

SOLID WASTE CAPACITY

Presented by:

State Planning Office

May 26, 2010

Presentation Outline

1. Overview of the system
2. Capacity trends and projections
3. Policy questions

Solid Waste Governance:

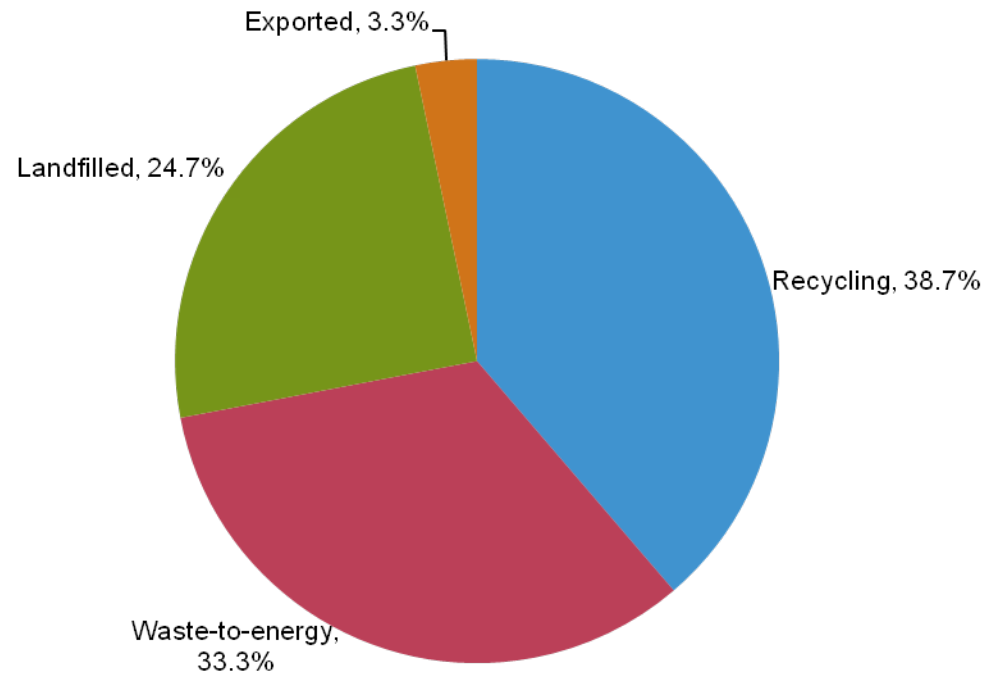
- **Solid Waste Management Hierarchy:** *Reduce, Reuse, Recycle, Compost, Processing of Wastes, Landfill.*
- **State** is responsible for providing landfill capacity to dispose of municipal solid waste and its residues (38 MRSA §2156-A.), with commercial landfills being phased out.
- **Municipalities** are responsible for providing disposal of solid wastes generated by residents and commercial activities within their boundaries.

Sources of Data

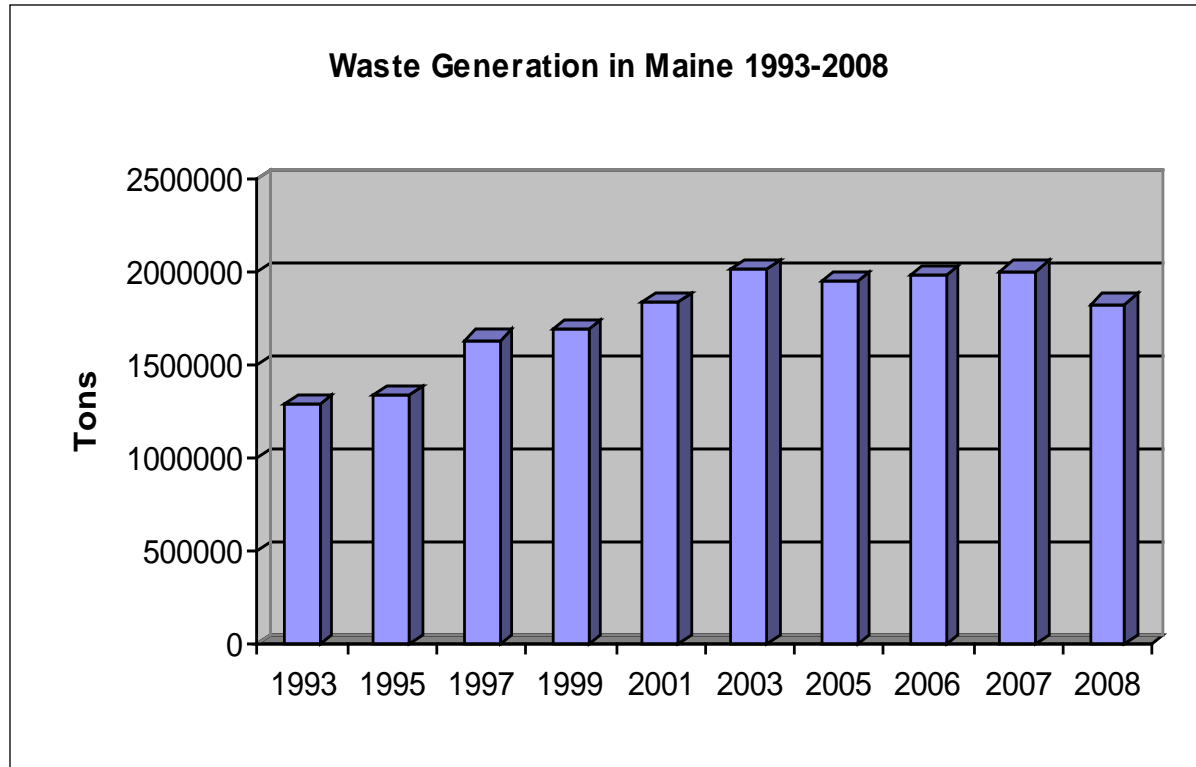
1. Waste to Energy Facilities Reports (SPO)
2. Landfill License Reports (DEP)
3. Municipal Recycling and Disposal Reports (SPO)
4. Commercial Recycling Survey (SPO)

Solid Waste Management Methods

Maine's Solid Waste Management Methods
2008



Waste Generation Trends



Landfills

Municipally owned landfills:

1. Tri-Community (Fort Fairfield)
2. Presque Isle
3. Greenville
4. Hatch Hill (Augusta)
5. Bath
6. Brunswick
7. Lewiston (primarily ash)
8. ecomaine (primarily ash)

Landfills

State Owned Landfills:

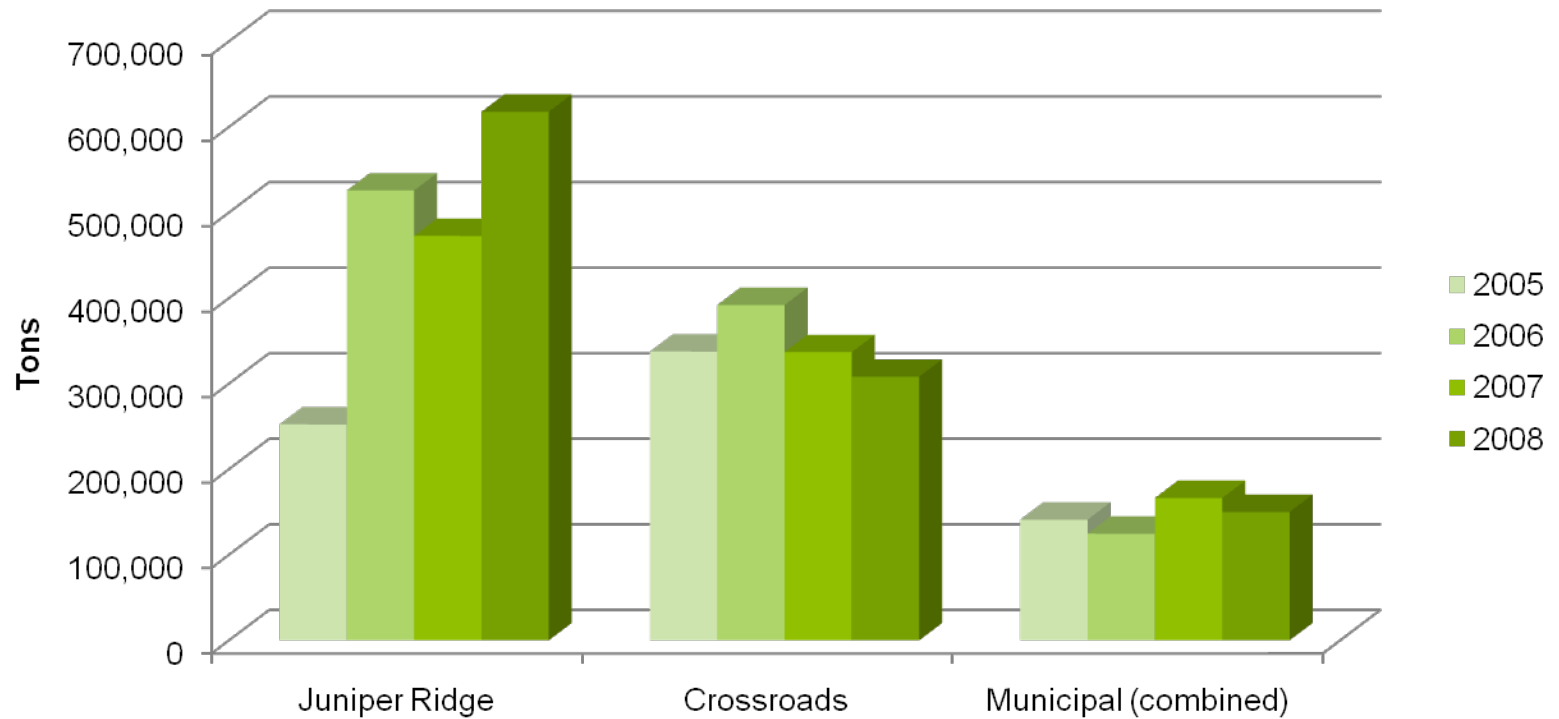
- Juniper Ridge
- Carpenter Ridge (not in operation)

Landfills

Privately owned commercial landfills:

- **Crossroads Landfill** (located in Norridgewock, owned and operated by Waste Management, Inc.)

Landfill Disposal



Waste to Energy Facilities





1. *ecomaine* – Portland – publicly owned
2. Maine Energy Recovery Company (MERC)– Biddeford – privately owned
3. Mid Maine Waste Action Corporation (MMWAC)– Auburn – publicly owned
4. Penobscot Energy Recovery Company (PERC)– Orrington – private/public ownership

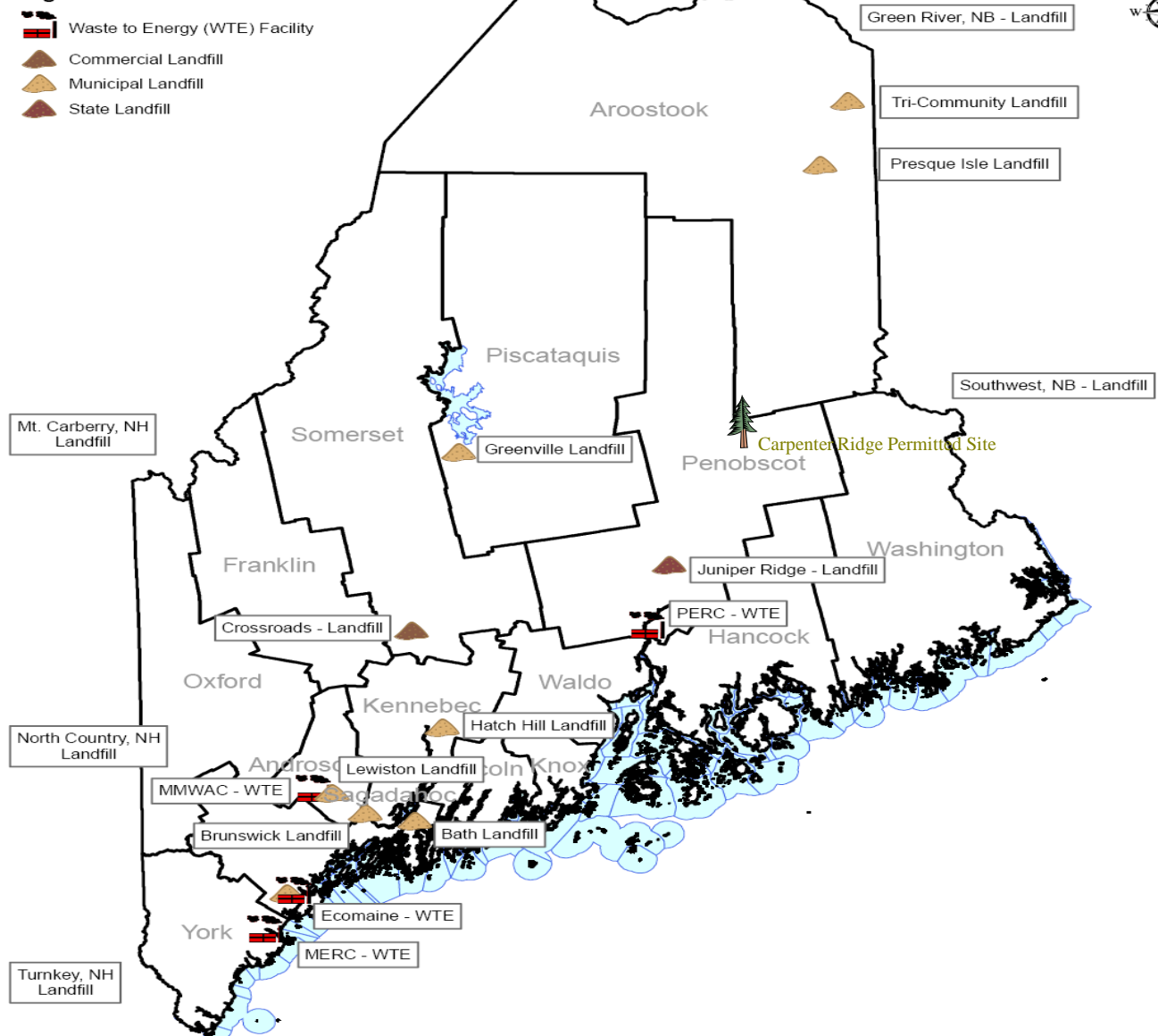


Municipal Solid Waste Disposal



Legend

-  Waste to Energy (WTE) Facility
-  Commercial Landfill
-  Municipal Landfill
-  State Landfill



Notes:
 State Planning Office, Waste Management and Recycling,
 25 State House Station, Augusta, ME 04333-0025
 Telephone: 1-800-562-4545
 For further information visit www.recyclomaine.com
 Printed under appropriation 014 0781685 003208
 Data provided by the Maine State Planning Office
 GIS Coordinator: Janet Parker, May 2010
 Source data from MBGIS, Accuracy ± 40 feet
 Town boundaries, County boundaries
 Projection: UTM, NAD83, Zone 18N, Meters

1:2,154,240
 1 inch = 34 miles
 0 10 20 30 Miles

Waste-to-Energy Facilities

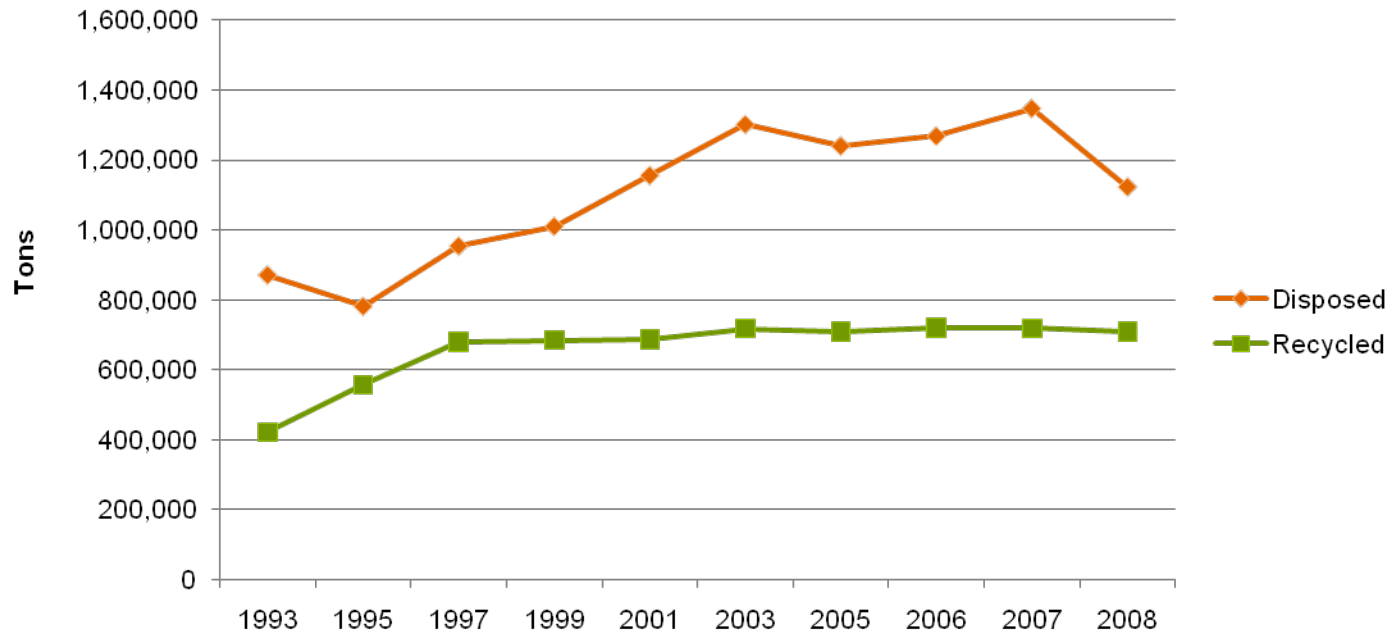
Waste-To-Energy Facility	Tons received in 2008	Energy Generation Capacity
ecomaine	162,680	14 MW
Maine Energy	287,943	21 MW
Mid Maine WAC	87,872	3.6 MW
Penobscot Energy	312,365	25 MW
Totals	850,860	63.6 MW

Types of Waste Exported

- MSW
- CDD
- Medical—pathological and chemical
- Low level nuclear and radioactive
- Hazardous
- Recyclables (glass, plastic, paper, metal)

Disposal & Recycling Efforts

Maine Solid Waste Disposed vs. Recycled
1993-2008



Barriers to Increased Recycling

- Consumer perception of difficulty, inconvenience
- Lack of investment in recycling programs and infrastructure
- Not all municipal recycling programs accept full range of recyclables

Barriers to Recycling (cont.)

- CDD, food and yard waste not often recycled at the local level due to budget constraints, lack of investment, lack of critical mass
- No enforcement provisions for commercial recycling

Capacity: Key Findings

- Solid waste volume decreased with economic downturn – decrease of 8.7% in 2008 from 2007 rate.
- Mainers continue to recycle more.
- Waste to Energy facilities decrease the volume of waste requiring landfilling by about 85-90%.
- Waste to energy plants import waste to meet operational needs and requirements for power contracts.

Capacity: Key findings

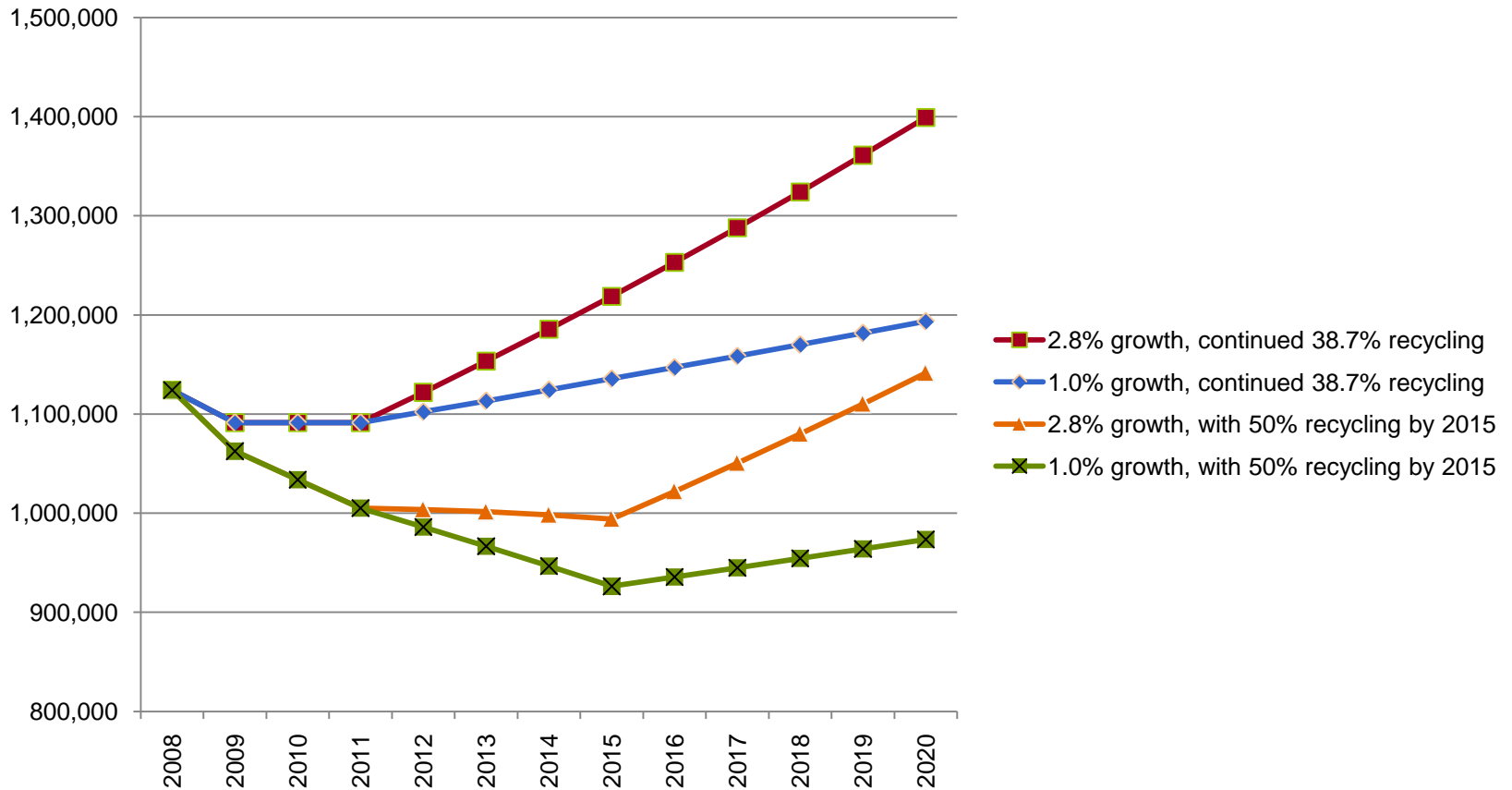
- Increased recycling will reduce landfill capacity needs but may increase imports to WTE plants.
- Recycling is more cost effective than building new landfill capacity. Preliminary estimates: \$5-6 M to build recycling to 50%, \$30 M to build equivalent landfill capacity.
- Maine has sufficient overall disposal capacity, assuming status quo activity, until 2018.

Capacity: Key findings

- The process to permit additional landfill capacity needs to commence within the next 1-2 years.
- Overall Maine's solid waste industry is diverse and competitive; a mix of public and private investments and services.
- Landfill disposal prices have remained stable from 2005-2008.

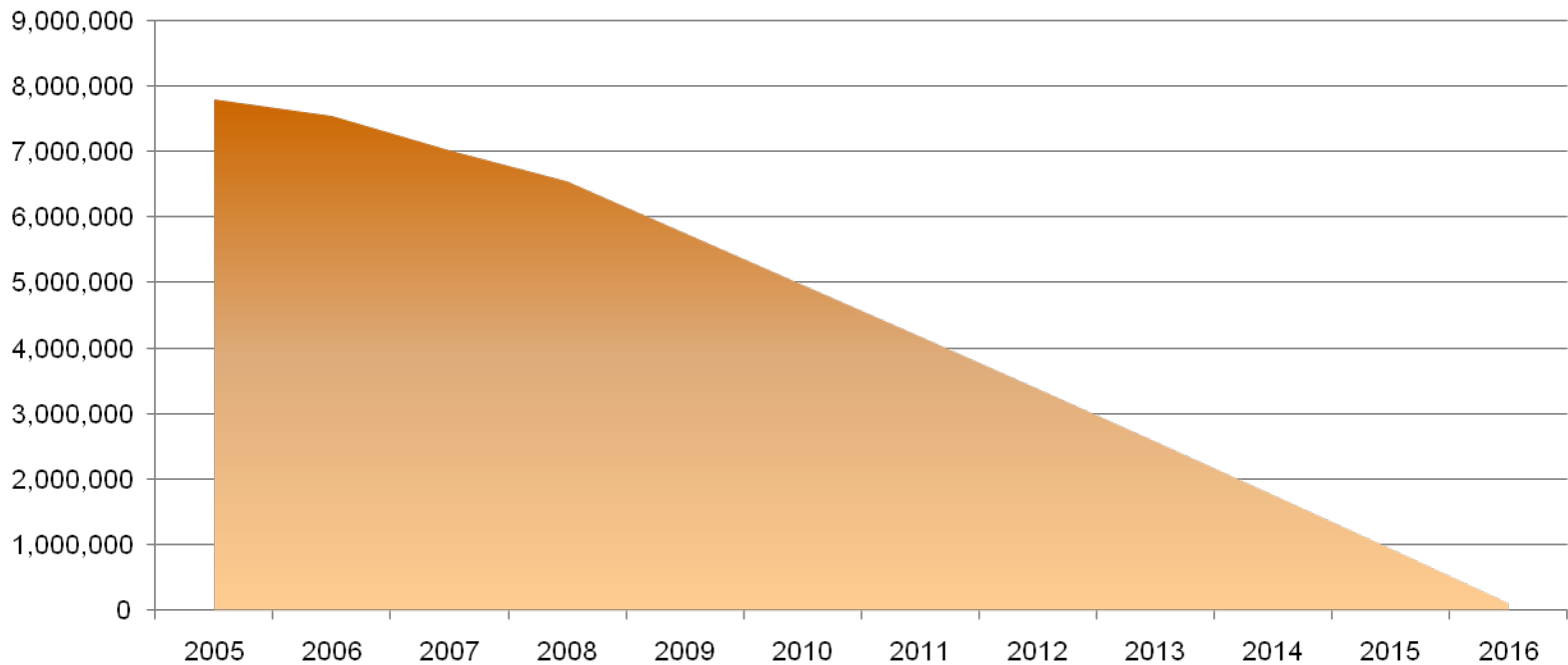
Capacity Projections

Actual Tons of MSW Requiring Disposal



Juniper Ridge Capacity

Juniper Ridge - Remaining Capacity (tons)



Assumes 1% annual growth and 38.7% recycling ratio

Capacity Projections: Status Quo Assumptions

- Recycling continues to increase slowly, sustaining the 38.7% recycling ratio
- MSW imports continue, gradually decreasing as more waste is generated in Maine
- Exports remain the same as 2008
- Ban on new commercial landfills continues
- No significant changes in WTE activities
- Existing landfills continue operations; expansion licenses granted in Ft. Fairfield and Presque Isle.

Capacity Projections: Many Variables

- Changes in recycling effort
- Expansions or closures of facilities
- Economic fluctuations impacting amount of MSW generated
- Competition, management, methods, and technology
- Fuel agreement associated with Juniper Ridge Landfill Operating Services Agreement
- Compaction and settling of wastes at landfills

Permitting Process for New (Greenfield) Landfill Capacity

- 1 YR: Legislative consideration
- 1 YR: Public benefit determination and application
- 2.5 YRS: DEP permit review
- 1.5 YRS: Appeals and legal challenges
- 2 YRS: Construction
- **8 YRS: Total time needed**

Permitting Process for Landfill Expansion

- Pine Tree expansion actual: 4 years
- Height expansion at JRL, no public benefit determination, no appeals: 2.5 years
- Expansion at JRL estimated time, with public benefit determination and appeals: 5 years

Key Policy Questions

1. Does Maine want to change current policy to increase recycling by either increasing incentives and/or mandating that certain materials be recycled?

SPO Recommendations:

- *Extend disposal ban to include recycling corrugated cardboard. Recycling rate projected to increase to 44%.*
- *Encourage towns to compost yard waste, recycle CDD, join regional programs for recycling, etc.*

Key Policy Questions

2. Does Maine—either the state, municipalities or both--want to invest in public recycling infrastructure or landfill capacity? If so, should this be funded through borrowing, fees or some other mechanism?

Key Policy Questions

3. Does Maine want to continue its ban on new commercial landfill capacity to help control the importation of solid waste, or remove the ban to foster landfill capacity?

Does the state still intend to have just one landfill to serve the needs of the state?

Further Resources

- **Webpage:**
www.maine.gov/spo

Reports available for download:

- Solid Waste Generation and Capacity Report
- Assessment of State-owned Landfill: Management and Oversight
- Recycling in Maine Municipalities: What Makes it Tick?
- Waste or Resource: Rethinking Solid Waste Policy
- etc.