

A Presentation on Princeton's Proposed Bid Solicitation for the Collection and Disposal of Solid Waste, Bulky Waste, and Organics

Princeton Council Meeting
May 23, 2022



**SUSTAINABLE
PRINCETON.**



DeFeo Associates

Presentation Overview

- ▶ Municipal Engineer and Waste Consultant will:
 - Review Princeton's existing waste collection program and industry trends
 - Discuss the proposed bid solicitation for waste and resumption of organics collection
 - Detail the next steps
- ▶ Sustainable Princeton will:
 - Discuss the emissions reductions to be achieved in this proposed plan

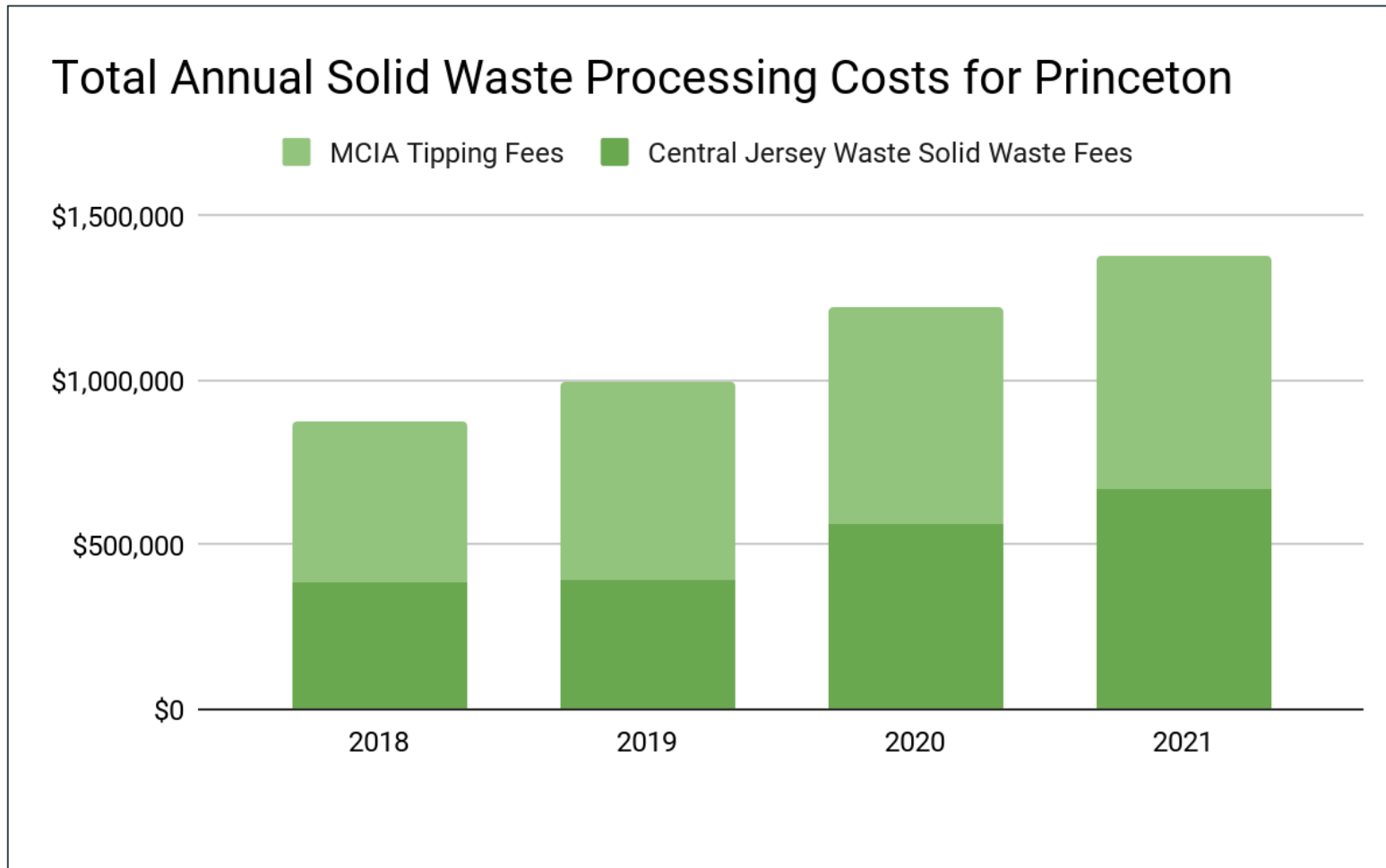
Princeton's current trash collection contract

- ▶ One time per week solid and bulky waste collection for 1-4 family homes and Princeton Housing Authority sites
 - Semi-automated collection service by hauler
 - Residents provide their own containers for trash collection
 - 200 pounds maximum of solid waste is allowed per week per residence
 - 200 pounds (8'x3'x4') maximum of bulky waste is allowed per week per residence
 - Waste payment is based on tonnage
 - 1-year terms for up to 3 years of service



Princeton's Costs for Solid Waste

- ▶ Solid waste volumes rose from 5,048 tons to 6,025 tons
- ▶ Princeton's fees have increased 18%



Current Trends

- ▶ Municipalities are facing multiple challenges with solid waste
 - Increased cost of new vehicles.
 - Increased residential solid waste volume due to more people working from home
 - Widespread labor shortages
 - Significant production delays with new trucks
 - Rising fuel costs
- ▶ This has led to extreme disruptions in municipal services
 - Service suspensions are occurring in parts of the country
 - Municipalities are revising collection schedules and making other structural changes in response.

Rate increases of 30-40% or more are occurring

Sources: New Jersey Municipalities Magazine, February 2022; Waste Dive, February 2022

Goals for New Waste Contract Solicitation

- ▶ **Control** our waste costs
- ▶ **Expand** municipal service to include organics (food) waste recycling for all
- ▶ **Reduce** our carbon emissions throughout this process

Proposed Solicitation

- ▶ Provide 66-95 gallon solid waste carts
- ▶ Provide 22-gallon organics waste carts
- ▶ Provide once a week solid waste and organics collection and disposal service
- ▶ Provide bulk waste collection by reservation
- ▶ Waste payment is based on flat rate service charge not tonnage
- ▶ 5-year contract term if carts are selected to allow for reasonable payback period

- ▶ Bid Options:
 - ▶ Frequency of bulk waste service will be bid once weekly and once monthly
 - ▶ Provision for residents to purchase additional residential solid waste cart service
 - ▶ Printed regulations on carts
 - ▶ RFID on carts for property linkage or other appropriate technology

Cart System 101

- ▶ Collection is more efficient
- ▶ Collection is cleaner
- ▶ Uniformity improves appearances
- ▶ Attached cart lids reduce litter, contamination and animal issues
- ▶ Risk of worker injury is reduced
- ▶ Cost control is possible because of reduced staff needs and injury reduction



Restoring Organics Collection

- ▶ Collection fees for 700 households ≈ 7,000 households
- ▶ Cost to transport (hauling fee) and recycle (tipping fee) is less than solid waste
- ▶ Most economical to combine bidding of residential curbside organics collection with solid waste contract
- ▶ Viable food waste recycling facility options for accepting residential organics now exist



Next Steps

- **June 2022:** Bid release for solid and bulky waste and organics collection contract
- **June 2022:** Request for proposal release for organics disposal contract
- **July 2022:** Proposals due for organics disposal contract
- **September 2022:** Collection bids due
- **August - December 2022:** Roll-out and public education
- **February 2023:** Revised collection begins

Communications Plan

- Solid waste ordinance update in Fall 2022
- Website updates
- Town-wide mailing regarding the new system
- Explore opportunities to collect old bins for recycling
- Sustainable Princeton and Princeton to collaborate on educational sessions related to solid waste, recycling and organics disposal
- Compliance Officer will perform inspections and provide educational information



Emissions Impact of Organics Recycling

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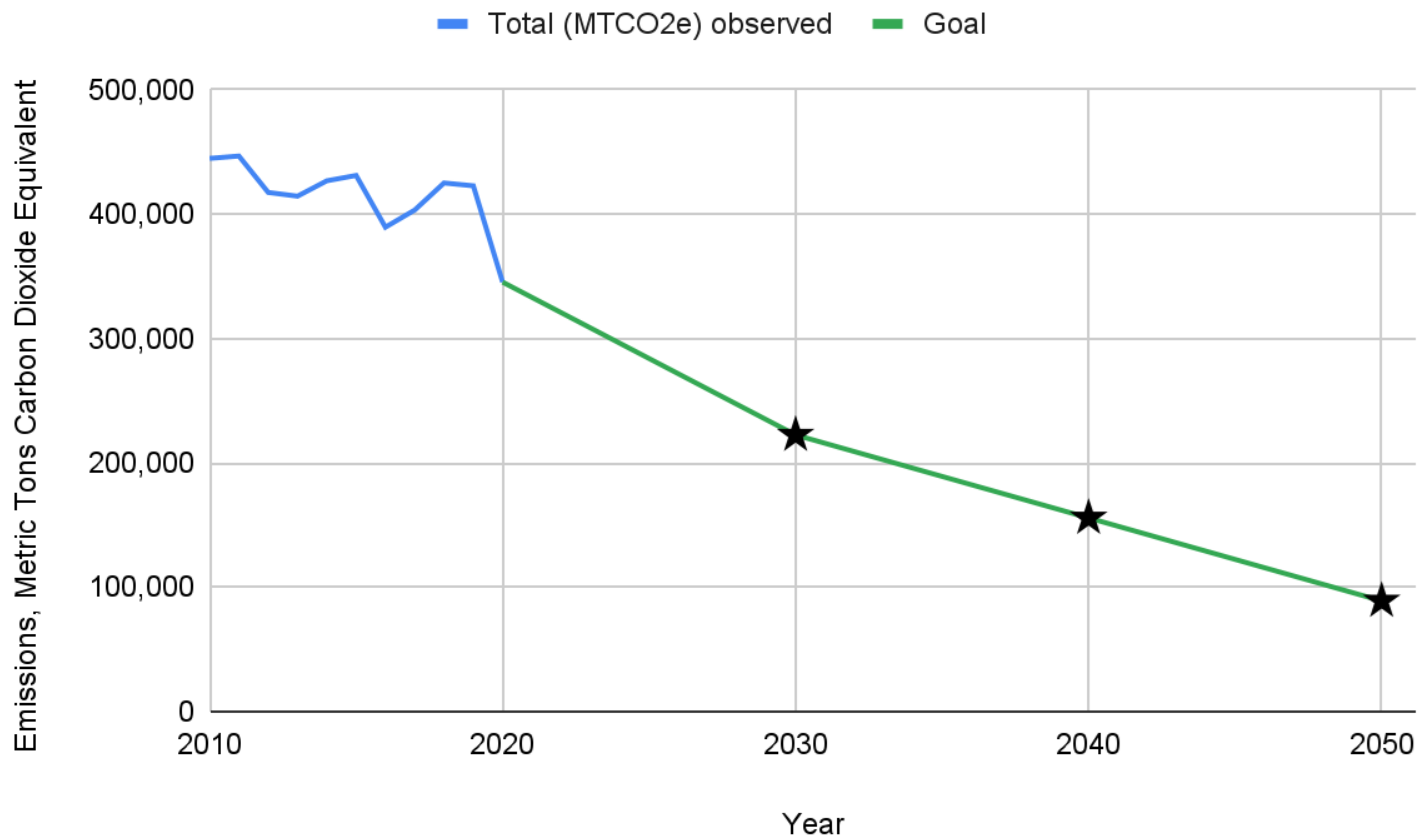
Princeton's goal is to reduce community-wide carbon emissions:

50% by 2030

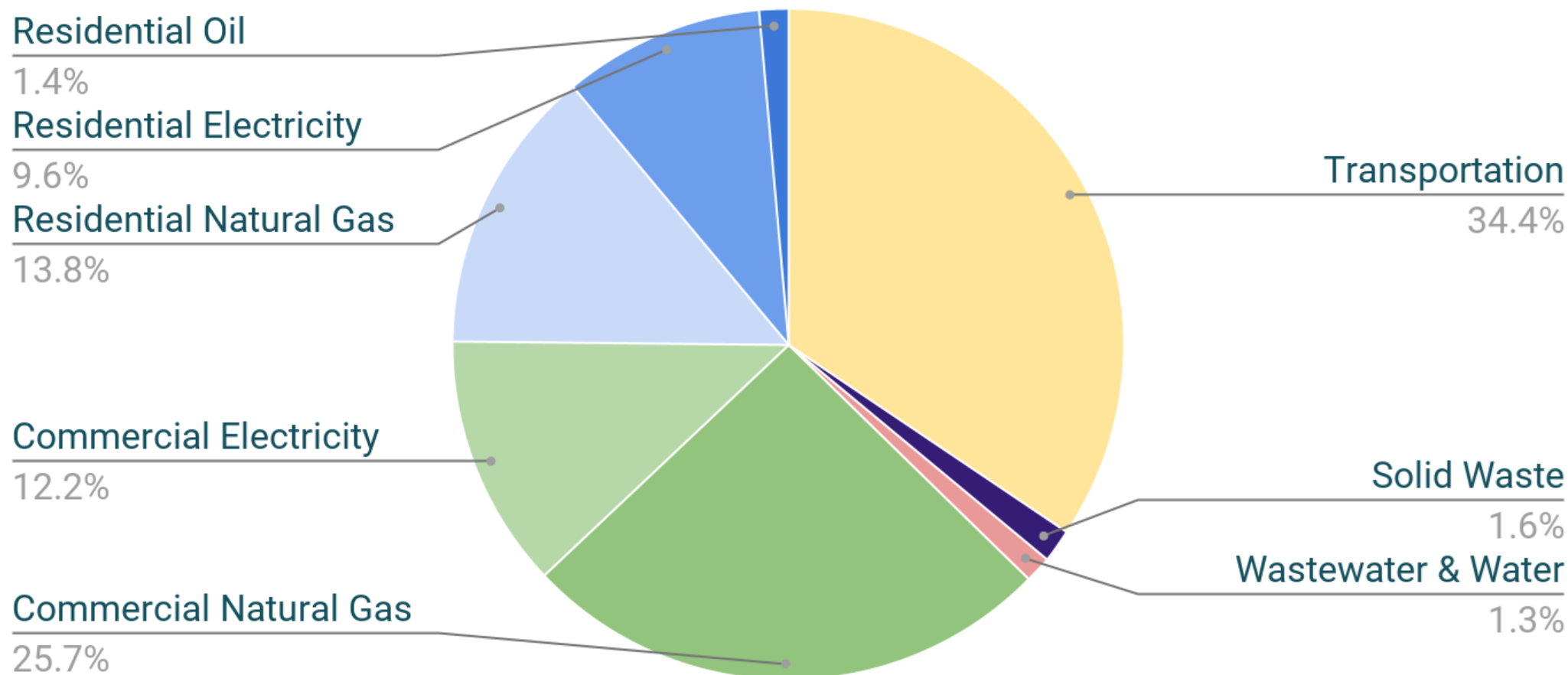
65% by 2040

80% by 2050

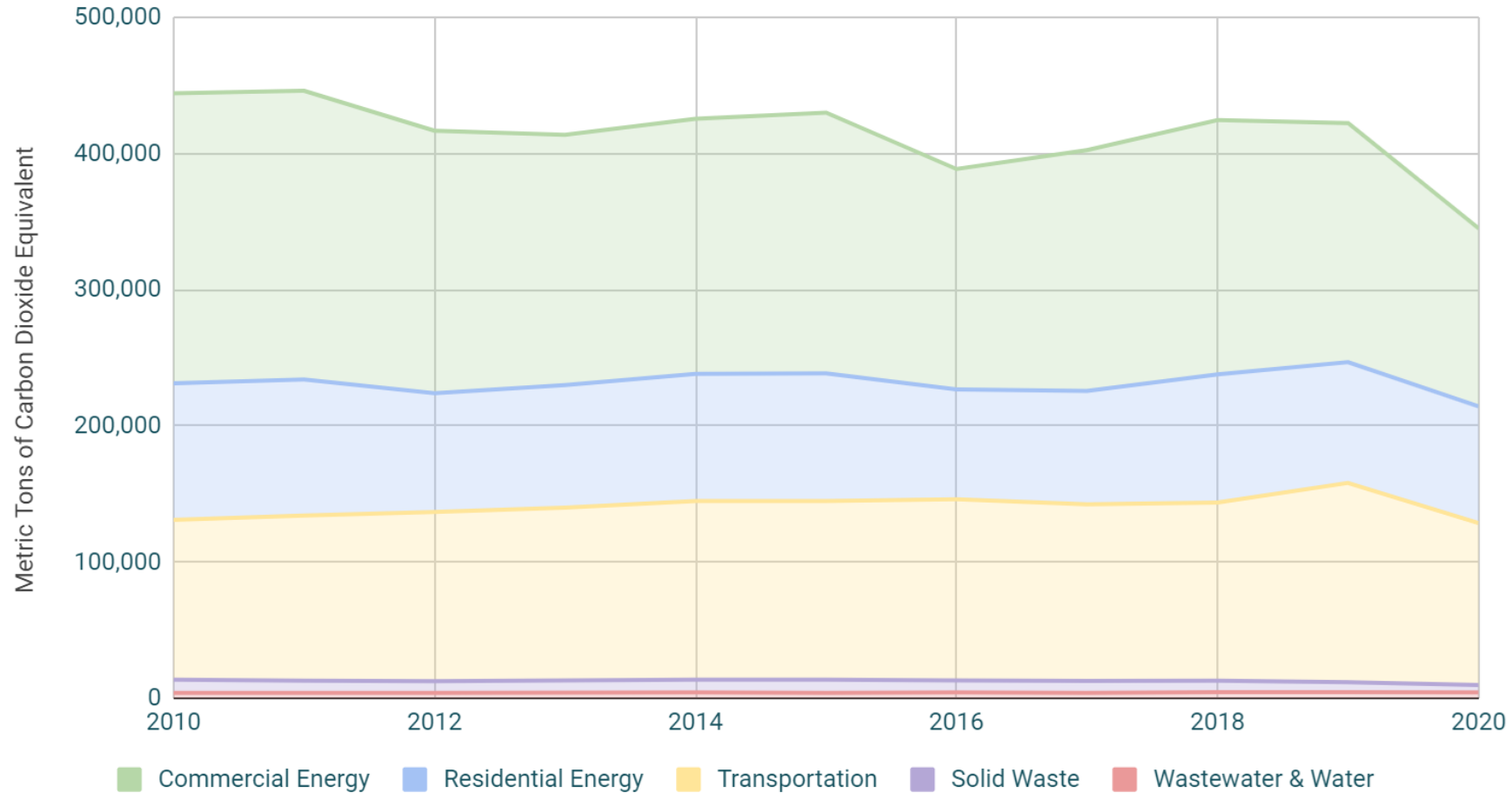
from 2010 levels, while pursuing efforts to reduce 100% of emissions by 2050.



Princeton's Production-Based GHG Inventory - 2020



Princeton's Production-based GHG Emissions 2010 - 2020

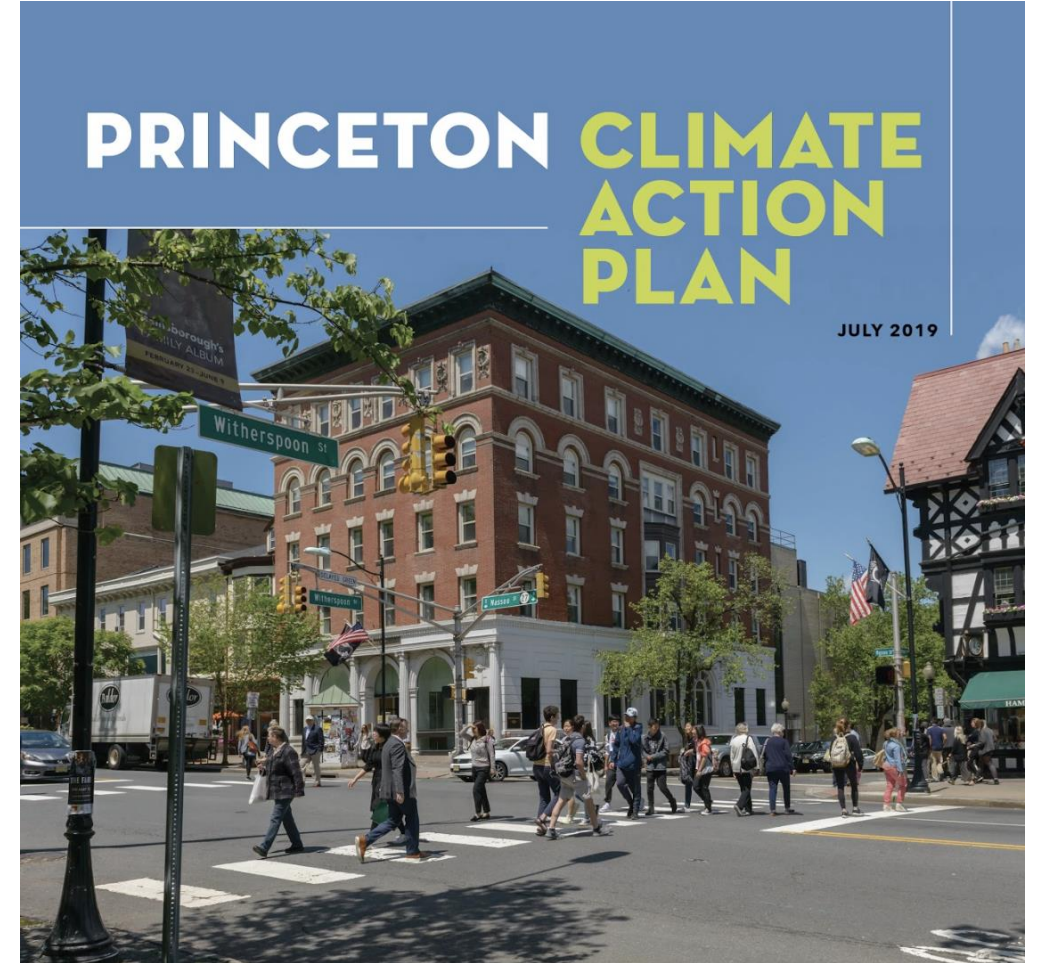


CAP OBJECTIVE 10:

Reduce the life-cycle emissions from the disposal of waste generated by the Princeton community.

10.1 Evaluate all waste streams (solid waste, recycling, food, leaf and brush, electronics, etc.) from all sectors (residential, commercial and institutional) and implement a plan to save money and reduce emissions.

10.2 Implement an equitable unit-based/variable rate waste management program, e.g., save-as-you-throw, that includes a well-designed transition plan.



EMISSIONS REDUCTION POTENTIAL

- In 2021, residents produced **6,025** tons of landfill waste.
- ~**24.8%** of landfill deposits are food waste.*
- We can estimate that Princeton sent approximately **1,500 tons of food waste to landfill** in 2021.
- Using the EPA's WARM tool, we can estimate the annual reduction in emissions:
 - Commercial-scale compost = **916 MTCO₂E**
 - Commercial-scale anaerobic digestion = **806 MTCO₂E**
- Using the EPA's Greenhouse Gas Equivalencies Calculator, we can state these reductions are **equivalent to 13,000 to 15,000 tree seedlings grown for 10 years.**

* Mercer County Improvement Authority Solid Waste and Recycling Quantification and Characterization Study

http://www.mcianj.org/filestorage/133/154/T%26M_Final_Waste_Study_-_Sept._2015.pdf

Thank you!

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