



Date:	April 17, 2013	File:	20132344.00.A.04.00
Time:	2:00 - 5:00 p.m.	Page:	1 of 3
Project:	Wastewater System Upgrades		
Subject:	Wastewater Advisory Committee Meeting No.1		
Client:	City of Port Alberni		
Location:	City Hall, Port Alberni, BC		
Present:	Rick Avis (RA) - Somass Estuary Management Plan Committee / Alberni Valley Enhancement Association (AVEA) Guy Cicon (GC) - City of Port Alberni Larry Cross (LC) – Catalyst Paper Andy Daniel (AD) – Alberni-Clayoquot Regional District Phil Edgell (PE) – AVEA Sheena Falconer (SF) – West Coast Aquatic Hugh Hamilton (HH) – Associated Engineering (AE) Baljeet Mann (BM) – Ministry of Environment (MOE) (by phone) Ashley Popovich (AP) – Catalyst Paper Tom Robinson (TR) - Associated Engineering Dean Shiskowski (DS) – Associated Engineering Kirsten White (KW) – Ministry of Environment		
Distribution:	Those Present Jeanine Bond – Ducks Unlimited Kelly Bush – Associated Engineering Stephanie Bruvall – Ministry of Health Bill Collette – AV Chamber of Commerce Robert Duncan – Hupacasath First Nation Joe Holmes – Western Forest Products Randy Lake – Department of Fisheries and Oceans Snehal Lakhani – Environment Canada Dave McCormick – Port Alberni Port Authority Allan McGill – McGill & Associates Scott Smith – City of Port Alberni Cindy Stern – Tseshah First Nation		

RECORD OF MEETING

These minutes are considered to be complete and correct. Please advise the writer within one week of any errors or omissions, otherwise these minutes will be considered to be an accurate record of the discussions.

Action By:

Discussion:

1 INTRODUCTIONS

Info

Introductions were made. The meeting was the first of the combined Technical Advisory Committee (TAC) and Public Advisory Committee (PAC), referred to in this case as the

Subject: Wastewater Advisory Committee Meeting No.1

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Action By:

Discussion:

Wastewater Advisory Committee (WAC), as required by the Liquid Waste Management Plan (LWMP) process. The LWMP will form the basis for future wastewater collection, treatment and disposal for the next 40 years.

Info The key objectives of the meeting were noted, as follows: to provide project background and history, to review the alternative locations for effluent return to environment, and to discuss the next steps.

Info TR provided some more detailed overview of the project and introduced the AE members.

2 PRESENTATION AND DISCUSSION

Info DS, TR, and HH presented several slides (appended) and led a discussion, following the agenda distributed to attendees (also appended).

Info A discussion was raised by KW on the CSO component of the LWMP.

Info The following points were noted during discussions:

- Planned integration of the Catalyst Lagoon into the City's system is scheduled for completion by March 2015.
- The tidal marsh areas within the Somass Estuary have high ecological and fisheries values, as outlined in the Somass Estuary Management Plan.
- The western side of the intertidal zone, and its channels, are primarily a freshwater environment. Plant species found here are freshwater-based and no clams or crabs exist in these locations. It does not appear this area has been significantly affected by historical municipal or industrial effluent discharges.
- Dissolved oxygen dynamics appear to have an important influence on fish behaviour in terms of the timing of when salmon enter the Somass River. Therefore BOD in the treated effluent will be an issue to be addressed in the LWMP.
- The local fishery is an important contributor to the local economy. This should be factored into the evaluation of options.
- River and estuary effluent discharge has a long history in the area. Intertidal zone effluent discharge has not been practiced.

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Action By:**Discussion:**

The following items were identified and agreed to as action items:

- | | |
|---------------|---|
| RA, PE (AVEA) | • AVEA to make material available to the WAC the results of a literature review currently underway. |
| KW (MOE) | • MOE to provide direction on application of recent Provincial policy on phosphorus. |
| GC | • City to speak with Catalyst Paper regarding any potential opportunity or interest for reclaimed municipal effluent reuse at the mill. |
| DS, HH, TR | • It was agreed that AE would develop a discussion paper outlining the three effluent return locations presented and discussed: Somass River, Alberni Inlet, and Intertidal Zone, as well as summarizing the relevant preliminary screening work and pertinent discussion points from this meeting. |

Info / HH

There was some discussion regarding the value of carrying out a limited monitoring program this spring and summer to sample water quality at the lagoon outlet, the channel outlet, and at a few upstream and downstream locations in the river.

[Post Meeting Note: HH is preparing a proposed work plan to this effect. The aim would be to determine concentrations of the MWR regulated parameters when the tide is coming in and when it is out, which will help inform the discussion on the Somass River option.]

3 MEETING ADJOURNED / NEXT MEETING

GC

It was agreed that the next WAC meeting will be scheduled for a date 4-6 weeks from now (i.e. mid or late May).

Prepared by:



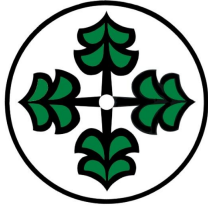
Quinn Crosina, M.A.Sc., P.Eng.
Environmental Engineer

Reviewed by:



Dean Shiskowski, Ph.D., P.Eng.
Project Advisor

QC/DS/lp



City of Port Alberni Wastewater Treatment Upgrades

Wastewater Advisory Committee (WAC) Meeting #1 - Agenda

April 17th, 2013, 2:00 – 5:00pm

1. Introductions

- a. Combined Public and Technical Advisory Committee: Wastewater Advisory Committee

2. Background and History

- a. Stage 1 LWMP
- b. Draft Stage 2 LWMP
- c. Investigations – Odour Control Options
- d. Hydraulic Analysis – Combined Sewer Overflows; Preliminary Upgrades
- e. Investigations – Constructed Wetland Option
- f. Compliance Review by MOE
- g. Draft Stage 2 LWMP – Additional Wastewater Treatment Options Discussion Paper
- h. Investigations - Potential Catalyst Lagoon Acquisition
- i. Discussion Paper – Wastewater Treatment Facility Upgrade Options
- j. Discussions - MSR Pre-Registration
- k. Discussion Paper – Wastewater Lagoon Treatment System Concept
- l. Gas Tax Funding Application and Award of Funding
- m. Acquisition of Catalyst Lagoon
- n. Other Environmental Assessment or monitoring activity in Alberni Inlet and Somass River Estuary
- o. Preliminary environmental screening work to-date

3. Alternative Locations – Effluent return to the environment

- a. Somass River
- b. Intertidal zone

- c. Alberni Inlet

4. Next Steps

- a. Develop decision-making framework for effluent return location
- b. WAC Meeting #2
- c. Update Draft Stage LMWP document – Ongoing

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Wastewater Advisory Committee




April 17, 2013


City of Port Alberni Wastewater Upgrades –
Stage 2 LWMP

Wastewater Advisory Committee

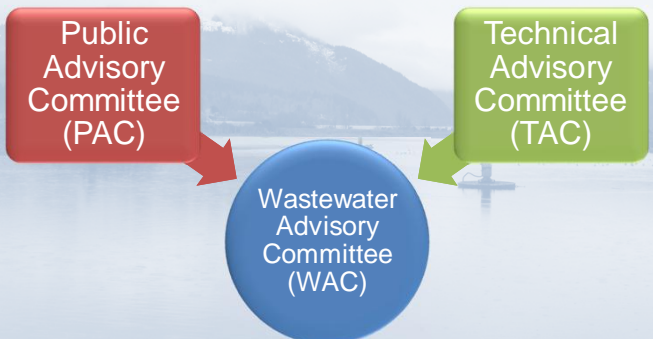
Meeting No.1

 City of Port Alberni

Wastewater Advisory Committee



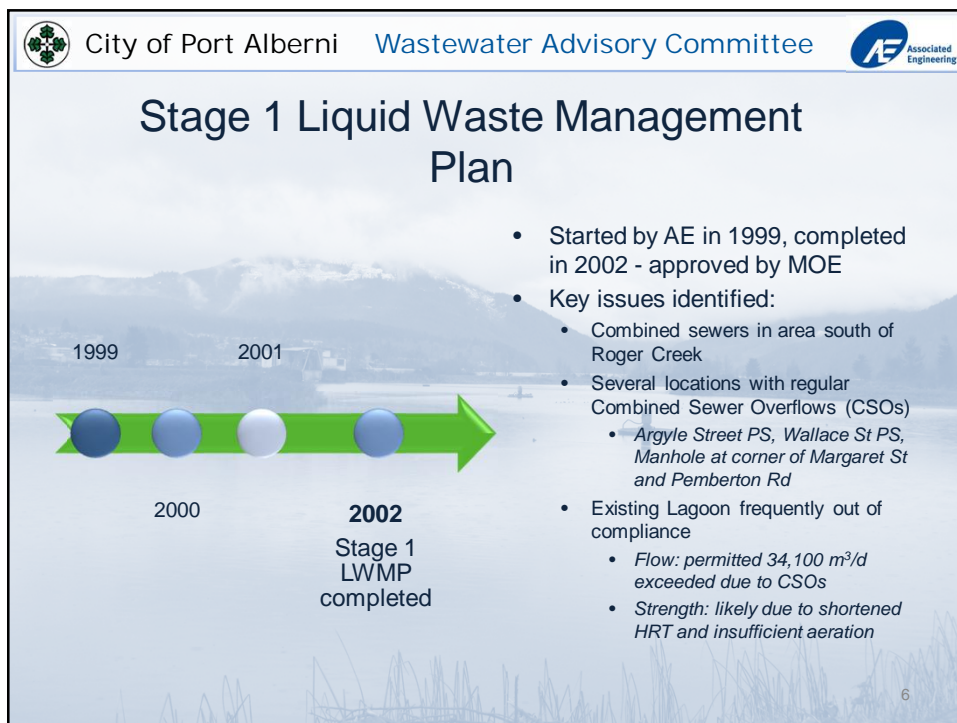
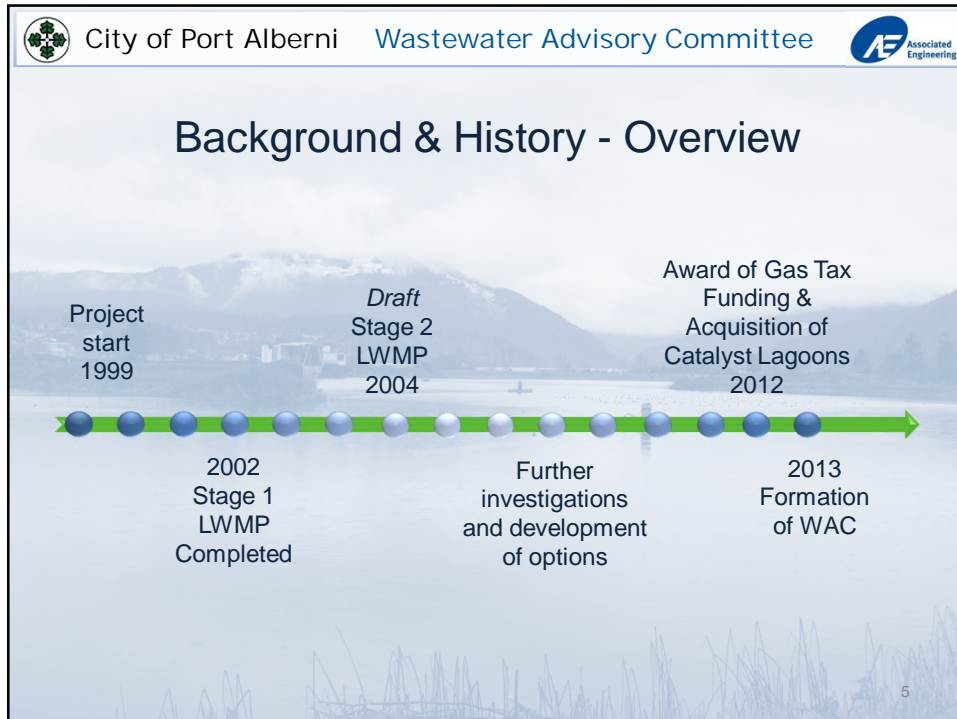
Introductions



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graph TD; PAC[Public Advisory Committee (PAC)] --> WAC((Wastewater Advisory Committee (WAC))); TAC[Technical Advisory Committee (TAC)] --> WAC;
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Draft Stage 2 Liquid Waste Management Plan



Stage 1
LWMP
2002



**Draft Stage 2
LWMP
development
commenced**

- Developed but not finalized
- Discussed 3 options for new Wastewater Treatment Facility:
 - South of Argyle Street- *treat all flows*
 - West of existing lagoons - *treat all flows*
 - South of Argyle Street to - *treat flows south of Roger Creek; existing lagoon to treat flows north*


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Draft Stage 2 Liquid Waste Management Plan

Stage 1
LWMP
2002



Odour control investigations




Stage 2
LWMP in
development

- 2002: Odour control investigations
 - Options investigated for odour control at Port Fish Plant
 - Aim to assist with managing odours in municipal lagoon
- 2003: Co-treatment with Mill Wastewater explored
 - Mill was not open to co-treatment in their surplus lagoon
 - Mill's response to City's request cites regulatory issues under Federal Fisheries Act

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Draft Stage 2 Liquid Waste Management Plan

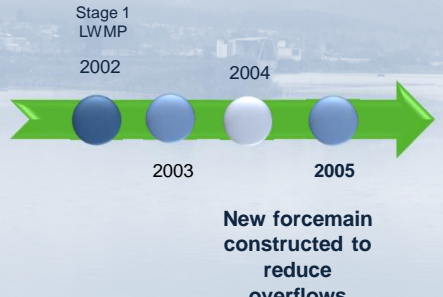


- Option of sharing / purchasing mill lagoon was eliminated
 - owner not willing at the time*
- Conclusion: mechanical-biological treatment facility options were all deemed cost-prohibitive at the time
 - Not presented to the public*
 - Follow-up investigations initiated*
 - Continued work to improve CSO and SSO situation*

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Hydraulic Analysis & Upgrades

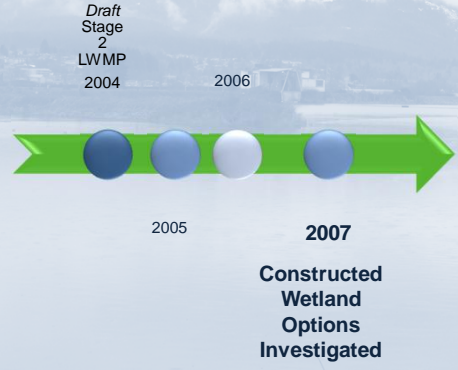


- Hydraulic modeling
 - Analysis of combined sewer overflows (CSOs)
- 2004 – 2005: New forcemain constructed from Pemberton Rd to existing municipal lagoon
 - Reduced overflows at Margaret St Pump Station*

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Investigations - Constructed Wetland




Constructed Wetland Options Investigated

- ~ 2007: Option of a constructed wetland is investigated
 - Work completed by McElhanney Consulting Services Ltd.
- Concept:
 - *Maintain the City's existing lagoon*
 - *Add screening and ultraviolet disinfection*
 - *Add a 20 ha constructed wetland for effluent polishing*
- Incorporated into Stage 2 LWMP documents

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Compliance Review

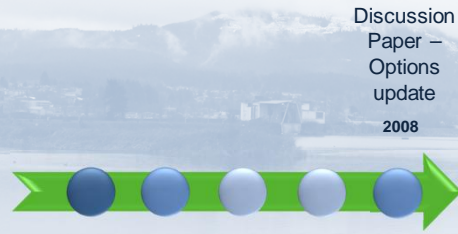


MoE compliance review of the municipal lagoon in 2008

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Additional Wastewater Treatment Options





2004
Draft Stage
2 LWMP
Completed


2008
Discussion
Paper –
Options
update

- Discussion paper
 - Update to Draft Stage 2 LWMP
 - Identified two new treatment options:
 1. *Use of existing 5 ha municipal lagoon + constructed wetland for polishing step*
 2. *Use of existing 5 ha municipal lagoon + half (7 ha) of Catalyst Lagoon for polishing*

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Additional Wastewater Treatment Options





2004
Draft Stage
2 LWMP
Completed

2008
Discussion
Paper –
Options
update

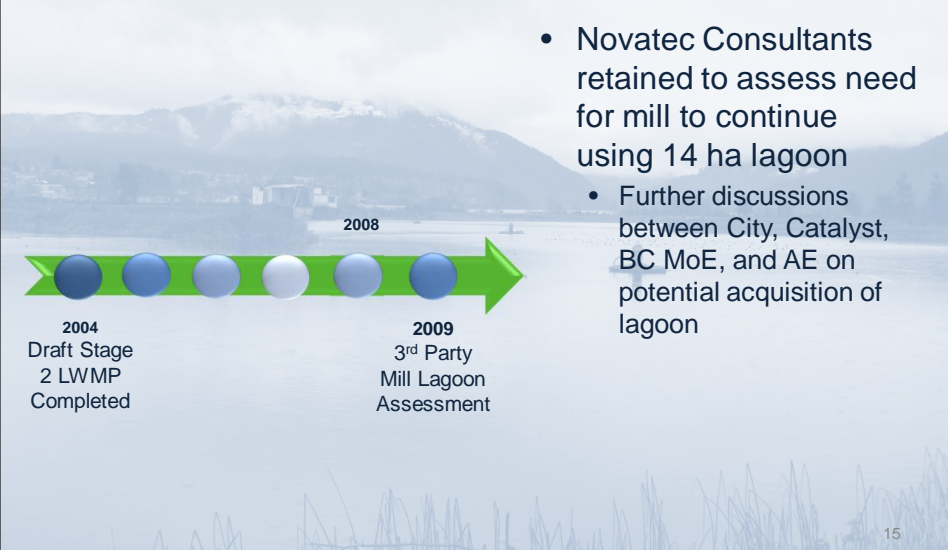
- Discussion paper
 - Update to Draft Stage 2 LWMP
 - Identified two new treatment options:
 1. *Use of existing 5 ha municipal lagoon + constructed wetland for polishing step*
 2. *Use of existing 5 ha municipal lagoon + half (7 ha) of Catalyst Lagoon for polishing*

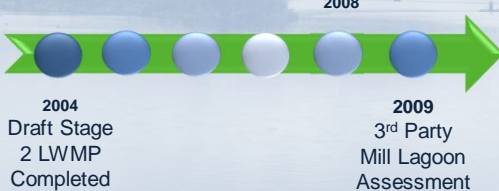
Option eliminated – mill sold proposed wetland property to Tseshaht First Nation

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Assessment of Mill Lagoon







2004
Draft Stage
2 LWMP
Completed

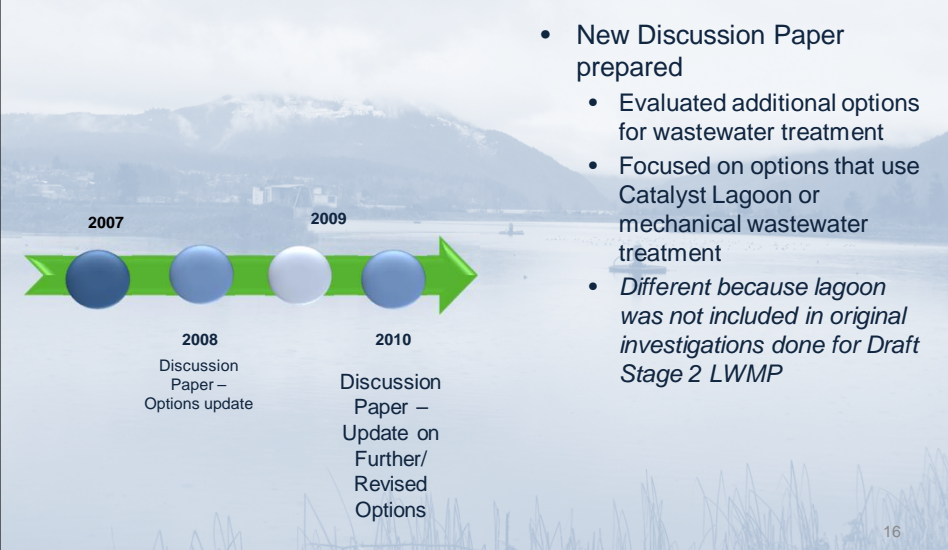
2009
3rd Party
Mill Lagoon
Assessment


- Novatec Consultants retained to assess need for mill to continue using 14 ha lagoon
 - Further discussions between City, Catalyst, BC MoE, and AE on potential acquisition of lagoon

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Update on Upgrade Options





2007

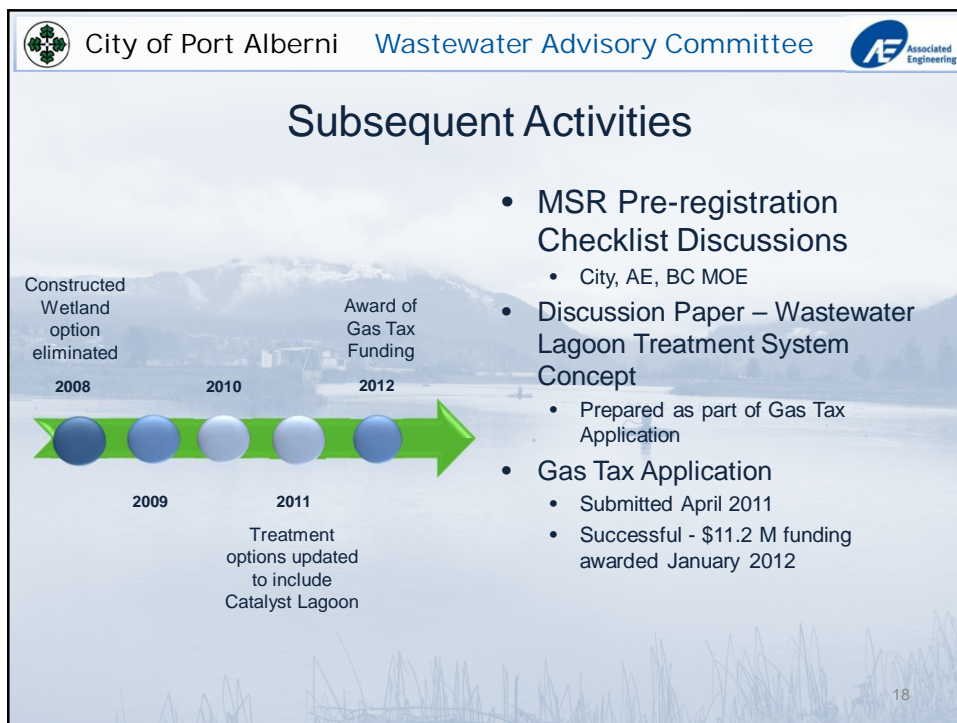
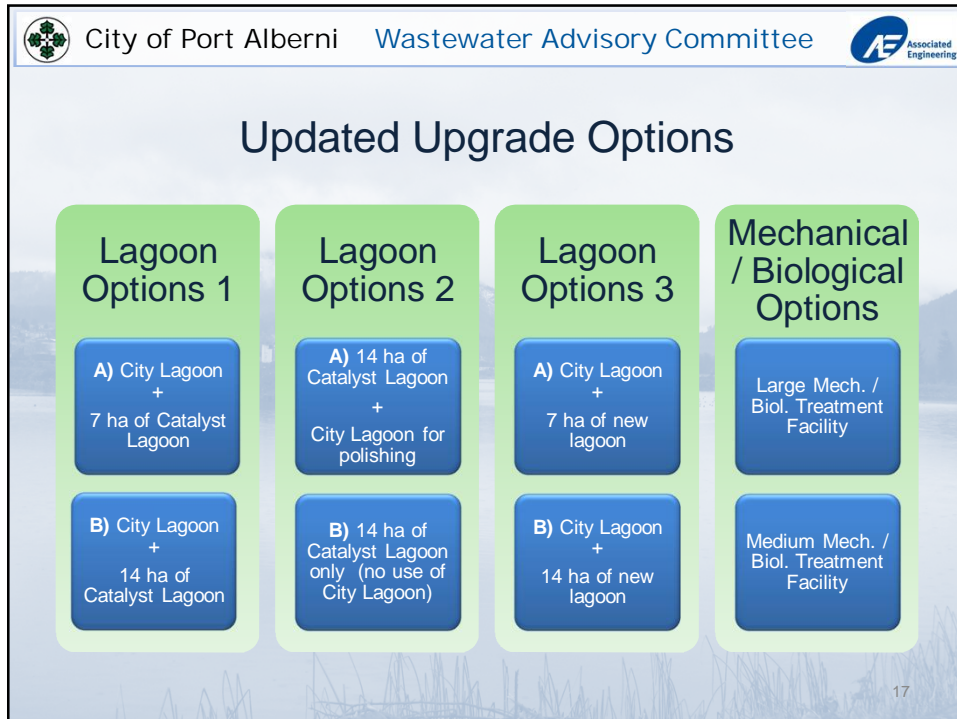
2008
Discussion
Paper –
Options update



2009

2010
Discussion
Paper –
Update on
Further/
Revised
Options

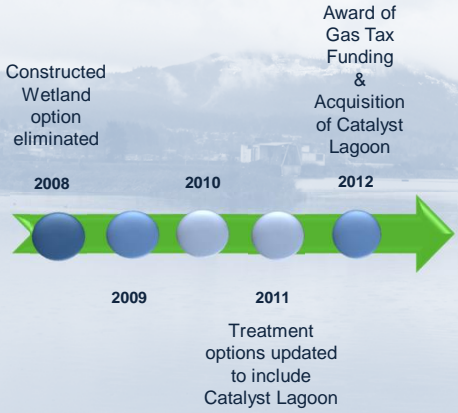
- New Discussion Paper prepared
 - Evaluated additional options for wastewater treatment
 - Focused on options that use Catalyst Lagoon or mechanical wastewater treatment
 - *Different because lagoon was not included in original investigations done for Draft Stage 2 LWMP*

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Subsequent Activities



- Summer 2012: City secures Catalyst Lagoons
 - Agreement eliminates shared use of lagoons
 - Agreement eliminates City's use of Mill's existing outfall
 - *City required to implement a new discharge point for the lagoon*



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Alternative Locations for Treated Effluent Return to the Environment





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Other Environmental Assessment / Monitoring Activity in Alberni Inlet and Somass River Estuary

- Catalyst Environmental Effects Monitoring (EEM - Cycle 6 most recent; Cycle 5 in 2010)
- Somass Estuary Management Plan (SEMP 2004)
- Somass Basin Watershed Management Plan (Pacific Salmon Commission June 2012) – climate change adaptation

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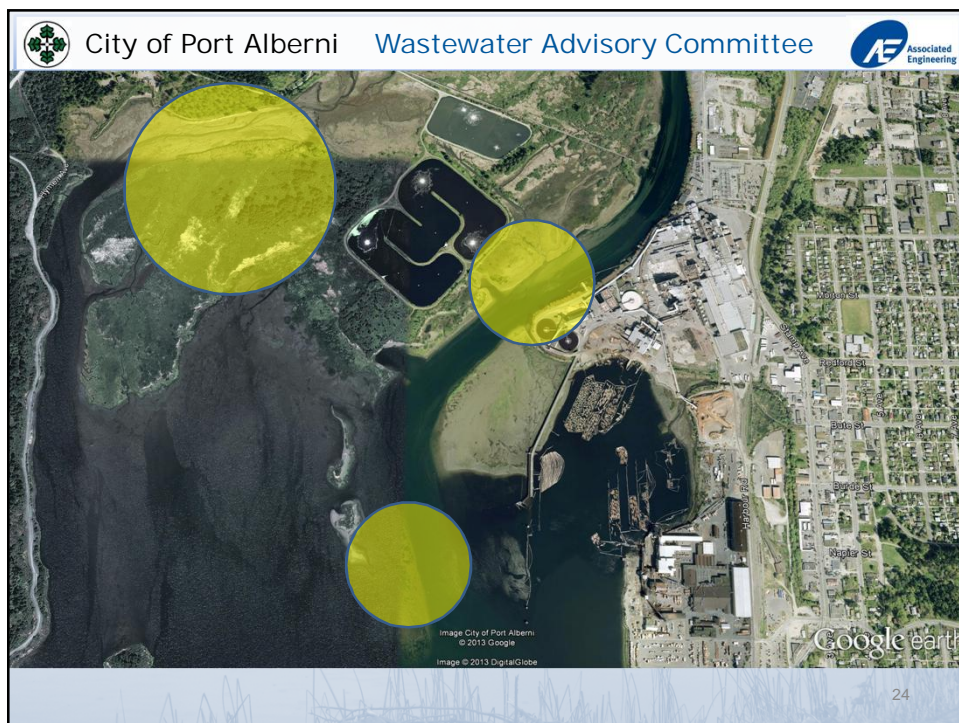
Preliminary Environmental Screening Work To-date:

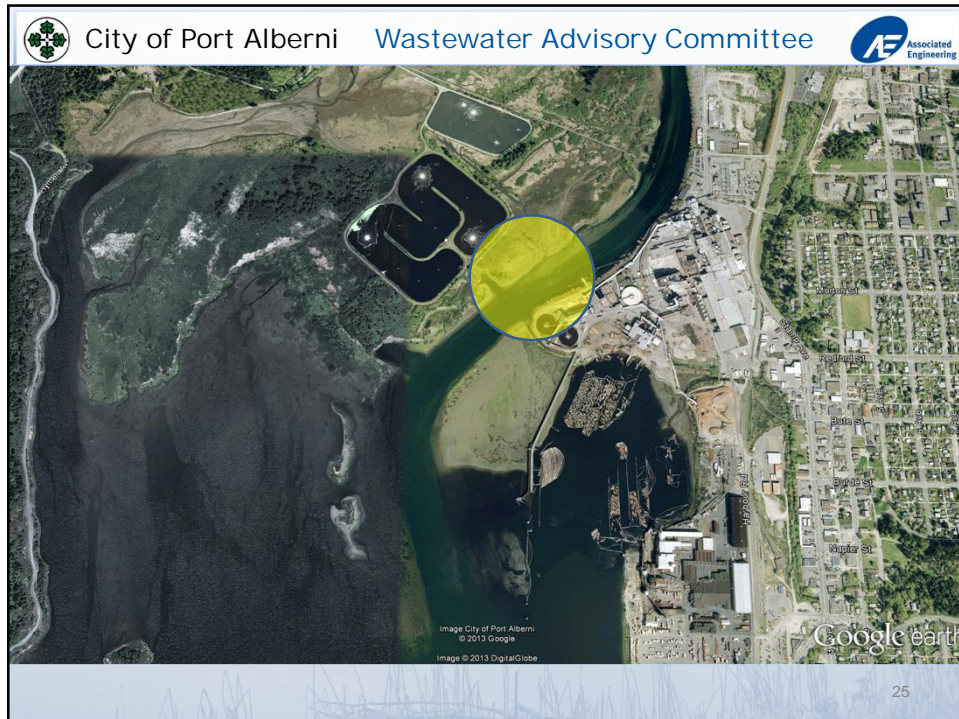
Aim is to address key outstanding issue:
location of effluent return to environment



<p>Options previously identified (Draft Stage 2 LWMP):</p> <p style="text-align: center; margin-top: 20px;">Somass River Alberni Inlet</p>	<p>Additional option tabled:</p> <p style="text-align: center; margin-top: 10px;">Intertidal Zone</p>
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Do 'deal-breakers' exist for any of the options?

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Screen the Feasibility of River Discharge

- Current “side channel” discharge through a vegetated ditch
- MWR approach to river discharge influenced by the Dilution Ratio (DR)

$$DR = \frac{\text{Average annual 7 – day Low Flow (7Q2)}}{\text{Maximum Weekly Average Wastewater Flow}}$$

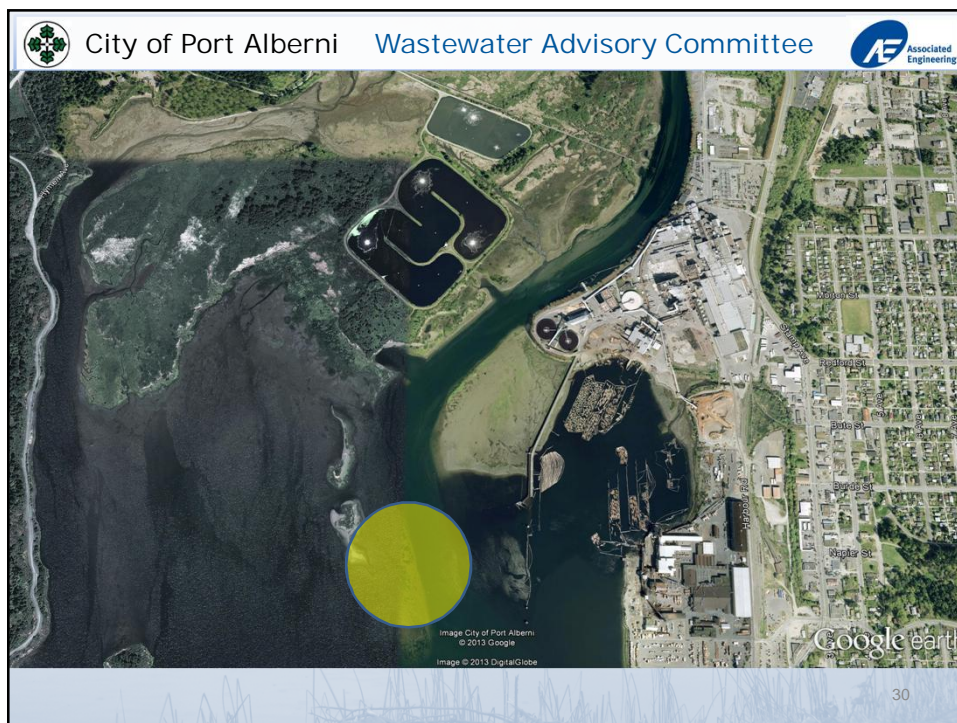
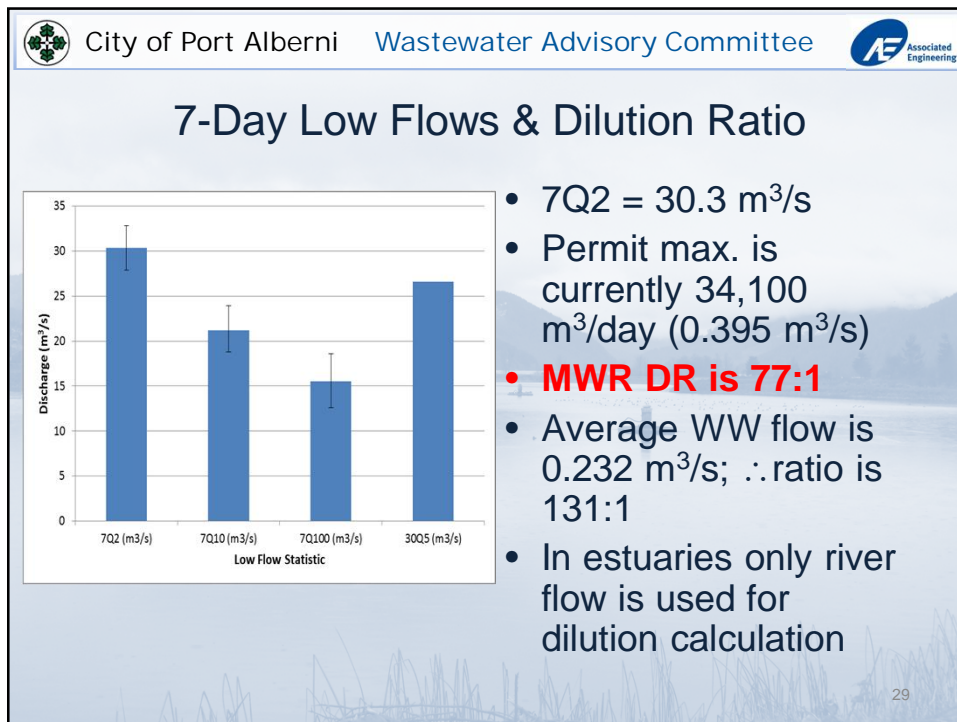
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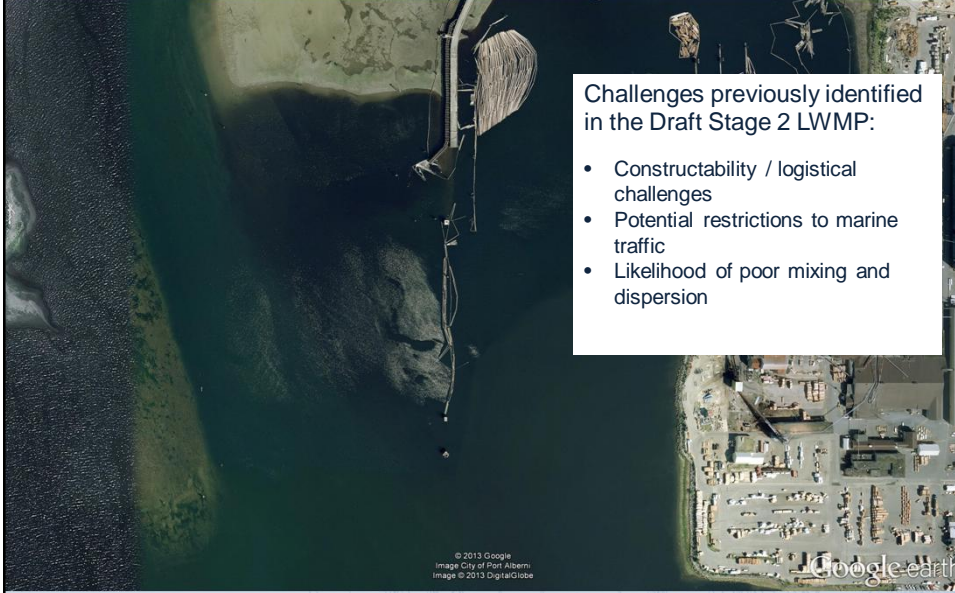
MWR Dilution Ratio

- If >100:1 – treatment standards & EIS scope are normal
- If <100:1 EIS must determine if more stringent treatment standards are needed
- If <40:1 & used for recreation or domestic, only possible if no other option; advanced treatment required
- Prohibited if <10
- Somass River is used for recreation

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Challenges previously identified in the Draft Stage 2 LWMP:

- Constructability / logistical challenges
- Potential restrictions to marine traffic
- Likelihood of poor mixing and dispersion

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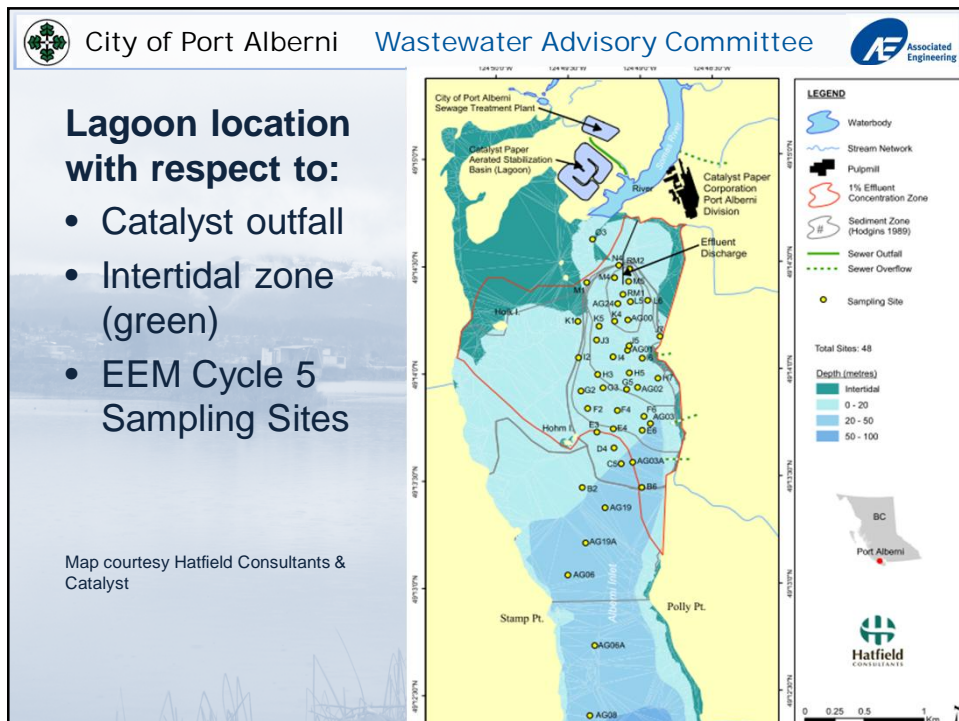
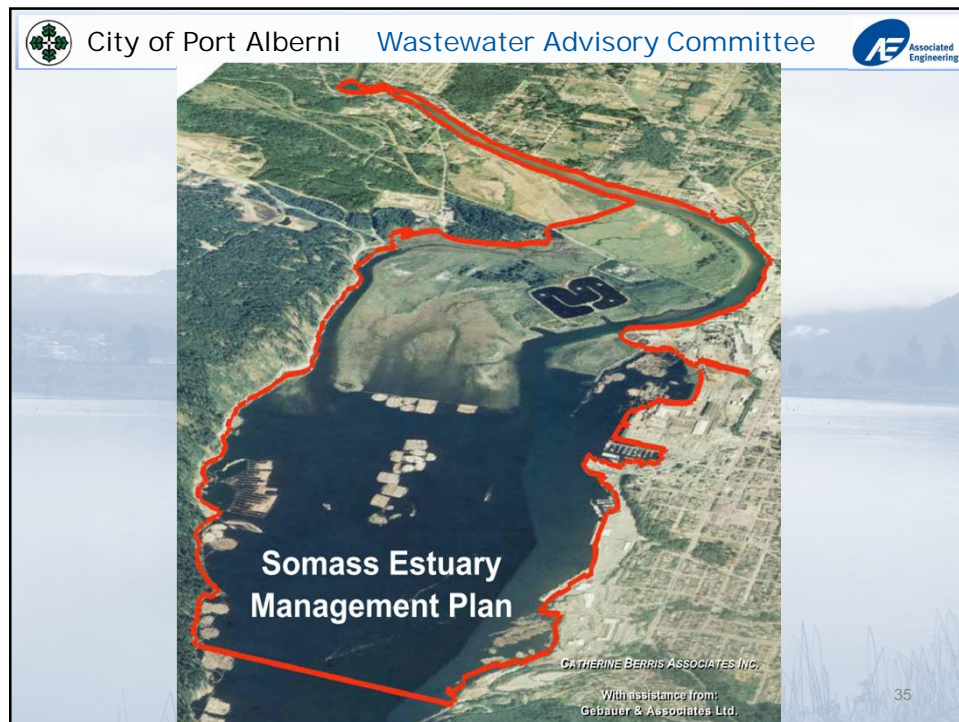


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SEMP Habitat Value Ratings


<p>Very High</p> <ul style="list-style-type: none"> • Permanent Tidal Channel (juvenile salmon, shorebirds, river otter, etc.) • Tidal Marsh (as above, plus 7+ blue or red plant species) 	<p>High</p> <ul style="list-style-type: none"> • River Channel • Mudflat <p>Moderate</p> <ul style="list-style-type: none"> • Shallow Subtidal <p>Low</p> <ul style="list-style-type: none"> • Deep Subtidal
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Somas Estuary Approaching High Tide

Photo: Long B. Nguyen (public domain)

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Next Steps



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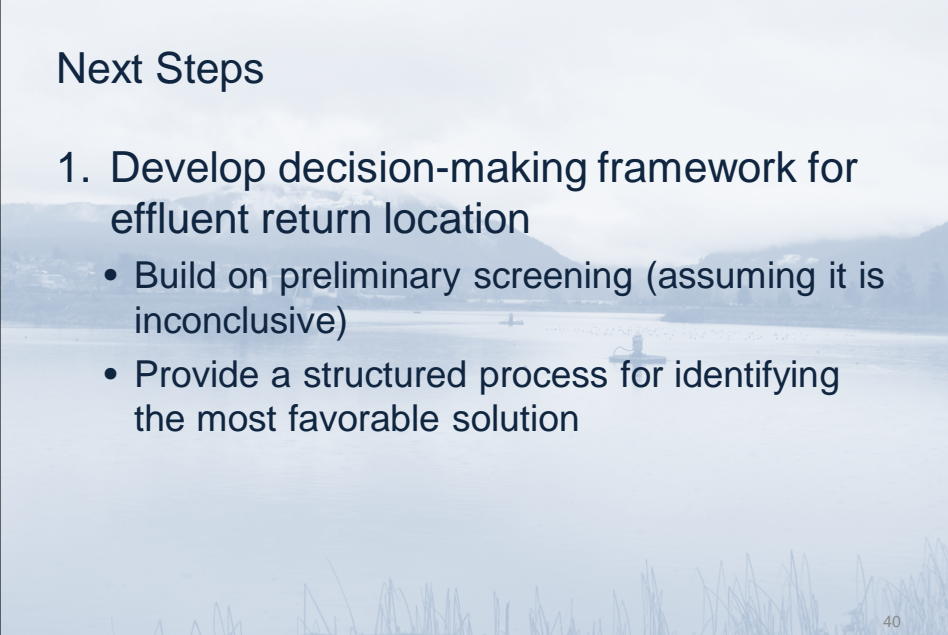
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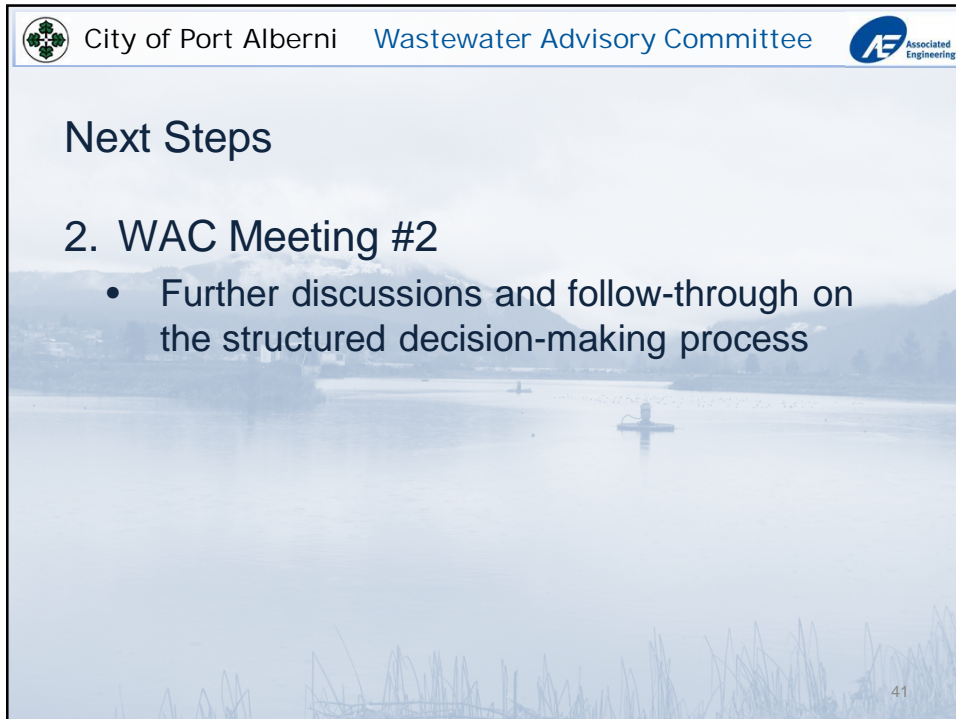





Next Steps

1. Develop decision-making framework for effluent return location
 - Build on preliminary screening (assuming it is inconclusive)
 - Provide a structured process for identifying the most favorable solution

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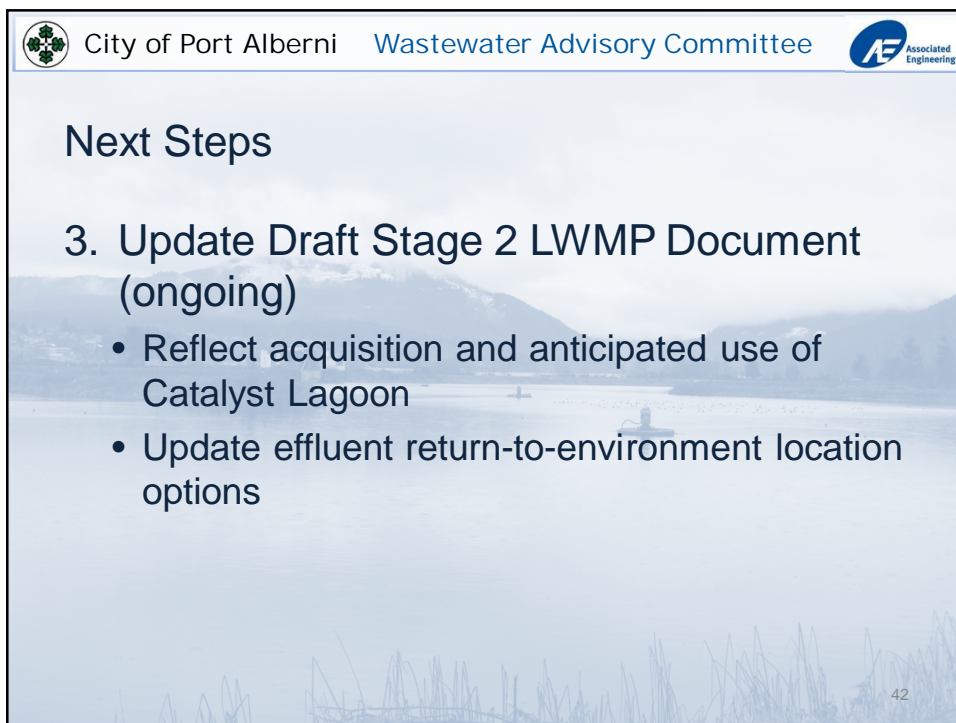
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Next Steps

2. WAC Meeting #2

- Further discussions and follow-through on the structured decision-making process

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Next Steps

3. Update Draft Stage 2 LWMP Document (ongoing)

- Reflect acquisition and anticipated use of Catalyst Lagoon
- Update effluent return-to-environment location options

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