Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

Date:	October 1, 2013	**File:**	20132344.00.A.04.01
Time:	1:00 - 4:00 p.m.	**Page:**	1 of 6
Project:	Port Alberni Wastewater Upgrades		
Subject:	Wastewater Advisory Committee Meeting #3		
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)
Steven Baxter (SB) – Port Alberni Port Authority
Kelly Bush (KB) – Associated Engineering (AE) (by phone)
Jason Clarke (JC) – Worley Parsons
Guy Cicon (GC) - City of Port Alberni
Quinn Crosina (QC) – AE
Larry Cross (LC) – Catalyst Paper
Elysha Gordon (EG) – Dept. of Fisheries and Oceans (by phone)
Joe Holmes (JH) – Western Forest Products
Andrew Olson (AO) – Tseshaht First Nation
Tom Robinson (TR) – AE
Dean Shiskowski (DS) – AE
Michal Simhon (MS) – AE (by phone)
Scott Smith (SS) – City of Port Alberni
Jana Tondu (JT) – AE / Summit Environmental
Ken Watson (KW) – City of Port Alberni
Brad West (BW) – McGill & Associates Eng.
Kirsten White (KW) – Ministry of Environment (MOE)

Distribution:

Those Present
James Arnott – Environment Canada
Jeanine Bond – Ducks Unlimited
Stephanie Bruvall – Ministry of Health
Bill Collette – AV Chamber of Commerce
Andy Daniel – Alberni-Clayoquot Regional District
Steve Tatoosh – Hupacasath First Nation
Phil Edgell – AVEA
Sheena Falconer – West Coast Aquatic
Hugh Hamilton (HH) – AE / Summit Environmental
Kim Hyatt – Dept. of Fisheries and Oceans
Baljeet Mann – MOE
Dave McCormick – Port Alberni Port Authority
Ashley Popovich – Catalyst Paper
Lisa Gallic – Tseshaht First Nation
Ivy Whitehorne – Ducks Unlimited

RECORD OF MEETING

CANADA'S BEST MANAGED COMPANIES

This Record of Meeting is considered to be complete and correct. Please advise the writer within one week of any errors or omissions, otherwise this Record of Meeting will be considered to be an accurate record of the discussions

Action By:	**Discussion:**
	1 INTRODUCTIONS
Info	Introductions were made around the table. The meeting was the third of the combined Technical Advisory Committee (TAC) and Public Advisory Committee (PAC), referred to in this case as the 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.
	2 BACKGROUND AND HISTORY – BRIEF OVERVIEW
Info	TR presented a brief overview of the discussions to-date and the objectives of this phase of the project. He highlighted the three alternative locations for effluent discharge that were originally identified and the two remaining: Somass River and the Alberni Inlet.
	3 OVERALL OBJECTIVES
Info	The immediate key project steps were noted to be as follows: • Screening of discharge alternatives • Further investigations as needed to inform screening and subsequent evaluation/decision making • Detailed evaluation and structured decision-making process • Select alternative location for discharge
	4 TODAY'S OBJECTIVE
Info	The specific objective of this meeting was stated as follows: *to identify potential 'show stoppers' to inform screening of discharge alternatives.*
Info	PowerPoint slides were presented throughout the discussion.

Action By:	Discussion:
	4.1 SOMASS RIVER DISCHARGE – WATER QUALITY SURVEYS
Info	JT presented the water quality survey results. The objective was to characterize river water quality upstream and downstream of the existing effluent channel across the daily tidal cycle to understand upstream effluent influences and current downstream effluent dilution.
Info	JT presented local hydrological information and noted that flows during the September sampling were higher than expected. AO noted that this was likely because water was released from the dam for the fisheries window.
Info	*[Post meeting note: LC has since provided this explanation: Catalyst had started the drawdown of their Great Central Lake to get the level down to winter operation levels. This is done so that the dam at Great Central Lake is not at risk of overflowing when the winter rains arrive. Some years the lake is drafted down throughout August to maintain a target river flow, but with the atypically wet August, less water than normal was used from the reservoir. The significant rainfall that occurred August 28-30 (total of 76 mm on Catalyst's rain gauge) meant that Catalyst had to start releasing water at a rate well above their minimum flow requirement starting in early September.]*
Info	JT described some of the complex flow interactions that were observed between the channels, the inlet and the river during the tidal cycle (confirmed through YSI measurements).
Info	DS asked about whether CSOs might be contributing to unexpected high chloride levels upstream in the river. KW stated that it is more likely there is salt water intrusion at the lagoon than at the pump stations.
Info	JT presented water quality data measured in the field and in samples sent to the lab. She presented average measurements for the following parameters: dissolved oxygen, total suspended solids, ammonia, total nitrogen, total phosphorus, dissolved phosphorus, and fecal coliforms. She also described the local aquatic ecology observed, in particular, algal growth.
Info	SS pointed out that the total phosphorus at the "Control" sampling point is above the 5 µg/L Provincial Objective. JT countered that it is just one sample and that the results for June and September differed.
Info	JT noted that the measured total phosphorus along the river transect illustrate the heterogeneous influence of the plume, which appears to 'hug' the bank during low tide.

Action By:	Discussion:
Info	Regarding the fecal coliform data, JT noted that it is important to remember potential external factors, such as birds (defecating) that could influence this data.
Info	JT presented the following conclusions regarding the water quality analysis: • Wastewater effluent does not impact upstream water quality. • Water quality downstream displays variability related to the tidal cycle. • Dilution capacity of the current discharge ranges between 10:1 and 67:1. • Available dilution capacity of the river discharge option, based on current water quality conditions, is highly variable at the edge of the IDZ.
	4.2 ALBERNI INLET DISCHARGE – SUMMARY OF PRIOR INVESTIGATIONS
Info	DS presented an overview of prior investigations done pertaining to industrial discharge into the Alberni Inlet, including a dye tracer test that was done. TR noted that the industrial (mill) discharge is about three times higher than the municipal wastewater effluent discharge flows.
	4.3 DISCHARGE SYSTEM CONCEPTS/FEASIBILITY
Info	JC presented three potential route options for the discharge, terminating at the following points: .1 Somass River .2 Alberni Inlet • Shallow terminus (3-4 m deep) • Deep terminus (> 10 m deep)
Info	JC noted that previous studies have shown the water temperature and salinity change drastically at a depth of 5-6 m, indicating that fresh water dominates the top of the water column. He noted that the water column profile doesn't just compress in shallow areas but rather it is truncated to correspond with the depth.
Info	JC stated that the upstream limit of direct tidal influence is thought to be about at the same point as the existing effluent discharge point. That is as far upstream as inlet (salt) water flows, but further upstream the river 'backs up'.
Info	JC noted that there appear to be 'dead zones' in the inlet with much less flushing on either side of the river jet.

Action By:	Discussion:
Info	JC described potential hazards in the inlet, including dead heads, which are expected to increase in number below the surface, and a designated anchorage area. SB noted that this is an emergency anchorage and could be relocated.
Info	SB noted that a new hydrographic chart is expected to be issued soon by Canadian Hydrographic Services and will more accurately represent the current situation.
Info	GC noted that there are some traditional use sites that have been identified near the industrial lagoon that will also be considered when developing the route.
Info	KW asked which Inlet option (shallow or deep) is environmentally better. JC noted that the pycnocline (density differential) shows the fresh water is moving out into the inlet and so would aid in dilution in the shallow zone. JC and DS noted that there would likely be an initial dilution 'boost' resulting from the buoyancy of the plume if deposited in the deeper layer.
Info	SB noted the new breakwater that has been constructed that was not there when the historical modeling and dye tracer work was done. As a result, the flow patterns have changed and there is a back-eddy off the breakwater. He mentioned that there is increased recreational use in the area near the breakwater and the Port Authority would prefer not to see an outfall terminate in that location.
Info	JC noted that from a constructability perspective, it would be best to avoid the fibre mat as the decomposing area is unstable and it is important not to disturb the gravel substrate in that location.
Info	JC noted that he would envision the construction as trenched, back-filled through the intertidal zone. Other considerations include that it is preferable, where possible, to maintain a downslope on the pipe.
Info	SB noted that the EIS done by Raven Coal is being revised and should be available soon.
Info	LC noted that an update (2010) to the fibre mat study is available.
KW	KW noted that the sampling results showing the extent of influence of saltwater mean that a long stretch of the river leading to the inlet would be defined as an 'estuary' under the Municipal Wastewater Regulation. This then leads to a required minimum 10 m depth for the discharge point. It is unclear whether the phosphorus objective will apply, KW to confirm by email.

Action By:	Discussion:
Info	SB confirmed that there are no navigational issues anticipated with respect to a new discharge pipe.
Info	AO noted that the Tseshaht have serious concerns about releasing toxic matter that has been shown to be present below the fibre mat. He also made reference to the recent EIS done by Raven Coal.
Info	KW noted that it is also important to consider terminus siting requirements that a 300 m distance be maintained from shellfish harvesting areas (even historical harvesting areas). EG responded that the DFO has no major concerns with respect to shellfish in the area. She also noted that Walter Hajen (also with Environment Canada) has done two rounds of modeling for the area with respect to enclosure boundaries. AO stated that he knows of no shellfish fisheries in the area, either current or historical. *[Post meeting note: JC spoke with Walter Hajen who said that Environment Canada has actually not done modeling work in that part of the inlet because there are no shellfish resources there.]*
Info	RA noted concerns about red-listed species (e.g. Oregon Ash) along the route shown.
KW	It was agreed that GC and AE staff would have a follow-up meeting with MoE personnel next week to further discuss regulatory issues. *[Post-meeting note: MOE staff were not available for such meeting, but additional comments on the latest work were provided by KW via email, which is appended to this ROM.]*

Prepared by:

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Project Manager

QC/TR/lp