

Solid Waste Disposal Capacity Issues

ASTSWMO HW-MM JOINT TRAINING
BREAKOUT SESSION, AUGUST 24, 2022

Agenda & Speakers

National Picture

- Kathryn Perszyk, MM Subcommittee Chair
- kathryn.perszyk@deq.virginia.gov

Drill Down: New England Area & CT Picture

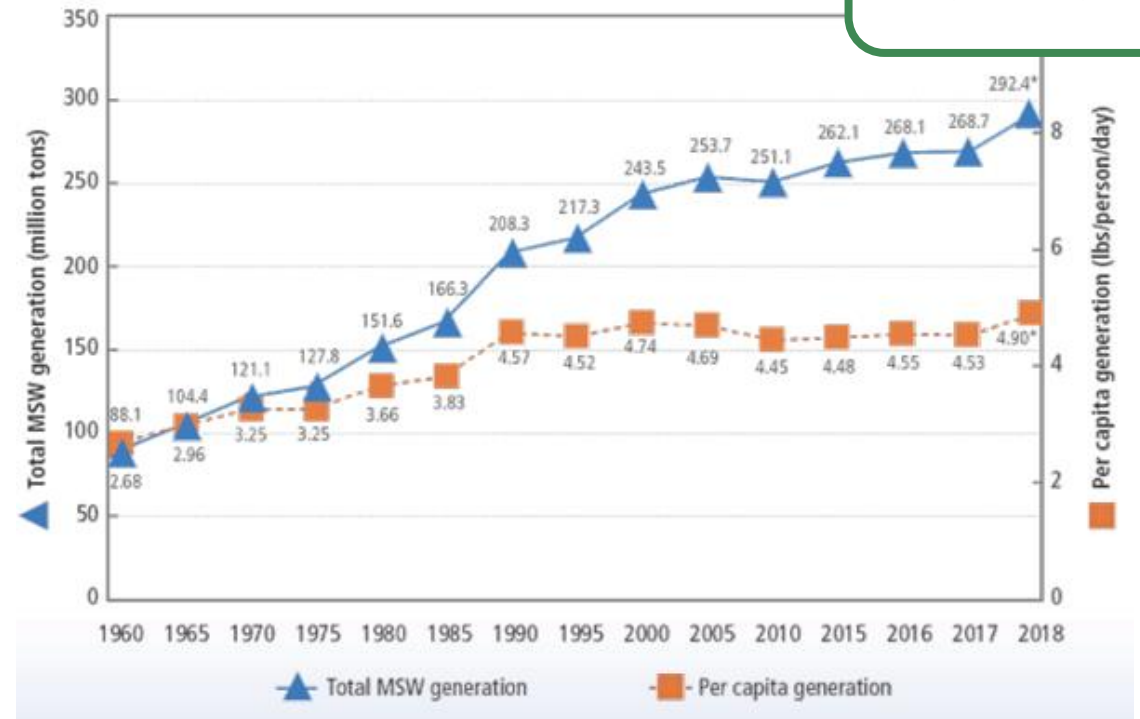
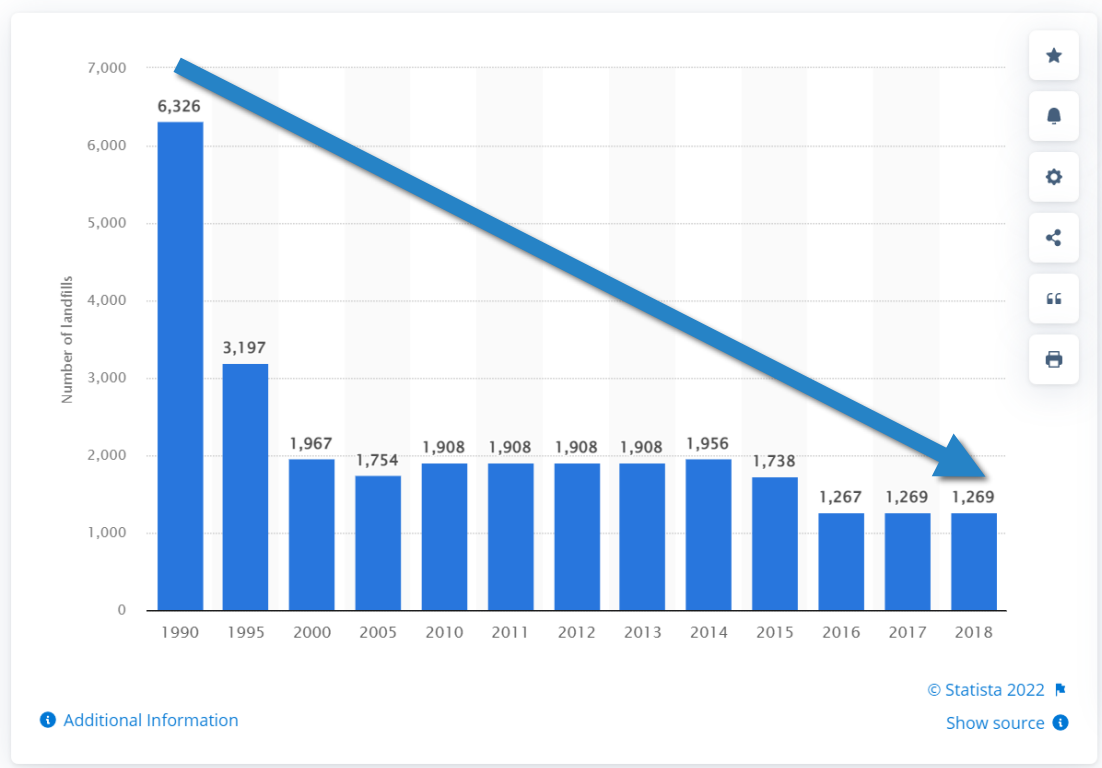
- Gabrielle Frigon, Region 1 Board Rep
- gabrielle.frigon@ct.gov

Your State Experience

- YOU!

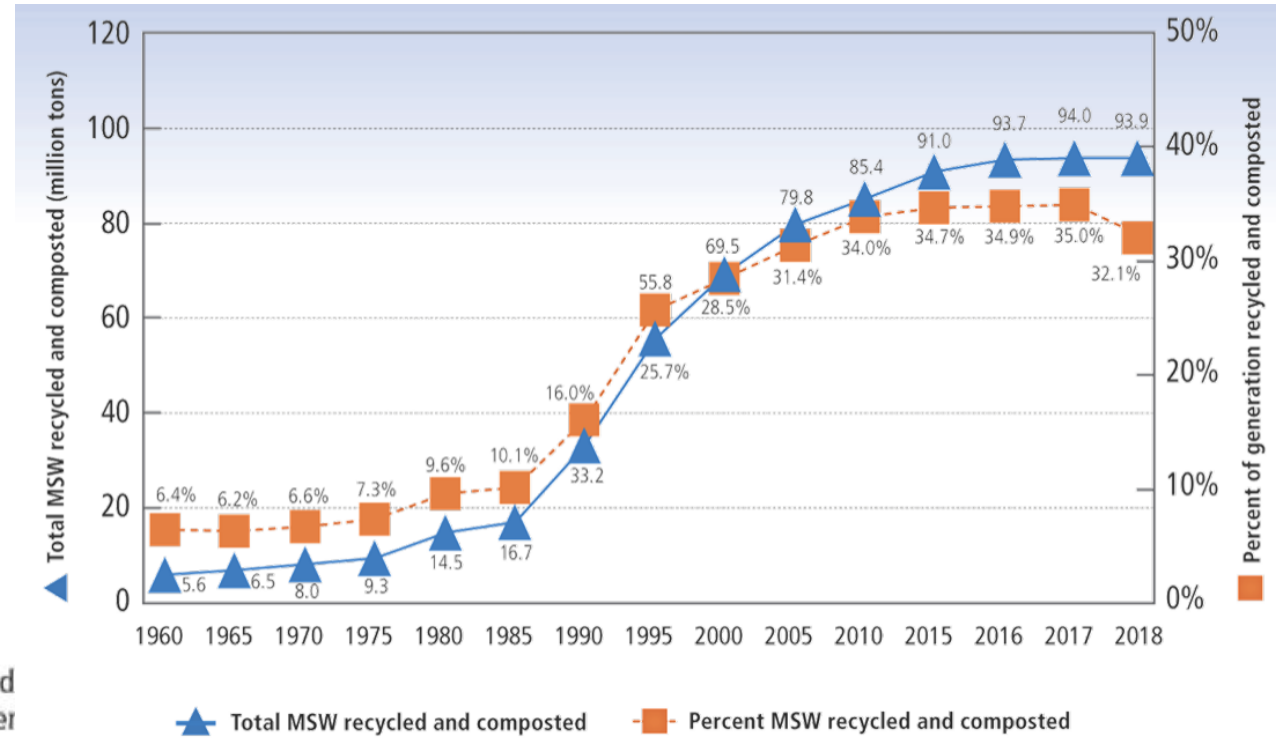
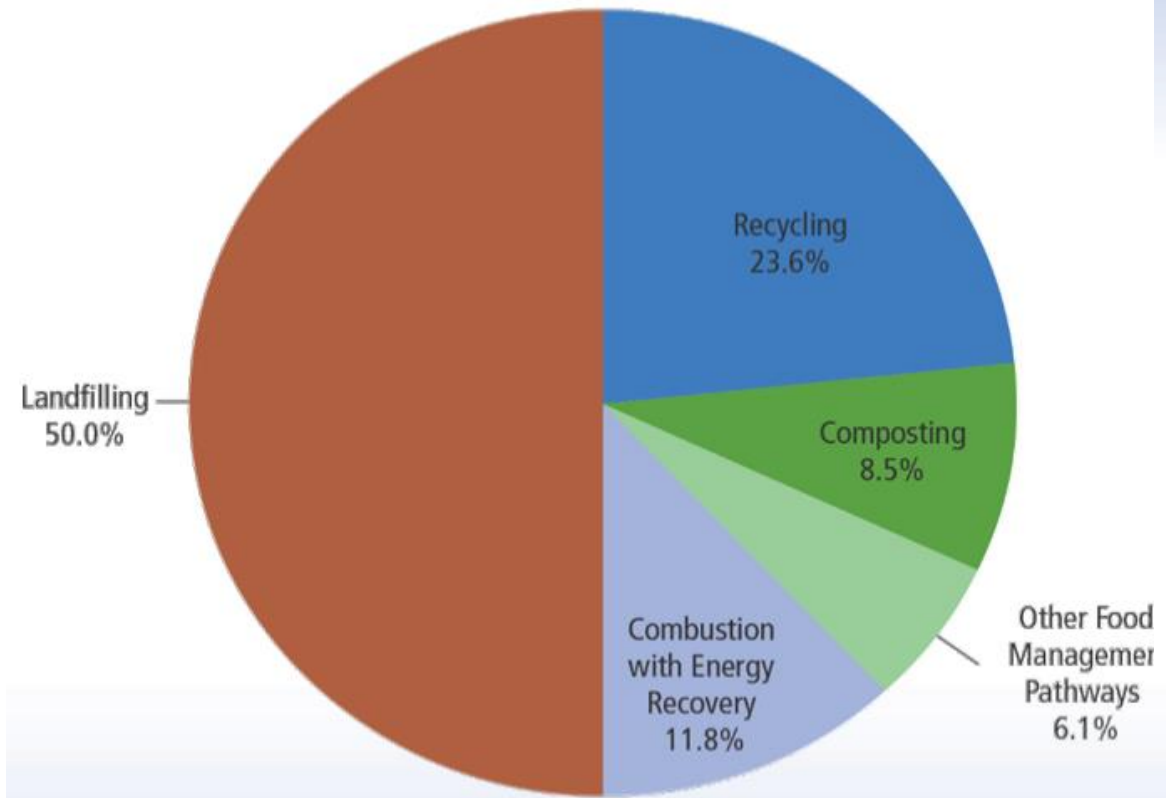
Landfills vs. Waste Generation

4.9 lbs/person per day



<https://www.statista.com/statistics/193813/number-of-municipal-solid-waste-landfills-in-the-us-since-1990/>
[https://www.epa.gov/sites/default/files/2021-01/documents/2018 ff fact sheet dec 2020 fnl 508.pdf](https://www.epa.gov/sites/default/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf)

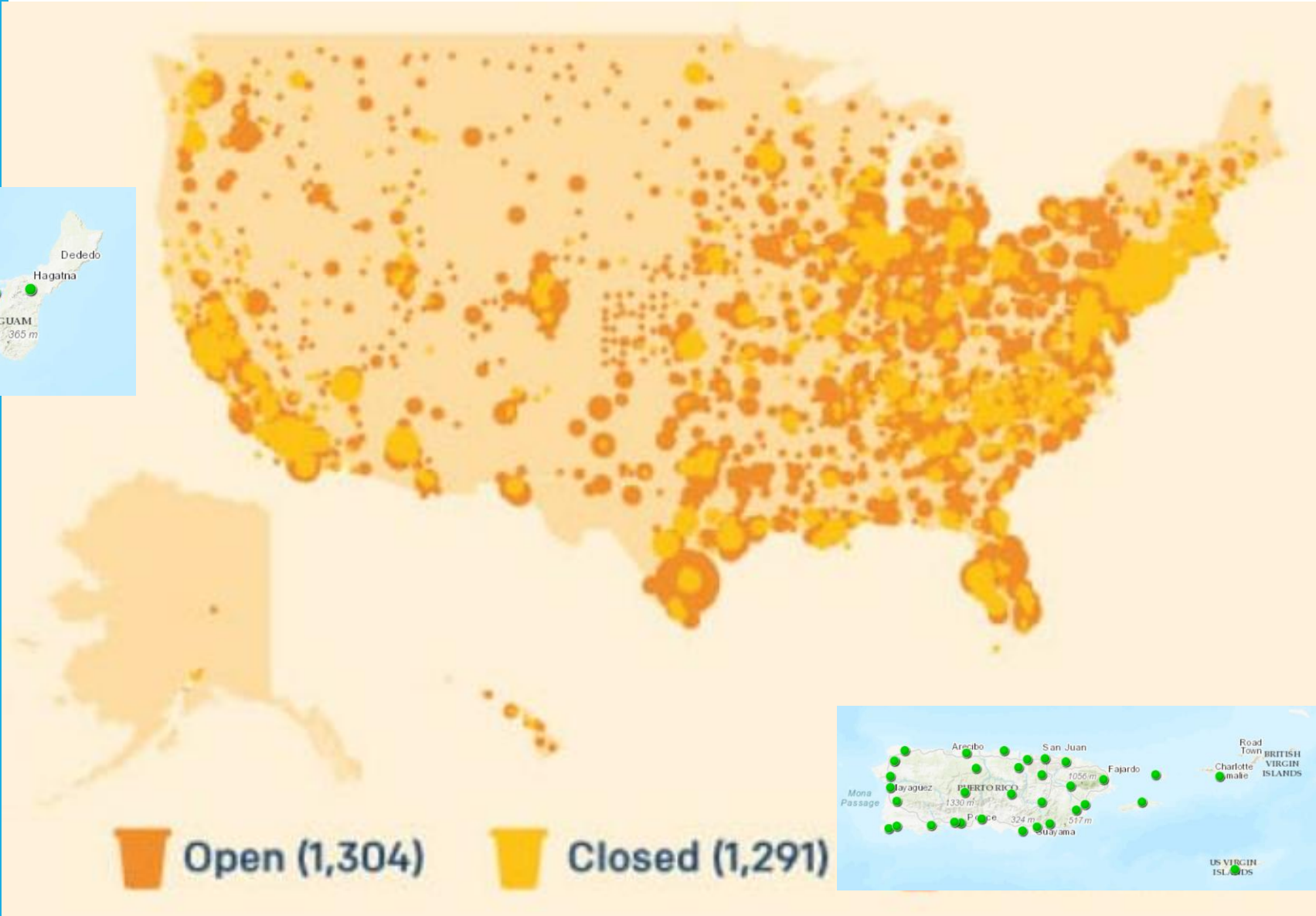
Not all waste goes to Landfills



Source: EPA Facts & Figures, 2018

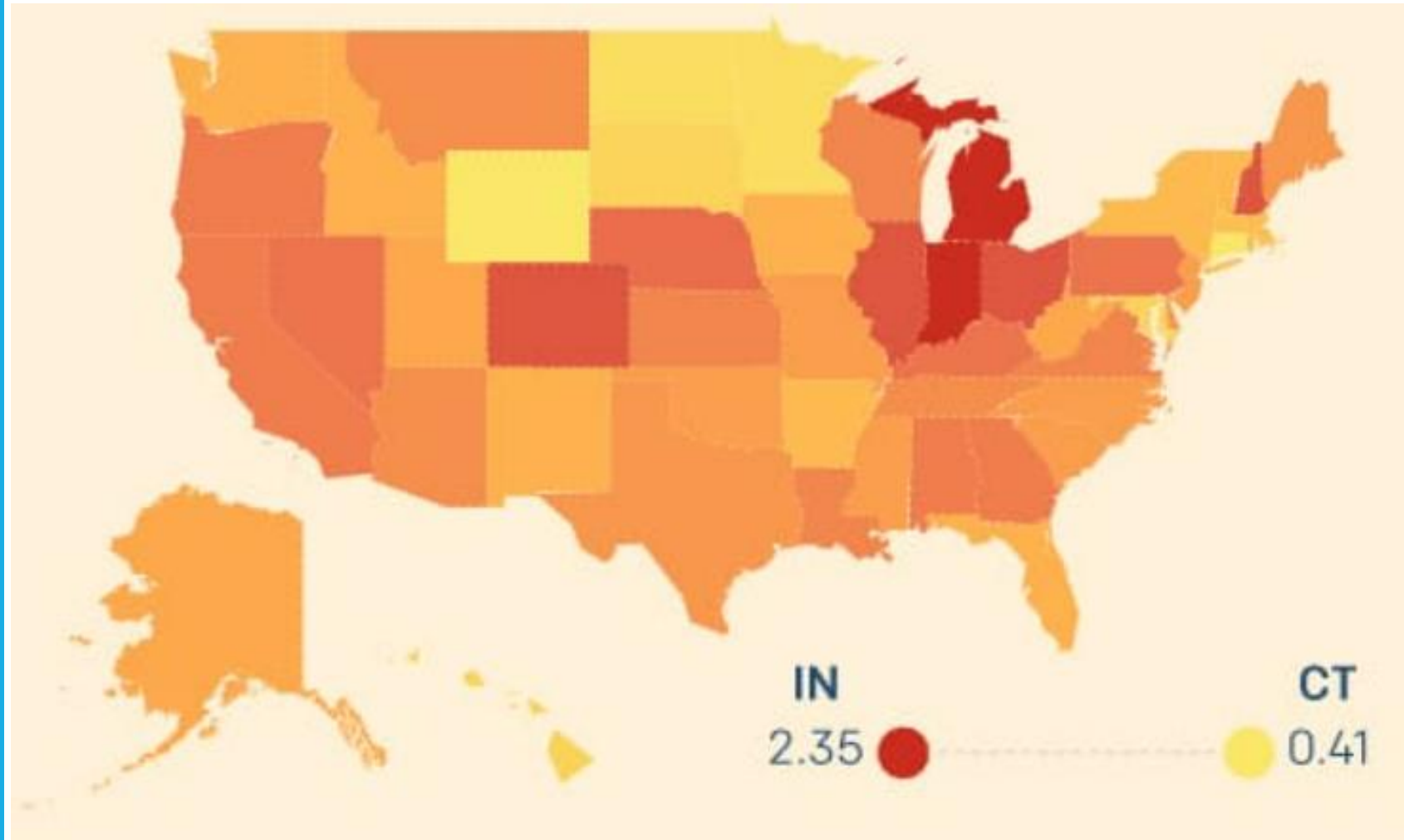
https://www.epa.gov/sites/default/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf

Where are the MSW Landfills?



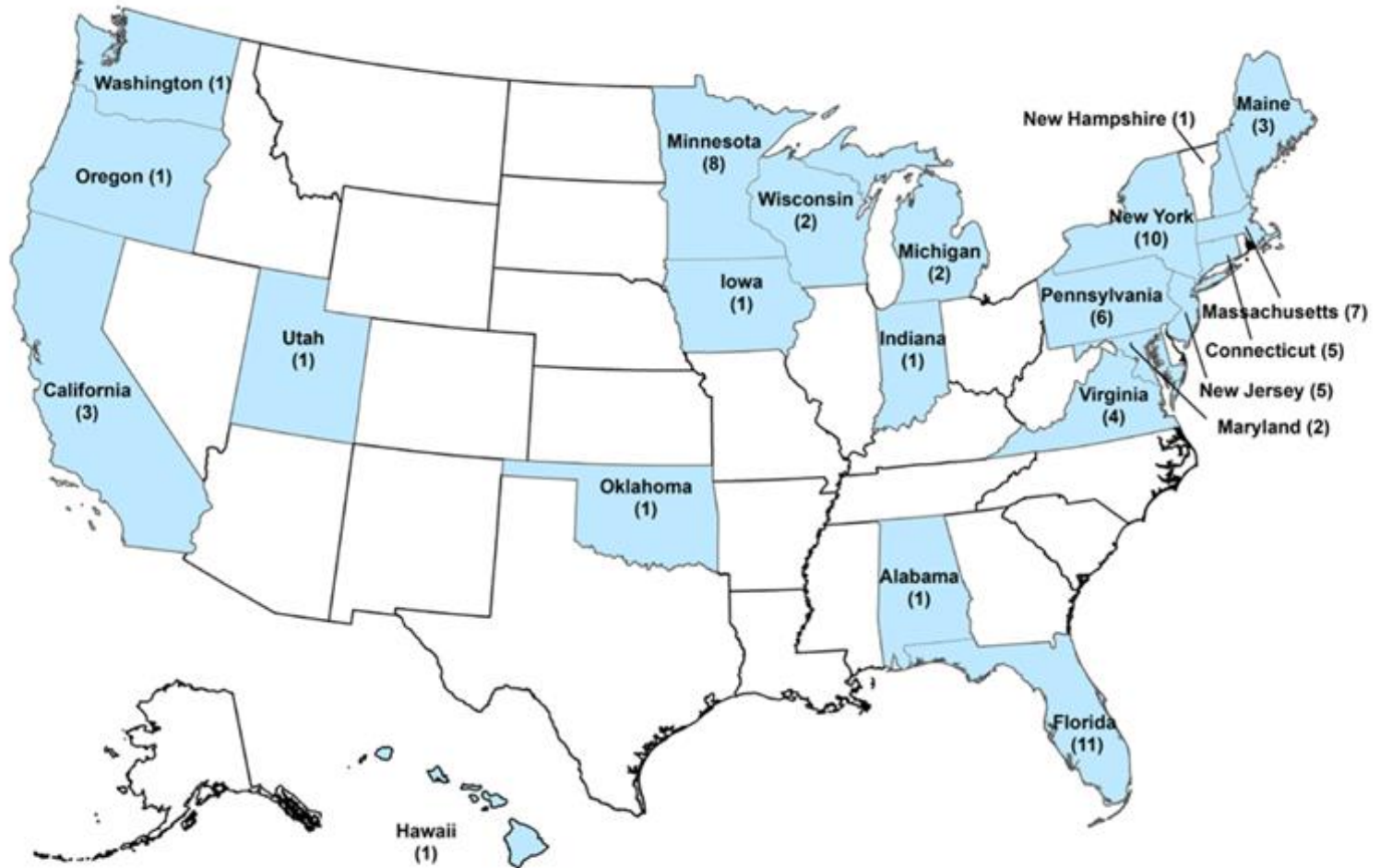
<https://www.bigrentz.com/blog/which-states-produce-most-trash>

Per Capita Landfill Waste Acceptance Rates



<https://www.bigrentz.com/blog/which-states-produce-most-trash>

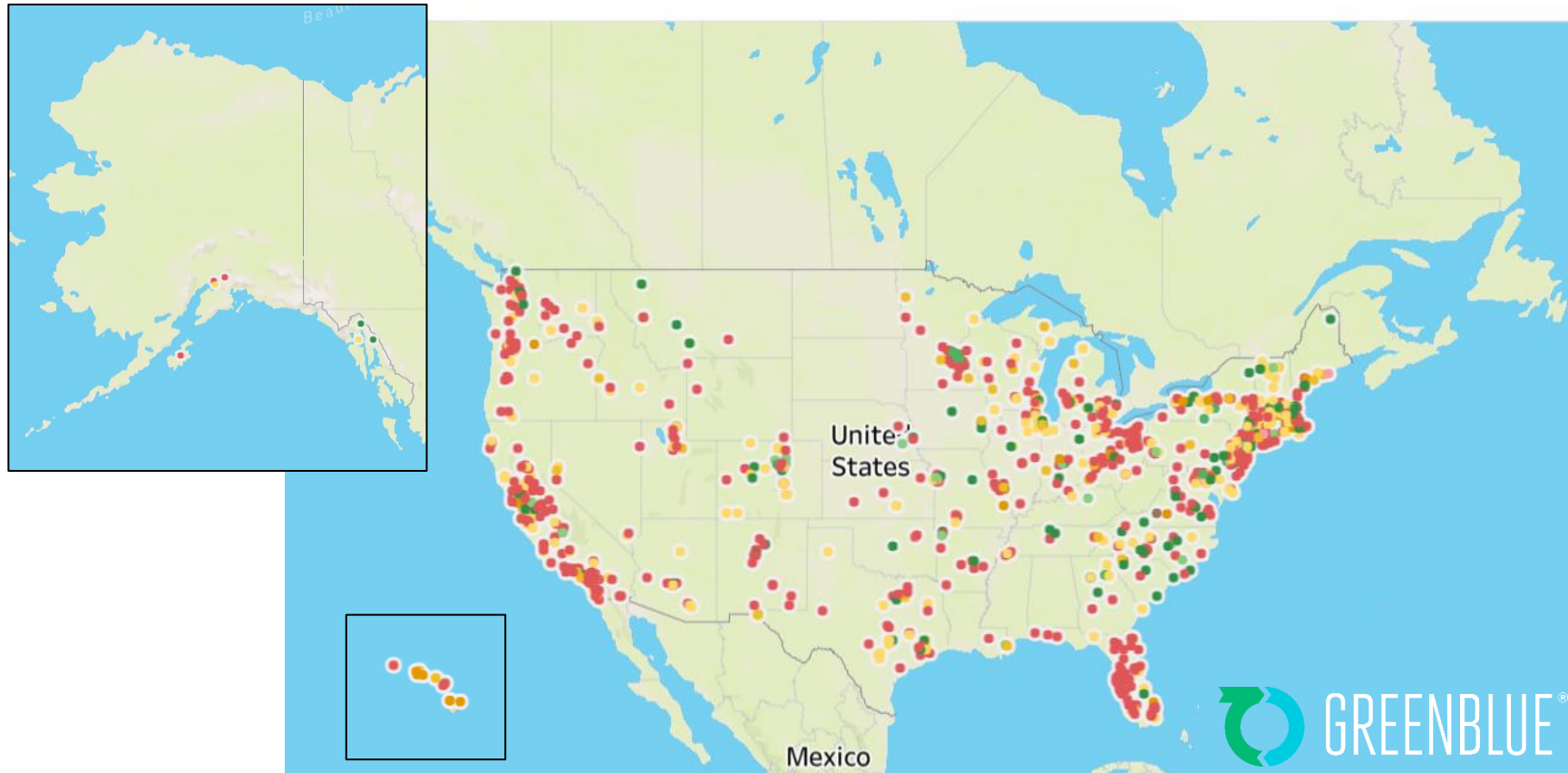
Alternatives: Waste to Energy



Data source: Energy Recovery Council 2016.
Data in parentheses shows number of plants in state.

<https://www.energy.gov/sites/prod/files/2019/08/f66/BETO--Waste-to-Energy-Report-August--2019.pdf>

Alternatives: Composting



Each level is inclusive of the previous materials, so that the tier accepting packaging also accepts food scraps and green waste, and the tier that accepts food waste also accepts green waste.

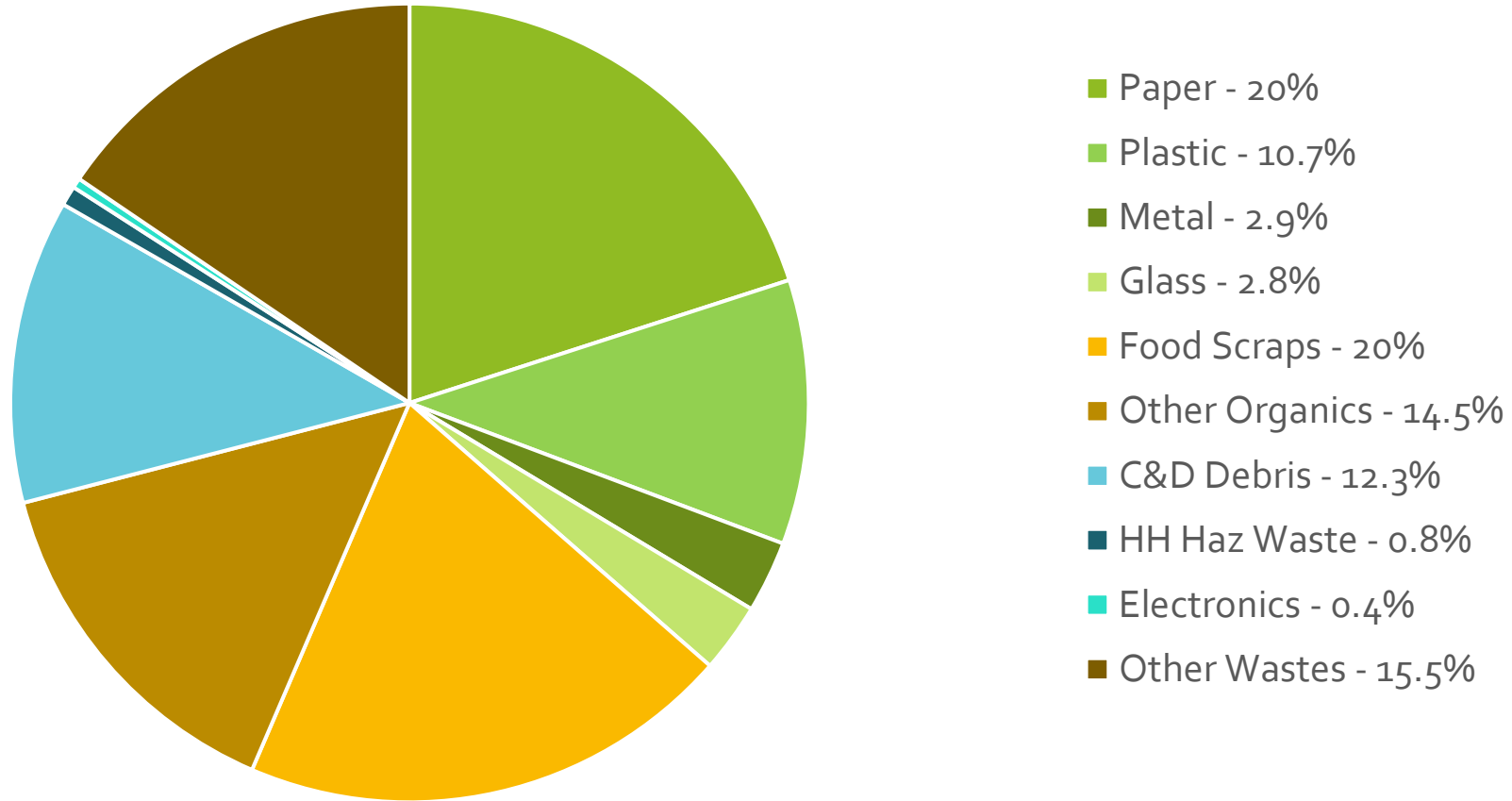
Materials Accepted

- Accept all compostable products (includi...
- Accept compostable products from resid...
- Accept fiber compostable products only
- Accept food waste
- Accept food waste (pre-consumer only)
- Accept food waste (residential only)
- Accept green waste only
- TBD- Under Construction
- TBD

https://public.tableau.com/app/profile/olg_a2630/viz/CompostingFacilitiesintheUnitedStates/CompostingFacilitiesStory

2015 CT Waste Characterization Study

Residential MSW Composition, 2015



Connecticut – Disposal Capacity

MSW Generation and Composition:

- Approximately 3.5M tons per year of MSW is generated in CT
- ~1.25 million is recycled or composted
- ~2.3 – 2.5 million TPY of MSW is disposed
- ~87% of CT disposed MSW goes to CT's 5 waste-to-energy plants which generate electricity as a by-product. CT has the lowest rate of landfilling of any state
- Currently ~400K tons per year of MSW goes to out of state disposal
- With the loss of the Hartford WTE capacity - ~ 1 million TPY of MSW might be disposed at out of state landfills

Connecticut – Disposal Capacity

Facility Ownership	Town	Permit to Construct Issued	Initial Issued Permit to Operate	Capacity Max TPY Permitted for combustion
Covanta	Bristol	9/12/1985	5/10/1988	261,340 (@ 716 TPD)
Covanta	Preston	12/12/1988	5/14/1993	251,485 (@ 689 TPD)
Wheelabrator	Bridgeport	10/24/1985	12/21/1988	821,250 (@ 2,250 TPD)
Wheelabrator	Lisbon	3/18/1993	9/27/1996	205,422 (@ 562.8 TPD)
MIRA	Hartford	2/11/1985	11/14/1994	739,855 (@ 2,027 TPD)

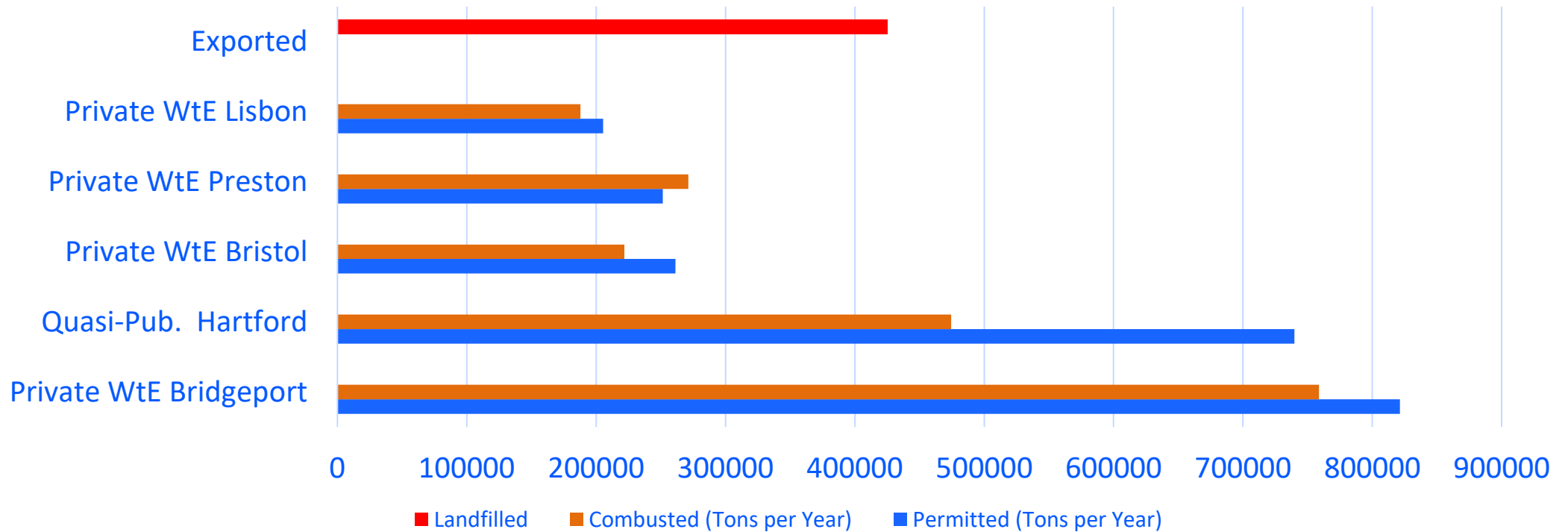
Connecticut – Disposal Capacity

MSW Disposal Infrastructure

- Pre 2015 – 6 MSW WtE facilities
- In-state disposal capacity = Self-sufficiency
- Post 2015 – 5 MSW WtE facilities
- Export of ~100-200K TPY
- Last LF receiving MSW closed ~2016
- Connecticut - Lowest reliance on LFs for MSW disposal

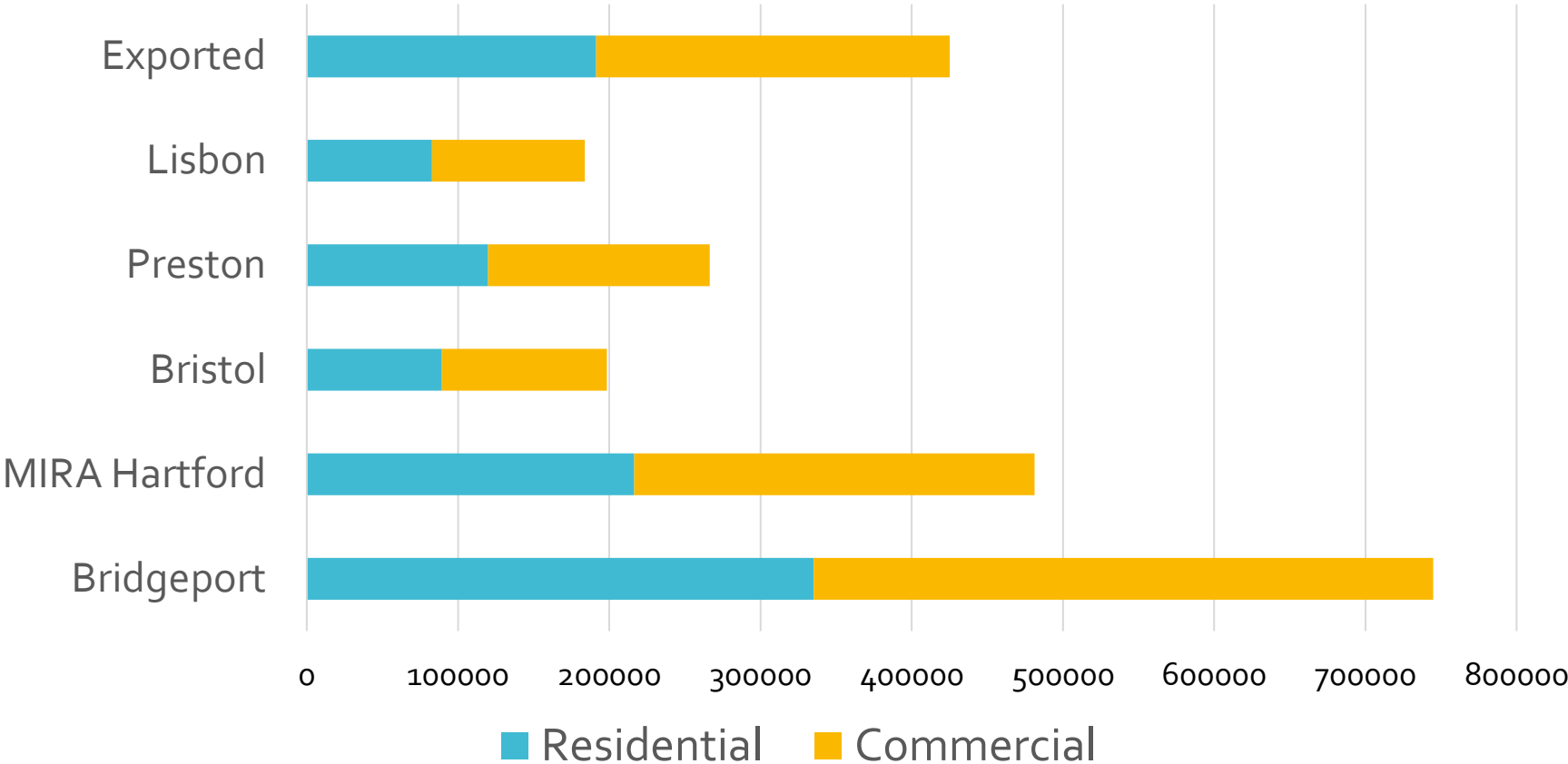
Connecticut – Disposal Capacity

2019 Actual (Combusted) vs. Permitted WtE Capacity

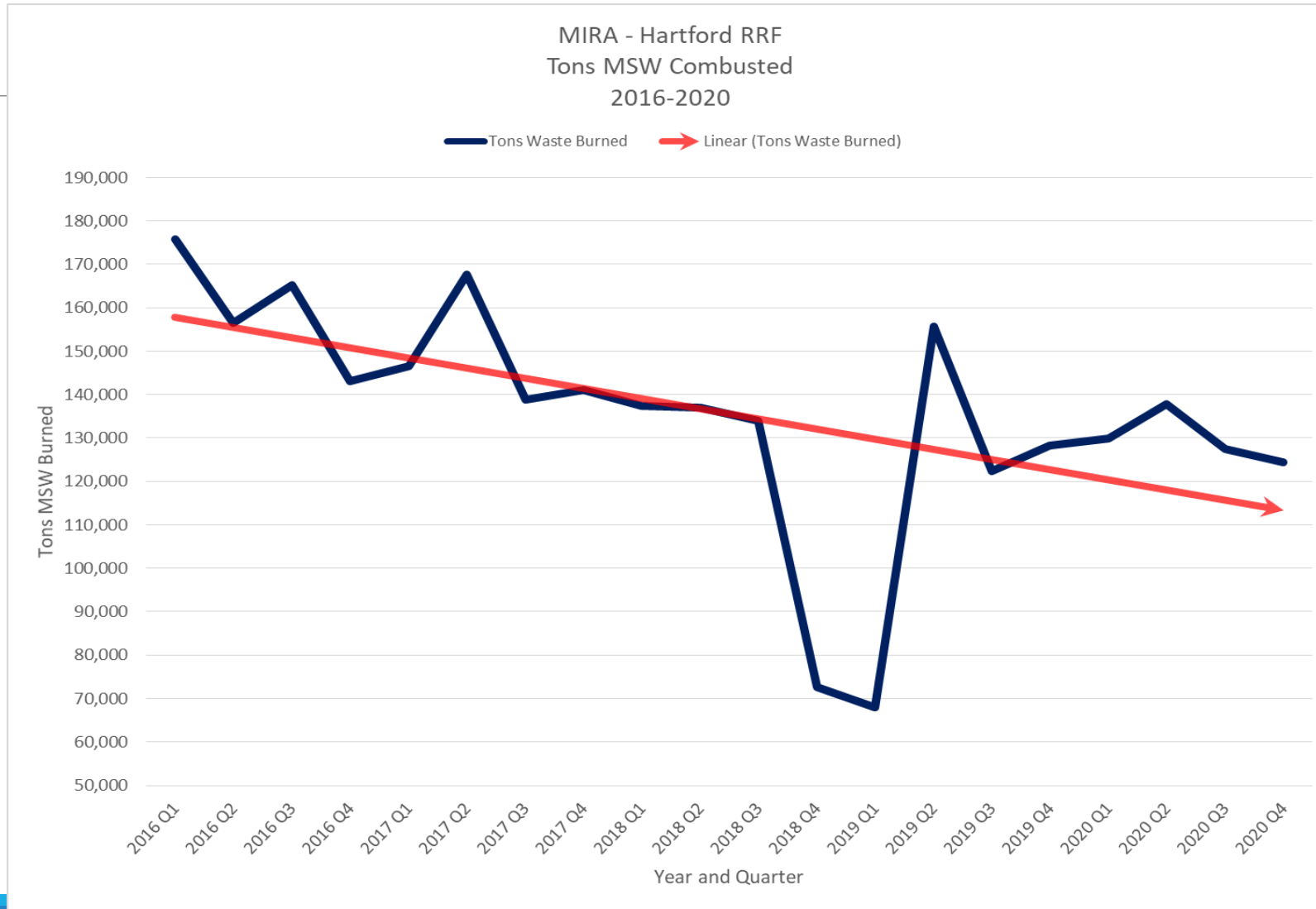


Connecticut – Disposal Capacity

Estimated Annual Residential, Commercial MSW Tonnage
Generated, 2018

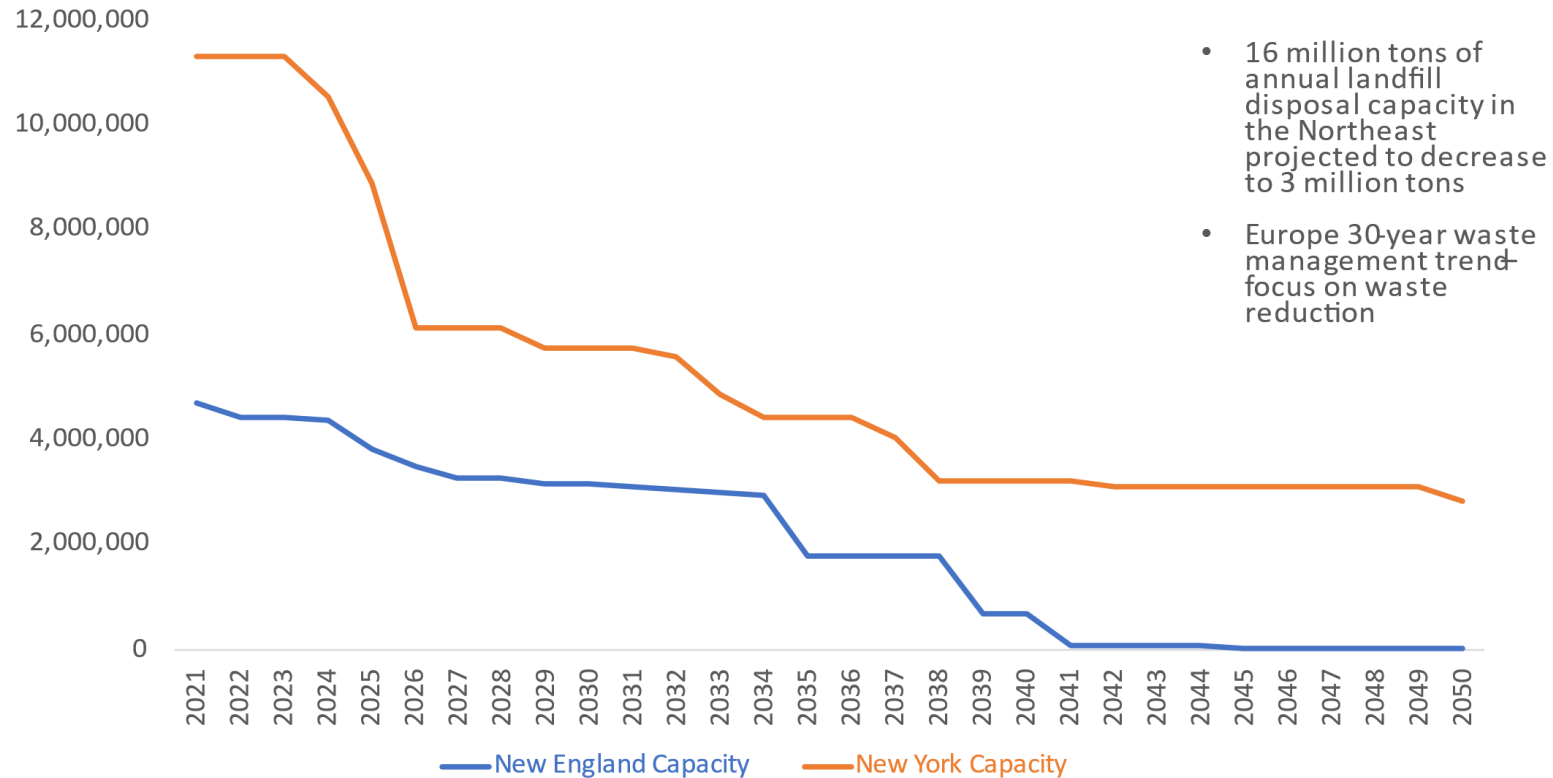


Connecticut – Disposal Capacity



Connecticut (and beyond) – Disposal Capacity

Landfill Capacity Through 2050



- 16 million tons of annual landfill disposal capacity in the Northeast projected to decrease to 3 million tons
- Europe 30-year waste management trend- focus on waste reduction

Sources: Report to the Joint Standing Committee on the Environment and Natural Resources, Maine Solid Waste Generation and Disposal Capacity Report, January 2017; NEW YORK STATE OFFICE OF GENERAL SERVICES, Material Recovery and Waste Reduction Program, ANNUAL REPORT, Fiscal Year 2007 -08; BIENNIAL SOLID WASTE REPORT, OCTOBER 2019, Prepared by the New Hampshire Department of Environmental Services; MA Material Management Capacity Study February 11, 2019, MSW Consultants

Connecticut Coalition for Sustainable Materials Management

- August 2020 CT Commissioner reached out to CT municipalities
- CCSMM established by munis signing on to a commitment to work together to find innovative approaches to waste reduction and increasing recycling
- CCSMM Objectives
 - 1: Share Experiences & Lessons Learned
 - 2: Engage Market Participants & Local Stakeholders
 - 3: Funding Solutions
 - 4: Menu of Options – Municipal, Legislative, Departmental
 - 5: Commitments toward Waste Reduction

Disposal Capacity Needs

How does your state measure remaining capacity?

What factors are used to determine whether new / expanded LF capacity is needed?

What does your SWMP say about disposal?

Waste Diversion Programs

What role does your program play in encouraging waste diversion?

What strategies are being employed to reduce reliance on landfills?

What funding mechanisms are used for state waste programs? Do they rely on LF disposal rates?