Fishers Island Waste Management District

Local Solid Waste Management Plan Update

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David Burnham, Chair
Bob Evans, Treasurer
Sarah Malinowski, Secretary
Tryn Collins
Kate Stevens

Part One - Summary Report

(i) Changes to the planning unit structure

Fishers Island Waste Management District (FIWMD) submitted its 'Final Plan' NYSDEC in compliance with Section 27-0107.1 in July of 2019. Since then, two major events have had far reaching impact on our daily operations and our vision for the future.

First, the proposed 4-million-dollar capital improvement program that formed the backbone of our 2019 Final Plan submission to the DEC was rejected by the local community. The program dates back to 2016 when the District commissioned a plan to overhaul its operations. The initiative was inspired by New York State's sustainable materials management strategy "Beyond Waste." We wanted to do our part in reducing dependance on disposal and look "upstream" for reduce, reuse, recycle, compost, and energy recovery solutions that would divert materials from landfills and minimize greenhouse gas emissions. A comprehensive planning process convinced us that combining our current two stations and building a state-of-the-art compost facility would best serve our stated mission, our employees, and the public.

In the end, the District was unable to persuade the public at that time that this effort was worth the investment. Concern focused on cost, possible increases in traffic, noise, and dust created primarily from brush & wood chipping activities, as well as the aesthetic impact of proposed utilitarian buildings and machinery. The neighborhood immediately surrounding our stations has always been home to multiple uses. However, in recent years significant investment in projects such as a community center and recreation space, artists' studios, residential units, a proposed trail system, and others, have deepened the field of stakeholders. The public's rejection of the District's 2019 plan triggered a broader understanding of our responsibility to our neighbors and taxpayers in general. On the fiscal side, a host of other major projects underway at the school, Fire District, and water distribution system mean we need to be even more targeted in how we approach improvements. Nonetheless, the District still maintains the goal of combining stations because of the efficiencies it represents and moving forward we strive to coordinate more closely with our neighbors to ensure the most beneficial impact possible.

Since the 2019 submission, COVID has also dominated. While there has been no intervening census on the ultimate impact, there have been signs of significant increases in both seasonal and year-round populations. With remote work and schooling options, some traditionally seasonal residents remained on the island through the winter(s), including several families that enrolled their children in the Fishers Island School. It is estimated that the year-round population surged from approximately 230 to 350 in 2020, settling to close to 300 in 2021. The changes in the seasonal population are more difficult to

assess. An argument can be made that the overall seasonal population has declined since COVID because many owners are choosing to use their homes for exclusively personal use rather than renting them out for a portion of the summer. Regardless, Fishers Island Waste Management has seen an increase in waste over this time.

In the wake of the failed 2019 capital improvement program and the unpredictability wrought by COVID, we have pivoted to focus on fine tuning our existing operations, testing projects, and introducing incremental changes. The following is our ***2022 Strategic Statement of Goals and Accomplishments*** *(updated 5.2.1 Adopted Statement of Commitment p. 47-48 LSWMP 2019*). This is a living document that will be updated at regular intervals to reflect evolving opportunities and tested solutions.

2022 Strategic Statement of Goals and Accomplishments

1. Planning Unit Structure

a. Additional Help - public private partnership, contract consultant, or new manager

Goals

- Clarity with accountability
- Defined roles and chain of command
- Clear communication channels
- Consultants and professional services
- Board effectiveness and makeup
- Waste management expertise and knowledge

Accomplished/Initiated

- Weekly employee self-directed co-ordination meetings
- Established annual anti-harassment training
- Invested in facilities and materials management assessment from Casella
- Advertising for mechanical staff
- Advertising for additional seasonal staff

2. LSWMP Specific Practices, Tasks & Goals

a. Compost

Goals

- Capture as much organic waste as possible i.e., greatly increase participation from islanders & larger organizations like the clubs
- Continue to educate public i.e., create a campaign to get the word out about our compost program
- Partner with other organizations to limit amount of compost imported
- Increase convenience, improve how compost is retrieved by customers i.e., bags etc.
- Continue to improve our composting process
- Develop pilot program for including compostable containers in our compost program
- Collect accurate data for how much household compost is dropped off and how much garden ready compost is picked up

Accomplished/Initiated

- Initiated program of accepting household organic waste for integration into compost rows
- Improved techniques for turning compost for more efficient management

- Initiated program of diverting suitable yard waste to cordwood
- Purchased wood processor for cordwood

b. Optimizing Financial Returns on Materials:

Goals

- Explore options for aluminum cans, cardboard, and scrap metal

Accomplished/Initiated

- Initiated testing phase of public-private partnership with local contractor to collect, haul, and share revenue from scrap metal

c. Improved Safety

Goals

- Update existing emergency protocols
- Update existing incident report protocols
- Improve signage and traffic flows

Accomplished/Initiated

- Established high wind shutdown protocol (to protect against airborne debris)
- Remote site working check-in protocols
- Employee safety gear reimbursement program
- Installation of safety fencing surrounding pits
- Fabricated compactor tops to better comply with OSHA safety standards
- Suspended glass crushing due to safety concerns
- Fire extinguisher training
- Eye safety training

d. Increased Efficiencies

Goals

- Identify opportunities for customer self-serve/self-help to free up employees for other activities

Accomplished/Initiated

- Increased compacting pressures to increase weights of outbound containers
- Bolstered in-house machine maintenance to reduce cost, delays, and inefficiencies of off-island servicing
- Replaced containers and rustproofed new ones for anticipated longer service life
- Purchased and installed waste oil furnace that runs on customer supplied waste oil to heat FIWMD facilities
- Installed instant hot water heaters
- Salvaged equipment abandoned after Sandy and added an additional compactor dedicated to bottles and cans
- Suspended glass crushing operation and redirected stream back into the bottle and can compactor
- Concentrated the days the stations are open to the public to allow employees more time to complete other tasks

e. *Combining Stations*

Goals

- Reduce operating costs
- Focus employee effort and facilitate teamwork
- Increase convenience for customers
- Consolidate resources

Accomplishments/Initiated

- Household organics that once went to the transfer station are now brought to the compost station

3.Data, Public Outreach & Education Goals

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a. Data

Goals

- Identify strategic data to collect
- Explore data collection tools including a scale, self-reporting sheets, surveys, compost/mulch measuring totes, etc.
- Visualize data graphically for the public in a way that is easily accessible and fun

Accomplished/Initiated

- Weighing food scraps

b. *Public Outreach & Education*

Goals

- Through public outreach and education, reduce waste being sent off island and facilitate responsible management of difficult to dispose of items (old paint cans, cleaning products, chemicals etc.)
- Stay up to date with latest waste techniques, regulations, etc.
- Relaunch social media accounts
- Pursue grants

Accomplished/Underway

- Peer-to-peer employee onsite training on machinery, maintenance, and best practices
- Ongoing dialogue between station employees and our customers (ex: reinforce material separation practices)
- Engaged a website designer to revamp current website
- Initiated a partnership with the local community garden (ficgarden.com) to highlight the benefits of using our locally produced compost instead of imported materials

(ii) Waste generation, recycling, disposal data, and comparisons

Table 20 – Forecasted MSW Quantities for the Planning Period from our 2019 LSWMP includes the statement that the "Plan assumes waste quantities follow population changes. As such, the per capita per day factor remains the same." However, the intervening period has proven both assumptions to be incorrect. Covid brought us unanticipated population and per capita waste increases. The 2019 Capital Improvement Program on which the projections were based never happened. As a result, there was no correlation between the forecasted and actual MSW numbers for 2020 and 2021 (refer to page 8 tables

for actual and page 1 LSWSP attachments for forecast). Our 2020 MSW was 237.42 tons compared to the forecasted 224.2 tons. 2021 MSW was 311.1 tons compared to the forecasted 214.6 tons. Our recently launched household organics program grew from 3.5 tons in 2020 to 5.4 tons in 2021. However, we are still several scales of magnitude away from the ~~2019~~ Table 20 targets of 26.4 tons and 35.8 tons respectively. We have seen a modest increase in participation rates that are currently hovering at around 40 families. We clearly have a lot of work to do both in improving our diversion rates in our current configuration, as well as building public support for investing in a more efficient one. Additionally, it is unclear if there is going to be a return to the old normal, or if we are ushering in a new era of remote working/school. Given the different variables and volatility of the landscape, we are not revising our MSW projections at this time. Meanwhile, we strive to be ever vigilant and responsive to opportunities to shrink our environmental impact and improve efficiencies.

While Covid has injected a high degree of unpredictability, certain trends are emerging. Foremost has been a shift towards internet shopping. The following data, supplied by the Fishers Island Ferry District indicates that incoming box freight experienced significant increases. February, the least active month, experienced an increase of 2.8x between 2017 and 2021. July, the most active month, has seen an increase of just under 50% for the same period. Also, residents have spent more time on the island and have initiated more home and yard improvement projects. The District has experienced significant increases in C&D and yard waste volumes.

Fishers Island Ferry – Freight Boxes

	2017	2018	2019	2020	2021
January	976	1146	1067	1235	2164
February	774	805	1009	1131	1847
March	1126	1185	1142	1891	2301
April	1350	1569	1755	2856	2775
May	2308	2899	2850	4152	3729
June	3899	4039	4051	6037	6827
July	4780	5593	6643	7046	7100
August	4133	3825	4413	5179	5475
September	1538	1540	2028	4155	3245
October	1242	1441	1638	2945	2033
November	1263	1160	1302	2560	1904
December	1427	1459	1652	3249	2240
Totals	24816	26651	29560	42436	41640

(iii) Changes to solid waste management practices & implementation schedule

Woody material:

The District dedicates significant resources to handling yard and landscaping waste – primarily trees. While our compost operation is the most environmentally sound program for handling brush and smaller unwanted woody material, we have begun experimenting with processing larger tree limbs and trunks into cordwood.

We will measure whether or not a cordwood program reduces our fuel use, labor, and wear and tear in machinery. We will also assess if producing cordwood rather than chipping the larger specimens reduces the dust and noise our neighbors experience.

During this testing phase and to encourage participation, the District is offering the processed cordwood to islanders at no charge.

Household organics:

The District has initiated and developed a recycling program that takes household and commercial food scraps for integration into compost windrows. The current program relies on customers depositing their kitchen scraps into special containers at the Compost Station. These containers are then periodically weighed by our employees and collected for integration into the composting windrows.

Expanding our composting program presents our greatest opportunity for reducing our environmental impact. Approximately 40 families and two small restaurants currently participate. The majority of families and the two largest food waste producers on the island – the two clubs - remain to be included.

In addition to diverting household organics from landfills, another key goal of our compost program is to reduce and eventually eliminate the amount of compost being imported from the mainland. As a first step, we are partnering with our local community garden to demonstrate that the compost we produce is actually of higher quality than what is being imported. During this testing phase and to encourage participation, the District is offering the compost to islanders at no charge. The District also tests our compost annually to get an accurate picture of the quality of compost we are producing.

Following are the 2019 – 2021 data for the program:

Food Scraps/Household Organics by weight (lbs.)

	2020	2021
January	588	253
February	599	517
March	394	244
April	Closed	0

May	356	521
June	501	2070
July	1062	1777
August	607	2494
September	1004	1087
October	558	1133
November	586	731
December	649	0
Totals	6904	10827

The somewhat irregular growth described in the table above reflects both the maturing of a pilot project and disruptions from COVID measures. The District initiated the pilot program with curbside pickup of customer food scraps. The declines in 2021 reflect the cessation of the pickup program. The overall y/y growth, which shows an approximate 50% increase, demonstrates the District is clearly headed in the right direction. As we increase and improve our methods and public outreach, we expect more consistent and considerable growth.

Household bulky, C&D waste, scrap metal, appliances, tires, mattresses, and e-waste:

Besides yard waste, the Compost Station accepts household bulky, C&D waste, scrap metal, appliances, tires, mattresses, and e-waste. The handling methods for these are unchanged from our last LSWMP, with the exception of:

a) Capturing reusable material for District use (wood, piping, etc.) and making it available to the public.

b) Hosting a more organized seasonal swap shop.

c) Partnering with a resident for salvaging and transporting textiles to mainland reuse initiatives.

The District has been considering possible improvements, including a partnership with local thrifts to streamline the retailing of discarded household goods.

Recyclables:

Being an island community means we are highly conscious of the energy, costs, and logistics associated with importing and exporting everything we use. Even so, there is much work ahead to develop a more robust recycling program. Possible initiatives could include educational reminders to our community to leave packaging at the store or seek products with compostable packaging. Additionally, a more extensive compost program that accepts certain types of cardboard, paper, and all compostable

containers and packaging products could be developed to divert materials from being shipped off island to alternative on-island uses.

It should be mentioned that anticipated inflation, especially with regard to commodities such as aluminum and cardboard, could provide better off-island recycling opportunities.

Solid Waste:

As discussed in Section 2, Transfer Station solid waste is being compacted to greater pressures, which results in lower environmental transportation cost. The data that follows will provide insight into the heavier outbound loads being achieved. While this improvement is a start, the District is exploring other alternatives to reduce both environmental and economic costs.

(iv) Obstacles preventing the planning unit from implementing tasks and/or achieving the goals of the LSWMP

Due in part to the fallout from the failed capital improvement program as well as health and other issues, we have had enormous turnover in our management structure over the last four years.

In addition, when the FIWMD's final plan was submitted in July of 2019 the world was a different place. Indeed, the entire waste management sector has been experiencing COVID-related disruptions and changes. Our waste stream has experienced clear changes, in particular with cardboard and related packaging that increased their share of the input.

The following 'Outbound Tonnages' data was compiled from invoices from our haulers and receiving vendors. The data is separated into Transfer Station and Compost Station statistics.

Transfer Station				19-'20	20-'21	19-'21
	2019	2020	2021	% change	% change	% change
Bottles & Cans[1]	35.68	36.24	85.61	101.57	236.23	239.94
Muni. Solid Waste	290.53	237.42	311.1	81.72	131.03	107.08
Paper	36	21.99	37.07	61.08	168.58	102.97
Cardboard	47	48.15	61.32	102.45	127.35	130.47

Note 1: The large jump in Bottles and Cans in 2021 reflects a notable change in handling glass products. Our initial glass crusher experiment raised concerns about glass dust, noise, and the time investment

required. It has been suspended until we identify a better approach on Fishers Island. In the short term, we have re-introduced glass into the Bottles & Cans compactors rather than separating and crushing it.

The most overarching observation is that the District experienced a general decline in waste between 2019 and 2020. The only category that defied that trend was cardboard, which was up by 2.45%. This period describes the onset of COVID 19. At the start of the pandemic the island experienced an influx of "refugees," who were generally housebound and inactive. As restrictions eased and life slowly returned to normal, the waste stream recovered, which largely accounts for the 2021 rebounds.

Compost Station:

The following table is also derived from billing information from our vendors. The total tonnage sums are net of 'unit costs'.

Compost Station:				19-'20	20-'21	19-'21
	2019	2020	2021	% change	% change	% change
Bulky	168.91	151.22	196.93	89.52697	130.2275	116.5887
Metal	52.6	34.06	67.74	64.75	198.88	128.78
Wood	149	87.67	189.79	58.84	216.48	127.38
Ewaste (Units)	41	27	36	65.85	133.33	87.80
Mattresses (Units)	169	82	199	48.52	242.68	117.75
Tires (Units)	52	46	34	88.46	73.91	65.38
	2389.51	2292.95	2475.46			

(v) Outreach and educational activities

We recognize that one of our greatest opportunities for successful outreach and educational opportunities rests in the capable hands of our station attendants. These team members interact with our public daily and can guide them towards better compliance with our waste standards and better ways to reduce, reuse and recycle in their own homes and businesses. Outreach and education are vital opportunities for significant increases in waste reduction and diversion of usable products. Our 2022 strategic statement highlights ongoing initiatives in this area (listed again here).

- Engaged a website designer to revamp our current website.

- Initiated a partnership with the local community garden (ficg.com) to highlight the benefits of using our locally produced compost instead of imported materials.

(vi) Compliance with local recycling laws

For proximity reasons, our recycling does not go to Long Island but to Willimantic, Connecticut (casella.com). Casella has a robust environmental policy, ensuring materials are handled in accordance with applicable laws and regulations.

(vii) Conclusion

From an operational perspective the District has continued to adopt improvements that address safety, economic, and environmental concerns. These accomplishments have occurred in the wake of an operational disappointment, the challenging context of an ongoing pandemic, and in an industry subject to changing global dynamics.

We recognize that our biggest opportunity to reduce greenhouse gas emissions is to capture a larger portion of household organic waste that is still being shipped off island. The multiple benefits include reducing the amount of MSW being exported for lower environmental transportation costs and decreased taxes. Less WET household organics at our destination facility also enables the incinerator to operate more efficiently for additional energy savings. Another benefit of a robust composting program is the ability to provide local, high-quality compost to our island population. This means less material has to be imported and less packaging discarded.