

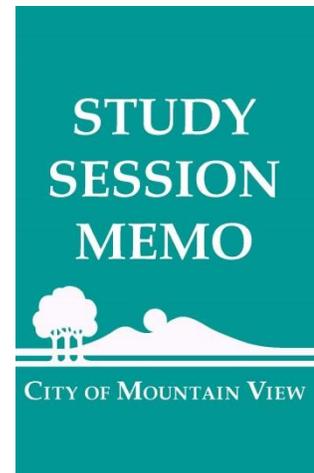
**DATE:** June 11, 2019

**TO:** Honorable Mayor and City Council

**FROM:** Lori Topley, Solid Waste Program Manager  
Dawn S. Cameron, Assistant Public Works Director  
Michael A. Fuller, Public Works Director

**VIA:** Daniel H. Rich, City Manager

**TITLE:** Zero Waste Plan



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## **PURPOSE**

The purpose of this Study Session is to review the Draft Zero Waste Plan and provide input for preparation of the final Plan.

## **BACKGROUND**

On June 19, 2018, the City Council adopted a Zero Waste Policy. The policy, provided in Attachment 1, memorialized many of the practices the City has been embracing since the first Environmental Sustainability Action Plan was adopted by the City Council in 2009. It serves as a long-term guide for the City's commitment to reducing waste, establishing an overall quantitative goal to reduce generated and disposed waste such that 90 percent of materials are diverted from landfill by 2030. To assist in meeting this goal, the City hired a consultant to prepare a Zero Waste Plan. The Draft Plan is provided in Attachment 2, and includes suggested measures the City could implement to increase diversion. The Plan also serves as a basis for developing new and revised contracts for collection, processing, and landfill services by 2021, when the current contracts with Recology, the SMaRT<sup>®</sup> Station, and Kirby Canyon Landfill expire.

## **Zero Waste**

Zero Waste is a holistic approach to managing the flow of resources through society in a closed-loop system (circular economy) rather than a linear one. It is more than the traditional hierarchy of reducing, reusing, and recycling. Zero Waste includes designing products and packaging to minimize waste, fostering producer and consumer responsibility, investing in recovery facilities, and building community collaboration—90 percent diversion is a benchmark measure of success accepted by the Zero Waste International Alliance.

Since 1992, when Mountain View began waste reduction programs in earnest to comply with AB 939 mandates to reduce waste by 50 percent, the City has reduced landfill disposal by nearly half. Achieving 90 percent diversion will require cutting Mountain View's current per-capita landfill disposal rate in half again. In 2017, 50,443 tons of waste was disposed in the landfill (2018 totals are not yet available). Based on a population of 80,897, this equates to 3.4 pounds per capita per day. To achieve a 90 percent diversion rate in 2030, assuming a population of 103,608 (as estimated by the City of Mountain View General Plan), landfill disposal could be no more than 30,250 tons, or 1.6 pounds per capita per day.

Although the Draft Zero Waste Plan contains many actions the City can implement to reduce landfill disposal, reaching 90 percent diversion will require actions in addition to programs that the City has direct control over implementing. Neither Mountain View nor any other community can achieve Zero waste on its own.

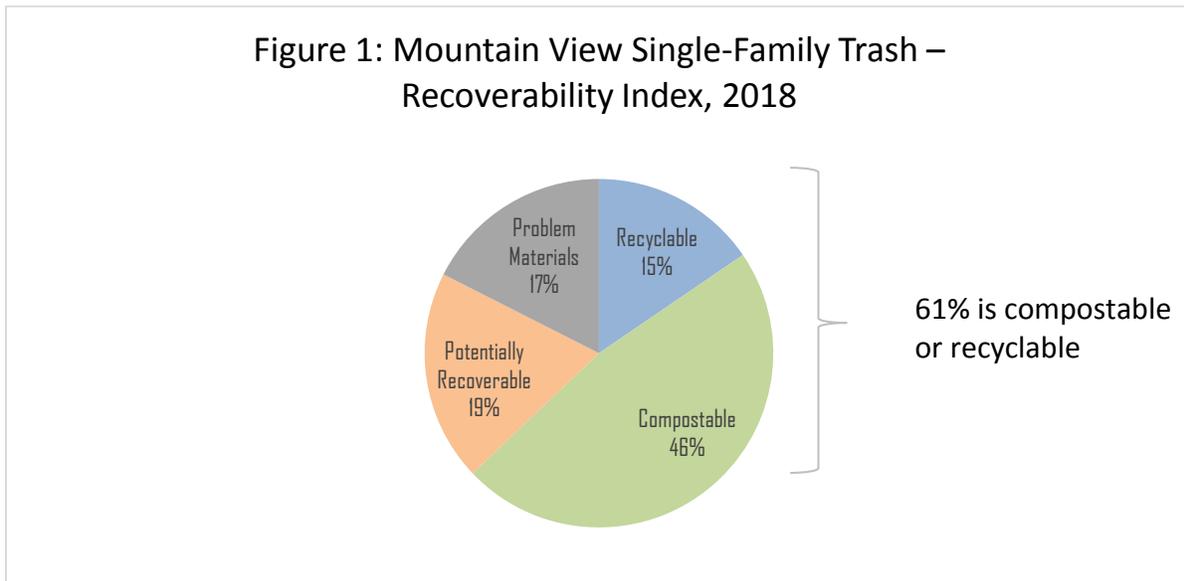
### **Waste Characterization**

Prior to development of the Draft Plan, a [Waste Characterization Study](#) was performed to analyze the composition of the City's waste streams. For this study, single-family curbside and commercial customers' trash was sampled. The multi-family trash was not sampled because they do not yet have access to composting programs and, therefore, multi-family trash composition has not likely changed significantly since the last waste characterization study was performed in 2010. Approximately 43 percent of Mountain View's waste stream is from commercial sources, 22 percent is from construction projects, 20 percent from multi-family, and 15 percent from single-family. The results of the current Waste Characterization Study, summarized below, were used to help identify key opportunities for reducing waste and landfill disposal in the proposed Draft Plan.

### **Single Family Recycling, Organics, and Trash**

All three carts from 120 households using curbside service were collected separately and hand-sorted into 100 different material types, with each material categorized into one of seven recoverability groups. The pie chart (Figure 1) indicates that 61 percent of material placed in the trash cart is either compostable or recyclable.

Figure 1: Mountain View Single-Family Trash –  
Recoverability Index, 2018

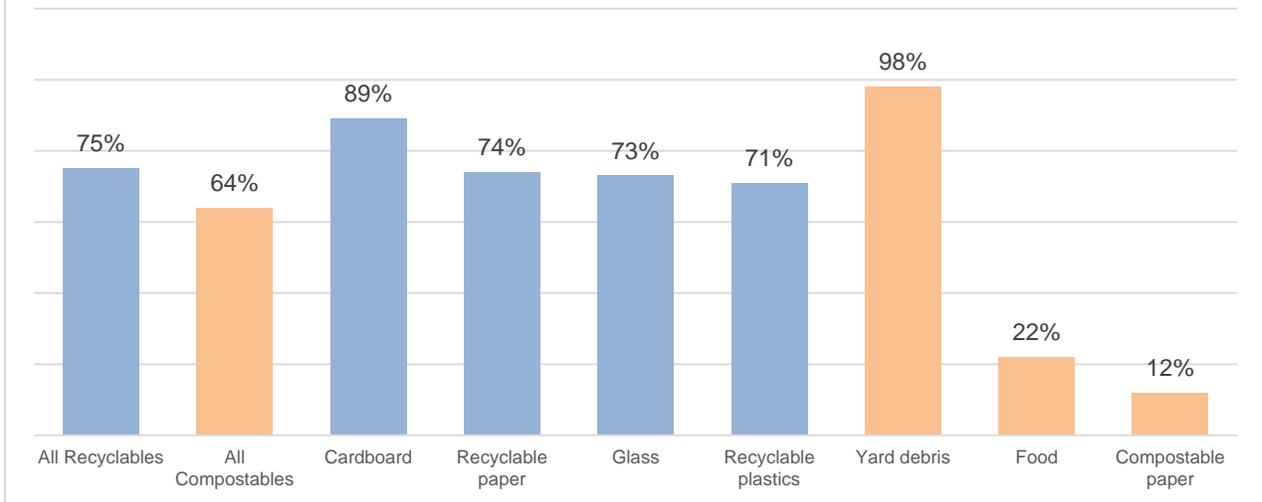


By weight, the top five discarded items were:

- Edible food – 17.7 percent (Compostable)
- Inedible food – 13.9 percent (Compostable)
- Compostable paper – 7.7 percent (Compostable)
- Pet Waste – 6.2 percent (Problem Materials)
- Diapers – 5.1 percent (Problem Materials)

The study also established a “capture rate” to identify what proportion of a material type is being placed in the correct container. Overall, 75 percent of recyclable materials and 64 percent of compostable materials are being placed in the correct cart. However, as can be seen in Figure 2, the majority of food and food-soiled paper is still being placed in the trash cart.

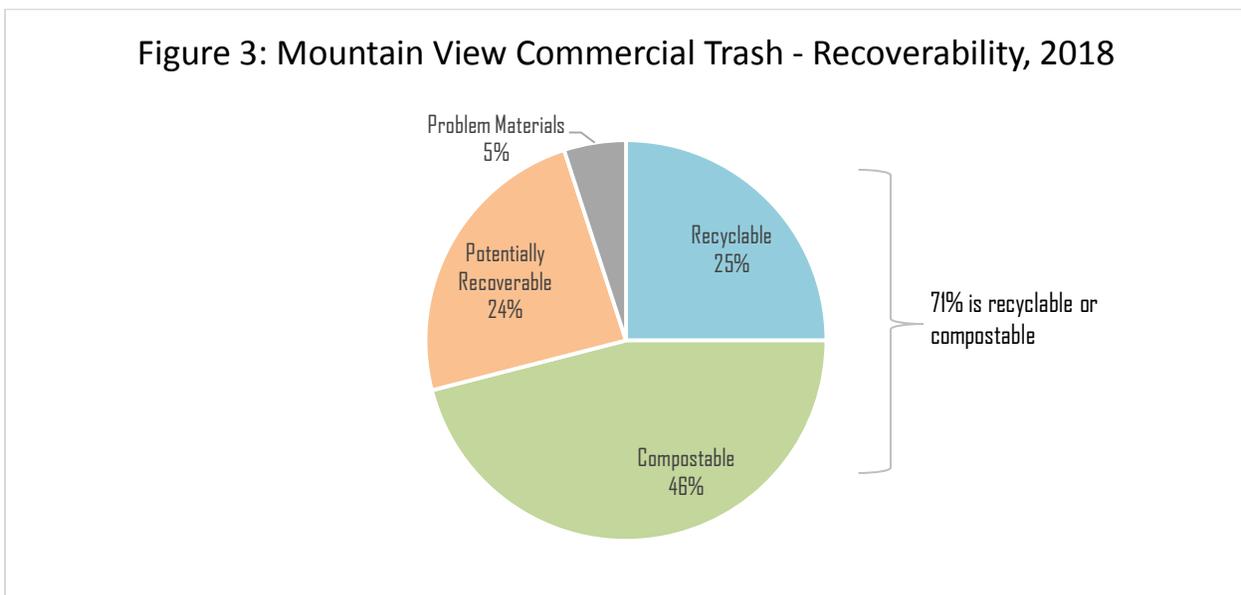
Figure 2: Mountain View Single-Family Capture Rates, 2018



### Commercial Trash

Only the trash was sampled for the commercial stream. Figure 3 indicates that 71 percent of materials placed in the trash are compostable or recyclable.

Figure 3: Mountain View Commercial Trash - Recoverability, 2018



The top five discarded items were:

- Edible Food – 15.6 percent (Compostable)
- Compostable Paper – 10.4 percent (Compostable)

- Inedible Food – 8.9 percent (Compostable)
- Ferrous Metal – 6.1 percent (Potentially Recyclable)
- Paper Towels and Tissues – 5.3 percent (Compostable)

### **Public Input**

Stakeholder interviews were conducted with interested residents, businesses, processors, nonprofits, property managers, homeowner associations, and members of the Environmental Sustainability Task Force.

Using insights from the stakeholder interviews and research on potential new or expanded programs, a menu of policy, program, and infrastructure options was presented at a public workshop held on March 4, 2019. The stakeholder and workshop input was used to help develop the final list of initiatives contained in the Draft Plan. Some of the feedback from the stakeholder interviews and public workshop is summarized below; the full results can be found in Attachment A of the Draft Plan:

- Expand the food ware ordinance to address single-use plastics.
- Conduct more door-to-door outreach at multi-family buildings.
- Seek regional cooperation on materials collected, container colors, and labels.
- Emphasize the basics, reduce confusion, make it as easy to recycle and compost as it is to put something in the trash.
- Focus on school programs.
- Don't change the commercial programs drastically – they are working.
- Look for plastics solutions.
- Encourage reusables.
- Support compostable and cloth diapers.
- Train Zero Waste advocates.
- Encourage business and corporate kitchen food donations.
- Require more construction diversion.

## **Senate Bill 1383 – Short-Lived Climate Pollutants**

Some of the initiatives in the Draft Plan, primarily those aimed at organics diversion, are anticipated to be required by regulations currently under development by the State to implement Senate Bill 1383 (SB 1383). SB 1383 was passed in 2016 and is intended to reduce short-lived climate pollutants. This is the most significant waste reduction mandate to be adopted in California in the last 30 years. To reduce targeted methane emissions, the law mandates a 75 percent reduction in the amount of organics being placed in landfills statewide by 2025.

The law provides CalRecycle the regulatory authority required to achieve these targets. Development of regulations began with a series of workshops followed by the release of two informal drafts in 2018. Mountain View Solid Waste Program staff provided comments on both drafts. The final 83-page regulation was submitted for the formal rule-making process in January 2019. Mountain View submitted a comment letter (signed by the City Manager and copied to the Council) within the 45-day review period. CalRecycle received over 250 comment letters, including from other jurisdictions in Santa Clara County. All submitted comments are being considered, and CalRecycle has indicated revised regulations will be released on June 18, 2019. CalRecycle plans to finalize the regulations by the end of 2019. This will allow cities two years to come into compliance by 2022, when the regulations take effect. A detailed description of the proposed regulations is provided in Attachment 3.

## **DISCUSSION**

The Draft Zero Waste Plan is action-oriented with a total of 38 initiatives that are subdivided into Short-Term, Medium-Term and Long-Term time frames. These initiatives fall into five general categories:

- Increasing Program Participation
- Waste Prevention and Reuse
- Collection and Processing Changes
- Construction and Demolition Waste Diversion
- Addressing Problem Materials

Diversion potential and Greenhouse Gas (GHG) emissions reduction has been estimated for each initiative, as well as the amount of staff effort required, one-time costs, and implementation effort needed. A full summary of these estimates can be found on Pages 32 through 34 of the Draft Plan. The Plan does not estimate ongoing

costs related to amended service agreements as these costs are subject to negotiation with service providers.

Taken all together, the actions contained in the Plan are estimated to divert 28,200 tons of material from the landfill and reduce GHG emissions by 40,380 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>). Adjusting for population growth as estimated by the City’s General Plan, this would put the City near the 90 percent goal. In order to reach 90 percent, it will be necessary to periodically review progress towards the goal and evaluate additional actions, including regional or State efforts, that can be taken as new solutions develop.

	<b>Population</b>	<b>Tons Disposed</b>	<b>Diversion Rate</b>
2017 – Current	80,897	50,443	78%
2030 – Estimated with Existing Programs Only	103,608*	62,703	78%
2030 – Estimated with Zero Waste Plan	103,608*	34,503	88%

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\*City of Mountain View General Plan.

**Short-Term Initiatives (Fiscal Years 2019-20 and 2020-21)**

The initiatives planned for the first two years are natural outgrowths of programs already under development, projects that are under way at the County level that can be leveraged by the City, or address large waste streams:

1. Food Ware Packaging Reduction – Phase 1
2. Multi-Family Food Scraps Collection
3. State Packaging and Product Advocacy
4. Generation Reduction Goal (new ways to measure progress)
5. Increase Bag Charge (for single-use bags)
6. Zero Waste Events and Venues
7. Residential Food Waste Reduction
8. Sustainable Repair Café
9. Increase Compost Use
10. Technical Assistance to Residential Food Scrap Customers
11. Technical Assistance to Construction Contractors

### **Medium-Term Initiatives (Fiscal Years 2021-22 through 2025-26)**

Years 3 (Fiscal Year 2021-22) and 4 (Fiscal Year 2022-23) focus on legal mandates that have implementation deadlines (such as mandatory participation under SB 1383) and programs that require service provider contract changes. Beginning in Year 5 (Fiscal Year 2023-24), the focus switches to problem materials and food donation programs:

1. Mandatory Participation Ordinance
2. Every Week Recycling
3. Technical Assistance to Schools
4. Technical Assistance for Multi-Family and Commercial Customers
5. Improve Materials Processing System
6. Direct Construction and Demolition Debris to High Diversion Facilities
7. Expand Commercial Recycling
8. Increase Construction and Demolition Diversion Requirement
9. Food Ware Packaging Reduction – Phase 2
10. Zero Waste Ambassadors
11. Promote Reuse, Rental, and Repair
12. Commercial Food Donations
13. Residential Food Donations
14. On-Call Collection of Hard-to-Recycle and Reusable Items
15. Plastic Solutions
16. Waste Reduction for Diapers
17. Waste Reduction for Pet Waste

### **Long-Term Initiatives (Fiscal Year 2026-27 through 2029-30)**

In the later years of the Plan, initiatives focus on a large-scale service change and collaborative efforts:

1. Every Other Week Garbage Collection
2. Waste Reduction Grants
3. Promote Access to Goods over Ownership
4. Business Reuse Exchange
5. Building Materials Exchange
6. Promote Reusable Filling Stations at Stores
7. Bans or Fees on Hard-to-Recover Materials
8. Zero Waste Research Initiative (find new solutions)
9. Local Product and Packaging Redesign
10. Market Development

Adoption of the Plan by the Council (anticipated to occur in September 2019) would not constitute final approval of every initiative in the Plan. Council approval will be requested for those items that have significant budgetary or staffing impacts, or require CEQA review, at the time of implementation.

### **Implementation Resources**

Staff anticipates the resources needed to implement the Zero Waste Plan and comply with the SB 1383 regulations will be substantial. The Zero Waste Plan estimates only the staff resources needed by the Solid Waste Program. Other departments will be affected by the SB 1383 regulations—for example, to implement procurement requirements—but staff has not yet determined the extent of those impacts. The initiatives of the Zero Waste Plan related wholly or partially to the SB 1383 regulations include:

- Multi-Family Food Scrap Collection (No. 2)
- Zero Waste Events and Venues (No. 6)
- Increase Compost Use (No. 9)
- Technical Assistance to Residential Food Scrap Customers (No. 10)
- Technical Assistance to Construction Contractors (No. 11)
- Mandatory Participation Ordinance (No. 12)
- Technical Assistance to Schools (No. 14)
- Technical Assistance for Multi-Family and Commercial (No. 15)
- Commercial Food Donations (No. 23)

The estimated staffing impacts based on the initiatives contained in the Draft Plan, including those listed above required to comply with the anticipated SB 1383 regulations, is shown below:

Current Permanent Staffing:	3.0 Full Time Equivalents (FTE)	
Short-Term Initiatives:	+ 1.5 FTE (4.5 Total)	+ \$214,000 one-time costs
Medium-Term Initiatives:	+ 1.0 FTE (5.5 Total)	+ \$ 30,000 one-time costs
Long-Term Initiatives:	+ 0.80 FTE (6.3 Total)	+ \$145,000 one-time costs

The Fiscal Year 2019-20 budget includes a limited-term position, bringing the staffing total to 4.0 FTE on a temporary basis. Beginning in Fiscal Year 2020-21, at least one new permanent FTE staff is needed to meet SB 1383 requirements. The remaining FTE needs could be met by a combination of new City staff, hourly assistance, contract assistance, or incorporation into service provider agreements. Staff will evaluate the actual staffing and one-time cost needs related to the Plan initiatives for each fiscal year as part of the annual Council budget process. Ongoing costs for initiatives that require service provider contract changes will be evaluated by the Council during the approval process

for those agreements. Funding for the Zero Waste Plan initiatives (including staffing needs) will come from the Solid Waste Fund, which receives revenue from rates paid by solid waste customers.

### **RECOMMENDATION**

Staff seeks Council direction on the following:

1. Any proposed Zero Waste Initiatives the Council does not wish to include in the Plan, with the understanding that some initiatives will be required by anticipated State regulations.
2. Other Initiatives not in the Draft Plan that the Council would like to include.
3. Any rearrangement of initiatives between the short-, medium-, or long-term categories.
4. Any other input on the Draft Zero Waste Plan.

### **NEXT STEPS**

A final Zero Waste Plan will be scheduled for Council approval in early fall 2019. At that time, the Council will also be asked to provide staff direction on options for developing new collection, processing, and landfill disposal agreements.

### **PUBLIC NOTICING**

Agenda posting, e-mail sent to interested community members, businesses, and stakeholders, and social media posts.

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- Attachments:
1. Zero Waste Policy
  2. Draft Zero Waste Plan
  3. Overview of SB 1383 Organic Waste Reduction Requirements