

Town and County of Nantucket Select Board • County Commissioners

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C. Elizabeth Gibson
Town & County Manager

***AGENDA FOR THE MEETING OF THE
SELECT BOARD
JANUARY 11, 2024 - 6:00 PM
PSF COMMUNITY ROOM, 4 FAIRGROUNDS ROAD
AND REMOTE PARTICIPATION VIA ZOOM WEBINAR
NANTUCKET, MASSACHUSETTS***

***YOU TUBE LINK FOR VIEWING ONLY:
<https://youtube.com/live/nreJ0DEIbFw>***

***ZOOM WEBINAR REGISTRATION LINK TO VIRTUALLY ATTEND MEETING:
https://us06web.zoom.us/webinar/register/WN_ULgvE0FSSSme5HdKjzubxQ***

- I. CALL TO ORDER***
- II. COMPREHENSIVE SOLID WASTE UPDATE***
- III. ADJOURNMENT***

Solid Waste Management

ON NANTUCKET

Town Administration Long-term Solid
Waste Planning Work Group

January 11, 2024



WASTE MANAGEMENT

*COMPLEX
AND EVOLVING*

IT IS NOT AN EASY PROCESS!

- Over 25 solid waste streams handled individually
- Four facilities on 174 acres
- Site and facilities regulated by MassDEP

CHANGES ARE COMING!

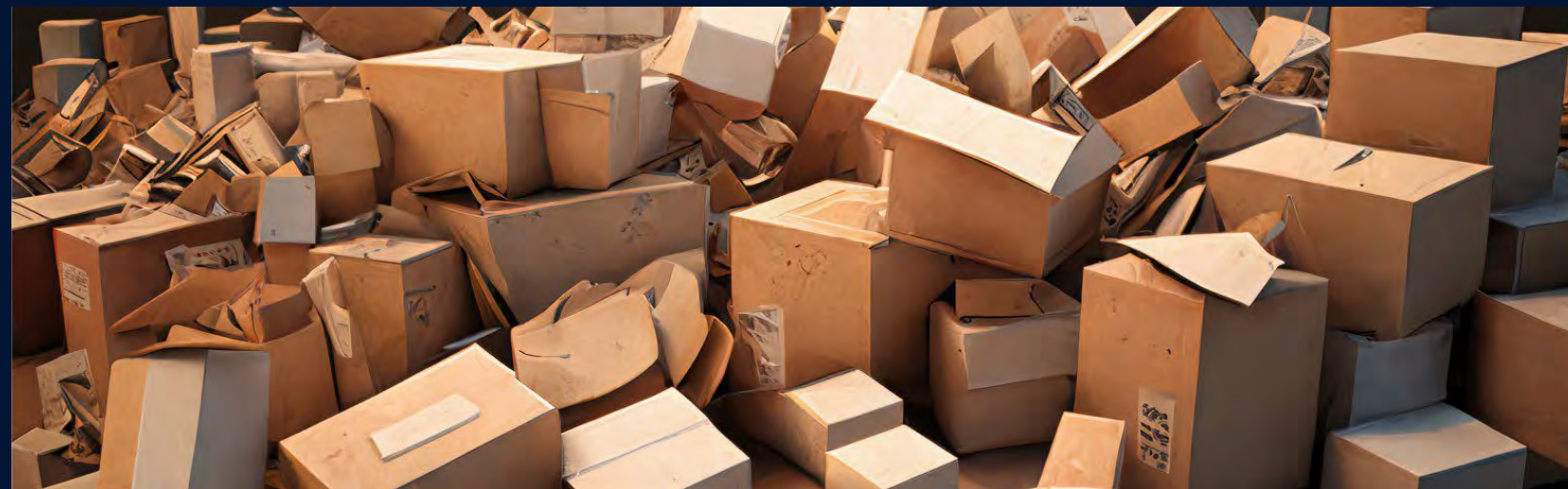
- MassDEP regulations being updated in 2024
- Existing Waste Services Agreement expires November 30, 2025

TOWN GOALS

- Stable and reliable services
- Sustainable, environmentally-sound and economic operations

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TRASH DELIVERED BY RESIDENTS

Chutes for separated recyclables

- Mixed metal (aluminium & tin)
- Mixed plastics
- Old corrugated cardboard, shipping boxes

Containers for separated wastes

- Glass containers
- Food waste / Organics
- Non-Recyclable Non-Compostable (NRNC)

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TRASH DELIVERED BY PRIVATE HAULERS

- Bags of mixed metal containers and plastics
- Bags of glass
- Loose cardboard
- Bags of commingled household trash

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OTHER WASTES INCLUDE

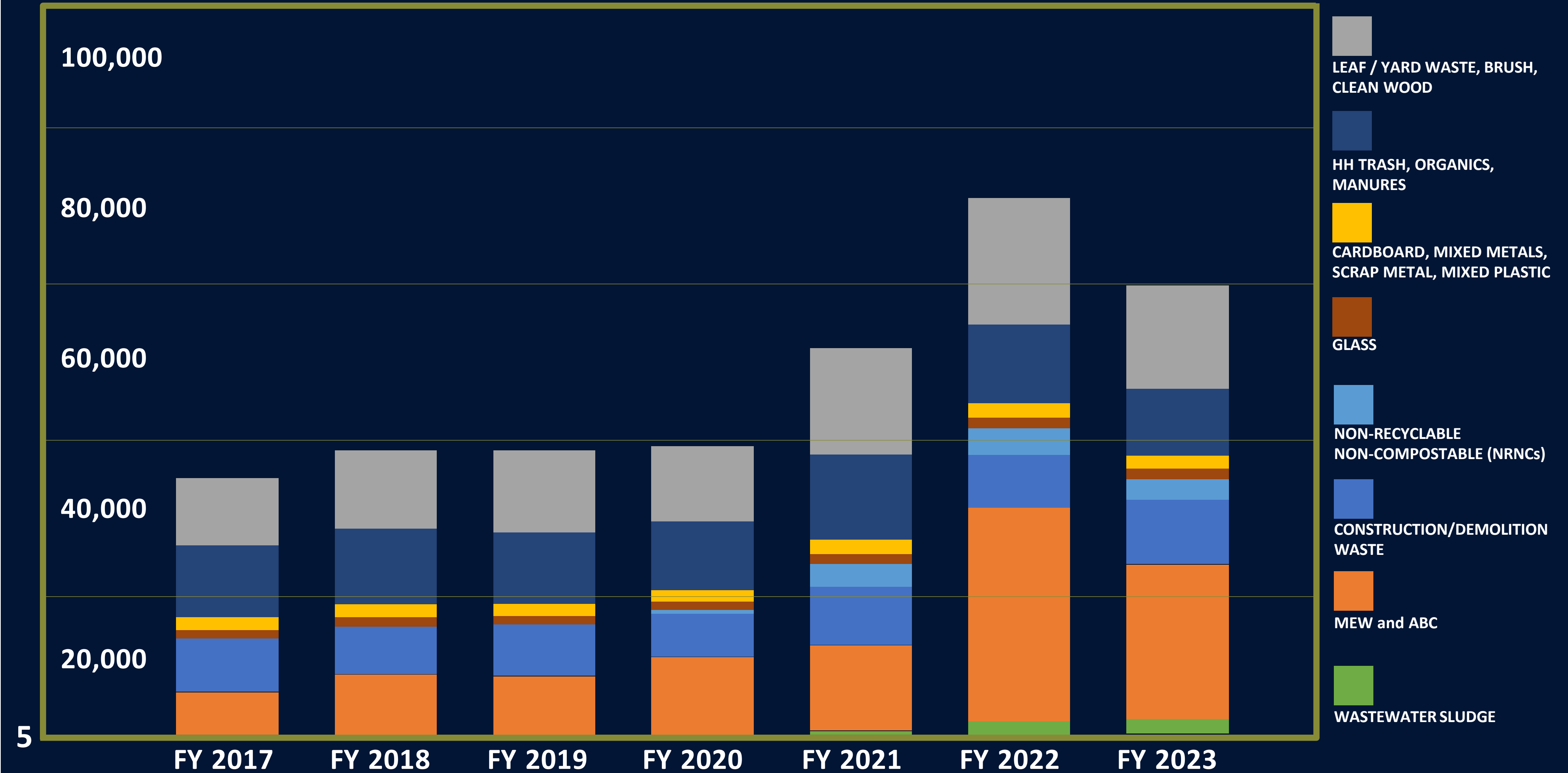
- Leaf/yard waste, brush, clean wood
- Construction/demolition waste
- Asphalt, brick, concrete (ABC)
- Mixed excavation waste (MEW)
- Wastewater sludge
- Mattresses and bulky household items
- Scrap metal
- Appliances (some with freon)
- Tires
- CRTS/TVs/screens and e-waste
- Household hazardous waste/paint

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WASTE HANDLED ON NANTUCKET

TONS PER YEAR - FY2017 THROUGH FY2023





**ONLY 10% OF INCOMING TRASH IS
BURIED IN THE LANDFILL – AND ONLY
AFTER
IT HAS BEEN PROCESSED**

MassDEP required the Town to stop landfilling unsorted trash in 2001.

Town working with MassDEP to cap/close unlined landfill areas to control potential impacts where old trash was buried.

Waste now sorted and sent to multiple areas on-site, off-site and off-Island for re-use, recycling and processing.

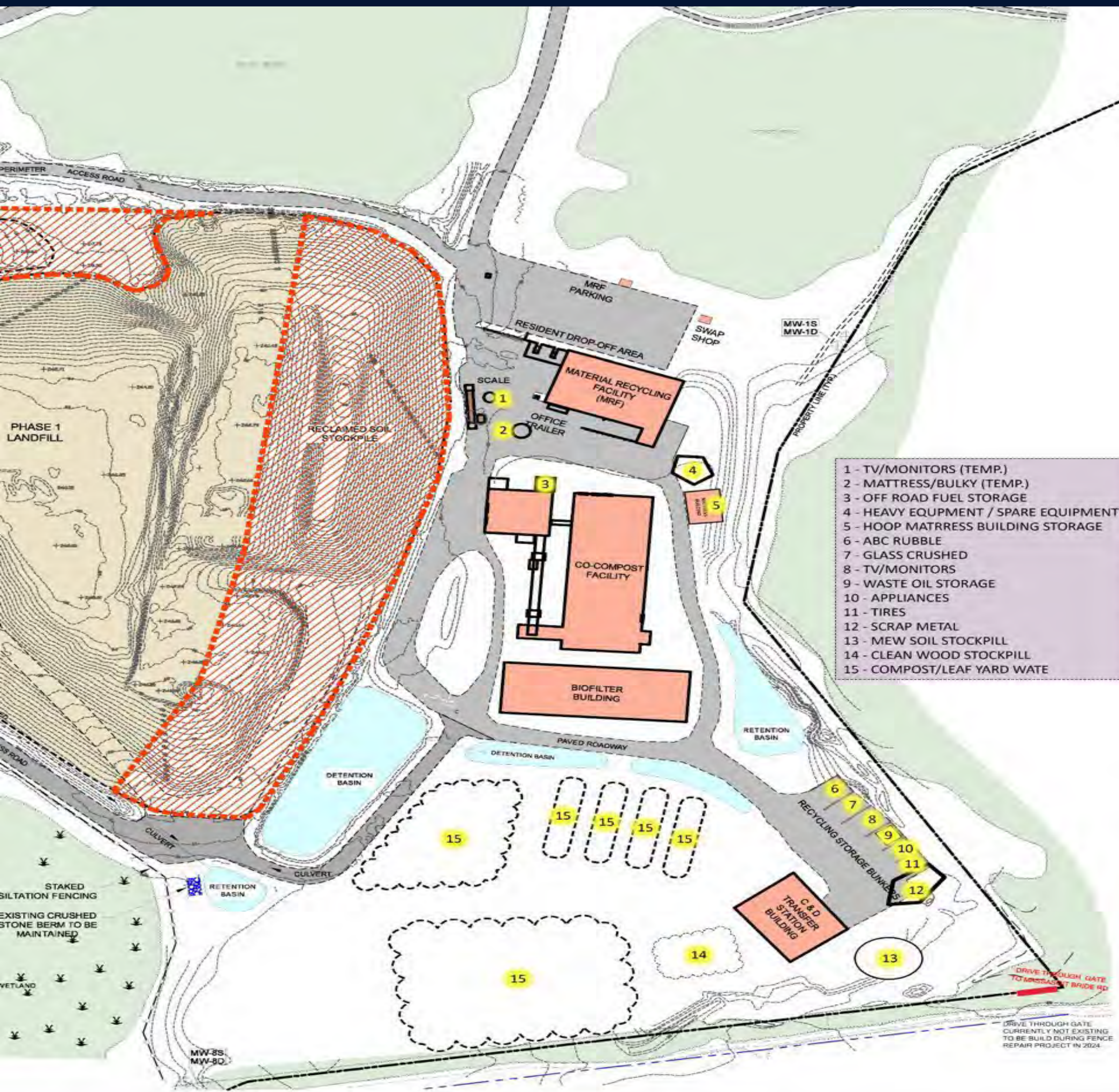
Today, the only waste buried in the landfill is residual material after processing that:

- **Can't be re-used or recycled (baled residuals from the Composter); and**
- **Can't be transported on the ferry (dried/bulked wastewater sludge)**

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D. Material stockpiles



THREE PROCESSING FACILITIES

- Materials Recycling Center (MRF)
- Composter, including aeration building, tip hall, drum and bio-filter
- Transfer Station (aka "C&D Building")

OTHER AREAS

- Compost/soil product management area
- Holding areas for hard-to-manage wastes
- MEW management area
- Landfill and materials management areas

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WASTE PROCESSED ON THE SITE

OUTSIDE AREAS

- Leaf/yard waste, brush, wood – processed into compost, mulch, soil products (14, 15 and 16)
- MEW (13) – screened for fill to raise grades and to recover sand
- ABC waste and Glass (9) – crushed for on-site road and pipe beds

FACILITIES

- Composter
- MRF
- Transfer Station
- Landfill (not shown)



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WASTE SENT OFF-ISLAND FOR PROCESSING, RE-USE OR RECYCLING

WASTE STREAM	DESTINATION OF EACH WASTE STREAM
Recyclable mixed metal and plastic containers – via the MRF →	Recycling facilities with processing equipment and rail access or long-haul trucking capability
Construction and demolition debris (C&D waste) – via the Transfer Station →	Facilities with MassDEP permits for C&D processing, recycling, fuel production and residuals transfer
Non-recyclable non-compostable waste (NRNCs) – via the Transfer Station →	Facilities with MassDEP permits for recycling, processing and transfer
Scrap metal, mattresses, tires, CRTs/screens – (Holding areas) →	Specialty waste processing and recycling facilities
Unusable textiles – (trailer) →	Textile sorting, re-sale, re-use and recycling facilities



MATERIALS RECOVERY FACILITY (MRF)

(OWNED BY TOWN) FOR MATERIALS SORTING, BALING AND SHIPPING



Receiving chutes



Holding areas



Sorting station
(after adding de-bagged trash delivered by haulers)



Baled materials ready for transport



Materials being baled



Picking conveyor
(pickers not shown)

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TRANSFER STATION

*(OWNED BY WASTE OPTIONS)
FOR LOADING C&D WASTE AND NRNCS
INTO TRAILERS FOR TRANSPORT TO THE MAINLAND*



OUTSIDE HOLDING AREAS

FOR OTHER MATERIALS



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THE COMPOSTER

*(OWNED BY WASTE OPTIONS)
FOR PROCESING OF ORGANICS AND OTHER HOUSEHOLD TRASH*



Drum loading area



Rotating drum



Baled residuals to be landfilled



Trommel screen and baler

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OTHER OPTIONS SUGGESTED

(AND REJECTED)



SHIP TO THE MAINLAND

More \$, more risk

- Already ship out nearly 1,000 truck loads per year!
- Need much more ferry and dock capacity
- Need to bale/shrink-wrap or containerize to manage odors and leaks
- Capacity shortfalls and rising tip fees in southeast Mass
- Reconsider long-term given landfill capacity limits



BUILD INCINERATOR

MassDEP ban on new incinerator permits

- Even if permittable, economics don't work at local scale



SELL THE SITE AND PRIVATIZE EVERYTHING

Not plausible

- Town \$19M+ liability for landfill closure continues even if site not used
- Who would buy the long-term site closure liability?
- Town obligated to ensure services are provided properly

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EMERGING TECHNOLOGY

Nantucket is actively evaluating gasification, pyrolysis and other technologies

- We're discussing options with potential vendors
- We've sent Nantucket plastic waste to two facilities for pilot studies to produce electricity or liquid fuels from fuel pellets



Technology must be commercially proven at scale, economically viable, permittable by the MassDEP.

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KEY TOWN INITIATIVES

1

Own/control all facilities at the site.

2

Replace the existing Waste Services Agreement with a transparent and operations-oriented agreement.

3

Consider separate collection of organics and NRNCs town-wide.

4

Prepare for changes in operations to meet changing waste management needs.

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BUY THE COMPOSTER

For contract option price (\$1M) and additional investment, own and control a facility originally built for \$20M with:

- Drum that reduces organic waste volumes, odors and pathogens
 - Aerated building with bio-filter to control process odors
 - Hard to get operating permits anywhere else
 - Hard to manage organic trash any other way
- Can process multiple waste streams into products for on-site use
 - Can be re-purposed for other future uses

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BUY THE TRANSFER STATION

For negotiated price (\$3.4M) and additional investment, own and control a facility rebuilt in 2013 for ~\$5M:

- Has operating permits hard to get anywhere else
- Ready to transfer C&D waste and NRNCs to mainland
- Can transfer other materials as appropriate
- Good working condition

Challenges of alternatives:

- No obvious site that meets MassDEP and Town suitability criteria
- Replacement would require years of development/permitting
- Replacement cost far above \$3.4M
- Difficult to manage 10,000+ tpy C&D waste, NRNCs, and residuals without a dedicated facility

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ISSUE AN RFP FOR A CONTRACT OPERATOR THROUGH A COMPETITIVE PROCESS

- Town drafts the service agreement and defines the business arrangements.
- Town requests proposals with unbundled services and pricing for transparency and as a baseline for changes.
- Town gets fixed prices and guarantees to the extent possible.
- Oversight by Town Administration Long-term Solid Waste Planning Work Group with:
 - Town staff with operating experience
 - Town volunteers with top-level solid waste industry experience
 - Legal and consulting support from solid waste industry specialists

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“Ensuring effective and transparent management of Nantucket solid waste today and into the future”

Town Administration Long-term Solid Waste Planning Work Group

- C. Elizabeth Gibson, Town Manager
- Andrew Patnode, DPW Director
- Chris Lowe, Solid Waste Manager
- Alice Kellogg, Recycling Coordinator
- Rick Sears, Assistant Town Manager
- Brian E. Turbitt, Finance Director
- Howard Matz, Capital Program Committee
- Brooke Mohr, Select Board
- Peter Schaeffer, Finance Committee
- John Giorgio, Esq., KP Law, Town Counsel
- George Aronson, CRMC. solid waste consultant

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www.nantucket-ma.gov/solidwaste



