

Notice of Meeting and Meeting Agenda Environmental Services Committee

Wednesday, June 28, 2017

1:00 PM

6th Floor Boardroom
625 Fisgard St.
Victoria, BC V8W 1R7

C. Hamilton (Chair), R. Atwell (Vice Chair), D. Blackwell, L. Helps, M. Hicks, W. McIntyre, D. Murdock, J. Ranns, M. Tait, K. Williams, R. Windsor, B. Desjardins (Board Chair, ex-officio)

1. Approval of Agenda

2. Adoption of Minutes

2.1. [17-530](#) Minutes of the May 24, 2017 Environmental Services Committee Meeting

Recommendation: That the minutes of the May 24, 2017 Environmental Services Committee meeting be adopted as circulated.

Attachments: [Minutes](#)

3. Chair's Remarks

4. Presentations/Delegations

5. Committee Business

5.1. [17-510](#) Advanced Integrated Resource Management - Next Steps

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.

Attachments: [Staff Report: Advanced Integrated Resource Management - Next Steps](#)

[Appendix A: Proposed IRM Work Plan](#)

[Presentation: IRM Road Map](#)

5.2. [17-513](#) Letter from CRD Board Chair Desjardins to Minister of Environment and Climate Change Catherine McKenna re Update of Environment

Canada's Intensity-Duration-Frequency Curves for the Capital Region of
British Columbia (June 14, 2017)

Recommendation: That this item of correspondence be received for information.

Attachments: [Correspondence: To Minister McKenna re Intensity-Duration-Frequency Curves](#)

6. New Business

7. Adjournment

Next Meeting: July 26, 2017

To ensure quorum, please advise Pat Perna (pperna@crd.bc.ca) if you or your alternate CANNOT attend.

Meeting Minutes

Environmental Services Committee

Wednesday, May 24, 2017

9:30 AM

6th Floor Boardroom
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT:

Directors: C. Hamilton (Chair), D. Blackwell, L. Helps, M. Hicks, W. McIntyre (9:44), J. Ranns, M. Tait (9:38), L. Wergeland (for D. Murdock), K. Williams, B. Desjardins (Board Chair, ex-officio)
Staff: R. Lapham, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services; G. Harris, Senior Manager, Environmental Protection; R. Smith, Senior Manager, Environmental Resource Management; E. Gorman, Deputy Corporate Officer (Recorder)
Others: Trevor Murdoch, Pacific Institute of Climate Studies and Gillian Aubie Vines, Pinna Sustainability.

ABSENT: Directors: R. Atwell (Vice Chair) and R. Windsor

The meeting was called to order at 9:29 am.

1. Approval of Agenda

**MOVED by Director Blackwell, SECONDED by Director Williams,
That the May 24, 2017 Environmental Services Committee meeting be approved
as circulated.
CARRIED**

2. Adoption of Minutes

2.1. [17-449](#) Minutes of the April 26, 2017 Environmental Services Committee Meeting

**MOVED by Director Williams, SECONDED by Director Helps,
That the minutes of the April 26, 2017 Environmental Services Committee
meeting be adopted as circulated.
CARRIED**

3. Chair's Remarks

The Chair remarked on her participation in the Federation of Canadian Municipalities' Program with delegates from Peru and Columbia who were here to learn about and tour facilities for recycling and solid waste. She advised there was lots to learn and the visitors took away a good deal of information.

4. Presentations/Delegations - None.

5. Committee Business

5.1. [17-433](#) Climate Projections and Adaptation Planning in the Capital Region

L. Hutcheson introduced the consultants, Trevor Murdoch, Pacific Institute of Climate Studies and Gillian Aubie Vines, Pinna Sustainability, who spoke to the presentation.

Discussion ensued on the following:

- the methods used to reach the conclusions
- international climate modelling
- recent incidents changing projections
- anticipation of positive and negative impacts of wind increases and changes
- impacts on salmon stock and wildlife due to additional salt water and water temperature sensitivity
- use of the information for emergency planning, regional water supply strategic planning, and working groups on climate change
- sea level change and the impact on zoning decisions

**MOVED by Director Helps, SECONDED by Director Blackwell,
That the Environmental Services Committee recommend to the Capital Regional District Board:**

That the report, Climate Projections for the Capital Region, be received for information and referred to municipal councils and the Electoral Area Services Committee for information.

**MOVED by Director McIntyre, SECONDED by Director Blackwell,
That the motion be amended to include sharing this information with Islands Trust, which two of the Electoral Areas are members of.**

CARRIED

**MOVED by Director Helps, SECONDED by Director Blackwell,
That the Environmental Services Committee recommend to the Capital Regional District Board:**

That the report, Climate Projections for the Capital Region, be received for information and referred to municipal councils, the Islands Trust, and the Electoral Area Services Committee for information.

CARRIED

5.2. [17-431](#)

Climate Action Program - 2016 Annual Report

G. Harris provided an overview of the report and spoke to a presentation.

Discussion ensued on the following:

- involvement with Islands Trust
- success, promotion, and scaling up of the Smart Drive Challenge Pilot Program
- how projects are selected and chosen and the degree of their impacts
- increasing ridership and multimodal transportation
- acceleration of fleet strategies and management to advance alternative fuel vehicles and infrastructure
- impacts to the aquifer in the Juan de Fuca from climate change and the different seasons
- sea water rise and the effect on salt water intrusion into the ground water

MOVED by Director Helps, **SECONDED** by Alternate Director Wergeland,
That the Environmental Services Committee recommend to the Capital Regional
District Board:

That the Climate Action Program 2016 Annual Report be approved.

CARRIED

OPPOSED: Director Hicks

- 5.3. [17-426](#) Hartland Landfill North Leachate Pump Station Cleanout Extension - Award of Contract 17-1897

MOVED by Director Blackwell, **SECONDED** by Director Helps,
That the Environmental Services Committee recommend to the Capital Regional
District Board:

That Contract 17-1897, Hartland Landfill North Leachate Pump Station Cleanout
Extension be awarded to G&E Contracting LP in the amount of \$746,000 (plus
GST), including separate pricing for the additional pump relocation, and that the
5-year capital plan be amended.

CARRIED

6. Correspondence

- 6.1. [17-435](#) Correspondence: From the District of Central Saanich re Free Cycle
Program and CRD Hartland Facility (April 18, 2017)

R. Smith spoke to a similar response that was sent to the District of Highlands.

Discussion ensued on distribution of expanding the reuse of materials after the
solid waste treatment plant is installed

MOVED by Director Blackwell, **SECONDED** by Director Helps,
That this item of correspondence be received for information.

MOVED by Director Ranns, **SECONDED** by Director Helps,
That the main motion be amended to add "and direct Staff to incorporate a
review of offering a free-cycle program to the general public as part of the Solid
Waste Management Plan process".

CARRIED

MOVED by Director Blackwell, **SECONDED** by Director Helps,
That this item of correspondence be received for information; and direct Staff to
incorporate a review of offering a free-cycle program to the general public as
part of the Solid Waste Management Plan process.

CARRIED

7. New Business - None.

8. Adjournment

MOVED by Director Blackwell, **SECONDED** by Director Helps,
That the May 24, 2017 Environmental Services Committee meeting be adjourned
at 10:21 am.

CARRIED

Chair

Recorder

**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

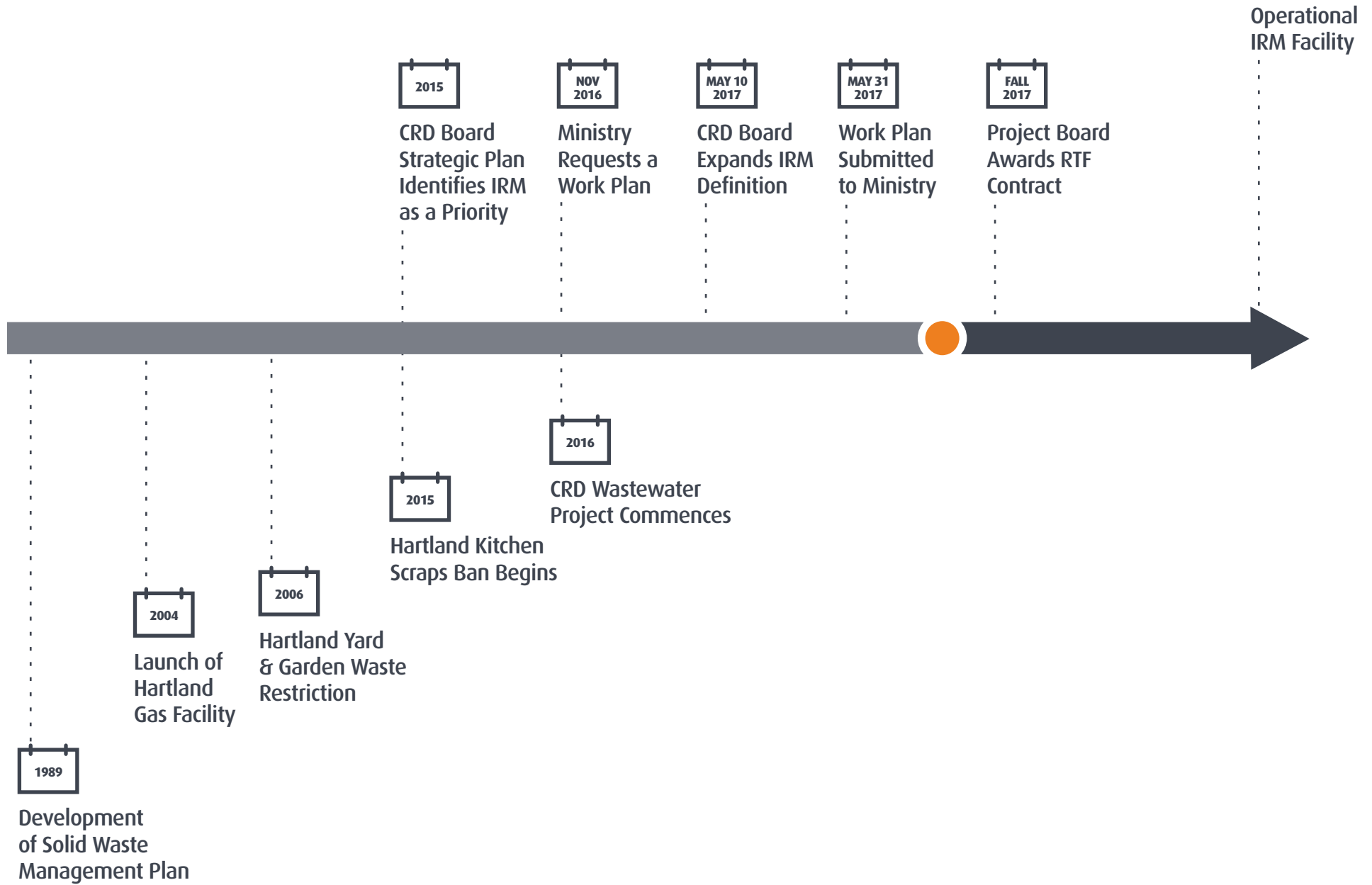
RS:cl

Attachment: Appendix A – Proposed Integrated Resource Management Work Plan

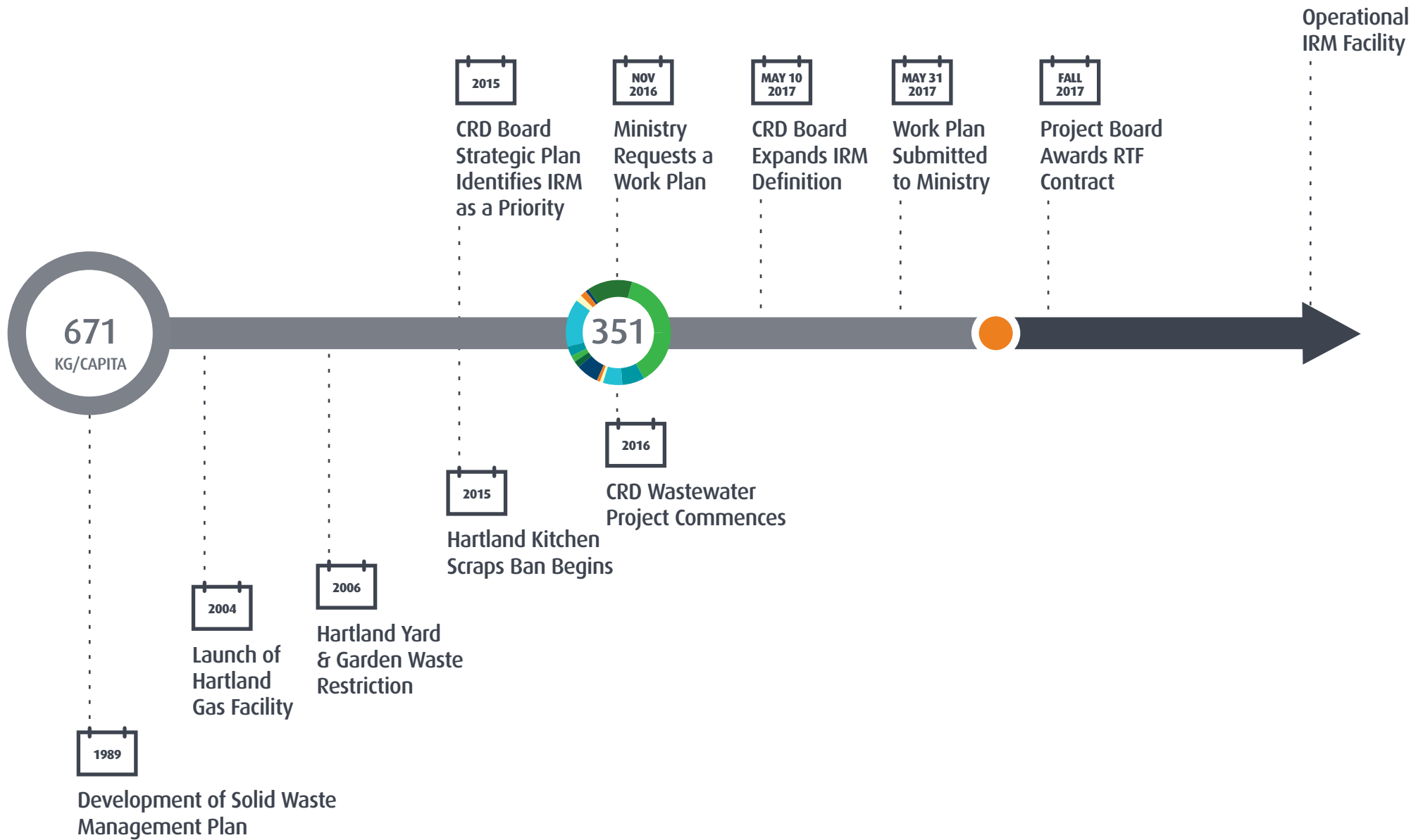
PROPOSED INTEGRATED RESOURCE MANAGEMENT WORK PLAN

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 Road Map



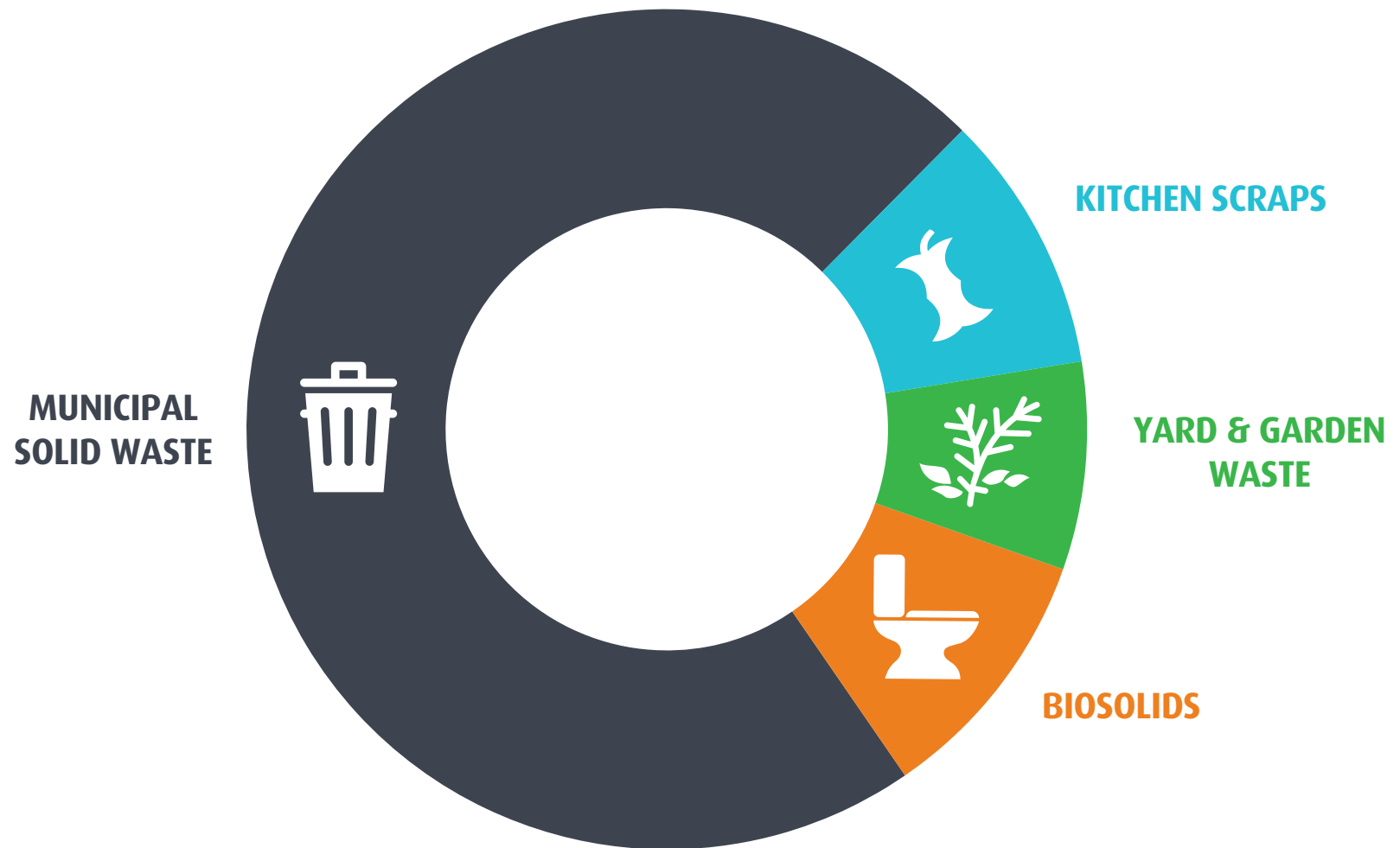
IRM Road Map



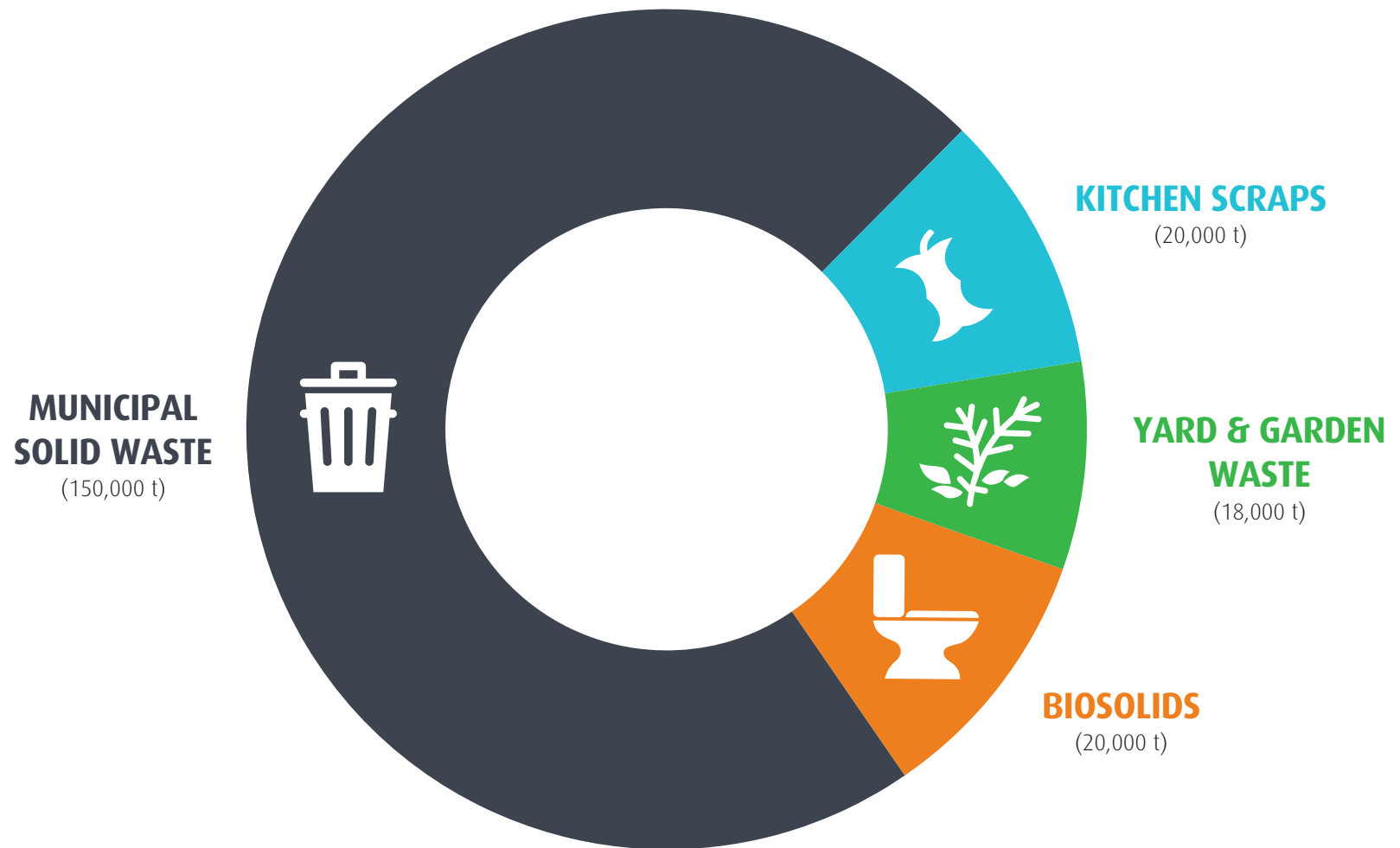
Integrated Resource Management (IRM)

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.

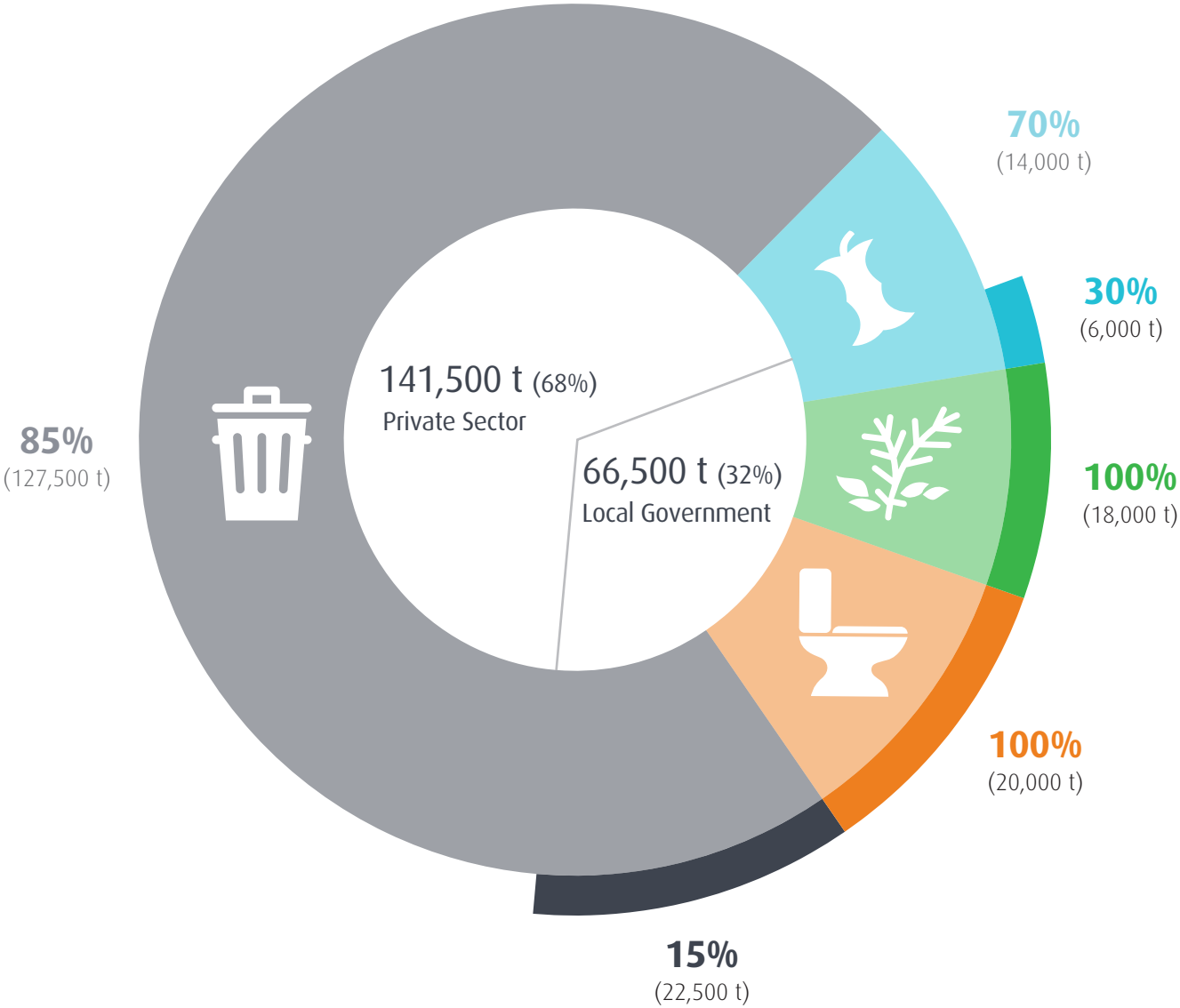
Solid and Liquid Waste Streams



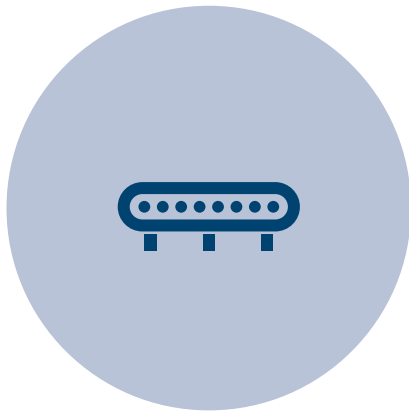
Solid and Liquid Waste Streams



Waste Stream Control (Local Government, CRD and Municipalities)



Resource Management Technologies



MECHANICAL

Refuse Derived Fuel



BIOLOGICAL

Anaerobic Digestion

Composting

Landfill Gas



THERMAL

Pyrolysis

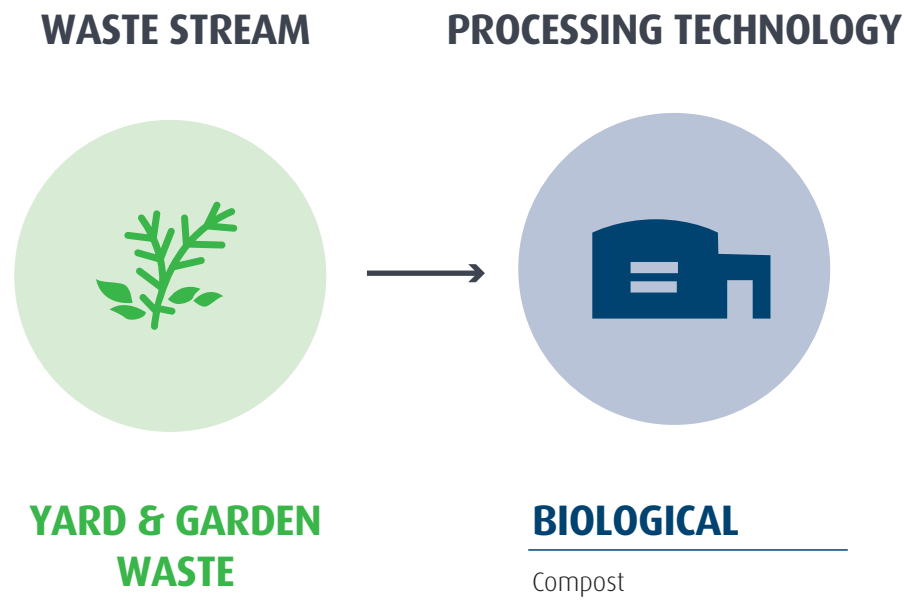
Gasification

Mass Burn

Individual Resource Management

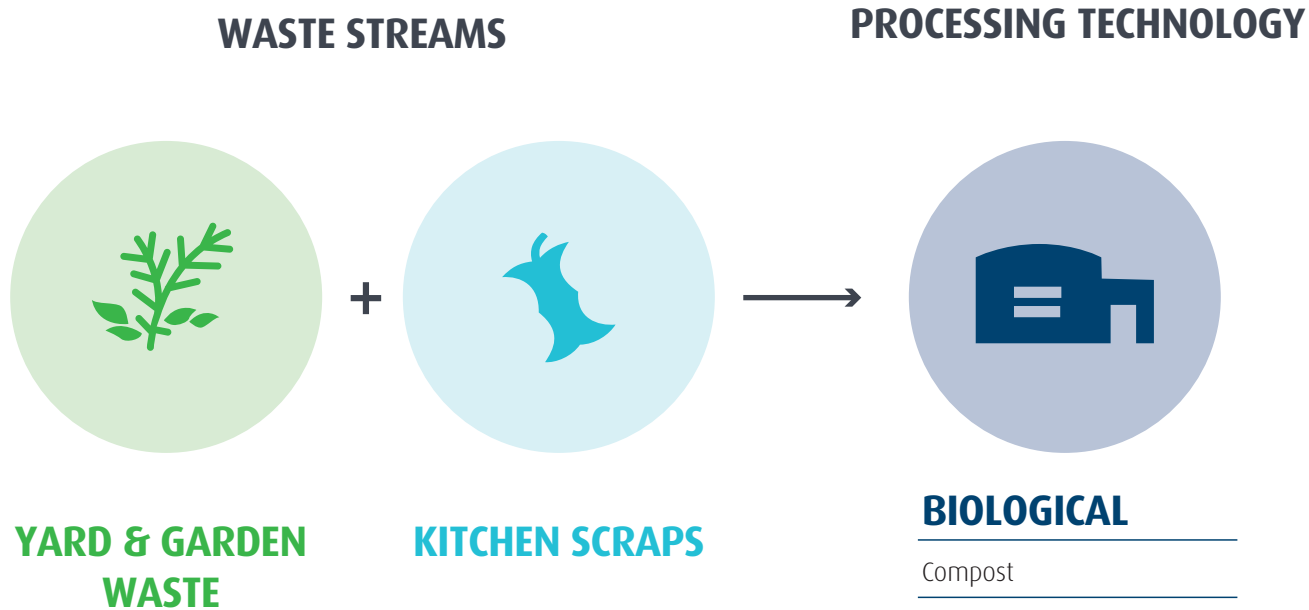
Single feedstock stream.

One or multiple processing technology styles applied.



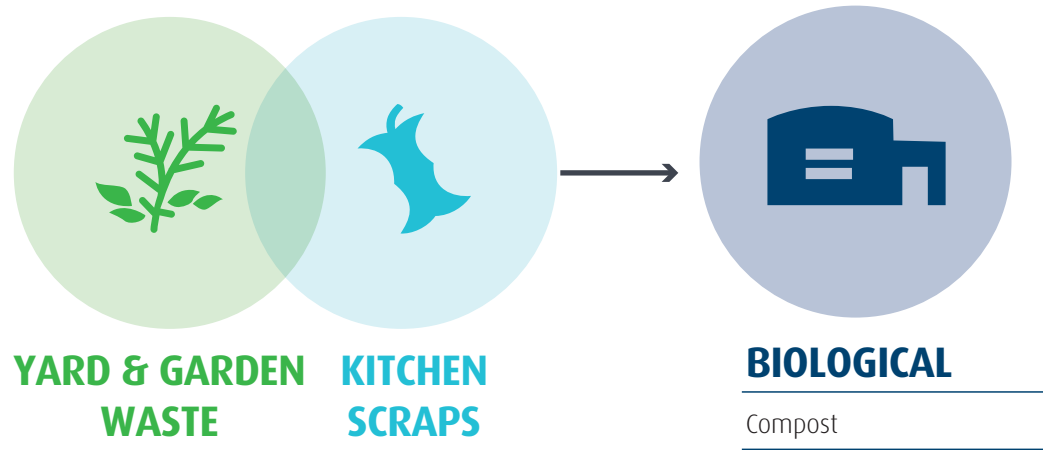
Integrated Resource Management

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

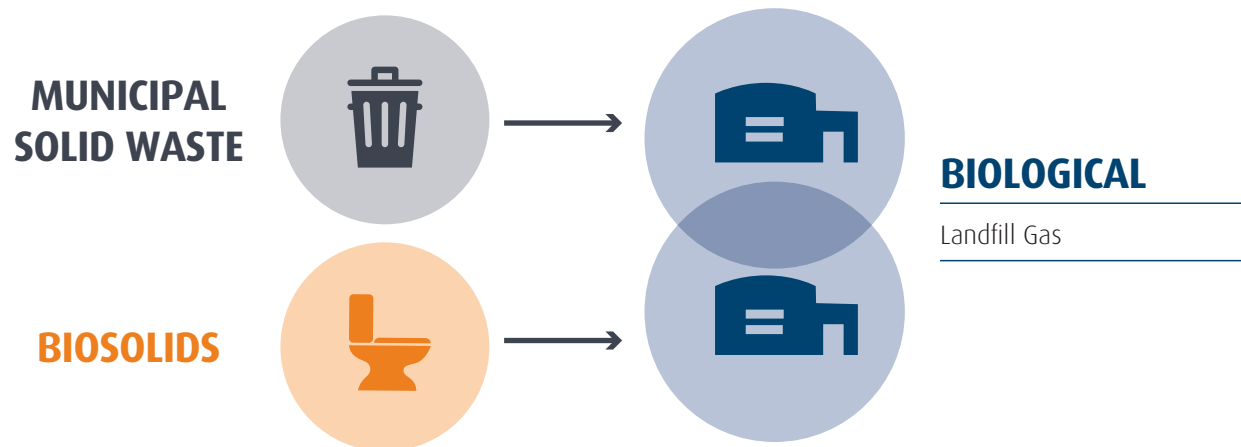


Current and Contemplated IRM Applications

SAANICH COMPOST & YARD WASTE INTEGRATION



HARTAND LANDFILL & RTF BIOGAS INTEGRATION



Milestones

Operational
IRM Facility

2018

CRD Board Decision
Integrated vs. Individual
Resource Recovery Plan

JUNE
2019

**Submit Definitive
Beneficial Reuse
Plan to MOE**
(integrated or individual)

MID
2020

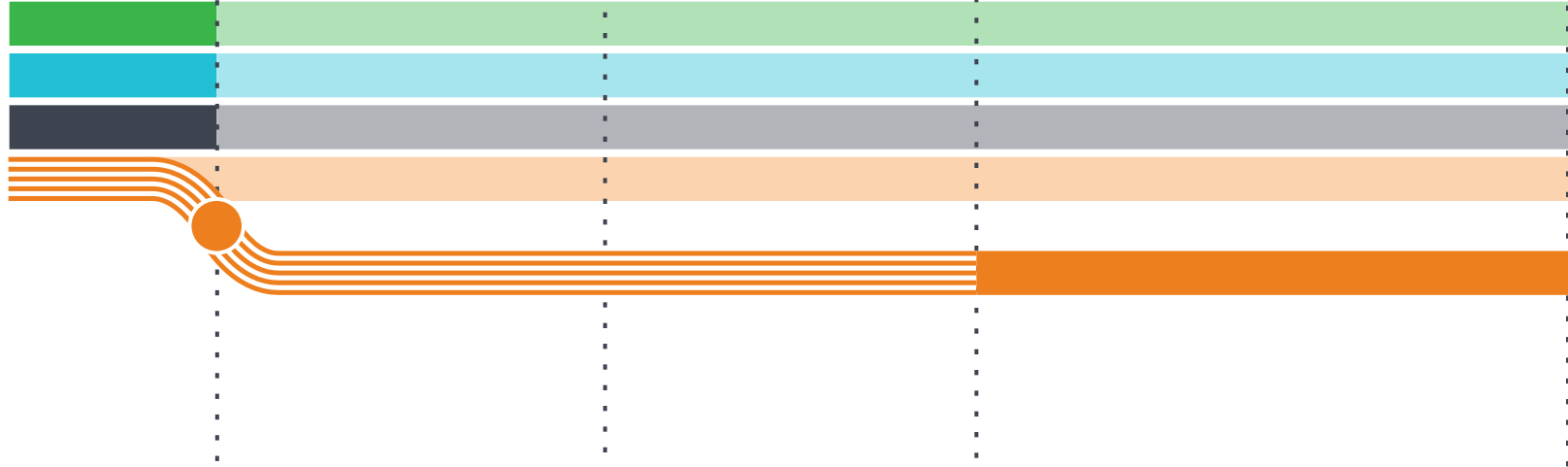
**Operational RTF
Producing Class A Biosolids**

YARD & GARDEN

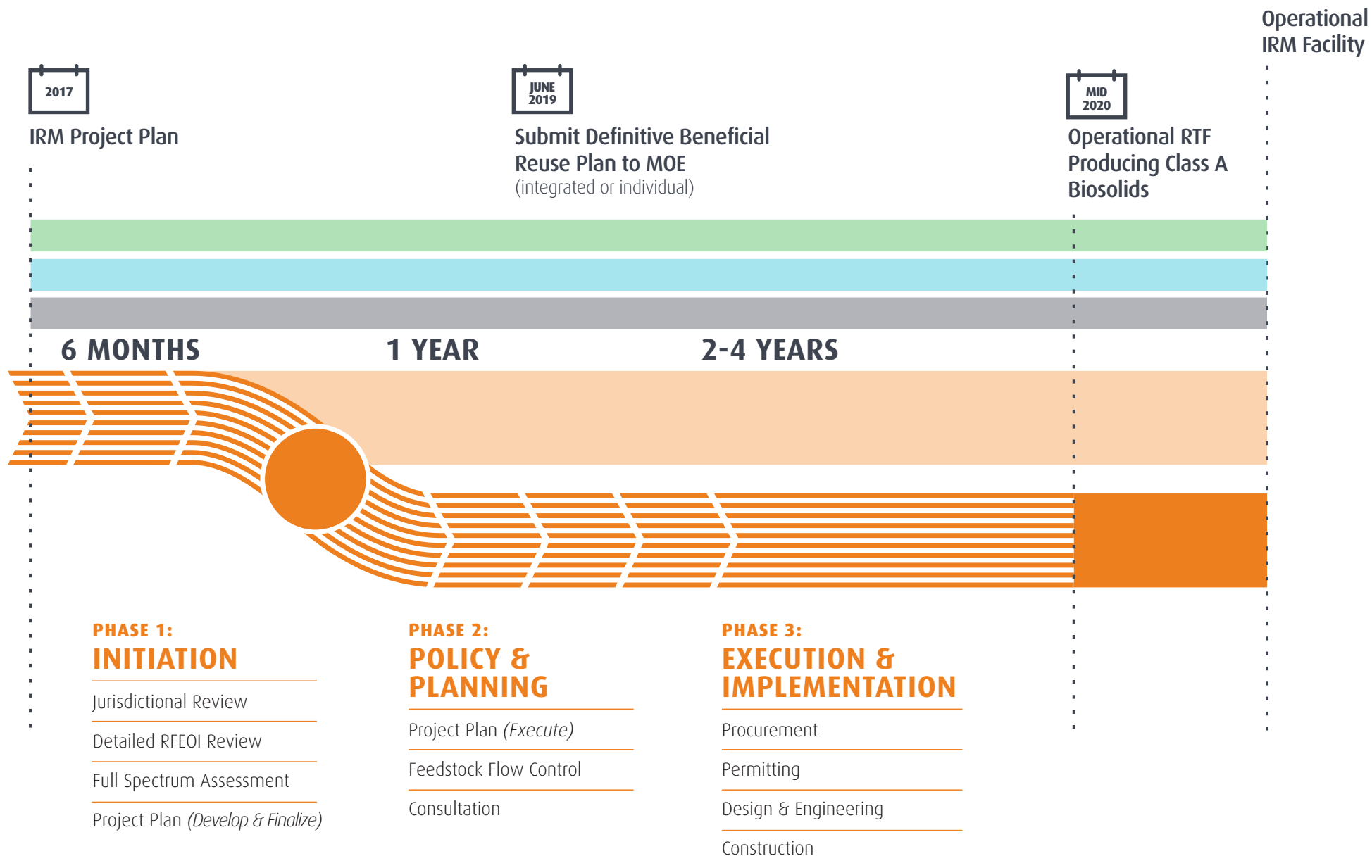
KITCHEN SCRAPS

SOLID WASTE

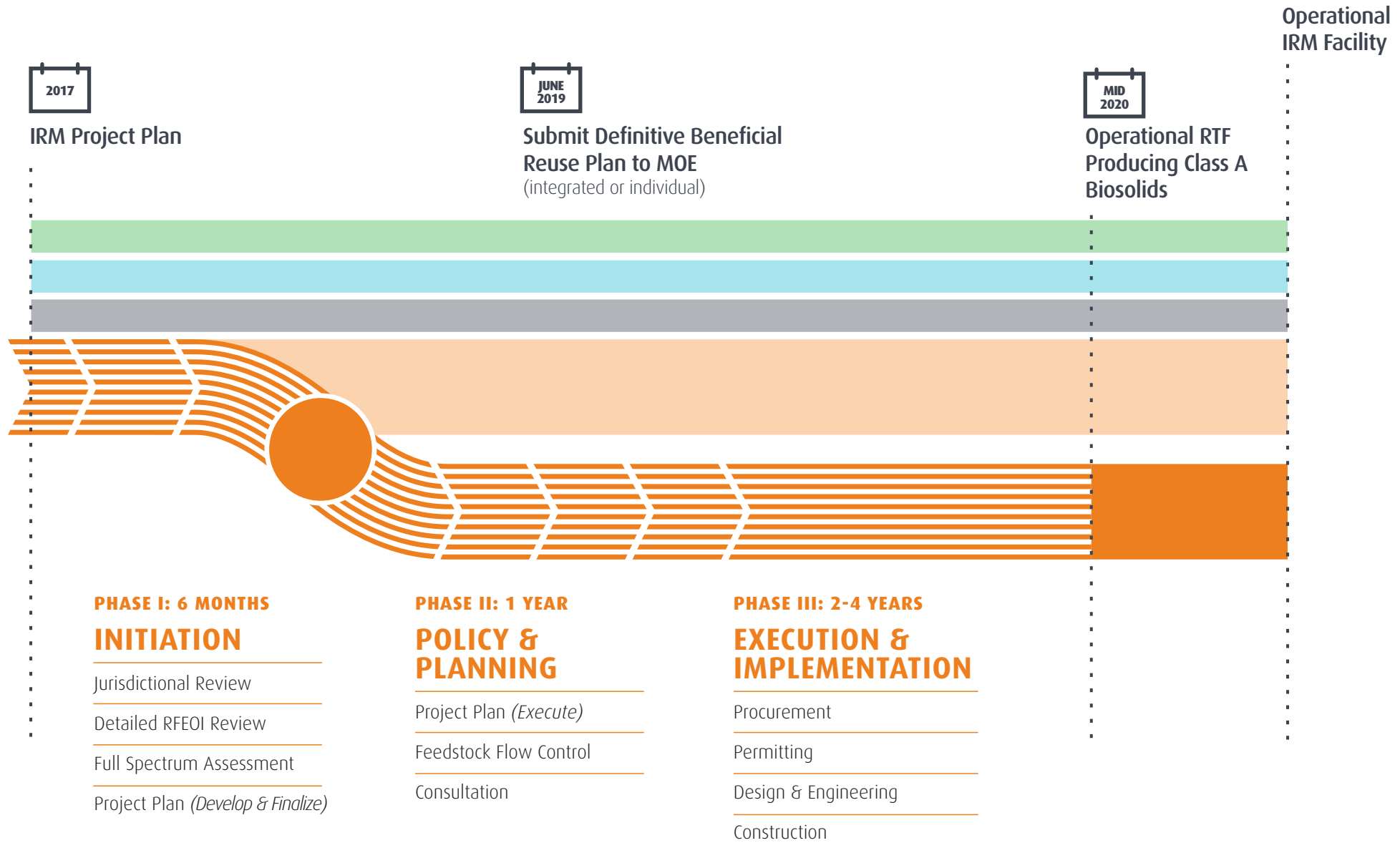
BIOSOLIDS



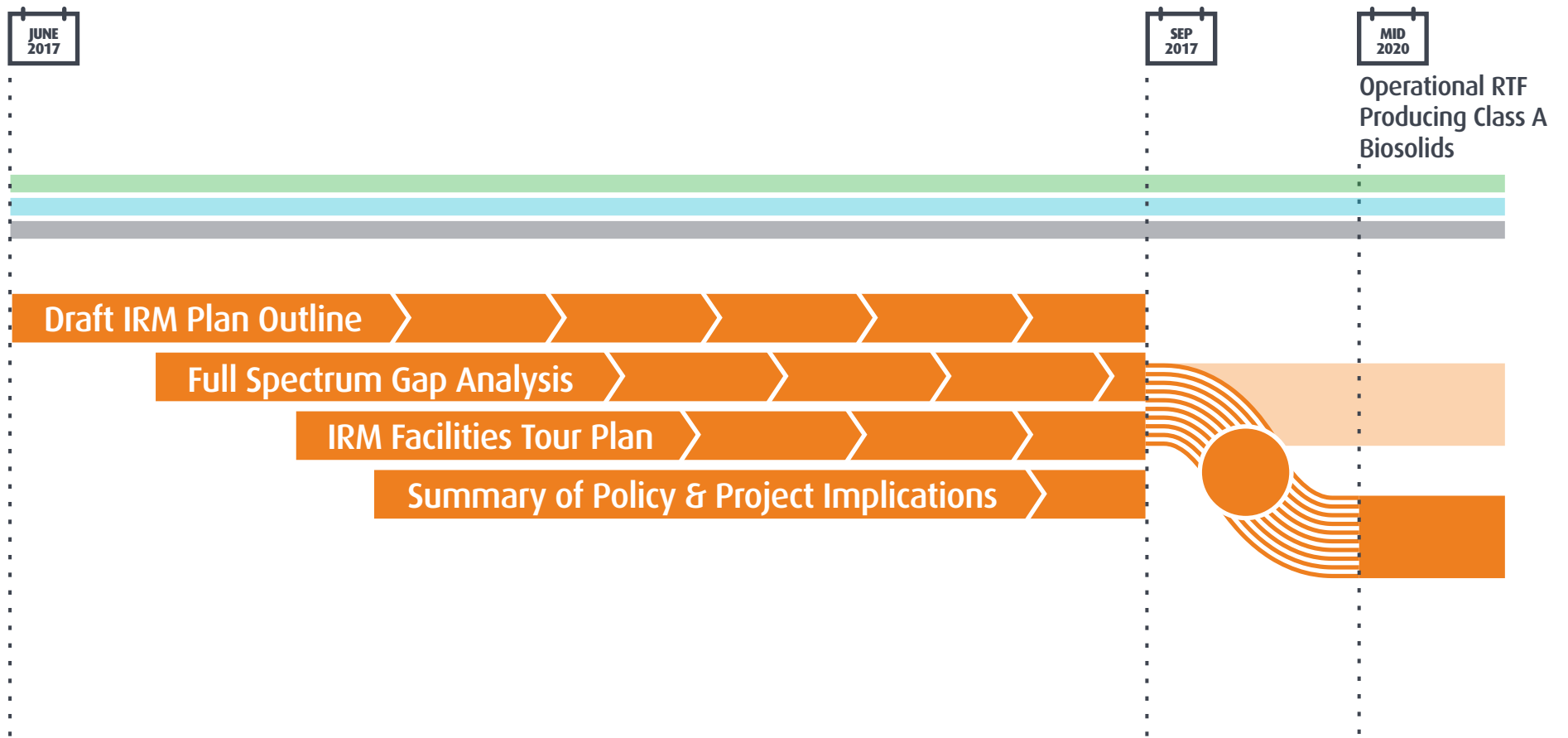
IRM Road Map



IRM Road Map



IRM Work Plan Next Steps





Making a difference...together

Parks & Environmental Services
625 Fisgard Street, PO Box 1000
Victoria, BC, Canada V8W 2S6

T: 250.360.3078
F: 250.360.3079
www.crd.bc.ca

June 14, 2017

File: 0400-40
Correspondence/Meetings/General

5220-20
Climate Action Program/Climate Action Adaptation

The Honourable Catherine McKenna
Minister of Environment and Climate Change
200 Sacré-Coeur Boulevard
Gatineau, QC K1A 0H3

Dear Minister Catherine McKenna:

RE: UPDATE OF ENVIRONMENT CANADA'S INTENSITY-DURATION-FREQUENCY CURVES FOR THE CAPITAL REGION OF BRITISH COLUMBIA

The Capital Regional District (CRD) is requesting that Environment Canada update its published rainfall data and associated rainfall Intensity-Duration-Frequency (IDF) curves for the capital region of British Columbia. We understand that Environment Canada is currently reviewing this task, based on regional requests.

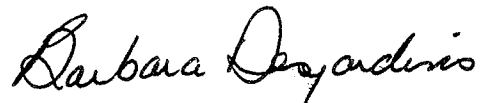
The CRD noted that the Environment Canada rainfall data used to build IDF curves are outdated, with data coming from the 1960s through 1990s. By using more recent rainfall data, Environment Canada will be able to better represent our current regional conditions. This will enable the regional and local governments to produce more effective climate adaptation plans.

The CRD Board has recognized climate action as a strategic priority. The region's municipalities and the CRD have signed on to the BC Climate Action Charter. In addition, the CRD established a Climate Action Service to support corporate, municipal, electoral area and public initiatives, to fulfill our provincial climate commitments and to incorporate a climate lens for our major capital projects and all service delivery.

As an example, rainfall IDF curves provide local government engineers and other end-users with information such as the maximum amount of rainfall that can be expected locally in a "1-in-5-year" or a "1-in-100-year" event. This information is critical for the design, sizing and management of rainwater infrastructure (e.g., stormwater drains, curb sizes, gutter requirements). IDF curve data are also used to inform flood, emergency response and other climate adaptation-related plans. Updated Environment Canada data and IDF curves will benefit other public services, as well, including integrated watershed protection, parks, drinking water and wastewater systems.

The CRD appreciates the Government of Canada's commitment to climate action and looks forward to engaging Environment Canada on this specific matter.

Sincerely,



Barbara Desjardins
Chair
Capital Regional District Board

NE:cam

cc: Robert Lapham, Chief Administrative Officer, CRD
Larisa Hutcheson, General Manager, Parks & Environmental Services, CRD
Glenn Harris, Senior Manager, Environmental Protection, CRD

