Comox Valley REGIONAL DISTRICT

Minutes

Minutes of the meeting of the Sewer Extension South (SES) Liquid Waste Management Plan (LWMP) Addendum Joint Technical and Public Advisory Committee (TACPAC) held on September 21, 2022 in the CVRD Civic Room at 770 Harmston Avenue, Courtenay, and via Zoom conference commencing at 12:30 pm

PRESENT:

A. Habkirk, Chair & Facilitator	Facilitator
M. Rutten, General Manager of Engineering Services	CVRD
D. Monteith, Manager of Liquid Waste Planning	CVRD
V. Van Tongeren, Environmental Analyst	CVRD
C. Wile, Senior Manager of Strategic Initiatives	CVRD
A. Mullaly, General Manager of Planning and Development Services	CVRD
T. Trieu, Manager of Planning Services	CVRD
M. Briggs, Branch Assistant – Engineering Services	CVRD
M. Simhon	Associated Engineering
I. Snyman	WSP
M. Levin	WSP
C. Peters	WSP
C. Davidson, City of Courtenay	TAC
C. Marshall, City of Courtenay	TAC
S. Ashfield, Town of Comox	TAC
M. Kamenz, Town of Comox	TAC
G. Kosmider, Fisheries and Oceans Canada	TAC
N. Clements, Island Health	TAC
E. Derby, Island Health	TAC
M. Mamoser, Ministry of Environment and Climate Change Strategy	TAC
L. Johnson, Ministry of Health	TAC
I. Munro, Electoral Area A Alternate Director	PAC
M. Hewson, Association for Denman Island Marine Stewards	PAC
N. Prins, BC Shellfish Growers Association	PAC
M. Cowen, BC Shellfish Growers Association	PAC
C. Pierzchalski, Comox Valley Conservation Partnership	PAC
A. Gower, Comox Valley Chamber of Commerce	PAC
I. Heselgrave, School District No.71	PAC
M. Atkins, Underwater Harvesters Association	PAC
N. Prince, Craigdarroch Resident Representative	PAC
R. Steinke, Craigdarroch Resident Representative	PAC
T. Donkers, Royston Resident Representative	PAC
K. Newman, Royston Resident Representative	PAC
J. Elliott, Union Bay Resident Representative	PAC
R. Lymburner, Union Bay Resident Representative	PAC

Item	Description	Owner
1.1	**Call to Order and Territorial Acknowledgement** The meeting was called to order at 12:30 pm. A. Habkirk acknowledged that the committee is meeting on and the Sewer Extension South Project will be constructed and operated on the unceded traditional territory of the K'ómoks First Nation (K'ómoks).	**A. Habkirk**
1.2	**Welcome** D. Monteith welcomed the committee members to the CVRD office and first TACPAC meeting.	**D. Monteith**
1.3	**Introductions** The committee members introduced themselves to the committee. A. Habkirk introduced the topics to be discussed this meeting and set the goals for the day.	**A. Habkirk**
1.4	**Discussion Paper #1: LWMP objectives and purpose** I. Snyman explained the common acronyms for the project, as well as detailed WSP's involvement in the project and previous experience with LWMPs. Explained the objectives and purpose of the LWMP process. LWMP is a three-stage process for managing liquid waste. Stage 1 identifies existing conditions and community goals, and develops a wide range of options for managing liquid waste. Stage 2 involves a detailed evaluation of shortlisted options and selection of preferred option. Stage 3 includes further development of the selected option and final submittal of plan to the Ministry of Environment and Climate Change Strategy (MoE) for approval. LWMP is set up with three committees: the Steering Committee, Public Advisory Committee (PAC), and Technical Advisory Committee (TAC). The SES LWMP Addendum's steering committee is the Electoral Areas Service Committee (EASC). The PAC represents community and stakeholder interests. The TAC provides input on regulatory and technical requirements. Q: Is the Stage 1 and 2 LWMP currently completed, or just at Stage 1? A: The Comox Valley Sewer Service (CVSS) LWMP is being completed as a combined Stage 1 and 2 plan. The draft plan is currently out for review and approval before being submitted to Ministry of Environment and Climate Change Strategy (MoECCS). The SES LWMP will be added as an addendum to the Stage 2 and 3 CVSS LWMP. An update was provided on the CVSS LWMP status. The CVSS TACPAC looked at various options for pump stations, conveyance, treatment and resource recovery, and developed a short list of options before deciding upon a preferred solution for each. The Stage 1 and 2 LWMP is currently being reviewed by Kómoks and the CVSS	**I. Snyman**

	TACPAC. Stage 3 will follow after MoECCS review of the Stage 1 and 2 plan. An overview was provided for why the SES LWMP addendum is needed. In August 2022, the CVRD Board approved the expansion of the CVSS service boundary to include a portion of Electoral Area A and K'ómoks First Nation lands due to the need to protect Baynes Sound and support reconciliation. Sewer Extension South project development work will follow the LWMP process and be submitted as addendum to CVSS Stage 1 and 2 LWMP. Both processes will then move forward together with development of a combined Stage 3 LWMP. Some items are already included in CVSS LWMP so not required for the addendum, such as reclaimed water, combined overflows, wastewater treatment, stormwater management, and integrated resource recovery. A brief overview was given of what will be discussed at each meeting. Q: Has the identification of alternatives to the SES been excluded due to the LWMP being an addendum or are alternatives being considered? A: CVRD went through a previous LWMP process that identified long-listed and short-listed options. Will be building off previous work completed, focusing on the concept of a regional sewerage service, but will look at options for phasing, collection, etc. Q: Will this become an extension of the existing service rather than separate service in respect to taxes and user fees? A: Yes and no. The south region will be included in the regional service, but there will also be individual service areas for local collection works, with residents paying into both the local collection system service and regional service. Q: What is an example of a service area? A: Catchment areas will be shown in presentation, but roughly follow major neighbourhood boundaries.	
1.5	**Public Consultation – SES LWMP Addendum** C. Wile gave an overview of public consultation for the SES LWMP Addendum. CVRD follows the International Association of Public Participation's engagement spectrum to identify the level of involvement with the public. Focused on informing the community on next steps and project status, consulting residents for feedback on options and working with First Nations, and collaboration with stakeholders and partners. K'omoks First Nation is project partner. Province identifies roughly a dozen First Nations with land or marine territory in Royston, Union	**C. Wile**

	Bay, and Baynes Sound. CVRD has reached out about interest in project and how they'd like to be engaged. Public engagement will occur in four phases. Phase 1 is project initiation; phase 2 is phasing, collection system, and pump stations; phase 3 is development of draft addendum; and phase 4 is review/approval.	
1.6	**Discussion Paper #2: Summary of past work** M. Simhon gave an overview of previous work done for the 2014-2015 South Region Stage 1 and 2 LWMP, including Associated Engineering's involvement in the process. Previous work dates as far back as the 1970s, but focus will be on Associated Engineering's work done from 2014-2016. Identified legislation relevant to the LWMP process, including the Municipal Wastewater Regulation, Vancouver Island Phophorus In-Stream Objective, and Wastewater Systems Effluent Regulation. Noted that an Environmental Impact Study is done separate from the LWMP. The Stage 1 and 2 study was not completed. The South Region LWMP work included First Nation consultation, three open houses, and five meetings of a combined TACPAC. Associated Engineering worked with the South Region TACPAC to develop raw elements of what's important to the members, screened options, developed them into more comprehensive scenarios, and then compared the options. Nine discharge options were developed, and then reviewed during TACAC Meeting #3 to identify obstacles, concerns, and benefits. Narrowed down to four: discharge to Baynes Sound, discharge to Strait of Georgia, treatment in south region and discharge to Lazo outfall, and discharge to sub-surface ground. Connection to existing CVSS system initially eliminated since it involved forcemain across estuary. Discharge to Trent River/Washer Creek, discharge to ground (both single and multiple locations, and management and improvement of existing on-site systems were ruled out. Evaluations compared environmental, economic (capital costs and life cycle costs), and social (truck traffic for sludge) factors, as well as risks (items that did not fit other categories but could impact preferred solution). Developed multi-criteria approach to quantify options and apply a scenario score. First looked at results of environmental, economic, and social factors without risk, with the options ranked from highest to lowest as Baynes Sound, ground discharge, Cape Lazo, and Strait of Georgia. The TACPAC decided to remove the social aspect and add risk, with the options now ranked from highest to lowest as Cape Lazo, Baynes Sound, and Strait of Georgia. Cape Lazo had lowest risk due to less regulatory requirements due to existing outfall system,	**M. Simhon & D. Monteith**

	as well as lower risk to shellfish and other unknown factors. Cape Lazo put forth as preferred option. LWMP process paused as referendum was held in 2016 on preferred option. The referendum failed and staff then looked to collaborate with the Sewage Commission. Q: How many trucks per day were expected to be leaving the treatment facility? Comox Valley Water Pollution Control Centre (CVWPCC) likely only 1-2 trucks per day. A: TACPAC felt looking at social factors wasn't worth considering, so did not investigate in depth. 5-6 trucks mentioned only as an example; actual number not certain. Q: What other social factors were considered besides truck traffic? A: At the time, only truck traffic was considered. D. Monteith gave an update on what has changed since the 2016 referendum. Environmental issues in south region still not resolved. Sewage Commission supported request to investigate impacts of extending service to Electoral Area A in 2018. Sewage Commission agreed to accept wastewater from Electoral Area A in 2020. Initial grant in 2020 was not successful, but CVRD submitted second grant in 2022 with K'ómoks as partner. Identified the various reasons for why a sewer service is needed, including Baynes Sound water quality, aging septic system (70% over 25 years old), high density of homes (some areas similar to municipalities), poor soil conditions, environmental impacts, proposed growth in areas (Union Bay as designated settlement area), to support community services, and to support reconciliation with K'ómoks. Provided background information on the CVRD-K'ómoks Community Benefit Agreement. Commits both parties to work together to implement sewer services south. Provided background information on the CVSS. Treats wastewater from Courtenay, Comox, K'ómoks IR#1, and Department of National Defence at the CVWPCC, and discharges to Cape Lazo. Benefits to connecting to existing system includes improving efficiencies (no need for independent treatment plant), shared costs, reduced regulatory requirements, protecting Baynes Sound by using existing outfall, and providing access to high quality treatment. CVSS already meets regulatory requirements, has secondary treatment and will add UV treatment, and has operators available 24/7. Septic systems require regular maintenance and discharges to ground. Poorly maintained systems may pose environmental and health risk, and older systems predate provincial regulations. Replacement may cost as much as	

	$15,000-$50,000+ depending on conditions of lot. CVRD looking at additional regulatory tools for addressing septic issues. Gave an overview of the project, including a rough map of the potential service areas and forcemains. Q: Where does the current forcemain go? A: To West Courtenay. Q: Why was the 2020 grant unsuccessful? A: There was a lot of competition for a small amount of money. Other projects likely scored higher. Q: What is the anticipated chance of success for the 2022 grant? A: Currently uncertain, but have been communicating regularly with the Province and other agencies. Comment: Costs were primary reason for failed referendum and should be kept down. Existing residents shouldn't be paying for new system designed for 2060 that will service new areas. Should be cost offset, especially if Union Bay Estates (UBE) does not provide expandable treatment system as part of Master Development Agreement (MDA). Staff have heard similar concerns from residents and are taking them into consideration. Costs will be reviewed at later meeting. Comment: Important to show what costs will be if we don't have sewer. Q: What happens if we don't get grant? A: Project will be expensive, so senior government funding will be important however, LWMP is needed regardless of current grant and developing plan will prove key to any future grant opportunities. Q: How much is grant request and what percent will be covered? A: $27 million. Unsure what overall percentage will be until costs determined. Project partners will also provide contributions. Q: Why step away from referendum? A: Staff identified many benefits to LWMP process over referendum. Gives opportunity to take in public feedback and consultation and involve them in the process. Q: Has there been investigative work into reusing water? A: CVSS LWMP looked at options for water reuse. Q: Any more work done on looking at separate community treatment facilities?	

	A: Significant benefit to not develop standalone treatment, including reduced costs. Proposal to develop separate treatment plant failed at referendum. Q: What proportion of waterfront properties on Baynes Sound included? A: Unsure of percentage, but properties shown in orange on map included. Discussion on phasing covered later in process. Q: Any discussion of extending to Fanny Bay? A: Not at the moment. Union Bay may cover the maximum extent that the wastewater can be pumped without causing additional technical or operational issues. Q: Has UBE confirmed partnership on the project? A: The MDA commits them to providing sewer amenities to the community. Q: UBE already has lots up for sale. Will they have septic systems? A: Work being done by UBE is anticipatory. MDA still requires lots to be connected to sewer system. Q: Would tertiary treatment improve the options of what can be done with the wastewater? A: Will discuss later in meeting when discussing CVSS LWMP. Q: For newly developed areas with good septic systems, how does the LWMP anticipate including areas that are currently excluded? A: Will be determined by land-use policies, zoning and public/environmental health considerations. It's inefficient to service larger rural lots.	
1.7	**Break** The committee took a 15-minute break at 2:15pm.	
1.8	**Discussion Paper #3: South wastewater flows and loads, treatment objectives, Comox Valley Sewer Service LWMP** I. Snyman provided background on the south region sewer extension proposal. Wastewater will be conveyed by a series of pump stations into CVSS, starting in Union Bay. Issue with onsite septic systems needs to be addressed and shouldn't keep being deferred. WSP looked at high, medium, low growth scenarios over 50 years (2020-2070). Provided an overview of the proposed catchment areas based on topography, slopes and other factors. Explained the various flows that are considered such as average dry weather flow, peak dry weather flow, inflow and infiltration (I&I), and	**I. Snyman**

	peak wet weather flow. The CVSS does not have a combined stormwater and wastewater system, but infiltration may occur. Q: Is stormwater included in the process? A: Not included and will not have combined storm/sanitary system. Q: Is there a formal stormwater system? A: Rural areas rely on road ditching and drainage on individual properties. Q: Do we have varying I&I numbers for age of the system? I&I rates seem high for brand new system. A: Being conservative since there isn't any data available yet. Gave conservative estimates of various flows for proposed catchment areas for 2025 and 2070. Q: Has pipe sizing and flows been considered for staging of different service areas and the cost implications? Would we be required to use a smaller pipe if only servicing part of the area or can we install a larger pipe in anticipation of higher flows when phasing is completed? A: Can only pump a certain amount of head with raw sewage, and the longer the pipe the greater the loss of head. 0.75 m/s flow required to keep solids and liquids together. Need to make sure velocity is high enough to ensure this, but not too high or will experience loss of head. Slower flows may also lead to increased odours. Will need to phase to accommodate. Q: Estimated I&I flows for 2025 and 2070 seem similar. Has climate change been accounted for in estimates? A: Wastewater system is meant to be separate from stormwater system, so ideally weather events should have minimal impact on sewer system. Impacts from climate change will only occur due to infiltration. Secondary process is based on organic load, quantified based on five-day biochemical oxygen demand (BOD), total suspected solids (TSS), total kjeldahl nitrogen (TKN). CVSS LWMP looked at average contribution of BOD by measuring it every day for a year and using those values to predict future values. Used similar calculations to estimate projections for south region. CVSS LWMP included flow estimates for south region. Updated population projections are slightly higher, but minimal impact on system. <11% difference in 2040 and <1.2% difference for whole system. Wastewater treatment, TSS and CBOD5 averages 5-15mg/L, which shows that the CVWPCC is operating very efficiently.	

CVSS LWMP looked at treatment options. Stage 1 included high-level discussion of four options, and Stage 2 involved a high-level option assessment. Recommended maintaining current level of treatment with addition of UV treatment. SES flows and loads do not impact recommendation. UV treatment is physical process with no byproduct and effective at killing pathogens.

CVSS TACPAC thoroughly investigated UV treatment and considered it a strong recommendation. CVWPCC is currently conventional activated sludge plant. Cost of tertiary treatment considered high for small improvement so TACPAC felt existing secondary treatment was sufficient with potential for future tertiary treatment if needed.

Q: Are pharmaceuticals and microplastics currently measured at the CVWPCC?
A: Not at the moment, and is not currently being looked into by staff.

Noted that tertiary treatment and phosphorus removal typically used in inland treatment due to discharging to freshwater. Less of a concern for marine discharge.

Q: Plant in Edmonton met requirements but was warned that regulatory requirements may change in 10 years. Will we account for potential increased treatment requirements?
A: CVWPCC is currently working efficiently and there is space to expand if improved treatment is needed.

Q: Requested clarification on bypassing the plant. Current plant exceeds flow limits on permit, so can it accept south flows?
A: Everything will go through whole treatment process. Will seek revision to operational certificate if project goes forward to accommodate increased flows.

Staff are developing site master plan for CVWPCC. Looking at future plant expansion, options, placing of new infrastructure and when they will be required. Planning for 50-year horizon. Looking to maximize use of existing system and how to handle solids. Noted that treatment is outside scope of SES LWMP.

Q: Existing plant is somewhat configured to do BNR (Biological Nutrient Removal), but has there been thought to do BNR at plant?
A: BNR is biological nutrient removal process that removes nitrates and ammonia. Staff have not looked at modifying aeration basins to accommodate BNR.

Q: Has the anoxic zone been piped for return flow? Does that infrastructure exist already or does it have to be modified?
A: Unsure if currently is, but was at one point.

	Q: Is plant ready for stricter MoE regulations? A: Not aware of any upcoming changes, but have accommodated for future upgrades. Would be more of a challenge if there was limited space for expansion at the plant, which is not the case.	
1.9	**TAC/PAC Committee Process** A. Habkirk gave an overview of how the TAC and PAC will function, referencing the draft Terms of Reference (ToR). The TAC and PAC will serve as a joint committee unless otherwise needed. Decisions to be made by consensus. The TAC will focus on needs (regulatory requirements, environmental protection, engineering standards), while the PAC will focus on wants (community aspirations, capacity aesthetic, non-regulated quality, other benefits). Jointly decide on ideal project and then confront constraints (funding, timing, operational complexity, geography, geology) to determine the recommended project. TACPAC decisions will be focused on conveyance (Hwy 19A forcemain and pump stations) and collection system (type/configuration, phasing). Treatment is not included. Staff put forward the TAC and PAC ToR for adoption, and requested any recommendations or changes. Gave an overview of the code of conduct for TAC and PAC members. MOTION: Adopt the Technical Advisory Committee Terms of Reference – M. Mamoser SECONDED: E. Derby CARRIED UNANIMOUSLY MOTION: Adopt the Public Advisory Committee Terms of Reference – K. Newman SECONDED: I. Munro CARRIED UNANIMOUSLY The committee requested that the list of members be updated before adoption. Q: The ToR references electing a chair. How is that done? Is it done this meeting? A: Will leave to the committee to decide if there should be joint chair or separate for TAC or PAC. Can elect one chair for now and elect second if separate meetings required. A. Gower put forth his name as chair. Q: What is the purpose of the chair?	**A. Habkirk**

	A: The chair may be required to present to or communicate with the steering committee about the TACPAC's discussions and decisions. MOTION: To nominate A. Gower as chair of the Sewer Extension South Liquid Waste Management Plan Addendum Joint Technical and Public Advisory Committee – I. Munro SECONDED: R. Lymburner CARRIED UNANIMOUSLY	
1.10	**Preview of Meeting #2** A. Habkirk gave a summary of what will be covered at the next TACPAC meeting. Q: Union Bay residents have heard rumours of UBE proposing discharge to Washer Creek. Is this part of this project? A: This project is only considering conveyance to the CVWPCC. Q: Can the CVRD set specific wastewater quality requirements in an area after the LWMP is adopted? A: The MoECCS requires that permit applications must meet provincial regulations as well as requirements of any adopted LWMP in the affected areas. Q: How will information and agendas be shared with the committee? A: Agendas will be provided a week before each meeting, and the presentation will be shared with the committee.	**A. Habkirk**
1.11	**Round table discussion** Q: What is the expected timeline for when we can expect sewer in the south? A: Will depend on outcome of this LWMP process. Combined Stage 3 LWMP will follow. Also dependent on grant outcome. Still a few years away. Q: How long do Stage 3 LWMPs take? A: Likely a year to develop and 6-8 months to review by MoECCS. Plan must be endorsed by MoECCS. Q: Can properties opt out? A: Expensive project with small number of participants, so people opting out increases costs for everyone else. Currently not considering opting out option. Q: Is there a better map of areas included? A: Will be available for next meeting. Q: Are the boundaries set or changeable? A: Nothing is finalized and will take into consideration committee input.	**A. Habkirk**

	Q: Do we have bullet points of drivers for project, such as failing systems and growth/development? A: Environmental concerns and water quality are primary issues since this has been an ongoing issue since the 70s. Reconciliation with K'ómoks is also key priority. Comment: No one opposes protecting Baynes Sound, but this process is very much development driven, so the committee should consider that going forward. Q: During the 2015-2016 process, were there any other environmental concerns besides shellfish? A: Shellfish were considered a risk factor rather than environmental concern. Looked at greenhouse gas emission and carbon footprint of plant. Also included pharmaceuticals and other health factors. Q: Do we know the contributions of the project partners (since it will impact resident contribution)? A: Staff are still working with partners to determine contributions. More information will be shared at a future meeting during the discussion on costs.	
1.12	**Adjournment** The meeting adjourned at 4:07pm.	**A. Habkirk**

GENERAL:
The next SES LWMP Addendum Joint PACTAC meeting will be held on November 23, 2022 commencing at 9:00 am in the CVRD Civic Room at 770 Harmston Avenue, Courtenay, and via Zoom conference.