**Martha’s Vineyard Food Waste Initiative**

**STOP EXPORTING FOOD WASTE**

**Expensive, wasteful, harmful and illegal**

* It will **cost the Island** **$19.4 million dollars** between 2025 and 2040 to export 6500 tons of food waste each year.
* Every year **621 trucks displace 2500 cars on the ferry** to travel a minimum 50 miles and one-way on the Steamship burning money and carbon dioxide.
* Food waste represents 8% of US **greenhouse gas emissions** driving climate change - the sea level rise and more frequent and intense storms - that are **rapidly changing our Island**.
* According to MassDEP**, 2,240 tons of food waste** - 173 garbage trucks full of food waste must be recycled every year, but due to lack of infrastructure – they are **illegally** **disposed of**.

**PROCESS FOOD WASTE ON ISLAND**

**Profitable, sustainable and climate smar**

* **$5.8 million in additional revenue** could be collected between 2025 and 2040 in tipping fees and compost sales if 4000 tons of food waste were processed and sold on Island.
* **Save $11.2 million if 4000 tons a year of food waste was processed here between 2025 and 2040**
* **60,000 cubic yards of compost** would enrich and and restore Island soils creating more resilient and bountiful local agriculture.
* **Absorb carbon dioxide from the atmosphere - Composted soils sequester 27,000 lbs. more carbon dioxide** per acre than untreated soils.

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Each year, Martha’s Vineyard exports 6,500 tons of food waste off-Island. A little less than half of this represents food waste that is disposed of illegally, and as MassDEP expands the Food Waste Ban in 2022 to smaller scale food waste producers, the volume of illegal waste will rise. We do not have the infrastructure on Island to comply with the law today. If we do nothing, the Island will spend **$19.4 million to export food waste** between 2025 and 2040.

We know these costs will continue to rise as only 3 landfills in Massachusetts will accept other community’s waste by 2022. Already, 40% of Massachusetts solid waste is exported to New Hampshire, Maine and Ohio.

Food waste exported off Island, along with the 360 truckloads of bulk compost we import in, represents 621 tractor trailers taking up the space of 2500 cars that will not make it on the ferry each year.

Food waste emits 8% of US greenhouse gas emissions per year.In the US in 2014, landfill gas from food waste emitted the equivalent of 163 million tons of carbon dioxide, that’s about the yearly emissions of **31 million cars**. Over half is methane gas, which is 28 times more potent than carbon dioxide but has a fraction of the atmospheric life - 12 years - meaning if methane release can be minimized, the climate impacts will be mitigated on a time scale of decades versus the centuries required by carbon dioxide.

When food waste is composted and applied to the soil, they sequester 27,000 lbs. more carbon dioxide per acre than untreated soils. Composted soils are richer in nutrients and soil microbes and require less watering resulting in more sustainable and bountiful crops.

If we do not process locally in the future, the Island will spend $19.4 million dollars between 2025 and 2040 to export 6500 tons of food waste each year. The IFR food waste pilot has proven there is a food waste collection market at $85/ton and a cured compost sales market at $60/cubic yard. If the Island collected and processed 4000 tons of food waste here at MVRD, $5.8 million in additional revenue could be collected between 2025 and 2040 in tipping fees and compost sales. That is in addition to $11.2 million saved on export costs. **That is $17.6 million in savings and revenue for the Island over 15 years.**

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| **SAVINGS, COST AND REVENUE TO PROCESS FOOD WASTE ON ISLAND 2025-2040** |
|  | **Tons of food waste generated** | **Cost to Export** | **Tons of food waste captured** | **Dollars saved by local capture** | **Tipping Fees and Compost Sales Revenue** | **Operating Costs** | **NET REVENUE including money saved** |
| **2025** | 6500 | $1 million | 1823 | $281k | $179K | $324K | **$136K** |
| **2030** | 6,500 | $1.1 million | 4,000 | $698K | $420K | $367K | **$751K** |
| **2040** | 6,500 | $1.4 million | 4,000 | $893K | $420K | $458K | **$855**  |
|  **All years total 2025-2040**  | 97.5K tons | $19.4 million | 60K tons | $11.2 million | 5.8 million | $5.8 million | **$11.2 million** |

**What has been done on Martha’s Vineyard so far?**

* In the 2009, the Martha’s Vineyard Commission’s (MVC) 2009 Island Plan recognized the great expense of exporting waste off island and recommended converting waste into useful resources with an integrated, Island-wide program of waste management. Their recommendations included a large-scale composting facility to transform wasted food into a needed island commodity.
* In 2015, a group of concerned islanders, with support and funding from the Martha’s Vineyard Vision Fellowship, convened the Organics Committee to identify an Island response to the Massachusetts Organics ban.
* Following the recommendations of the Committee, a food waste pick-up and composting pilot – Island Food Rescue (IFR) was launched in 2016 resulting in 17 tons of food waste recycled into compost.
* In 2019, an in-vessel composter and a food waste truck were acquired by IGI, and 360 tons of food waste were processed in 2019 proving a market demand for both food waste collection and compost sales.
* In 2020, the third in a series of reports commissioned by the Committee to study the issues and opportunities around food waste on Island outlined specifications and estimated all-in capital costs for an in-vessel drum composting system at $9,826,496 for MVRD.
* The MVRD has a plan in place, approved by the four towns in the district and the MV Commission, to provide a location for an in-vessel drum, and awaiting final approval from the MassDEP.
* No other location appears to be a feasible island-wide processing location at this time.
* In 2020, IFR was recognized by the Environmental Protection Agency (EPA) as a New England organization keeping food waste out of landfills.

If we do not process locally in the future, the Island will spend $19.4 million dollars between 2025 and 2040 to export 6500 tons of food waste each year. The IFR food waste pilot has proven there is a food waste collection market at $85/ton and a cured compost sales market at $60/cubic yard. If the Island collected and processed 4000 tons of food waste here at MVRD, $5.8 million in additional revenue could be collected between 2025 and 2040 in tipping fees and compost sales. That is in addition to $11.2 million saved on export costs. **That is $17.6 million in savings and revenue for the Island over 15 years.**

**What’s next?**

**The MV Food Waste Initiative, along with partners Bruno’s Rolloff and Keane’s Excavation will continue to grow the compost collection pilot to reach 1800 tons of food waste collected, processed and sold in 2025.**

An Island in-vessel drum composting system that can process over 6500 tons of food waste will cost **$9,826,496.** Projected total yearly operating costs for the new in-vessel system are $324,100. Capital costs will be recovered through export savings, tipping fees and compost within 11 years.

The Island exports 19,000 tons of solid waste that is nearly equally divided between MVRD and OB/Tisbury. If OB/Tisbury do not opt-in, it will cost $6 million to export their food waste between 2020 and 2040. The Massachusetts DEP will force food waste ban compliance by 2025 driving 2240 in mandated food waste recycling resulting in MVRD collecting and processing that in addition to 2000 tons resulting in NET revenue of 1.4 million between 2025 and 2040. The four MVRD towns alone would recover the capital costs by 2045.

The waste business is an economy of scale in that the more volume produced the less it costs per unit. This is true for exporting solid waste off-Island and it is true for processing food waste on Island. There is no question that the most economical approach to waste management on Island is a six-town waste system.

The $9 million Capital expense requires investment from all six Island towns. All commercial waste and residential curbside collection waste is tipped through the Edgartown and OB transfer stations, dramatically skewing town-by-town waste data on Island.

**CHALLENGES**

1. There is no question that the most economical approach to waste management on Island is a six-town waste system. An agreement for food waste alone, or all waste must be reached between the two different Island waste systems, OB/Tisbury and MVRD.
2. An equitable share of costs for each town must be agreed upon.
3. Allocation of funds for a composting system must be included in next year’s proposed town budgets and approved at each Annual Town Meeting in the Spring of 2021.