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RESOLUTION #2021-291

October 25, 2021

RESOLUTION IN SUPPORT OF A ZERO WASTE COMMUNITY, PURSUIT OF RECOMMENDATIONS AND STRATEGIES ARTICULATED BY ZERO WASTE ASSOCIATES AND THE CREATION OF A JOINT WORKING GROUP WITH MAPLEWOOD TOWNSHIP FOR THE PURPOSE OF CREATING AND RELEASING A JOINT PUBLIC BID FOR COLLECTION AND PROCESSING SERVICES DESIGNED TO ADVANCE THE PRODUCTION OF ZERO WASTE

WHEREAS, the Township of South Orange Village ("South Orange") and Maplewood Township ("Maplewood") (South Orange and Maplewood are collectively referred to as the "Towns") embarked on a planning process to develop a strategic plan and procurement strategy to reduce waste and increase recycling and composting; and

WHEREAS, the Towns procured the services of consultant team Zero Waste Associates ("Zero Waste") to conduct surveys of local and regional processors, collection service providers, and peer communities; and

WHEREAS, Zero Waste has provided the Towns with a Procurement Strategy and separate Strategic Plan (both of which are attached hereto); and

WHEREAS, Zero Waste has recommended the Towns consider a joint procurement strategy, articulate this policy decision for implementation by staff/administration; establish a joint working group with responsibility for designating a lead agency and creating and releasing an appropriate public bid.

THEREFORE, BE IT RESOLVED that the Board of Trustees of the Township of South Orange Village hereby acknowledges receipt of the attached Procurement Strategy and separate Strategic Plan and South Orange wishes to express its continued support and involvement in the creation of a joint procurement strategy with Maplewood as recommended by Zero Waste for the purpose of advancing the goals of both communities towards becoming 'zero waste' and hereby directs its Village staff and administration to assist in the implementation of this effort as shall be reasonable and proper; and

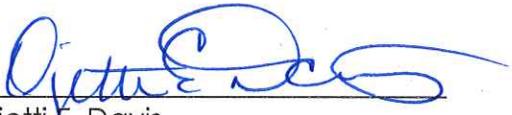
BE IT FURTHER RESOLVED that South Orange shall establish a joint working group with Maplewood, should Maplewood be willing, with the goal and responsibility for designating a lead agency and creating and releasing an appropriate public bid for collection and processing of waste in a fashion that advances their collective desire to become zero waste communities.

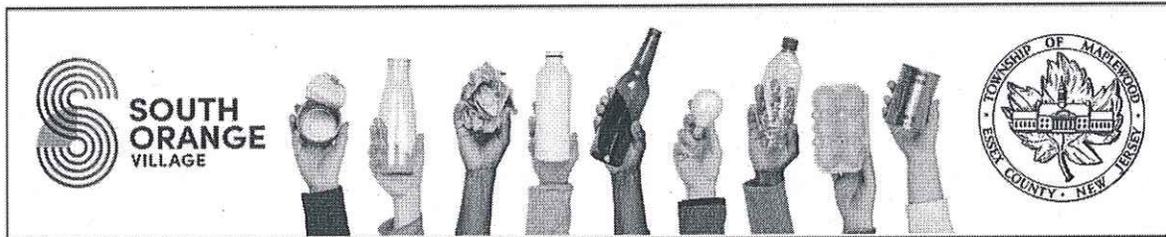


Trustee Member	Motion	Second	Ayes	Nays	Abstain	Absent
Brown			X			
Coallier						X
Haskins	X		X			
Hartshorn Hilton			X			
Jones		X	X			
Zuckerman			X			

CERTIFICATION

I, Ojetti E. Davis, Acting Village Clerk of the Township of South Orange Village, County of Essex, State of New Jersey, do hereby certify that this is a true and correct copy of the Resolution adopted by the Board of Trustees at their regular meeting held on Monday, October 25, 2021.


Ojetti E. Davis
Acting Village Clerk



Maplewood - South Orange Village Zero Waste Strategic Plan

Executive Summary

Maplewood and South Orange Village embarked on a planning process to streamline recycling and trash collection, reduce waste, and improve recycling and expand composting.

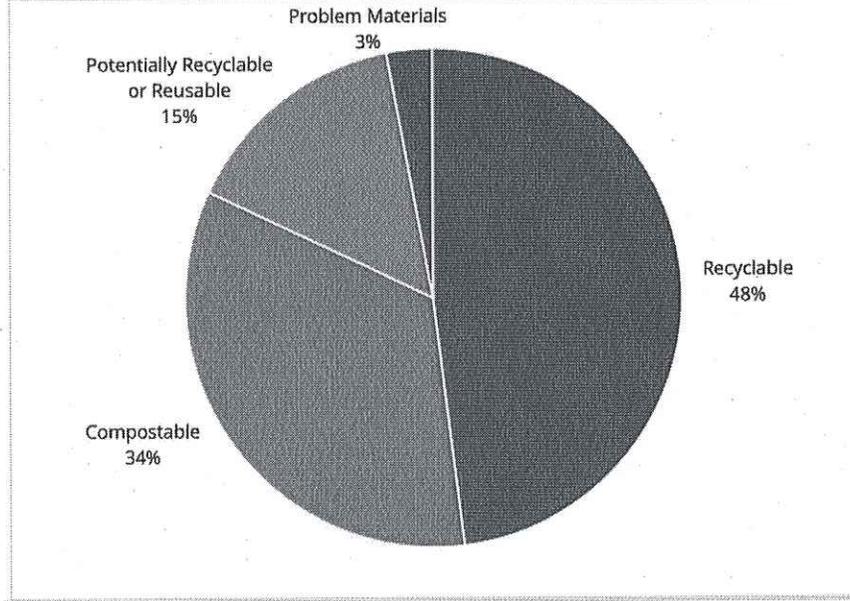
Maplewood and South Orange residents pay over \$5 million for trash disposal and an additional \$1 million in tax dollars for curbside recycling collection.

Communities across the country are reevaluating their understanding of “waste” and choosing to adopt management practices that support the local economy, improve community health, and benefit the environment. Maplewood and South Orange are leading among New Jersey communities in providing services to help residents waste less and recycle more.

Zero Waste addresses the entire system of our stuff and can substantially reduce climate emissions by changing what and how much we buy, what resources went into making it, how long it’s designed to last, how much gets reused, recycled or composted, and what we throw away. A Zero Waste community has access to the systems to make reducing, reusing and recycling easier for everyone. Households can reduce the waste we bring into our homes and “recycle right” by sorting properly and reducing contamination. Municipalities can provide policies, programs and infrastructure to create a more sustainable system.

The recommendations are based on consultation with a joint planning team with representatives from both communities, public input through a communitywide survey and Town Hall, and research conducted by a consultant team.

Most of What We Throw Away is Recyclable or Compostable¹



Source: US EPA 2018

Maplewood and South Orange will work together to implement the Zero Waste initiatives over the Short- (2021-2023), Medium- (2024-2027), and Long-Term (2028-2030).

Several Zero Waste initiatives will be addressed through the procurement process for new residential collection services that will be initiated in the short-term.

Other initiatives may require staff or contractor resources and will take more time to plan, fund and develop.

Short-Term (21-23)	Medium-Term (24-27)	Long-Term (28-30)
<ul style="list-style-type: none"> • Pay-As-You-Throw • Robust Residential Curbside Recycling • Food Waste Prevention Campaign • Food Scrap Diversion • Durable Goods Reuse & Bulky Item Recycling • Textile Collection 	<ul style="list-style-type: none"> • Outreach & Education • School Recycling Education & Assistance • Single-Use Foodware & Litter Reduction Ordinance 	<ul style="list-style-type: none"> • Construction Debris Reuse & Recycling Requirement • Reuse & Repair Infrastructure • Zero Waste Events Requirements and Permitting

¹ US EPA Advancing Sustainable Material Management: 2018 Fact Sheet

Context

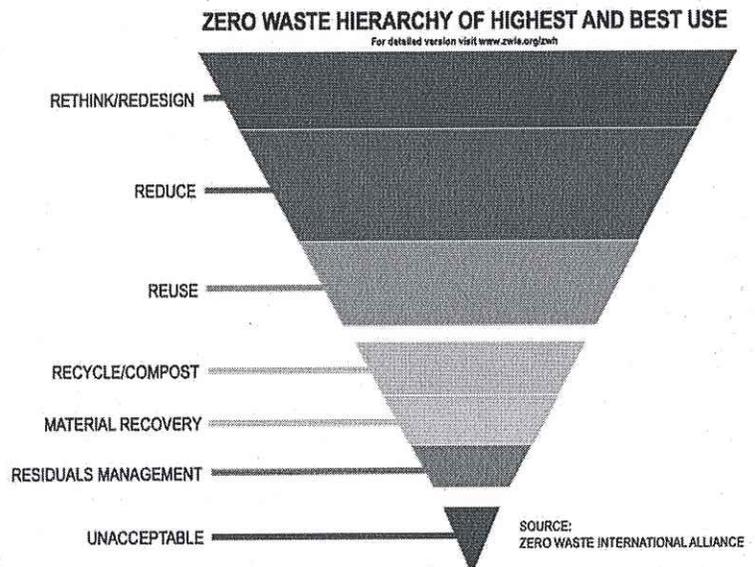
Zero Waste Vision

Zero Waste is a systems approach to eliminating wasteful practices and maximizing the highest and best use of resources through reuse, repair, recycling, and composting. Materials in a Zero Waste system remain as valuable resources in the local economy where they create more abundance, wealth, community engagement, and job opportunities. Due to the interconnectedness of global economic systems, local Zero Waste programs reduce impacts to the environment and to communities all over the world. Evidence suggests that every pound of materials we discard “downstream” has been preceded by 71 pounds of discards “upstream” in raw materials extraction, processing, product manufacturing, and distribution.

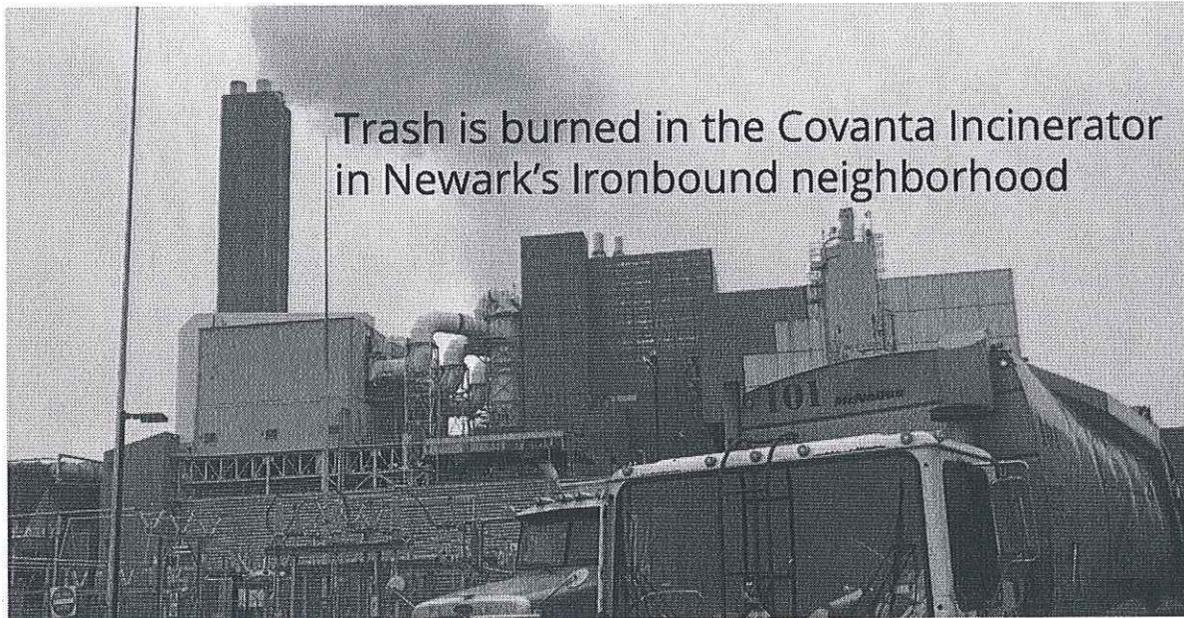
The Zero Waste International Alliance collaborated with Zero Waste organizations and communities around the world to develop the peer-reviewed, internationally-accepted definition of Zero Waste.

“The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning, and with no discharges to land, water, or air that threaten the environment or human health.”

Zero Waste is also a global movement based on environmental and social justice principles. The Zero Waste movement seeks to realize a sustainable and regenerative future by advocating for policies and practices that ensure human safety, equitable access to resources and opportunities, and elimination of toxins and pollution that negatively impact ecological health and the health of frontline and fenceline communities.²



² Zero Waste Hierarchy of Highest and Best Use



Trash is burned in the Covanta Incinerator in Newark's Ironbound neighborhood

Impact of the Essex County Incinerator

Materials discarded by residents and businesses in SOMA are directed to the Essex County Incinerator operated by Covanta and located in the Ironbound neighborhood, a frontline multi-ethnic, largely working-class community in Newark. The negative impacts of incineration include harm to human and environmental health and economic vitality.

Health Impacts

The World Health Organization recognizes that the impacts on human health caused by air pollution from incinerators include short-term acute impacts (systemic diseases) and chronic (long-term) impacts (e.g., cancer). They also recognize additional exposure "pathways" from consuming food grown on land or caught in tainted waterways near an incinerator to direct contact with soil within the deposition zone such as at children's playgrounds, which also contribute to adverse impacts to the health of residents who live, work, and play within proximity to incinerators.

Economic Impacts

SOMA's discarded materials are typical to a suburban community in the United States. They contain reusable goods, construction and demolition material, recyclables, and organic compostable materials as well as electronic waste, hazardous materials, and recoverable materials. Of the tons of discarded materials generated in SOMA, organic materials comprise approximately 40 percent and repairable and reusable items comprise another 3 percent. These materials are

primary targets for reducing the discard stream and stimulating economic growth in the two towns.

Organic materials are food discards, yard trimmings and soiled papers which make the ideal recipe for a variety of distributed composting systems including backyard, community scale, and municipal scale facilities. Markets for finished compost are local and year round. Compost products for commercial landscaping and household gardening reduce the need for energy, water, and synthetic garden chemicals. Composting is a source of good jobs and benefits. For every 10,000 tons of materials composted, 18 jobs are created. For every 10,000 tons of waste incinerated or landfilled one job is created. A new report from the Global Alliance for Incinerator Alternatives (GAIA), finds that all activities supporting a Zero Waste economy create 200 times more jobs than landfills and incinerators.

Repairable and reusable items are just 2-5 percent of the waste stream but they are among the most valuable, estimated at \$550 per ton. Small businesses that repair mattresses, electronic scrap, textiles, cars, and appliances allow for the re-skilling of workers. Studies have shown that workers recruited from the population of formerly incarcerated citizens have low recidivism rates because the jobs provide family security. Reuse businesses can also provide good products at very low prices for low-income consumers and their community organizations and schools. Both composting and reuse operations have low capital requirements and ready local markets.

Those discarded materials and others can be decreased through the policies, programs, and infrastructure recommended in this plan with a proportional increase in community benefit.

Town Leadership

With environmental and environmental justice advocates' recent focus on incinerators and New Jersey's renewable energy credit program, SOMA's efforts to reduce reliance on the Essex County Incinerator demonstrate the communities' joint commitment to righting the wrongs identified in New Jersey's Environmental Justice legislation.

Acting separately over the past few years, the communities of South Orange and Maplewood have adopted policies that ban and limit the free distribution of single-use plastic bags, straws, and polystyrene foam containers. Not only are their actions consistent with the vision of a Zero Waste future, they also helped set the stage for the passage of S864, a statewide ban on single-use plastic and paper bags and polystyrene foam food containers, which was signed into law by Governor Murphy in November 2020.

Acting together, as both communities face the expiration of current recycling contracts, SOMA has taken the opportunity to evaluate options for adopting a more sustainable approach to materials management. SOMA's thoughtful reform of discards management will not only bring immediate and direct benefits to the communities themselves, it will also enhance their reputation as "good neighbors," positioning them as state leaders in addressing two of the great challenges of our time: environmental justice and waste.

Single-Use Plastic Bag Bans in Maplewood and South Orange

Maplewood and South Orange both have single-use plastic bag ban ordinances. These were passed prior to the state mandate in an effort to reduce pollution of non-recyclable materials and encourage a culture of reuse.



Maplewood's Single-Use Plastic Bag Ban began on July 1, 2019 and South Orange's Reusable Bag Ordinance

began on January 1, 2020. Maplewood's single-use plastic bag ordinance bans single-use plastic check out bags at all retail establishments within the Township of Maplewood. In Maplewood, there is a charge for single-use paper bags (0.5 cents (it's 5 cents that began on September 1, 2019. The goal of this ordinance is to reduce the use of single-use bags and encourage the use of reusable bags.

South Orange's Reusable Bag Ordinance began on January 1, 2020 and places a ban on single-use plastic bags and a fee on single-use paper bags. The goal is to encourage the use of reusable bags, while not allowing for the use of non-recyclable plastic bags and discouraging the use of paper bags.

Regulations for Food and Beverage Accessories and Service Ware

Maplewood has a ban on expanded polystyrene foam containers and requires that food establishments only provide accessories to take out food upon request. These [Regulations for Food and Beverage Accessories and Service Ware](#) prohibit the use of expanded polystyrene containers for food service, with an exception for foods pre-packaged outside of Maplewood and prohibits offering single-use food and beverage accessories, except upon customer's request. This regulation took effect on October 1, 2020 and has the goal of reducing single-use polluting items that are not recyclable.



SO Not Plastic Campaign

The South Orange Environmental Commission has launched the SO Not Plastic Campaign to encourage residents to live free of single-use plastics for one week (September 4th - 11th, 2021). Residents were challenged to stop using single-use plastics, foregoing single-use plastic shopping bags, water bottles, straws, sandwich bags, takeout containers/ beverage cups/utensils, plastic wraps, coffee "pods", juice pouches, single size snack bags and other disposable plastics. South Orange students created a series of [videos](#) with actions that residents can take. The campaign created awareness and encouraged residents to continue to reduce single-use plastic all year long.



Maplewood Food Scrap Drop Off Pilot

On September 1, 2021 Maplewood officials launched a pilot drop off program for residential food scrap recycling. Fifty five households in the community were selected via lottery from throughout the six sections of the Township. Participants were required to pay a \$50 fee, as well as complete an online training course and evaluation. Chosen households received a kitchen scrap bucket, 5 gallon pail with lid and BPI certified compostable bags. Participants bring separated food scraps to a designated drop off site at the Department of Public Works, where they are collected weekly by Java's Compost of West Orange and transported to Ag Choice, a licensed food waste composting facility that has been operating in Andover, NJ for over 10 years. The food scraps will be composted into several types of high-grade compost and sold to landscapers, farmers, and gardeners. Maplewood officials plan to use information gained from the pilot to determine waste diversion potential and the effectiveness of public education efforts on quality food scrap recycling, information which will be used to assess the future continuation and expansion of the program. Plans also include providing backyard composting education and resources to residents in the near future.



State of New Jersey Department of Agriculture's Food Waste Prevention Campaign

The State of New Jersey's Department of Agriculture partnered with various food banks in September 2020 to create a campaign to help prevent food waste. Their campaign is contained on this website: moremealslesswaste.com and it provides information on preventing food waste to individuals and businesses while also providing a list of resources. The New Jersey Department of Environmental Protection also has a 2 page flyer on How to Reduce Food Waste at Home.

Current Services

South Orange

GARBAGE: Hauler is South Orange Disposal Co. Subscription service by residents. Toters provided.

Single Family - curbside or back yard collection. 2 cans twice a week flat fee.

Multifamily & Commercial - Multiple different haulers utilized under individual contract, depending on volume generated

Tipped: Covanta Incinerator or Essex County Incinerator Newark, New Jersey (approximately 12 miles away) MSW Type 10 processible waste. Type 13 (bulky) waste is tipped at Advanced Enterprises Recycling Transfer Station in Newark and disposed of in out of state landfills.) Commercial Type 27 processible waste is tipped at Waste Management Transfer Station on Julia Street in Elizabeth and disposed of in out of state landfills.

RECYCLING: Curbside single-stream recycling picked up every other week on either Thursday or Friday.

Hauler: Giordano

Recycling Guidelines

Recycling Drop off center

Other Services Related to Zero Waste: Bulk Pick up - by appointment \$75 per stop - These items go to the transfer station for out of state landfill disposal.

Container Days: Drop off household bulk items at Department of Public Works - first come first serve

Electronics Recycling Days - 6 times a year in SO (monthly April-October), year round in Maplewood. Residents of either town can go to either, as well as to either of two Electronics Recycling Days held by Essex County in Spring and Fall. In addition SO hosts 2 e-waste days and Maplewood accepts e-waste for recycling during all operating hours for residents of both towns.

Household Hazardous Waste: Essex County Household Hazardous Waste Collection held twice a year (spring and fall). Flyer from October 2020. Drop off location: Essex County Department of Public Works. For residents needing disposal between events Essex County HHW has an arrangement with Morris County. Residents must pay a fee.

Maplewood

GARBAGE: Haulers are Waste Management or Waste Industries. Subscription service by residents.

Single Family - curbside or back yard collection two cans twice a week (WM), one or two cans once or twice a week (WI). Limited number of bulky items picked up curbside monthly by arrangement with the haulers at no additional charge .

Multifamily & Commercial - Multiple different haulers utilized under individual contract, depending on volume generated

Tipped: Covanta Incinerator or Essex County Incinerator Newark, New Jersey (approximately 12 miles away) MSW Type 10 processible waste. Type 13 (bulky) waste is tipped at Advanced Enterprises Recycling Transfer Station in Newark and disposed of in out of state landfills.) Commercial Type 27 processible waste is tipped at Waste Management Transfer Station on Julia Street in Elizabeth and disposed of in out of state landfills.

RECYCLING: Curbside single-stream recycling picked up every week on either Monday or Tuesday depending on where you live. Recyclables are placed in reusable containers provided by residents.

Hauler: F. Basso

Recycling Guidelines:

Recycling Drop Off Center: for Maplewood residents only. M-F 8am - 3pm, Sat 7:30-12 noon.

Other Services Related to Zero Waste: Bulk drop off service - twice a year - June and Sept at the Recycling Center - 8am - 2pm (again this bulk drop off ends up in an out of state landfill). Residents also can put bulk waste (up to 4 items) to the curb once a month by appointment with hauler. No fee. No metals, appliances or construction debris.

Electronics Recycling: Maplewood Department of Public Works - daily for SOMA residents - M - F 8am - 3pm, Sat 7:30-12 noon.

Maplewood Paint Disposal

Scrap Metal, Used clothing, Oil, and more

Household Hazardous Waste: Essex County Household Hazardous Waste Collection held twice a year (spring and fall). Flyer from October 2020. Drop off location: Essex County Department of Public Works. For residents needing disposal between events Essex County HHW has an arrangement with Morris County. Residents must pay a fee.

Procurement Strategy

The consultant team Zero Waste Associates conducted surveys of local and regional processors, collection service providers, and peer communities.

Key takeaways include:

- Markets for traditional recyclable materials are cyclical and are currently high for many commodities
- Processors have increased costs due to labor shortages, fires, insurance costs
- Contracts should be flexible to reduce risks and costs of service providers
- More lead time for proposal responses will attract more and better proposals
- More specificity in the Bid Process will allow for better responses
- Haulers indicated willingness to work with subcontractors for collection of additional, non traditional streams such as food waste

Based on the hauler and processor interviews and the initial responses to the community survey and Town Hall, it is clear that there is interest in pursuing a procurement strategy that moves beyond the status quo. The procurement strategy reflects the regional opportunities for expanding recycling and composting, reducing waste, and creating a cost-effective and efficient collection and processing system for Maplewood and South Orange.

Key features of the procurement strategy include:

- Weekly curbside collection of recycling, organics and trash
- Pay as you throw rates charged by the hauler
- Joint procurement process
- Separate, identical service agreements

Zero Waste Initiatives

Fourteen Zero Waste initiatives were identified as strategies for Maplewood and South Orange to work towards Zero Waste. These initiatives were chosen based on stakeholder input, identified as priorities by Town leaders, or recommended for the procurement process. This section includes a summary of the 14 initiatives. The full initiative research can be found in the Appendix.

The following metrics have been estimated for the Zero Waste initiatives and the results are rounded to the nearest 10 to indicate the use of estimated values:

- Potential diversion of incinerated waste in tons – annual
- Potential greenhouse gas (GHG) emissions reduction in metric tons carbon dioxide equivalent (MTCO_{2e}) – annual
- Zero Waste initiative type (policy, program, or infrastructure)

1. Pay-As-You-Throw

Pay-As-You-Throw (PAYT) is a trash collection system for single-family residents that uses variable size carts or bags corresponding with variable fees (smallest cart or bag is the lowest cost). This system is similar to utilities, where a consumer is charged for the amount of energy or water used in the household. The goal is to encourage the household to reduce the amount of trash generated and reduce, reuse, recycle, and compost more. It is also known as unit-based pricing, Pay per Bag or Pay as You Save, and these types of volume-based structures create an economic incentive to reduce trash generation.

PAYT in Maplewood and South Orange can be implemented through a town contract with a hauler or households can solicit services on their own with the hauler. If the town doesn't contract with the hauler directly, then the towns should require PAYT through licensing with reporting. This will allow the towns to keep track of the tonnage of municipal solid waste going to the incinerator. Either way, this system is designed to reduce the amount of discarded items going to the incinerator.

Summary of Impacts*	Maplewood	South Orange
Diversion Potential	590 tons	340 tons
GHG Reduction Potential	(1,410) MTCO ₂ e	(810) MTCO ₂ e
Initiative Type	Policy included in the procurement strategy for single-family residential curbside collection	

All data were rounded to the nearest 10 due to the estimated numbers used in this analysis

2. Robust Residential Curbside Recycling

Higher diversion rates and cleaner streams of recyclables in the residential sector can be achieved through either a single-stream or dual-stream collection system, when coupled with a high quality education campaign.

In a single-stream system, where one bin is used for all recyclables as currently is employed in SOMA, incentives or requirements such as contract extensions, lower franchise fees, bonuses, or liquidated damages can be written into the contract in relation to the quality of recyclables produced by the collection system. Novel provisions such as these have led to improved quantity and quality of recyclables in a system historically plagued by high levels of contamination. Fewer collections typically make single-stream more efficient and less expensive in terms of collection. However, single-stream materials require more intensive processing making processing more costly than in dual-stream systems.

Dual-stream systems often use 2 bins - one for papers, e.g. cardboard, newspaper, office paper, junk mail, and one for containers, e.g. bottles and cans - to limit contamination and maintain quality. Collection costs in dual-stream systems are typically higher than in single-stream systems. However, savings can be achieved on the processing side of up to \$30-40/ton for materials collected dual-stream in the SOMA region.³

It is important to note that both collection systems require robust and consistent outreach and education to be successful.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	560 tons	320 tons
GHG Reduction Potential	(1,370) MTCO ₂ e	(770) MTCO ₂ e
Initiative Type	Policy related to curbside collection of recyclable materials for single-family residential	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

3. Construction Debris Reuse and Recycling Requirement

Construction debris reuse and recycling is an initiative that includes requirements, programs, and incentives to capture, reuse, and recycle materials generated through construction projects in Maplewood and South Orange. Some policy and program recommendations are:

- Minimum requirements for C&D debris diversion (e.g., 75 percent), offering contractors the option to source-separate the materials for reuse, recycling, and composting on-site or to send a mixed load to a certified C&D sorting facility.
- Require a waste management plan or sustainable deconstruction plan be submitted with permit applications for construction and demolition projects - do not issue permits to projects without plans.
- Charge a deposit for permitted projects, refundable upon permittee demonstrating that the minimum threshold of C&D debris diversion has been met through reuse, recycling, or composting.
- Give preferential treatment and/or permit credits for projects that meet existing Maplewood and South Orange Green Building/Sustainable Building Product policies or that earn LEED or Green Globe certification.
- A deconstruction ordinance that requires deconstruction rather than demolition of buildings that meet certain criteria.

³ ZWA communication with Bayshore Industries, Gary Sondermeyer, VP Operations.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	220 tons	130 tons
GHG Reduction Potential	(250) MTCO ₂ e	(140) MTCO ₂ e
Initiative Type	Policy and programs for construction material capture for reuse and recycling across sectors	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

4. Outreach and Education

Outreach and Education are programs that correlate with all aspects of the Zero Waste Strategic Plan and will allow all sectors of the community to know what changes to expect and how they play a role in achieving Zero Waste in Maplewood and South Orange. Zero Waste policies and programs will be accepted and integrated better when there is outreach and education focused on the new initiatives.

The goal of outreach and education is to educate the towns on new policies and programs related to Zero Waste. The outreach and education that is created will help the community members, business owners, and institutional administrators understand the new Zero Waste initiatives related to waste reduction, reuse, recycling, and composting. Outreach and education examples include a Zero Waste video, a website and social media dedicated to Zero Waste information, specific informational campaigns such as one on source separating materials at home to reduce discarded materials going to the incinerator, brochures and flyers distributed to residences and at an event, and direct interaction at events.

One type of outreach and education is Community-based social marketing (CBSM). CBSM is a program that targets behavior change by identifying the benefits and barriers of engaging in that behavior. CBSM can be used by the towns to encourage and enhance new Zero Waste behaviors that align with new Zero Waste policies and programs. CBSM is accomplished through these 5 steps:

1. Select behavior
2. Identify barriers and benefits
3. Develop strategies
4. Pilot the program
5. Implement and evaluate

A Community-Based Social Marketing program that targets specific behaviors related to Zero Waste, such as residential recycling, can greatly enhance the desired outcome of diverting recyclable items from the waste stream. CBSM differs from a

traditional information-based campaign and goes beyond by identifying barriers and benefits and piloting a strategy based on that barrier and benefit knowledge. Zero Waste policies and programs will be accepted and integrated better when there is education and outreach around those new initiatives that are based on barrier and benefit knowledge.

Maplewood and South Orange communities can partner with organizations like AmeriCorps New Jersey to help with the outreach that is needed. There are other behavior change marketing strategies such as social marketing and social media/website education, outreach such as flyers, advertisements and articles in local papers, or tabling at local events for one on one conversation. CBSM or any behavior change marketing should be rolled out with new Zero Waste policies or programs and be ongoing.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	1000 tons	570 tons
GHG Reduction Potential	(1,570) MTCO ₂ e	(900) MTCO ₂ e
Initiative Type	Program – education, outreach, and marketing on Zero Waste policies and programs to increase success	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

5. School Recycling Education and Assistance

The school recycling education and assistance initiative would provide dedicated staff or contractor resources to implement Zero Waste programs in public and private schools in Maplewood and South Orange. For this initiative, the towns would support expansion of recycling and composting programs at all schools. Demonstrating successful compost programs at school will provide a model for Maplewood and South Orange families and support expansion of recycling and organics collection communitywide. This initiative includes:

- Purchasing products for schools that contain recycled content, create less waste (e.g., durable or reusable), and/or are recyclable or compostable
- Setting up collection systems for composting and recycling
- Arranging for collection services for composting and recycling
- Conducting compost audits
- Supporting Zero Waste ambassadors at each school
- Teaching sorting lessons to all grade levels, compatible with existing grade level competency requirements
- Conducting waste audits with students to ensure proper sorting and pinpoint service gaps
- Training custodians in proper materials management

- Purchasing containers, custodial equipment, signs and stickers
- Training student green teams to ensure proper sorting
- Launching the new program with assemblies
- Monitoring the lunchroom sorting until students are confident in their abilities
- Offer scholarship awards to high school students who demonstrate leadership in waste prevention and recycling at their school

A school recycling education and assistance program in Maplewood and South Orange can help create culture change and allow the K-12 schools to be part of the Zero Waste community.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	210 tons	120 tons
GHG Reduction Potential	(340) MTCO ₂ e	(200) MTCO ₂ e
Initiative Type	Programs – Zero Waste education for K-12 schools, assistance with programming, and student hand on experience with waste reduction practices	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

6. Commercial Technical Assistance

Commercial technical assistance is a program where multi-family buildings, commercial businesses, institutions, and construction professionals receive assistance when initiating new Zero Waste programs. These new Zero Waste initiatives will require new habits and new systems for those involved, such as sorting their discarded materials differently. The roll out of these new initiatives will be more successful with technical assistance. For example, when Maplewood and South Orange roll out collection of food scraps in multi-family units, this policy may be new to some residents and require technical assistance to meet the standards of the ordinance.

Technical assistance can be provided by employees of Maplewood and South Orange, or by consultants. This technical assistance program can be outlined on the towns' websites and can include on-site assessments, educational material, and in-person presentations.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	560 tons	320 tons
GHG Reduction Potential	(1,030) MTCO ₂ e	(590) MTCO ₂ e

Initiative Type	Programs – education and on-site assistance for a successful roll out of Zero Waste policies
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis	

7. Food Waste Prevention Campaign

Food waste prevention campaign is a program that would take a comprehensive approach to educating the community about the important components of preventing wasted food. The USDA estimates 30-40 percent of the U.S. food supply is wasted.⁴ According to the EPA, those discarded food scraps comprise nearly 22 percent of what our nation sends to landfills and incinerators each year.⁵ This program would follow the US EPA Food Recovery Hierarchy⁶ recommendations (i.e., source reduction first, then feed hungry people, etc) and would target the entire communities of Maplewood and South Orange including single-family residents, multi-family residents, commercial and institutional.

Food waste prevention campaigns are designed to educate the community about the importance of preventing wasting food and give people the tools necessary to be successful. The overall goal is to drastically reduce the amount of food being wasted and instead encourage edible food rescue because when food is wasted all the resources that went into making that food are also wasted. This initiative will also result in less food entering the waste stream and ending up at the incinerator.

A Food Waste Prevention Campaign will increase the likelihood of success for any policies or programs related to food waste and organics as part of the Zero Waste plan through education via various platforms on preventing wasted food. There should be a dedicated web page on each municipality's website along with the creation of education content appropriate for each sector.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	360 tons	210 tons
GHG Reduction Potential	(1,280) MTCO ₂ e	(740) MTCO ₂ e
Initiative Type	Programs – specific education on preventing wasted food	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

⁴ [USDA FAQs on Food Waste](#)

⁵ [US EPA Advancing Sustainable Material Management: 2018 Fact Sheet](#)

⁶ [US EPA Food Recovery Hierarchy](#)

8. Food Scrap Diversion

Food scrap diversion has the goal of diverting all food scraps (and other compostable organics) away from the incinerator and toward repurposing, composting, or energy recovery. A Food Waste hierarchy, such as the U.S. EPA's Food Recovery Hierarchy or the Institute for Local Self Reliance Hierarchy to Reduce Food Waste and Grow Community should guide this initiative with a goal to phase out food scraps from residuals collection and from entering the incinerator.

This initiative will work across sectors in Maplewood and South Orange to divert food scraps away from the incinerator and instead they could be composted through vermiculture, the use of black soldier flies, or in vessel, or wind row composting. These practices turn food scraps into a valuable soil amendment that can be applied locally. When composted, food scraps improve soil health in numerous ways and can help sequester carbon in soil, making composting an effective climate change mitigation strategy.⁷ Composting also supports the local economy. Besides making locally-produced soil amendments, composting creates 4 jobs for every 1 job at an incinerator.⁸

New Jersey's Food Waste Recycling and Food Waste-to-Energy Production Law (A2371), signed into law in 2020, goes into effect in October 2021. The law applies to "large food waste generators" which are defined as "any commercial food wholesaler, distributor, industrial food processor, supermarket, resort, conference center, banquet hall, restaurant, educational or religious institution, military installation, prison, hospital, medical facility, or casino that produces at least 52 tons per year of food waste." Such generators must be within 25 miles of a permitted food waste management facility. Maplewood and South Orange should evaluate the impact of that law on the commercial business and institutional sectors in their communities based on this threshold. The use of commercial technical assistance (initiative #6) could help local businesses with this state-wide policy on diverting food scraps.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	680 tons	390 tons
GHG Reduction Potential	30 MTCO ₂ e	20 MTCO ₂ e
Initiative Type	Programs – specific education on food scrap collection	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

⁷ US Composting Infrastructure Coalition

⁸ ILSR Recycling Means Business

9. Reuse and Repair Infrastructure

Reuse facility would be a facility in Maplewood or South Orange that collected durable goods for resale. Reuse for the same purpose is the highest and best use for durable goods and every effort should be made to keep building materials, household items, clothing, appliances, and other durable goods in use in the local reuse economy. Creating infrastructure that collects, sorts, prices, and resells these items to the local community is a great way to keep those resources local and cycling through the reuse economy.

A reuse facility in Maplewood or South Orange could also be a place for repair clinics. Repair is an aspect of reuse, where durable goods get repaired so that they can stay in use as their original purpose. Household appliances, electronics, clothes, and other items can be repaired through repair clinics at a reuse facility.

Other ways the towns can support reuse can be through:

- City-owned surplus materials reuse connection that facilitates reuse and recycling of the materials as an alternative to disposal
- An online reuse directory for local reuse and repair services
- Brick-and-mortar reuse centers as described above that offer used durable goods for sale to the community, along with a repair section, and a "share" section where items are checked out and returned

Summary of Impacts	Maplewood	South Orange
Diversion Potential	180 tons	100 tons
GHG Reduction Potential	(430) MTCO ₂ e	(250) MTCO ₂ e
Initiative Type	Infrastructure - for reuse, repair, and share	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

10. Durable Goods Reuse & Bulky Item Recycling Collection

A durable goods reuse and bulky item recycling program will help Maplewood and South Orange residents keep their durable goods in the local reuse economy. This initiative will be a program where durable goods will be diverted from the incinerator or landfill and instead be directed to the local Reuse Facility (see initiative #9) for repair or resell.

This initiative can be accomplished in many ways and will be a collaboration between the hauler, the town officials, and the residents of Maplewood and South Orange. There can be many components of this program including:

- A specific day of the week where bulky items can be placed curbside and a contracted hauler or service picks up the items and takes them to the local Reuse Facility

- An app that residents use when they have a bulky item to be picked up for reuse
- A directory of local reuse and repair locations where residents can donate items or get them repaired

Summary of Impacts	Maplewood	South Orange
Diversion Potential	80 tons	40 tons
GHG Reduction Potential	(170) MTCO ₂ e	(100) MTCO ₂ e
Initiative Type	Program – system to capture residents durable good for the reuse economy	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

11. Textile Collection for Reuse and Recycling

Textile collection for reuse and recycling initiatives has the goal of diverting textiles from the incinerator and instead having those resources stay in use through reuse or recycling. After all recyclables and organics are captured from a community's waste stream and diverted to recycling and composting, textiles become the next largest component to manage, representing nearly 9 percent of total municipal solid waste (MSW).⁹ The discarded textiles in Maplewood and South Orange can be diverted to the local reuse economy or as-local-as possible recycling industry to keep the resources in a closed loop system.

Contracted hauler(s) could provide periodic curbside collection (e.g., quarterly) of textiles from residences for diversion to reuse and recycling as part of bundled rates for all services. Or, containers could be added at the recycling centers. There could also be programs in schools and other municipal facilities to collect textiles. Dedicated education and outreach on mending textiles, buying durable textiles, and keeping textiles as long as possible could also pair well with this initiative.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	420 tons	240 tons
GHG Reduction Potential	(1,330) MTCO ₂ e	(760) MTCO ₂ e
Initiative Type	Programs – reuse and recycling of textiles	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

⁹ [Advancing Sustainable Materials Management: 2018 Fact Sheet](#)

12. Single-Use Foodware & Litter Reduction Ordinance

A single-use foodware and litter reduction ordinance is a policy that targets food generating businesses with the goal of reducing single-use foodware and advancing the use of reusable foodware for dine-in and to-go services. This initiative includes promoting reusable foodware and only allows for compostable foodware that is certified through the Biodegradable Products Institute (BPI).¹⁰ (BPI certified compostable foodware is free of per and poly-fluoroalkyl substances (PFAS)).

The following are components of a foodware ordinance. Considerations should be made on the use and recommendation of compostable foodware depending on local availability to compost those items. Any or all can be implemented in Maplewood and South Orange as individual components, or there can be a policy that includes all that are applicable to the towns:

- Reusable foodware for dine-in service
- Recycling and composting options for customers at food establishment
- BPI certified disposable foodware that is PFAS free
- Charge for BPI certified fiber to-go cups/discount for reusable cups
- Disposables accessories upon request
- Reusable to-go food and drink containers

Summary of Impacts	Maplewood	South Orange
Diversion Potential	80 tons	40 tons
GHG Reduction Potential	(260) MTCO ₂ e	(150) MTCO ₂ e
Initiative Type	Policy - prevent single-use materials and promote reusables	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

13. Zero Waste Events Requirements and Permitting

Zero Waste Event Requirement and Permitting is a Zero Waste initiative requiring public events such as festivals in Maplewood and South Orange to meet the requirements of Zero Waste set forth by the Towns. The goal of this initiative is to create Zero Waste events and festivals in Maplewood and South Orange through reduction, reuse, and diversion of recyclables and compostable materials. Through this initiative the towns will outline steps that all public events would have to follow to reach Zero Waste. This initiative should also include technical assistance that is available to event coordinators. This will allow for greater understanding and success for these events. Education should be provided to event attendees about why events are working towards Zero Waste to help create culture change, which is

¹⁰ [Biodegradable Products Institute](#)

another goal of this policy. The more that Maplewood and South Orange see Zero Waste programs in place, the more it will become an everyday practice.

Summary of Impacts	Maplewood	South Orange
Diversion Potential	200 tons	110 tons
GHG Reduction Potential	(390) MTCO ₂ e	(190) MTCO ₂ e
Initiative Type	Policy – require Zero Waste practices at public events	
All data were rounded to the nearest 10 due to the estimated numbers used in this analysis		

14. Licensing with Reporting

Licensing with reporting requires haulers who work in Maplewood and South Orange to report the amount of material they haul (landfill or incinerator disposal, recyclables, yard debris, food scraps, reusables, hazardous or other materials) to the department identified in the policy (i.e., public works or city administration). Knowing the amount of materials generated by a community is vital information when the community is working towards Zero Waste.

When working towards Zero Waste, a municipality should know the amount of materials by sector that are being generated and how they are being managed (i.e., landfill or incineration, recycling, composting, or other method). Regular reporting by haulers to the Towns through this Licensing with Reporting will give Maplewood and South Orange the understanding they need around the materials they generate.

Licensing with reporting is a policy initiative and no analyses were performed.

Diversion Potential Estimates and Greenhouse Gas Emissions Reduction Estimates

In 2018, it was estimated that Maplewood generated 15,422 tons of municipal solid waste (MSW) and had a recycling rate of 57% and South Orange generated 10,721 tons of MSW and had a recycling rate of 64%.¹¹ The amount of MSW incinerated for Maplewood and South Orange (6,641 and 3,811 respectively) were analyzed to estimate the diversion potential and greenhouse gas emission reduction.

Municipal Solid Waste Data estimated from the State of New Jersey for Maplewood and South Orange in 2018

Municipality	Municipal Solid Waste Incinerated (tons)	Municipal Solid Waste Recycled (tons)	Recycling Rate	Total Municipal Solid Waste Generated (tons)
Maplewood	6,641	8,781	57%	15,422
South Orange	3,811	6,910	64%	10,721

The 14 Zero Waste initiatives identified in this Strategic Plan were analyzed to estimate diversion potential and estimate the greenhouse gas (GHG) emissions reduced as a result of implementing these initiatives. The tons generated data used are from the State of New Jersey¹² and the waste characterization data used for the diversion potential are from the U.S. EPA 2018 data of materials going to incineration.¹³ Also, the GHG emissions reduction estimate analysis used factors from the U.S. EPA Waste Reduction Model.¹⁴

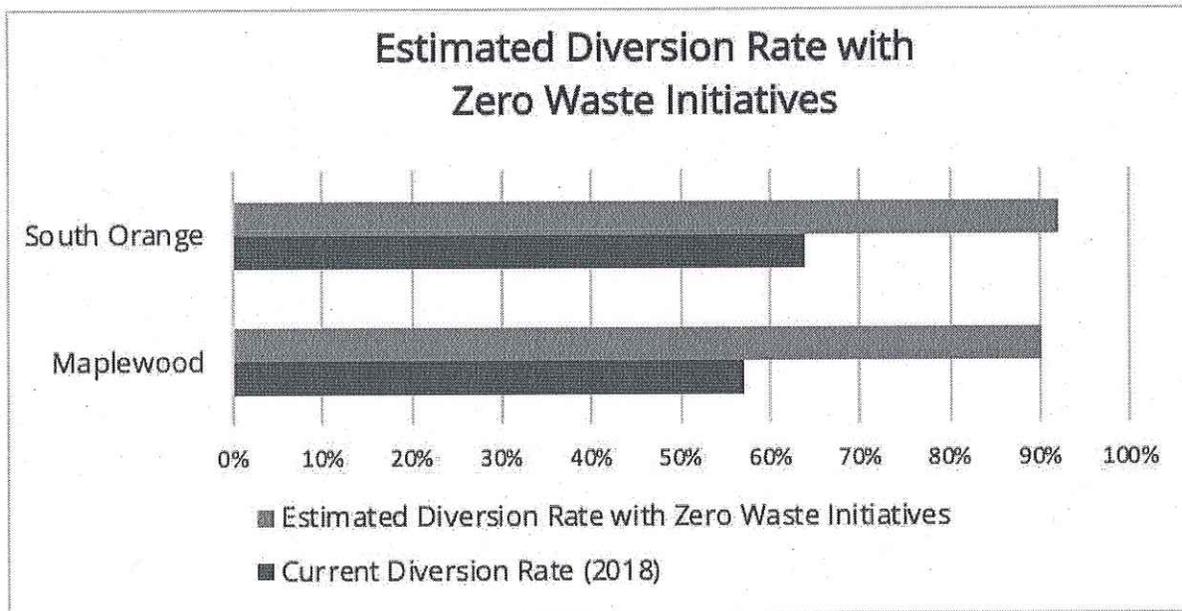
During this analysis, conservative estimates for capture rates by material type were used with each municipality's estimated data. The results showed that by implementing the 14 Zero Waste initiatives an estimated additional 5,125 tons per year diverted from incineration in Maplewood and would result in an estimated additional 3,000 tons per year diverted from incineration in South Orange. These initiatives would be phased in over several years and increase Maplewood's diversion rate from 57% to 90% and increase South Orange's diversion rate from 64% to 92%.

¹¹ [New Jersey Department of Environmental Protection](#)

¹² [New Jersey Department of Environmental Protection](#)

¹³ [U.S. EPA Advancing Sustainable Material Management: 2018 Fact Sheet](#)

¹⁴ [U.S. EPA Waste Reduction Model Documentation Chapters](#)



Maplewood and South Orange estimated increase in diversion rate after the diversion rate estimate analysis was performed.

The Zero Waste initiatives that Maplewood and South Orange pursue will also reduce greenhouse (GHG) emissions. The results from conducting a GHG emissions reduction estimate using the U.S. EPA Waste Reduction Model (WARM) factors demonstrate that these initiatives would result in an estimated GHG emission reduction of (9,800) MTCO₂e for Maplewood and (5,600) MTCO₂e for South Orange. This is an annual reduction in GHG gas emission after all initiatives are in place.

Impacts of Zero Waste Initiatives

Zero Waste Initiatives	Maplewood		South Orange		Policy, Program, or Infrastructure
	Projected Diversion	Projected GHG Emissions Reduction	Projected Diversion	Projected GHG Emissions Reduction	
	Tons*	MTCO2e*	Tons*	MTCO2e*	
1. Pay-As-You-Throw	590	(1,410)	340	(810)	Policy
2. Robust Residential Curbside Recycling	560	(1,370)	320	(770)	Policy
3. Construction Debris Reuse & Recycling Requirement	220	(250)	130	(140)	Program
4. Outreach and Education	1000	(1,570)	570	(900)	Program
5. School Recycling Education & Assistance	210	(340)	120	(200)	Program
6. Commercial Technical Assistance	560	(1,030)	320	(590)	Program
7. Food Waste Prevention Campaign	360	(1,280)	210	(740)	Program
8. Food Scrap Diversion	680	30	390	20	Program
9. Reuse & Repair Infrastructure	180	(430)	100	(250)	Infrastructure
10. Durable Goods Reuse & Bulky Item Recycling	80	(170)	40	(100)	Program
11. Textiles Collection for Reuse & Recycling	420	(1,330)	240	(760)	Program
12. Single-Use Foodware & Litter Reduction Ordinance	80	(260)	40	(150)	Policy
13. Zero Waste Events Requirements and Permitting	200	(390)	110	(190)	Policy, Program
14. Licensing with Reporting	--	--	--	--	Policy
Totals	5,140	(9,800)	2,930	(5,580)	

*All data were rounded to the nearest 10 due to the estimated numbers used in this analysis

Timeline

Maplewood and South Orange will work together to implement the Zero Waste initiatives over the Short- (2021-2023), Medium- (2024-2027), and Long-Term (2028-2030).

Several Zero Waste initiatives will be addressed through the procurement process that will be initiated in the short-term. Other initiatives may require staff or contractor resources and will take more time to plan, fund and develop.

Short-Term (21-23)	Medium-Term (24-27)	Long-Term (28-30)
<ul style="list-style-type: none"> • Pay-As-You-Throw • Robust Residential Curbside Recycling • Food Waste Prevention Campaign • Food Scrap Diversion • Durable Goods Reuse & Bulky Item Recycling • Textile Collection 	<ul style="list-style-type: none"> • Outreach & Education • School Recycling Education & Assistance • Single-Use Foodware & Litter Reduction Ordinance 	<ul style="list-style-type: none"> • Construction Debris Reuse & Recycling Requirement • Reuse & Repair Infrastructure • Zero Waste Events Requirements and Permitting

Both Maplewood and South Orange have an active and highly motivated volunteer base that support each town’s Zero Waste initiatives. Each town sponsors committees that are appointed by the governing bodies and Green Teams that anyone can join.

- Maplewood: Green Team Advisory Committee (appointed), Green Team open to everyone, Environmental Advisory Committee (appointed)
- South Orange: Environmental Commission (appointed), Green Team open to everyone, Zero Waste Subcommittee

By working together with staff, elected officials, commissioners and volunteers, Maplewood and South Orange can become models for Zero Waste in New Jersey.

[1] <https://www.usda.gov/foodwaste/faqs>

[2] https://www.epa.gov/sites/production/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf#page=8

[3] <https://compostinfrastructure.com/>

[4] <https://ilsr.org/recycling-means-business/>

Appendix - Initiative Research

Initiative: Pay-As-You-Throw (PAYT)

Initiative Type: Policy

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

Pay-As-You-Throw is a trash collection system for single family residents that uses variable size carts or bags corresponding with variable fees (smallest cart or bag is the lowest cost). This system is similar to utilities, where a consumer is charged for the amount of energy or water used in the household. The goal is to encourage the household to reduce the amount of trash generated and reduce, reuse, recycle, and compost more. It is also known as unit-based pricing or Pay as You Save and these types of volume-based structures create an economic incentive to reduce trash generation.

Examples: *describe communities near and far that have this initiative*

PAYT is represented in at least 8 communities in New Jersey. Morris County, which is just west of Essex County, has two good examples of PAYT: Chatham Borough and Mendham Township. Chatham Borough's system of PAYT includes 2 sizes of green bags - 15 and 30 gallon sizes, which are sold at 3 locations within the township. Mendham Township's PAYT system included stickers that can be purchased from the private hauler, RTS, and at 2 locations in town. Ten stickers cost \$7.50 and each sticker represents 15 pounds of trash. Single family residents in the city of Gainesville, FL have 4 choices in garbage carts with their PAYT program: 20-gal cart \$18.50/month, 35-gal cart \$34.00/month, 64 gal-cart \$29.75, and 96 gal cart \$37.00/month.

Potential Impact: *describe the goal of this initiative in SOMA and possible measurable success*

PAYT systems are designed to increase recycling while decreasing waste, provide an economic incentive to reduce waste, and create an equitable system where the resident only pays for the trash they produce.¹⁵ PAYT has been shown to reduce waste in communities who enact this program. According to the Institute for Local Self Reliance, several communities in Massachusetts reduced their tons of municipal solid waste from 35% - 57% and increased their tons of recycling from 20% - 98%.¹⁶

Implementation Considerations:

A PAYT system is created via a policy. A municipality will work with a private hauler to implement this system or the municipality can implement this program on their own. This is a one time creation of the policy but there should be programs that go along with

¹⁵ U.S. EPA Pay-As-You-Throw

¹⁶ Institute for Local Self Reliance, Metering Residential Garbage Can Pave the Way to Zero Waste

this policy, such as educational material. This educational component can be phased in over time to reach all single-family residents. Education is needed because recycling contamination can increase when PAYT is enacted unless people understand clearly what is allowed in their recycling bins through education and enforcement. Education should meet specific needs of the community and allow for stakeholder engagement. Waivers for low income community members along with targeted education for PAYT policy violations should be a consideration as should the inclusion of curbside service exemptions (back/side yard or alley service) for elderly or disabled customers or for those who wish to pay an additional fee. Additionally, a service provider contract could include bulk pick up for reuse & recycling as part of the regular service.

Initiative: Robust Residential Curbside Recycling

Initiative Type: Program

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

Higher diversion rates and cleaner streams of recyclables in the residential sector can be achieved through either a single-stream or dual-stream collection system.

In a single-stream system, where one bin is used for all recyclables as currently is employed in SOMA, incentives or requirements such as contract extensions, lower franchise fees, bonuses, or liquidated damages can be written into the contract in relation to the quality of recyclables produced by the collection system. Novel provisions such as these have led to improved quantity and quality of recyclables in a system historically plagued by high levels of contamination. Fewer collection visits typically make single-stream more efficient and less expensive in terms of collection. However, single-stream materials require more intensive processing making processing more costly than in dual-stream systems.

Dual-stream systems often use 2 bins - one for papers, e.g. cardboard, newspaper, office paper, junk mail, and one for containers, e.g. bottles and cans - to limit contamination and maintain quality. Collection costs in dual-stream systems are typically higher than in single-stream systems. However, savings can be achieved on the processing side of up to \$30-40/ton for materials collected dual-stream in the SOMA region¹⁷.

It is important to note that both collection systems require robust and consistent outreach and education to be successful.

Examples: *describe communities near and far that have this initiative*

Available data (2018) from the Essex County Utilities Authority (ECUA) suggests that 9 of the 22 municipalities in Essex County have single-stream recycling collection programs

¹⁷ ZWA communication with Bayshore Industries, Gary Sondermeyer, VP Operations

for residents. In addition to SOMA, those municipalities include Belleville, East Orange, Essex Fells, Glen Ridge, Millburn, Orange, and West Orange.

ECUA data suggests the remaining 13 of the 22 municipalities in Essex County have residential dual-stream recycling collection programs. Those are: Bloomfield, Caldwell, Cedar Grove, Fairfield, Irvington, Livingston, Montclair, Newark, North Caldwell, Nutley, Roseland, Verona, and West Caldwell. In Bloomfield, for example, paper and containers are collected on alternating weeks while in Newark papers are collected every Monday/Tuesday and containers are collected every Thursday/Friday depending on where you live.

Potential Impact: describe the goal of this initiative in SOMA and possible measurable success

Improved efficacy of SOMA's recycling system would increase the quantity of recycled materials being collected, reduce contamination in the recycling stream, and increase the quantity and quality of materials being processed for recycling into new products. An improved system would also build residents' confidence in recycling and support for additional policies, programs, and initiatives that would move SOMA toward Zero Waste.

Implementation Considerations:

A Materials Recovery Facility (MRF) audit for current single-stream collection would reveal the quantity and quality of SOMA's materials currently being collected and recycled. After implementation of the new contract, whether an improved single-stream or dual-stream system, a follow up MRF audit would reveal any changes in the quantity and quality of materials collected and recycled.

Robust curbside recycling can be implemented by a contracted hauler or by a municipal operation. In any recycling collection program, it can be beneficial for the municipality to retain ownership over the recycling bins in the event that the hauler changes at some point in the future.

Ongoing, phased-in, or a one-time initiative? Robust curbside recycling collection is an ongoing program for single family residents. It can be phased-in or rolled out community-wide depending on the wishes of the municipality.

Initiative: Construction, Demolition, and Deconstruction Requirements

Initiative Type: Policy, Program, Infrastructure

Basic Information: describe the initiative and detail the role it plays in a Zero Waste community

A 2019 Rowan University study suggests that Essex County generated over 111,000 tons of C&D debris in 2015 and only recycled around 30,000 tons¹⁸. This diversion rate of 28 percent could be significantly increased by adopting requirements, programs, and incentives to increase deconstruction, building materials reuse, and diversion of recyclable and compostable C&D debris. Options include:

- Adopt one or more of the following policies or programs after obtaining input from stakeholders and service providers: Minimum requirements for C&D debris diversion (e.g., 75 percent), offering contractors the option to source-separate the materials for reuse, recycling, and composting on-site or to send a mixed load to a certified C&D sorting facility; Require a waste management plan or sustainable deconstruction plan be submitted with permit applications for construction and demolition projects - do not issue permits to projects without plans; Charge a deposit for permitted projects, refundable upon permittee demonstrating that the minimum threshold of C&D debris diversion has been met through reuse, recycling, or composting; Give preferential treatment and/or permit credits for projects that meet existing SOMA Green Building/Sustainable Building Product policies or that earn LEED or Green Globe certification; A deconstruction ordinance that requires deconstruction rather than demolition of buildings that meet certain criteria.
- Considering current environmental justice legislation, develop community infrastructure for C&D debris diversion including an inert materials recycling facility for rocks, asphalt, and concrete. Expand Maplewood's Public Works Division Yard and South Orange's DPW Yard acceptable materials to include clean wood from C&D projects. Establish a public or private reuse center for sale of salvaged building materials and used household items.
- *For consideration in hauler contract:* Contracted hauler(s) to provide periodic collection of small quantity clean source separated C&D debris from residences for diversion to reuse, recycling, or composting as part of bundled rates for all services.

Examples: *describe communities near and far that have this initiative*

In 2007, Harrison, NJ adopted an ordinance mandating the recycling of C&D debris.

In 2007, the Township of Woolwich adopted an ordinance creating the Construction and Demolition Debris Diversion Program to increase the diversion of construction and demolition debris from landfill disposal, conserve the capacity and extend the useful life of landfills, and avoid the potential financial and other consequences to the Township of failing to timely meet New Jersey Department of Environmental Protection requirements.

In 2012, the Borough of Chatham adopted a Construction and Demolition Debris Ordinance.

¹⁸ <https://www.sciencedirect.com/science/article/pii/S2405844019359730>

Potential Impact: describe the goal of this initiative in SOMA and possible measurable success

- Jobs – Zero Waste policies like this stimulate the development of many more jobs than landfilling. 4x the number of jobs for composting organics, 10x the number of jobs for recycling, and well over 100x the number of jobs for reuse. A deconstruction ordinance would kick start or bolster an entire sub-industry of skilled labor.
- Equity – C&D diversion requirements would ensure that all contractors working in SOMA are engaging in a minimum level of effort to reduce waste on job sites.
- Resilience – The more options SOMA has to manage its C&D debris, the less it has to rely on adjacent communities or out-of-town businesses.

Implementation Considerations:

Cost to develop requirements and to oversee and enforce. After up-front cost of development, C&D materials reuse and recycling facilities could generate revenue.

Ongoing, phased-in, or a one-time initiative? Development of requirements and ordinances would be a one-time effort. The requirements/ordinances would be ongoing and would require oversight and enforcement. C&D materials reuse and recycling facilities would be ongoing.

Initiative: Outreach and Education
Initiative Type: Program

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

Outreach and Education included programs that correlate with new policies and programs that result from the Zero Waste Strategic Plan and will allow all sectors of the community to know changes to expect and how they play a role in Maplewood and South Orange in achieving Zero Waste. Zero Waste policies and programs will be accepted and integrated better when there is outreach and education around those new initiatives. This can happen through programming such as websites with Zero Waste specific information, informational campaigns, brochures, videos, and flyers which will allow for a more successful rollout of Zero Waste initiatives.

One type of outreach and education is Community-Based Social Marketing (CBSM). CBSM is a program that targets behavior change by using 5 steps: 1. Select behavior, 2. Identify barriers and benefits, 3. Develop strategies, 4. Pilot the program, 5. Implementation and evaluation. A Community-Based Social Marketing program that targets specific behaviors related to Zero Waste, such as residential recycling, can greatly enhance the desired outcome of diverting recyclable items from the waste stream. CBSM differs from a traditional information-based campaign and goes beyond by identifying barriers and benefits and piloting a strategy based on that barrier and benefit knowledge. Zero Waste policies and programs will be accepted and integrated better when there is education

and outreach around those new initiatives that are based on barrier and benefit knowledge.

Examples: *describe communities near and far that have this initiative*

Boulder, CO created this [short video](#) to go along with their [Universal Zero Waste Ordinance](#). [Eco-Cycle](#) has created great videos on recycling, composting, and Zero Waste. These videos help communities understand the aspects of Zero Waste. CBSM programs are used to change behaviors related to health, environment, and public safety. This technique to change behaviors has been used effectively to change behaviors related to the environment, including improving residential recycling behaviors. This [case study](#) from Volusia County, Florida showed that recycling increased and improved when CBSM techniques were used. [This article](#) clearly demonstrates how to use CBSM to help increase recycling rates. The Fond de Lac Tribe Community College used CBSM to address the problem of recyclable items in the trash. After implementing the CBSM program the amount of recyclable items in the trash decreased by 41%. [Their toolkit and slides](#) show all the steps necessary to implement CBSM.

Potential Impact: *describe the goal of this initiative in SOMA and possible measurable success*

The goal of outreach and education is to educate the towns on new policies and programs related to Zero Waste. The outreach and education that is created by the towns will help the community members, business owners, and institutional administrators understand the new Zero Waste initiatives related to waste reduction, reuse, recycling, and composting. This will allow for a more seamless transition to these new Zero Waste initiatives.

The goal of CBSM is to change a specific behavior with a strategic approach after identifying barriers and benefits. This program utilizes many strategies such as prompts, social norms, and commitments. If the targeted behavior is to reduce the amount of recyclables in the trash, then that can be measured by completing a waste composition study prior to the CBSM and then following up with another waste composition study after implementation of the program. The waste composition study does not have to be community wide, it could be a small study targeting the area or neighborhood that participated in the CBSM. If successful, the program can be scaled up to be community wide.

Implementation Considerations: *is it a policy, program, or infrastructure? What is needed to implement it? Phases or a one-time initiative?*

Outreach and education are programs that will be phased in as Zero Waste initiatives are implemented. These outreach and education programs should be ongoing and possibly live on the town's website. The first thing the towns can create is a video overview of Zero Waste and the towns goal in waste reduction. This can be followed up over time with Zero Waste initiative specific education and that can live on the towns website but can also be used one on one or at events in the towns.

CBSM is a program that takes time to implement. Knowledge of CBSM concepts and steps are necessary to effectively use this program. There are classes that can teach CBSM skills and there are outside consultants that can be hired to implement CBSM programs. Maplewood and South Orange communities can partner with organizations

like [Americorps New Jersey](#) to help with the outreach that is needed. There are other more simple behavior change marketing strategies that can be components of CBSM but can stand alone if needed, such as social marketing and website education, outreach such as flyers, or tabling at local events for one on one conversation. CBSM or any behavior change marketing should be rolled out with new Zero Waste policies or programs and be ongoing.

Initiative: Working with the School District

Initiative Type: Policy, Program, Infrastructure

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

This initiative would provide dedicated staff or contractor resources to implement Zero Waste programs in public and private schools in Maplewood and South Orange. The School District of South Orange and Maplewood serves more than 7,200 students in ten schools, including one early-childhood center, six elementary schools, two middle schools, and one high school. The District is committed to sustainability and voted to pursue Sustainable Jersey for Schools Certification in Fall 2019.

GAIA is the Columbia High School's environmental organization. It seeks to heighten environmental awareness at school and the wider community and sponsors recycling projects.

For this initiative, the Towns would support expansion of recycling and composting programs at all schools. Demonstrating successful compost programs at school will provide a model for Maplewood and South Orange families and support expansion of recycling and organics collection communitywide.

This includes: setting up collection systems, arranging for collection services, conducting compost audits, supporting Zero Waste ambassadors at each school, teaching sorting lessons to all grade levels, conducting waste audits with students to ensure proper sorting and pinpoint service gaps, training custodians in proper materials management, purchasing containers, custodial equipment, signs and stickers, training student green teams to ensure proper sorting, launching the new program with assemblies, and monitoring the lunchroom sorting until students are confident in their abilities. For the high school, this could involve offering scholarship awards to several students demonstrating leadership in waste prevention and recycling at their school.

Examples: *describe communities near and far that have this initiative*

- [Boulder County, CO](#)
The County and other local agencies fund a local nonprofit organization to coordinate a recycling and environmental education program for public schools, including a [Green Star Schools Program](#); this program provides training to

cafeteria staff and students on how to reduce food waste, compost food scraps, and use reusable service ware

- RecycleSmart (Central Contra Costa Solid Waste Authority)

The RecycleSmart School Education Program was created to engage students and teachers in waste prevention and recycling and to create greater awareness of the importance of diverting materials from landfills.

The program was revamped in 2012 to focus on diversion performance by providing the technical assistance, training and incentives to help schools “walk the talk” and achieve RecycleSmart’s goal of 75% diversion. This involved engaging the whole school community (teachers, students, custodians, principals, district facility managers) to increase recycling and composting at each school site and in every school district. The results have been dramatic and measured diversion has increased from 19% in 2012 to 68% in 2019.

Potential Impact: describe the goal of this initiative in SOMA and possible measurable success

The goal of this initiative is to expand recycling and composting programs at public and private schools and model these programs for families, students, faculty and staff. Diversion rates at schools can be monitored based on service volumes. A robust recycling, composting and Zero Waste education program at the District will help to increase performance with residents in Maplewood and South Orange. Students, faculty, staff and District Green Teams will support community wide efforts and promote behavior change.

Implementation Considerations:

The program requires dedicated resources of staff or contractor resources and materials including bins, stickers, posters and lesson plans. Maplewood and South Orange can provide direct support to the District, by training Green Teams and providing grants for bins, stickers, signage and equipment. The Towns can also support community-based organizations to seek grants and fellowships for ongoing support.

Initiative: Commercial Technical Assistance

Initiative Type: Program

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

Commercial Technical Assistance is a program where multi-family buildings, commercial businesses, institutions, and construction professionals receive assistance when initiating new Zero Waste programs. These new Zero Waste initiatives will require new habits and new systems for those involved, such as sorting their discarded materials differently. The roll out of these new initiatives will be more successful with technical assistance. This technical assistance will be directed towards multi-family building owners

and residents, commercial, institutions, industrial and construction, deconstruction and demolition (MFU, ICI, C&D) sectors within Maplewood and South Orange. For example, when Maplewood and South Orange roll out collection of food scraps in multi-family units, this policy may be new to some residents and require technical assistance to meet the standards of the ordinance.

Examples: *describe communities near and far that have this initiative*

The City of Fort Collins Environmental Services Department offers a Waste Reduction and Recycling Assistance Program (WRAP). This WRAP program is free and offers technical assistance to multifamily units and businesses to begin or increase their recycling and composting efforts. They offer on-site assessments, in person education, and educational materials.

In Boulder, CO, the Partners for a Clean Environment offers technical services to businesses. These technical services range from energy conservation to waste reduction and they have at least one person on staff who is trained in Zero Waste.

Potential Impact: *describe the goal of this initiative in SOMA and possible measurable success*

The goal of the technical assistance initiative is to help the commercial sector implement the Zero Waste policies correctly. Some Zero Waste policies include diverting durable goods into the local reuse economy instead of sending them to the landfill or incinerator. Other policies will relate to recycling correctly and diverting food scraps for composting. These new initiatives will be implemented more successfully if there is technical assistance provided to these multi-family unit property owners and residents and to businesses and institutions.

Implementation Considerations: *is it a policy, program, or infrastructure? What is needed to implement it? Phases or a one-time initiative?*

Technical assistance is a program that accompanies Zero Waste policies. The targeted sector for a Zero Waste policy like source separating food scraps for composting collection will be more successful if there is technical assistance to the multi-family unit owner and residents specifically about these initiatives.

Technical assistance implementation will involve the city employees of Maplewood and South Orange or hired consultants to create the program related to each Zero Waste initiatives that would benefit from assistance. This technical assistance program can be outlined on the city's websites and can include on-site assessments, educational material, and in-person presentations.

The on-site assessments may include waste assessments, procurement practices, or technical assistance related to better reuse, recycling and composting. Waste reduction efforts like diverting edible food or complying to new foodware ordinance initiatives may also be conducted during on-site assessments.

The educational material will be created to assist MFU, ICI, and C&D. This educational material can be the same that is used for Behavior Change Marketing. The educational materials will be specific to the Zero Waste initiatives with the goal of waste reduction through compliance with the specifics outlined in the initiatives. Examples of areas that might benefit from educational material include source separation and management of

organic compostable material.

The in-person presentation directed to these sectors (MFU, ICI, C&D) will focus on how to initiate the new programs that are based on the new Zero Waste initiatives. This could include source separating reusable durable goods, recyclables, food scraps, or other waste reduction or diversion efforts.

Timeline and phases: This will be phased in as new Zero Waste initiatives are introduced to the community.

This will be an ongoing program.

Initiative: Food Waste Prevention Campaign

Initiative Type: Program

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

Food Waste Prevention Campaign is a program that would take a comprehensive approach to educating the community about the important components of preventing wasted food. This program would target the entire communities of Maplewood and South Orange including single-family residents (SFR), multi-family residents (MFR), commercial, and institutional. This campaign would provide education via various platforms on preventing wasted food. There should be a dedicated web page on each municipality website along with the creation of education content appropriate for each sector. A Food Waste Prevention Campaign will increase the likelihood of success for any policies or programs related to food waste and organics as part of the Zero Waste plan.

Examples: *describe communities near and far that have this initiative*

In September of 2020 the New Jersey Department of Agriculture partnered with food banks to help prevent food waste. Their campaign, MoreMealsLessWaste.com, contains tips for residents and businesses in New Jersey to prevent wasted food. The New Jersey Department of Environmental Protection also has a 2 page flyer on How to Reduce Food Waste at Home. They also have guidelines for K-12 schools to reduce, recycle, and recover food waste. These voluntary guidelines are here in this comprehensive 53 page report on how schools can reduce, recycle, and recover food waste. Fort Collins, CO has a great web page devoted to reducing food waste that is targeted to their residents as part of their overall Zero Waste plan. The U.S EPA has web pages devoted to reducing food waste. This one's for residents and these sites from the U.S. EPA offers great information for business and institutions. The resources on these websites can help municipalities build their own food waste prevention programs and they offer programs to join like the Food Recovery Challenge.

Potential Impact: *describe the goal of this initiative in SOMA and possible measurable success*

Food Waste Prevention Programs are designed to educate the community about why it's important to prevent wasting food and give them the tools necessary to be successful.

The overall goal is to drastically reduce the amount of food from entering the incinerator and instead create awareness that food is an important resource that shouldn't be wasted. One important guideline that may be used is adopting a food waste hierarchy. The U.S. EPA offers one and the Institute for Local Self Reliance also offers a hierarchy that can help direct a community in preventing food waste. This initiative can be measured by completing a waste composition study prior to rolling out a food waste prevention campaign and then completing a waste composition study several years later to see if there were any measurable reductions in the amount of food entering the waste stream.

Implementation Considerations:

A Food Waste Prevention Campaign is a program that Maplewood and South Orange municipalities would create as part of their Zero Waste goals. It should be aligned with initiatives that the communities enact related to food waste and it should offer the communities resources that allow them to be successful in their Zero Waste efforts. There are great resources available that these two communities can use to help their residents prevent wasted food, such as savethefood.com, stilltasty.com, and zerowastechef.com, along with the state resources listed in the examples section. This program would be a one time roll out of the webpage with educational material on preventing food waste but it will need to be updated as the municipalities work towards Zero Waste. There should be a dedicated section that addresses the unique needs of residents, businesses, and institutions in preventing food waste.

Initiative: Food Scraps - Residential & Industrial, Commercial, Institutional (ICI)

Initiative Type: Policy, Program, Infrastructure

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

The USDA estimates 30-40 percent of the U.S. food supply is wasted¹⁹. According to the EPA, those discarded food scraps comprise nearly 22 percent of what our nation sends to landfills and incinerators each year²⁰. Much of that food is edible and can be recovered to feed hungry people and animals. What remains can be used in industrial processes or composted. When composted, food scraps improve soil health in numerous ways and can help sequester carbon in soil, making composting an effective climate change mitigation strategy²¹. Composting also supports the local economy. Besides producing locally-produced soil amendments, composting creates 4 jobs for every 1 job at an incinerator²².

¹⁹ <https://www.usda.gov/foodwaste/faqs>

²⁰

https://www.epa.gov/sites/production/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf#page=8

²¹ <https://compostinfrastructure.com/>

²² <https://ilsr.org/recycling-means-business/>

New Jersey's Food Waste Recycling and Food Waste-to-Energy Production Law (A2371), signed into law in 2020, will go into effect in October 2021. The law applies to "large food waste generators" which are defined as "any commercial food wholesaler, distributor, industrial food processor, supermarket, resort, conference center, banquet hall, restaurant, educational or religious institution, military installation, prison, hospital, medical facility, or casino that produces at least 52 tons per year of food waste²³." SOMA should evaluate the impact of that law on the ICI sectors in their communities based on this threshold.

In conjunction with a Food Waste Prevention Campaign, SOMA can support improved food scraps management in the residential and ICI sectors by:

- *For consideration in new hauler contract:* Contracted hauler(s) to provide weekly residential curbside collection of food scraps (and other compostable organics) as part of service bundled with recycling and residuals collection; consider a phased-in launch with a pilot program in a carefully-selected community.
- Adopt a Zero Food Waste hierarchy (examples from the EPA and the Institute for Local Self Reliance) and a goal to phase out food scraps (and other compostable organics) from residuals collection and from entering the incinerator.
- Adopt a Community Recycling and Compost Ordinance that requires source separation and universal provision of service (Recycling, Composting, Residuals) for residential and ICI as well as Pay As You Throw (PAYT) Incentives for the single family residential sector (SFR). This could be important for ICI diversion if the threshold of NJ's new food waste law is too high to apply to SOMA entities in a meaningful way.
- Require permitted foodservice establishments (ICI) to submit an online Organics Diversion Plan annually.
- Steward or encourage the establishment of residential food scrap drop-off sites around town.
- Provide free backyard composting workshops to residents with subsidized compost bins for residents and offer a Master Composter Certification course, possibly in conjunction with the Essex County Master Gardener Program or the Maplewood Garden Club.

Examples: *describe communities near and far that have this initiative*

- In 2018, Jersey City, NJ partnered with Community Compost Company to launch a Residential Compost Drop-Off Program that established community organics collection sites at City Hall, parks, community gardens and other sites around town. The City also started a Backyard Composting Program that offers discounted materials and free workshops.
- The City of Hoboken, NJ partnered with Community Compost Company to establish community organics collection sites at City Hall, parks, and other sites around town. The City also promotes Community Compost Company's collection service on its website.

²³ <https://www.newjerseylawyersblog.com/new-jerseys-new-mandate-for-food-waste-recycling/>

- Java's Compost is a private compost collection service for residents and businesses operating in SOMA and surrounding communities. Other New Jersey communities serviced by Java's Compost include Westfield, Ridgewood, Cranford, and Summit.
- NYC Department of Sanitation's Commercial Organics Requirements mandate source separation of organics by certain businesses.
- NYC Department of Sanitation provides online resources and support for backyard composting.

Potential Impact: describe the goal of this initiative in SOMA and possible measurable success

The goal is to divert all food scraps (and other compostable organics) away from the incinerator and toward food rescue, repurposing, composting or energy recovery. Food scraps (and other compostable organics) diversion can be measured by completing a waste composition study prior to rolling out initiatives and then completing a waste composition study several years later to quantify reductions in the amount of wasted food (and other compostable organics) entering the waste stream.

Implementation Considerations:

Staff time and possible consultant fees to develop collection service provider contracts - *one-time effort*

Staff time and committee time to steward community adoption of a Zero Food Waste goal and hierarchy- *one-time effort*

Staff time and possible consultant fees to develop Community Recycling and Composting Ordinance - *one-time effort to develop, on-going staff oversight of ordinance implementation and compliance*

Staff time to create online portal for foodservice establishments to upload annual Organics Diversion Plans - *one-time effort to create, on-going oversight*

Staff time to research potential community partnerships and identify potential sites for food scraps drop-off, develop MOUs, promote program, manage partnerships - *on-going*

Staff and possible consultant time to set-up, manage and deliver backyard composting program - *on-going*

Available Regional Resources:

New York State food waste estimator:

- <https://www.rit.edu/affiliate/nysp2i/food-waste-estimator>

Center for EcoTechnology food waste estimator:

- <https://recyclingworksma.com/food-waste-estimation-guide/>

NJDEP Food Waste Recycling and Food Waste-to-Energy Production Map:

- <https://www.state.nj.us/dep/dshw/food-waste-recycling-law/op-food-waste>

-facilities.html

NJ Composting Council New Jersey Food Waste Recycling Law FAQ and Guidance:

- https://drive.google.com/file/d/1z2vAvj6XqAeHnwqmfsbR-Otoikncb_RN/viewdeveloped

Initiative: Reuse & Repair Infrastructure

Initiative Type: Policy, Program, Infrastructure

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

Internally, SOMA should lead by example by evaluating its purchasing practices and developing guidelines and programs that will highlight ways for all City departments to reduce waste and, when products and materials need to be replaced, find opportunities for reuse. For example, the City of San Francisco, CA maintains a Virtual Warehouse for City-owned surplus materials to facilitate reuse and recycling of the materials as an alternative to disposal. From that position of leadership, SOMA can encourage other local institutional and corporate entities to follow its source reduction and reuse purchasing practices.

Externally, there are many ways SOMA can support the development of community reuse infrastructure, from providing an online reuse directory such as DonateNYC to supporting a business-to-business network such as the Austin Materials Marketplace that facilitates trades of reusable items. Community stakeholders are also interested in seeing SOMA coordinate/promote in-person community swaps and neighborhood yard sales to augment an already vibrant online sharing/resale community, reuse pop-up tent events, and repair events such as Repair Cafes or Fixit Clinics.

Reuse services and brick-and-mortar repair and reuse centers are also important aspects of community reuse infrastructure. These are actions SOMA should consider to support the development of community reuse capacity:

- *For consideration in new hauler contract:* Contracted hauler(s) to provide periodic collection of small quantity reusable items from residences for diversion to reuse outlets as part of bundled rates for all services.
- Expand Maplewood's Public Works Division Yard and South Orange's DPW Yard to include a community reuse center for the resale or free exchange of used household items, clothing, furniture, building materials, tools, sports equipment, art supplies, etc., or the combination of reusable items that makes the most sense on-site. These facilities should also be considered as drop-off sites for hard-to-recycle items such as household appliances, metals, books, textiles, electronics, mattresses, hard to recycle plastics, ceramics, concrete and more. These items are generally discarded as waste if there is not a convenient and efficient system in the community to divert them from landfills and incinerators.

- Contract with for-profit or non-profit vendor to collect reusable materials once or twice a year from recycling center or curb. Include reporting requirements regarding tonnage or volume, types of products, and end-uses
- Help develop a reuse warehouse, like a food bank system, which would be a central place to which all thrift stores would have equal access for sorting through incoming products and for bulk sales to the public.
- Establish a municipally-owned or municipally-contracted reuse center for sale of reusable items ideally with a permanent space to host repair events
- Expand public library services to include more than books, e.g. Tool library
- Adopt an ordinance requiring multi-family developments and neighborhood community centers to include a secure location for reusable items to be easily accessed for move-ins and move-outs, including used furniture, appliances, clothing, and books.

Examples: *describe communities near and far that have this initiative*

- Examples of privately-owned and operated reuse centers in the region include:
 - Tompkins County, NY made a commitment to develop a Reuse Center as part of its 20-year solid waste management plan; Finger Lakes Reuse's Ithaca Reuse Center, a non-profit run community reuse warehouse, is an outgrowth of that vision.
 - Lancaster's Creative Reuse Center in Lancaster, PA, a donation based art, craft, and sewing supply store, is a non-profit organization working to connect community excess to those who can use it creatively. Closer to home, Materials for the Arts in New York City is another example.
 - Habitat for Humanity ReStores are non-profit home improvement stores that accept donated new and gently-used furniture, home accessories, building materials, and appliances for resale with two locations in Newark.
- Examples of municipality-owned reuse centers include:
 - Woodbridge Township, NJ operates a ReUse It Center out of a repurposed shipping container co-located at its recycling yard. Due to COVID-19, it is currently open by appointment only.
 - Through its Zero Waste initiative, the Town of New Paltz, NY established a municipally-owned Reuse Center that accepts donations of craft supplies and building materials in usable condition for re-sale; the Town promotes de-construction and provides volunteer opportunities for residents. Town staff created and presented a municipally-owned and operated reuse center business plan to the town board.
 - The Last Chance Mercantile, a popular reuse center owned and operated by the Monterey Regional Waste Management District in CA, accepted donations of clothing, housewares, furniture, building materials, tools, sports equipment, etc. for resale and also included stations for free drop-off of electronic waste. It was forced to close in 2020 due to impacts from COVID-19.
- Example of a municipality-contracted reuse center:
 - In 2020, the County of San Mateo, CA contracted with PlaceMakers, a for-profit building materials reuse center, to expand their existing

operations and focus on providing affordable building materials to the community.

Potential Impact: describe the goal of this initiative in SOMA and possible measurable success

- For every 10,000 tons of material managed per year, reuse creates 62-265 times the number of **jobs** compared to landfill disposal - *metric: local jobs in reuse*
- Reuse retains the embodied energy of a product and therefore generally is linked to greater **greenhouse gas (GHG) reduction** than other management practices - *metric: GHG reduction through reuse via waste composition and diversion study paired with GHG analysis*
- Reuse promotes **equity** by providing affordable or free materials to everyone - *metric: # of transactions/patrons at reuse centers per year*

Implementation Considerations:

Staff time to evaluate purchasing practices and develop guidelines and programs to support reuse in internal operations - *one-time effort to evaluate and develop, on-going oversight*

Site development costs to modify Maplewood's Public Works Division Yard and South Orange's DPW Yard to include community reuse centers as well as options for hard-to-recycle materials and staff time to operate - *one-time effort to develop, on-going operation*

If SOMA were to identify one or more community partner(s) with whom to collaborate on a reuse center, as in the instance of the County of San Mateo, SOMA's risk would be lower than if it were to own the center outright and some of the same goals could be met. Investing in a local business also comes with risks. However, those risks could potentially be mitigated in the contract - *one-time effort to contract, on-going oversight*

Initiative: Textiles

Initiative Type: Program, Infrastructure

Basic Information: describe the initiative and detail the role it plays in a Zero Waste community

After all recyclables and organics are captured from a community's waste stream and diverted to recycling and composting, textiles become the next largest component to manage representing nearly 9 percent of total municipal solid waste (MSW)²⁴.

SOMA can support diversion of textiles throughout the community by supporting diverse capture methods including:

²⁴ Advancing Sustainable Materials Management: 2018 Fact Sheet

- *For consideration in new hauler contract:* Contracted hauler(s) to provide periodic curbside collection (e.g. quarterly) of textiles from residences for diversion to reuse and recycling as part of bundled rates for all services.
- Contract with a private textile collection and recycling service provider like Simple Recycling to provide residential curbside collection.
- Set up or partner with a private textile recycling service provider like Recycle For Change or UsAgain to set up drop-off bins hosted at community partner sites, at DPW yards, or both.
- Work with local schools, offices, libraries, community centers, business districts, places of worship, sports teams, and/or school clubs to coordinate shoe drives and connect with the Nike Factory Store in Paramus, NJ to drop off the shoes for reuse and recycling as part of their Reuse-A-Shoe and Nike Grind programs.
- Include information on textile reuse and recycling options on municipal websites including for retailers who provide drop-off service in the area such as H&M, Patagonia, and The North Face.

Examples: *describe communities near and far that have this initiative*

- Castro Valley Sanitation District in CA provides quarterly residential curbside collection of textiles.
- Numerous cities and towns in Connecticut, Massachusetts, and Rhode Island contract with Simple Recycling to provide residential curbside collection of textiles for residents.
- The town of Bethlehem, NY provides 24/7 drop boxes for clothing, shoes and other textiles to residents, having partnered with a clothing recycling company to collect the materials.
- Repurpose New Jersey manages clothing donation drop-off bins in Edison & Woodbridge Townships, including at public libraries and community centers in the towns. They also offer curbside collection in the Edison-Woodbridge area only.
- DonateNYC is an online reuse directory and mapping tool managed by the City of New York as a resource for residents, businesses, and institutions.

Potential Impact: describe the goal of this initiative in SOMA and possible measurable success

As a source-separated stream, it is possible to track textiles diversion to recycling and reuse if service providers provide weight data for material diverted. Those data would allow for analysis in the areas of diversion rate of textiles (based on national statistics in the absence of local data) and estimated greenhouse gas (GHG) reduction through diversion.

Implementation Considerations:

Staff time and possible consultant fees to develop textile collection service provider contracts - *one-time effort*

Staff time to set-up and manage municipality-owned textile collection bins at DPW yards -

one-time effort to set up, on-going management and marketing of collected materials

Staff time to coordinate with local entities for shoe drive events - *as needed*

Staff time to create online reuse directory - *one-time effort to create, on-going oversight*

Initiative: Zero Waste Event Requirement and Permitting

Initiative Type: Policy

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

Zero Waste Event Requirement and Permitting is a Zero Waste initiative directed to public events such as festivals in Maplewood and South Orange that would require public events to create a Zero Waste plan. The goal of this initiative is to create Zero Waste events and festivals in Maplewood and South Orange through reduction, reuse, and diversion of recyclables and compostable materials. Through this initiative the towns will outline steps that all public events would have to follow to reach Zero Waste. This will be a policy that the towns initiate that require events to meet the Zero Waste criteria that the towns put forth through the permitting process. The towns should require recycling and composting at all events, encourage the use of reusable foodware products where appropriate, and prevent certain material types at events. This initiative should also include technical assistance that is available to event coordinators. This will allow for greater understanding and success for these events. Education to the event attendees is another aspect of these initiatives to help create culture change.

Examples: *describe communities near and far that have this initiative*

The City of Boulder has an incentive program for Zero Waste events where up to \$250 is reimbursed if an event goes above and beyond the city's recycling requirements for events. The City of San Jose has a waste management program for special events to divert all recyclables and compostable materials from the waste stream. Rethink Disposable New Jersey, part of Clean Water Action, works with events to reduce the amount of single-use materials that are used, which reduces the overall waste that is created.

Potential Impact: *describe the goal of this initiative in SOMA and possible measurable success*

The goal of a Zero Waste events policy and program is to reduce the amount of discarded material going to the incinerator and instead divert those valuable resources to recycling and composting. It also has the goal of reducing the problematic single-use material used at public events that isn't recyclable or compostable. Another goal is culture change. The more the Maplewood and South Orange see Zero Waste programs in place, the more it will become an everyday practice.

Implementation Considerations: *is it a policy, program, or infrastructure? What is needed*

to implement it? Phases or a one-time initiative?

Zero Waste event requirement and permitting is both a policy and a program. The policy will be passed that Maplewood and South Orange public events will have to meet certain Zero Waste criteria, such as avoiding certain material types and offering recycling and composting. The program aspect will be the towns creating the system that event coordinators will use to comply with the policy. Also the towns will create a webpage to outline the aspects of this Zero Waste initiative and offer technical assistance as needed.

Initiative: Licensing with Reporting
Initiative Type: Policy

Basic Information: *describe the initiative and detail the role it plays in a Zero Waste community*

Haulers within a municipality are required to report the amount of material they haul (landfill or incinerator disposal, recyclables, yard debris, food scraps, reusables, hazardous or other materials) to the department identified in the policy. Generally the departments receiving these data are the facilities department and possibly the city officials. A municipality working towards Zero Waste needs to know how much materials they are already diverting (baseline) and how much they still need to reduce or divert when beginning their Zero Waste journey.

Examples: *describe communities near and far that have this initiative*

Boulder County, CO (Ordinance #2019-3) requires licensing of all hauling companies operating within Boulder County that collect, transport, or dispose of discarded materials (trash, recyclables, compostables, construction and demolition materials, aggregate, or landscaping materials). The licensed haulers are required to report annually to Boulder County via ReTRAC.

The City and County of Broomfield, CO requires licensed haulers to report an annual waste tracking and diversion report to the city officials. The report includes weight in tons of the following materials: landfill material, recyclable materials, compostable materials, construction and demolition materials, reuse materials, e-scrap, landscaping materials, architectural paint, and other information deemed necessary as diversion programs are further developed. This allows them to accurately report the total landfill tonnage, recycling rate, and total diversion rate annually.

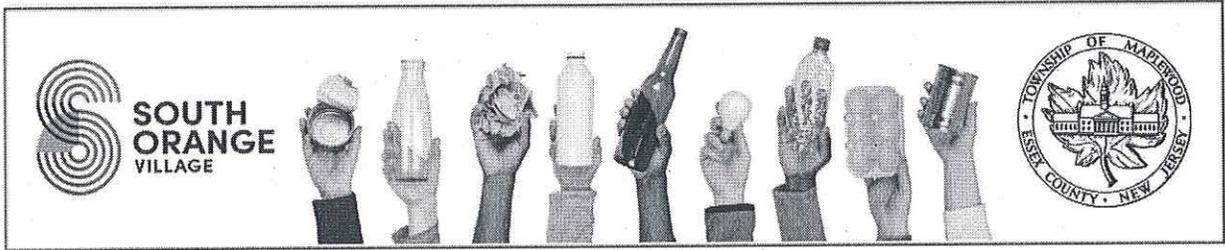
The City of Austin, TX requires haulers to be licensed with the city and report their annual tonnage of materials hauled.

Potential Impact: *describe the goal of this initiative in SOMA and possible measurable success*

When working towards Zero Waste, a municipality should know the amount of materials by sector that are being generated and how they are being managed (i.e., landfill or incineration, recycling, composting, or other method). The communities of South Orange and Maplewood will understand the materials that their communities generate if they require licensed haulers to supply an annual report on the amount and types of materials they collect and how those materials are managed.

Implementation Considerations: *is it a policy, program, or infrastructure? What is needed to implement it? Phases or a one-time initiative?*

Licensing with reporting is a one-time initiative that is a policy. The municipality that wants to require licensing with reporting needs to create a policy to do so. ReTRAC is one example of a reporting system that haulers can use to report the tons of materials managed. The reports can be generated by total tons, by sector, or by activity and are very useful for a community working towards Zero Waste.



Maplewood - South Orange Village Residential Collection System Procurement Strategy

Executive Summary

The Towns of Maplewood and South Orange Village embarked on a planning process to develop a strategic plan and procurement strategy to reduce waste and increase recycling and composting. This procurement strategy addresses the residential collection system. Additional procurement processes or other approaches may be needed for other initiatives included in the strategic plan.

The approach is intended to reduce costs to the towns and its residents, provide transparency and accountability in services and rate setting, and demonstrate leadership in Zero Waste.

The recommendations are based on consultation with a joint planning team with representatives from both communities, public input through a communitywide survey and Town Hall, and research conducted by a consultant team.

Key features of the recommendations include:

- Weekly curbside collection of recycling, organics, and trash
- Pay as you throw rates charged by the hauler
- Joint procurement process
- Separate, identical service agreements

Overview

The consultant team Zero Waste Associates, conducted surveys of local and regional processors, collection service providers, and peer communities. Key takeaways include:

- Markets for traditional recyclable materials are cyclical and are currently high for many commodities
- Processors have increased costs due to labor shortages, fires, insurance costs
- Contracts should be flexible to reduce risks and costs of service providers
- More lead time for proposal responses will attract more and better proposals
- More specificity in the Bid Process will allow for better responses

Recommendations

Based on the hauler and processor interviews and the initial responses to the community survey and Town Hall, it is clear that there is interest in pursuing a procurement strategy that moves beyond the status quo.

The following recommendations reflect the regional opportunities for expanding recycling and composting, reducing waste, and creating a cost-effective and efficient collection and processing system for Maplewood and South Orange.

Joint Procurement Process (Maplewood and South Orange)

- Can be separate contracts with identical contract terms (and allow for cross border routes, as needed)
- Can create a joint powers agency to share administrative oversight, though this is not necessary
- Should include options for territories, materials, services

Separate contracts for collection, processing/marketing, and disposal

- Reduces risk (and therefore cost) to collection service provider
- Allows towns to select best processing option
- Provides potential for future municipal facility development
- Offers variable terms for collection, processing/marketing, and disposal
- Can consider subcontractors for collection of specialty materials (such as food scraps)

Consider municipal staff capacity for billing (for town-wide solid waste collection)

- Can be part of a utility bill or property bill
- Reduces risk (and therefore cost) to collection service provider
- Allows for town rate-setting and transparency
- Prime contractor could also bill and remit payments to towns for processing and disposal (and pay subcontractors)

Move to curbside collection for all materials

- Recycling, Organics (yard trimmings and food scraps), Trash
- Town or service provider billing as appropriate for all services
- Option for backyard pick up for an extra fee. (Waive fee option for eligible disabled, seniors and/or low income households in these categories.)

Consider options for separate collection

- Dual stream (paper and cardboard collected separately from containers)
- Food scraps collected separately from yard trimmings
- Food scraps co-collected with yard trimmings
- Bulky item collection focused on recycling and reuse

Procurement Best Practices

Phase	Feature	Description
Pre-Bid Solicitation	Conduct additional outreach on potential proposers	Expand the list of potential proposers, especially for out-of-state companies that might be willing to break into the market and register in NJ to bid on a contract of this size
Pre-Bid Solicitation	Early engagement of potential proposers	Notify potential proposers in advance of bid solicitation release, and invite their attendance at Governing Body meetings during which the future services and process are discussed.
Pre-Bid Solicitation	Collect information from current service provider	Carefully review the operational data provided by the current service provider (for current services) in required reports and determine if there are any critical missing data points. This includes detailing what existing equipment and assets of the existing service provider may have available for use in a future Agreement, whether or not the incumbent service provider is selected.
Bid Solicitation/ Agreement	Resolve policy issues prior to Bid solicitation release	A clear, unambiguous bid solicitation that addresses all issues affecting cost reduces bidder uncertainty and provides for lower proposed prices.
Bid Solicitation/ Agreement	Detail the process in the Bid	Provide specificity about the entire process. Be clear about the role of the Governing Body, how bids will be evaluated and scored, timeline for contract award, etc.
Bid Solicitation/ Agreement	Provide draft Agreement with Bid	It is important that all proposers provide their offers on the same basis. Proposers may take exception to specific contract provisions as long as they offer a rationale and alternative language. Proposers with numerous and/or serious exceptions should receive lower scores.
Bid Solicitation/ Agreement	Request options sparingly	While it is appropriate to ask proposers to provide options in key service areas, requested options should be limited to those in which the Town is seriously interested.
Bid Solicitation/ Agreement	Define a clear evaluation process that will result in selection	Sometimes Bid processes do not result in a clear means for comparing "apples to apples". The outcome of such an undefined process can include proposer legal challenges, and/or the need for a "do-over".

Bid Solicitation/ Agreement	Define clearly the evaluation criteria and weighting, specifically as it relates to non-cost and cost criteria	We recommend a process in which specific weighting is detailed for the evaluation criteria so there is a clearly defensible rationale for scoring and ranking of bids received. This includes cost criteria reflecting the reasonableness <u>and</u> competitiveness of cost proposals.
Bid Preparations	Allow adequate time for bid preparation	We recommend allowing a sufficient amount of time for bid preparation, such as a 90-day timeframe. Allowing adequate time is an inducement for potential bidders to participate, and helps widen and level the field.
Negotiations	Rapid negotiations	Limit proposer rights to negotiate changes to the Agreement to the exceptions taken (defined) in the proposal response. This will result in much quicker negotiations with the selected service provider.

Bid Process and Schedule

Activity	Completion Date (Specific Dates to be Identified)
Town governing bodies consider procurement strategy and provide direction to staff/authorization to proceed	October 2021
Designate a lead agency and joint working group for purpose of releasing the Bid Solicitation for Collection & Processing Services	
Town governing bodies review draft Bid Solicitation and Service Agreement	November 2021
Release Bid Solicitation for Collection & Processing Services	January 2022
Mandatory Pre-Bid Meeting	Mid-February 2022
Deadline for Registering to Receive Future Correspondence	Early March 2022
Deadline to Submit Additional Written Questions	Early March 2022
Lead Agency will Issue Response to Written Questions and Bid Addendum, if necessary	Late March 2022
Proposers submit bids	Late April 2022
Evaluation team conducts preliminary evaluation, clarifies proposal questions	Early May 2022
Evaluation team conducts interviews with one or more proposers	Late May 2022
Town governing bodies select collection and processing contractor(s)	June 2022
Lead Agency negotiates with selected contractor(s)	August 2022
Town governing bodies approve negotiated Service Agreement	September 2022
Selected contractor(s) begin providing service	March-October 2023 (up to one year needed for ordering equipment and conducting roll-out activities) Specific date to be identified by contractor

Bid Solicitation Elements/Business Terms

Service	Base Bid	Alternative Proposals
Recyclable Materials	<ul style="list-style-type: none"> • Weekly, curbside • Single stream • 64-gallon cart standard, 96-gallon cart available in place of 64-gallon cart upon request for no additional cost • Unlimited flattened cardboard may be placed beside cart (2 ft. x 3 ft. pieces) • Extra recyclables may be placed beside cart in paper bags or cardboard boxes. 	<ul style="list-style-type: none"> • Dual stream collection (containers/paper)
Recyclable Materials Processing	<ul style="list-style-type: none"> • Single stream processing • Glass Bottles & Jars, Plastic Bottles & Containers 1, 2 & 5, Paper, Paperboard, Cardboard, Aluminum & Steel Cans, Aluminum Pans & Foil, Milk, Juice & Food Cartons 	<ul style="list-style-type: none"> • Dual stream processing (containers/paper)
Organic Materials	<ul style="list-style-type: none"> • Weekly, curbside • 64-gallon cart standard • Second 64-gallon cart available for no additional cost • Kitchen pails for food scraps provided and delivered by hauler to all customers at start-up, and throughout the term upon request • Curbside holiday tree collection • Yard trimmings overages accepted using pre- paid paper bags. 	<ul style="list-style-type: none"> • Separate collection of food scraps and compostable paper from yard trimmings
Organic Materials Processing	<ul style="list-style-type: none"> • Food scraps and compostable paper co-collected with yard trimmings 	<ul style="list-style-type: none"> • Separate processing of food scraps and compostable paper from yard trimmings
Solid Waste	<ul style="list-style-type: none"> • Weekly, curbside • 20-, 35-, 64-, or 96-gallon carts • Overages accepted using pre-paid "Extra Trash Service Tags" • Twice per week collection for an additional charge • Solid waste to be delivered to Essex County Resource Recovery Facility 	
Backyard or Side yard	<ul style="list-style-type: none"> • Provided to disabled at no additional cost • Available to others for additional charge 	

Bulky Items	<ul style="list-style-type: none"> • Two scheduled (Spring, Fall) neighborhood clean-up days per year (up to three cubic yards of material plus two bulky items per set-out, limit 200 lbs. per item) materials collected curbside from individual homes. • Salvageable items collected in a separate vehicle, and preserved for re-use. • On-call collection of bulky items for a fee (in addition to neighborhood clean-up days) 	
Customer Billing	<ul style="list-style-type: none"> • Quarterly or monthly billing 	
Customer Service	<ul style="list-style-type: none"> • Professional and courteous customer service • Customer service representatives to respond to calls during business hours 	
Customer Education	<ul style="list-style-type: none"> • Website with customer rates, services 	

Recommended Bid Structure

1. Overview
2. Schedule
3. Background Information
4. Current Services, Tonnages, Customers
5. Scope of Services for Base Bids
6. Scope of Services for Alternates
7. Labor Policy
8. Subcontractors
9. Bid Submittal Process
10. Bid Submittal Requirements

Recommended Outline (to be included in the Bid)

Title Page

Cover Letter

Table of Contents

Executive Summary

1. Company Description
 - A. Business Structure
 - B. Collection Experience

- C. Service Initiation Experience
 - D. Key Personnel
 - E. Labor Agreements and Wages
 - F. Past Performance Record
 - G. Financial Information
2. Technical Proposal for Base Bid
 - A. Collection
 - B. Recyclable Materials Processing
 - C. Organic Materials Processing
 - D. Residential Neighborhood Clean-Up Days and Bulky Item Collection
 - E. Customer Service
 - F. Billing
 - G. Public Education and Outreach Plan
 - H. Implementation Plan
 - I. Subcontractors
 - J. Existing Management and Customer Service Systems
 - K. Corporation Yard and Maintenance Facilities
 3. Technical Proposal for Alternates
 4. Environmental Considerations
 5. Acceptance of Bid and Service Agreement
 6. Cost Bid
 - A. Base Cost Bid
 - B. Cost Bid for Alternates
 7. Other Bid Forms
 - A. Secretary's Certificate
 - B. Anti-Collusion Affidavit

Attachments

Additional material may be included at bidder's discretion (Optional)

Sample Request For Proposals and Service Agreements

Link to folder:

Lafayette, Colorado
Livingston, New Jersey
Palo Alto, California
Renton, Washington
San Ramon, California

