SUSTAINABLE MATERIALS MANAGEMENT (SMM) GRANT PROGRAM UPDATE

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Connecticut Department of Energy & Environmental Protection

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SMM GRANT PROGRAM

Background / Drivers

- CT generates 2.3 million tons per year of municipal solid waste (MSW)
- 41% of what CT residents throw away is organic material that can be composted, converted to energy or processed into animal feed
- 22% of residential trash is food scraps
- CT is exporting 860,000 tons MSW per year out of state
- Tip fees for MSW disposal have nearly doubled over the last decade and will continue to escalate as disposal capacity in the northeast declines

High-Level SMM Pilot Goals

- Support municipalities in conducting waste reduction **pilots that contain elements of both food scrap diversion and Unit-Based Pricing (UBP)**
- Gather data that municipalities can use to estimate the costs/benefits of various diversion strategies as paths to permanence are considered.

FOOD SCRAP COLLECTION OPTIONS

Transfer Station Drop-Off

Curbside Co-Collection

No new collection route, but added costs for sorting

Curbside Separate Collection

New collection route added

<u>Growing interest in food scrap collection:</u>

- 15 food scrap diversion pilots funded through SMM Grant Program
- Other towns undertaking food scrap reduction, composting, or collection efforts outside of SMM Grant Program
- Stamford SWIFR grant award to address food waste diversion

UNIT-BASED PRICING (UBP) ELEMENTS

Voluntary Program / 2 free bags + extra free bags as needed	Voluntary Program / 2 free bags + purchase extra bags as needed	Mandatory Program / Some free bags? / Extra bags priced at actual bag cost or slightly higher	Mandatory Program / No free bags / Bags priced to partially cover actual bag cost + disposal cost of bag contents	Mandatory Program / No free bags / Bags priced to fully cover actual bag cost + disposal cost of bag contents
PILOTS				GOAL!

PILOT PROGRAM OBJECTIVES

Evaluate options for collecting & separating food scrap

- Drop-off (transfer station or similar location)
- Co-collection (curbside)
- Separate collection route (curbside)

Assess ability to collect separated residential food scrap from pilot area residents

- Will residents participate if given the option?

Assess quantity & quality of separated residential food scrap

- How “clean” is the separated food scrap (i.e., what is the contamination rate)?
- How much food scrap is being collected (e.g., % of estimated available and pounds per participating household)

Can pilot participants meet the challenge of 2 bags or less of MSW disposed per week?
Will this “UBP Lite” pilot approach help to reduce trash disposal for the pilot areas?

What other results might the pilots programs generate (e.g., will recycling increase)?

FREQUENT PILOT PROGRAM QUESTIONS

Q: I don't like the orange bags (i.e., UBP aspect of pilot). Couldn't we just offer the food scrap diversion program instead?

A: Towns are free to adopt any food diversion program of their choosing as a permanent program. Several towns have implemented transfer station-based food scrap collection programs without support from SMM grants. But keep in mind that any food scrap collection program will add new costs to a town's budget.

This is why DEEP encourages towns to adopt UBP for trash in combination with a food scrap diversion program. Full UBP is the primary driver for reducing waste generation and reducing associated MSW tipping costs.

Q: Should I expect to see cost savings during the course of my town's pilot?

A: No - DEEP is not expecting to see cost savings during the initial pilot period. None of the SMM pilots have adopted full UBP, so MSW cost savings are not yet being realized to offset the costs of the food scrap collection program.

As noted previously, one of the goals of these pilots is to capture data that towns can use to better evaluate projected paths forward post-pilot.

SMM GRANT PROGRAM STATUS

Pilot Program	November 2022	December 2022	January 2023	February 2023	May 2023	July 2023	August 2023	September 2023
West Haven	Launched							
Middletown	Launched							
Ansonia		Launched						
Stonington			Launched					
Deep River				Launched				
Woodbury				Launched				
Seymour				Launched				
Guilford					Launched			
Madison					Launched			
West Hartford					Launched			
Middlebury						Launched		
Kent						Launched		
Meriden							Launched	
Bethel							Launched	
Newtown								Launched

PILOT RESULTS

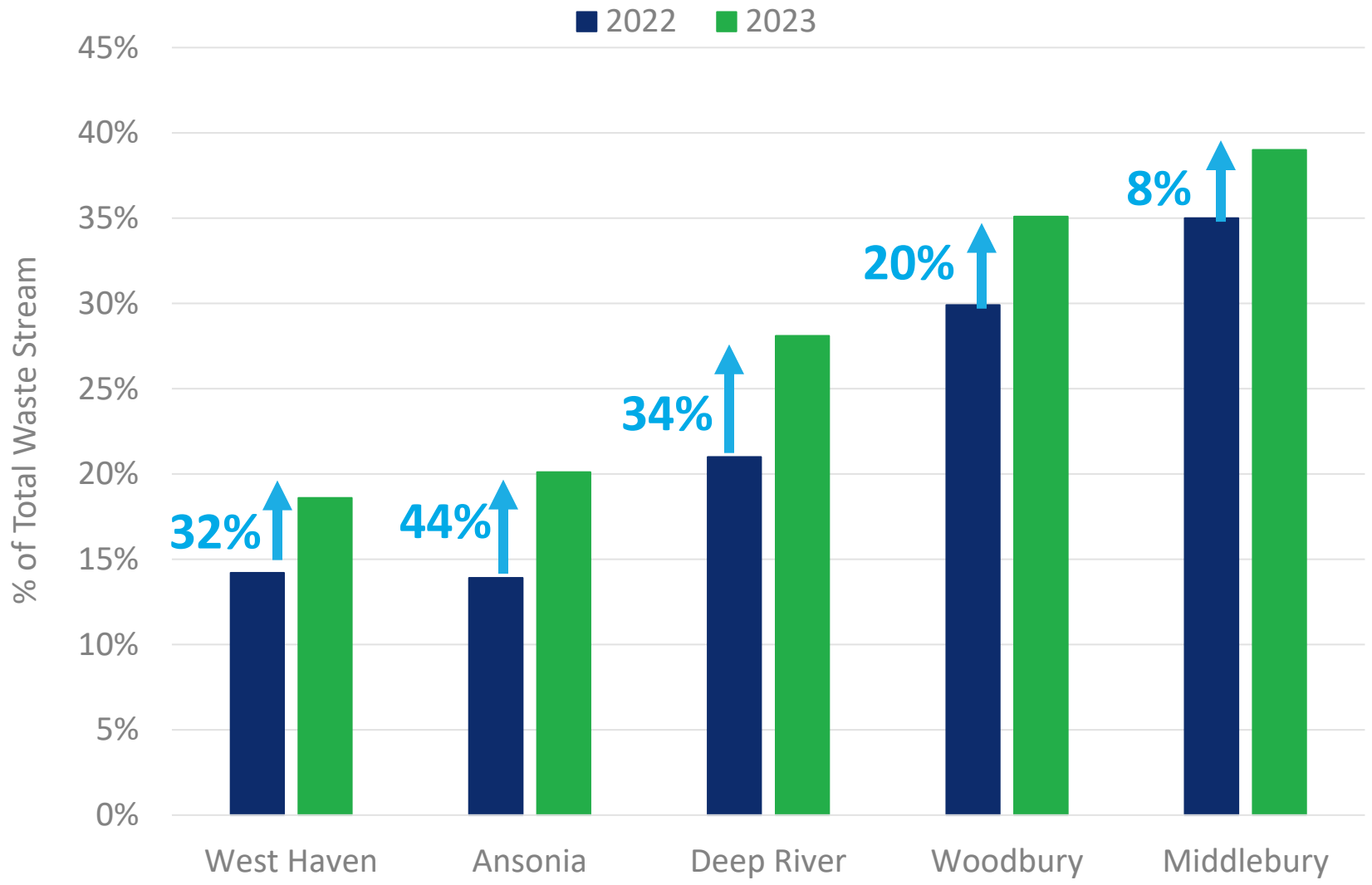
GENERAL OBSERVATIONS / TAKEAWAYS

- Waste diversion exceeds food waste diversion for all program types because of increases in recycling and source reduction
- All program types demonstrated ability to separate significant amounts of food scrap – over 1 million pounds in total
- Drop-off programs result in high levels of diversion, low contamination and are cost effective – but are challenging to implement for larger towns
- Co-Collection is cost effective and significantly increases diversion, but does have higher food scraps contamination rates - those rates improve over time with education and some enforcement
- Separate collection programs are effective, but will be too expensive for most towns
- Problems aligning pilot data with historical data remains a challenge for some towns

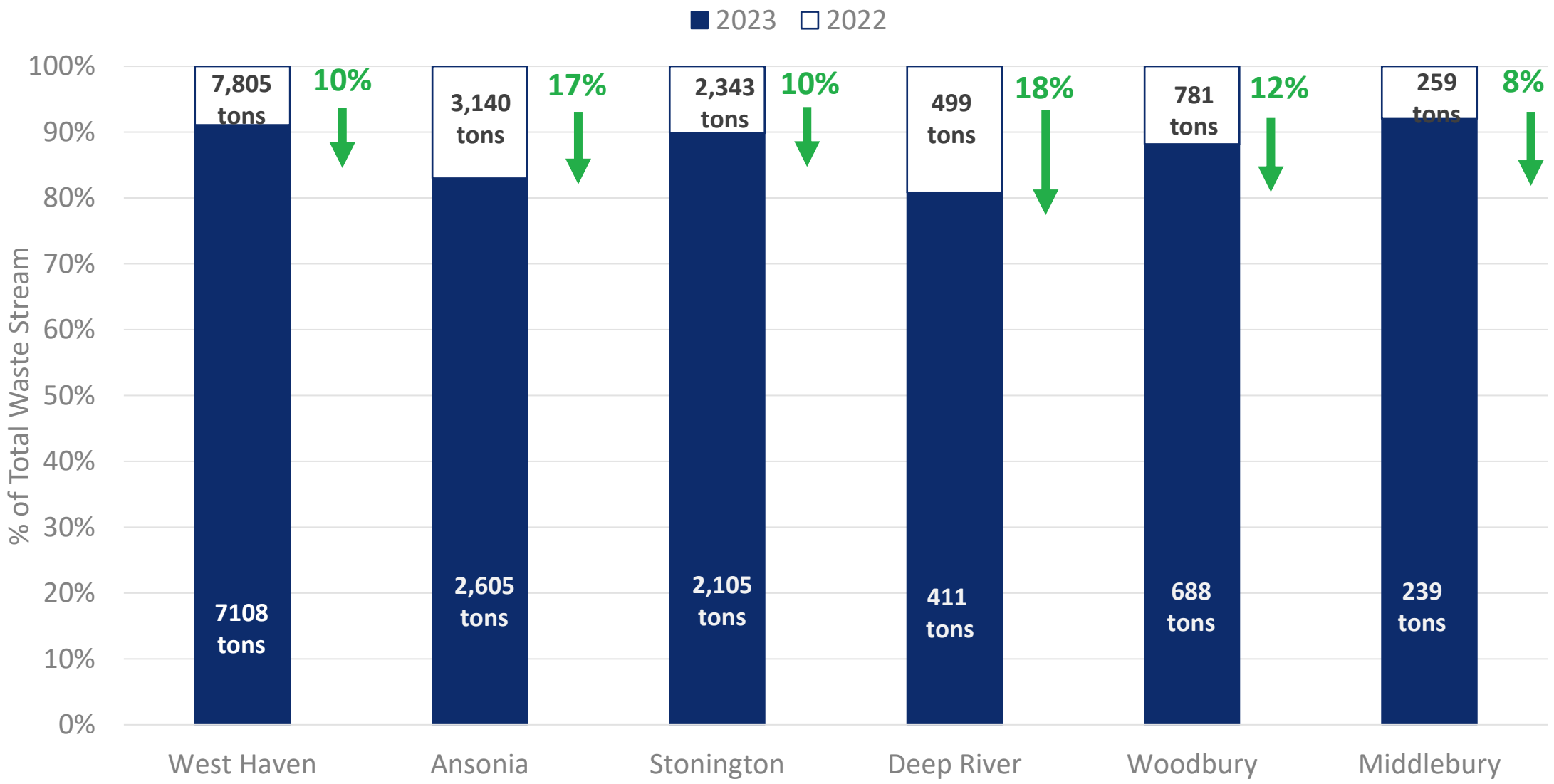
SMM GRANT PROGRAM – KEY INDICATORS

Pilot Program	# of Weeks of Data	Collection Type	*Clean Food Capture Rate (prior week)	Food Scraps Captured (cumulative lbs)	Contamination Rate (prior week)	Waste Reduction	Curbside Diversion (Recycling + Food Scraps) Increase
Ansonia	30	Co-Collection	15%	234,758	9%	17%	44%
Deep River	30	Drop Off	43%	79,840	0.6%	19%	36.2%
Middletown	39	Co-Collection	15%	103,110	15%	N/A	N/A
Seymour	26	Co-Collection	20.1%	17,930	13%	N/A	N/A
Stonington	30	Separate Collection	44%	307,100	1%	10%	8%
West Haven	38	Co-Collection	12%	495,858	19%	9%	32%
Woodbury	33	Drop Off	23%	62,520	2%	12%	17.4%
West Hartford	24	Separate Collection	62%	68,760	2%	N/A	N/A
Middlebury	12	Drop Off	33%	23,840	0.5	8%	11%
Meriden	9	Co-collection	4%	420	1%	N/A	N/A

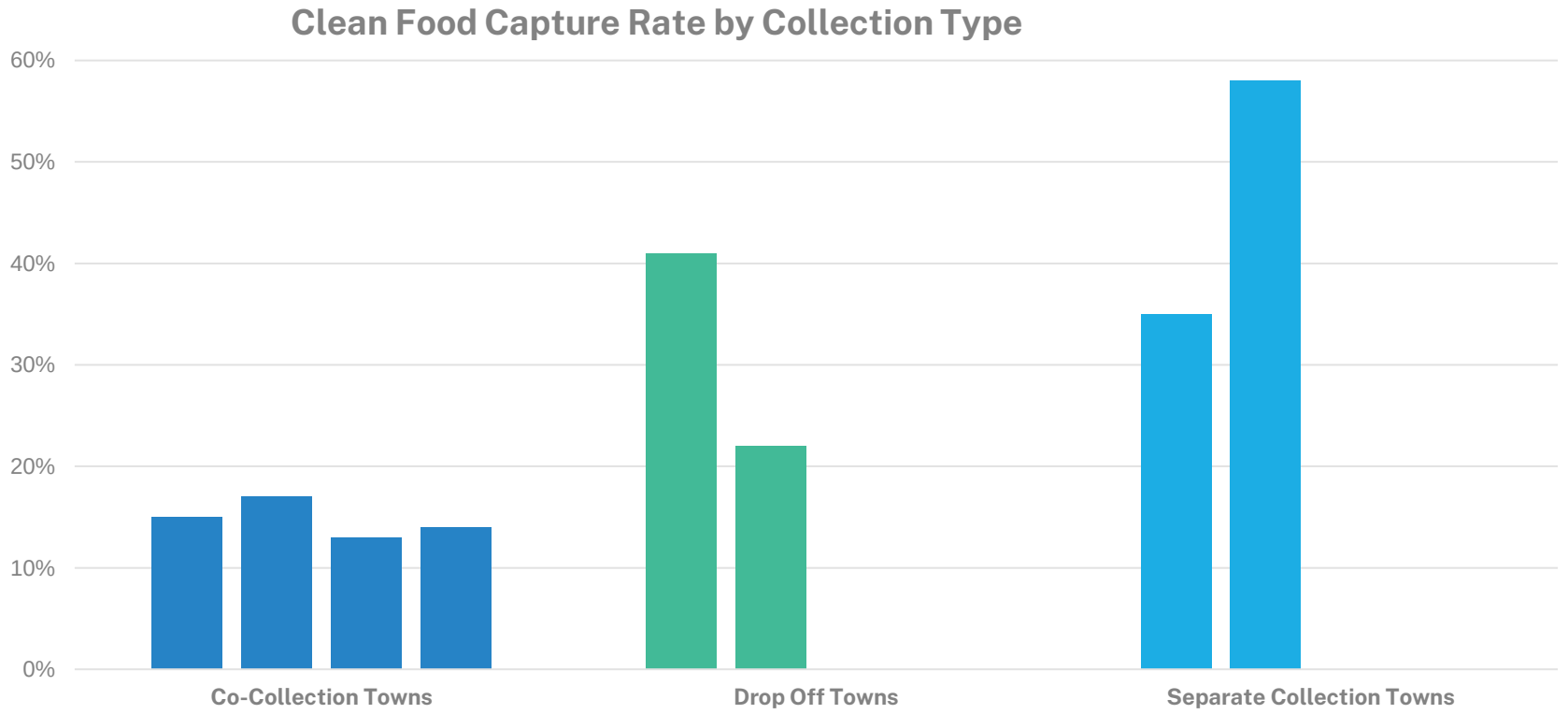
SMM GRANT PILOT CUMULATIVE DIVERSION RATE CHANGE
(RECYCLING + FOOD SCRAPS)



SMM GRANT PILOT CUMULATIVE WASTE REDUCTION

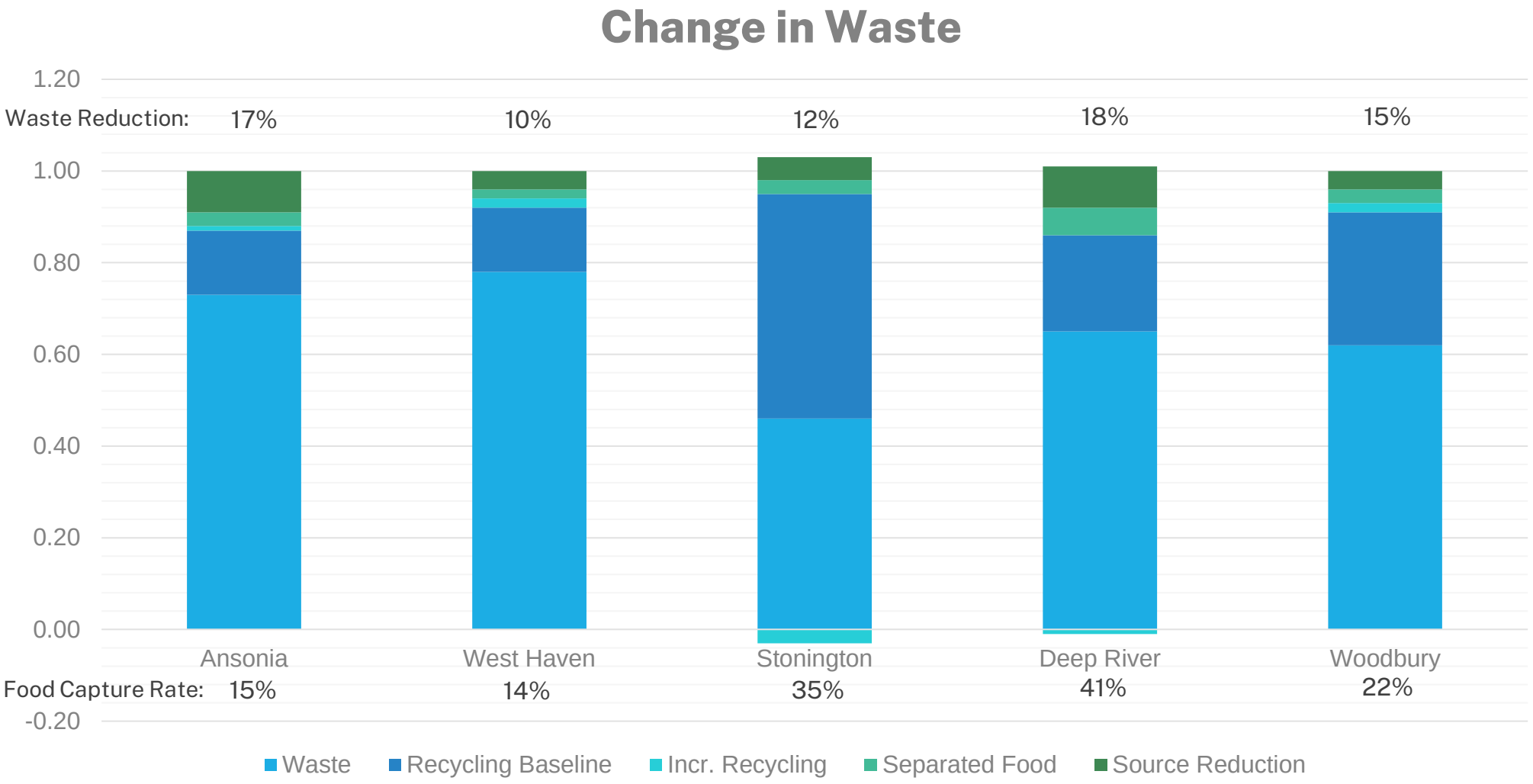


PROGRAM TYPE



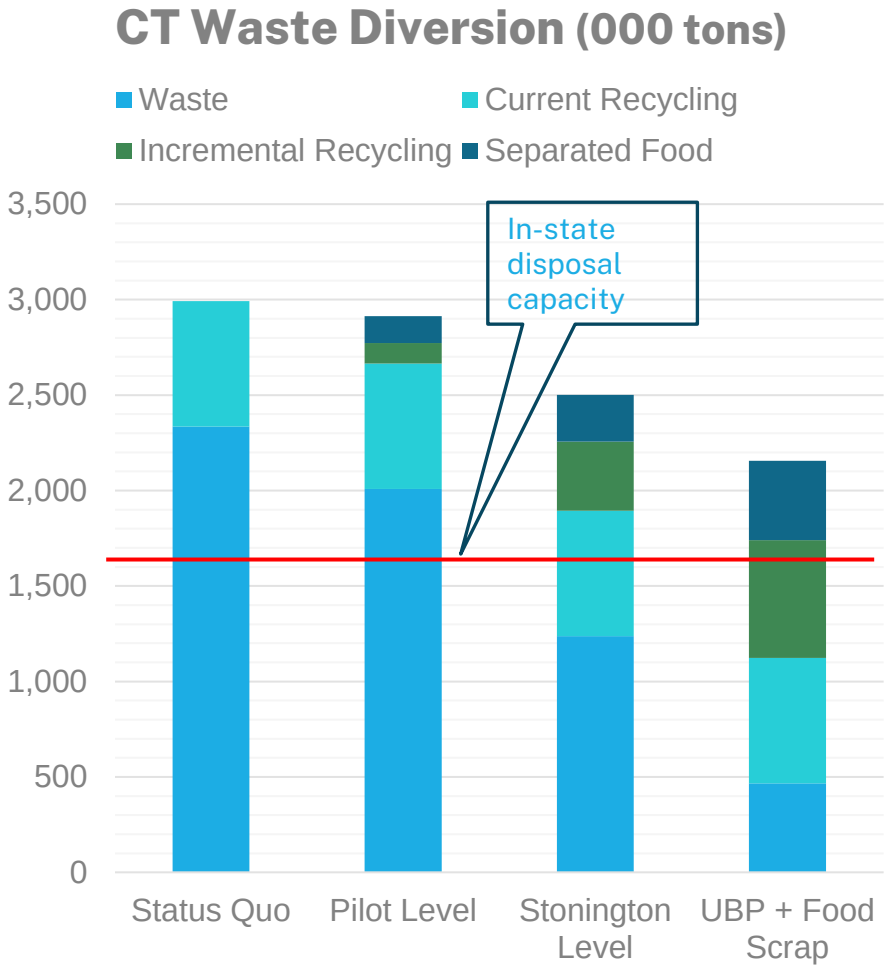
- Clean food capture rate has been higher in Drop Off and Separate Collection programs

Components of Waste Reduction



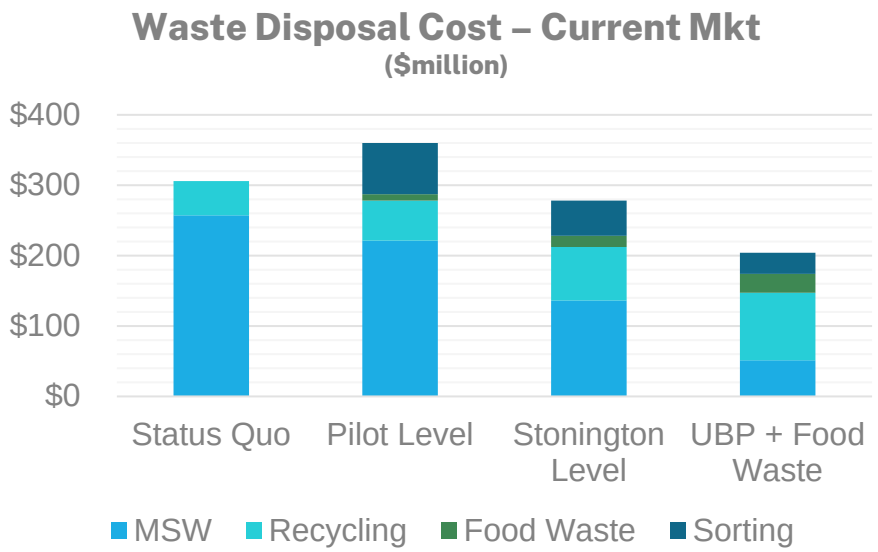
IMPLICATIONS

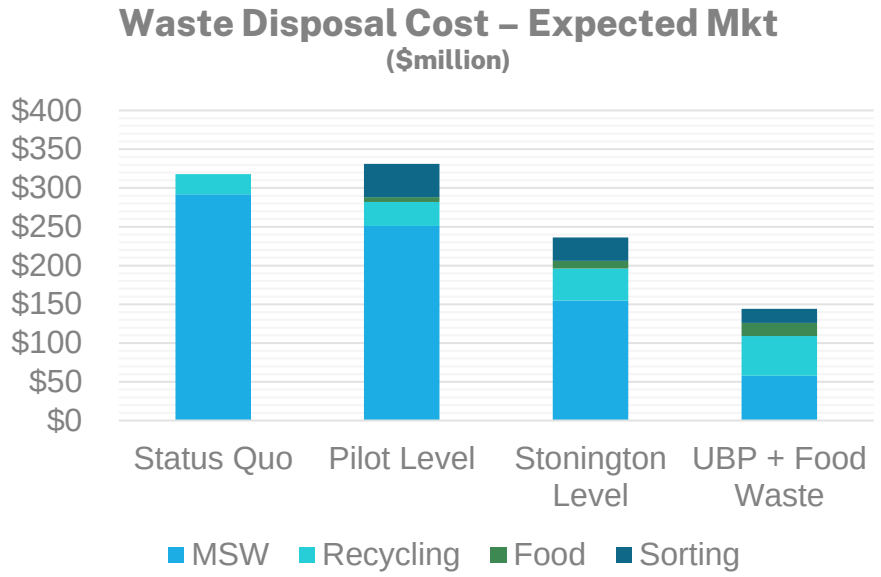
Diversion Program Impact - Statewide



- The waste reduction levels reached through the voluntary pilot programs, if achieved state-wide, would reduce the in-state disposal capacity shortfall by more than 1/2
- Reaching the waste reduction levels of Stonington would bring statewide waste levels well below current disposal capacity
- Reaching the waste reduction levels achieved by communities outside of CT using UBP, coupled with food waste separation, would reduce statewide waste levels to about 1/3 of disposal capacity

Diversion Program Impact - Statewide





	Current Market	Expected Market
MSW Tip Fee/ton	$110	$125
Recycling Tip Fee/ton	$75	$40
Food Waste Tip Fee/ton	$65	$40
Sorting Cost/HH	$34	$20

- At current market and voluntary pilot level diversion, cost saving would not offset additional sorting expenses
- At current market, statewide annual waste disposal costs would decline by ~$75 million at Stonington level diversion, and by ~$185 million with full UBP and food waste separation
- At expected market, voluntary pilot level diversion cost savings would effectively offset sorting costs
- At expected market, statewide annual waste disposal costs would decline by ~$130million at Stonington level diversion, and by ~$260 million with full UBP and food waste separation
- **These forecasts exclude local collection savings that also would be realized as these savings are more difficult to estimate**