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MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
Notice of Meeting on **Tuesday, September 12, 2017 at 9:30 a.m.**
Main Conference Room, 479 Island Highway, Victoria, BC

Kathy Heslop (Chair)	David Reed	Jim Petrie	Joe Gill
Director Dave Howe	Courtenay Rodash	Alex Wilson	

AGENDA

1. Approval of Agenda
2. Adoption of Minutes of July 11, 2017
3. Motion to Close the Meeting
That the Magic Lake Estates Water and Sewer Committee close the meeting in accordance with the Community Charter, Part 4, Division 3, 90(1)(g) litigation or potential litigation affecting the municipality.
4. Water Update (verbal report with handout)
5. Wastewater Update (verbal report with handout)
6. Operations Report (verbal report with handout)
7. Advanced Integrated Resource Management – Next Steps (information report)
8. Correspondence
9. New Business
10. Adjournment

To ensure quorum, advise Lorrie Siemens 250.360.3087 or lsiemens@crd.bc.ca if you cannot attend.



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**Minutes of a Meeting of the Magic Lake Estates Water and Sewer Committee
Held Tuesday, July 11, 2017 in the Main Conference Room, 479 Island Highway, Victoria,
BC**

PRESENT: **Committee Members:** K. Heslop (Chair), C. Rodash, A. Wilson, J. Petrie
 Staff: M. McCrank, Senior Manager, Infrastructure Operations, I. Jesney, Senior
 Manager, Infrastructure Engineering, M. Cowley, Manager, Wastewater
 Engineering and Planning, L. Siemens (recorder)
ABSENT: Director D. Howe, J. Gill, D. Reed

The meeting was called to order at 9:30 a.m.

1. Approval of Agenda

MOVED by C. Rodash, **SECONDED** by A. Wilson,
That the agenda be approved as distributed.

CARRIED

2. Adoption of Minutes of June 13, 2017

MOVED by C. Rodash, **SECONDED** by A. Wilson,
That the minutes of June 13, 2017 be adopted as previously distributed.

CARRIED

3. Motion to Close the Meeting

MOVED by A. Wilson, **SECONDED** by C. Rodash,
That the Magic Lake Estates Water and Sewer Committee close the meeting in
accordance with the Community Charter, Part 4, Division 3, 90.1 (e) *the acquisition,
disposition or expropriation of land or improvements, if the council considers that
disclosure could reasonably be expected to harm the interests of the municipality.*

CARRIED

The Magic Lake Estates Water and Sewer Committee closed the meeting at 9:33 a.m. and
resumed in open session at 9:41 a.m.

4. Water Update

I. Jesney presented a verbal report and provided a handout that will be included as part
of the agenda package.

5. Wastewater Update

M. Cowley presented a verbal report, a handout and an information report titled *Condition
Assessment of Schooner Wastewater Treatment Aeration Tank.*

MOVED by J. Petrie, **SECONDED** by C. Rodash,
That the Magic Lake Estates Water and Sewer Committee receive the report for
information.

CARRIED

The verbal report handout and the information report will be included as part of the agenda
package.

6. Operations Report

M. McCrank presented a verbal report and provided a handout that will be included as part
of the agenda package.

7. Correspondence

There was no correspondence.

8. New Business

Details of the upcoming Annual General Meeting on August 19, 2017 were discussed.

9. Adjournment

MOVED by C. Rodash, **SECONDED** by A. Wilson,
That the meeting be adjourned at 10:20 a.m.

CARRIED



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September 12, 2017

File: 0360-20
Magic Lake Estates Water and Sewer Committee

Magic Lake Estates Water Service

Magic Lake North Dam (Saddle Dam) License Agreements:

- The purpose of the license is to enable CRD to access, operate and maintain the saddle dam. The new landowner at 3804 Pirates Road has executed an agreement with the CRD.

Magic Lake Dam Safety Upgrade (Siphon):

- Work was undertaken by CRD Operations staff in the summer of 2017 by installing the valve and planning for the rip-rap installation after the high water demand period.

Signal Hill, Schooner and Capstan Way PRV's:

- Recent Progress – due to construction cost estimates, this issue will be brought forward to the budget meeting.

Chemical (ISOPAC) Storage and Handling:

- Recent Progress – options for chemical storage have been identified with the assistance of an equipment supplier.

Prepared by: Stephen Henderson and Dale Puskas.



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File: 0360-20

Magic Lake Estates Water and Sewer Committee

September 12, 2017

MAGIC LAKE ESTATES WASTEWATER

Wastewater Infrastructure Projects – Phase 1 Update

Sewer Pipe Replacement – Buck Lake & Privateers Road

- Sent letters to residents regarding the project and test holes to confirm ground conditions.
- Retained geotechnical consultant to assess the ground conditions.
- Retained contractor to dig the test holes (tentatively planning for last week in Sept).

Inflow & Infiltration Program

- The contractor is planning to commence with the cleaning and CCTV and manhole (MH) inspections of the entire collection system in October.
- Notification of the cleaning/inspections work will be sent out with the next quarterly bill.
- After the inspection work is complete, a report will be prepared summarizing the pipe condition and priority repairs.

Wastewater Projects - 2017 Capital Plan

Schooner Outfall Protection

- A consultant has completed the inspection and prepared a draft report. Initial findings indicate greater damage to the concrete encasement than originally thought. The consultant's estimate to complete repair is higher than the \$30,000 budget.
- The repair must be completed this fall to prevent damage to the outfall during the winter.
- A local contractor has been retained to complete the repair on a time & material basis. Work is scheduled to start this week.
- Should the final cost exceed the \$30,000 budget, it is recommended that the additional cost be funded from the Capital Reserve Fund.

Phase 2 Wastewater Infrastructure Upgrades – Public Consultation

- Starting to evaluate the required upgrades and prepare a needs assessment memo. Conceptual cost estimates will be prepared for the recommended upgrades.
- An open house will be scheduled for early 2018.

Schooner and Cannon Outfall Inspections

- The outfall inspections were completed on June 7, 2017. The consultant's report indicated that the outfalls are operating as intended, but will require some general maintenance work in the next 5 years and upgraded signage to meet Transport Canada guidelines.
- The next inspection will be in 5 years (2022).

Report Prepared by: Malcolm Cowley and Dale Puskas



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September 12, 2017

File: 0360-20
Magic Lake Estates Water and Sewer Committee

Magic Lake Estates Water and Sewer Committee

OPERATIONS REPORT

Water Operations Highlights:

- Emergency response to repair the magic lake intake. Divers found the intake assembly to be lying on the lake bed as a result of a broken cable used to support the underwater structure.
- Trouble shooting and repairs undertaken for a failed air saturator system at the water treatment plant.

Wastewater Operations Highlights:

- Operating Permit Regulatory Non-compliance reporting for June/July/August 2017:

Facility	# of Reports Issued for July/Aug	Total # of Reports Issued 2017	Cause
Schooner WWTP	0	11	UV failure (effluent disinfection system) as a result of power outages (typically).
Schooner Pump Station	0	1	Occurred in February during an extended power system outage. Raw sewage discharged into the marine environment.
Cannon WWTP	0	17	Exceeding maximum daily flows due to storm water entering through I&I.

Capital Improvement work:

- Magic Lake Syphon improvements underway. Work includes the installation of a valve and other appurtenances. Completion of the installation is anticipated by the end of September with commissioning to follow.

Prepared by: Dan Robson and Matt McCrank, Integrated Water Services

**REPORT TO INTEGRATED RESOURCE MANAGEMENT ADVISORY COMMITTEE
MEETING OF WEDNESDAY, JUNE 28, 2017**

SUBJECT **Advanced Integrated Resource Management – Next Steps**

ISSUE

To present the next steps in the development of the Advanced Integrated Resource Management (IRM) Project.

BACKGROUND

The recent Advanced Integrated Resource Management (IRM) Project – Request for Expressions of Interest (RFEOI) gathered information to better inform the CRD of IRM market capabilities and considerations prior to embarking on an IRM procurement process. The outcome of the RFEOI process was not intended to qualify technologies or respondents, nor was it intended to validate partners.

The CRD received ten RFEOI submissions that propose a variety of IRM technologies, feedstocks and end uses. An initial high-level assessment of the responses was presented to this advisory committee in April 2017. Additional clarification was sought from all respondents to better inform the detailed analysis.

Key findings from the detailed analysis point to a number of next steps to advance the initiative. The primary next step in the IRM process is to draft an IRM Project Plan outline, together with the following short-term deliverables:

- a gap analysis to complete the evaluation of the broader array of technologies and feedstock combinations (as required in the provincial approval of the Core Area Liquid Waste Management Plan, Amendment No. 11)
- a proposed IRM facilities tour plan to address identified information gaps; and
- a summary of potential policy/project implications resulting from the CRD's lack of flow control over much of the waste feedstock.

The gap analysis bulleted above will be informed by a jurisdictional review of how similar-sized and larger municipalities within BC, North America and further abroad successfully and beneficially reuse biosolids. This review was also directed by the Minister of Environment as a condition of approval for Amendment No. 11 of the Core Area Liquid Waste Management Plan, and will be presented to the Advisory Committee in September.

The IRM Project Plan, which builds on the IRM work plan that was submitted to the Province at the end of May (Appendix A), will serve as a road map and will be built over time as the process evolves and further deliverables are identified.

ALTERNATIVES

Alternative 1

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

That staff be directed to prepare the following deliverables for the September 2017 IRM Advisory Committee meeting:

- a draft Integrated Resource Management Project Plan outline
- a gap analysis to complete the evaluation of the broader array of technologies and feedstock combinations (as required in the provincial approval of the Core Area Liquid Waste Management Plan, Amendment No. 11)
- a proposed IRM facilities tour plan to address identified information gaps; and
- a summary of potential policy/project implications resulting from the CRD's lack of flow control over much of the waste feedstock.

Alternative 2

That staff revise the next steps in the IRM process as directed by the IRM Advisory Committee.

POLICY IMPLICATIONS

IRM has the potential to impact every aspect of the overall waste management system. IRM in the Capital Region is predominantly driven by the solid waste streams, as biosolids comprise a relatively small proportion of the total combined liquid and solid waste streams. The CRD does not have flow control over the vast majority of its solid waste streams, which presents a significant risk to the IRM project, as identified by the RFEOI respondents.

If thermal treatment technology (mass burn, gasification, pyrolysis) is used to produce energy from Municipal Solid Waste, the Province expects local governments to have a minimum target of 70% reduction of solid waste from reduce, reuse and recycle initiatives before moving to a thermal treatment technology for residuals management. Furthermore, an amendment to the CRD Solid Waste Management Plan would be necessary to move in this direction. Supporting such a plan amendment and the fundamental shift in waste management will necessitate ongoing and meaningful public and First Nations consultation and deep community support.

CONCLUSION

The CRD has initiated the Advanced Integrated Resource Management Project process by issuing a Request for Expressions of Interest and has obtained valuable information. The next step in the process is to prepare the initial deliverables in the development of a draft IRM Project Plan for review by committee in September 2017.

RECOMMENDATION

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

That staff be directed to prepare the following deliverables for the September 2017 Integrated Resource Management Advisory Committee meeting:

- a draft Integrated Resource Management Project Plan outline
- a gap analysis to complete the evaluation of the broader array of technologies and feedstock combinations (as required in the provincial approval of the Core Area Liquid Waste Management Plan, Amendment No. 11)
- a proposed IRM facilities tour plan to address identified information gaps; and
- a summary of potential policy/project implications resulting from the CRD's lack of flow control over much of the waste feedstock.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

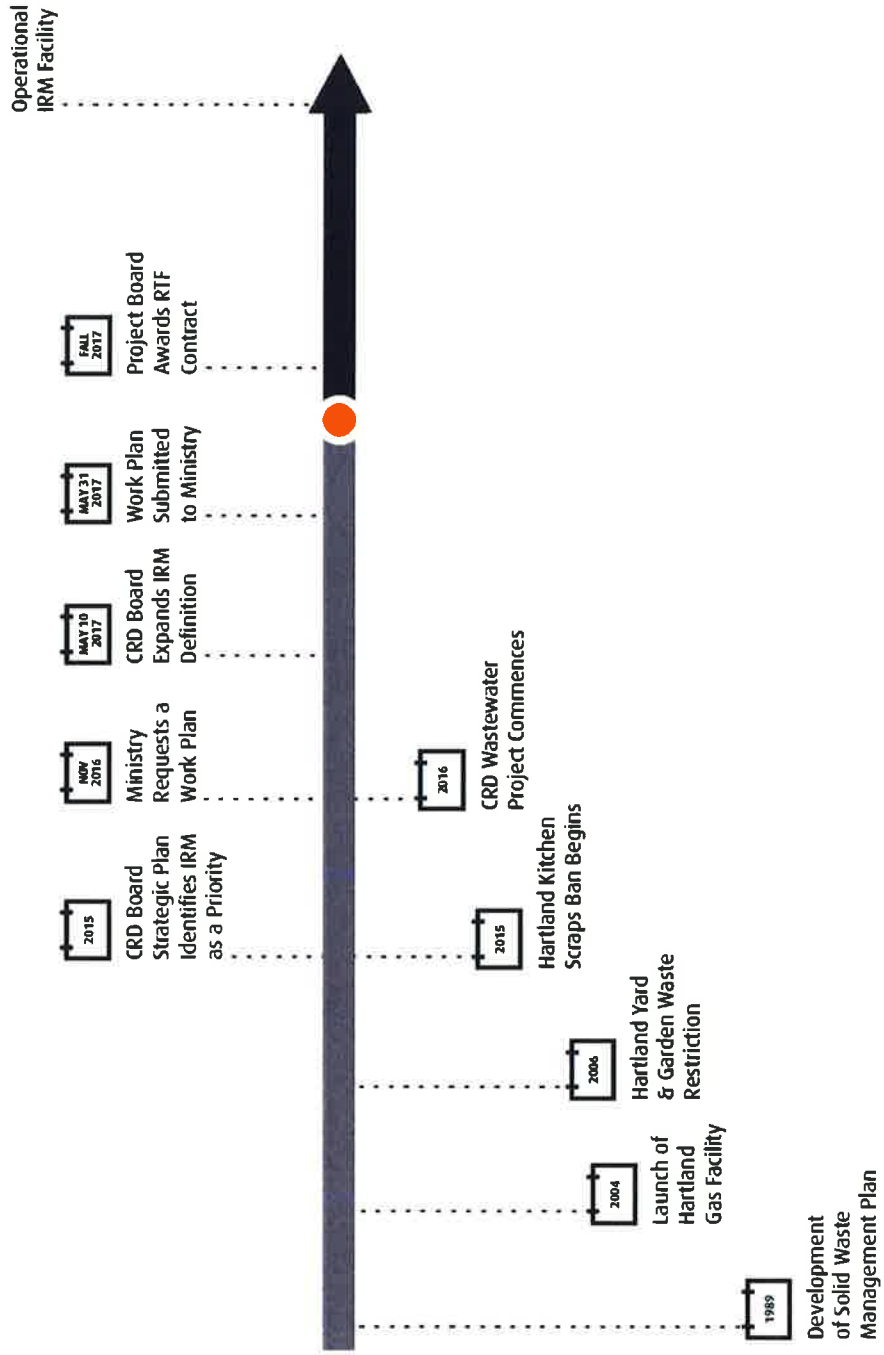
RS:cl

Attachment: Appendix A – Proposed Integrated Resource Management Work Plan

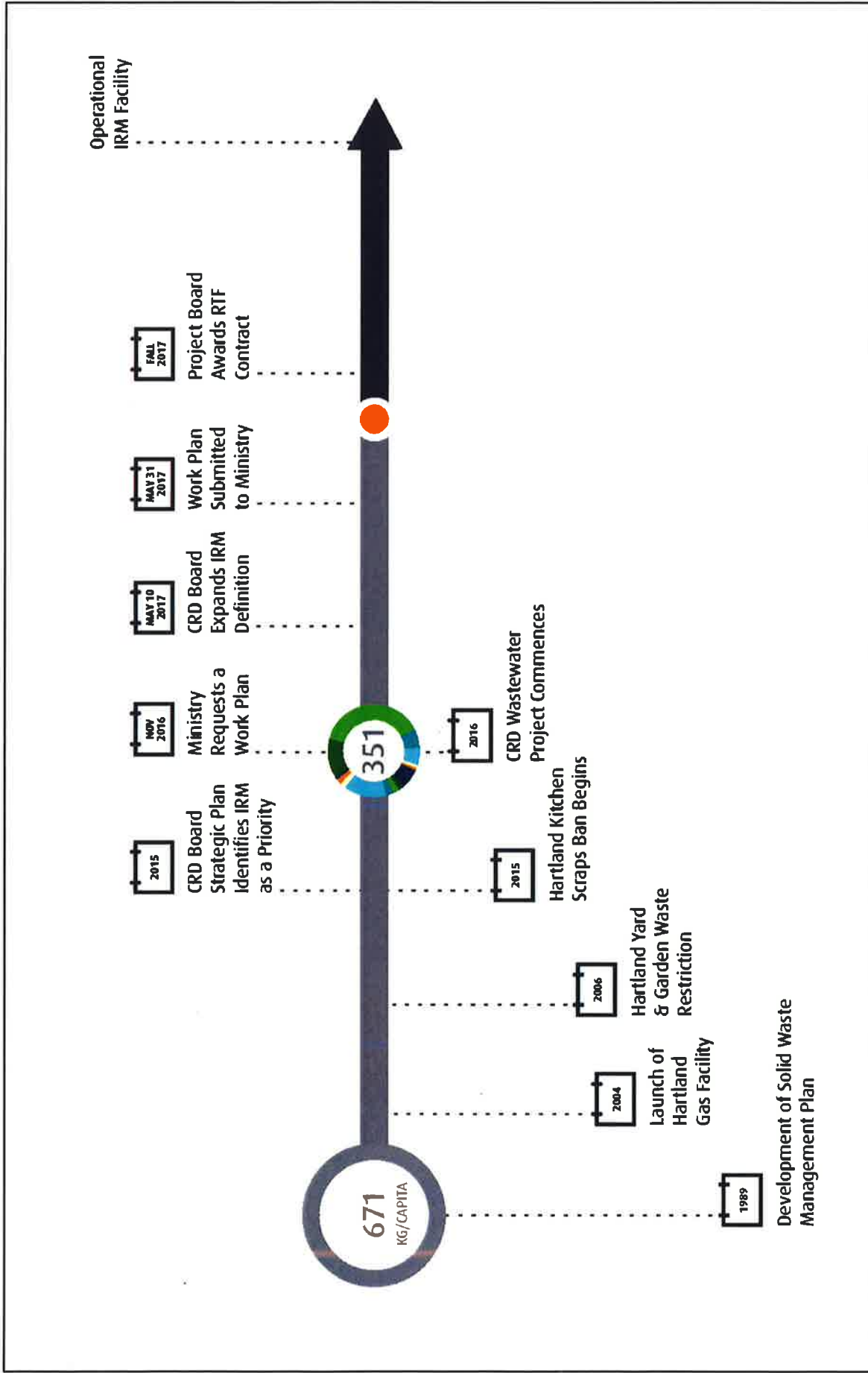
PROPOSED INTEGRATED RESOURCE MANAGEMENT WORK PLAN

June 2017	<ul style="list-style-type: none"> Core Area Liquid Waste Management Plan biosolids requirements: jurisdictional review, assessment of full spectrum of beneficial uses Detailed review and assessment of Request for Expressions of Interest submissions
July 2017	<ul style="list-style-type: none"> Draft Integrated Resource Management (IRM) Project Plan Pre-Request for Qualifications (RFQ) consultation/scope definition for IRM facility
Q3 2017	<ul style="list-style-type: none"> Review Draft IRM Project Plan with Ministry of Environment (MoE) staff and First Nations for feedback and alignment Issue Request for Pre-Qualifications (RFPQ) for IRM facility
Q4, 2017	<ul style="list-style-type: none"> Review/evaluate results of IRM RFPQ and evaluate the feasibility of an integrated solution Work with MoE staff to finalize IRM Project Plan (including a public consultation plan and timeline)
Q1, 2018	<ul style="list-style-type: none"> Present full business case and identification of qualified vendors from IRM RFPQ process Determine regulatory requirements for IRM pilot (if warranted) Obtain permits for IRM pilot (if warranted)
Q1, 2018 up to Q1, 2019	<ul style="list-style-type: none"> Conduct IRM pilot project (if warranted) IRM Request for Proposals (RFP) scope definition and develop IRM RFP document Secure IRM feedstock commitments/agreements Confirm IRM resource reuse opportunities CRD Board decision to proceed Issue RFP for full-scale advanced IRM facility Evaluation of IRM RFP submissions and negotiations with preferred bidder Review of financing options Determine regulatory approvals and environmental requirements for preferred IRM facility
2019/2020	<ul style="list-style-type: none"> Permitting process for the long-term advanced IRM facility <ul style="list-style-type: none"> legal technical environmental (EIS) public consultation, as required Design and engineering of long-term advanced IRM facility
June 30, 2019	<ul style="list-style-type: none"> Submit definitive IRM Plan to the Minister of Environment
January 1, 2021	<ul style="list-style-type: none"> Residual treatment facility starts operation and produces Class A biosolids Short-term Class A biosolids storage, if required
2021 & 2022	<ul style="list-style-type: none"> Construction and commissioning of long-term advanced IRM Facility
January 1, 2023	<ul style="list-style-type: none"> IRM facility starts operation

IRM Roadmap



IRM Roadmap



Integrated Resource Management (IRM)

IRM is a process that promotes integrated management of solid and liquid waste residuals to maximize resource recovery through combined processing of some, or all of these materials.

Solid and Liquid Waste Streams

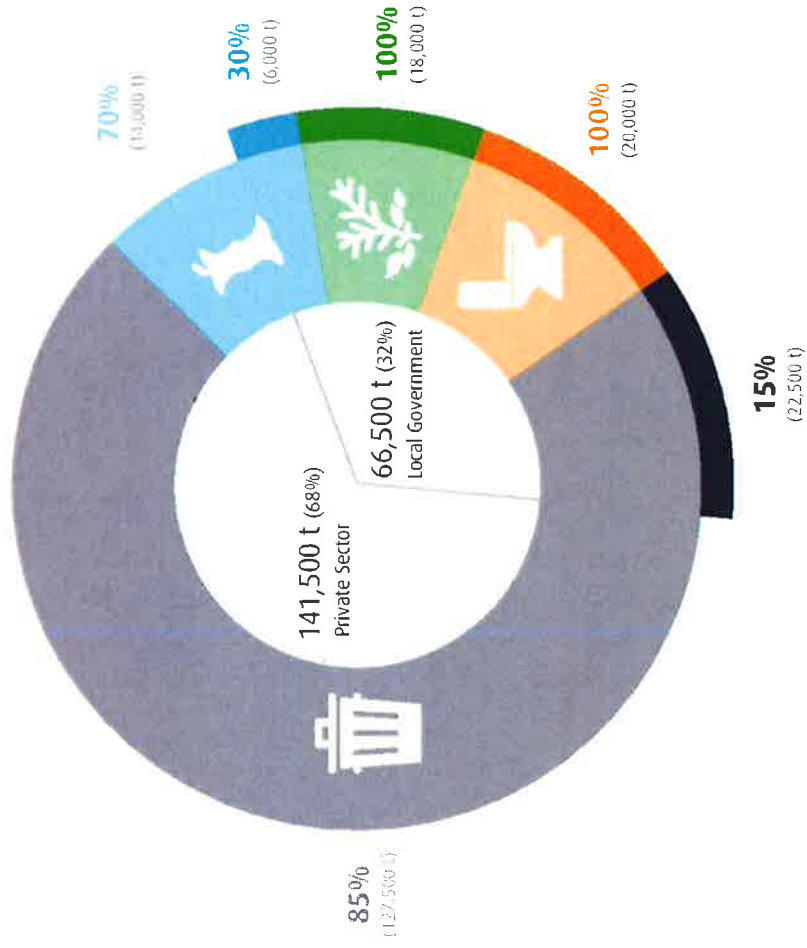
CRP



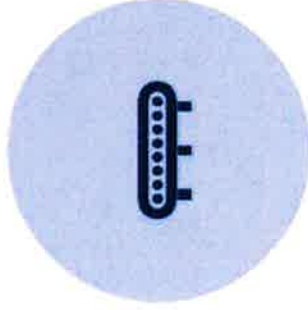
Solid and Liquid Waste Streams



Waste Stream Control (Local Government, CRD & Municipalities)



Resource Management Technologies



MECHANICAL

Refuse Derived Fuel

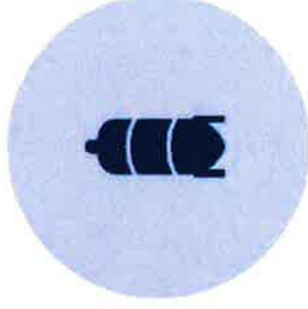


BIOLOGICAL

Anaerobic Digestion

Composting

Landfill Gas



THERMAL

Pyrolysis

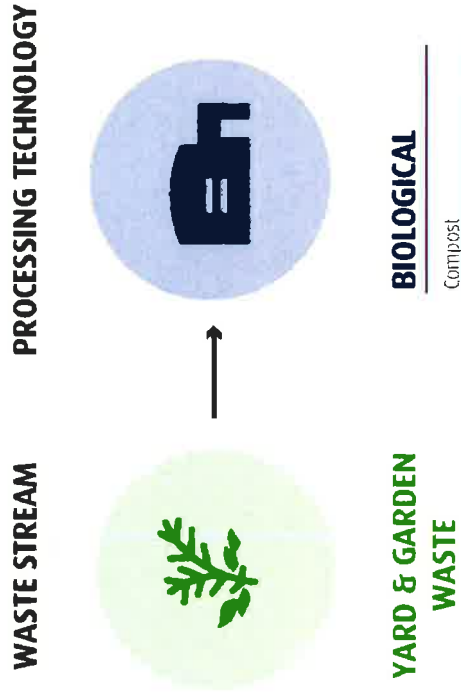
Gasification

Mass Burn

Individual Resource Management



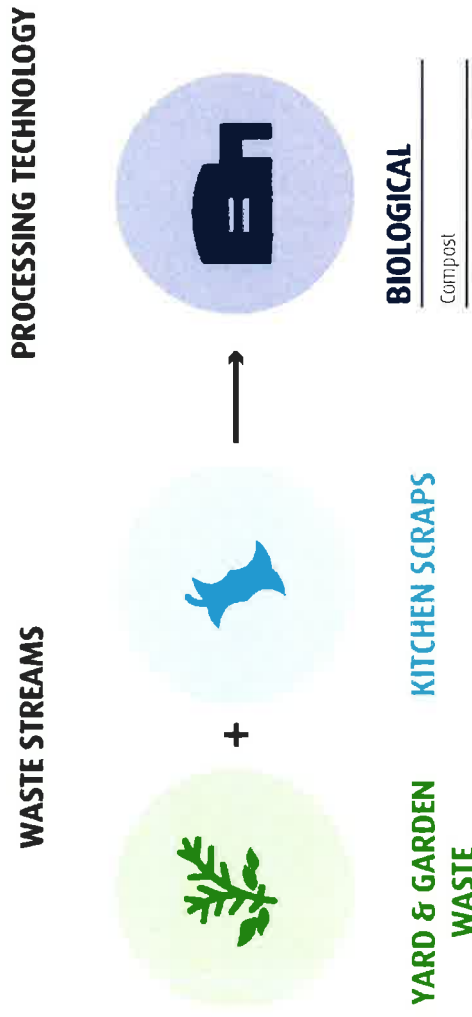
Single feedstock stream.
One or multiple processing technology styles applied.



Integrated Resource Management



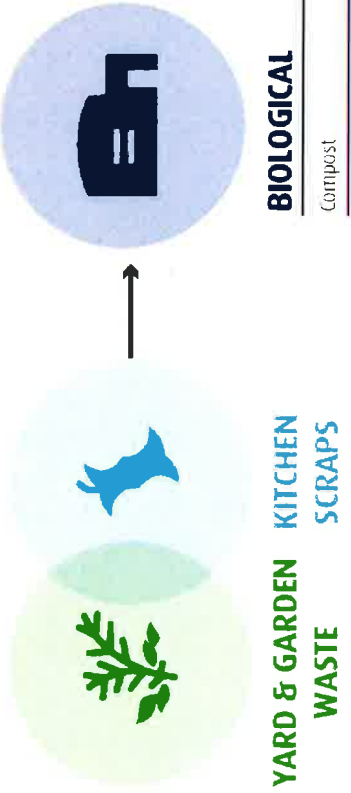
Two or more integrated feedstock streams. One or multiple processing technology styles applied.



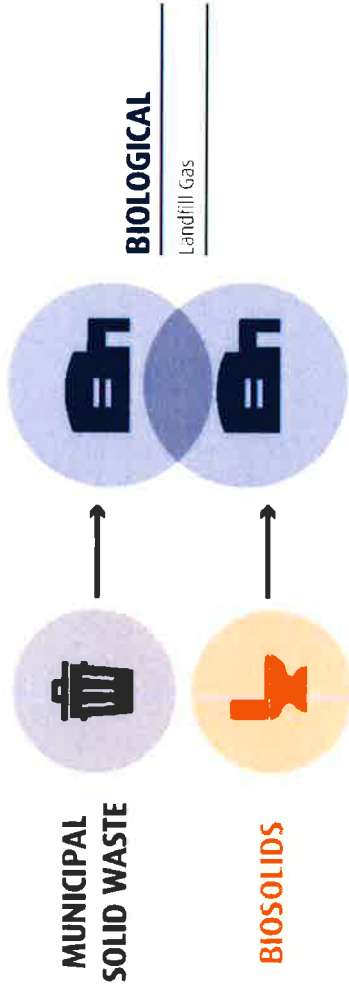
Current IRM Applications



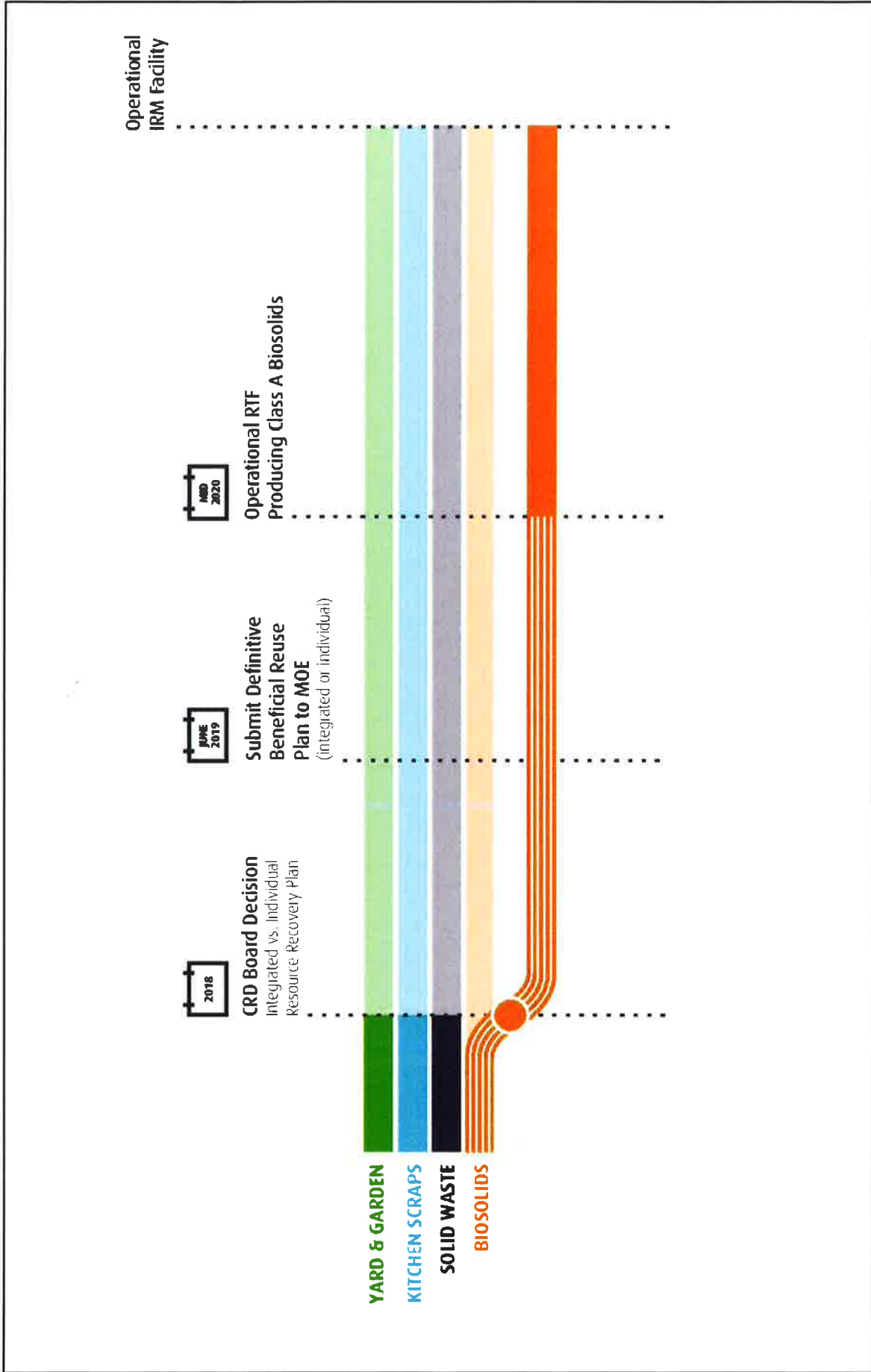
SAANICH COMPOST & YARD WASTE INTEGRATION



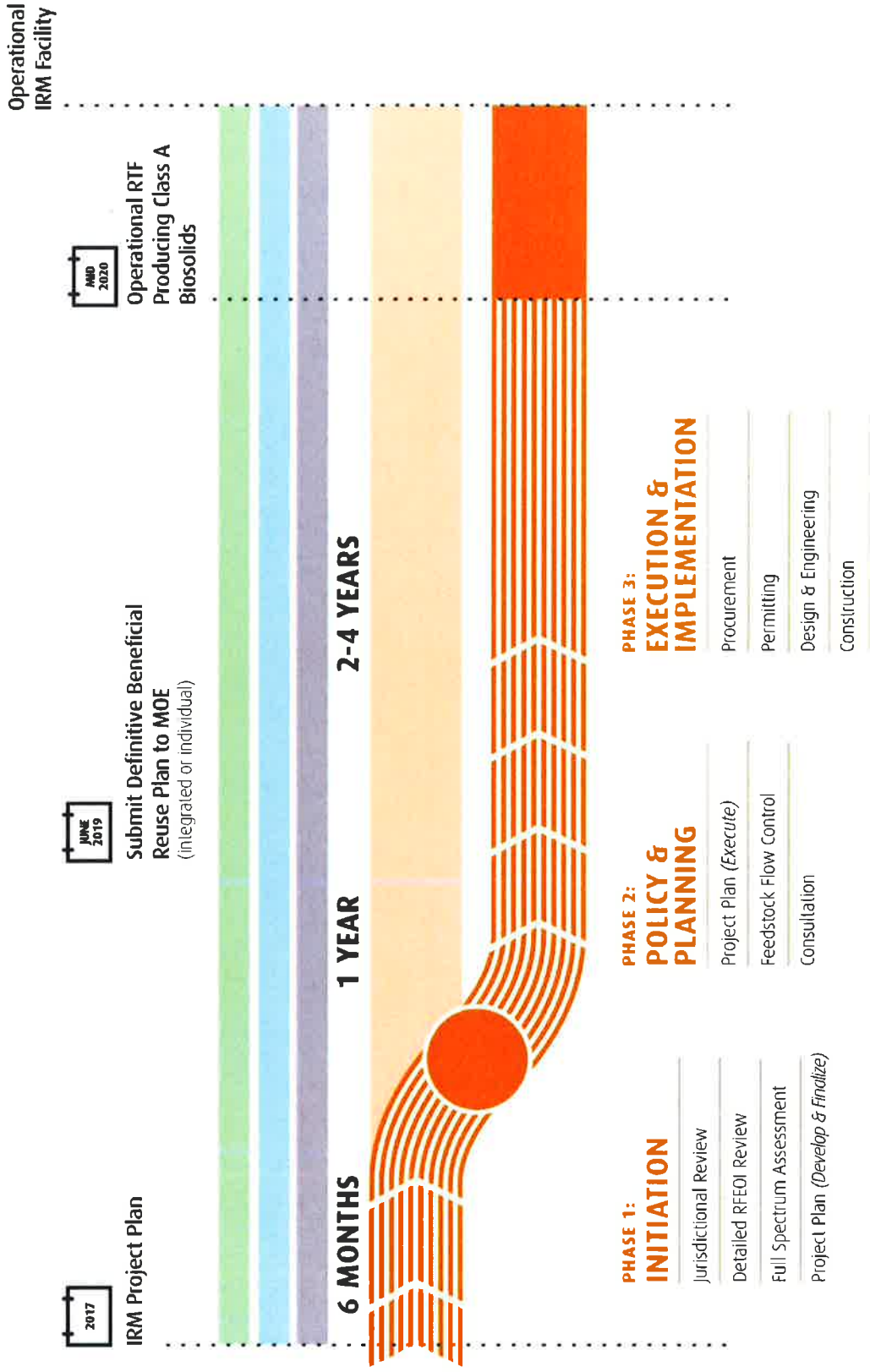
HARTAND LANDFILL & RTF BIOGAS INTEGRATION



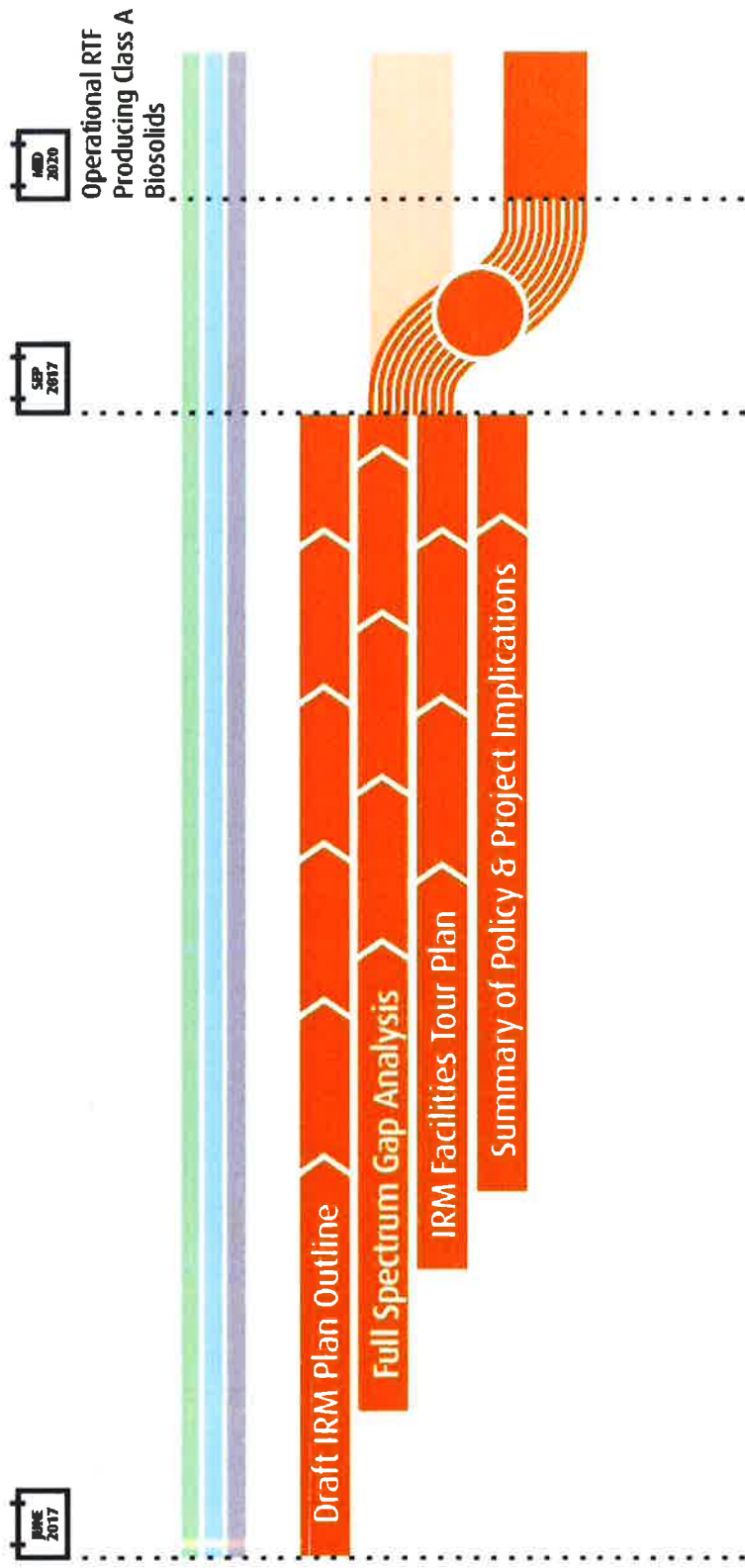
Milestones



IRM Roadmap



IRM Work Plan Next Steps



Thank you.