

New York State Climate Leadership and Community Protection Act

December 4, 2020

Meeting 1 Waste Emissions Advisory Panel



**Climate Action
Council**

Climate Leadership and Community Protection Act (CLCPA) – Overview

Carbon neutral economy, mandating at least an 85% reduction in emissions below 1990 levels

40% reduction in emissions by 2030

100% zero-carbon electricity by 2040

70% renewable electricity by 2030

9,000 MW of offshore wind by 2035

6,000 MW of distributed solar by 2025

3,000 MW of energy storage by 2030

185 TBtu on-site energy savings by 2025

Commitments to climate justice and just transition

Delivering the CLCPA



Advisory Panels and Working Groups

Six Advisory Panels (Plus One):

- > Sectors: Transportation, Agriculture/Forestry, Land Use/Local Government, Power Generation, House/Energy Efficiency, Energy Intensive/Trade Exposed Industries.
 - **Waste Emissions added by CAC on November 24, 2020**
- > Chaired by Climate Action Council Commissioner or designee.
- > Advisory Panel to determine scope of work, within the emissions sector.

Just Transition Working Group:

- > Co-Chaired by Commissioner of Labor and President & CEO of NYSERDA; includes Commissioner of Housing and Community Renewal and Chair of the Public Service Commission.
- > Scope of work includes jobs report, workforce training needs, power plant site reuse opportunities.

Climate Justice Working Group

- > First meeting on August 14, 2020

Adopt a Scoping Plan

Directions to the Council

- > Adopt a Scoping Plan of recommendations for achieving GHG limits
- > Recommend measures to achieve the GHG limits, including carbon neutral economy
- > Evaluate the costs and benefits, both economic and non-economic and including co-benefits, of the measures for reducing GHGs
- > Identify measures to maximize reductions of both GHGs and co-pollutants in disadvantaged communities

Process

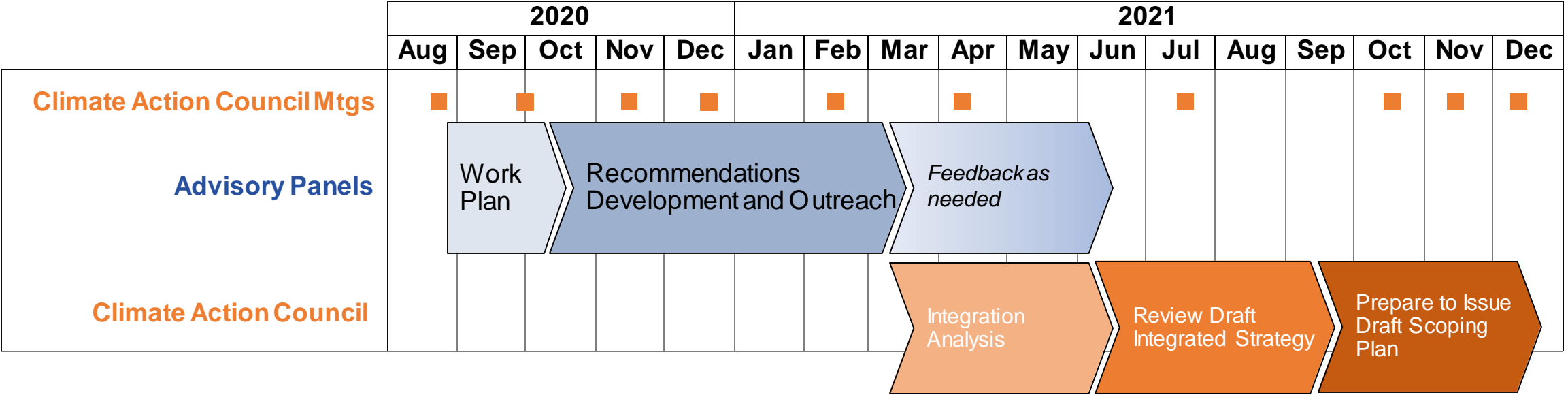
- > Receive recommendations from Advisory Panels, Just Transition Working Group
- > Consult with Climate Justice Working Group and Environmental Justice Advisory Group
- > Hold 6 public comment hearings on the draft Scoping Plan
- > Update every 5 years

Scoping Plan Contents

At a minimum, contains measures for:

- > Performance-based standards for GHG sources
- > Reducing electricity sector emissions, advancing achievement of the clean energy requirements
- > Limiting use of synthetic GHGs
- > Land-use and transportation planning
- > Reducing energy use in existing residential or commercial buildings
- > Achieving long-term carbon sequestration
- > Promoting best management practices in land use
- > Aiding in the transition of the state workforce to the clean energy economy
- > Limiting emission leakage

Timeline to Draft Scoping Plan



Considerations for the Waste Emissions Advisory Panel

This Advisory Panel has a unique charge.

- > Other Advisory Panels have had more time to develop recommendations.
- > Waste management touches many different aspects of life and potential emissions.
- > COVID-19 has affected the logistical and financial challenges associated with waste management.
- > Climate impacts also support well recognized goals of waste management such as increased waste reduction, reuse, and recycling.

CLCPA Emission Reduction Requirements

The Scoping Plan must address:

- > 40% reduction in GHG emissions by 2030, from 1990 levels
- > 85% reduction in GHG emissions by 2050, from 1990 levels
- > 100% emission reduction – or net zero emissions – by 2050

These requirements cover the *entire* economy.

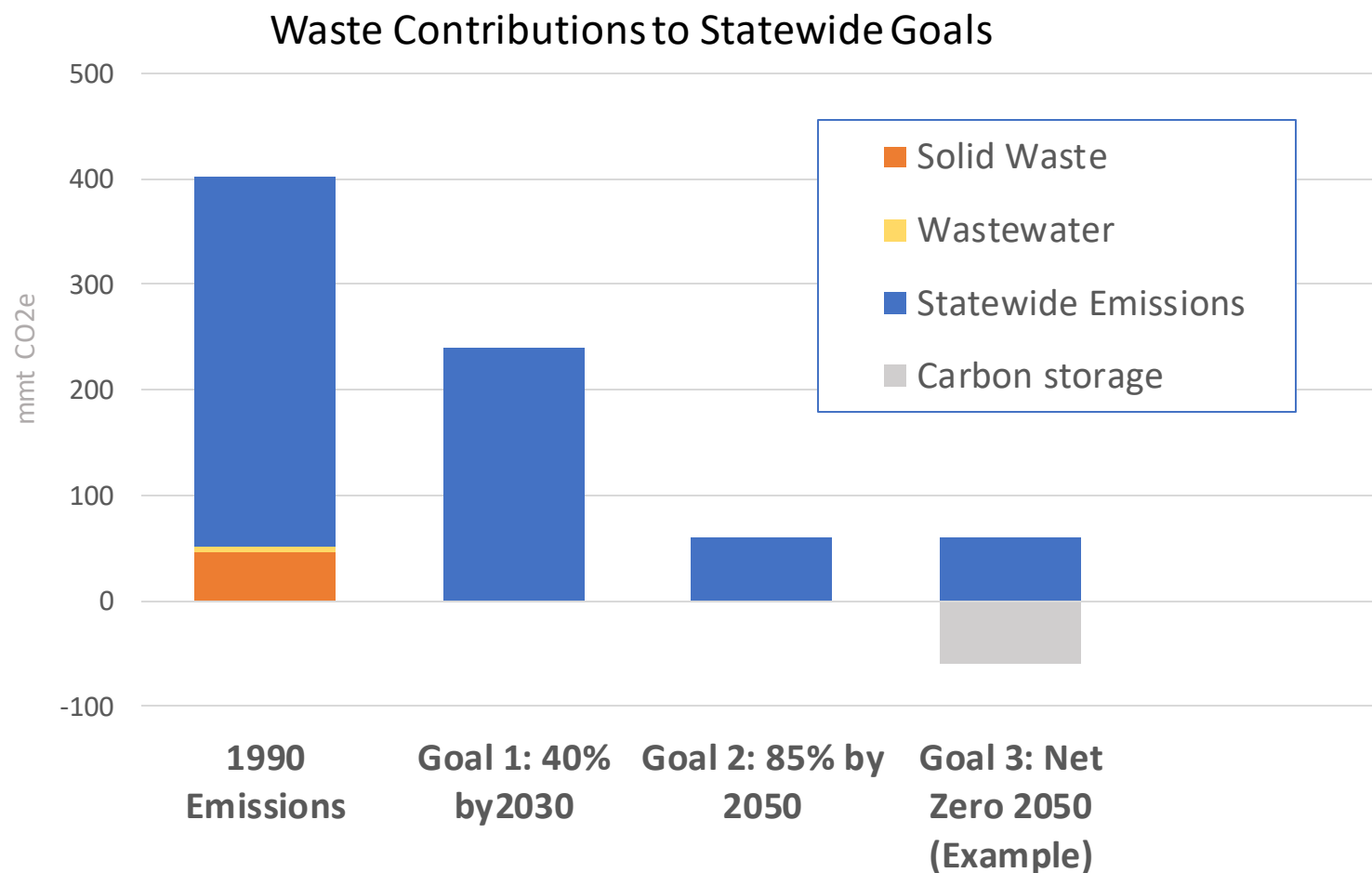
Although there are other sectors with bigger potential GHG impacts, waste management plays a role.

CLCPA Emission Reduction Requirements

The emission requirements are statewide, with contributions from across all parts of the economy.

Your recommendations should:

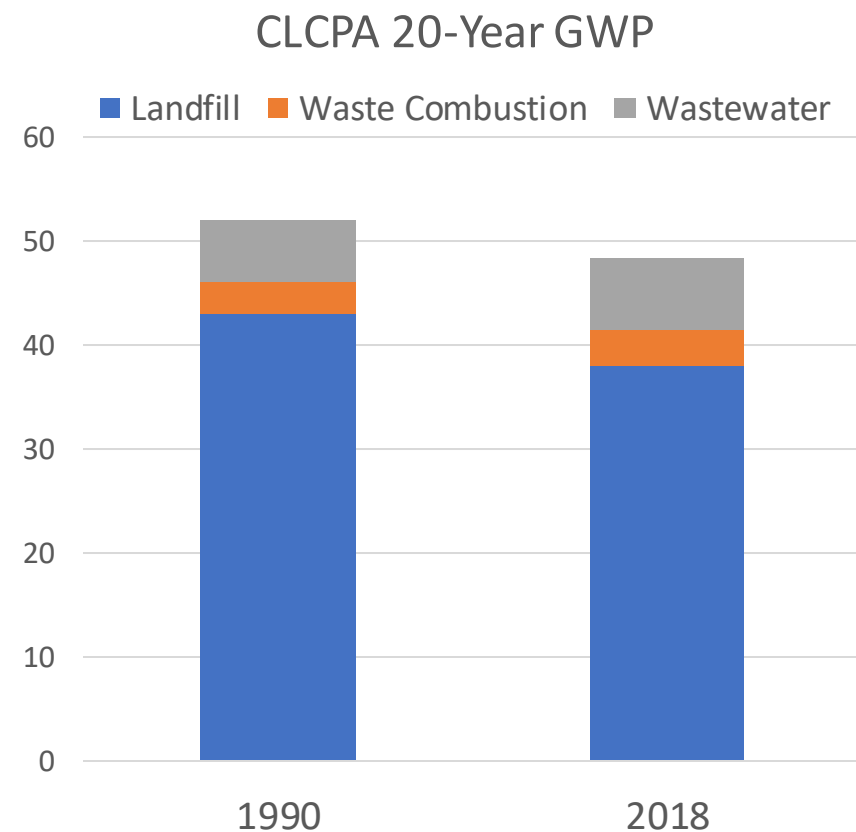
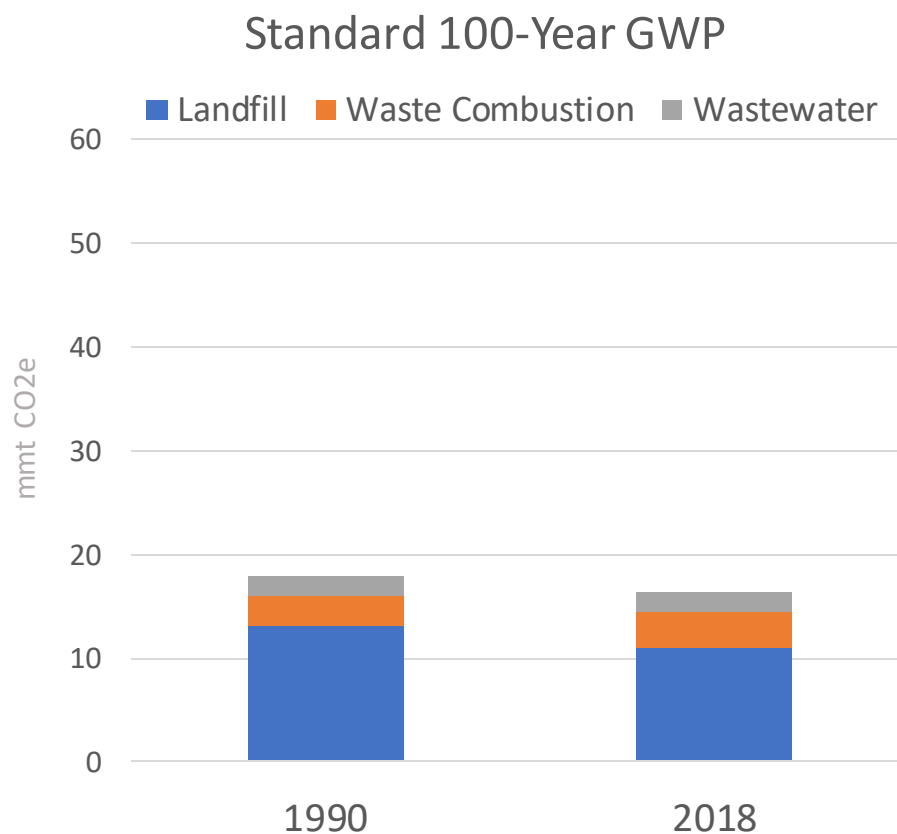
- > Maximize emission reductions.
- > Enhance carbon sequestration. This will be used to address unavoidable emissions across the whole economy.



Values are approximate

Waste Emission Trends Since 1990*

> Two key takeaways: Emissions haven't changed but the CLCPA highlights methane sources.



Based on current estimates



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Waste Emissions Advisory Panel Charge and Workplan

Deputy Commissioner Martin Brand,
Department of Environmental Conservation

November XX, 2020

General Advisory Panel Work Product

Each advisory panel is expected to:

- Identify a range of emissions reductions, consistent with analysis and in consultation with the CAC, for the sector which contributes to meeting the statewide emission limits.
- Present a list of recommendations for emissions reducing policies, programs or actions, for consideration by the Climate Action Council for inclusion in the Scoping Plan.
 - Recommendations should identify the estimated scale of impact, knowable costs to achieve, ease of deployment or commercial availability, potential co-benefits to emissions reduction, advancement of climate justice outcomes, and impacts to businesses.
 - Recommendations may be informed by quantitative analysis or qualitative assessment.
- Recommendations should be sector-based.
 - The panels should not rely on economy-wide policies to achieve emission reduction goals but can recommend that the Council consider economy-wide policies if needed to advance certain sector-specific policies.
 - Cross-sector recommendations should be advanced only after consultation with the appropriate panels.
 - Recommendations should include climate adaptation and resilience considerations.



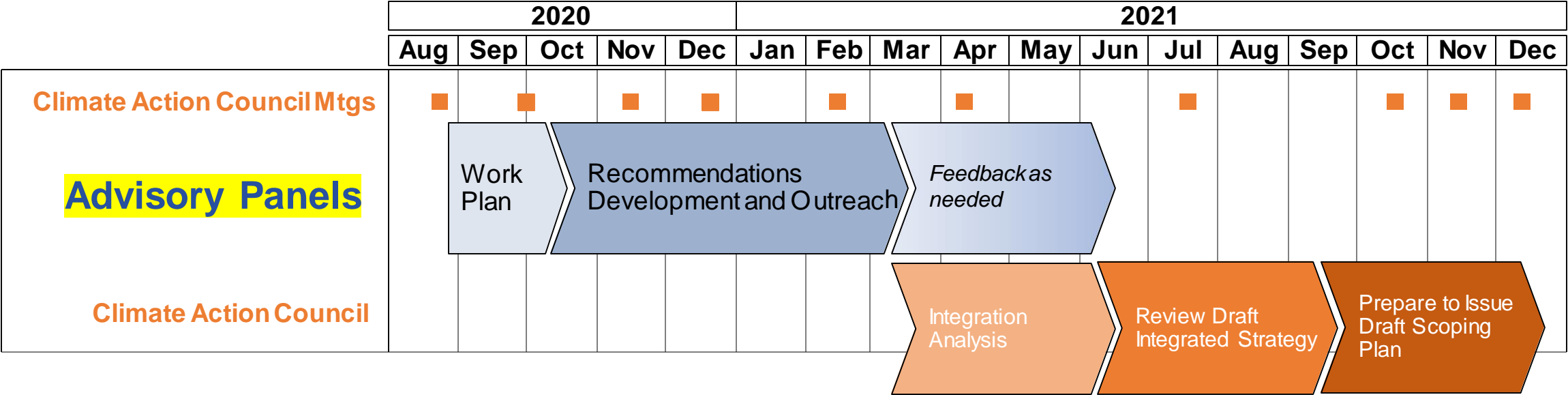
Advisory Panel Consultation



Each advisory panel shall:

- Meet at least once a month and provide regular updates to the Council on the advancement of its work.
 - Present (oral or written) progress reports at Council meetings and solicit feedback.
 - Provide final recommendations in accordance with the Scoping Plan development schedule.
- Consult with the Climate Justice and Just Transition working groups to inform its recommendations for the Climate Action Council.
- Seek public input to inform the development of recommendations to the Council for consideration.
 - Panels may seek input from selected expertise in a subject area, as determined necessary by the members.
 - Panels shall, during the next six months, hold at least one forum to receive broad-based public input.
 - Provide transparency by making meetings open to public viewing or/and publishing minutes of deliberations.
- Make available information regarding advisory panel public meetings and comment opportunities on the climate.ny.gov webpage.

Timeline for Advisory Panels to Develop Recommendations



Focus on Waste Emissions



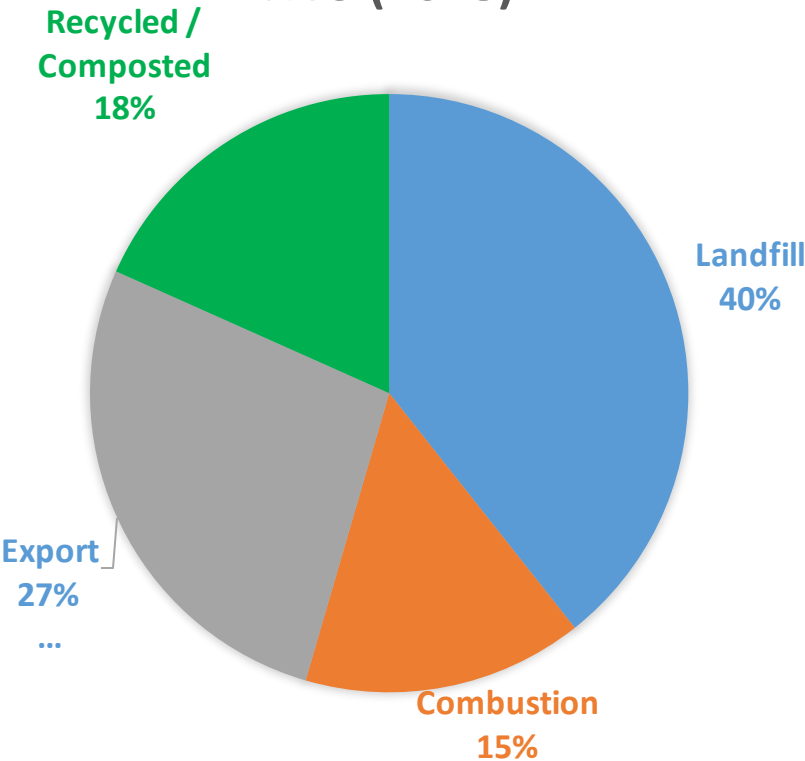
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Outline

- Current status of Waste Management in New York State
- Sources of GHG emissions in the waste management sector
- Potential actions for waste management to help achieve the CLCPA goals
- Means to achieve actions
- Quantification of emissions
- Where do we go from here? Advisory Panel Recommendations

Waste Management in New York State

END USE OF MSW GENERATED IN
NYS (2018)



MSW Destination	Tons (2018)
Landfill	7,174,868
Combustion	2,764,004
Export	4,954,487
Recycled / Composted	3,341,051
Total MSW Generated	18,234,411

Waste Management in New York State

Solid Waste Management Facilities

SWM Facility Type	No. Facilities in NYS	Waste Quantity Processed Annually (tons, 2018)
Landfills		
Active	48	12,449,736
Inactive		N/A
Combustors	10	4,102,558
Recycling		
Organics*	256	-
MRFs	342	2,802,699
CDDHRFs	488	15,693,857
Transfer Facilities	529	13,812,364

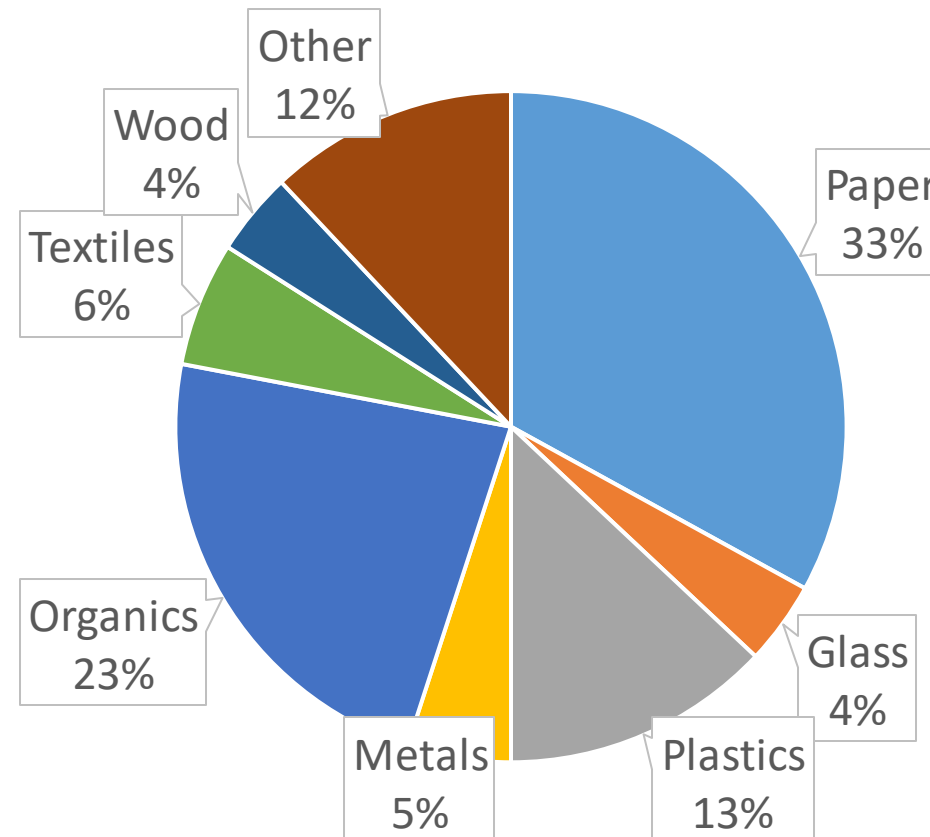
*Biosolids, septage, and mulch operations were not included in the organics facilities figures.



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Waste Management in New York State

MSW Generated – Material Composition



Waste Management in New York State

Landfills



Landfill Type	No of Landfills in NYS
MSW LF	26
C&D Debris LF	9
Insustrial LF	8
LI LF	5
Total:	48

Landfill Disposal Data (2018)					
Waste Type*	MSW LFs	C&D Debris LFs	Industrial LFs	LI LFs	Total Disposed (tons)
MSW	6,824,709			28,960	6,853,669
C&D Debris	2,433,562	1,011,999		1,769,139	5,205,700
Industrial Waste	1,210,378		236,751		1,447,128
Biosolids	526,214				526,214
MWC Ash	272,117			406,582	678,699
Total:	11,266,980	1,011,999	236,751	2,195,681	14,711,410

* Includes waste used as alternative operating cover and in landfill construction

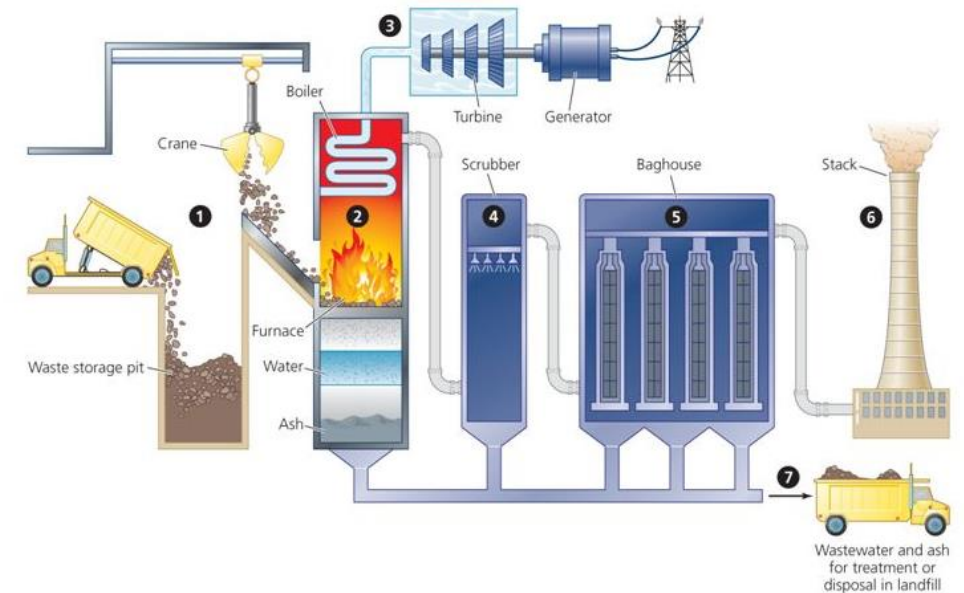


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Waste Management in New York State

Combustors

Waste Combusted in NYS	
Waste Type	Total Managed (tons)
MSW	3,696,680
C&D Debris	143,096
Industrial Waste	255,663
Biosolids	7,119
Total:	4,102,558



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Waste Management in New York State

Biosolids

Biosolids End Use (2015)		
End Use Method	Generated (dry tons)	No. POTWs Using Method
Landfill		310
In-State	164,279	-
Out-of-State	93,183	-
Combustion	58,031	87
Recycling*	60,999	90
Other**	1,170	93



*Land app, compost, heat drying, mine reclamation - some out of state

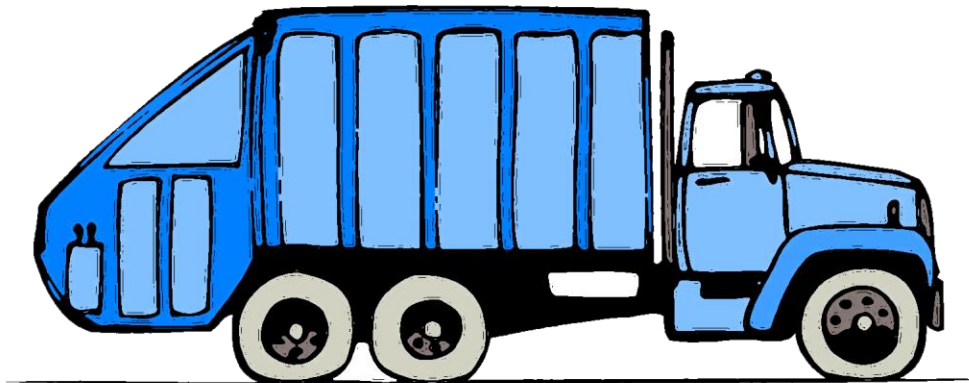
**Some managed outside of NYS



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Waste Management in New York State

Transportation



Part 364 Transporters

23,300 Registered or Permitted Waste Transport Vehicles

Rail Transportation

SWM Facility Type	No of Facilities with Rail Access
Landfills	3
Combustors	1
Other (TFs, CDDHRFs, RHRFs)	15

Potential GHG Emission Sources – Waste Mgmt in NYS

- Common to many – Transportation
- Landfills
 - Methane from waste degradation & loss due to leaks
- Combustion
 - Carbon Dioxide
- Anaerobic Digesters (WWTPs, farms, other)
 - Methane from valve leaks, etc.
- Refrigerants
 - Fluorocarbon compound leaks



Potential Actions to Reduce Emissions

- Transportation
 - Reduce fossil fuel use
 - Reduce miles driven
- Landfills
 - Reduce methane leaks
 - Reduce methane generating waste placed in landfills
 - Increased reduction, reuse, and recycling, including EPR (Extended Producer Responsibility) and organics recycling (composting, AD, animal feed, etc.)
 - Increased combustion
- ADs (WWTP, farms, other)
 - Improve monitoring and controls to reduce leaks
- Refrigerants
 - Tighter controls



Potential Means to Achieve Emission Reduction Goals

- Transportation
 - Provide information to Transportation Advisory Panel
- Landfills: Methane Generation
 - Legislation to establish EPR framework
 - Amend 2019 Food Donation and Food Scraps Recycling Law to ultimately include all food scraps generators
 - Surcharge on landfilling of methane producing waste and/or limit the amount that can be landfilled
 - Explore alternatives to biosolids landfilling
 - Financial support and policy for reduction, reuse, and recycling (including composting and AD)
 - Expand and support combustion or alternative processing (MSW composting, preprocessing, etc.) as preferred alternative to landfill
 - Expansion of the Bottle Bill
 - Financial/other assistance for recycling markets
 - Expand organics markets (compost, digestate, others)
 - Expand Universal Waste designation



Means to Achieve Emission Reduction Goals (cont.)

- Landfill: Methane Leaks
 - Regulatory changes to increase monitoring and remediation
 - Regulatory changes to require design/operational changes
- Methane leaks at anaerobic digesters
 - Financial support for WWTPs to upgrade ADs
 - Financial support for farms to monitor for leaks and eliminate
 - Regulatory requirements for regional ADs to monitor for methane leaks and to eliminate
- Refrigerants
 - Include in EPR legislative program
 - Increased monitoring and enforcement

Quantification of Emissions

Reductions achieved by
reducing landfilling:

Method: WARM Model

Challenges:

- Estimating the amount of reduction that can be achieved in each category (paper, food waste, etc.)
- Establishing 1990 baseline
- Accounting for reduced methane leakage



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Quantification of Emissions (cont.)

Reducing methane leaks from ADs:

Method: Determine amount currently leaking (as well as 1990) and potential reductions

Challenges:

- Data on leaking is very limited



Quantification of Emissions (cont.)

Reducing refrigerant leaks:

New estimates are forthcoming.

Method: Determine amount currently leaking, End-of-Life leakage and potential reductions

Challenges:

- How to encourage leak management / recovery



Where do we go from here?

- Refinement of Goals and Actions
- Quantification of Emissions (DEC is working on)
- Coordination with other Panels concerning overlapping issues
- Development of Recommendations for CAC

Thank You

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Waste Advisory Panel Members

Name	Association
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Brigitte Vicenty	Inner City Green Team
Tok Michelle Oyewole, Ph.D.	NYC Environmental Justice Alliance
Jane Atkinson Gajwani	New York City DEP
Dereth Glance	Onondaga Co Resource Recovery Agency
Steve Changaris	National Waste & Recycling Association
Eric Goldstein	NRDC
Resa Dimino	Resource Recycling Systems
Michael Cahill	Germano & Cahill, P.C.
Allen Hershkowitz	Green Sports Alliance
Paul Gilman	Covanta
John W. Casella	Casella Waste Systems
Lauren Toretta	CH4 Biogas

