



Joint Utilities Board (JUB)

OUTFALL RELOCATION PROJECT

Cowichan River to Cowichan Bay

Presentation at:

Cowichan Watershed Board

By:

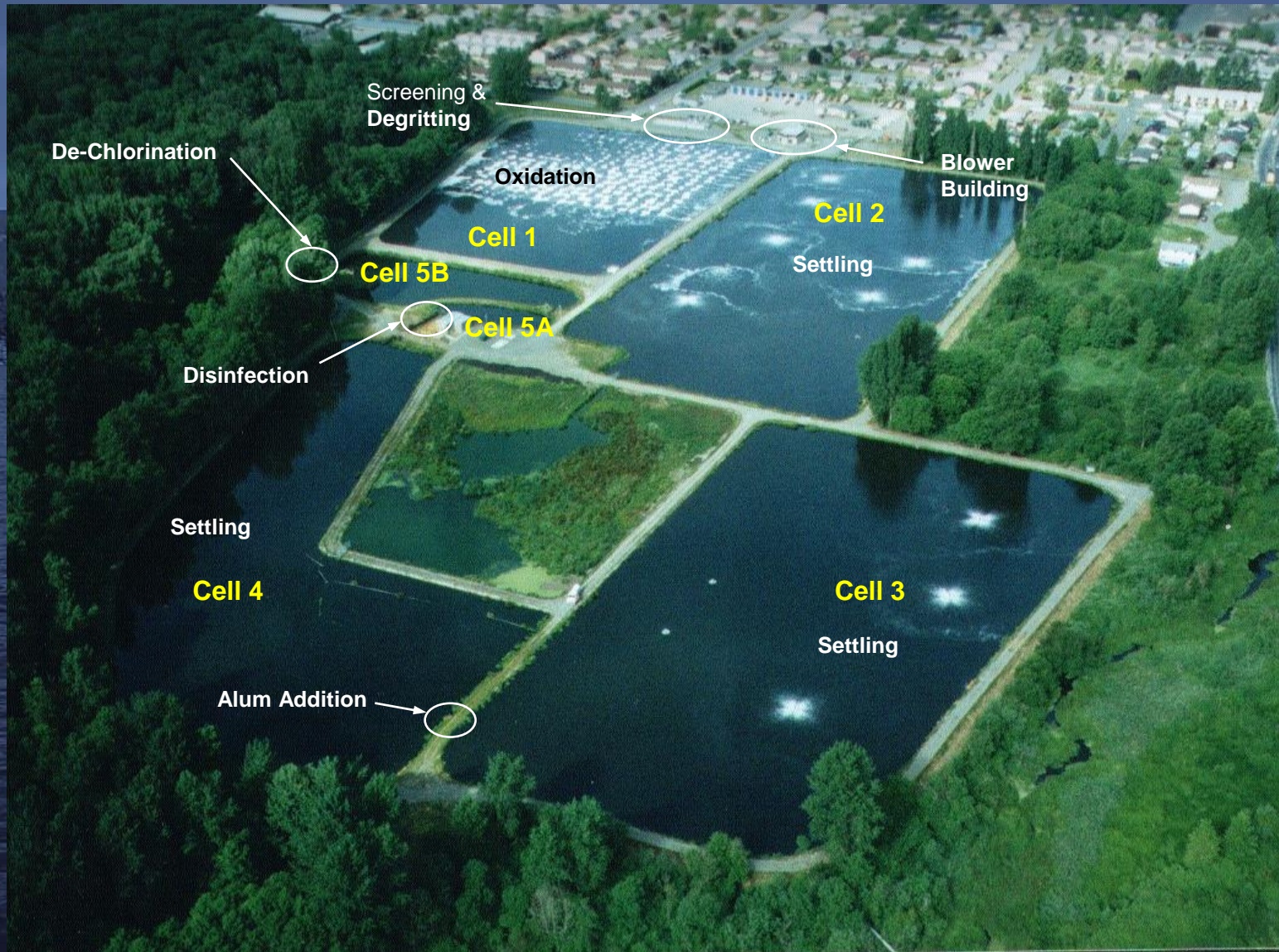
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Director, Engineering

September 23, 2024

Outline

- Treatment plant background:
 - Treatment process
 - Effluent quality monitoring
 - Capacity and future upgrades
- Outfall relocation project:
 - Purpose and benefits of outfall relocation
 - Work done to date
 - Land and marine pipe routing
 - Project timing
 - Public engagement

JUB STP: Treatment Process



JUB STP: Treatment Process

Screening	Removes larger inorganic material (plastics, rocks)
Degritting	Removes heavier/finer inorganic material (sand)
Oxidation	Converts organics to micro-organisms (secondary treatment)
Settling	Settles out micro-organisms
Alum Addition	Removes phosphorus (tertiary treatment)
Chlorination	Kills bacteria and viruses in the process water
De-Chlorination	Removes residual chlorine byproducts from the effluent prior to discharge to the river

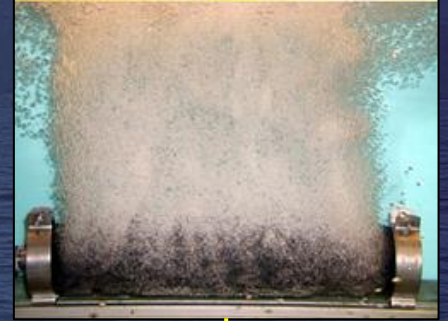
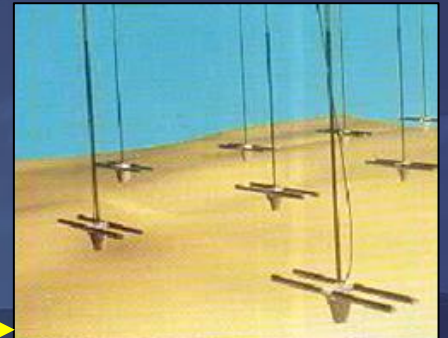
Screening



Degritting



Oxidation



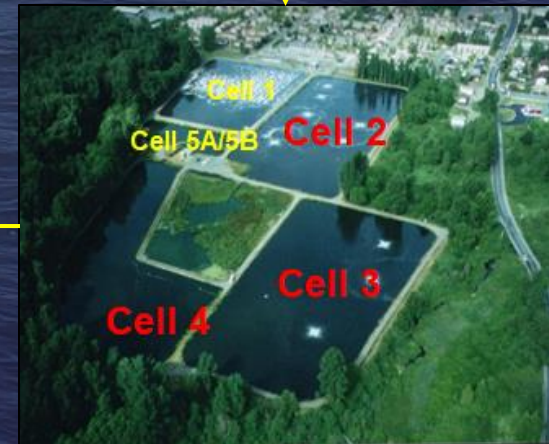
Chlorination



Alum Addition



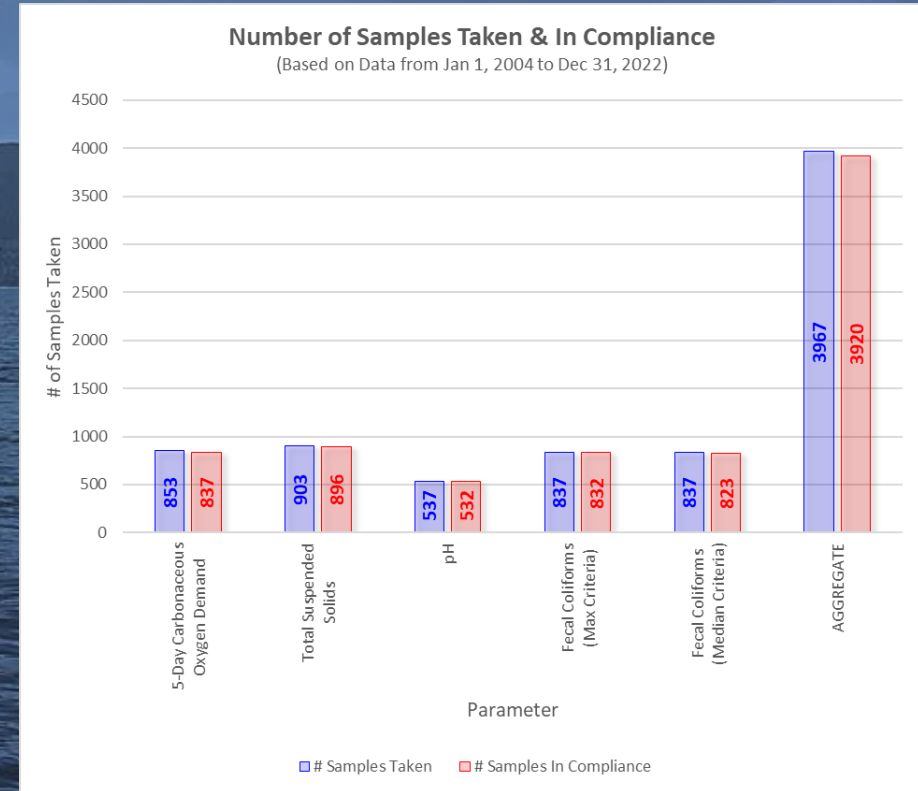
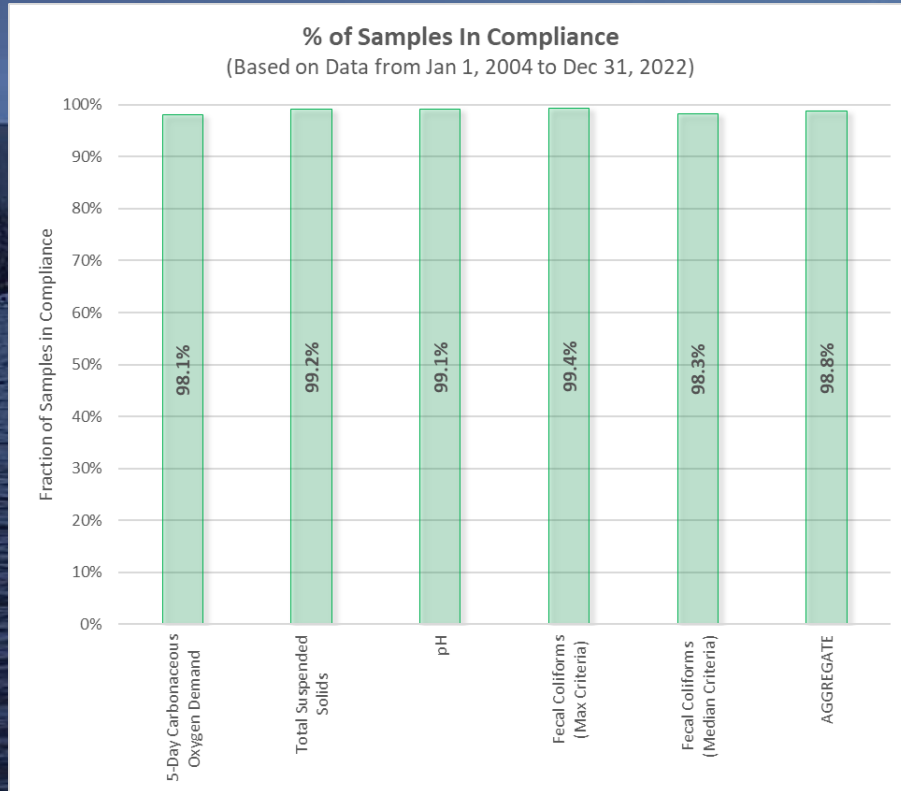
Settling



De-Chlorination



JUB STP: Water Quality Monitoring



JUB STP: Near-Term/Long-Term Upgrades

- 2/3 of Cell 1 aerated (**current configuration**)
 - Capacity = **20,000 ERUs**
 - Current Connections = 14,160 ERUs
 - Capacity Remaining = 5,840 ERUs
- Add remaining aeration diffusers to Cell 1 (**2024/2025**)
 - Cost = \$3,700,000
 - Additional Capacity = 10,000 ERUs
 - Total Capacity = **30,000 ERUs**
- Add additional diffusers to Cell 2 (**Future**)
 - Cost = \$13,800,000
 - Additional Capacity = 30,000 ERUs
 - Total Capacity = **60,000 ERUs**

JUB STP: Near-Term/Long-Term Upgrades



Outfall Relocation Project: Purpose and Benefits

- Commitment made to Cowichan Tribes
- Removes risk of damage to outfall from log jams and gravel deposition
- Ensures significantly higher levels of dilution
- Significantly reduces risk of contact with contaminant of emerging concern
- Reduces flood risk
- Could trigger re-evaluation of shellfish harvesting in Estuary

Work to date

- 2010 - 2015: Stage 1 Environmental impact assessment and public engagement (CVRD-led)
- 2018-2024:
 - Detailed environmental studies
 - Consultations with local First Nations (ongoing)
 - Engagement with public and interest groups
- 2024:
 - Route confirmed
 - Public engagement on final routing and cost (coming soon)

First Nations Consultation

- Two rounds of consultation:
 - 2015 (Stage 1 EIS; LWMP amendment)
 - 2018 to Present (Stage 2 EIS; LWMP amendment update)
- In 2018 11 Nations contacted:
 - 6 requested in-depth consultation (\$125 k in capacity funding to assist First Nations with consultation)
 - 5 wanted to continue to be informed
- Environmental assessments incorporate Indigenous knowledge
- Economic opportunities for First Nations
- First Nations consultation to continue after installation

Environmental Studies



- Stage 2 EIS
 - Assess conditions along marine pipe route
 - Treated effluent plume modelling
 - Extensive sampling at each proposed discharge location:
 - 2 yrs; 2 seasons/yr, 5 days/season (over 30 days), total 20 sampling sessions
 - Seasons are summer and winter
- Pre-discharge monitoring (part of Receiving Environment Monitoring Program - REMP)

Outfall Project: Transport Canada Notification

- Sign board to be erected at Hecate Park; notice in local paper
- 30 day response period

PUBLIC NOTICE

Canadian Navigable Waters Act

The Municipality of North Cowichan hereby gives notice that an application has been made to the Minister of Transport, pursuant to the Canadian Navigable Waters Act for approval of the work described herein and its site and plans.

Pursuant to paragraph 7(2) of the said Act, the Municipality of North Cowichan has deposited with the Minister of Transport, on the online Navigable Waters Registry (<http://cps.canada.ca/>) and under registry number 6565, or, under the NPP File Number 2021-504773 a description of the following work, its site and plans:

Relocation of an existing treated effluent outfall from the lower Cowichan River, leaving land at Hecate Park, through Cowichan Bay, and terminating at the embayment line of Cowichan Bay.

Comments regarding the effect of this work on marine navigation can be sent through the Common Project Search site mentioned above under the Comment section (search by the above referenced number) or, by sending your comments directly to (Navigation Protection Program - #820-800 Burrard St., Vancouver BC, V6Z 2J8) if you do not have access to the internet.

However, comments will be considered only if they are in writing (electronic means preferable: NPPAC-PPNPAC@tc.gc.ca) and are received not later than 30 days after the publication of the last notice. Although all comments conforming to the above will be considered, no individual response will be sent.

Signed at North Cowichan, British Columbia this day of, 202.

(Signature)
(full name of owner)

Outfall Project: Next Steps

- Public engagement later this year (information on routing)
- Ongoing consultations with First Nations
- Pipeline construction expected to begin 2025



Questions?