



**TECHNICAL AND COMMUNITY ADVISORY COMMITTEE
CORE AREA WASTEWATER TREATMENT
Meeting Minutes**

Thursday, March 14, 2024

1:00 pm

Online only (MS Teams)

PRESENT: B. Donald, C. Valeo, D. Kobayashi (Acting Chair), D. Monsour, G. Gillespie, I. Leung, J. Andrews, J. Clary, J. Paul, K. Wilson, L. Hatch, M. Engelsjord, S. Rennick, W. Pugh

STAFF: D. Green, G. Harris, L. Nickerson (Recorder), P. Kickham, T. Urquhart

GUESTS: D. Liddy, K. Hamilton, R. Beise

REGRETS: C. Counce, C. Coleman (Chair), C. Remington, J. Roe

Electronic Participation Only

Acting Chair Kobayashi called the meeting to order at 1:01 pm.

1. Territorial Acknowledgement

Acting Chair Kobayashi provided a Territorial Acknowledgement.

2. Approval of Agenda

Agenda for the [March 14, 2024](#) Technical and Community Advisory Committee meeting:

**MOVED by G. Gillispie and SECONDED by W. Pugh
That the agenda be approved as circulated.
CARRIED**

3. Adoption of Minutes of February 13, 2024

Minutes from the [February 13, 2024](#) Technical and Community Advisory Committee meeting.

**MOVED by G. Gillispie and SECONDED by W. Pugh
That the minutes of the February 13, 2024 Technical and Community
Advisory Committee be adopted as circulated.
CARRIED**

4. Chair's Remarks

Welcome to S. Rennick representing Oak Bay Engineering & Public Works.

5. Biosolids Management Options Discussion - P. Kickham, CRD

- a. Thermal, Advanced Thermal and Land Application**
- b. Portfolio Approach**

P. Kickham reviewed the available beneficial use options and reiterated the technical consultant's recommendation to develop a portfolio of several options to ensure operational



resiliency and redundancy to the group (see [Attachment A](#)). The group asked questions and P. Kickham (CRD), G. Harris (CRD) and D. Liddy (GHD) provided answers.

6. Biosolids Management Options Ranking – D. Green, CRD

The TCAC members participated in an anonymous online voting survey to:

- indicate their level of support for each of the seven biosolids management options, and
- provide comments on each option.

The members then discussed the averaged option scores and all comments provided.

CRD staff will collate these survey results with the questions and comments made by the TCAC to establish the portfolio of options that will be presented to the CRD Board in the draft Long-Term Biosolids Management Plan.

7. Update on Public Engagement – K. Hamilton, Tavola Strategy Group

K. Hamilton gave an update on the biosolids public consultation process. She informed the group that the public online survey on the CRD [Get Involved](#) website was open for approximately two months and closed on March 6, 2024. During that time, the [Get Involved](#) website had about 3,000 visitors including 580 engaged visitors who either completed the survey or submitted questions to the project team. 569 visitors completed this survey and 13 questions were submitted with answers being posted on the website. Almost all engaged visitors viewed the [FAQ page](#), which was the most visited page on the site. Over 100 people downloaded documents and over 200 documents were downloaded. The most popular downloaded document was the [GHD technical report](#).

A representative survey (in parallel with the voluntary survey on the [Get Involved](#) website) was done by Ipsos Reid between March 1-11, 2024. 516 residents participated in this survey with representation from all municipalities and associated demographics in the Capital Region.

A Virtual Open House on Harnessing the Benefits of Biosolids was held on February 20, 2024, facilitated by Jim Beatty, Communications Consultant. There were 90 RSVP's with 59 active participants and approximately 150 questions were asked and answered by the project team. The Open House was over two hours and the recording can be viewed [here](#).

Staff will continue to respond to questions received through the [Get Involved](#) website and biosolids@crd.bc.ca email. A thorough analysis and results from both surveys, the open house and questions asked will be provided in a "What We Heard" report that will be made available to the TCAC, CRD Board and the public.

8. Other Business

There was no other business.

9. Next meeting:

The next TCAC meeting will be scheduled in April – date to be determined.



Making a difference...together

10. Closing Comments – G. Harris

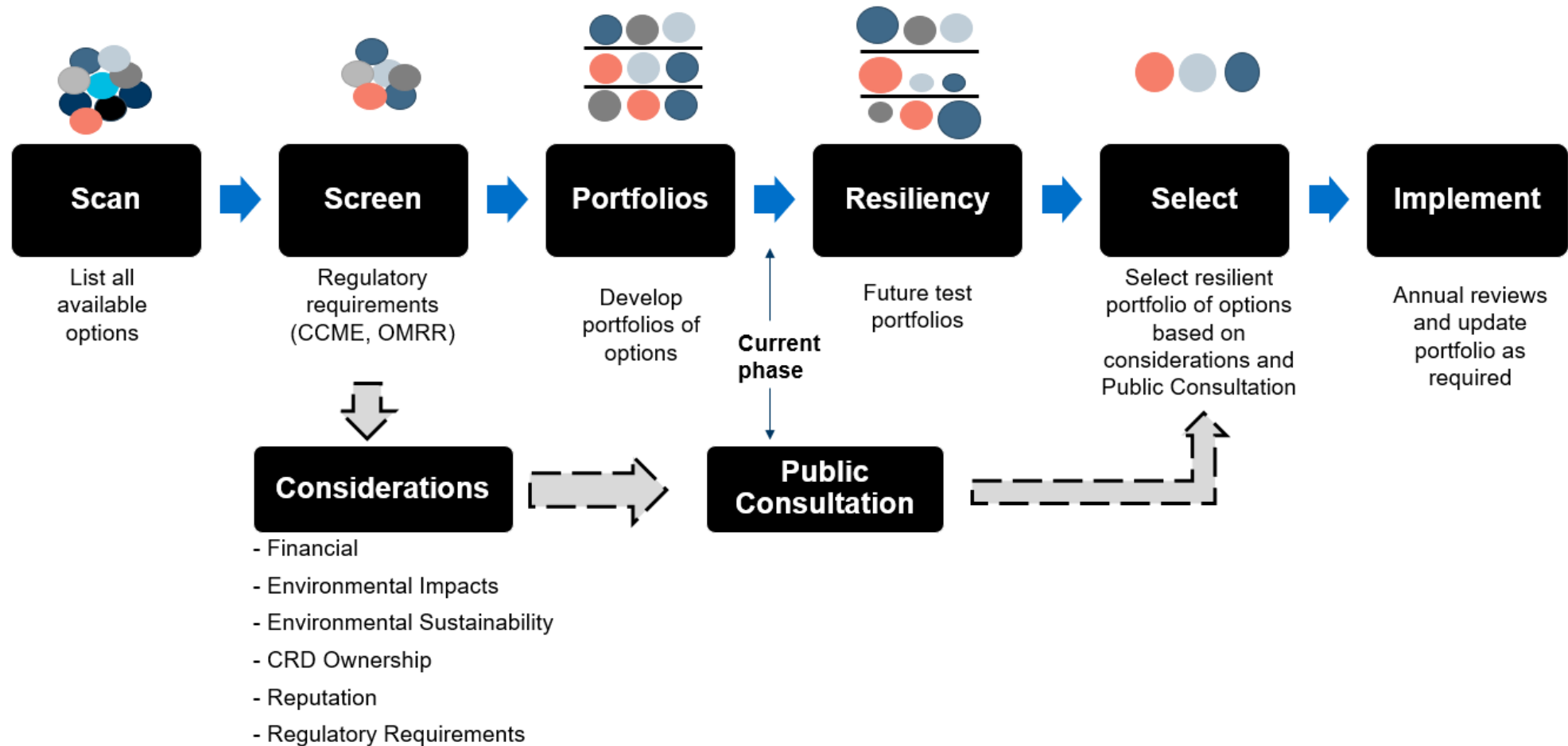
CRD staff will draft the Long-Term Biosolids Management Plan (the “Plan”) to be presented at the April 10, 2024 CRD Board meeting with a recommendation that the Plan be referred back to the TCAC for review and discussion. The Plan will be posted for public consideration with the “What We Heard” report from Tavola Strategy Group and information regarding First Nations consultation. A final package compiling information from all sources will then be provided to the CRD Board for discussion at their May 8, 2024 meeting where the Board will decide to adopt or amend the Plan and provide CRD staff with direction to meet the provincial obligations under the Ministry of Environment and Climate Change Strategy.

11. Adjournment



The meeting was adjourned at 2:36 pm.

**MOVED by G. Gillispie and SECONDED by W. Pugh
That the Technical and Community Advisory Committee meeting be adjourned.
CARRIED**

Risks of interruption may be mitigated through **redundancy of options**, achieved by **portfolios** composed of **multiple contingent options**.



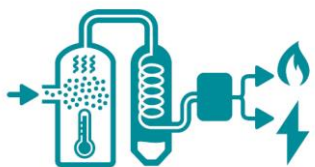
Considerations

	Thermal Processing 	Land Application 
Financial	<ul style="list-style-type: none"> – High initial capital cost, low economies of scale – Potential for revenue to partially offset processing costs 	<ul style="list-style-type: none"> – Comparatively low capital cost. Additional investment into storage/transport infrastructure may be required. – No potential for revenue generation
Environmental Impacts	<ul style="list-style-type: none"> – Facility will have nuisance emission abatement systems (odour, noise, air/dust) 	<ul style="list-style-type: none"> – Potential for nuisance odour, noise, air/dust emissions at application sites (far from population centers)
Environmental Sustainability	<ul style="list-style-type: none"> – Potential to recover energy from waste product – GHG emissions from transport (off-site combustion) 	<ul style="list-style-type: none"> – Reduction of need for synthetic fertilizer – Potential for soil/groundwater impacts if OMRR not followed – GHG emissions from transport
Experience and Reputational	<ul style="list-style-type: none"> – Advanced thermal technology is emerging – No advanced thermal plants using biosolids feedstock operating in North America 	<ul style="list-style-type: none"> – Demonstrated commercial implementation
CRD Ownership	<ul style="list-style-type: none"> – CRD would own advanced thermal facility or send biosolids to third-party for off-site combustion 	<ul style="list-style-type: none"> – Biosolids would be sent to third-parties or be bagged by the CRD and sold commercially
Regulatory	<ul style="list-style-type: none"> – Facility permits required 	<ul style="list-style-type: none"> – Land application plan required per OMRR
Potential Risks of Interruption	<ul style="list-style-type: none"> – Multiple years required to implement advanced thermal facility – Unknown market for biochar – Unscheduled shutdowns for operational maintenance/commissioning – Limited commercially operational biosolids thermal facilities in North America 	<ul style="list-style-type: none"> – Fluctuations in need for biosolids (typically project-based, seasonal) – Unclear if market exists for bagged biosolids product

Available Options

Available options can be broadly categorized as various forms of thermal processing or land application.

Pyrolysis or Gasification



- Heating with little to no oxygen
- 300-800 °C (pyrolysis)
- 600-1000 °C (gasification)
- Produces syngas, biochar, steam, ash
- \$500 - \$4,500/tonne

Incineration or Combustion



- Heating with excess oxygen
- 800-1200 °C cement kilns, pulp mills
- Converts to energy (steam, electricity, heat)
- >\$500/tonne

Forest Fertilization



- Supplementing nutrients in forest soil
- >\$400/tonne

Industrial Land Reclamation



- Reclaiming barren soils damaged from mining
- >\$250/tonne

Wholesale Fertilizer for Landscaping



- Blending with soil, compost, or wood chips
- Wholesale distribution (e.g., golf courses)
- >\$500/tonne

Bagged Fertilizer for Residential Use



- Blending with soil, compost, or wood chips
- Residential distribution (e.g., gardens)
- >\$500/tonne

Fertilizer for Agriculture



- Fertilizer for crops
- >\$500/tonne

Questions?

