

CommonWealth

Resource Management Corporation

The ISWM Business Plan:

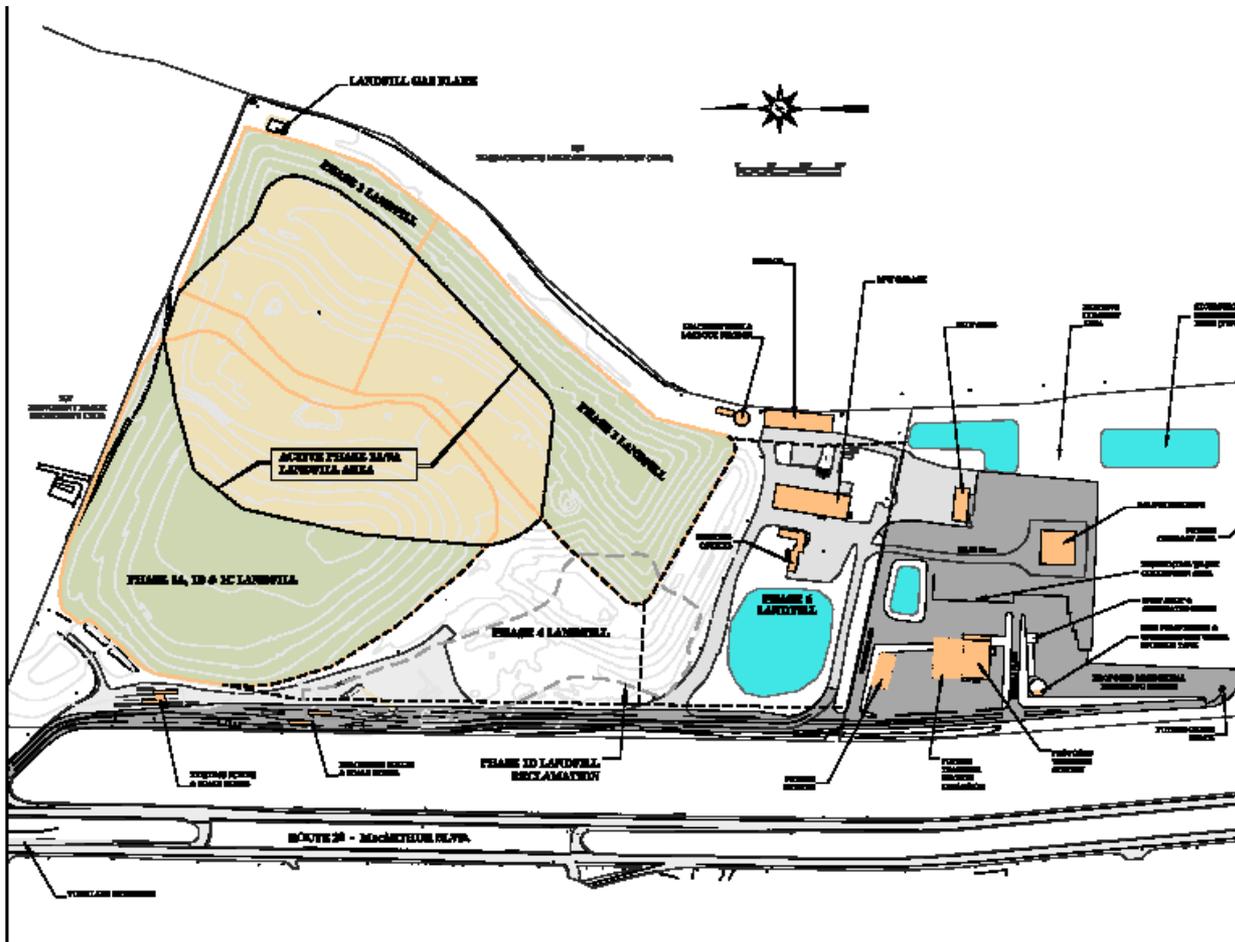
**Waste acquisition planning
and long-term site development**

**Presented to the Town of Bourne
Board of Selectmen
Board of Health
Finance Committee
Energy Advisory Committee**

14 September 2010

The ISWM Business Plan: waste acquisition planning and long-term site development

ISWM today: a solid waste enterprise providing \$ for the Town



ISWM Assets

1. Landfill permitted for disposal of 219,000 tons/year (tpy)
2. Transfer station to handle C&D waste
3. Recycling center with baling facility
4. Compost/organics processing area
5. Infrastructure and space for more development
6. Landfill gas available for beneficial use
7. Upper Cape Regional Transfer Station
8. Cape Light Compact and CVEC affiliation

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ISWM tomorrow: depends on choices made (or not made) today

Phase I: The Landfill Waste Acquisition Plan

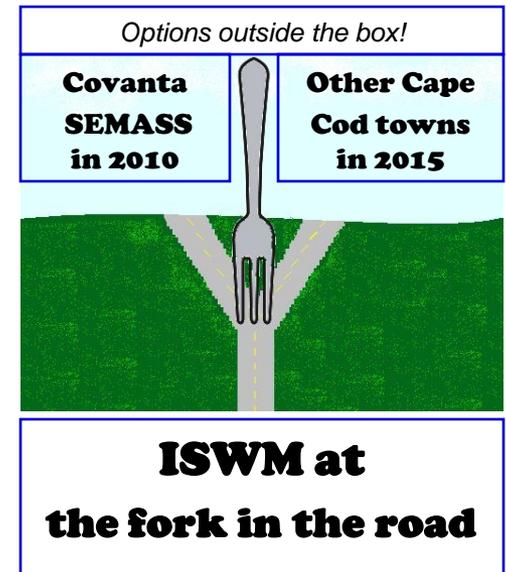
Acquire waste at tip fees that meet targets
Maximize airspace value
Manage risks

Activity: The ISWM staff continues to monitor closely actions of Covanta/SEMASS and the Cape Cod towns

Phase II: The Long-Term Site Development Plan

Provide maximum value for the Town from the entire site

Activity: The ISWM Working Group met with six vendors representing a variety of technology sectors



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Phase II: The Long-term Site Development Plan

Vendor presentations

Vendor	Technology	Space needs	Other key needs
Plankton Power	Enhance algae growth to produce biodiesel at off-site facility	S-T: access L-T: pipeline	Flare output
Brightfields Development	Generate electricity from solar PV on closed landfill	~8 acres on landfill cap	Solar access
Harvest Power	Produce biogas from anaerobic digestion of organic materials	5-6 acres	
National Grid	Treat landfill gas to pipeline quality	< 1 acre + easements	Landfill gas
Turning Mill Energy	Convert C&D wood waste to syngas to produce biodiesel and waxes	5-6 acres	
We Care / MaxWest	Produce syngas to dry biosolids	~ 1 acre	

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Phase II: The Long-term Site Development Plan

Findings from vendor presentation process

1. Vendors are interested in ISWM site, landfill gas and infrastructure
2. Biosolids processing offers a growth opportunity as sewerage expands on Cape Cod
3. DEP moratorium on combustion defers the timeline for MSW processing technologies
4. ISWM can defer solar PV development until landfill cap is ready
5. Landfill gas use options depend on unresolved air permitting issues and terms of business deal with National Grid
6. Town will protect itself against technology risks

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Phase II: The Long-term Site Development Plan Technology risks

Technology	Reference facility	Evaluation concepts
Use CO2 (e.g., Plankton Power)	Bench-scale testing in Woods Hole	R&D process to reach commercial operation
Solar PV (e.g., Brightfields)	Solar PV on landfills in TX, GA; none in MA yet	Impacts on operations, landfill cap, stormwater control systems
AD (e.g., Harvest Power)	Richmond (Vancouver), B.C.	Management of organics; economics of scaled-down systems
Refine landfill gas for pipeline use (National Grid)	Fresh Kills, NY and other large facilities	Gas collection system impacts; high oxygen/balance gas; economics of scaled-down system
Gasify C&D (e.g., Turning Mill)	Experience in Europe and Asia	Technology transfer to US regulatory/economic environment
Gasify biosolids (e.g. We Care)	Sanford, Florida	Management of biosolids at site

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Staff recommendations approved by the Working Group

1. Defer solar PV 2-3 years until landfill areas are ready
2. Review Plankton Power plan to get flare output samples
 - BOS has approved the Letter of Intent
 - ISWM staff will review engineering plan from Plankton Power
 - BOH will review proposed modifications to the flare
 - BOS will review proposed compensation plan
3. Defer RFP on landfill gas until next meeting to investigate air emissions permit issues and National Grid business issues

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Staff recommendations approved by the Working Group

4. Have ISWM staff develop an RFP to lease out the 5.7-acre and 1.1-acre areas
 - Determine minimum lease and performance requirements without picking a technology
 - Clarify that biosolids processing is acceptable
 - Develop business terms to protect the Town from technology risks
 - Develop selection criteria to compare applicable technology experience and performance

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Staff recommendations approved by the Working Group

5. Host a forum in Bourne for Cape Cod policy-makers on MSW commitments starting in 2015
 - Cape Cod Commission plans to release an RFP in 2011 for disposal of MSW post-2015
 - Covanta is marketing post-2015 contracts now to pre-empt the CCC RFP process
 - ISWM has a window to act now before Covanta, the Cape Cod towns and/or the Commission are locked into other commitments
 - A forum for Cape Cod policy-makers would provide information regarding ISWM and gain feedback on waste disposal opportunities

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Next steps

Reconvene large group in January 2011 to address

- RFP to lease sites
- Landfill gas use
- Waste acquisition plan and forum results
- Site tours for interested parties