# Stage 3 Liquid Waste Management Plan (LWMP)

# TACPAC Meeting #16

May 26, *2026*

Comox Valley
REGIONAL DISTRICT

The Comox Valley Regional District respectfully acknowledges the land on which we gather is on the unceded traditional territory of the K'ómoks First Nation, the traditional keepers of this land.

Comox Valley
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# Agenda

1. Review of Meeting Minutes
2. Overview of Environmental Impact Study
3. Update on South Sewer Extension Project
4. Summary of Consultation and Feedback
5. Review of Stage 3 LWMP and Commitments
   - Request for Decision
6. Next Steps

# Overview of Environmental Impact Study (EIS)

*Peter Howland, Great Pacific*

Comox Valley
REGIONAL DISTRICT


# STAGE 2 ENVIRONMENTAL IMPACT STUDY

## COMOX VALLEY WATER POLLUTION CONTROL CENTRE

## MARINE OUTFALL

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Peter Howland

Aquatic Scientist, Director

GreatPacific Consulting Ltd.

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# Study Context


- Environmental Impact Study is a requirement of the MWR.
  - Demonstrate the discharge will not adversely affect public health or the receiving environment
  - Establishes municipal effluent quality requirements
  - Establishes pre- and post-discharge receiving environment monitoring
- Outfall extends 2.3 km offshore with multiport diffuser at 60 m depth, serving Courtenay, Comox, K'ómoks First Nation, and CFB Comox
- Study area encompasses 6 km radius around discharge point, extending beyond plume extent to assess marine habitat impacts
- The study was based predicted effluent on flows up to year 2060.
- This study integrated both desktop assessment of available data and field monitoring through effluent, water quality, sediment, and benthic sampling

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# 2025 EFFLUENT CHARACTERIZATION

Parameters of Potential Concern (POPCs) primarily those that exceed 80% of at least one of the following thresholds:

- Approved British Columbia Water Quality Guidelines
- British Columbia Working Water Quality Guidelines
- Canadian Environmental Quality Guidelines (CEQGs)
- Federal Environmental Quality Guidelines (FEQGs)
- Guidelines for Canadian Recreational Water Quality
- Municipal Wastewater Regulation (MWR)

| Analyte Group | Frequency |
|---|---|
| Enterococcus spp. | 5 in 30; Biannually (Winter & Summer) |
| Fecal Coliforms | |
| Total Ammonia (as N) | |
| Total Metals | |
| Nitrogen – Nitrate (N) | |
| Nonylphenols / Alkylphenols | Once during each Winter and Summer 5 in 30 sampling events |
| Polybrominated Diphenyl Ethers (PBDEs) | |
| Polychlorinated Biphenyls (PCBs) | |
| Polycyclic Aromatic Hydrocarbons (PAHs) | |
| Hexabromocyclododecane (HBCD) | |
| Volatile Organic Compounds (VOCs) | |
| Pesticides | |
| Phthalates | |
| Bisphenol A | |
| Chlorinated Alkanes/Paraffins | |

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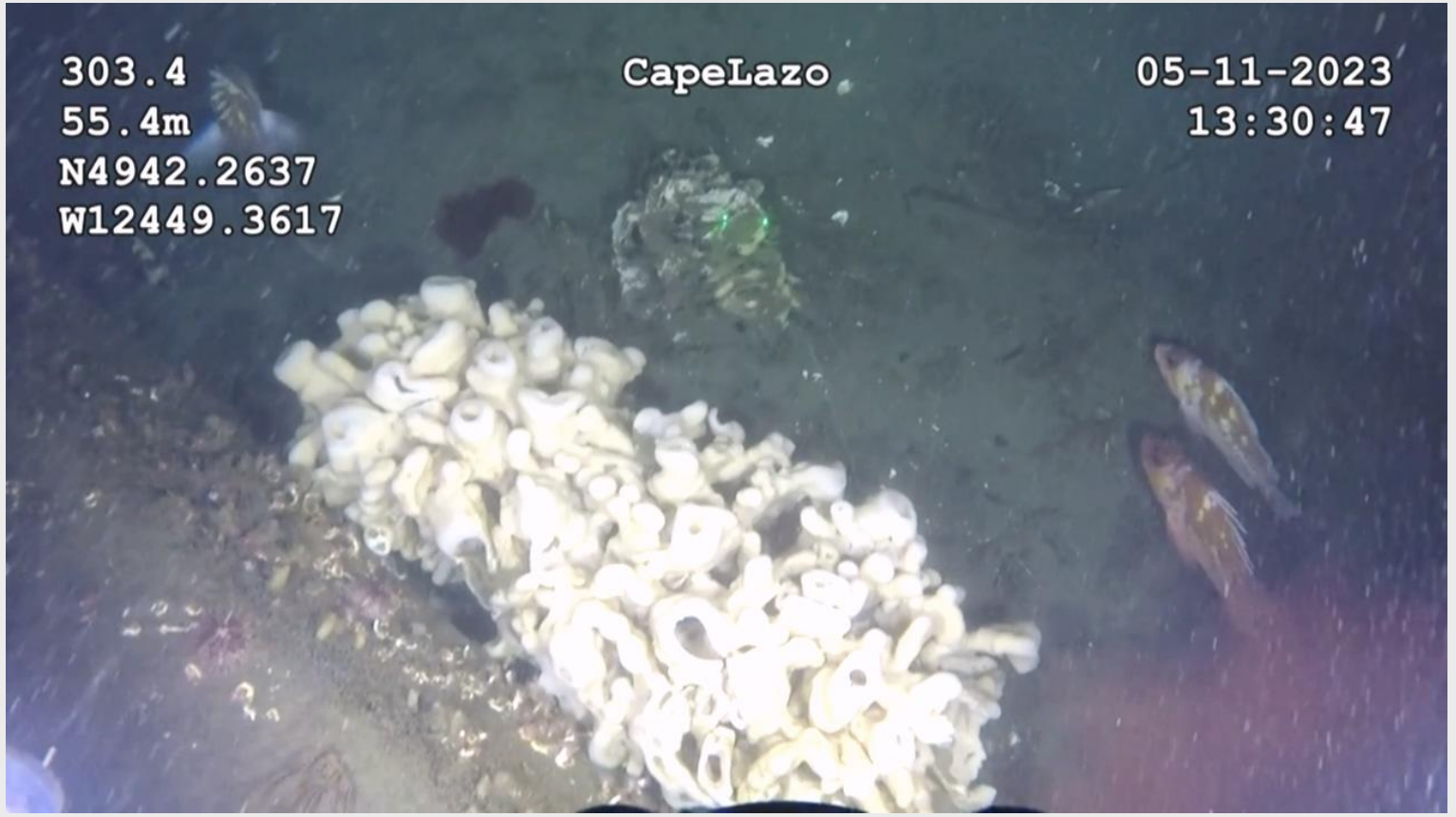
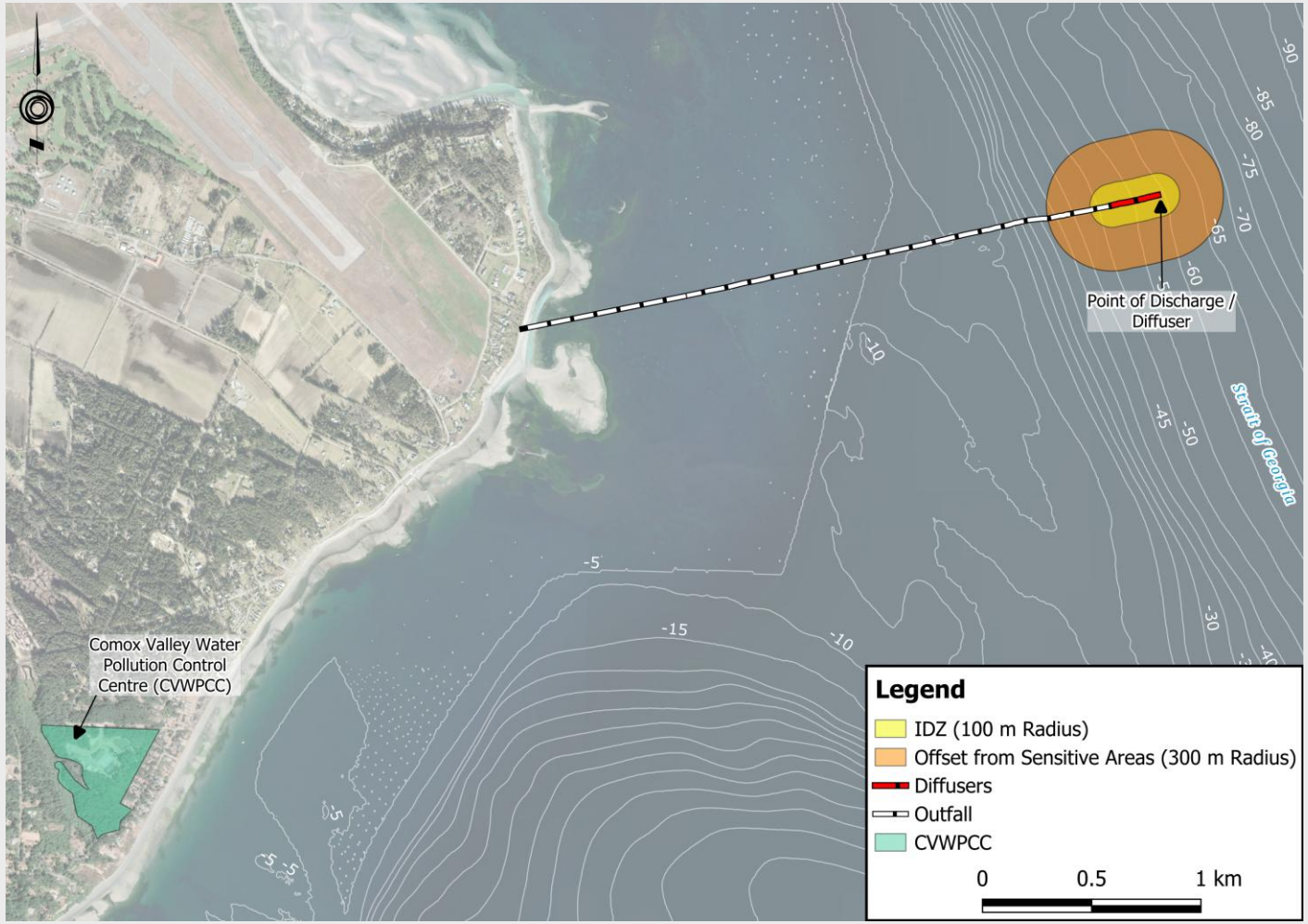



# SITE CHARACTERIZATION

# SPATIAL BOUNDARIES FOR EFFECTS PREDICTIONS

- **The Initial Dilution Zone (IDZ):** A 100 m radius from the point(s) of discharge. Parameters must achieve water quality guidelines at the boundary of the IDZ.
- **300 m Offset:** A minimum 300 m offset from the edge of the IDZ applies to recreational areas, aboriginal, commercial, or recreational shellfish harvesting areas, and any sensitive areas.
- **Study Area:** Sensitive areas requiring protection were identified within the study area.



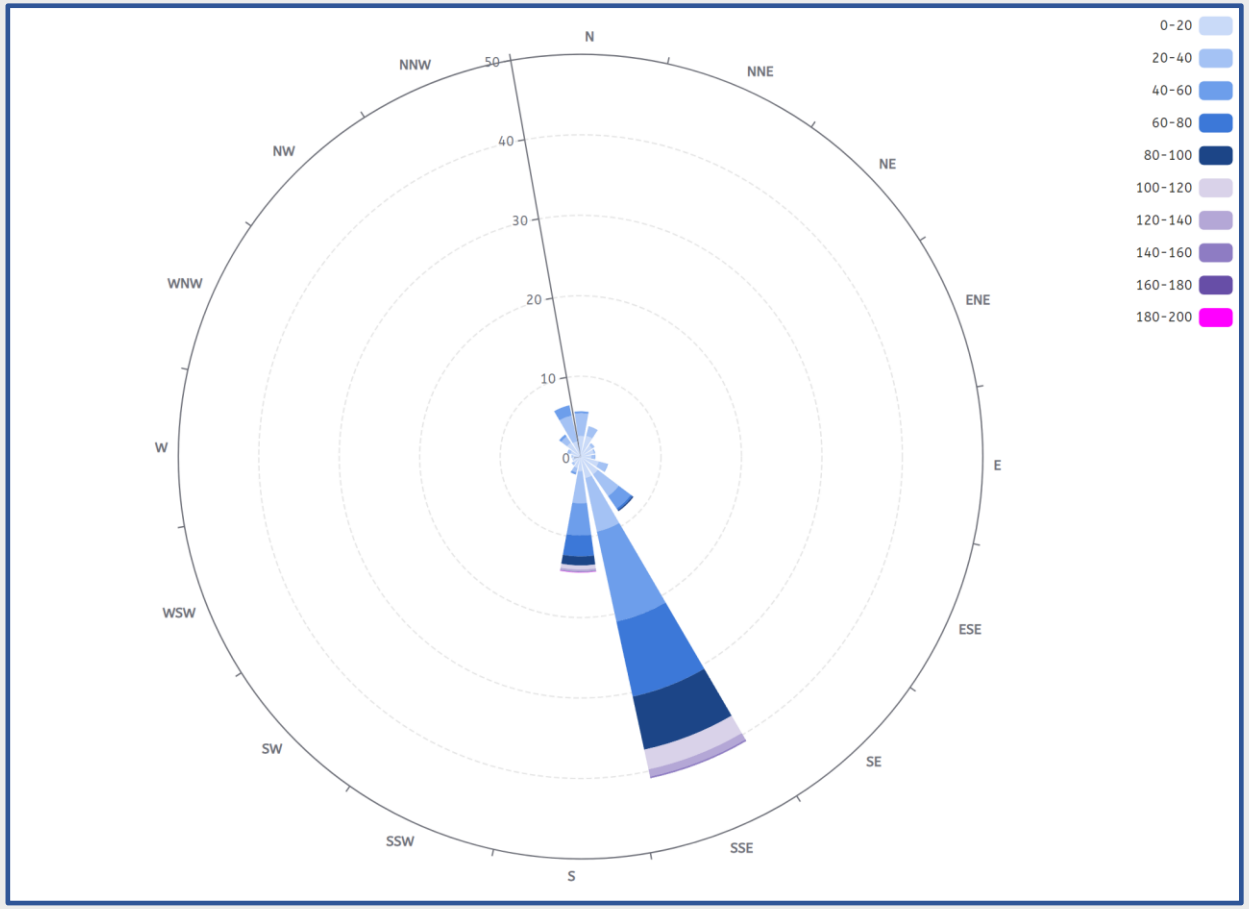
# OCEANOGRAPHIC CONDITIONS

## Current Measurements

- Acoustic Doppler Current Meter (ADCP)
- Drogues at 5 m, 15 m, & 35 m depth
- Flow south/southeast parallel to shore majority of time, rarely onshore

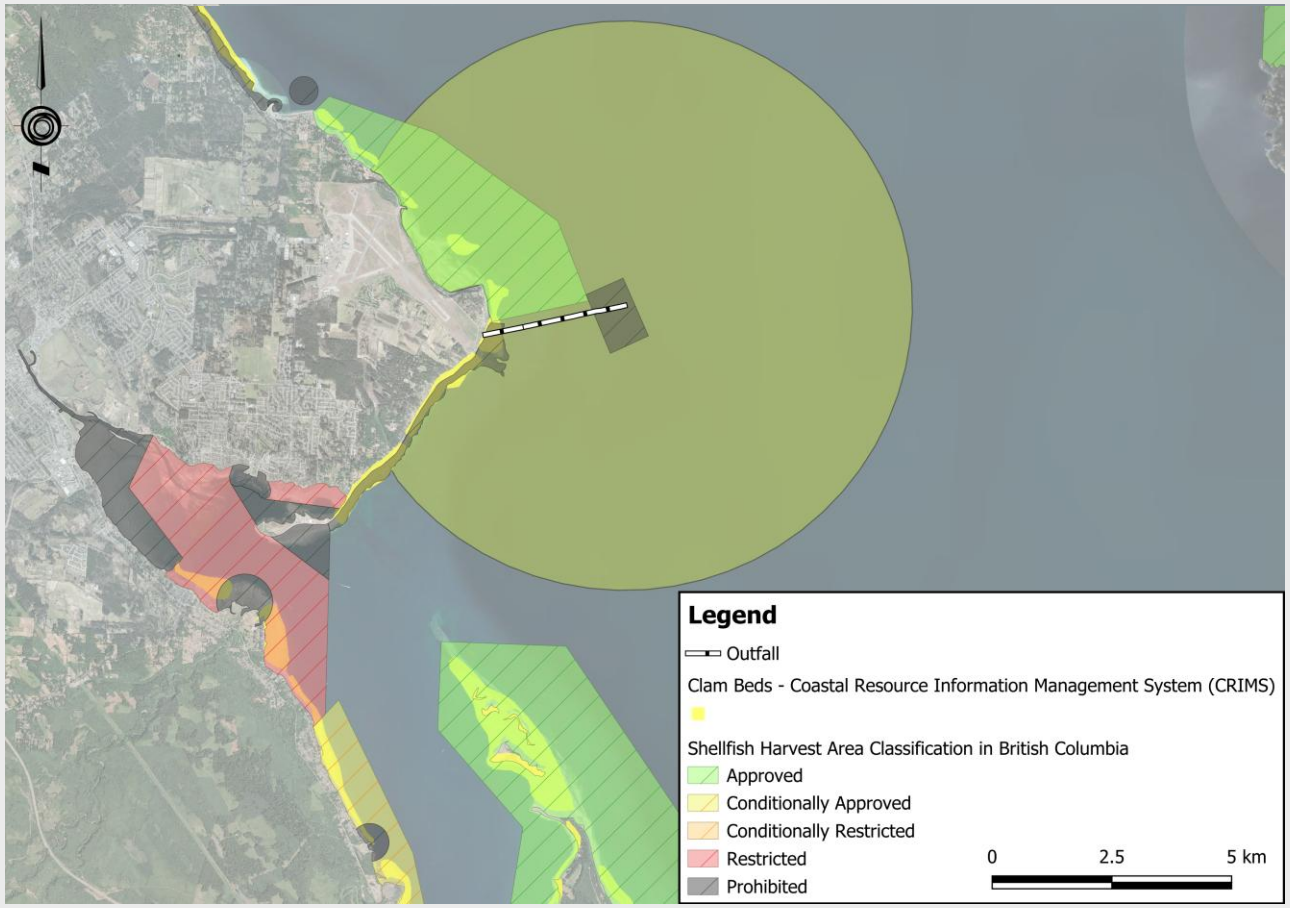
## Stratified Waters

- Most stratified in summer with low salinities and high temperatures at surface



# ENVIRONMENTAL RECEPTORS

- **Parks:** Kye Bay and Point Holmes Park, Activities such as swimming, paddleboarding, snorkeling, kayaking, etc., which may involve intentional immersion in the water.
- **Ecological and Biological Significant Area (Proposed):** within the 6 km study area, although it is well outside the IDZ and 300 m IDZ offset.
- **An Important Bird Area:** overlapping with both the IDZ and 300 m IDZ offset.
- **Marine macrophytes:** Eelgrass and kelp beds
- **Commercial Fisheries:** Crab, geoduck, shrimp, and prawn, as well as herring spawning
- **Shellfish:**
  - Two commercial shellfish licenses have been identified within the 6 km study area both well outside the IDZ and 300 m IDZ offset;
  - Subtidal (Geoduck) harvesting to a depth of 20 m



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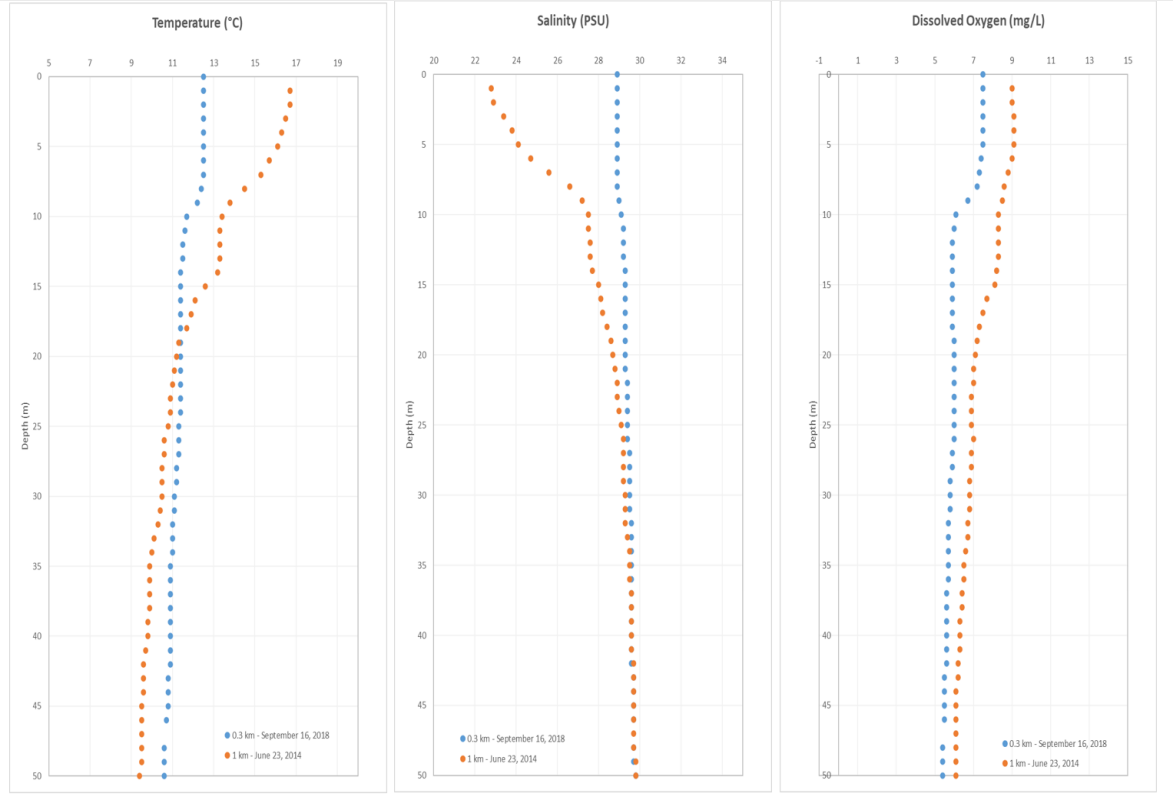
# DILUTION MODELING

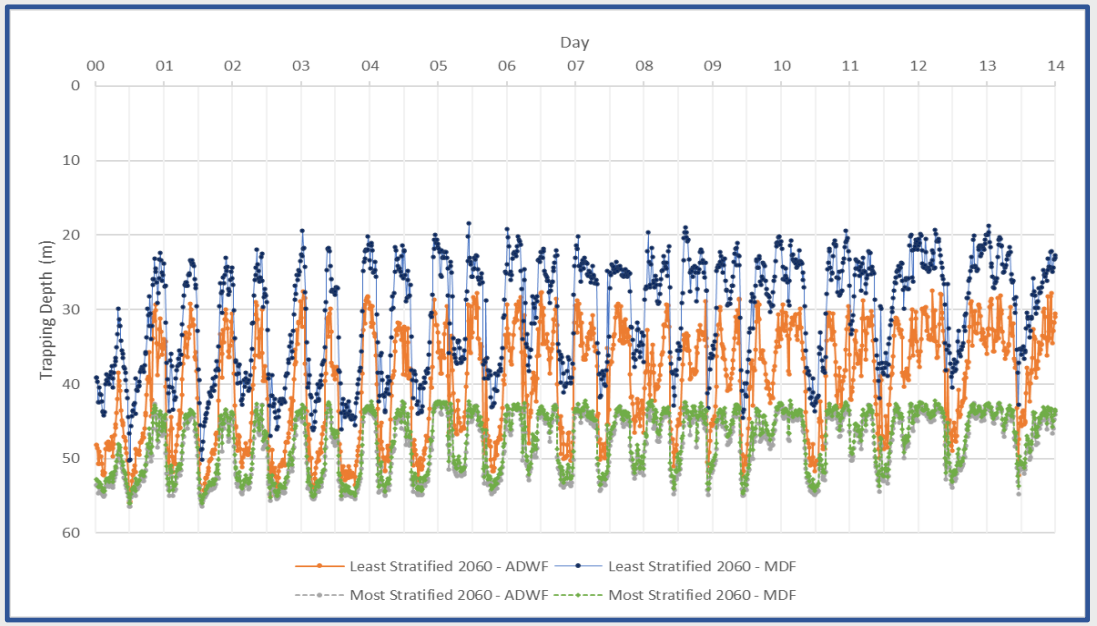
# MODELLED SCENARIOS

| Scenario | Ambient Profile | Effluent Flow |
|---|---|---|
| Case 1 | Least Stratified September 16, 2018 | 2040 - ADWF |
| Case 2 | | 2040 - MDF |
| Case 3 | | 2060 - ADWF |
| Case 4 | | 2060 - MDF |
| Case 5 | Most Stratified June 23, 2014 | 2040 - ADWF |
| Case 6 | | 2040 - MDF |
| Case 7 | | 2060 - ADWF |
| Case 8 | | 2060 - MDF |

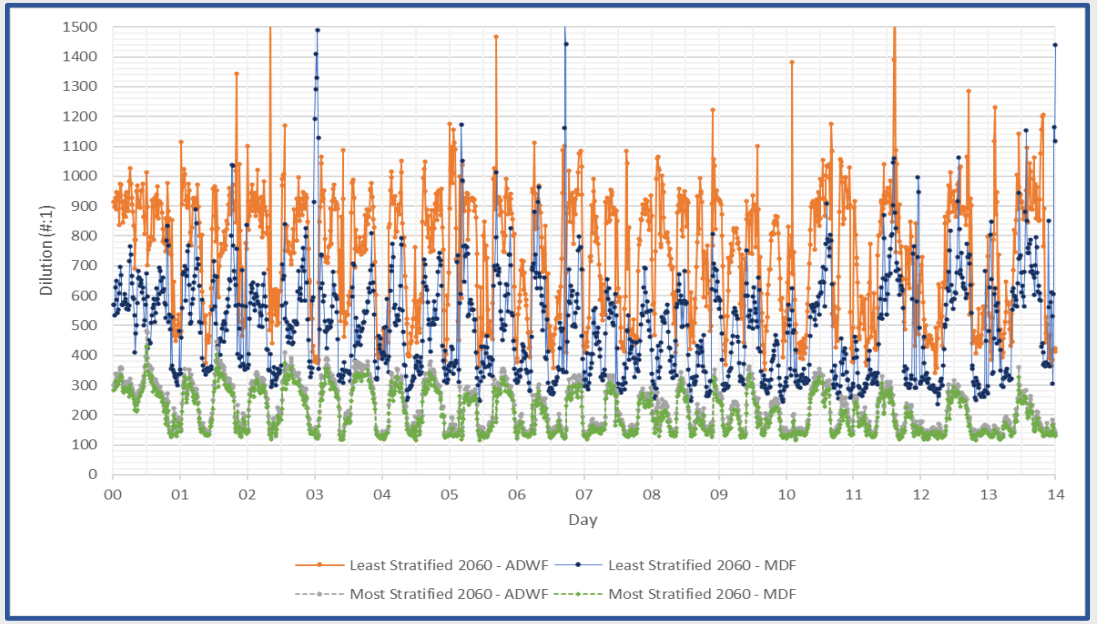


# DILUTION MODELLING

- **Predicted Trapping Depth, 14-day Simulation, 2060 Flow**
  - Under the least stratified conditions, the minimum trapping depths are predicted to range from 50 to 18 m.
  - During the most stratified water column conditions, the effluent plume is predicted to remain trapped below a depth of 42 m




- **Predicted Dilution at IDZ (100 m), 2060 MDF**
  - Minimum median dilution was predicted to be 192:1
  - Overall minimum of 114:1 at the IDZ.
  - All predicted dilutions satisfied the MWR minimum required dilution of 10:1.



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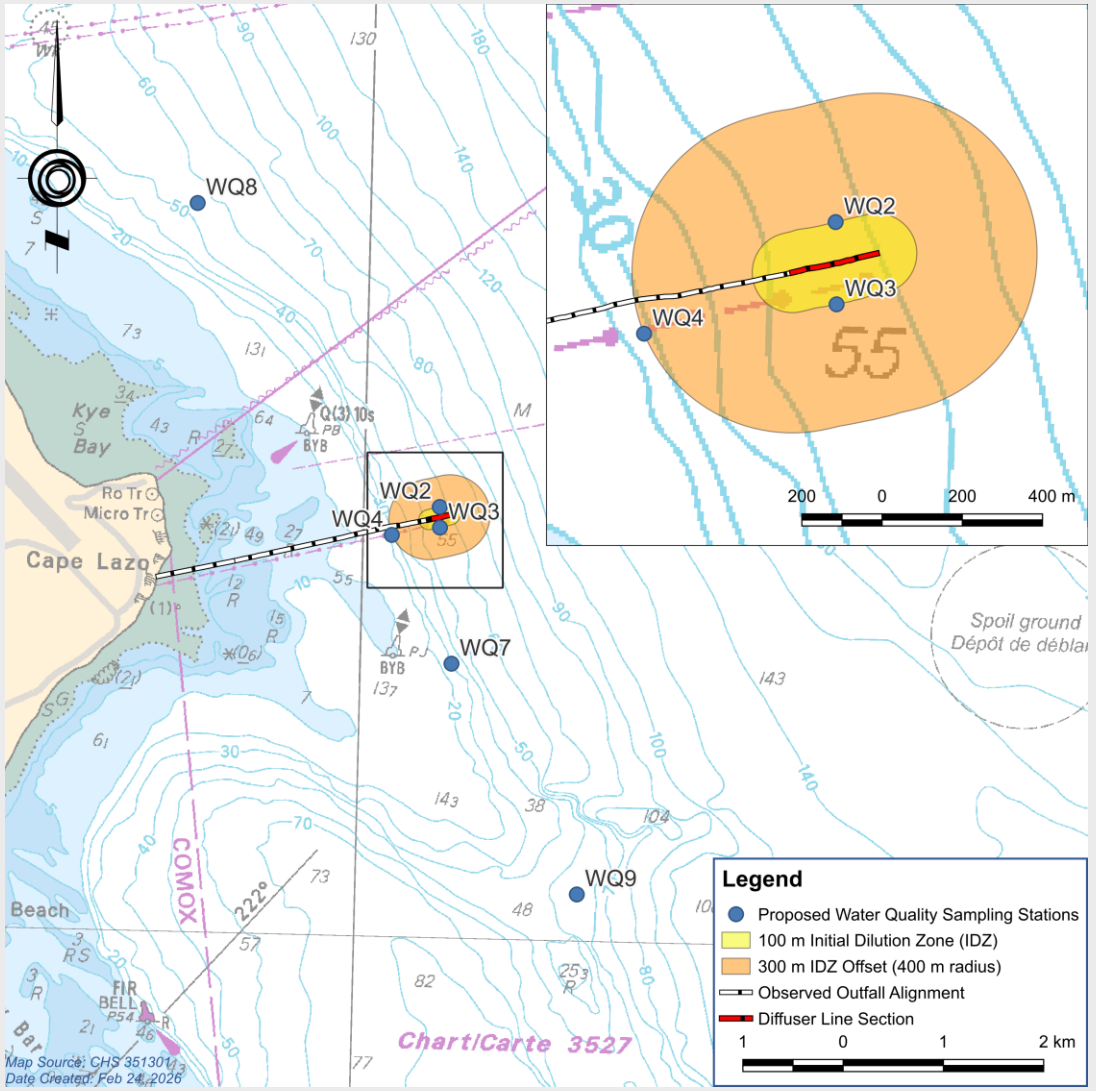
WATER QUALITY, SEDIMENT QUALITY,
AND BENTHIC COMMUNITY STRUCTURE

# RECEIVING ENVIRONMENT MONITORING

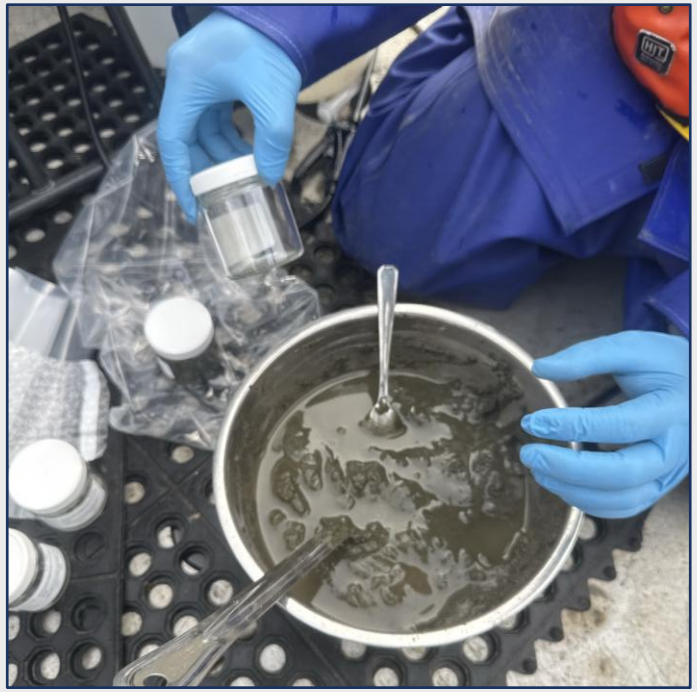
# 2025 Monitoring Results – Water Quality

- Fecal coliform
  - **Effluent:** < 48,400 CFU/100 mL
  - **Winter 2025:** Below guidelines
  - **Summer 2025:** The 90th-percentile fecal coliform concentration exceedance shellfish harvesting criteria at the trapping depth (~52 m) at WQ03 and WQ06.
- Total Ammonia
  - **Effluent:** Average 22.8 and 32 mg/L in the winter and summer, respectively.
  - No total ammonia guideline exceedances occurred during either winter or summer sampling events.
- Metals:
  - Cadmium exceeded both BC LT and CCME guidelines on several individual samples, clearly not linked to the outfall.
  - Copper Effluent concentrations exceeded water quality guidelines. Concentrations also exceeded BC ST water quality guidelines in several individual samples during both summer and winter, including at the reference station (WQ08). The outfall is unlikely to be the primary source.
  - Zinc levels in the effluent exceeded guidelines in both sampling seasons. Zinc was detected in some receiving
- PBDEs: Effluent results exceeded PBDE 100 guidelines (winter) and Total PentaBDE



# 2025 Monitoring Results - Sediment

- Sediment predominantly sand with lesser silt and clay, showing negligible variation across stations.
- Total organic carbon relatively low, consistent with sandy conditions
- Total metals within sediment quality guidelines and consistent spatial trends, suggesting natural processes rather than point-source discharge.
- Most PAHs within guidelines; 2-Methylnaphthalene exceeded limits at IDZ station only.
- PBDE concentrations complied with guidelines but elevated at IDZ, indicating potential accumulation.
- Total PCBs exceeded the BC LT guidelines at both the IDZ and reference stations*



# RECEIVING ENVIRONMENT MONITORING

## 2025 MONITORING RESULTS - BENTHIC

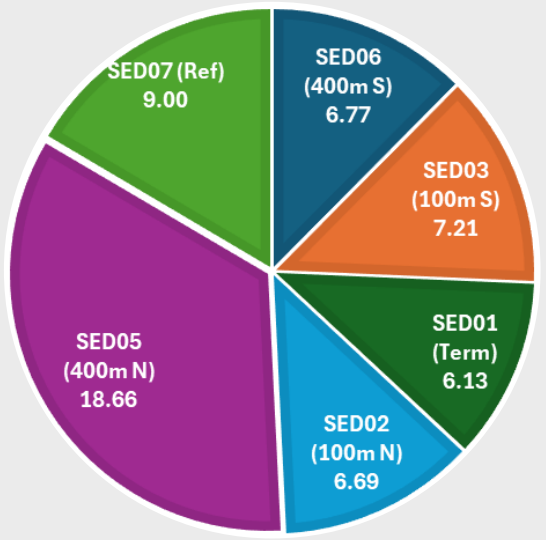
- Benthic community baseline established for tracking species richness and abundance trends over time


Anthorpod,
Rhepoxynius boreovariatus

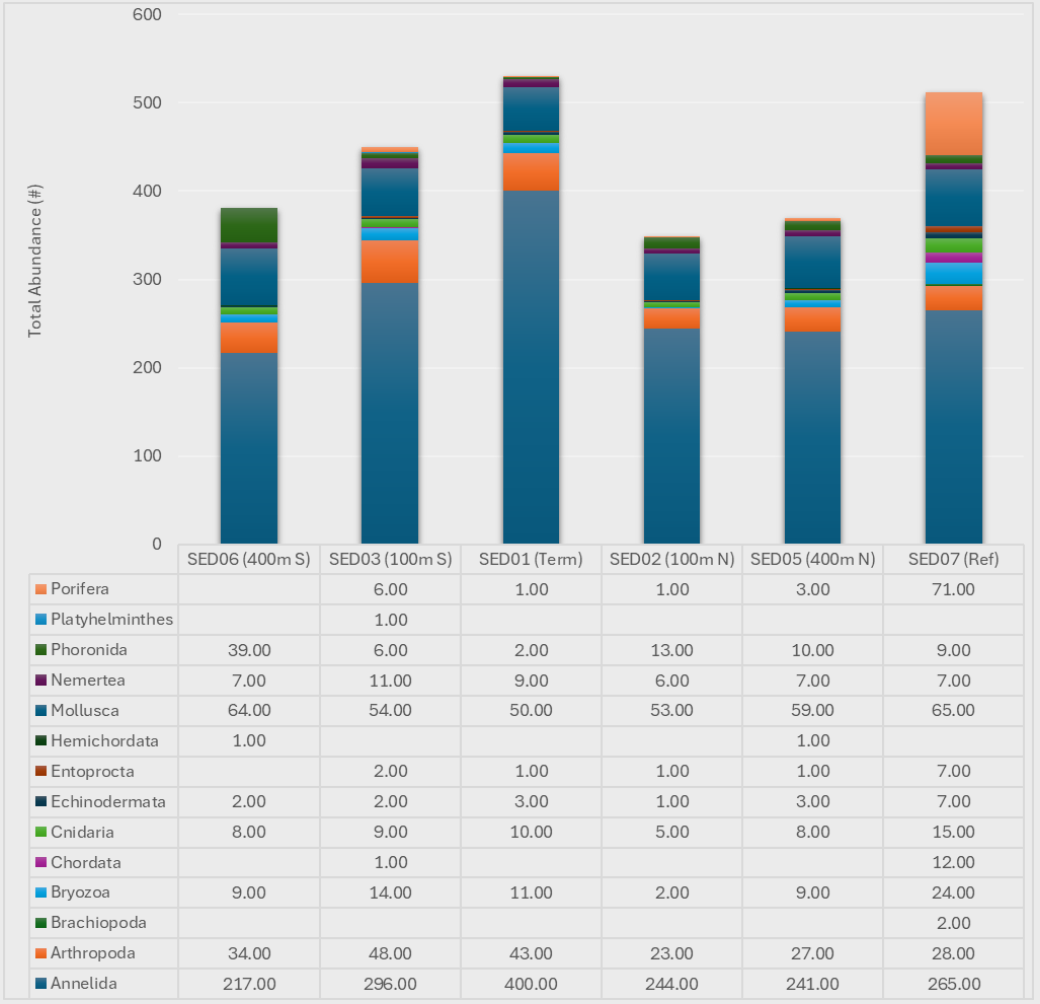
Molusc,
Axinopsida
serricata

Polycheate., *Mediomastus californiensis*

### Total Biomass (g)




### Total Abundance




| | SED06 (400m S) | SED03 (100m S) | SED01 (Term) | SED02 (100m N) | SED05 (400m N) | SED07 (Ref) |
|---|---|---|---|---|---|---|
| Porifera | | 6.00 | 1.00 | 1.00 | 3.00 | 71.00 |
| Platyhelminthes | | 1.00 | | | | |
| Phoronida | 39.00 | 6.00 | 2.00 | 13.00 | 10.00 | 9.00 |
| Nemertea | 7.00 | 11.00 | 9.00 | 6.00 | 7.00 | 7.00 |
| Mollusca | 64.00 | 54.00 | 50.00 | 53.00 | 59.00 | 65.00 |
| Hemichordata | 1.00 | | | | 1.00 | |
| Entoprocta | | 2.00 | 1.00 | 1.00 | 1.00 | 7.00 |
| Echinodermata | 2.00 | 2.00 | 3.00 | 1.00 | 3.00 | 7.00 |
| Cnidaria | 8.00 | 9.00 | 10.00 | 5.00 | 8.00 | 15.00 |
| Chordata | | 1.00 | | | | 12.00 |
| Bryozoa | 9.00 | 14.00 | 11.00 | 2.00 | 9.00 | 24.00 |
| Brachiopoda | | | | | | 2.00 |
| Arthropoda | 34.00 | 48.00 | 43.00 | 23.00 | 27.00 | 28.00 |
| Annelida | 217.00 | 296.00 | 400.00 | 244.00 | 241.00 | 265.00 |

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# IMPACT ASSESSMENT

# IMPACT ASSESSMENT

## Summary of POPCs, Assigned Ratings, and Potential Effects

| Parameter | Factor of Safety | Assigned Rating | Potential Direct or Indirect Effects, and Recommendations |
|---|---|---|---|
| **Temperature** | 16 | Low | Low potential of water quality exceedance. |
| **Total Suspended Solids (TSS)** | 38 | Low | Low potential of water quality exceedance.<br>Suspended sediments do not appear to be resulting in excess fines and/or nutrients (total organic carbon) in marine sediments. |
| **BOD / Oxygen** | n/a | Low | Low potential of eutrophication.<br>Ongoing water quality monitoring recommended. |
| **Microbiological Indicators** | 2 | Medium | Recommend effluent fecal coliform < 1,300 CFU/100 mL, to protect human health from shellfish consumption.<br>Medium potential, ongoing water quality monitoring recommended. |
| **Ammonia** | 3.5 | Medium | Combination of present-day effluent quality and predicted dilution is sufficient to achieve water quality guidelines at IDZ and prevent toxicity to fish.<br>Medium potential, ongoing water quality monitoring recommended. |
| **Copper, total** | 2.9 | Medium | Combination of present-day effluent quality and predicted dilution is sufficient to achieve water quality guidelines at IDZ.<br>Medium potential, ongoing water and sediment quality monitoring recommended. |
| **Zinc, total** | 52 | Low | Low potential to exceed water quality guidelines at IDZ.<br>Ongoing effluent monitoring recommended |
| **PAHs** | n/a | Low | Measured PAH in sediment above the sediment quality guideline.<br>Ongoing effluent and sediment monitoring recommended |
| **PBDEs (PBDE 100, Total PentaBDE)** | >18 | Low | Low potential to exceed water quality guidelines at IDZ.<br>Accumulation in sediments observed (within guideline).<br>Ongoing effluent and sediment monitoring recommended |
| **PCBs (77, 126. Total PCBSs)** | >10 | Low | Low potential to exceed water quality guidelines at IDZ.<br>Accumulation in sediments was observed.<br>Ongoing effluent and sediment monitoring recommended |
| **Additional parameters with water quality guidelines.** | - | Low | Low potential to exceed water quality guidelines at IDZ.<br>Periodic effluent monitoring should be completed, including (VOCs, alkylphenols, pesticides, HBCD, phthalates, and paraffins). |

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# PROPOSED RECEIVING ENVIRONMENT MONITORING PROGRAM

## WATER QUALITY, SEDIMENT QUALITY, AND BENTHIC COMMUNITY

# PROPOSED RECEIVING ENVIRONMENT MONITORING PROGRAM

Quarterly
effluent monitoring for
parameters of concern

Biannual
5-in-30 water quality
sampling

Triennial
sediment and benthic
community assessment

- Marine monitoring classification scored as "**high**" primarily due to discharge volume (MDF of 76,344 $m^3$/day by 2060), requiring comprehensive receiving environment monitoring program.
- Quarterly effluent monitoring recommended for all parameters of potential concern including metals, PBDEs, PCBs, with periodic screening for additional emerging substances.
- Biannual water quality sampling (winter and summer) at six stations from IDZ to 4 km reference locations, including *in-situ* parameters (pH, temp, DO, etc.,), microbiological indicators, ammonia, and total metals at various depths.
- Sediment monitoring every three years at five stations to assess long-term impacts, including physical parameters, total metals, AVS/SEM, TOC, PAHs, VOCs, PBDEs, & PCBs.
- Benthic invertebrate community monitoring every three years at all five sediment quality stations.

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# CONCLUSIONS

# CONCLUSIONS

- Effluent plume is likely to be trapped between the depths of 18 m and 56 m.
- The dilution of the effluent plume at the edge of the IDZ was predicted to range between 114:1 and 1,581:1.
- Based on the predicted dilution of the effluent plume and present-day effluent quality, effluent parameters (excluding microbiological indicators) are expected to satisfy water quality guidelines at the edge of the IDZ with a factor of safety of greater than 2.
- Non-disinfected effluent fecal coliforms (median 16,000 CFU/100mL summer, 11,000 winter) could exceed shellfish harvesting criteria nearby without disinfection
- Effluent quality targets: fecal coliforms ≤1,300 CFU/100mL mean and ≤2,400 maximum to achieve shellfish criteria with 2x safety factor
- Category I reliability recommended for treatment plant to prevent shellfish contamination from short-term upsets
- A receiving environment program including effluent, water quality, sediment quality, and benthic community

## Water Quality Guidelines

Predicted to be achieved, protecting aquatic life.

↓

## UV Disinfection

≤1,300 CFU/100mL mean, ≤2,400 CFU/100mL max

<14 CFU/100mL @ IDZ boundary for shellfish harvesting compliance

↓

## Receiving Environment Monitoring

Designed to provide ongoing robust data


# Questions

# Update on Sewer South Extension Project

*Darry Monteith, CVRD*

Comox Valley
REGIONAL DISTRICT

# South Sewer Extension Addendum

**Project Goals:**

The project aims to address aging septic systems, support reconciliation work with K'ómoks First Nation and prepare for anticipated growth in the area.

**Service Area:**

The proposed project would service Royston, Gartley Point, Kilmarnock/Spindrift, Union Bay and new developments in Union Bay and K'omoks Southlands.

**Current Status:**

The loss of a significant funding partner requires substantial changes to the project plan to maintain affordability.

**Next Steps for LWMP:**

The uncertainty and change required will continue beyond the scheduled completion of Stage 3 LWMP – and as a result, will be revisited in the future as an update or amendment.

**Septic Systems:**

Failing septic systems continue to be a key driver for the Sewer Extension South Project. If sewer servicing does not proceed as planned, the CVRD will explore the development of a septic maintenance bylaw for the proposed service area.

# LWMP Commitments

- Advance planning and design of Project. Consider affordability as key criterion to successful project delivery
- Continue to seek additional grant funding and partnership contributions for project
- Explore development of a septic maintenance bylaw for the proposed service area if project does not proceed as planned

# Summary of Consultation and Feedback on Stage 3 LWMP Report

*Kris La Rose, CVRD*

Comox Valley
REGIONAL DISTRICT

# Timeline

### 2018: LWMP Kick Off and Goal Setting

The CVRD created the Public and Technical Advisory Committee, who developed goals and criteria based on information collected from the community. Feedback was collected through public engagement.

### 2018-2019: Engagement and Technical Review

Long lists of options for conveyance and level of treatment were developed and then boiled down to shortlists and presented to the community.

### Spring 2020: COVID-19 Postponement

Further engagement on shortlists was postponed during the pandemic to ensure sufficient public participation. Work resumed in Fall 2020.

### Winter 2020: Preferred Level of Treatment Approved

The preferred level of treatment for the wastewater facility was approved, with community input.

### Spring/Fall 2021: Preferred Conveyance Option

The preferred option to move waste to the treatment plant was approved. A successful alternative approval process allowed urgent improvements to proceed.

### April 2022: Stage 1 and 2 Complete

The first two stages of the LWMP were completed. The report was submitted to the Province for review/consideration.

### 2022-2024: Sewer Extension South Addendum

Stage 1 and 2 of the addendum for sewer service to Royston, Union Bay and K'ómoks Southlands was completed.

### 2023-2026: Conveyance Project Delivery

Design and construction of the Sewer Conveyance Project began, replacing the at-risk forcemain along the foreshore. The new pump station will be complete in 2026.

### 2023-2025: Treatment Facility Master Plan

Technical analysis and planning to confirm the necessary upgrades to the sewer treatment plant achieve the preferred treatment level, maintain reliable service delivery and accommodate future growth.

### 2026: Stage 3 LWMP Activated

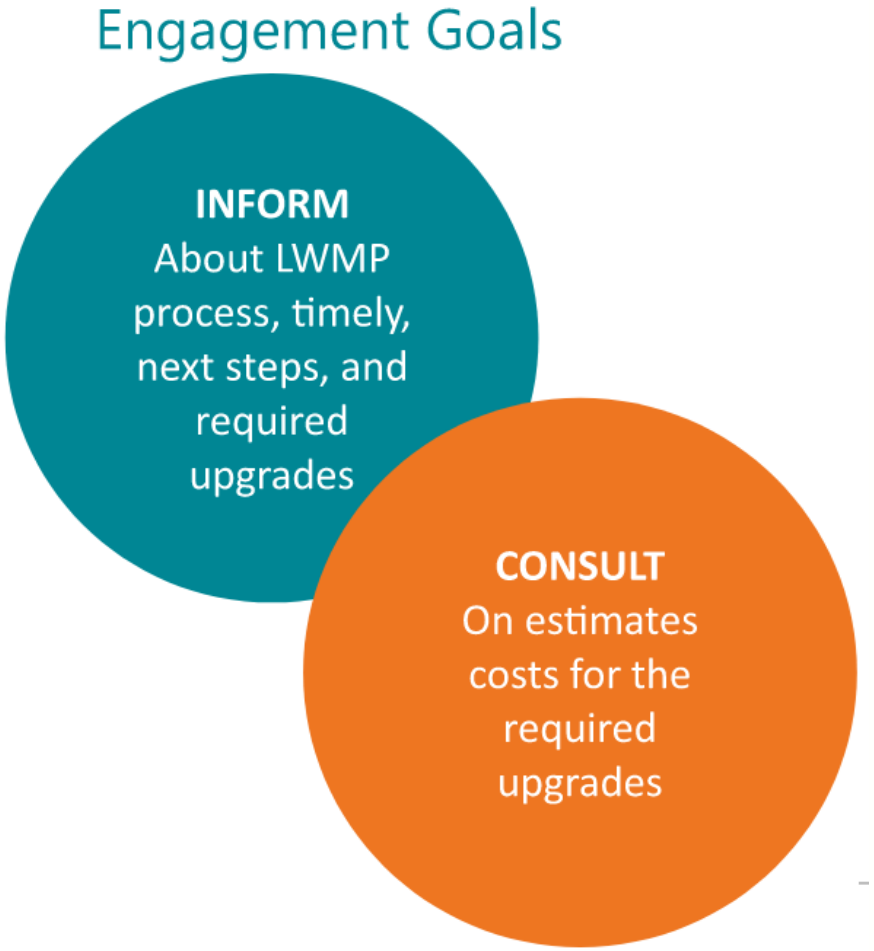
Report back to community on upgrades required and provide cost and timing updates.

# Stage 1 & 2 Consultation

- Dedicated project webpage
- 13 TACPAC Meetings
- Consultation with K'ómoks First Nation
- Public open houses, online consultation, webinars and surveys

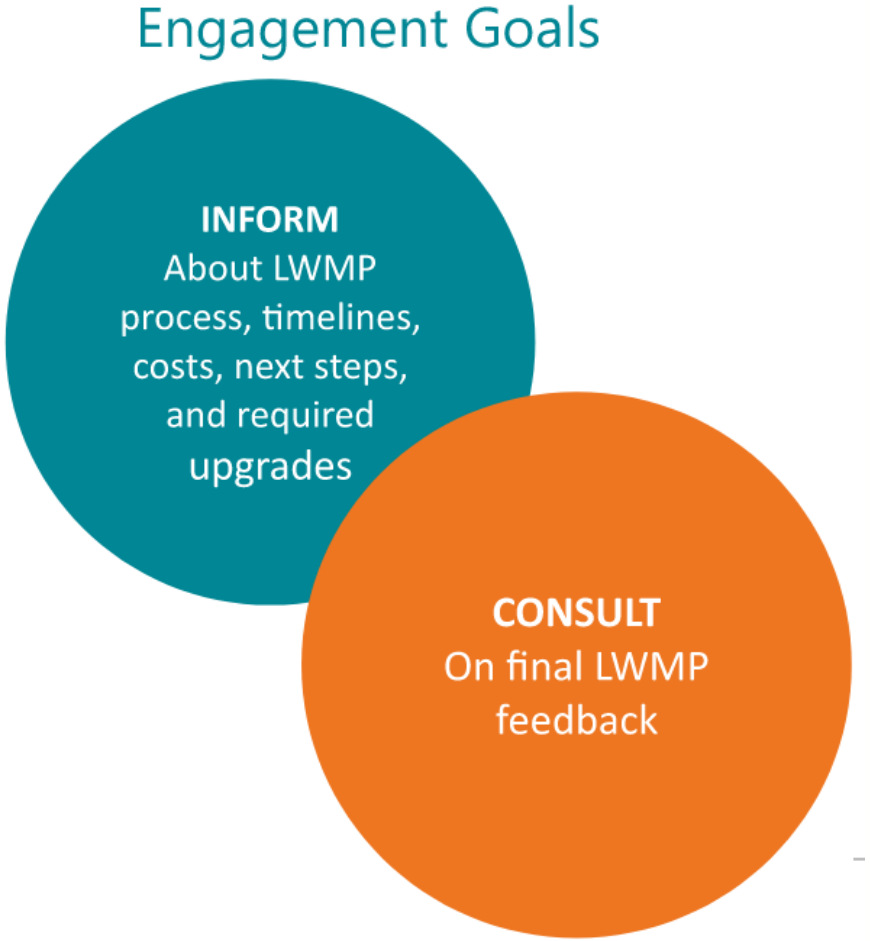
# Stage 3 Public Consultation – Winter ‘26

- Started a new online Engage Comox Valley project webpage
- March 3 Open House & Tour at CVWPCC
  - 33 attendees
  - Feedback themes:
    - Appreciation to tour facility
    - Questions how wastewater systems works



# Stage 3 Public Consultation – Spring ‘26

- Online engagement through Engage Comox Valley project page
- May 5 Open House at CVRD Office
  - 1 attendee
  - Feedback themes:
    - Questions on South Sewer Extension



# Stage 3 First Nations Consultation

- CVRD has established process for engagement with K'ómoks
- 13 potentially impacted Nations with overlapping territory
  - Letter sent to all nations regarding EIS and to introduce Stage 3 LWMP process in fall 2025
  - Follow-up letter with summary document of draft Stage 3 LWMP report and EIS sent in May 2026
  - 30 day follow-up letter planned for June 2026 for any Nations that have not responded

# LWMP stage 3 referral to municipal councils

- Focus on I&I and Source Control commitments
- Town of Comox support for both
- City support for Source Control, final discussion on I&I at May 27 Council
- Staff recommending one minor change
- Recommendation today will include that change, and a commitment to re-engage with the TACPAC if anything more substantial comes out of mtg tomorrow

# Value Engineering Review

- Focus on optimizing design and construction and identifying options to improve fiscal affordability
- Key outcomes:
  - Deferment of full build out of UV system
  - Deferment of full build out of filter systems
  - Modifications to septage receiving facilities
  - Relocation of grit removal facilities

# Cost Per Connection Impact

| | Scenario 1: No SPF Grant | Scenario 2: With SPF Grant |
|---|---|---|
| **Phase 4 Total Capital Costs** | **$113.4M** | **$113.4M** |
| Reserves & Upfront Capital Contributions Applied | $30.6M | $30.6M |
| SPF Grant | $0M | $7M |
| **Total Anticipated Borrowing** | **$82.8M** | **$75.8M** |
| Annual Debt Payment* | $5.54M | $5.07M |
| **Cost Impact Per Connection for Long Term Borrowing in 2030** | **$240** | **$220** |
| **Cost Impact Per Connection for Long Term Borrowing in 2050** | **$170** | **$150** |

*assuming a 30-year amortization and an interest rate of 4.5%

# Stage 3 LWMP & Commitments

*Angie Smythe, WSP*

Comox Valley
REGIONAL DISTRICT

# REVIEW OF STAGE 3 LWMP AND COMMITMENTS

May 26, 2026

# Outline

1 Stage 3 LWMP Overview and Process Reminder

2 Summary of Stage 3 LWMP Commitments

# Stage 3 LWMP Overview and Process Reminder

# Purpose and Objectives of a LWMP

- LWMP is a method of providing a comprehensive plan for building, financing, and managing a community's liquid waste infrastructure
- Completed through multi-year planning, engineering, and public consultation process to develop long-term community-specific solutions

## Three Stage Process

| STAGE 1 | STAGE 2 | STAGE 3 |
|---|---|---|
| Gather information | Examine pros and cons of each option | Final confirmation |
| Develop concepts | Selection of preferred option(s) | Costs, implementation schedule, financing |
| Identify realistic options | Draft LWMP | Approved LWMP |

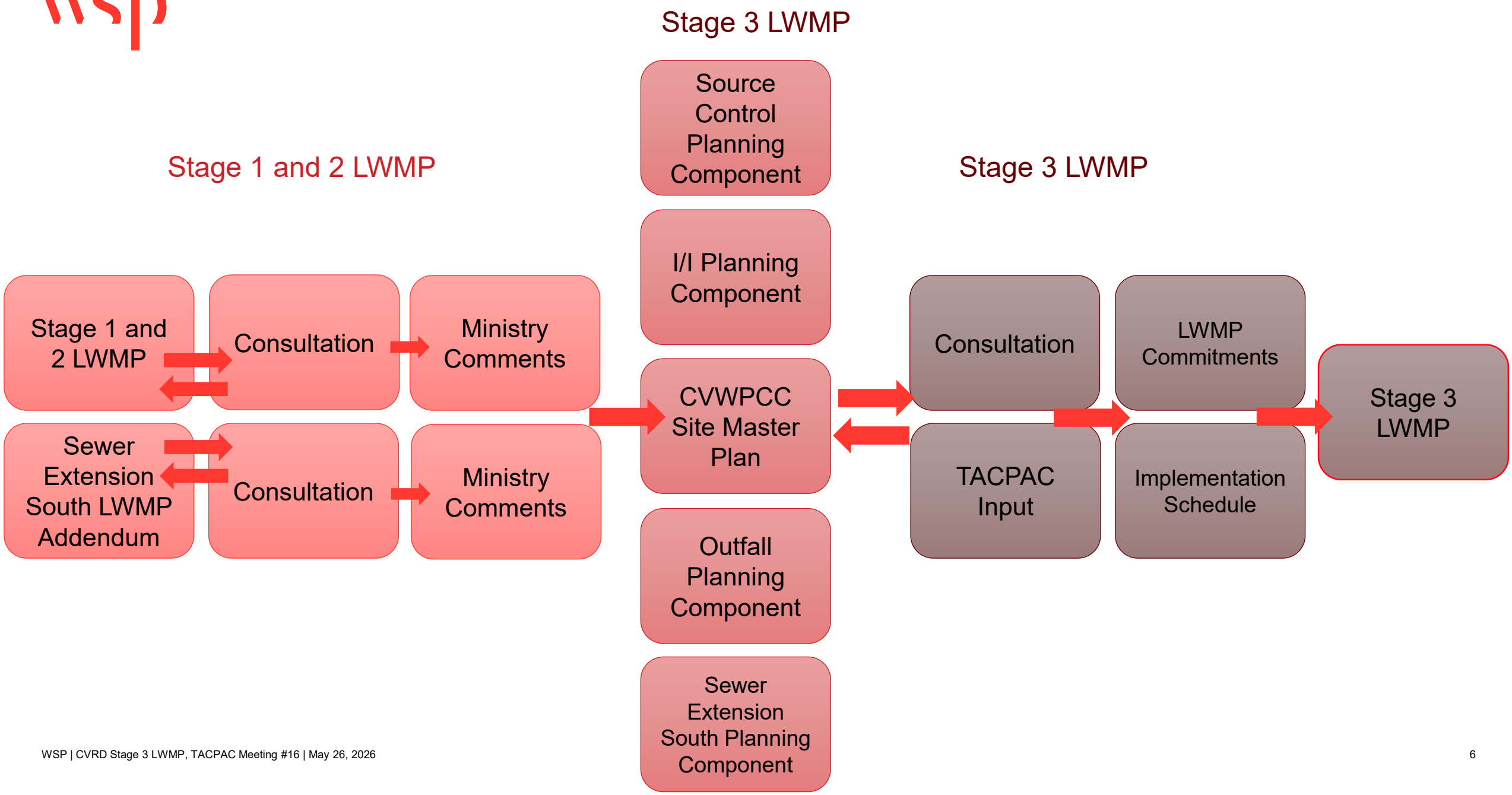
# Regulatory Context

**▪Key Authorizations**

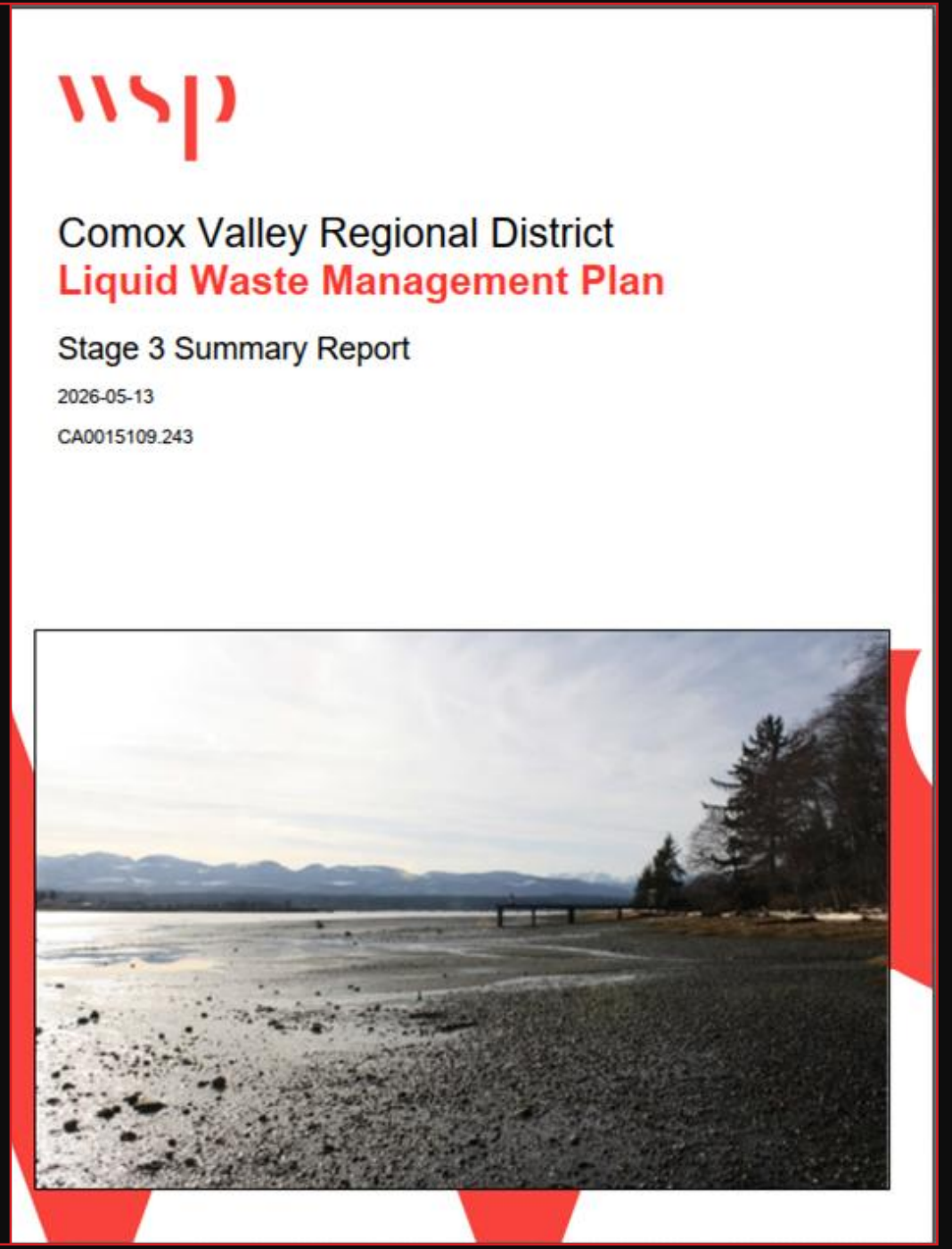
- BC Environmental Management Act allows local governments to develop a Liquid Waste Management Plan (LWMP) for approval by the Minister of Environment
- Approved LWMP, through provisions of EMA, allow local governments to borrow money without the approval of electors for implementation of an approved LWMP
- Approved LWMP, through provisions of EMA, provide the necessary authorizations through the issuance of Operational Certificates

**▪Key Requirements**

- The LWMP must demonstrate that an adequate process for comprehensive review and consultation with the public is provided - EMA Section 27(1)(2).
- The LWMP must comply with the governing regulations respecting the management of municipal liquid waste - EMA Section 24(1).
- The Ministry will also consider satisfaction of the “Interim Guidelines for the preparation of Liquid Waste Management Plans” in approval of the LWMP.


Stage 3 LWMP
Stage 1 and 2 LWMP
Stage 3 LWMP
Source Control Planning Component
I/I Planning Component
Stage 1 and 2 LWMP
Consultation
Ministry Comments
Sewer Extension South LWMP Addendum
Consultation
Ministry Comments
CVWPCC Site Master Plan
Outfall Planning Component
Sewer Extension South Planning Component
Consultation
TACPAC Input
LWMP Commitments
Implementation Schedule
Stage 3 LWMP

# Summary of Stage 3 LWMP Commitments



# Stage 3 LWMP Components

- CVWPCC Wastewater Treatment
- CVWPCC Outfall
- Resource Recovery
- Sewer Extension South
- Source Control
- Inflow and Infiltration
- Climate Change Mitigation and Adaptation
- Environmental Monitoring
- LWMP Monitoring and Update

# Wastewater Treatment

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| WWT-1 | Implement Phase 4, Foundational Upgrades at the CVWPCC | $113.4M[1] | 2030 |
| WWT-2 | Periodically validate population and flow projections to confirm capital timing and adjust phasing of future upgrades as needed | TBD | Every 5-10 years, as needed |

Notes:
1. Estimated costs are Class B cost estimates escalated to the midpoint of construction assuming an inflation rate of 2.5% per year

# CVWPCC Outfall

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| O-1 | Implement effluent pumping system modifications to address hydraulic constraints as part of Phase 4, Foundational Upgrades at the CVWPCC | Included in cost estimate for WWT-1 | 2030 |
| O-2 | Conduct outfall condition assessment to reevaluate the condition of the existing outfall and determine if potential for further increases to outfall pressure are possible | $400k | 2034 |
| O-3 | Conduct a feasibility study and review options for replacing outfall | $75k | 2035 |

# Resource Recovery

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| RR-1 | Design and construct an expanded reclaimed water system as part of Phase 4, Foundational Upgrades at the CVWPCC | Included in cost estimate for WWT-1 | 2030 |
| RR-2 | Continue to produce Class A compost | N/A | Ongoing |
| RR-3 | Conduct capacity assessment of existing composting facility | $20k | 2026 |
| RR-4 | Evaluate potential for additional resource recovery (heat recovery, reclaimed water, biosolids) as technology and regulatory environments change | TBD | 2035 |

# Sewer Extension South

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| SE-1 | Advance planning and design of the Sewer Extension South Project and consider affordability as a key criterion for successful project delivery | TBD | TBD |
| SE-2 | Continue to seek additional grant funding and partnership contributions for the Sewer Extension South project | TBD | Ongoing |
| SE-3 | Explore development of a bylaw for septic system maintenance within those parts of Electoral Area A included in the plan area boundaries, to be put in place if sewer servicing will not proceed as planned | TBD | 2032 |

# Source Control

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| SC-1 | Strengthen and harmonize sanitary sewer bylaws for Town of Comox and City of Courtenay | $25k | 2030 |
| SC-2 | Develop and execute a regional educational campaign that focuses on source control | TBD | 2030 |

# Inflow and Infiltration

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| II-1 | Upgrade infrastructure as part of Phase 4, Foundational Upgrades, to implement the wet weather treatment strategy and achieve the selected level of treatment at the CVWPCC | Refer to WWT-1 | 2030 |
| II-2 | Develop and initiate an ongoing staged I/I reduction plan with the goal of limiting the maximum daily flow at the CVWPCC to less than 2x ADWF during storm events with less than a 5-year return period in the future (partner with CVSS participants) | TBD | TBD |

# Inflow and Infiltration

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| II-3 | Undertake the study work and assessment necessary to develop and initiate a staged I/I reduction program | TBD | TBD |
| II-3a | Develop a standardized annual I/I reporting template | | TBD |
| II-3b | Conduct additional flow monitoring in collection systems (sub-catchment level) | | TBD |
| II-3c | Conduct additional flow monitoring at jurisdictional boundaries | | TBD |
| 11-3d | Develop year-by-year inspection plans for systematic inspection/assessment of infrastructure | | 2035 |
| 11-3e | Identify and conduct cost-benefit analyses of I/I reduction options and develop system remediation plans | | 2037 |

# Inflow and Infiltration

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| ~~II-4~~ | ~~Investigate options for private sewer lateral inspection and rehabilitation programs~~ | ~~TBD~~ | ~~TBD~~ |
| II-5 | Review and update bylaws related to sewer system connections and engineering development standards | TBD | TBD |
| II-6 | Investigate funding mechanisms to help facilitate I/I reduction program development and future capital works | TBD | TBD |

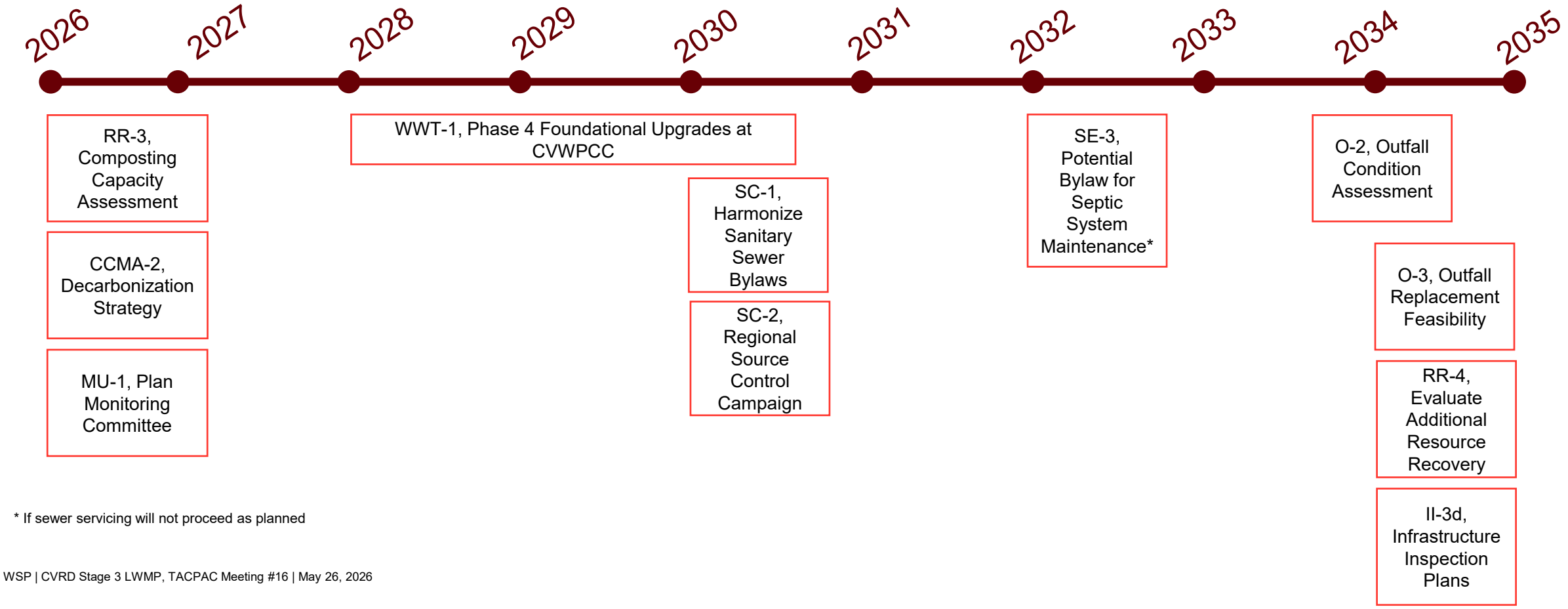
# Climate Change Mitigation and Adaptation

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| CCMA-1 | Track and report GHG emissions annually | TBD | Annual |
| CCMA-2 | Develop a Decarbonization Strategy | $50k | 2026 |
| CCMA-3 | Track annual rainfall frequency and intensity of extreme rain events to facilitate planning | TBD | Annual |

# Environmental Monitoring | LWMP Monitoring and Update

| Item No. | LWMP Commitment | Estimated Cost | Schedule |
|---|---|---|---|
| EM-1 | Complete annual receiving environment monitoring program for CVWPCC discharge | TBD | Annual |
| MU-1 | Establish a Plan Monitoring Committee | TBD | 2026 |
| MU-2 | Review LWMP progress and update as required and provide regular status updates on commitments | TBD | Annual |
| MU-3 | Conduct the first review of the LWMP within 10 years | $500k | 2035 |

# LWMP Commitments over the next 10 years




* If sewer servicing will not proceed as planned

# Thank you

# Next Steps

*Kris La Rose, CVRD*

# Planned LWMP Engagement

## June

- Sewage commission review & approval of Stage 3 LWMP

## Summer 2026

- Conclusion of First Nation review
- Stage 3 LWMP submitted to Ministry (pending no material comments from first nations)
- Operational certificate application submitted
- Continued design of Phase 4 Foundational Upgrades

# What's Next

## Spring/Summer 2026

**Final Draft Submitted**

The CVRD will share the draft Stage 3 report with the public, K'ómoks First Nation, complete any final updates, and once ready, submit to the province for review.

## Spring/Summer 2027

**Review and Potential Approval**

The province will complete its review of the LWMP. Approval can take up to a year from submission date.

## Ongoing

**LWMP Monitoring and Updates**

Once the LWMP is approved, the CVRD will get started on the commitments made within the plan. A plan monitoring committee will meet annually to review/ discuss progress.

**.....CVWPCC Phase 4 upgrades construction starting early 2028.**

Comox Valley
REGIONAL DISTRICT

# Request for Decision

*The TACPAC recommends to the Sewer Commission that the Commission approve the LWMP as drafted pending no material change required to address feedback from the First Nation review*

Comox Valley
REGIONAL DISTRICT