with the longer term application of these materials to food producing surfaces. Again, in the short term, there will likely be a brief enhancement of the organic matter regimen, which in the case of depleted crop lands could represent an improvement and increased yields. My concerns lie with the long term applications of a host of low concentration elements, which have a longer soil residency period, therefore, greater opportunity to find their way in to the food chain and food supply. Increasing longer term, and greater mass applications (as is inevitable with expanding populations) concentrations of all potentially toxic, long residency elements will invariably increase. This is especially critical when producers are working to maintain full Organic Certifications. It also leads to increasing, yet uninformed, ingestion of moderately toxic foods stuffs. . Hence, it is important in my view for the CRD to conduct a proper and complete populations based Risk Assessment followed by the development of a long term Risk Management Plan.
2024/05/28 – 7:33pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 7:43pm	My family and I oppose the land application of biosolids in Shirley. Our watershed is close by, we grow our food, and we're raising our children here. We do not want our community at risk. Please come up with another option. Thank you
2024/05/28 – 7:48pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/28 – 9:41pm	I do NOT support any land use of biosolids or any application on land for any reason. I do NOT support incineration or composting of biosolids or any form of incineration releasing biosolid particles into the air, on land, or water (sea water or fresh water), or our environment. I do NOT support the use of biosolids as fertilizer in wooded areas and forests whether federal or provincial or regional or municipal or privately owned properties.
2024/05/28 – 9:42pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:30pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 10:39pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/28 – 11:03pm	support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD,
2024/05/29 – 6:34am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/05/
29 –
7:36am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
9:06am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
10:43am

This has to be one of the most inadequate public consultation processes I have ever seen and is totally unfit for purpose for consultation on such a complex topic. There is no opportunity to upload documents or provide a detailed response. However, since this is the only way to provide input, let me say the following. Tier 1, using thermal conversion, is the only safe and sensible approach given the potentially long term effects of bioaccumulation of biosolids containing forever chemicals. As more and more is learned about the dangers and persistence of these chemicals that are present in treated biosolids, it becomes ever more important to maintain the ban on land application. The present policy of dumping 10 tons a day at Hartland is a ticking time bomb. This must stop immediately. Given the time to bring Tier 1 onstream (this process should prioritized and accelerated) it is essential that non land application interim solutions be found. The first option in Tier 2 must be to reactive the Lafarge solution. As part of this, the Board should pursue legal options to remedy the farce that Lafarge has become, wasting hundreds of thousands of dollars of taxpayer money and delivering no results. Either Lafarge is in breach of contract or Synagro is for not producing pellets with the required caloric value. Either way, the public has a right to know and the Board a responsibility to shed light on what happened, so as to avoid it happening again. If Lafarge doesn't work, find other similar beneficial fuel uses. Do not resort to land application either out of region, in region or at Hartland. The only safe solution is to biocell the biosolids somewhere other than Hartland until such time as the biosolids can be beneficially used in the pyrolysis conversion plant to produce biochar, which can generate revenue. Tier 3 should be off the table completely. The CRD fortunately has been able to avoid most of the long term risks by not applying biosolids to land in the region. Don't throw all that away for some short term gain. Either use the stuff as fuel, or biocell so that it can be used as fuel in future while Tier 1 option is expedited.

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2024/05/
29 –
10:55am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
11:19am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
11:20am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
11:23am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
11:47am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
1:36pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/
29 –
1:38pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids (also known as solid sewage sludge) to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids (also known as solid sewage sludge) in the CRD, including at Hartland.

I welcome information about the decision of the CRD Board regarding this essential ecological and environmental issue.

2024/05/
29 –
3:07pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
3:10pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
7:57pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
8:04pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
29 –
9:07pm

I live in Otter Point. I just attended a presentation by Phillipe Lucas. Following this I am 100% opposed to the land application of biosolids. Gasification appears to be the only way forward. Municipalities which vote for land application approval must be prepared to receive the biosolids themselves!

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2024/05/29 – 9:09pm	I disagree 100% with applying biosolids/sludge on the land, but I support using gasification or pyrolysis of biosolids/sludge to generate syngas for electricity generation. Mixing of biosolids with wood waste is ok to achieve better gasification or pyrolysis. The charcoal obtained in this process can be used for filtering the emissions from the gasifier or on the land as a soil amendment.
2024/05/30 – 7:24am	I think biosolids should be converted into gas and not put onto the land or in the water.
2024/05/30 – 7:26am	I am an organic farmer and opposed to putting biosolids on the land, particularly on farm land.
2024/05/30 – 8:23am	This reminds me of the Canadian Red Cross decision to ignore emerging science on HIV and continue using contaminated blood. It was a costly decision in many ways, including costing lives. "Only 6 measured parts per billion" does not sound like a lot. But it adds up. Just say "no" to land application. Speed up the biochar option and look at other nations' successes.
2024/05/30 – 9:07am	The only responsible option to deal with bio-solids is advanced thermal. Spreading it out on farm land or any forest is only going to poison (say PFASs) the land , and the water on and in it. Our water source is a well, drawing from an aquifer which is regenerated by rainwater. There are water licences for residences in our area that draw water from creeks. The land around our rural home is our water shed, so please don't poison it this concern must apply both inside and outside the CRD. Bio-solids spread on the land must not happen.
2024/05/30 – 9:10am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/30 – 9:12am	Any plan to spread bio-solids on land must not happen!! Bio-solids are proven beyond doubt to be toxic to the environment and to all living things. To do so is beyond irresponsible -
2024/05/30 – 9:31am	I'm curious as to how the CRD has concluded that pursuing "advanced thermal" options at great expense is in alignment with the public feedback received, as this was the least supported option in the representative survey and will cost more than 10 times what other options cost. I also find it ridiculous that the CRD has separated "out of region" and "in region" land application options. If this material is truly "toxic waste" (it isn't) why would they send it out of region to somebody else's backyard?
2024/05/30 – 9:33am	BAD IDEA! Don't do it. Dumping bio solid where it won't have impact of our water and soil. I am COMPLETELY AGAINST THIS!
2024/05/30 – 9:44am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/30 – 10:42am	Current system rejected around the world, unsustainable mass effect even now and is dangerous to public health - spreading toxins, forever chemicals and ever evolving noxious bacteria and viruses into schools, agricultural lands and the very water table in residential areas that rely on wells. Frequent bad odours as you pass Hartland enroute to adjacent Durance Lake and Tod Gowland park recreation area for an increasingly congested, nature-needy city tell it all. Victoria's prime, world-class tourist attraction, Bouchart Gardens, cops it too - what a short- sighted disgrace.
2024/05/30 – 11:05am	I am a resident of the Juan de Fuca regional district. I oppose the land application of biosolids as an option for managing waste and would like to see the current ban remain in place. The CRD should move ahead with establishing gasification processes.

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2024/05/30 – 11:19am	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/30 – 1:09pm	It seems that the CRD could benefit from some professional help when it comes to managing biosolids. Is there any reason why they do not bring in a tenured professor of environmental or waste management to advise them? Might be a step up from relying on special interest groups focusing on preventing anything from occurring in their own back yard.
2024/05/30 – 1:14pm	\$10 Million for a 1-year pilot project, and then a significantly higher amount if the technology works?! The CRD is going to spend more on this (non)-issue than other regions will spend this century!
2024/05/30 – 1:41	If other regions can safely land apply biosolids I'm not sure why we can't. Is the assertion that cancer rates are higher outside of the CRD? Are the forests around Nanaimo a toxic wasteland? The CRD Board should dismiss Phillippe Lucas' statements for the hyperbole they are, and the CRD should bring in the experts that have advised other local governments when these same questions have been asked.
2024/05/30 – 4:11pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/30 – 4:15pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/30 – 4:50pm	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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2024/05/
30 –
4:52pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
30 –
5:33pm

Tier 1 - I support thermal conversion and ask that you accelerate the timeline. I support processing that does not involve the use of fossil fuels, incineration, or other method that disperses chemicals into the air. I expect that all toxic chemicals will be removed from the biochar.

Tier 2 options 1, 2, 3, 4 and Tier 3 option 1, 2, 3 - I do not support any land application, anywhere at any time. There is too much evidence of the dangers of contamination. CRD doesn't take nearly enough care to rigorously test the areas impacted by Hartland. Slow contamination is impossible to reverse.

Tier 2 option 5, 6 - Until Tier 1 can be achieved, I support prioritizing the use of biosolids at the Lafarge plant or similar as originally intended. I trust CRD will inform us of and solve the problems that suspended this use.

Tier 3 option 3 - Given the existing pressures on landfill capacity, the use of biosolids as coverage on the filling face of Hartland must be eliminated as an option. If all else fails, biosolids must be safely biocelled at a site other than Hartland.

It makes sense that Biocelled material can be beneficially used as fuel when Tier 1 becomes available.

2024/05/
30 –
5:39pm

I am opposed to any land application either in region or out of region. The biosolid spread at Hartland must stop. The landfill has too much already.

There is significant evidence that biosolids are toxic and that over time cause serious harm. Thermal conversion without incineration is the only option. In the meantime you must do your upmost to fix the problems with LaFarge and pursue that option. We are skeptical that you have not said why this option is not working.

We think that biocells are a good option to store the waste until thermal conversion is available

Engagement Summary

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2024/05/
30 –
6:03pm

I'm very concerned with these two items from the Tier 2 plan:

2. Forest fertilization
3. Production of biosolids growing medium and/or feedstock in soil production

Putting human waste, no matter how it's pretreated, onto our forests is reckless to say the least. Our forests are a precious biome, already in danger from other hazards, whether man or climate related. Our forests are vital for our survival. Forests will not respond well to human waste, especially with all the hazard material in it (pharmaceuticals, hormones, poisons, whatever someone decides to flush down their toilet).

The same comments relate to using these biosolids as a growing medium or feedstock for soil production. Really? There needs to be some very serious questions raised about where such outrageous ideas came from. Certainly not from qualified scientific sources.

2024/05/
30 –
7:28pm

Don't re invent the wheel; go with a working gasification system and get on with disposing of biosolids. spreading it around as " fertilizer" is compounding the harm from toxic substances. Your crd sewage sludge does not belong in my jdfea back yard, contaminating my water sources.

2024/05/
30 –
8:42pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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Draft Long-term Biosolids Management Strategy

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2024/05/
30 –
10:17pm

Biosolids contain toxic 'forever chemicals' that disperse when they adhere to microplastics, so I don't support Tier 3 of the Plan. There is recent research from the UCLA pollution lab on this issue, and I therefore do not support the land application of biosolids anywhere under any circumstances. I do support Tier 1, but until a thermal conversion plant is operational, biosolids must be safely stored for future beneficial use in a biocell facility at a location other than Hartland. Furthermore, like airports across Canada are starting to do, because biosolids have been over-applied at Hartland against provincial approval, when the thermal plant is operational, the Hartland Landfill must be remediated for PFAS and other forever chemicals. Until then, a long term detailed monitoring program like what CRD has underway with the Raincoast Foundation needs to continue. Lastly, CRD's consultation and public education on the issue of biosolids has not been accurate or adequate. The public needs to understand this issue so they can make an informed decision and support building the infrastructure needed to safely handle our region's biosolids. The results of the two surveys that CRD recently did show the importance of public education. Residents who were cold called by IPSOS and who did not know any better, assumed that provincial regulations were adequate and therefore agreed with land application. This was not informed support and frankly, this type of survey is not ethical given the issue involves public health, environmental risk and a huge amount of public money. Please truthfully educate the public and make the right infrastructure investment...no matter what the outdated and inadequate OMRR direct. The Province is wrong , and for the sake of our children, it's time to start pushing back so CRD can deliver what it's citizens want.

2024/05/
31 –
6:59am

I support new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland Dump and surrounding lands.

2024/05/
31 –
9:55am

More recent research appears to call into question the safety of using biosolids on land. This new information means that the precautionary principle must be followed. I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/05/
31 –
9:57am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/05/
31 –
11:46am

I do not support any land application of existing biosolids generated at Hartland whatsoever including the continuing application at Hartland landfill

I do support alternate solutions including thermal conversion and processes to generate a benign product for potential value added applications

2024/05/
31 –
12:20pm

I am opposed to spreading biosolids on our lands. Please consider other beneficial strategies like gasification and energy production. Please also consider the possible extraction of elements and metals for beneficial use.

2024/05/
31 –
1:03pm

We must live within our own means - Rescind the rules that ban land application in the CRD: This rule is outdated at best. A vocal minority of conspiracy theorists with the luxury of plenty of non-working time have the confidence of the CRD Board. This confidence is misguided and will not age well. You, CRD Board, should know better. The more inclusive survey of the CRD voters, taxpayers and ratepayers reports the opposite views. The overworked, inflation weary, underhoused and too-exhausted-to-pay-attention-to-the-rabbit-holes-the-vocal-minority-have-dug majority will eventually get the bill for the only facilities for biosolid vapourization this side of Alpha Centauri and vote accordingly. The funds should go to address their aforementioned hyphenated issues. The CRD needs to take responsibility for the products it buys and the food it eats. Eventually the outside communities the CRD expects to accept its biosolids (because they are too frightening for the CRD but are good enough for colonization of other areas) will pass their own rules banning biosolids from the CRD. I expect the CRD will partner with Space X and stop funding anything else at that point. Humans, dinosaurs and insects have been using land application for waste products since the single cell organism began metabolizing. Just like breathing uses air. If legislation can control the manufacture of ozone damaging chemicals, pesticides and mutagenic antinausea drugs for pregnancy why is the untested wasteful technology something the CRD ratepayers need to fund? Even if the conspiracy theorists are correct, the impact will not be felt in their lifetime and these individuals have expressed little concern for anyone but their own group. The conduct is cultlike. Provenance of BC. Please act in an equitable manner. And for heavens sake, burning assets for cement plants is not sustainable either. With all that, thank you for your service.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/05/31 - 4:12	I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.
2024/05/31 - 7:44pm	Current research indicates that persistent organic compounds, or emerging pollutants, found in pharmaceuticals and personal care products, microplastics, and per- and polyfluoroalkyl substances (PFAS) have the potential to contaminate ground and surface water, and the uptake of these substances from soil amended by the land application of biosolids can result in contamination of food sources (e.g. fish, berries) and ecosystems that have provided a home for the indigenous flora and fauna and birds and pollinators for centuries and the air that we all breathe when we walk in the woods. Advanced technologies to remove these contaminants from wastewater treatment plant influent, effluent, and biosolids destined for land application along with tools to detect and quantify emerging pollutants are critical for human health protection.
2024/06/01 = 5:08am	I oppose the land application of bio-solids. The ban of this practice must stay in place. I support the strategy of gasification of bio-solids and believe this should be pursued more aggressively.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/
01 –
9:01am

Dear CRD,

Biosolid Free BC strongly opposes the land application of biosolids, whether it's in the CRD, at Hartland landfill, or in any other jurisdiction. The available academic evidence makes it evident that due to the large concentration of toxic chemicals found in sewage sludge - which include PFAS, microplastics, pharmaceuticals, PAHs, dioxins and other chemicals of emerging concern - there is no way to avoid significant negative impacts on the environment and public health inevitably associated with the land application of biosolids, nor the associated legal liability for the CRD.

In light of these harms, Biosolid Free BC strongly supports alternative approaches that make beneficial use of biosolids in waste-to-energy applications, including industrial uses that displace the use of fossil fuels such as powering cement manufacturing and/or the development of local thermal conversion opportunities in the CRD.

We note that despite the significant implications associated with the implementation of effective strategies for the long term management of biosolids, the CRD public consultation process has been completely inadequate and flawed by the lack of balanced, unbiased evidence-based information. Decisions on this file have significant financial, public health and environmental implications, and the general public as well as local First Nations should have been provided with far better opportunities to engage in the decision-making around this issue.

Despite the reluctance of senior CRD staff to dutifully provide the Board and the public with the available evidence regarding unavoidable harms and legal liability associated with the land application of biosolids, or to ensure that Synagro's current practices - which have resulted in a number of criminal investigations and lawsuits in the US and Canada - don't endanger our region's environment and public health, we strongly commend the CRD Board for upholding the longstanding and popular regional ban on the land application of biosolids, and will continue to support alternative strategies that don't threaten the future health of our region.

2024/06/
01 –
9:31am

I am concerned about the wisdom of using bio solids on food producing fields. I would prefer to err on the side of caution now rather than find too late that this was a mistake.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/
01 –
12:10 pm

I strongly support the continued ban on all land application of biosolids in the CRD, including at Hartland. I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate or at least reduce toxic chemicals and produce beneficial use in biochar and fossil free energy.

2024/06/
01 –
6:50pm

1) Above all we should keep waste processing as low tech and as simple as possible. Future energy use (thermal treatments) will be harder to implement, more and more expensive, fuel more and more scarce. Given these future issues, I support land fertilization and creation of compost for farming and use in urban settings. 2) A portion of our community waste stream could be managed locally, within neighborhoods. Waste processing could be more evenly and locally distributed by popularizing the use of composting toilets, neighborhood-located composting sites, and redistribution of finished composted material back within the same neighborhood. This strategy would also avoid the energy use required for transportation to more distant locations.

2024/06/
02 –
7:50am

Do not spread biosolids anywhere on Vancouver Island! I'm shocked that you would even consider doing this with the repercussions in the news from south of the border!

2024/06/
02 –
8:24am

I strongly support development of a demonstration facility for advanced thermal processing.
I am opposed to biosolids being used as a growing medium for agricultural - human or livestock.
I am opposed to biosolids being used for forest fertilization.
I strongly support the CRD addressing the region's sewage waste in the region as opposed to off loading to another region.
Accordingly, I strongly support the CRD retaining its policy banning biosolid land application which it has had in place since 2011.
Now is the time for the CRD to prove itself as an environmental leader, and adhere to the guiding policies of its Regional Growth Strategy and protect the region's ecosystems.
As stated by the CRD, " We all live in a watershed, regardless of how far we are from a body of water; therefore, the activities we do on land impact our water quality."

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/02 – 10:35am	Thank you for the opportunity to comment. I live near the Hartland landfill and have a well drawing water from the same aquifer as that o Hartland. I don't support applying biosolids on the landfill or other CRD land. Our CRD population is set to increase significantly and the CRD land base outside urban areas and parks is not huge. Although we don't have a lot of industry, we do have a lot of domestic sources of the forever chemicals. Unless source control of forever chemicals is in place (and I don't see that happening), then I support thermal conversion of biosolids into a non-toxic beneficial safe product such as biochar. I am pleased that a trial of this technology is planned. At an earlier on-line information session, a member of the public asked if the CRD had tested for concentrations of some of these forever chemicals in the biosolids. The response was yes but the CRD was not willing to share the results. This lack of transparency does not engender trust in the CRD professionals.
2024/06/02 – 11:26am	Pls move away from incineration and chemicals . We are being poisoned. Our hearts and health compromised.
2024/06/02 – 12:07pm	Burn it as energy. Do not use as fertilizer please.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/
02 –
1:00pm

Comments in response to the long term plan for managing biosolids in the CRD area Thermal Conversion Full support of Tier 1 options for thermal conversion with the following components • expedite planning and construction of demonstration plant • prepare for seamless transition from demonstration plant to fully operational facility • utilize and expand on existing research completed by GHD Environmental to minimize time needed to complete RFP • insure contract agreement with Lafarge is functioning or explore and commit to other industrial facilities using biosolids as fuel • explore biocell specifically designed to store biosolids until they can be effectively thermally processed Land Application Remove land application of biosolids as an acceptable option unless it can be proven that land application is safe in terms of human and environmental health. This position applies to both application within the CRD, including Hartland Landfill and also out of region and is necessary until • scientific literature and legal liability reviews of land application are publicly released and independently reviewed • Raincoast Conservation Society has released it's water quality monitoring data for the Tod Creek Watershed, specifically the areas around Hartland Landfill • Raincoast Conservation has independently commented on CRD data on chemicals of concern especially concerning bio-accumulation • BC Environment has modernized OMRR, and specifically addresses chemicals of emerging concern and long term impacts Public Consultation The CRD has been directed by the Ministry of Environment to submit a long term plan by mid June although the province itself has not provided the necessary information and resources in a timely manner. • public consultation has been impacted and restricted by the ministry requirements and out of date regulations. • critical research, information and education are missing from the consultation dialogue • many stakeholders including environmental groups, farmers and First Nations have had minimal consideration. • the final phase of the public consultation, which closes June, 3 is inadequate in terms of public promotion, access and education. • a robust and ongoing consultation process is necessary as the long term plan evolves especially with respect to thermal conversion options

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
02 –
3:50pm

I live in Shirley, JDF EA. There are a lot of former forest lands here that were removed from TFL. When I hear the term "forest fertilization" in reference to biosolids disposal, I rightly or wrongly presume that means forests in JDF EA.

Residents in Shirley are dependent on wells and water licences for domestic water supply. Drought conditions mean that both of those sources are threatened. There is not a comprehensive aquifer study of the area, and many of the water courses are unmapped or not completely mapped. There is no assurance that dumping of biosolids on the forest floor will not leach into our watersheds.

There is nothing in this for residents of rural areas such as Shirley that are not on piped water. It is ironic that CRD water is obtained from water bodies in JDF EA but much of the district is not serviced. We are responsible for obtaining and maintaining our water supplies with no help from the CRD. Likewise, rural areas of JDF EA are not on sewer and have to build and maintain our own septic systems with no help from the CRD.

Those in the CRD who are on sewers should just pay up and establish the best system of disposing of biosolids, thermal processing, and not dump on other communities. I'm against the dumping of biosolids on the forest floor, that just is adding insult to injury.

How about starting the conversation about extending CRD water to rural areas of JDFA???? That could change the scenario. Or how about getting Aquifer Studies done for the area west of Sooke? Ensuring the creeks are accurately mapped to get a better picture of where the water flows??

2024/06/
02 –
5:30pm

I am concerned about the environmental and health risks associated with spreading biosolids on the land as well as potential legal liability in future.

2024/06/
02 –
5:32pm

There are too many unknowns to risk spreading biosolids on the land.

2024/06/
02 –
6:05pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/
02 –
7:14pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
02 –
7:15pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
02 –
7:15pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
02 –
7:33pm

I fully support the Tier 1 options for thermal conversion of biosolids. In the interim while the pilot plant is under construction, I support the use of biosolids as fuel for cement plants or similar industrial applications. The land application ban in place in the CRD since 2011 must be upheld, especially as the scientific evidence of the harmful and long term impacts of "forever chemicals" such as PFASs in biosolids continues to mount. In other jurisdictions, governments have been held liable for the devastating impacts that contaminants in biosolids have had on agricultural lands (crops and livestock), and drinking water as a result of land application.

The public consultation on this critically important topic has been woefully minimal. People in the capital region deserve better.

2024/06/
02 –
7:51pm

I oppose the land application of biosolids! My research found that biosolids contain a complex mix of contaminants including PFAS, microplastics, synthetic organics, pharmaceuticals, in addition to the organic human waste. It is shameful for the CRD to consider this as an option after only recently ceasing the practice of ocean dumping due to the very same pollutants! The CRD should expedite the plan for alternate disposal methods such as incineration with energy recovery or biochar and abandon the environmental disaster of land distribution. I live in the JDF area to enjoy the ocean and forests, not to destroy either simply because it's cheaper and easier than doing the right thing!

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/
02 –
8:13pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
02 –
8:14pm

hello -- I support the continued ban on all land application of biosolids in the CRD, including at Hartland. and, I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. Thank you for your on-going work on finding best solution for the safest means of dealing with this toxic waste product.

2024/06/
02 –
8:28pm

You should have thought about this problem before you built the plant.

2024/06/
02 –
9:20pm

support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
02 –
9:30pm

I don't believe that the CRD has investigated the safety of biosolids enough to consider them "safe" or "beneficial". There continues to be new evidence of harm. I am sure that the State of Texas does not take legal action just because it can. The biosolids project has been bungled from the start. You must be sure without a doubt that you are doing no further harm. The Hartland landfill is already well past what was intended for biosolid disposal, I am strongly opposed to any further land application there or anywhere else. The biocell storage is a hopeful option until you can get Tier 1 thermal but not incineration in place. Incineration doesn't seem a good option at all, why put more toxins into the air? Richmond plant may be one option in the interim but it is suspicious that CRD won't say why this option can't be sorted out. You must do more rigorous testing to protect the land, water and air around Hartland. So close to farms, parks , aquifers and so many people in the area. It's ridiculous that CRD continues to expand Hartland right next to a park and heavily used lake. I won't let my kids swim in that lake anymore, not since the pipeline went in, not while to odours and spills continue.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
02 –
9:59pm

As an advocate for sustainable practices, I endorse the adoption of innovative technologies that steer clear of incineration or fossil fuels in the thermal conversion of biosolids. By doing so, we can effectively eliminate harmful chemicals and simultaneously generate valuable biochar and fossil-free energy.

Furthermore, I remain steadfast in my support for maintaining the ban on land application of biosolids within the CRD, including the Hartland area.

2024/06/
02 –
10:23pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
02 –
10:29pm

na

2024/06/
02 –
11:51pm

I oppose the land application of biosolids

2024/06/
02 –
11:58pm

I support using new technologies that DO NOT involve incineration of fossil fuels for the thermal conversion of biosolids. I support the continued ban on all land application of biosolids in the CRD including Hartland.

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Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
6:13am

To say that I am deeply disappointed in what is currently happening at Hartland landfill is a huge understatement. When this project was proposed and information meetings were held, we were PROMISED by the representatives at the meeting that the biosolids would not be remaining at Hartland. So, I do not find any of these solutions ideal, but we are forced to move ahead and find the best solutions for a poorly planned project. I support using new technologies that DO NOT involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy. I urge you to accelerate the establishment of this process at Hartland.

I support the CONTINUED BAN on all land application of biosolids in the CRD, including at Hartland.

Until Tier 1 thermal conversion can be achieved, I support fuel combustion in Richmond (Tier 2 Option 5) or similar as a less harmful / risky choice. I ask that it be made to work, or to tell us why it isn't working. (This option was the original plan and has not yet worked, leaving all biosolids to be spread at Hartland.)

If the T2 Op 5 fuel combustion won't work, I support environmentally safe storage (biocelling). Biocelling stores the material until Tier 1 is available, when it can be converted. Given the existing capacity pressures at Hartland, I do not support biocell storage at Hartland.

2024/06/
03 –
7:06am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 –
9:00am

I believe the only use of the biosolids should be incineration or gasification.

Please do not spread this product on the land. The risks are too great.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
9:28am

I support thermal conversion processes but not incineration. I ask that you accelerate the timeline for Tier 1. Incineration disperses toxins into the air. Using fossil fuels only adds to greenhouse gasses.

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I oppose land application of any kind, anywhere. This may release toxins into our ecosystem. Therefore, I oppose further biosolids spread at Hartland. Hartland's capacity is already over target from regional growth, with drastically greater than planned dumping of biosolids.

Until Tier 1 thermal conversion can be achieved, I support fuel combustion in Richmond (Tier 2 Option 5) or similar as a less harmful / risky choice. I ask that it be made to work, or explain why it isn't working. (This option was the original plan and has not yet worked, leaving all biosolids to be spread at Hartland—without adequate consultation with nearby communities or First Nations.

2024/06/
03 –
9:33am

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 –
11:41am

I have read a detailed response to the biosolids strategy from my friend [REDACTED NAME] and agree completely with that feedback. It is a very well researched outline that approves of Tier One and has excellent changes to recommend in some other aspects, It seems I can just say yes or no, so I'll go for yes below

2024/06/
03 –
12:08pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

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Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
12:32pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 – 1:57
-m

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.
I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 –
2:48pm

YES to Tier 1 options for thermal conversion
NO to land application unless proven safe for the environment

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/
03 –
2:58pm

The proposed strategy is not unreasonable. What is depressing is how long it has taken the CRD to even get to this point. Advanced thermal processing of the anerobic digestate has to be the ultimate goal of the CRD biosolids plan. I have been looking into issues around biosolids management for the past 20+ years. At one time, I felt that the benefits of land application outweighed the risks, in line with CRD staff thinking, EPA guidelines, etc., as long as long as metals contents were below critical threshholds. Research done through the University of Washington in particular has been unable to demonstrate unwanted impacts of land application to soil and streamwater chemistry, at least for the chemicals examined. Potential benefits of land application of Class A biosolids to managed forest lands on eastern Vancouver Island include greater tree productivity, increased soil organic matter and soil carbon sequestration, and improved soil moisture retention- an important consideration as growing seasons become longer, warmer, and drier with climate change. For the past 10 years, I've become convinced that "advanced thermal processing", specifically pyrolysis, is what the CRD needs to be doing. Compared to anerobic digestion, appropriate pyrolysis produces biochar, in addition to energy as gas, oil, electricity, and / or hydrogen. Pyrolysis should destroy many/most contaminants not addressed in the dated EPA and Province of BC guidelines that we rely on; certainly micro- and nanoplastics and, potentially, PFAs and their relatives, although that is the subject of much active research. Metals can concentrate in biochar, compared to anaerobic digestate, but studies to-date suggest those metals are much less mobile in soil. Biochar is a very recalcitrant form of carbon and is a better way (than are biosolids) to increase long-term soil carbon sequestration when applied to land. Like biosolids, application of biochar can increase soil health and productivity on managed forest lands, in reclamation, and even in degraded urban soils. Other feedstocks which may be compatible with biosolids for pyrolysis could include organic "wastes" which are problematic to compost (animal products, invasive vegetation?). Where land application of biochar is consderied especially risky, its use in other applications (e.g., concrete and asphalt, wastewater and stormater filtration and cleanup) show promise. There is a considerable research literature underpinning biochar production, characteristics, and applications. That said, there are many questions that need to be answered by the CRD before using pyrolysis to complete the treatment of its sewage sludge. What are the contaminants in our biosolids and how does pyrolysis influence them? What forms of energy can be produced via pyrolysis? These are not new issues of concern and have been studied intensively in Europe, Australia, Asia, and much less so in North America. I was not impressed by the "process" that CRD followed when previously looking into thermal processing of biosolids (e.g., ca. 2015-2018?). Nor have I been impressed by provincial approaches on this file. Much of the CRD process insince 2015 seemed almost backwards in its approach. And I think the province is behind on understanding and regulating biochar as a soil amendment. A part of the problem likely is that biochar manufacture and applications cuts across many disciplines, but is a tiny part of any given discipline, at least to those who work in a given discipline.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/03 – 4:12pm	The original plan to use this as a source of energy and concrete component sounded like a good way to invest in a billion dollars of debt for taxpayers but dumping it on land in any form defeats the original purpose entirely. This project reeks of incompetence.
2024/06/03 – 5:13pm	Do not proceed with the plan to distribute biosolids throughout the lands of the CRD. Look at the experience of other jurisdictions like Texas, which is dealing with toxicity issues everywhere biosolids were spread onto the land.
2024/06/03 – 6:03pm	Stop wasting money and land apply like everyone else.
2024/06/03 – 6:05pm	Land application in region is by far the most responsible option from a climate change perspective. Shame on the CRD for pursuing options that maximize GHG production.
2024/06/03 – 7:25pm	I live in the JDF area and am opposed to the CRD taking any action to dumping biosolids on land in our region. This is not safe, nor is it acceptable for us to have to accept contamination and dangerous chemical filled waste from an urban centre in our wild/rural land.
2024/06/03 – 8:01pm	We oppose further biosolids being spread at Hartland Landfill. Capacity at Hartland is already over target and the dumping of biosolids is drastically greater than planned. We support fuel combustion in Richmond until Tier 1 thermal conversion can be achieved. We were promised this in the beginning. Why isn't it working at Hartland and why is the company that built the plant not responsible for making it work properly? Everyone is concerned about the chemicals in biosolids and its harm to the environment. We support the continued ban on all land applications of biosolids in the CRD, including Hartland. Thank you for your attention to this matter.

Engagement Summary

Draft Long-term Biosolids Management Strategy

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2024/06/
03 –
5:13pm

I support using new technologies that do not involve incineration or fossil fuels for the thermal conversion of biosolids to eliminate all toxic chemicals and produce beneficial use in biochar and fossil free energy.

I support the continued ban on all land application of biosolids in the CRD, including at Hartland.

2024/06/
03 –
5:13pm

I STRONGLY oppose any land application of bio solids with the CRD and especially at the Hartland landfill. There is so much research that outlines the detrimental and dangerous implications of land application and I am shocked this is still being considered as an option. Please do the right thing and ban land application of bio solids . This is not a solution. Develop a way to use thermal techniques before further environmental damage occurs

2024/06/
03 –
5:13pm

Thank you for the opportunity for public comment. Spreading of human waste and the included chemicals is of great concern to all of us who work for the land and the viability and productivity of the land for current and future generations.

At this point in time Thermal Conversion seems the best option. Expensive, but much less expensive than the potential for contamination of our aquifers, watersheds and our forestry and land bases. Ministry of Environment has failed to be up to date with OMRR regulations, has inadequate studies of modern chemicals and the effects on our land and water and has failed to prove that land application is “beneficial use” in the long term. There are many issues in North America and Europe with land application of human sewage sludge (biosolids), Synagro processing, long-term polyflouroalkyls, heavy metals, etc. Cumulative effects are not yet adequately studied and monitored. “Class A” doesn’t really mean very much anymore.

(Comment continues on the following page)

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

Location, Location, Location.

Hartland Dump was a private garbage dump established "out in the bush" on the back side of DND land in the 1950's. CRD purchased it in 1975 and CRD Environmental Sustainability Services have managed the landfill since 1985. To their credit, they have greatly improved management. However, it is still very poorly situated at the top of key aquifers and Saanich Inlet watershed and has limited capacity. We need to have evolved from: "Out of sight, out of mind" and "Flush and Forget". CRD needs to be seriously siting a second land fill, particularly as the province is decreeing increased population densities in the area. Perhaps the site of a temporary bio-cell could be the impetus for a 2nd better-situated landfill/thermal conversion site in the CRD. It does not seem ethical or moral to move our waste to other regions. We create it we need to deal with it in a sustainable manner.

The contracts with CRD, Synagro, LaFarge, need to be looked at because CRD residents seem to be paying for a product that is not usable for the intended LaFarge use and is unproven to be safe for land application.

There seems to have been little contact with First Nations. I can't speak for First Nations, but Land managers from T'souke to T'sawout seem to have little knowledge and no enthusiasm of any possibility of land application, so public consultation and information seems to be lacking on many levels.

CRD Staff have frequently stated that land application of "Class A" biosolids is a "beneficial use" under OMRR, but the province has failed B.C. residents not having adequate information for cumulative effects of modern chemical to prove "beneficial use". One can only support thermal conversion options as soon as possible, and temporary bio-cell storage for future energy use at this time.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/06/
04 – 9:26
am

Dear CRD Board.

The Peninsula Biosolids Coalition (PBC) is pleased to submit the following comments on the long-term plan for managing biosolids in the CRD Region.

Thermal Conversion

PBC fully supports top priority is given to Tier 1 options for thermal conversion. There are four components to this Tier that PBC wishes to comment on.

1. Expedite RFP for demonstration plant

PBC supports a seamless transition from a demonstration plant to a fully operational facility so the initial plant is in place within two years after which there is continuous operation. The design and regulatory process should be run concurrently to reduce the approval time. The private sector should take the lead on operating the plant to manage the risk and expedite the approval process. The plant should be designed to process both biosolids and construction and demolition waste streams to enable the CRD meet its per capita waste disposal target of 250Kg/person/year in 10 years.

2. Make LaFarge contract work or seek compensation for a failed contract.

LaFarge is thermal conversion of biosolids so making its contract work is part of Tier 1. The public needs to know why the contract between CRD and LaFarge has failed to process biosolids and the accountability for this failure.

3. Explore other industrial facilities that can use biosolids as a fuel.

There are a number of other facilities such as cement and concrete plants in BC and nearby in other jurisdictions that should be considered in the interim before a thermal conversion plant is operational.

4. Explore a biocell specifically designed to temporarily store biosolids till they can be thermally processed outside Hartland. Again this option belongs to thermal conversion, as this is the ultimate application.

(Comment continues on the following page)

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

Land Application of Biosolids

In view of a number of jurisdictions banning land application of biosolids because of chemicals of emerging concern, the PBC cannot support land application till it is assured that land application is safe in terms of potential impacts on public health and the environment. It is generally recognized that the Provincial OMRR is out of date in considering the latest peer reviewed science associated with the impacts of these chemicals on the environment.

This position applies both to application within the CRD including Hartland due to non-compliance with provincial regulations and also out of region.

The PBC will hold this position until:

- The scientific literature and legal liability reviews of land application are publicly released for public consultation
- Raincoast Conservation Society has released its water quality monitoring data around Hartland
- Raincoast Conservation Society has independently commented on CRD data on chemicals of concern especially concerning bioaccumulation.
- BC Environment has modernized OMRR, which specifically addresses chemicals of emerging concern.
- Testing the accumulated deposits of biosolids mixed with garbage at Hartland to ensure no release to the ambient environment.

(Comment continues on the following page)

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

Public Consultation

We recognize that the CRD has not been given a time extension to submit its plan beyond mid- June and therefore is not able to engage in a comprehensive public consultation as required under Section 27 (2) of the Environment Management Act. However, we are aware that the public response to the CRD survey changed when the general public became aware of the toxicity embedded in biosolids compared when this information was missing from the initial survey. We are also concerned that only 3 of 19 First nations have responded to the opportunities to consult with CRD. Finally there has not been any meaningful opportunity for in person engagement, nor has any been planned before the submission of the long-term plan.

The current consultation process limited to a text box in the CRD website till June 3 is completely inadequate in light of the potentially serious financial, public health and environmental impacts of biosolids management on residents and businesses across the Region.

We request that CRD initiate a long term plan for public consultation as the plan continues to be developed over the coming years and include opportunities for in-person engagement. In this note, we have identified many issues that need to be addressed associated with the thermal conversion facility, independent assessments of risk associated with land application of biosolids and costs estimates for various management options.

We appreciate the ongoing collaboration with the Board and staff as we feel the ongoing engagement of public interests is essential for a properly functioning democracy.

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/05/
23 -
11:24am

Email to CRDBoard@crd.bc.ca

Hello,

I recently learned more about the nature of biosolids and concerns regarding the dumping of biosolids at the Hartland Landfill. I wish to express concern about this practice and wish to state the I oppose the land application of biosolids in the CRD in general but especially now as it is happening at the Hartland Landfill.

I understand that a solution to this would be to consider a thermo-conversion plant to deal with biosolids which would be a healthy sustainable way to deal with biosolids. This should be an emergency situation and considered immediately by the CRD board.

Thank you for your attention to this serious matter,

[REDACTED NAME]

Resident of Saanich

Engagement Summary

Draft Long-term Biosolids Management Strategy

Capital Regional District | June 2024

2024/05/
27 -
12:54pm

Email to CRDBoard@crd.bc.ca

Dear Board members,

I am writing to log my absolute opposition to any land application of biosolids within CRD boundaries, ever. They are completely unhealthy and contaminate the soil for an inordinate amount of time. It is simply not the best way to deal with this product.

Biosolids can be used as a heat source, making biochar, as is done in many other jurisdictions like in Europe. This option deserves to be researched posthaste.

This is our region's opportunity to be a leader in this field in North America. Let's not miss it. Let's not shirk our prime responsibility to be good stewards of our land and water resources. And let's recognize our responsibility as citizens to future generations.

Thank you for your immediate attention to this matter.

[REDACTED NAME]

[REDACTED PHONE NUMBER]

Attachment for more information:

<https://www.youtube.com/watch?v=GFHXzz6NXN4>

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, MAY 15, 2024**

SUBJECT **Bylaw No. 4607 – Electric Vehicles Charging and Fees Bylaw No. 1, 2024**

ISSUE SUMMARY

To approve Bylaw No. 4607, Electric Vehicles Charging and Fees Bylaw No. 1, 2024, and Bylaw No. 4611, Capital Regional District Ticket Information Authorization Bylaw, 1990, Amendment Bylaw No. 79, 2024, to set a user fee on all Capital Regional District (CRD) owned and operated public Electric Vehicle (EV) charges.

BACKGROUND

As of May 2024, the CRD owns and operates eight public electric vehicle (EV) chargers located at Panorama Recreation Centre, SEAPARC Recreation Centre and Rainbow Recreation Centre. In 2024, four additional public chargers are scheduled for installation at Beaver Lake Regional Park and Mount Work Hartland Regional Park. The CRD plans to install over 150 public chargers across the region and will likely manage and operate the majority of these as part of the CRD Public Electric Charging Network project from 2024-2028. To date, the CRD has not charged a fee on use of public EV chargers.

The CRD's Local Government EV and E-Bike Infrastructure Planning Guide (2018) recommends setting a fee for charging, as free charging can send an incorrect price signal about the cost of public infrastructure and the cost of using an EV. Free charging also limits access for EV drivers without access to charging at home and can inadvertently encourage behaviour such as overuse of public infrastructure without consideration for the cost of service. Until recently, the federal regulatory body, Measurement Canada, restricted energy-based billing model for non-utilities. As such, the guide recommends a \$1 per hour time-based fee structure. The \$1 fee would recover a portion of operational costs. This fee is currently implemented by municipalities and other EV charger owners in the region, such as the District of Saanich, Township of Esquimalt and City of Victoria.

Proposed Fees and Charges

The proposed Bylaw No. 4607, Electric Vehicles Charging and Fees Bylaw No. 1, 2024 (Appendix A) sets a time-based user fee on all CRD owned and operated public EV charges. The proposed Bylaw No. 4611, Capital Regional District Ticket Information Authorization Bylaw, 1990, Amendment Bylaw No. 79, 2024 (Appendix B) sets fees and charges for contraventions against Bylaw No. 4607.

The Bylaw establishes the user fees at \$1 per hour while charging for public EV chargers that do not load-share electricity, \$0.50 per hour for two-way load share chargers, and \$0.25 per hour for four-way load share chargers. This is a time-based billing model, which is currently allowed by Measurement Canada and is in alignment with fees already in place among local governments in the region. CRD public EV chargers are networked and equipped to process transactions to collect user fees at the charger. Revenue from user fees will be attributed to the owning CRD service area to recover costs associated with operating public EV chargers. Contraventions of

Bylaw No. 4607 are set out in Section 3 of the Bylaw and ticketing fees are set out in the accompanying amending Bylaw No. 4611.

Implementation Plan

Bylaw No. 4607 will be implemented with a phased approach.

Phase 1a – Education and User Fee Activation of Existing Chargers: For CRD public EV chargers that have already been installed, enforcement of the user fee is targeted to begin after a 30-day education campaign period from the adoption of this Bylaw, with an anticipated user fee activation date of August 1. Targeted communications, including affixing a notice sign to EV chargers at impacted sites, specific media for site users (i.e., recreation newsletters, one-pager at front desk) will be distributed to inform site users of the forthcoming change.

Phase 1b – User Fee Activation for Future Chargers: EV chargers that are planned for installation after August 1 will not have a 30-day education period prior to user fee activation. All new CRD-owned public chargers will have the user fee activated as soon as they are successfully installed and operational to ensure efficient and consistent operation of the public EV network.

Phase 2 – Parking Contravention Enforcement: In addition to user fee activation, Bylaw No. 4607 includes contraventions related to parking a non-electric vehicle in an EV parking space and overstaying a posted time limit in an EV parking space. To familiarize the public with the new regulation regarding these parking contraventions, a communication and notice campaign is targeted to begin in August after all appropriate signage is installed, with a duration of six months. After the six-month period, active enforcement of parking contraventions will begin on a per-complaint basis.

Future Considerations

As of 2023, Measurement Canada began to change the regulations to allow EV charger owners to begin switching to an energy-based billing model (\$/kW). Staff are monitoring the changes to regulation and are currently participating with a cohort of local governments to develop an adequate and consistent energy-based billing model (\$/kW) for public EV chargers. This will also consider current operational costs. This will inform future updates to Bylaw No. 4607.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the CRD Board:

1. That Bylaw No. 4607, “Electric Vehicles Charging and Fees Bylaw No. 1, 2024”, be introduced and read a first, second and third time; and
2. That Bylaw No. 4607 be adopted.
3. That Bylaw No. 4611, “Capital Regional District Ticket Information Authorization Bylaw, 1990, Amendment Bylaw No. 79, 2024”, be introduced and read a first, second and third time; and
4. That Bylaw No. 4611 be adopted.

Alternative 2

That Bylaw No. 4607, “Electric Vehicles Charging and Fees Bylaw No. 1, 2024” be referred to staff for changes.

IMPLICATIONS

Climate Implications

The CRD's Climate Action Strategy includes a commitment to support a public electric vehicle charging network and to encourage uptake of zero-emission vehicles (3-10). In support of this, the proposed fees and charges will support EV charging infrastructure to align with best practices and recover operational costs.

Financial Implications

Staff will undertake procurement to facilitate the network expansion in 2025 through 2028, leveraging planned Climate Action service and grant funds. In 2024, operational expenses and revenue from charging will be nominal. User fees are subject to a transaction fee by network providers (currently 15% per transaction). Operational costs and revenues will be embedded in future service budgets accordingly. All revenue received from user fees on public EV chargers will be allocated to the owning CRD service.

Service Delivery Implications

There is no immediate impact to bylaw enforcement services while the initial implementation steps of Bylaw No. 4607 take place. As more EV chargers are installed and active enforcement begins on a per-complaint basis, Bylaw will advise if additional resources are required to meet the needs of this program.

CONCLUSION

Bylaw No. 4607 “Electric Vehicles Charging and Fees Bylaw No. 1, 2024” is an important step in the implementation of the CRD Public Electric Charging (EV) Network. Introducing this Bylaw will start to recover operating costs of providing public EV charging infrastructure in the region by collecting user fees of \$1 per hour, which is considered appropriate best practice for introducing charging fees. Staff are currently undertaking work to develop a consistent energy-based billing model for EV charging and anticipate future updates to this Bylaw to switch the fee structure in 2025.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4607, “Electric Vehicles Charging and Fees Bylaw No. 1, 2024”, be introduced and read a first, second and third time; and
2. That Bylaw No. 4607 be adopted.
3. That Bylaw No. 4611, “Capital Regional District Ticket Information Authorization Bylaw, 1990, Amendment Bylaw No. 79, 2024”, be introduced and read a first, second and third time; and
4. That Bylaw No. 4611 be adopted.

Submitted by:	Nikki Elliott, MPA, Manager, Climate Action Programs
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Bylaw No. 4607, A Bylaw to Provide for Fees and Charges Payable for the Use of Electric Vehicle Chargers

Appendix B: Bylaw No. 4611, A Bylaw to Amend Bylaw No. 1857, CRD Ticket Information Bylaw, 1990

**CAPITAL REGIONAL DISTRICT
BYLAW NO. 4607**

**A BYLAW TO PROVIDE FOR FEES AND CHARGES PAYABLE FOR THE USE OF ELECTRIC
VEHICLE CHARGERS**

WHEREAS:

- A. Pursuant to section 397(b) of the *Local Government Act*, the Board of the Capital Regional District may, by bylaw, impose a fee or charge payable in respect of the use of Capital Regional District property;
- B. The Capital Regional District operates public electric vehicle charging infrastructure throughout the region; and
- C. The Board wishes to authorize and impose the fees and charges payable for the use of Capital Regional District operated public electric vehicle charging infrastructure.

NOW THEREFORE, the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. DEFINITIONS

In this Bylaw, unless the context otherwise requires:

“Electric Vehicle” means a vehicle that uses electricity for propulsion and that can use an external source of electricity to charge the vehicle’s batteries but does not include vehicles that cannot be licenced by the Insurance Corporation of British Columbia or vehicles that are not compatible with an Electric Vehicle Charging Station.

“Electric Vehicle Charging Station” means an electric vehicle charging station operated by the Capital Regional District and made publicly available for use by members of the public driving Electric Vehicles.

“Electric Vehicle Charging Zone” means a parking space providing access to an Electric Vehicle Charging Station.

“Sign” means a sign, signal, posted notice, digital notice, or other marking placed by, or on behalf of, the Capital Regional District within, or near to, an Electric Vehicle Charging Station or Electric Vehicle Charging Zone.

2. PROHIBITION

Subject to section 3, no person in charge, control, or possession of any vehicle shall stop the vehicle in an Electric Vehicle Charging Zone unless:

- (a) the vehicle is an Electric Vehicle, and the said Electric Vehicle is being actively charged;
- (b) the Electric Vehicle is stopped in an Electric Vehicle Charging Zone for a period not exceeding the time limit posted upon a Sign; and
- (c) the fee prescribed in Schedule “A” is paid.

3. EXEMPTIONS

- (1) Section 2 does not apply to a vehicle that is stopped in an Electric Vehicle Charging Zone during times in which a Sign indicates that parking by non-Electric Vehicles is permitted.
- (2) Sections 2 and 4 do not apply to officers, employees, and agents of the Capital Regional District operating a Capital Regional District-owned vehicle while they are acting in the course of their duties.

4. FEES

A person in charge, control, or possession of any Electric Vehicle who connects an Electric Vehicle to an Electric Vehicle Charging Station shall pay the applicable fees set out in Schedule "A" to this Bylaw.

5. SEVERABILITY

If any section or lesser portion of this Bylaw is held to be invalid by a court of competent jurisdiction, the invalid section or portion is severed, and the remainder continues to be valid.

6. OFFENCE AND PENALTIES

- (1) Any person who contravenes any provision of this Bylaw commits an offence and is liable upon conviction to the penalties prescribed by the *Offence Act*.
- (2) Each day that a contravention of this Bylaw occurs or continues shall constitute a separate offence.
- (3) Nothing in this bylaw shall limit the Capital Regional District from pursuing any other remedy that would otherwise be available to the Capital Regional District at law.

7. TITLE

This bylaw may be cited for all purposes as “Electric Vehicles Charging and Fees Bylaw No. 1, 2024”.

READ A FIRST TIME THIS th day of 20

READ A SECOND TIME THIS _____th _____ day of _____ 20____

READ A THIRD TIME THIS th day of 20

ADOPTED THIS th day of 20

CHAIR

CORPORATE OFFICER

Schedule "A"

CRD PUBLIC EV CHARGING STATION FEES AND CHARGES			
Row	Type of Charging Station	Charging Station Specifications	Fee
1	Level 2	Without power sharing	\$1.00 per hour
2	Level 2	2-way power sharing	\$0.50 per hour
3	Level 2	4-way With power sharing	\$0.25 per hour

CAPITAL REGIONAL DISTRICT
BYLAW NO. 4611

A BYLAW TO AMEND BYLAW NO. 1857, CAPITAL REGIONAL DISTRICT TICKET INFORMATION
AUTHORIZATION BYLAW, 1990

WHEREAS:

- A. Under Bylaw No. 4607, “Electric Vehicles Charging and Fees Bylaw No. 1, 2024”, the Regional Board prohibited the use of Electric Vehicle Charging Stations and Zones in certain circumstances;
- B. The Board wishes to amend Bylaw No. 1857, “Capital Regional District Ticket Information Authorization Bylaw, 1990”, to establish fine rates for contravening Bylaw No. 4607;

NOW THEREFORE, the Capital Regional District Board in open meeting assembled hereby enacts as follows:

- 1. Bylaw No. 1857, “Capital Regional District Ticket Information Authorization Bylaw, 1990”, is hereby amended as follows:
 - (a) Sections 3 and 4 are amended by deleting the words “Schedule 2 to 39” wherever they appear and substituting “Schedules 2 to 40”.
 - (b) Schedule 1 to Bylaw No. 1857 is amended by inserting section 39 as follows:

“39. Electric Vehicles Charging and Fees Bylaw
No. 1, 2024

Bylaw Enforcement Officer
Park Officer”
 - (c) By adding Schedule 40, attached as Appendix 1 to this bylaw.
- 2. This bylaw may be cited for all purposes as “Capital Regional District Ticket Information Authorization Bylaw, 1990, Amendment Bylaw No. 79, 2024”.

READ A FIRST TIME THIS	DAY OF	,	2024
READ A SECOND TIME THIS	DAY OF	,	2024
READ A THIRD TIME THIS	DAY OF	,	2024
ADOPTED THIS	DAY OF	,	2024

CHAIR

CORPORATE OFFICER

APPENDIX 1 TO BYLAW NO. 4611

SCHEDULE 40 TO BYLAW NO. 1857

Electric Vehicle Charging and Fees Bylaw No. 1, 2024

<u>WORDS OR EXPRESSIONS DESIGNATING OFFENCE</u>	<u>SECTION</u>	<u>FINE</u> if paid after the 30 th day from the date on which the ticket is served	<u>FINE</u> if paid on or before the 30 th day from the date on which the ticket is served
1. Non-Electric Vehicle	2(a)	\$100.00	\$50.00
2. Not Actively Charging	2(a)	\$100.00	\$50.00
3. Disobey Sign	2(b)	\$100.00	\$50.00
4. Fail to Pay Charging Fee	2(c)	\$100.00	\$50.00

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, MAY 15, 2024**

SUBJECT **Bylaw No. 4610 - Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2024**

ISSUE SUMMARY

To amend the Hartland Landfill Tipping Fee and Regulation Bylaw to shift the ban on carpet, underlay and salvageable wood waste, and the implementation of the \$300/tonne unsorted renovation and demolition waste rate to Phase 3 of the material stream diversion strategy.

BACKGROUND

At its April 10, 2024 meeting, the Capital Regional District (CRD) Board directed staff to finalize negotiations and enter into a contract with DL's Bins for the construction and operation of a material stream diversion transfer station to process clean wood, treated wood and asphalt roofing shingles for the purpose of recycling, reuse or resource recovery, effective July 1, 2024; and to return to committee with proposed bylaw amendments to shift the ban on carpet, underlay and salvageable wood, and implementation of the \$300/tonne unsorted load rate to Phase 3 of the CRD's material stream diversion strategy.

Based on this direction, staff have prepared an amending bylaw, Bylaw No. 4610, to amend Bylaw No. 3881, Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013 (Appendix B). A red-lined, consolidated version of the bylaw for convenience is included as Appendix C.

Further, while preparing the amendment bylaw, staff discovered a clerical error with the previous amendment to Bylaw No. 3881 (Bylaw No. 4497). Certain revisions made to the red-lined version of the consolidated Bylaw presented to the Board on December 13, 2023 were not included in the amendment Bylaw adopted by the Board. The proposed Bylaw No. 4610 corrects this clerical error.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4610, "Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2023", be read a first, second and third time; and
2. That Bylaw No. 4610 be adopted.

Alternative 2

That this report be referred back to staff for additional information.

IMPLICATIONS

Service Delivery Implications

The proposed bylaw amendments to the Hartland Landfill Tipping Fee and Regulation Bylaw remove reference to the ban on carpet, underlay and salvageable wood, and unsorted renovation and demolition waste (\$300/tonne), currently scheduled to come into effect July 1, 2024.

Loads of clean renovation and demolition waste will be accepted at Hartland Landfill for a tipping fee rate of \$150/tonne and must not include mandatory recyclables such as clean wood, treated wood or asphalt shingles. A \$500 fine will be in effect for loads found to be containing mandatory recyclables, including wood waste or asphalt shingles. Effective July 1, 2024, source-separated loads of treated wood and asphalt shingles will be accepted for recycling or energy recovery at a tipping fee rate of \$110/tonne. Source-separated loads of clean wood are accepted for recycling or energy recovery at a tipping fee rate of \$80/tonne.

The phasing in of material bans came about as a result of feedback from Hartland customers, and feedback gathered through procurement for the material diversion transfer station construction and operation. Further background can be found in Appendix A.

Pending future direction, the material bans on carpet, underlay and salvageable wood will be added back into the bylaw when Phase 3 of the CRD's material stream diversion strategy is implemented in 2026.

CONCLUSION

On April 10, 2024, the Capital Regional District (CRD) Board directed staff to return to committee with proposed bylaw amendments to shift the ban on carpet, underlay and salvageable wood, and implementation of the \$300/tonne unsorted load rate to Phase 3 of the CRD's material stream diversion strategy. Staff have prepared an amending bylaw that will amend the Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4610, "Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2023", be read a first, second and third time; and
2. That Bylaw No. 4610 be adopted.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Environmental Services Committee Staff Report (March 20, 2024): Material Stream Diversion – Award of Contract – Presented to CRD Board on April 10, 2024

Appendix B: Bylaw No. 4610, Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2023

Appendix C: Bylaw No. 3881 Hartland Tipping Fee and Regulation Bylaw No. 6, 2013 (Red-lined)

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, MARCH 20, 2024**

SUBJECT **Material Stream Diversion – Award of Contract ERM2022-010**

ISSUE SUMMARY

To provide an update on implementation of Hartland Landfill policy changes approved by the Capital Regional District (CRD) Board in December 2023, and to seek direction on next steps, including award of contract for construction and operation of a material diversion transfer station (MDTS).

BACKGROUND

In December 2023, the CRD Board passed a motion to adopt bylaw amendments, to come into effect in 2024, to divert materials from Hartland Landfill in alignment with the CRD's Solid Waste Management Plan.

Phase 1 of the Hartland policy changes were successfully implemented beginning January 1, 2024, including a ban on clean wood waste, changes to the tipping fee structure, introduction of a hauler waste stream collector incentive program, increases in fine rates, reductions for early payment of fines, and introduction of an education and warning program. To date, 22 Hartland commercial customers representing approximately 70% of Hartland's total general refuse tonnages have registered for the waste stream collector incentive. In the month of January, staff issued 30 warning tickets/MTIs to provide education around the clean wood ban, and 104.7 tonnes of clean wood was diverted from landfilling for recycling/energy recovery. Staff will continue to provide regular updates on implementation.

Phase 2 of the Hartland policy changes is planned to come into effect July 1, 2024, and includes further policy bans and tipping fee modifications. To support the execution of Phase 2 of the material diversion strategy, a Request for Proposals (RFP) for proponent to construct and operate a MDTS at Hartland to manage the processing, utilization, on-site operations and transportation of source-separated materials from Hartland Landfill was issued in September 2023, and closed January 2024.

Learnings through January's Phase 1 implementation have provided staff with valuable information about market response and participation. Phase 2 currently includes introduction of a new \$300/tonne tipping fee for loads of unsorted renovation and demolition materials that contain banned items including wood waste. Market response to date suggests that under current market conditions, the \$300/tonne rate will incent Hartland customers to seek lower cost landfill disposal options out of region, rather than divert banned materials, including wood waste. This is counter to the Solid Waste Management Plan objectives, and presents financial risk to the solid waste service, as these tipping fees would be paid out of region. To address this risk, staff recommend adding a Phase 3 of implementation in 2026 and shifting the implementation of \$300/tonne rate to Phase 3, to allow the market time to develop processes to ensure removal of banned materials from refuse loads. To eliminate the risk of general refuse waste exiting the region during Phase 3, staff also recommend that the CRD immediately begin consultation on policies to restrict the

flow of general refuse waste outside the capital region. These policies could be implemented as part of Phase 3 and would be subject to future consideration by the CRD Board. Additional material bans including rigid plastics could also be considered as part of Phase 3.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board:

1. That staff be directed to finalize negotiations, and the Chief Administrative Officer be authorized to enter into a two-year operating and construction contract, for a combined value not to exceed \$12,500,000 (excluding GST) with DL's Bins, for the construction and operation of a material diversion transfer station to begin processing of clean wood, treated wood and asphalt shingles on July 1, 2024;
2. That staff be directed to return to the Environmental Services Committee with proposed bylaw amendments to shift the ban on carpet and underlay and salvageable wood to Phase 3;
3. That staff be directed to return to the Environmental Services Committee with proposed bylaw amendments to shift the implementation of the \$300/tonne unsorted load rate to Phase 3; and
4. That staff immediately begin consultation on policies to restrict the flow of general refuse waste outside of the capital region.

Alternative 2

The Environmental Services Committee recommends to the Capital Regional District Board:

1. That staff be directed to finalize negotiations, and the Chief Administrative Officer be authorized to enter into a two-year operating and construction contract, for a combined value not to exceed \$12,500,000 (excluding GST) with DL's Bins, for the construction and operation of a material diversion transfer station to begin processing of clean wood, treated wood and asphalt shingles on July 1, 2024;
2. That staff be directed to return to the Environmental Services Committee with proposed bylaw amendments to shift the ban on carpet and underlay and salvageable wood to Phase 3.

Alternative 3

That this report be referred back to staff for additional information.

IMPLICATIONS

Alignment with Board & Corporate Priorities

The proposed two-year contract under Alternative 1 aligns with the Board's desire to optimize the diversion of solid waste and maximize resource recovery from waste materials by executing new policies for diverting waste.

Service Delivery Implications

To support the execution of Phase 2 of the material diversion strategy, a RFP for proponent to construct and operate a MDTS at Hartland Landfill was issued in September 2023, and closed in January 2024. The RFP Package is included as Appendix A. Two submissions were received from Emterra Environmental and DL's Bins.

Staff have evaluated the MDTs proposals on technical and financial merit and conducted negotiations with the preferred proponent. Market feedback obtained through the procurement process identified that the costs to process and transport materials diverted from the landfill are higher than identified through the 2021 Market Sounding that was completed. A full financial evaluation is included in the financial implications section of this report.

Both proposals included options for processing clean and treated wood waste, asphalt shingles, and carpet and underlay. Neither proponent provided an option for salvageable wood, however negotiations with the preferred proponent have indicated that this could be considered as part of a Phase 3 alternative. Various options for staging were presented to allow for control of costs.

Staff recommend award of contract for the construction and operation of the MDTs to DL's Bins, enabling the start of Phase 2 policies July 1, 2024.

On the basis feedback obtained through procurement, staff recommend entering into a two-year 'pilot project' contract for the diversion and recycling/recovery of clean wood, treated wood and asphalt shingles. This two-year pilot will enable vendor learning on operational process and end-markets, allow the CRD to fully understand costs of material diversion, and minimize over all costs to the solid waste service.

At the end of the two-year pilot, and pending Board direction at that time, a new Phase 3 of implementation of the material diversion strategy would be implemented. Phase 3 could include a follow-on contract, terms of which are to be negotiated during the pilot period. This contract would extend the operation of the transfer station for a further 5 years, and expand accepted materials to include carpet and underlay, salvageable wood, books and rigid plastic. Additional capital investments at that time would be required to enable additional material streams, and a full financial evaluation would be brought forward at that time. Implementation of the ban on salvageable wood and carpet and underlay would be moved to Phase 3. Additional material bans on books and rigid plastics could also be considered at that time.

Alignment with Existing Plans & Strategies

Implementation of the proposed contract has the potential to divert up to 36,500 tonnes of waste per year from Hartland Landfill's active face, which would align with the Solid Waste Management Plan goal to target an annual disposal rate of 250kg per capita by 2031. Phase 3 could result in additional diverted tonnages.

Financial Implications

Alternative 1 (2-year contract) capital and operating expenditures over the 2-year contract are estimated to be \$12.5 million (\$3.5 million capital and \$9 million operating), to be partially offset by diversion tipping fee revenue of \$750,000 (20,000 tonnes). The shortfall will be funded within the 2024/25 Environmental Resource Management budget approvals and reserves.

Alternative 2 (2-year contract) capital and operating expenditures over the 2-year contract are estimated to be \$12.5 million (\$3.5 million capital and \$9 million operating), to be partially offset by diversion tipping fee revenue of \$750,000 (20,000 tonnes). The shortfall will be funded within the 2024/25 Environmental Resource Management budget approvals and reserves.

CRD Financial Services assisted in evaluating the long-term financial implications of the alternatives. The reserve balances have been projected to provide an indication of financial health and the need for tax requisition. Neither alternative is projected to require requisition support within the current 5-year planning horizon. Below is a summary of the proposed changes to tipping fees, and the implementation date:

Mandatory Recyclables		
Material Type	Tipping Fee (per tonne)	Landfill Ban Implementation Date
Clean Wood	segregated diversion \$80	Phase 1
Treated Wood	segregated diversion \$110	Phase 2
Asphalt Shingles	segregated diversion \$110	Phase 2
Salvageable Wood	segregated diversion \$0	Phase 3
Carpet and Underlay	segregated diversion \$110	Phase 3
Renovation and Demolition Waste		
Clean	segregated diversion \$150	Phase 2
Mixed	segregated diversion \$150, with \$500 fine in effect	Phase 2
Mixed	segregated diversion \$300, with \$500 fine in effect, potential flow control policies	Phase 3

Phase 1: January 1, 2024

Phase 2: July 1, 2024

Phase 3: 2026

CONCLUSION

The Capital Regional District (CRD) Board passed a motion to adopt the Hartland Landfill Tipping Fee and Regulation Bylaw and CRD Ticket Authorization Bylaw on December 13, 2023. The approval of these bylaws supports the goals and strategies of the CRD's Solid Waste Management Plan. Two proposals were received from the Request for Proposals issued in September 2023, one from Emterra Environmental and the other from DL's Bins. Upon review of the two proposals, staff recommend commencing a contract with DL's Bins for the processing, utilization, on-site operations and transportation of source-separated materials from Hartland Landfill.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:

1. That staff be directed to finalize negotiations, and the Chief Administrative Officer be authorized to enter into a two-year operating and construction contract, for a combined value not to exceed \$12,500,000 (excluding GST) with DL's Bins, for the construction and operation of a material diversion transfer station to begin processing of clean wood, treated wood and asphalt shingles on July 1, 2024;

2. That staff be directed to return to the Environmental Services Committee with proposed bylaw amendments to shift the ban on carpet and underlay and salvageable wood to Phase 3;
3. That staff be directed to return to the Environmental Services Committee with proposed bylaw amendments to shift the implementation of the \$300/tonne unsorted load rate to Phase 3; and
4. That staff immediately begin consultation on policies to restrict the flow of general refuse waste outside of the capital region.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence	Larisa Hutcheson, P.Eng., Acting General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: Material Stream Diversion Request for Proposals Package

**CAPITAL REGIONAL DISTRICT
BYLAW NO. 4610**

**A BYLAW TO AMEND HARTLAND LANDFILL TIPPING FEE
AND REGULATION BYLAW NO. 6, 2013 (BYLAW NO. 3881)**

WHEREAS:

- A. Under Bylaw No. 3881, “Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013”, the Regional Board established fees and regulations for the operations of the Hartland Landfill; and
- B. The Board wishes to amend Bylaw No. 3881 to update schedules, fees, and bans to align with Phase 2 implementation of the material stream diversion strategy.

NOW THEREFORE, the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. Bylaw No. 3881, “Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013”, is hereby amended as follows:

- (a) by deleting the defined term “Unsorted Renovation and Demolition Waste” in section 1;
- (b) in Schedule “B”, by deleting the words “salvageable wood, carpet and underlay” from section 3.11;
- (c) in Schedule “C”, by deleting the following rows from the table in section 1:

Carpet and Underlay (effective July 1, 2024)	Public Drop off Area	\$110	\$10 bin fee	
Carpet and Underlay (effective July 1, 2024)	As directed by CRD staff	\$110		\$10
Unsorted Renovation and Demolition Waste (effective July 1, 2024)	Public Drop Off Area	\$300	\$10 bin fee	
Unsorted Renovation and Demolition Waste (effective July 1, 2024)	Active Face	\$300		\$20

- (d) in Schedule “C”, by deleting the following rows from the table in section 1:

Refuse	Active Face	\$110		\$10
Refuse	Public Drop Off Area	\$110	\$10 bin fee	
Treated Wood and Wood Products	As directed by CRD staff	\$110	\$10 bin fee	
Weeds (not Source –separated in Refuse)	Active Face	\$110		\$10
Weeds (not Source –separated in Refuse)	Public Drop Off Area	\$110	\$10 bin fee	

and replacing them with the following rows:

Refuse	Active Face	\$150		\$10
Refuse	Public Drop Off Area	\$150	\$10 bin fee	
Treated Wood and Wood Products (effective July 1, 2024)	As directed by CRD staff	\$110	\$10 bin fee	
Weeds (not Source –separated in Refuse)	Active Face	\$150		\$10
Weeds (not Source –separated in Refuse)	Public Drop Off Area	\$150	\$10 bin fee	

- (e) in Schedule “D”, by deleting “Carpet and Underlay, except as permitted in this Bylaw” from the list of Prohibited Waste;
- (f) in Schedule “E”, by deleting the following row from the list of Controlled Waste:

Commercial Load of Uncontaminated Demolition Waste	\$110 per tonne
--	-----------------

and replacing it with the following:

Commercial Load of Uncontaminated Demolition Waste	\$150 per tonne
--	-----------------

- (g) in Schedule “F”, by deleting “Carpet and Underlay (Effective July 1, 2024)” and “Salvaged Wood Waste (Effective July 1, 2024)” from the list of Mandatory Recyclable Material.

2. This bylaw may be cited for all purposes as “Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2024”.

READ A FIRST TIME THIS th day of 2024

READ A SECOND TIME THIS th day of 2024

READ A THIRD TIME THIS th day of 2024

ADOPTED THIS th day of 2024

CHAIR

CORPORATE OFFICER



Making a difference...together

BYLAW NO. 3881

**HARTLAND LANDFILL TIPPING FEE AND
REGULATION BYLAW NO. 6, 2013**

Consolidated for Public Convenience

(This bylaw is for reference purposes only)

ORIGINALLY ADOPTED APRIL 10, 2013

(Consolidated with Amending Bylaws 3917, 4100, 4420, 4497, 4610)

For reference to original bylaws or further details, please contact the Capital Regional District,
Legislative Services Department, 625 Fisgard St., PO Box 1000, Victoria BC V8W 2S6
T: (250) 360-3127, F: (250) 360-3130, Email: legserv@crd.bc.ca, Web: www.crd.bc.ca

Amending Bylaws Consolidated

Bylaw No.	Adopted	Purpose
4610		To amend the bans on carpet and underlay and salvaged wood and to amend the tipping fee rate on refuse, weeds (not source-separated), and commercial load of uncontaminated demolition waste.
4497	December 13, 2023	To amend the tipping fee rates; to update the definitions; to enact bans on asphalt roofing shingles, carpet and underlay, and wood waste; to make bylaw housekeeping edits; and, to update bylaw enforcement language.
4420	June 9, 2021	To address the Kitchen Scraps tipping fee by replacing Schedule C.
4100	May 8, 2016	To address tipping fees for asbestos containing material, kitchen scraps and to make bylaw housekeeping changes.
3917	Jan. 14, 2015	To enact a kitchen scraps ban, the stewardship program for packaging and printed paper (PPP) and to amend the tipping fee rate.

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CAPITAL REGIONAL DISTRICT

BYLAW NO. 3881

**A BYLAW FOR THE PURPOSE OF ESTABLISHING A TIPPING FEE
AND REGULATIONS FOR SOLID WASTE DISPOSAL AT HARTLAND LANDFILL**

WHEREAS:

- A. By Supplementary Letters Patent, dated 04 October 1973, the Capital Regional District was granted the function of Refuse Disposal under Division X of its Letters Patent;
- B. The Capital Regional District has by bylaw, converted the function of Solid Waste Disposal to a local service for all of the Regional District;
- C. The Capital Regional District is empowered to establish a scale of fees payable for depositing Solid Waste and Recyclable Materials at a Disposal Site;
- D. The Regional Board of the Capital Regional District deems it advisable to enact regulations pertaining to Solid Waste and Recyclable Materials and to establish fees for depositing Solid Waste and Recyclable Materials.

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

SECTION 1 – DEFINITIONS

Note: Defined terms are capitalized in this bylaw.

In this Bylaw, unless the context otherwise requires:

“Active Face” means that area of the Disposal Site where active landfilling of Solid Waste takes place.

“Aggregate” means inert granular fill material.

“Animal Fecal Waste” means animal feces collected by a commercial business or generated at a site where animals are kept for commercial purposes, including, but not limited to, boarding kennels, animal shelters, stables, and similar operations.

“Asbestos Containing Material” means waste containing any amount of asbestos including waste asbestos as defined in the bylaw.

(Bylaw 4100)

“Asbestos Cement” means shingles, tiles, siding, board or pipe containing asbestos material tightly bound within a solid matrix not easily crumbled by hand but which is easily crumbled and friable by equipment during landfill Disposal.

“Asphalt” means recyclable asphaltic concrete originating from roadways, driveways, parking areas and other paved surfaces.

“Asphalt Roofing Shingles” means roofing shingles composed of a felt mat saturated with asphalt, with small rock granules added, but does not include tar and gravel roofing.

(Bylaw 4497)

“Biomedical Waste” means waste as defined in the Hazardous Waste Regulation as Biomedical Waste.

“Bulky Waste” means individual articles of Refuse with a volume greater than one-and-a-half (1.5) cubic metres or greater than two and a half (2.5) metres in length.

“CRD” means Capital Regional District.

“Carpet and underlay” means flooring material made of woven wool, silk, cotton or synthetic fibers and foam padding underlayment where tack stripping material has been removed.

(Bylaw 4497)

“Catch Basin Waste” means the contents of catch basins or similar devices that detain and pre-treat stormwater to allow solids to settle and oily materials to float to the surface and be retained in the device while treated stormwater is discharged.

“Clean Renovation and Demolition Waste” means material that results from the construction, renovation or demolition of all or part of a building or structure that does not contain Surface Coating Waste, Asbestos Containing Material, Hazardous Waste, Prohibited Waste, Mandatory Recyclable Materials, or an Extended Producer Responsibility product.

(Bylaw 4497)

“Clean Soil” means soil, sediment or fill material which contains the substances specified in Schedule D, Column IV of the Contaminated Sites Regulation but in quantities less than those specified.

“Clean Wood Waste” means wood products such as dimensional lumber, pallets, crating, and salvaged wood waste:

- 1) that is untreated, unstained, unpainted, and
- 2) that does not include any antiseptant, coating, glues, or resins.

(Bylaw 4497)

“Commercial Hauler” means a person whose business collects and receives for a fee Refuse, Voluntary Recyclable Material, Mandatory Recyclable Material, Extended Producer Responsibility Products, or Weeds for Disposal, or a person whose business generates Voluntary Recyclable Material, Mandatory Recyclable Material, Extended Producer Responsibility Products, and who delivers those materials for Disposal at the Disposal Site.

(Bylaw 4497)

“Commercial Load” means Uncontaminated Demolition Waste to be Disposed of at the Disposal Site brought into the Disposal Site in a Vehicle which with the Uncontaminated Demolition Waste has a gross vehicle weight greater than 5,500 kg.

“Concrete” means a hardened mixture of cement with sand and gravel.

“Condemned or Spoiled Foods” means food confiscated or quarantined, or designated as international high risk waste, by the Canadian Food Inspection Agency or the Canadian Border Service Agency and spoiled food from a commercial operation or spoiled food greater than 50 kilograms from a domestic residence.

“Contaminated Demolition Waste” means material that results from the demolition of all or part of a building that contains Hazardous Waste, Prohibited Waste, Mandatory Recyclable Materials or an Extended Producer Responsibility Product.

“Contaminated Gypsum Board or Wallboard” means Gypsum Board or Wallboard that is contaminated by oil, tar, fungus, mould, has been burned, or had other materials affixed to it.

“Contaminated Sites Regulation” means the Contaminated Sites Regulation, B.C. Regulation 395/96, enacted under the *Environmental Management Act*.

“Contaminated Soil” means soil or sediment or fill material containing substances in quantities or concentrations equal to or greater than those specified in Schedule E, Column IV of the Contaminated Sites Regulation but which is not a Hazardous Waste under the Hazardous Waste Regulation.

“Contaminated Wood Waste” means wood products such as wood contaminated with asphalt shingles, wood painted with lead based paint, creosote wood products, pressure treated wood, or laminate flooring that is not Hazardous Waste due to the proportion of surface coatings or preservatives.

“Controlled Waste” means a material, substance or object listed in Schedule “E” which may be Disposed of if special handling and Disposal techniques are used to avoid creating health hazards, nuisances or environmental pollution excluding Hazardous Waste under the Hazardous Waste Regulation.

“Corrugated Cardboard” means recyclable paper that consists of a fluted corrugated sheet and one or more flat linerboards including pizza boxes free of food residue, but excluding materials which are impregnated with blood, grease, oil, chemicals, food residue, wax; or have polyethylene, polystyrene, foil or other non-paper liners; or are contaminated with a material which will render the Corrugated Cardboard Unmarketable.

“Dead Animal” means the carcass or part of the carcass of an animal excluding Hazardous Waste under the Hazardous Waste Regulation and Specified Risk Material.

“Designated Location” means the location at the Disposal Site designated by the Manager and identified as the location for Disposal of specific types of Solid Waste.

“Dispose”; **“Disposal”** means leaving Solid Waste at the Disposal Site for the purpose of landfilling, composting, or recycling.

“Disposal Site” means the Hartland Landfill site, more particularly described in Schedule “A”.

“Environmental Management Act” means the *Environmental Management Act* SBC 2003 c.53.

“Extended Producer Responsibility Product” means any material defined as a product in a “product category” listed in the Recycling Regulation for which a “product plan” as defined in the regulation has been “approved” and is operating.

“Fibre Optic Cable” means a cable consisting of a bundle of glass or plastic threadlike fibres used for the transmission of information by light impulses wrapped in layers of treated paper and plastic or metal cladding.

“Food Processing Waste” means waste, residues, byproducts or waste treatment residuals from commercial food manufacturing or packaging operations.

“Glass” means clear or coloured food and beverage containers made of glass but does not include plate glass, window glass, laminated glass, or safety glass.

“Gypsum Board or Wallboard” means a panel used for interior walls and ceilings made up of a liner typically made of paper with a core of gypsum plaster and additives.

“Hauler Incentive Rate” means a reduced tipping rate available for private and municipal haulers who conform to the requirements of the hauler incentive program. (Bylaw 4497)

“Hazardous Waste” means any chemical compound, mixture, substance, or article defined as a Hazardous Waste in the Hazardous Waste Regulation.

"Hazardous Waste Regulation" means Hazardous Waste Regulation, BC Reg. 63/88 enacted under the *Environmental Management Act*.

"Health Hazard Waste" means a gaseous, liquid or solid material, substance or object which, because of its inherent nature and quantity, may be a health hazard and includes, but is not limited to: infectious wastes that originate from foreign countries, including, without limiting the generality of the foregoing, waste confiscated at customs stations or received from ships or planes and which is not a Biomedical Waste.

"Household Hazardous Waste" means a class of Hazardous Waste that results from any of the following involving anything in a "product category" as defined in the Recycling Regulation:

- (a) a domestic activity at a residence;
- (b) personal use; or
- (c) a person's use in relation to his or her own residence.

"Ignitable" means substances liable to spontaneous combustion or substances that on contact with water emit flammable gases having the properties of:

- (a) flammable gas;
- (b) flammable liquid; or
- (c) flammable solids,

and as defined in the Hazardous Waste Regulation.

"Industrial Commercial Institutional" includes any industrial or commercial operations of any size including manufacturing, processing and packing and small businesses with one or more employees such as retail stores, offices, strip malls, vacation facilities, hotels, motels and resorts and institutional operations such as schools, student residences, correctional facilities, churches, community buildings, hospitals, licensed care facilities and hospices, but does not include residential premises.

(Bylaw 3917)

"International High Risk Cruise Ship Waste" means any item, material, or load originating from a Cruise Ship that is identified as High Risk Material by Canadian Border Services Agency and/or the Canadian Food Inspection Agency.

(Bylaw 4497)

"International Waste" means any item, material, or load that is defined as International Waste under the International Waste Directive or as identified by the Canadian Food Inspection Agency and/or the Canadian Border Services Agency.

(Bylaw 4497)

"Invasive Species Plants" means plants set out in the Schedule to the Spheres of Concurrent Jurisdiction – Environment and Wildlife Regulation, B.C. Reg. 144/2004.

"Kitchen Scraps" means compostable waste generated by residential, business, institutional and commercial sources such as fruits, vegetables, meat, meat by-products, dairy products, baked goods, cereal, grains, pasta, bones, egg shells, coffee grounds and filters, tea bags, nuts and shells, houseplants and cut and dried flowers, and soiled paper products such as paper towels, tissues, food packaging, plates and cups but does not include Controlled Waste.

(Bylaw 3917)

"Kitchen Scraps Transfer Station" means a facility at Hartland landfill designated for receipt and the transfer of **Kitchen Scraps** to another location.

(Bylaw 3917)

"Knotweed" means Japanese knotweed (*follopia japonica*), himalayan knotweed (*persicaria wallichii*), giant knotweed (*fallopian sachalinensis*), bohemian knotweed (*fallopian x bohémica*) plants including

stems, seeds and rhizome fragments.

“Lead Acid Battery” means an electro-chemical cell contained in a plastic case consisting of lead and lead oxide plates and containing a mixture of acids which is used to supply an electric power source.

“Load” means Solid Waste which arrives at the Disposal Site in a Vehicle.

“Manager” means the General Manager of the Environmental Sustainability department of the Capital Regional District or his or her authorized agent.

“Mandatory Recyclable Material” means a Recyclable Material listed in Schedule “F”.

“Marketable” means Recyclable Material which can be disposed of through an existing Capital Regional District program or a commercial market for recycling.

“Miscellaneous Controlled Waste” means a material, substance or object that the Manager considers to be an environmental or health and safety hazard and should be Disposed of as Controlled Waste but excludes Hazardous Waste under the Hazardous Waste Regulation.

“Mixed Paper” includes, but is not limited to, newspaper and inserts; office paper, including white and coloured ledger paper, computer paper, photocopy paper, writing pads, business forms, phone message notes, file folders, reports, envelopes, non-thermal fax paper, no carbon required (NCR) paper, calculator tape, ‘post-it’ type notes, business cards, paper index cards; boxboard, including paper egg cartons, laundry and cereal boxes; junk mail; gift wrapping and packing paper; magazines; catalogues; directories; calendars; postcards; shredded paper; cardboard storage boxes; cardboard storage; cardboard moving boxes; paper gift boxes; paper bags; paper lunch bags; paper pinata; paper gift bags; paper part hat; paper party décor; but excluding paperback and hardcover books; waxed paper; carbon paper; and other paper which are impregnated with blood, grease, oil, chemicals, food residue or have polyethylene, polystyrene, foil or other non-paper liners or attachments or are contaminated with a material which will render the paper fibres Unmarketable.
(Bylaw 4497)

“Non-EPR” means a material that is not in the specific form or category set out in the Extended Producer Responsibility Product list in Schedule “G”.

(Bylaw 3917)

“Non-EPR Rigid Plastics” means rigid plastic items, such as children’s toys, lawn chairs, and car seats that are not an Extended Producer Responsibility Product.

(Bylaw 4497)

“Noxious Weeds” means weeds designated within the Provincial and Regional Noxious Weeds Lists of the Weed Control Regulation.

“Out-of-Region Waste” means municipal solid waste that is originating from outside the boundaries of the Capital Regional District but is not International Waste.

(Bylaw 4497)

“PCB” means any monochlorinated, dichlorinated or polychlorinated biphenyl or any mixture that contains one or more of these.

“Printed Paper and Packaging” means the materials listed in Schedule “G” of this Bylaw under the heading **Printed Paper and Packaging originating from residential premises**.

(Bylaw 3917)

“Prohibited Waste” means a gaseous, liquid, or solid material, substance or object as listed in Schedule “D”.

“Propane Tank” means a refillable or non-refillable metal container rated at a capacity of less than 46 kg (100 lbs.) which is used to contain flammable hydrocarbon gases used as fuel.

“Public Drop Off Area” means that area of the Disposal Site containing Designated Locations for the Disposal of Small Loads of Refuse, Voluntary Recyclable Material, Mandatory Recyclable Material, Extended Producer Responsibility Products, Weeds, or Household Hazardous Waste.

“Pumpings” means liquid and semi-solid materials collected by a vactor truck or pump and transported by vactor truck, tanker truck or other container to the Disposal Site.

“Radioactive Waste” means waste containing a prescribed substance as defined in the *Atomic Energy Control Act* (Canada) in sufficient quantity or concentration to require a licence for possession or use under that Act and regulations made under that Act.

“Reactive” means a gaseous, liquid or solid material, substance or object which is:

- (a) explosive, oxidizing or so unstable that it readily undergoes violent change in the presence of air or water;
- (b) generates toxic gases, vapours, or fumes by itself or when mixed with water; or
- (c) polymerized in whole or in part by chemical action and causes damage by generating heat or increasing in volume,

and as defined in the Hazardous Waste Regulation.

“Recyclable Material” means Solid Waste that has been sorted by material, substance or object and that satisfies at least one of the following criteria:

- (a) is organic material from residential, commercial, or institutional sources and is capable of being composted, at a site;
- (b) is Marketable;
- (c) is being used in the manufacture of a product that has an established market or is being processed as an intermediate stage of an existing manufacturing process; or
- (d) has been identified as a Recyclable Material in the solid waste management plan, and includes Mandatory Recyclable Material and Voluntary Recyclable Material.

“Recycling Regulation” means the Recycling Waste Regulation BC 449/2004 enacted under the *Environmental Management Act*.

“Refuse” means discarded or abandoned materials, substances or objects but does not include Controlled Waste, Prohibited Waste, Kitchen Scraps, Hazardous Waste, Mandatory Recyclable Materials and Extended Producer Responsibility Products.

(Bylaw 3917)

“Regional Board” means the Board of the Capital Regional District.

“Residential Premises” includes houses, apartments, condominiums, townhomes, and other premises in which persons reside but does not include institutional or commercial accommodations.

(Bylaw 3917)

“Rubble” means gravel, brick, Concrete block, refractory material, road asphalt or rock, or a combination of any or all of these.

(Bylaw 3917)

“Salvaged Wood Waste” means Clean Wood Waste:

- 1) that is dimensional lumber greater than 4 feet in length; and
- 2) that may or may not contain nails.

(Bylaw 4497)

“Scrap Metal” means ferrous and non-ferrous metallic materials, including, but not limited to, sheet metal, siding, roofing, rebar, flashings, pipes, window frames, doors, furnaces, duct work, wire, cable, bathtubs, fencing, bicycle frames, automotive body parts, machinery, garbage cans, metal furniture, tire rims.

“Screenings” means the material and debris captured by screens used in the treatment or processing of sewage or septage.

“Sharps” means needles and syringes, from domestic sources.

“Site Regulations” means regulations set out in Schedule “B” that regulate the conduct of a person using the Disposal Site.

“Small Appliances” means small electronic or electrical appliances as defined in the Recycling Regulation.

“Small Load” means Solid Waste to be Disposed of at the Disposal Site brought onto the Disposal Site in a Vehicle which, with the Solid Waste, has a gross vehicle weight of no more than 5,500 kgs.

“Solid Waste” means Refuse, Voluntary Recyclable Materials, Mandatory Recyclable Materials, Extended Producer Responsibility Products, Weeds, Kitchen Scraps, Hazardous Waste as permitted in this bylaw and Controlled Waste, but excludes Prohibited Waste. *(Bylaw 3917)*

“Soot and Ash” means black carbonaceous residue of wood, coal, oil and other fossil fuels originating in chimney linings, boilers, furnaces and other burners, residuals from burning fossil fuels, and includes material collected from duct cleaning and chimney cleaning.

“Source-separated” means materials, substances or objects that are separated by means of a barrier or containers into separate distinguishable accumulations of the same kind of materials, substances, or objects.

“Specified Risk Material” means any waste containing the Specified Risk Material as defined in the federal Fertilizers Regulations (C.R.C., c. 666), as amended from time to time, including material from the skull, brain, trigeminal ganglia, eyes, tonsils, spinal cord and dorsal root ganglia of cattle aged 30 months or older, or material from the distal ileum of cattle of all ages.

“Stumps and Branches” means wood material, substances or objects which have not been processed or manufactured and includes stumps, tree trunks and branches greater than 75 mm (3 in.) in diameter.

“Surface Coating Waste” means stucco, plaster, brick, or other unconsolidated or similar material coated with lead based paint that may present a respiratory hazard due to the presence of lead particulate and also includes paint chips, hull coatings and spent sandblast media generated from scraping, power washing or sandblasting from, but not limited to, ships, boats, cars, buildings, bridges and storage tanks. *(Bylaw 4100)*

“Tires” means the outer pneumatic rubber covering of wheels of passenger vehicles, light service trucks and motorcycles with an inner diameter of less than 42 centimetres.

“Treated Wood and Wood Products” means engineered wood products or pressure treated, stained, or painted wood and wooden furniture that may or may not contain nails or other metal fasteners. *(Bylaw 4497)*

“Treasurer” means the Director of Finance of the Capital Regional District or her or his authorized agent.

“Uncontaminated Demolition Waste” means material that results from the demolition of all or part of a building or a structure that does not contain Surface Coating Waste, Hazardous Waste, Prohibited Waste,

Mandatory Recyclable Materials, or an Extended Producer Responsibility Product. (Bylaw 4497)

“Unmarketable” means Recyclable Materials which cannot be Disposed of through an existing Capital Regional District recycling program or a commercial market due to contamination.

~~**“Unsorted Renovation and Demolition Waste”** means material that results from the construction, renovation or demolition of all or part of a building or structure that does not contain Surface Coating Waste, Asbestos-Containing Material, Hazardous Waste, Prohibited Waste but may contain Wood Waste, Asphalt Shingles, and Carpet and Underlay.~~

~~(Bylaw 4497)~~

“Used Oil Filter” means a spent cylindrical metal container housing a filter element which is used on a motor vehicle to remove impurities from its engine lubricating oil.

“Vehicle” means a Vehicle, as defined in the *Motor Vehicle Act*, R.S.B.C. 1996, c.318.

“Vehicle Washing Facility Waste” means Pumpings from sumps which collect effluent from vehicle washing facilities, but not from facilities used for maintenance or lubrication or automobile components or where solvents or sand blasting are employed for removal of paint, grease or oil.

“Vermiculite Insulation” means a mineral which expands greatly when heated and creates pockets of air that was used as an insulation material. (Bylaw 4100)

“Visitor” means a person who arrives at the Disposal Site for purposes other than to Dispose of Solid Waste.

“Voluntary Recyclable Material” means a Recyclable Material Listed in Schedule “F”.

“Waste Asbestos” means waste containing friable asbestos fibres or asbestos dust and as defined in the Hazardous Waste Regulation and includes Asbestos Cement.

“Waste Sludge” means the residual material resulting from chemical treatment, coagulation, flocculation, sedimentation, floatation or biological treatment of wastewater.

“Weed Control Regulation” means the *Weed Control Regulation* BC Reg 66/85 under the *Weed Control Act*.

“Weeds” means Invasive Species Plants and Noxious Weeds as defined in this bylaw and other plants with similar properties but excludes Knotweed.

“White Goods” means appliances such as refrigerators, stoves, freezers, metal dishwashers, water coolers and air conditioners.

“Yard and Garden Material” means organic materials, substances or objects including, but not necessarily limited to, grass, lawn and hedge clippings, grass sod, flowers, leaves, vegetable stalks, shrubs, and shrub and tree branches less than 75 mm (3 inches) in diameter, but does not include:

- (a) Invasive Species Plants
- (b) Noxious Weeds
- (c) plants or growing media that may have been identified by the Canadian Food Inspection Agency from time to time as infectious or potentially infectious and of which notice has been sent to the Capital Regional District or publicized by the Canadian Food Inspection Agency; or
- (d) plant or tree material in municipal street sweepings.

SECTION 2 - CONDITIONS

2.1 No person shall Dispose of Solid Waste at the Disposal Site except in accordance with this Bylaw

and the Site Regulations.

- 2.2 All persons attending the Disposal Site shall act in accordance with this Bylaw and Site Regulations.
- 2.3 No person shall Dispose of Solid Waste at the Disposal Site which originated outside the Capital Regional District.
- 2.4 Despite section 2.3, a person may Dispose of Solid Waste at the Disposal Site which originates outside the Capital Regional District if it is Waste Asbestos or Contaminated Gypsum Board or Wallboard.
- 2.5 Subject to 2.6 and 2.7, no person shall dispose of Prohibited Waste at the Disposal Site.
- 2.6 Despite section 2.5 and 2.8, a person may dispose of Asbestos Containing Material in accordance with Section 2.11, and Contaminated Gypsum Board or Wallboard, liquids, Sharps, or Vermiculite Insulation as Controlled Waste in accordance with section 2.12.
(Bylaw 4100)
- 2.7 Despite section 2.5, a person may dispose of light ballasts that may contain PCB as an Extended Producer Responsibility Product in accordance with section 2.20.
- 2.8 Subject to sections 2.9, 2.10, and 2.11, no person shall dispose of a Hazardous Waste at the Disposal Site.
- 2.9 Despite section 2.8, a person may Dispose of Household Hazardous Waste at a Designated Location in the Public Drop Off Area if it is:
- (a) a Small Load; and
 - (b) Source-separated.
- 2.10 Despite section 2.8, a person may Dispose of an Extended Producer Responsibility Product listed in Schedule "G" that is a Hazardous Waste at a Designated Location in the Public Drop Off Area if it is:
- (a) a Small Load; and
 - (b) Source-separated.
- 2.11 Despite section 2.8, a person may Dispose of Asbestos Containing Material at a Designated Location provided that:
- (a) The disposal of Waste Asbestos is manifested as required by the British Columbia Ministry of Environment and Transport Canada;
 - (b) the Disposal is in accordance with the Occupational Health and Safety Regulation BC Reg 296/97 enacted pursuant to the Workers Compensation Act;
 - (c) the Disposal of Waste Asbestos is in accordance with the Hazardous Waste Regulation.
 - (d) the Disposal of Waste Asbestos is in accordance with the Transportation of Dangerous Goods Regulation.
 - (e) documentation has been submitted upon request of the Manager to confirm the presence of Asbestos Containing Material in the load.
 - (f) an appointment for Disposal is made with Capital Regional District staff a minimum of twenty-four (24) hours prior to Disposal, regular appointment hours for Asbestos Containing Material are Monday to Friday 9 a.m. to 2:30 p.m. excluding statutory holidays.
(Bylaw 4100)
- 2.12 No person shall Dispose of a Controlled Waste at the Disposal Site other than at a Designated Location and provided that:

- (a) the person who is to Dispose of the Controlled Waste has made an application to the Manager for permission:
 - (i) on a Controlled Waste permit application form provided by the Manager; and
 - (ii) the application is received a minimum of 30 days prior to the requested Disposal date
 - (b) the Manager has issued a Controlled Waste permit for the waste including any terms and conditions of Disposal;
 - (c) the Controlled Waste has been inspected and accepted by designated Capital Regional District staff prior to being Disposed of;
 - (d) the Controlled Waste is one type and from no more than one source unless the Manager gives written permission otherwise in the Controlled Waste permit;
 - (e) an appointment for Disposal is made with Capital Regional District staff a minimum of twenty-four (24) hours prior to Disposal of Controlled Waste, regular controlled waste appointment hours are Monday to Friday 9 a.m. to 2:30 p.m. excluding statutory holidays;
 - (f) the person who is to Dispose of the Controlled Waste has submitted a Declaration By Waste Carrier form provided by the Manager prior to Disposal;
 - (g) if the terms and conditions of the Controlled Waste permit are not met, or the Declaration By Waste Carrier form is not complete, Capital Regional District staff may refuse to allow Disposal;
 - (h) the Controlled Waste is not Marketable;
 - (i) the Disposal is conducted so as to minimize health and safety risks associated with the Disposal of the Controlled Waste; and
 - (j) the amount of Controlled Waste does not exceed the operational capacity of the Disposal Site including, without limitation, the Disposal is consistent with the provisions of the Solid Waste Management Plan or Operating Plan as amended from time to time.
- 2.13 Despite subsection 2.12(a)(ii) and 2.12(e), in cases of an emergency or hardship the Manager may permit the Disposal of Controlled Waste before the 30 day application period expires and without a minimum of twenty-four (24) hours' notice and outside regular appointment hours.
- 2.14 No person shall dispose of Mandatory Recyclable Material at the Active Face.
- 2.15 No person shall Dispose of Mandatory Recyclable Material at the Disposal Site other than at a Designated Location in the Public Drop Off Area provided that it is:
- (a) a Small Load; and
 - (b) Source-separated.
- 2.16 A person may Dispose of Voluntary Recyclable Material at the Active Face as Refuse or at the Disposal Site at a Designated Location in the Public Drop Off Area provided that it is:
- (a) a Small Load; and
 - (b) Source-separated.
- (Bylaw 3917)*
- 2.17 A person may Dispose of Weeds at the Active Face provided they are:
- (a) Source-separated; or
 - (b) if not Source-separated, as refuse.
- 2.18 A person may Dispose of Weeds at a Designated Location in the Public Drop Off Area provided they are in:
- (a) a Small Load and Source-separated; or
 - (b) if not Source-separated, as refuse.
- 2.19 No person shall Dispose of an Extended Producer Responsibility Product at the Active Face.
- 2.20 No person shall Dispose of an Extended Producer Responsibility Product other than those listed

in Schedule "G" and other than at a Designated Location in the Public Drop Off Area provided that it: *(Bylaw 3917)*

- (a) is a Small Load; and
- (b) is Source-separated.

- 2.21 No Commercial Hauler shall Dispose of Household Hazardous Waste at the Disposal Site.
- 2.22 No person shall dispose of Household Hazardous Waste at the Active Face.
- 2.23 No person shall Dispose of Household Hazardous Waste at the Disposal Site except at a Designated Location in the Public Drop Off Area and provided that it is:
 - (a) a Small Load; and
 - (b) Source-separated.
- 2.24 A person may Dispose of Refuse at the Active Face or in Small Loads at a Designated Location in the Public Drop Off Area.
- 2.25 No person shall Deposit Contaminated Demolition Waste at the Disposal Site.
- 2.26 No person shall Deposit Uncontaminated Demolition Waste at the Disposal Site other than:
 - (a) as a Controlled Waste in accordance section 2.12 and provided that it is a Commercial Load; or,
 - (b) at the Public Drop Off Area and provided it is a Small Load and Source-separated.
- 2.27 Effective January 1, 2015, no person shall deposit Kitchen Scraps at the Disposal Site except at the Kitchen Scraps Transfer Station and provided that they are Source-separated. *(Bylaw 3917)*
- 2.28 No person shall deposit Solid Waste at the Disposal Site that is not Source- separated when this Bylaw requires that it be Source-separated. *(Bylaw 3917)*
- 2.29 No person shall Deposit Vermiculite Insulation at the Disposal Site other than as a Controlled Waste in accordance with Section 2.12. *(Bylaw 4100)*

SECTION 3 - FEES

- 3.1 Every person depositing Solid Waste at the Disposal Site shall pay to the Capital Regional District the applicable fees in the amounts, and in accordance with the terms and conditions set out in Schedules "C", and "E".
- 3.2 Where a fee is not paid within the time specified in Schedule "C" for its payment, the person liable to pay such fee shall:
 - (a) pay interest on the fee at the rate set out in Schedule "C" from the date the fee was due to the date of payment; and
 - (b) not Dispose of any Solid Waste on or at the Disposal Site until such fee with interest owing has been paid in full.

SECTION 4 - VIOLATIONS & PENALTIES

- 4.1 A person who contravenes, violates or fails to comply with any provision of this Bylaw, or who suffers or permits any act or thing to be done in contravention or violation of this Bylaw, or who

fails to do anything required by this Bylaw, commits an offence and shall be liable, upon conviction, to a fine of not more than \$2,000, the costs of prosecution and any other penalty or order imposed pursuant to the *Local Government Act* or the *Offence Act* (British Columbia). Each day that an offence against this Bylaw continues or exists shall be deemed to be a separate and distinct offence.

- 4.2 The penalties imposed under Section 4.1 shall be in addition to and not in substitution for any other penalty or remedy imposed by this Bylaw or any other statute, law, or regulation.

SECTION 5 - SEVERANCE

- 5.1 If a section, subsection, sentence, clause or phrase of this Bylaw is for any reason held to be invalid by the decision of a Court in competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Bylaw.
- 5.2 Schedules "A," "B," "C," "D," "E", "F" and "G" are attached to and form part of this Bylaw.

SECTION 6 - REPEAL

- 6.1 Hartland Tipping Fee and Regulation Bylaw No. 5, 2003 is hereby repealed except insofar as it repeals any other bylaw.

SECTION 7 - TITLE

- 7.1 This Bylaw may be cited as "Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013"

READ A FIRST TIME THIS	13 th	DAY OF	March	2013
READ A SECOND TIME THIS	13 th	DAY OF	March	2013
READ A THIRD TIME THIS	13 th	DAY OF	March	2013
ADOPTED THIS	10 th	DAY OF	April	2013

Original signed by Alastair Bryson
CHAIR

Original signed by Sonia Santarossa
CORPORATE OFFICER

SCHEDULE "A"

DISPOSAL SITE

**CAPITAL REGIONAL DISTRICT
BYLAW NO. 3881**

DISPOSAL SITE means the Hartland Landfill site, more particularly described as:

PID: 023-851-457

Lot 1, Sections 54, 55 and 65, Highland District, Plan VIP64898

SCHEDULE "B"

SITE REGULATIONS

CAPITAL REGIONAL DISTRICT BYLAW NO. 3881

PURPOSE:

To ensure a safe and orderly environment for the staff and public at the Disposal Site.

POLICY:

These Site Regulations shall be observed by a person while on the Disposal Site.

REGULATIONS:

1. VEHICLES

1.1 Capital Regional District staff may refuse to allow a Vehicle to enter the Disposal Site or require a Vehicle to leave the Disposal Site if:

- (a) the Vehicle's Load exceeds the permitted weight limits set out in the regulations passed pursuant to the *Motor Vehicle Act*, or the *Commercial Transport Act*; or
- (b) the Vehicle is noisy due to improper or poor muffling and braking systems; or
- (c) the Load is poorly secured so as to be noisy or dangerous.
- (d) the Vehicle is in unsafe conditions due to excessive tire wear, broken mirrors, or inadequate door restraint system.
- (e) the Vehicle is owned, leased, operated, licensed, utilized, or otherwise associated with a person that is restricted from accessing, has been refused entry to, or has been prohibited re-entry to, the Disposal Site, whether under this bylaw or the *Trespass Act*, RSBC 2018 c 3.

(Bylaw 4497)

2. LOADS

2.1 All Loads of Solid Waste entering the Disposal Site shall be covered and secured. A cover shall be a tarpaulin or other overlay that is used to confine the load to the vehicle.

2.2 Despite Section 2.1, the following items are permitted at the disposal site without covers:

- (a) stumps - chained on flat bed or within confines of truck box;
- (b) Bulky Wastes strapped on flat beds or within confines of truck box.

2.3 A person must ensure that all Loads are ready for Disposal, including being Source-separated, before the Disposal Site closes for the day; otherwise they will not be permitted to Dispose of the Load.

(Bylaw 3917)

3. DISPOSAL SITE

- 3.1 No person while driving a Vehicle at the Disposal Site shall drive their Vehicle on any part of the Disposal Site other than on the roads and paved areas designated by the Capital Regional District.
- 3.2 No person while driving a Vehicle on the Disposal Site shall exceed the speed limits posted at the Disposal Site; or fail to obey posted signs.
- 3.3 No person delivering Solid Waste to the Disposal Site shall Dispose of Solid Waste except in such a place and in such a manner as directed by the Capital Regional District staff or the landfill contractor.
- 3.4 All Solid Waste Disposed of at the Disposal Site shall become the property of the Capital Regional District.
- 3.5 No person shall remove Solid Waste from the Disposal Site except with written approval of the Manager.
- 3.6 No person shall loiter at the Disposal Site. Vehicles must proceed directly to the Designated Location and then leave the Disposal Site as soon as possible after Disposal.
- 3.7 No person shall use the wheel wash facility unless their Vehicle was used to attend the active face. No person shall wash out the interior of truck boxes or wash the exterior of a Vehicle other than the wheels and wheel wells at the Wheel Wash Facility.
- 3.8 No person shall act with conduct that is disorderly or offensive including but not limited to excessive and loud use of offensive language or drunkenness.
- 3.9 No person shall enter the Disposal Site where the Vehicle Load exceeds the permitted weight limits set out in the regulations passed pursuant to the *Motor Vehicle Act*, or the *Commercial Transport Act*.
- 3.10 No person shall obstruct, intimidate, interfere, or harass Capital Regional District staff or officers who are performing their duties.
(Bylaw 4497)
- 3.11 Clean wood, treated wood, ~~salvageable wood, carpet and underlay~~ and asphalt shingles must be source separated prior to arriving to Hartland landfill.
(Bylaw 4497, 4610)
- 3.12 No person shall record audio and/or video or take photographs at the Disposal Site without the permission of the manager.
(Bylaw 4497)

4. SAFETY

- 4.1 Any person entering the Disposal Site does so at their own risk. The Capital Regional District accepts no responsibility or liability for damage or injury to person or to property.

- 4.2 Children are not permitted at the Disposal Site except when they are either inside a Vehicle or attending an event or education program supervised by CRD staff.
- 4.3 Pets or livestock are not permitted at the Disposal Site except when they are inside a Vehicle.
- 4.4 Smoking is not permitted at the Disposal Site.
- 4.5 All visitors to the Disposal Site must check in at the site office and complete the appropriate waiver forms.
- 4.6 Any person delivering Solid Waste to the Disposal Site shall Dispose of the waste in a manner that conforms with WorkSafe BC Board regulations.
- 4.7 No person shall use electronic devices as defined in the *Motor Vehicle Act* while driving a Vehicle at the Disposal Site except in a manner permitted by the *Motor Vehicle Act*.
- 4.8 No person shall attend the Active Face without personal protective equipment as required by WorkSafe BC Board regulations including but not limited to steel toed boots and a high visibility vest.

5. GENERAL

- 5.1 Every person who contravenes these regulations, fails to obey orders or directions given by Capital Regional District staff or fails to comply with the posted notices and signs on the Disposal Site may be refused or prohibited re-entry onto the Disposal Site.
- 5.2 Where a person has unpaid fines or amounts owing to the Capital Regional District resulting from violation of this bylaw, and any such amounts are outstanding for more than 45 days from the date of conviction or deemed conviction, Capital Regional District staff may refuse access or prohibit re-entry to the Disposal Site until such amounts are paid. Where the person operates a waste disposal, hauling, or other commercial waste generating business or is associated with such a business, this refusal may be extended to those entities or vehicles owned, leased, or operated by those entities, which in the opinion of Capital Regional District staff, are affiliated, associated, controlled, owned-by in part or in whole, conducting business on behalf of, or otherwise related to that person, corporately or by degree of co-sanguinity or family relationship, despite those persons not having unpaid fine amounts, amounts owing, or separate legal personality.

(Bylaw 4497)
- 5.3 The Manager is authorized to enforce all site rules, regulations, and bylaws at Hartland Landfill. They may also prohibit or restrict a person(s) who contravenes this Bylaw from attending the Hartland Landfill.

(Bylaw 4497)
- 5.4 A person is entitled to a 25% reduction in monetary penalty resulting from violation of this bylaw if fines or fees are paid within 30 days from issue.

(Bylaw 4497)

SCHEDULE "C"

TIPPING FEES

CAPITAL REGIONAL DISTRICT BYLAW NO. 3881

(Bylaw 4497, 4610)

FEES

1. The fees for depositing solid waste at the Disposal Site are:

Waste Type	Disposal Site Designated Location	Tipping Fee (per tonne)	Other Fees	Minimum Tipping Fee
Asbestos Containing Material	As directed by CRD staff	\$157		\$20
Asphalt Roofing Shingles (effective July 1, 2024)	Public Drop Off Area	\$110	\$10 bin fee	
Asphalt Roofing Shingles (effective July 1, 2024)	As directed by CRD staff	\$110		\$10
Bicycle tires and tubes	Public Drop Off Area	No fee	\$6 recycling area entry fee	No fee
Bulky Waste	Active Face	\$254		\$10
Carpet and Underlay (effective July 1, 2024)	Public Drop off Area	\$110	\$10 bin fee	
Carpet and Underlay (effective July 1, 2024)	As directed by CRD staff	\$110		\$10
Clean Renovation and Demolition Waste (effective January 1, 2024)	Public Drop Off Area	\$150	\$10 bin fee	
Clean Renovation and Demolition Waste (effective January 1, 2024)	As directed by CRD staff	\$150		\$10
Clean Wood Waste (effective January 1, 2024)	Public Drop off Area	\$80	\$10 bin fee	
Clean Wood Waste (effective January 1, 2024)	As directed by CRD staff	\$80		\$10
Controlled Waste	As directed by CRD staff	As listed in Schedule "E"		\$20
Cooking oil and grease	Public Drop Off Area	No fee		No fee
Extended Producer Responsibility Product listed in Schedule "G" (excluding tires on rims)	Public Drop Off Area	No fee		No fee

Extended Producer Responsibility Product listed in Schedule "G" tires on rims	Public Drop Off Area	No fee	\$6 recycling area entry fee	No fee
Hauler Incentive Rates (effective January 1, 2024)		\$125		
Hauler Incentive Rates (effective January 1, 2025)		\$135		
Household Hazardous Waste	Public Drop Off Area	No fee		No fee
International Low Risk Waste	As directed by CRD staff	\$135		
Kitchen Scraps until December 31, 2021	Kitchen Scraps Transfer Station	\$120		
Kitchen Scraps effective January 1, 2022	Kitchen Scraps Transfer Station	\$140		
Unsorted Renovation and Demolition Waste (effective July 1, 2024)	Public Drop Off Area	\$300	\$10 bin fee	
Unsorted Renovation and Demolition Waste (effective July 1, 2024)	Active Face	\$300		\$20

Waste Type	Disposal Site Designated Location	Tipping Fee (per tonne)	Other Fees	Minimum Tipping Fee
Mattresses and boxsprings	Public Drop Off Area	\$110	\$10 bin fee	
Propane tanks and fire extinguishers	Public Drop Off Area	No fee		No fee
Recyclable Material excluding Scrap Metal, mattresses and boxsprings, Yard and Garden Material and Clean Wood Waste (by non-commercial hauler)	Public Drop Off Area	No fee	\$6 recycling area entry fee	No fee
Recyclable Material excluding Scrap Metal, mattresses and boxsprings, Yard and Garden Material and Clean Wood Waste (by Commercial Hauler)	Public Drop Off Area	No fee	\$26 recycling area entry fee	No fee
Refuse	Active Face	\$110		\$10
Refuse	Public Drop Off Area	\$110	\$10 bin fee	
Refuse	Active Face	\$150		\$10
Refuse	Public Drop Off Area	\$150	\$10 bin fee	
Scrap Metal	Public Drop Off Area	No fee	No fee	
Stumps and Branches	As directed by CRD staff	\$110		\$10
Treated Wood and Wood Products	As directed by CRD staff	\$110	\$10 bin fee	
Treated Wood and Wood Products (effective July 1, 2024)	As directed by CRD staff	\$110	\$10 bin fee	
Waste Asbestos which originates outside the CRD	As directed by CRD staff	\$500		\$20
Weeds (Source separated)	Active Face	\$59		\$10
Weeds (not Source separated in Refuse)	Active Face	\$110		\$10
Weeds (not Source separated in Refuse)	Public Drop Off Area	\$110	\$10 bin fee	
Weeds (not Source separated in Refuse)	Active Face	\$150		\$10
Weeds (not Source separated in Refuse)	Public Drop Off Area	\$150	\$10 bin fee	

Weeds (Source separated)	Public Drop Off Area	\$59		\$10
Yard and Garden Materials	As directed by CRD staff	\$59		\$10
Uncovered or unsecured loads	All fees applicable to the Load are doubled			

GENERAL

2. Per tonne fees are based on weight as measured on the scale, based on the difference in weight between the loaded weight and the weight of the empty Vehicle.
3. Where a dollar amount per tonne is indicated, it is to be interpreted as allowing a proportionate fee for a portion of a tonne in 10 kg increments.
4. All fees shall be rounded up or down to the nearest quarter of a dollar.
5. In the event that the weigh scales provided at the Disposal Site are not operational, or in the event of traffic congestion, or at the discretion of the Manager, weights shall be as estimated based on volume by the Manager or Capital Regional District staff.
6. If a person disposes a Load containing Source-separated Recyclable Materials, Extended Producer Responsibility Products, Yard and Garden Material, Household Hazardous Waste, or other Refuse at the Public Drop Off Area and chooses not to weigh out after disposal of each class of material, they are subject to pay a tipping fee for Refuse for the entire Load.
7. All fees payable under this Bylaw shall be paid to the Capital Regional District in cash, by cheque, debit, or credit card at the time the disposal is made.
8. Notwithstanding Section 7, any person disposing Solid Waste, except Recyclable Materials, at the Disposal Site on a regular basis may apply to the Capital Regional District for credit, and, if the treasurer is satisfied of the credit worthiness of the person, he or she may grant credit to the person, in which case payment of the fee imposed under Section 1 shall be made and the credit extended on the following conditions.
 - (a) the person receiving credit shall pay to the Capital Regional District all fees in full within thirty (30) days of the last day of the month for which an invoice has been submitted. The Capital Regional District will invoice monthly for Solid Waste disposed during the preceding month. The invoice amount will be based on the total quantity of Solid Waste delivered during the month and the posted disposal rates in effect at the time of delivery;
 - (b) late payment(s) will be subject to an interest penalty fee of 1.5% per month;
 - (c) the Capital Regional District reserves the right to cancel, upon five (5) days' notice, the credit offered herein for late payment, non-payment, or other justified cause as judged solely by the treasurer;
 - (d) if the person receiving credit fails to pay to the Capital Regional District all fees in full within thirty (30) days of the last day of the month in which an invoice has been issued, the Capital Regional District may withhold monies equivalent to those fees, plus interest, that are owed by the Capital Regional District to the person receiving credit under a separate contract, agreement, or offer between the Capital Regional District and the person receiving credit; and
 - (e) the Capital Regional District reserves the right to refuse access to the Disposal Site to a person receiving credit until outstanding fees are paid.

SCHEDULE "D"

PROHIBITED WASTE

**CAPITAL REGIONAL DISTRICT
BYLAW NO. 3881**

(Bylaw 4497, **4610**)

Prohibited Waste
Aggregate
Asphalt Roofing Shingles, except as permitted in this Bylaw
Asbestos Containing Material, except as permitted in this bylaw
Asphalt and Rubble
Biomedical Waste
Carpet and Underlay, except as permitted in this Bylaw
Clean Soil
Concrete
Contaminated Demolition Waste
Gypsum Board or Wallboard, except as permitted in this bylaw
Ignitable Waste
Kitchen Scraps, except as permitted in this Bylaw
Liquids, except as permitted in this Bylaw
Motor vehicle bodies and farm implements
Radioactive Waste
Reactive wastes
Sharps, except as permitted in this Bylaw
Specified Risk Material
Vermiculite Insulation, except as permitted in this Bylaw
Waste that is on fire or smouldering
Waste containing PCBs, except as permitted in this bylaw
Wood Waste, except as permitted in this Bylaw

SCHEDULE “E”

CONTROLLED WASTE

**CAPITAL REGIONAL DISTRICT
BYLAW NO. 3881**

(Bylaw 4497, 4610)

The fees for disposing of Controlled Waste in the Disposal Site are:

Controlled Waste	Disposal Fee
Animal Fecal Waste	\$157 per tonne
Catch Basin Waste	\$157 per tonne
Commercial Load of Uncontaminated Demolition Waste	\$110 per tonne
Commercial Load of Uncontaminated Demolition Waste	\$150 per tonne
Condemned or Spoiled Foods	\$157 per tonne
Contaminated Gypsum Board or Wallboard	\$311 per tonne
Contaminated Gypsum Board or Wallboard originating outside the CRD effective January 1, 2017	\$500 per tonne
Contaminated Soil	\$157 per tonne
Dead Animal	\$254 per tonne
Fibre Optic Cable	\$157 per tonne
Food Processing Wastes	\$157 per tonne
Health Hazard Waste	\$157 per tonne
International High Risk Cruise Ship Waste	\$500 per tonne
Knotweed	\$59 per tonne
Miscellaneous Controlled Waste	\$157 per tonne
Pumpings from septage treatment facilities containing residual sludge	\$157 per tonne
Pumpings from sewage treatment plants, pump stations and sewer lines	\$157per tonne
Screenings from sewage treatment plants, septage treatment facilities and pump stations	\$157 per tonne
Sharps	\$254 per tonne
Slurries which may contain non-hazardous solids, soil, sand, gravel, fibres, fats, oils and grease or mineral oil and grease	\$157 per tonne
Soot and Ash	\$157 per tonne
Spent charcoal from water purification plants and odour filters	\$157 per tonne
Surface Coating Waste	\$157 per tonne
Vehicle Washing Facility Waste	\$157 per tonne
Vermiculite Insulation	\$157 per tonne
Waste Sludge from sewage treatment plants containing no more than 80% total moisture	\$121 per tonne

SCHEDULE "F"

RECYCLABLE MATERIALS

**RECEIVED AT HARTLAND LANDFILL AT A DESIGNATED LOCATION
AT THE PUBLIC DROP OFF AREA (SMALL SOURCE SEPARATED LOADS)**

**CAPITAL REGIONAL DISTRICT
BYLAW NO. 3881**

(Bylaw 4497, 4610)

Mandatory Recyclable Material
EPR Products
Clean Wood Waste (Effective January 1, 2024)
Asphalt Roofing Shingles (Effective July 1, 2024)
Carpet and Underlay (Effective July 1, 2024)
Treated Wood and Wood Products (Effective July 1, 2024)
Salvaged Wood Waste (Effective July 1, 2024)
Non-EPR Corrugated Cardboard
Propane Tanks and fire extinguishers
White Goods
Non-EPR Mixed Paper
Scrap Metal
Yard and Garden Material
Voluntary Recyclable Material
Books (textbooks, novels, soft and hardcover books)
Non-EPR Film plastic
Non-EPR Glass containers
Large rigid plastics
Mattresses and boxsprings
Rigid plastic containers
Non-EPR Polystyrene
Non-EPR Polycoated containers
Bicycle tubes and tires

SCHEDULE "G"

(Bylaw 4497)

EXTENDED PRODUCER RESPONSIBILITY PRODUCTS RECEIVED AT HARTLAND LANDFILL AT A DESIGNATED LOCATION AT THE PUBLIC DROP OFF AREA (SMALL SOURCE SEPARATED LOADS)

CAPITAL REGIONAL DISTRICT BYLAW NO. 3881

Product Category	Materials Accepted at Hartland
Beverage container	• ready-to-serve beverage containers made of aluminium, glass, paper, plastic and/or steel
Solvent and flammable liquids, Gasoline, Pesticide, Lubricating oil, oil filter, Paint product, Lead acid battery, antifreeze	• flammables, • gasoline and pesticides • lubricating oil and empty oil containers • used oil filters • paint • lead acid batteries • antifreeze
Electronic and electrical	• display products and accessories (TV, monitor, remote) • desktop computers and accessories (CPU, keyboard, mouse, cable) • portable computers and accessories (laptop, netbook, tablet) • printing, scanning and multifunction devices (printer, fax machine, scanner) • audio products and accessories (radio, record player/stereo, walkie talkie, MP3, earphones) • video products and accessories (camera, video console, VCR/DVD/PVR) • video gaming systems and accessories (game console, controller, joystick, cable) • non-cellular telephones and answering machines • aftermarket vehicle audio and video systems (speaker, vehicle display, GPS) • electronic musical instruments (guitar, drum set, keyboard) • IT and Telecom devices (router, Ethernet switch, telecom bridge, cash register) • medical monitoring and control devices (thermometer, blood pressure device, stethoscope, microscope) • small appliances and power tools (kitchen countertop, personal care, floor cleaning, weight measurement, garment care, air treatment, time measurement, sports and leisure, power tools, sewing and textile, exercise machines) • residential lights (fluorescent tubes and bulbs (CFLs), halogen and

	incandescent lamps, light emitting diode (LED) lamps, light ballasts (that may contain PCB), High Intensity Discharge (HID) and other mercury containing lamps) - residential light fixtures and products (bike lights, ceiling fixtures, chandeliers, flashlights, floor lamps, light strings, outdoor fixtures, recessed/pot lights) - batteries for use in electronic and electrical products listed in this section including primary and rechargeable batteries
Tire	automotive tires (unrimmed)
Printed Paper and Packaging from Residential Premises but not from Industrial Commercial Institutional operations	- Cardboard storage box - Cardboard storage - Cardboard moving boxes - Paper gift boxes - Paper bag - Paper lunch bag - Paper pinata - Paper gift bag - Paper party hat - Paper party décor - Newspapers - Newspaper Inserts - Magazines - Catalogues - Telephone Directories - Other Printed Media - Residential Printed Paper - Miscellaneous Printed Paper - Old Corrugated Cardboard - Paper cup (hot) (Polycoated liner) - Paper Cup (hot) (biodegradable liner) - Paper Cup (cold) (waxed) - Paper Cup (cold) (2-sided Polycoated) - Polycoated Milk Cartons - Aseptic Containers - Multi-laminated Paper Packaging - Old Boxboard (OBB) - Wet Strength Boxboard - Moulded Pulp - Kraft Papers - Polycoated Boxboard - High-density polyethylene Films - Low-density polyethylene / Linear Low-density polyethylene Films - Polystyrene Clamshells Expanded polystyrene - Polystyrene Trays/Plates Expanded polystyrene - Polystyrene Meat Trays Expanded polystyrene - Polystyrene Hot Drink Cups Expanded polystyrene - Polystyrene Cushion Packaging Expanded polystyrene - Polyethylene terephthalate Bottles (non-beverage) - Polyethylene terephthalate Jars

	• Polyethylene terephthalate Clamshells • Polyethylene terephthalate Trays • Polyethylene terephthalate Tubs & Lids • Polyethylene terephthalate Cold Drink Cups • High-density polyethylene Bottles (non-beverage) • High-density polyethylene Jars • High-density polyethylene Pails • High-density polyethylene Trays • High-density polyethylene Tubs & Lids • High-density polyethylene Planter Pots • Polyvinyl chloride Bottles • Polyvinyl chloride Jars • Polyvinyl chloride Trays • Polyvinyl chloride Tubs & Lids • Low-density polyethylene Bottles (non-Beverage) • Low-density polyethylene Jars • Low-density polyethylene Tubs & Jars • Polypropylene Bottles (non-beverage) • Polypropylene Jars • Polypropylene Clamshells • Polypropylene Trays • Polypropylene Tubs & Lids • Polypropylene Cold Drink Cups • Polypropylene Planter Pots • Polystyrene Bottles (non-beverage) • Polystyrene Clamshells (rigid) • Polystyrene Trays (rigid) • Polystyrene Tubs & Lids (rigid) • Polystyrene Tubs & Lids (high impact) • Polystyrene Cold Drink Cups (rigid) • Polystyrene Planter Pots • Other¹ Plastic Bottles (non-beverage) • Other Plastic Jars • Other Plastic Clamshells • Other Plastic Trays • Other Plastic Tubs & Lids • Other Plastic Cold Drink • Other Plastic Planter Pots • Steel Cans (non-beverage) • Steel Aerosol Cans • Spiral Wound Cans (steel ends) • Aluminum Cans (non-beverage) • Aluminum Aerosol Cans • Aluminum Foil and Foil Containers • Bimetal Containers/Aerosols
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¹ 'Other' plastic packaging is typically: manufactured from a combination of recycled resins; manufactured with a barrier layer; or, lacking a resin code mark.

	• Clear Glass Bottles and Jars (non-beverage) • Coloured Glass Bottles and Jars (non-beverage)
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**CAPITAL REGIONAL DISTRICT
BYLAW NO. 4572**

**A BYLAW TO AMEND BYLAW NO. 3478,
MANAGEMENT OF ONSITE SEWAGE SYSTEMS SERVICE ESTABLISHMENT BYLAW, 2007**

WHEREAS:

- A. Under Bylaw No. 3478, "Management of Onsite Sewage Systems Service Establishment Bylaw, 2007", the Regional Board has established a service to prevent the environmental degradation and public health risks associated with poorly maintained onsite sewage systems;
- B. The District of North Saanich has requested to join the Service; and
- C. The Board wishes to amend Bylaw No. 3478 to add the District of North Saanich as a participant in the service;

NOW THEREFORE, the Capital Regional District Board in open meeting assembled hereby enacts as follows:

- 1. Bylaw No. 3478, "Management of Onsite Sewage Systems Service Establishment Bylaw, 2007", is hereby amended by:

(a) replacing section 2 in its entirety with:

"2. Boundaries

The boundaries of the Service Area are coterminous with the boundaries of the District of Saanich, the Town of View Royal, the City of Colwood, the City of Langford and the District of North Saanich (the "**Service Area**")."; and

(b) replacing section 3 in its entirety with:

"3. Participating Areas

The "Participating Areas" are the District of Saanich, the Town of View Royal, the City of Colwood, the City of Langford and the District of North Saanich."

2. This bylaw may be cited for all purposes as "Management of Onsite Sewage Systems Service Establishment Bylaw, 2007, Amendment Bylaw No. 1, 2023".

READ A FIRST TIME THIS	8 th	day of	November,	2023
READ A SECOND TIME THIS	8 th	day of	November,	2023
READ A THIRD TIME THIS	8 th	day of	November,	2023
DEPOSITED WITH THE MINISTER OF HEALTH THIS	13 th	day of	December,	2023
APPROVED BY TWO-THIRDS OF PARTICIPANTS THIS	15 th	day of	January,	2024
APPROVED BY THE INSPECTOR OF MUNICIPALITIES THIS	10 th	day of	May,	2024
ADOPTED THIS		day of		2024

CHAIR

CORPORATE OFFICER

**CAPITAL REGIONAL DISTRICT
BYLAW NO. 4592**

**A BYLAW TO AMEND OTTER POINT FIRE PROTECTION AND EMERGENCY RESPONSE LOCAL
SERVICE ESTABLISHMENT BYLAW NO. 1, 1992 (BYLAW NO. 2042)**

WHEREAS:

- A. Under Bylaw No. 2042, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992", the Regional Board established a service to provide fire protection service to residents of the Local Service Area (the "Service");
- B. By petition under section 337 of the *Local Government Act*, a landowner requests inclusion into the service area;
- C. The Electoral Area Director for the Juan de Fuca Electoral Area has consented to the modifications to the establishing bylaw under ss. 347 and 349 of the *Local Government Act*; and
- D. The Board wishes to amend Bylaw No. 2042 to ensure fire protection and emergency response in the community;

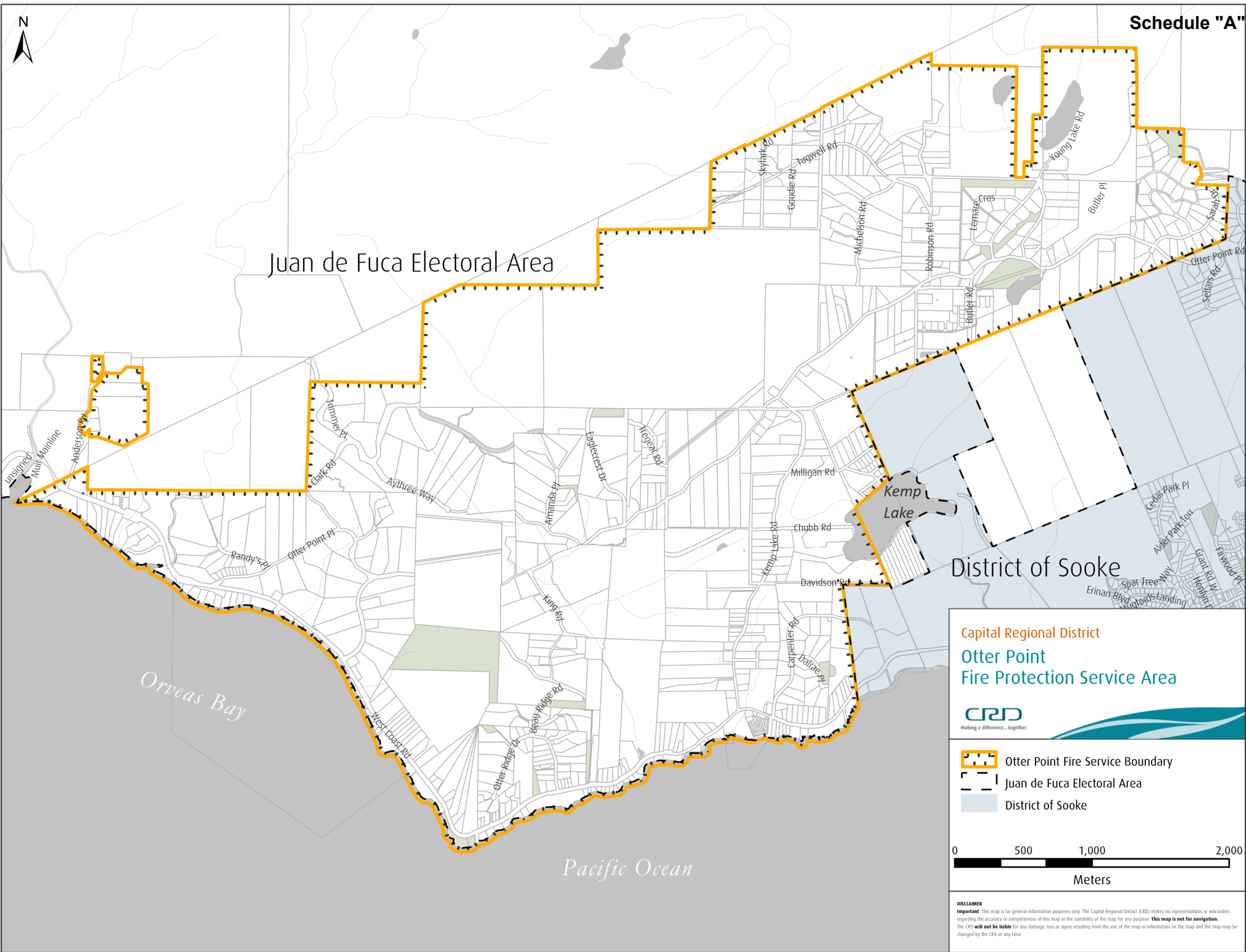
NOW THEREFORE, the Capital Regional District Board in open meeting assembled hereby enacts as follows:

- 1. Bylaw No. 2042, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992" is hereby amended by replacing Schedule "A" in its entirety with the attached amended Schedule "A".
- 2. This Bylaw may be cited for all purposes as "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, Amendment Bylaw No. 8, 2024".

READ A FIRST TIME THIS	8 th	day of	May,	2024
READ A SECOND TIME THIS	8 th	day of	May,	2024
READ A THIRD TIME THIS	8 th	day of	May,	2024
APPROVED BY THE ELECTORAL AREA DIRECTOR THIS	6 th	day of	June,	2024
ADOPTED THIS		day of		2024

CHAIR

CORPORATE OFFICER



Capital Regional District
Otter Point
Fire Protection Service Area

CRD
 Making a difference...together

Legend:

- Otter Point Fire Service Boundary
- Juan de Fuca Electoral Area
- District of Soke

Scale: 0 500 1,000 2,000 Meters

DISCLAIMER
 Important: This map is for general information purposes only. The Capital Regional District (CRD) makes no representations or warranties regarding the accuracy or completeness of this map or the suitability of the map for any purpose. **This map is not for navigation.** The CRD **will not be liable** for any damage, loss or injury resulting from the use of the map or information on the map and the map may be changed by the CRD at any time.