



**REPORT TO INTEGRATED RESOURCE MANAGEMENT ADVISORY COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 6, 2017**

SUBJECT **Integrated Resource Management Technology Gap Analysis – Biosolids
Jurisdictional Review**

ISSUE

To present the Integrated Resource Management (IRM) Technology Gap Analysis and the Biosolids Jurisdictional Review.

BACKGROUND

The IRM Request for Expressions of Interest (RFEOI) process resulted in 10 expressions of interest submissions representing a wide variety of technologies. The Capital Regional District Board recommended the completion of a Technology Gap Analysis to ensure comprehensive consideration of available IRM technology, presented in Appendix A.

An outstanding condition of the Province's approval of the Core Liquid Waste Management Plan Amendment No. 11, and associated provincial and federal funding of the core area sewage project, is a Jurisdictional Biosolids Review to present examples of how other jurisdictions produce and beneficially use biosolids. The review was completed by Environmental Dynamics Inc. (Appendix B) and reviewed by the Province to confirm it meets their requirements. Information was compiled for 15 jurisdictions with established biosolids programs, with the intent of presenting a diversity of Class A biosolids processing, end uses and marketing strategies in North America.

ALTERNATIVES

Alternative 1

That the Integrated Resource Management Advisory Committee recommend to the Environmental Services Committee:

1. That the Integrated Resource Management Technology Gap Analysis and the Biosolids Jurisdictional Review be received for information;
2. That the Biosolids Jurisdictional Review be submitted to the Minister of Environment and Climate Strategy; and
3. That these reports be forwarded to the Saanich Peninsula and Gulf Islands Wastewater Commissions and the District of Sooke for information.

Alternative 2

That staff be directed to bring back more information to the committee.

IMPLICATIONS

A number of technologies were not represented in the RFEOI process. The table below summarizes the findings of this gap analysis.

Summary of Technology Gap Analysis Findings

Technology Classification	Technology	Represented in the RFEOI Responses (by Company Name)	Not Represented in the RFEOI Responses
Mechanical	Mechanical Sorting	Anaergia, APD, ECS, ICC Group, Pivotal, Redwave, Veolia, Walker, WTT	
	Autoclave/Steam Classification		Not represented
Biological	Composting	ECS, Redwave, Veolia, Walker, WTT	
	Anaerobic Digestion Dry or High solids	Anaergia, Redwave, WTT	
	Anaerobic Digestion using wet (low solids) or WWTP	Veolia, Walker	
Thermal	Gasification	Pivotal, ICC Group	Not all gasification technologies represented
	Electro-Thermal Gasification	APD	
	Pyrolysis		Not represented
	Waste to Fuel (Fischer-Tropsch)		Not represented
	Combustion (WTE, EFW, Mass Burn)		Not represented
	Refuse Derived Fuel (also pelleting or briquetting)	Anaergia, ICC, Pivotal, Redwave, WTT	
Chemical	Thermal and Chemical Hydrolysis		Not represented
	Catalytic and Thermal Depolymerization		Not represented
Other	Nutrient Recovery	Ostara	

The Jurisdictional Review was compiled for 15 jurisdictions with established biosolids programs. Jurisdictions were selected with the intent to present a diversity of Class A biosolids product processing types, end uses, and marketing strategies used in North America. The review highlights that biosolids are processed, reused, or disposed of in a variety of ways worldwide. The most prevalent biosolids management option in many regions of the world, including North America, is land application.

CONCLUSION

Information from the IRM Technology Gap Analysis and the Biosolids Jurisdictional Review will provide valuable background information as the CRD moves forward with the evaluation and potential development of an Advanced Integrated Resource Management solution.

RECOMMENDATION

That the Integrated Resource Management Advisory Committee recommend to the Environmental Services Committee:

1. That the Integrated Resource Management Technology Gap Analysis and the Biosolids Jurisdictional Review be received for information;
2. That the Biosolids Jurisdictional Review be submitted to the Minister of Environment and Climate Strategy; and
3. That these reports be forwarded to the Saanich Peninsula and Gulf Islands Wastewater Commissions and the District of Sooke for information.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
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Concurrence:	Larisa Hutcheson, P.Eng., Acting Chief Administrative Officer

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Attachments: Appendix A – IRM Technology Gap Analysis – HDR
Appendix B – Beneficial Reuse of Biosolids – Jurisdictional Review - EDI