

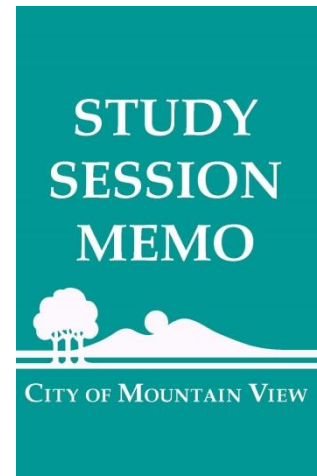
DATE: April 26, 2016

TO: Honorable Mayor and City Council

FROM: Lori Topley, Solid Waste Program Manager
Linda Forsberg, Transportation and Business
Manager
Michael A. Fuller, Public Works Director

VIA: Daniel H. Rich, City Manager

TITLE: **Residential Food Scraps Pilot Program
Review**



PURPOSE

The purpose of this Study Session is to:

- Review the results of food scraps collection pilot programs conducted in Mountain View, Palo Alto, and Sunnyvale.
- Seek Council direction regarding the potential establishment of a Citywide food scraps collection program in Mountain View.
- Provide the Council with an opportunity to provide input regarding a potential change in the City's current recycling program to increase service from every-other-week collection to weekly collection.

BACKGROUND

The City Council approved a new waste hauler contract with Recology Mountain View in September 2012. The contract will expire at the end of 2021. The implementation of a residential food scraps collection program was anticipated to occur during the life of the current collection agreement and the agreement specifically required cooperation from Recology on a pilot. The introduction of a food scraps collection program will be one of several waste reduction strategies outlined in the City's Zero Waste Plan (ZWP). The ZWP is still under development and will be presented to the City Council by early 2017.

The three SMaRT Station® partner cities (Mountain View, Palo Alto, and Sunnyvale) each piloted a different residential food scraps collection program with the goal of comparing results, efficiencies, costs, and practicalities prior to selection and implementation of a program that best serves the needs of each city.

City of Mountain View

Pilot Description

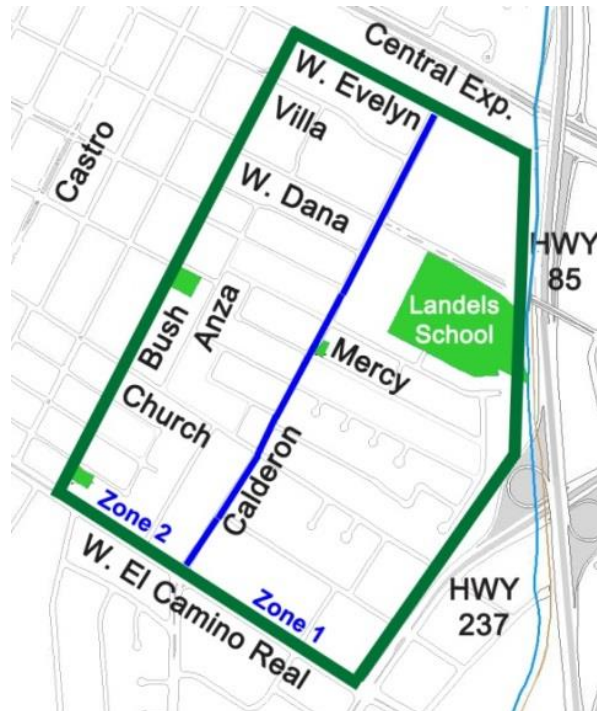
The Mountain View food scraps collection pilot was conducted in the Old Mountain View neighborhood for a six-month period beginning on July 16, 2015. Data was collected through January 21, 2016, though the collection system currently remains in place for residents in the pilot area. The purpose of the pilot was to test the weekly collection of food scraps and food-soiled paper (referred to as food scraps) in the yard trimmings cart. The selected pilot area was further divided into two zones to test the effect of different garbage collection schedules on the amount of food scraps diverted and on overall program costs. Zone 1 residents received weekly garbage collection, while Zone 2 residents received every other week (EOW) garbage collection. California Code of Regulations requires removal of putrescible materials (food scraps) on a weekly basis, which is met in either zone by the new weekly collection of the yard trimming carts. Both zones continued to have recycling collected every other week.

Zone 1

- Weekly garbage
- Weekly organics
- 415 total households
- 9% rowhouses
- 4% small multi-family

Zone 2

- EOW garbage
- Weekly organics
- 565 total households
- 11% rowhouses
- 6% small multi-family



There was one rowhouse development in each zone. Because this style of housing typically does not have a yard trimmings cart, each home was provided with a small 24-gallon cart for food scraps.



Residents were notified about the pilot through mailers and cart hangers. One week prior to the start, every resident received a kitchen pail, a how-to brochure, and two boxes of three-gallon compostable bags to line the kitchen pail. Residents in the EOW garbage area were also provided with four free extra garbage stickers to help with the transition between weekly and EOW garbage service.



Additional tools available to residents upon request included a “side-saddle” trash container that could be used to convert an existing larger kitchen trash can to a food scraps can, and two boxes of 13-gallon bags to line the larger kitchen can. Approximately 40 households requested these materials.



Pilot Findings

Data was collected throughout the course of the pilot and is summarized in greater detail in the Final Data Report (Attachment 1). A customer survey was conducted in January 2016, with a response rate of 23 percent from Zone 1 participants and 32 percent from Zone 2. The survey results are summarized in Attachment 1 (including the many customer comments received). Highlights regarding participation levels, performance, and customer satisfaction with the pilot program are provided below.

Overall, the results show that the EOW garbage collection option piloted in Zone 2 performed better in terms of maximizing food scraps diversion and reducing waste going to landfill than the Weekly Garbage option provided in Zone 1 (as shown in the table below). However, in terms of customer satisfaction, those with EOW garbage service who responded to the survey were less satisfied with all aspects of the pilot than those with weekly garbage service.

Staff has communicated with other Bay Area communities that are interested in EOW garbage collection as a method to increase diversion and reduce costs. San Francisco has been experimenting with this collection method (results not yet available), and the Alameda County Waste Management Authority is getting ready to run an EOW garbage collection pilot, as is the South Bayside Waste Management Authority in San Mateo County.

Performance Measure	Zone 1 Weekly Garbage	Zone 2 EOW Garbage
Households with food scraps observed in yard trimmings cart (lid lifting)	68%	73%
Households with confirmed food scraps in yard trimmings cart (cart sampling)	90%	100%
Households reporting participation of 4 months or longer (customer survey)	84%	81%
Amount of food scraps diverted (per household, per week)	5.2 pounds	8.6 pounds
Percentage of all household food scraps diverted (per household)	66%	82%
Percentage of all household waste diverted (per household)	29%	42%
Reduction in amount of garbage collected during the pilot versus before the pilot	24%	55%
Increase in amount of yard trimmings collected during the pilot (with food) versus before the pilot (without food)	17%	45%
Customer satisfaction rate with overall food scraps collection program (% very or somewhat satisfied)	94%	72%
Customer satisfaction rate with EOW garbage collection (% very or somewhat satisfied)	N/A	45%

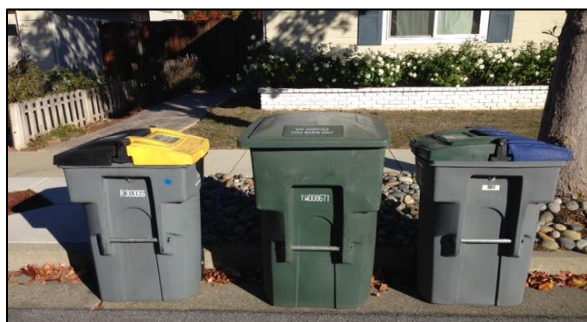
City of Sunnyvale

Pilot Description

The Sunnyvale food scraps pilot was designed based on the premise of collecting food scraps separately from yard trimmings. This was done to maximize the processing options for both of these commodities, as discussed later in this report. One hundred (100) homes were chosen to participate in each of five different neighborhoods to vary the housing stock and demographics. Data was collected over a nine-month time period.

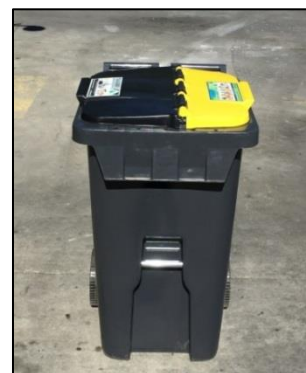
Each participating household was provided with a new 64-gallon garbage cart that was split in half (50/50 cart), exactly like the recycling carts currently used in both Mountain View and Sunnyvale. Food scraps (and food-soiled paper) were placed on one side of

the cart, and all remaining garbage placed on the other side. The split garbage cart was collected by a truck that was also split, to keep the materials separated.



New set out with 50/50 cart

Yellow lid side was
for food scraps.



70/30 cart

Later in the pilot, the homes in one neighborhood were provided with a garbage cart that was split 70/30. This cart (available in 64-gallon or 96-gallon size) would be the standard for any citywide program as it was demonstrated to provide a better balance of space for food scraps (30 percent side) and garbage (70 percent side).

Pilot residents in Sunnyvale received the same kitchen pail and compostable bags as Mountain View residents. In addition, Sunnyvale experimented with various outreach methods to correct issues such as contamination or low participation during the course of the pilot.

Pilot Findings

Data was collected throughout the course of the pilot and is summarized in greater detail in Attachment 2. Highlights regarding participation levels, performance, and customer satisfaction with the pilot program are provided below. Overall, the pilot had high participation and diversion.

Performance Measure	Split Garbage
Households with food scraps observed in yellow side of cart (lid lifting)	74%
Households with confirmed food scraps in yellow side of cart (cart sampling)	78%
Amount of food scraps diverted (per household, per week)	8.1 pounds
Percentage of all household food scraps diverted (per household)	62%
Percentage of all household waste diverted (per household)	32%
Survey respondents indicating all their garbage could fit in the 70% side of a split garbage cart	84%
Survey respondents that would recommend Citywide use of 70/30 split garbage cart	74%
Survey respondents that have no interest in participating in a food scraps program	19%

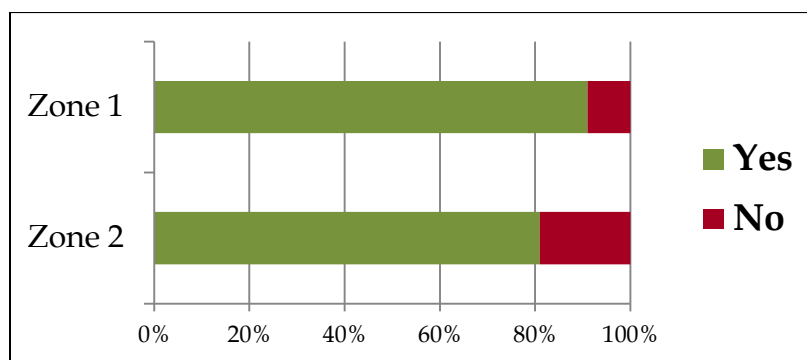
City of Palo Alto

The City of Palo Alto implemented a two-cart waste pilot for a one-year period at 670 homes in 2014. During the pilot period, residents stopped use of their garbage carts. All wet waste (food and food-soiled paper) was required to be bagged and placed in the yard trimmings cart. All remaining dry waste (including diapers and pet waste) was required to be bagged and placed in the recycling cart. The bags were then removed from the collected loads at a sorting facility. At its completion, Palo Alto staff determined the pilot's labor-intensive method for separating the bags was difficult, inefficient, and resulted in too much contamination, and did not recommend the program for citywide implementation. Mountain View staff has reviewed the results of the Palo Alto pilot program and does not recommend it for implementation in Mountain View.

Palo Alto recently implemented a food scraps collection program similar to that tested in Mountain View, consisting of weekly collection of food scraps (bagged or loose) in the yard trimmings cart.

DISCUSSION

The results of the January 2016 customer survey of participants in the Mountain View pilot program indicate a high number of participants are interested in having some type of Citywide food scraps program.



Given this high level of interest, and based on the results of the Mountain View and Sunnyvale pilots, staff has identified three options for a Citywide food scraps program in Mountain View:

- Option 1 – Weekly Garbage (Mountain View pilot Zone 1 model) has the lowest diversion and potentially highest cost, but is least disruptive to residents and would be the easiest to implement.
- Option 2 – EOW Garbage (Mountain View pilot Zone 2 model) has the highest diversion and lowest cost, but would require more effort to implement and could be perceived as most disruptive by residents.
- Option 3 – Split Garbage (Sunnyvale pilot model) has moderate diversion and cost, would require substantial effort to implement, but would likely be perceived as only moderately disruptive by residents.

An option to change the City's current recycling program to increase service from EOW collection to weekly collection is also presented later in this report.

Option 1 – Weekly Garbage

Participation, Customer Acceptance, and Diversion

Positive aspects of this option include:

- As tested by Zone 1 pilot customers, this program received high customer satisfaction marks (94 percent) and had good participation (at least 68 percent of households) and diversion (5.2 pounds per household per week or 66 percent of household food generated).
- This is a low-impact program for customers. There is minimal disruption to the current collection system and they receive a service perceived as “positive” by most (weekly yard trimmings collection). Residents can choose to participate in the separation and collection of food scraps on a voluntary basis.
- This program is similar to what many other cities in the Bay Area are doing. Therefore, residents who move to Mountain View from other communities are more likely to understand the system without special instruction.

Negative aspects of this option include:

- It takes effort on the part of residents to separate food scraps. Typically, only those that believe waste diversion is an important goal will bother. If garbage capacity and collection frequency remain the same, there is no further incentive to participate. Therefore, it is not expected that the level of diversion seen in the relatively small and short pilot period would be achieved Citywide or sustained over time.

The Alameda County Waste Management Authority recently shared some data from a sampling of households in Castro Valley and Fremont that have this same program. On the sampling day, less than half of the sampled households put their yard trimmings cart out for collection. Of those that did put out their carts, only 19 percent had food scraps in the cart. This seems to indicate a very low overall participation rate in the program, which has been in place for a number of years. Castro Valley will soon be starting an EOW garbage collection pilot to evaluate if participation and diversion can be increased.

The City of Palo Alto recently implemented this program for all residential households beginning July 1, 2015. Recent data gathered by Palo Alto staff indicate that 50 percent of residents are participating and they expect about 1,800

tons of food scraps to be diverted this fiscal year (about 3.8 pounds per household).

- Mountain View pilot participants expressed dissatisfaction with the price and availability of compostable bags. While multiple methods of wrapping food scraps for removal from the home to the organics cart can be used (paper bags, newspaper, empty ice cream or milk cartons, other empty paper containers), if a customer desires to use a more liquid-proof bag, it must be compostable. Plastic bags are not allowed in the composting process.
- Some residents may not want to put their yard trimmings cart out for weekly collection. Because of its large 96-gallon size, it can be more unwieldy to manage than the typical 32-gallon garbage cart. Also, this cart is sometimes stored in a different area of the yard than the garbage cart, so it may not be convenient as a repository for food scraps.

Processing and Collection

Not all organics processing/composting facilities are equipped to accept and process co-collected food scraps and yard trimmings. A composting facility (Harvest Power in Lathrop) is available to accept Mountain View's food scraps and yard trimmings at a reasonable cost. Unfortunately, Harvest Power's facility is located 70 miles from the SMaRT Station, 20 miles more distant than the current yard trimmings composting facility in Gilroy. This means a longer daily haul for Mountain View's materials. In addition, Harvest Power is the only known processor within a reasonable distance from Mountain View that is available to process co-collected food scraps and yard trimmings at a desirable rate. Should this processor become unavailable at some point in the future (which can happen despite contractual arrangements), rates at other local processors, assuming they are available, would be at least twice as much, resulting in additional program costs of approximately \$400,000 annually and increased rates for cart customers.

An additional negative aspect of this option is increased truck traffic in the neighborhoods. Some residents may be bothered by the additional Recology truck trips and related vehicle emissions associated with weekly collection of organics.

Implementation

This program could be implemented across all collection routes in Mountain View at the same time, approximately four to five months after selection by the Council. Kitchen pails, compostable bags, outreach material, and 24-gallon carts (as needed)

would be delivered to homes approximately two weeks before the new weekly collection service begins. Although Recology would need to purchase a new truck to support this weekly collection service, a spare or borrowed truck could be utilized in the interim until the new equipment is available (approximately one year after order). As indicated in the costs section below, cart customer rates would need to be increased to cover the annual costs of the vehicle and driver.

Program Costs

The provision of weekly organics collection was negotiated as an optional service in the current Recology Mountain View contract. This program requires the purchase of a truck and hiring of a driver at an annual cost for the weekly collection service of \$425,000. In addition, about 1,200 new 24-gallon size carts would need to be provided to rowhouses and townhomes that do not currently have a yard trimmings cart at an estimated cost of \$5,000 to \$10,000 per year, depending on the depreciation period, which has not yet been established with Recology.

Processing and composting costs would also increase. Although an agreement with the processor would need to be finalized, the estimated cost per ton, including transfer to the composting facility, is about 22 percent higher than the current cost to process yard trimmings only (\$41 per ton versus \$32). However, there would be offsetting avoided disposal savings for every ton of food scraps diverted from the garbage cart into the organics cart, so the additional cost is effectively neutral.

One-time costs of approximately \$210,000 would be incurred to produce outreach materials and provide kitchen pails and introductory compostable bags to all residents. These costs would be paid from the Solid Waste Fund's available balance.

The additional annual program costs would result in an approximately 8 percent rate increase to cart customers. This would be in addition to the 10 percent rate increase recommended for Fiscal Year 2016-17 as part of the three-year phase-in of cart rates resulting from the recent Cost of Service Study.

Option 2 – EOW Garbage

Participation, Customer Satisfaction, and Diversion

Positive aspects of this option include:

- As tested by Zone 2 pilot participants, this program had high participation (at least 73 percent) and the highest diversion rate of the three pilots (8.6 pounds per

household per week or 82 percent of household food generated). The results of the pilot match those found by the five known cities in the northwest United States and 30 or so in Canada that have already reduced garbage collection frequency to every other week. Reducing garbage collection frequency increases food scraps diversion. In addition, participation and diversion are not expected to drop as the program matures because people are motivated to separate food scraps in order to have them collected weekly.

Negative aspects of this option include:

- The collection of garbage on an EOW schedule received low satisfaction ratings by the Zone 2 pilot customers who responded to the survey. Only 45 percent of survey respondents indicated they were very (21%) or somewhat (24%) satisfied with the collection of garbage every other week. Interestingly, in satisfaction categories that did not directly relate to garbage collection frequency (separation of food, placement of food in yard trimmings cart, weekly yard trimmings service), Zone 2 customers had lower ratings than Zone 1 customers (see Page 13 of Attachment 1). This seems to imply that garbage collection frequency negatively affected the view of the food scraps program overall.
- Based on survey comments received, many Zone 2 pilot participants perceived the EOW garbage collection as a reduction in service. However, because yard trimmings collection frequency was increased, there was no overall reduction in service (see Page 2 of Attachment 1 for an illustration of how service capacity is increased with this program for the typical customer).
- As noted for Option 1, residents were dissatisfied with the expense of compostable bags and the necessity of putting out the larger yard trimmings cart on a weekly basis.
- Diapers and pet waste cannot be accepted in the organics carts, so they must be held in garbage carts for as long as two weeks. Provided space is available in the cart for two weeks volume of these materials, odors can be controlled by double bagging, adding baking soda to the bag before tying off, and storing carts out of the sun. It might be possible to implement an optional weekly collection service for additional charge for customers with diapers and pet waste.
- Some residents may need to upsize their garbage carts and pay a higher rate, particularly families with diapers. By separating as much food scraps as possible, staff believes the majority of residents would have enough capacity available in their current garbage cart to retain two weeks of remaining dry garbage without

needing to increase the size. Audits performed on five occasions found that, on average, 7 percent of carts were overfilled (see Page 8 of Attachment 1), even though 32 percent of customers reported their cart was regularly “overfull” in the survey (see Page 14 of Attachment 1).

- Residents in rowhouses and townhomes will be required to find storage space for a third cart.

Processing and Collection

Positive aspects of this option include:

- As with Option 1, Harvest Power would be available to compost the volume of co-collected yard trimmings and food scraps that this program would produce.
- The savings from a reduced garbage collection schedule would mostly offset the additional costs to implement a food scraps program with weekly collection of the organics cart.
- There will be no increase in Recology truck traffic in neighborhoods because the yard trimming and garbage route frequencies would be swapped.
- No significant issues with odors or vectors (flies, ants, rodents) were observed or reported during the pilot program. Prior to the start of the pilot and in the early phase, residents expressed concern about increased odors and presence of vectors. During field audits, staff checked for the presence of these nuisances. Their presence was found to be minimal (see Page 9 of Attachment 1). Staff does not regularly collect overall data on nuisances as they are handled on a case-by-case basis (and are infrequent in the residential sector as compared to the commercial sector), so the results of the pilot cannot be compared to a “before” situation, but staff did not find these nuisances to be prevalent during the pilot.

Negative aspects of this option include:

- As with Option 1, there is a risk of increased processing costs should an alternate composting facility be needed, increasing program costs by approximately \$450,000 annually.
- Increased haul distance. Harvest Power is located in Lathrop, a distance of 70 miles from the SMaRT Station. The processing facility in Gilroy where Mountain View yard trimmings are currently processed is 50 miles away.

Implementation

Implementation of EOW garbage service across the City would require extra effort on the part of City and Recology staff to help residents adapt to the change. Therefore, the program would likely be phased in over a period of months rather than rolled out all at once. The phasing could begin approximately five to six months following Council approval.

If co-collection of yard trimmings and food scraps is desired, EOW garbage collection could also be implemented at some later time. For example, if Option 1 is implemented and participation and diversion are found to be lower than expected, or drops off over time, garbage collection frequency could be reduced to increase diversion. A target diversion number and date for evaluation could be incorporated into the Zero Waste Plan. However, in this case, the annual costs for the food scraps program Option 1 would be incurred now, and savings from reducing garbage collection frequency would not be realized until later.

Program Costs

For this option, the current garbage service collection frequency (weekly) would be switched with the current yard trimmings collection frequency (every other week). Due to the differential in the number of individual collections on each route, this is not quite a one-for-one switch. Therefore, based on the participation level experienced during the pilot, additional labor and vehicle operating costs are currently estimated at \$70,000 annually (higher participation might result in higher costs). In addition, annual costs for this option would include \$5,000 to \$10,000 for the additional 24-gallon carts needed for rowhouse and townhome residents without yard trimming carts. As indicated for Option 1, increased processing and composting costs would be offset by avoided disposal savings, and one-time costs would be approximately \$210,000.

One-time costs would be paid from the Solid Waste Fund's available balance, and the additional annual costs would result in a rate increase of 1 percent for cart customers.

Option 3 – Split Garbage/Sunnyvale Model

Participation, Customer Acceptance, and Diversion

Positive aspects of this option include:

- As tested by Sunnyvale, this option had good participation (74 percent) and diversion (8.1 pounds per household per week, or 62 percent of household food generated). The impact to customers would only be moderate because the garbage cart, even though split, would be collected weekly. Actual volume available for dry garbage would be reduced only for the 15 percent of customers who are currently using 64- and 96-gallon garbage carts (as shown in the table later in this report). The split cart, with visible labels on each lid, provides a visual reminder to separate food from the garbage.
- In the survey, 93 percent of Mountain View pilot residents in Zone 1 and 84 percent of residents in Zone 2 indicated they would be likely (on a scale of slightly to extremely) to participate in a food scraps program utilizing a 70/30 split garbage cart (see Page 19 of Attachment 1).
- Customers can place food scraps in plastic bags before placement in the “yellow” side of the garbage cart for collection because the bags are removed during processing (as described later in this report). Often, plastic bags such as bread wrappers are already available around the home and could be reused for food scraps. If bags are purchased specifically for food scraps, plastic bags are significantly cheaper than compostable ones.

Negative aspects of this option include:

- The switch from regular garbage carts to split carts may result in garbage capacity changes for customers depending on their current cart size. A rate analysis would need to be completed to restructure the rates from a four-size system to a two-size system. Customers with 20- and 32-gallon carts would be provided with 64-gallon split carts, while customers with 64- and 96-gallon carts would be provided with 96-gallon split carts. This would result in disproportionate rate changes among customers, as those customers currently in the 20- and 32-gallon rate categories move into a reset 64-gallon split cart rate. The chart below illustrates the changes in capacity that would result:

% of Subscriptions	Current Garbage Capacity (in gallons)	New Garbage Capacity (in gallons)	New Food Scraps Capacity (in gallons)
25%	20	42	22
60%	32	42	22
13%	64	62	34
2%	96	62	34

- Food scraps must be bagged (in either plastic or compostable bags) to keep the yellow food side of the garbage cart relatively clean. Paper wrappings or no wrapping would not really be feasible when food scraps are not mixed with yard trimmings.
- If short on garbage space, residents may simply put garbage in the food scraps side of the cart.
- Approximately 300 businesses in Mountain View use garbage carts. These businesses would be required to participate in the split garbage cart system as they are serviced on the residential routes and all of the single-body garbage trucks would be retrofitted to split bodies. While it could be inconvenient to these businesses to make the change, it would also offer an opportunity for them to participate in food scraps collection when they might not otherwise enroll in the commercial program (because it includes an extra charge for a separate organics cart).

Processing and Collection

Positive aspects of this option include:

- Greater flexibility is retained because there are more options available for processing food scraps when they are not mixed with yard trimmings (including energy production), and clean yard trimmings (without food scraps) are a desirable commodity, with several processors available to accept them at a lower processing cost than food.
- Mountain View's collected food scraps would most likely be turned into animal feed. In the waste management hierarchy established by the Environmental Protection Agency, feeding animals and energy creation are higher and better uses for food scraps than composting. The collected food scraps would be preprocessed in a self-contained unit located at the SMaRT Station that produces a substance called mash. The mash is transported via tanker truck to a facility in Santa Clara that turns it into a product used in animal feed. Although the facility is not yet in full operation, food scraps collected in Sunnyvale's commercial organics program are currently being processed using this method. The initial product from this facility will be used as pig and fish feed, although it is suitable for other animals. While the facility and end use as animal feed shows great promise and would be the intended use of the food scraps collected in a split-garbage program, the mash could be sent to an anaerobic digester for energy production if necessary. A brochure with more information about the Sustainable Alternatives Feed Enterprise Facility is provided in Attachment 3.

Negative aspects of this option include:

- A number of equipment changes would be required for this option. Five single-body trucks that currently collect garbage in Mountain View would need to be retrofitted with split bodies. Recology estimates this cost at \$870,000. In addition, the 15,000 garbage carts currently in use would need to be replaced with the new 70/30 split carts at an additional cost of approximately \$1.2 million. Because equipment expenses (trucks and carts) are amortized, the actual net increase to annual costs and customer rates would depend on the depreciation period negotiated with Recology.
- Switching to split-body garbage carts eliminates some collection flexibility. Single-body trucks can currently be used to collect both yard trimmings and garbage, while split-body trucks could not be used to collect yard trimmings if the need should arise (e.g., if multiple trucks are out of operation at the same time).

- The amount of residual material remaining after the mash is made is high. While the process removes plastic contaminants, it also removes almost all the paper. This results in anywhere from 30 percent to 50 percent of the originally collected material being left over at the end of the mash-making process. Any residual sent to landfill would decrease the overall diversion achieved by the program. Methods to further process the residual are being explored, most likely through composting, to maintain the overall diversion of the program. However, at this time it is difficult to predict how much this program would reduce Mountain View's actual landfilled tons.
- The newer compressed natural gas (CNG) vehicles in the fleet cannot be retrofitted for this program. Therefore, the vehicles available for retrofitting are diesel. This would result in a delay of the full transition of the fleet to cleaner-burning CNG fuel trucks because these retrofitted vehicles would not be replaced with CNG during the remaining life of the contract (through 2021).
- Yard trimmings collection would remain on an EOW collection schedule. Should weekly collection of yard trimmings, such as was available during the Mountain View pilot, be desired, the annual costs would increase by an additional \$425,000.

Implementation

Staff is still evaluating all the implications of implementing a split-garbage program. Issues to be resolved include the phasing of the truck retrofits, deployment of a large number of new carts, and equipment depreciation rates. In addition, because garbage cart size choices would change from the four currently available in Mountain View (20-, 32-, 64-, and 96-gallon) to only two (64- or 96-gallon), analysis would be needed to establish new rates that ensure revenue covers expenses. If implementation were to be phased in by route, changeover of the first route would probably not occur until spring 2017. If the change were to roll out Citywide all at once, that would likely not happen until fall 2017.

Program Costs

Annual costs for this option are very preliminarily estimated to range between \$340,000 and \$620,000. The final costs related to collection would need to be negotiated with Recology and would vary (thus, annual cost range) depending on the equipment depreciation period and other collection-related issues that may arise as details of the program are established. Processing costs for the collected food scraps (about \$85 per ton) would be higher than for the co-collected food scraps/yard trimmings mix, but

fewer tons would be processed at the higher rate because yard trimmings would continue to be composted at the ZBest facility in Gilroy (currently \$32 per ton). Due to the higher cost of the food scraps processing, avoided disposal savings would not quite offset increased processing costs.

The additional annual costs (as preliminarily estimated) would result in a rate increase of 6 percent to 11 percent. However, because the program could only, at the soonest, be partially implemented in the latter half of Fiscal Year 2016-17, the rate increase would be spread over a two-year period.

One-time costs are estimated at \$450,000. This is higher than with the other two options because of the large number of split garbage carts (nearly 15,000) that would need to be assembled and delivered to customers. One-time costs would be paid from the Solid Waste Fund's available balance.

Weekly Recycling Option

The provision of weekly recycling collection was negotiated as an optional service in the most recent Recology Mountain View contract. A new route would need to be established, requiring the purchase of a truck and hiring of a driver. The annual cost for the weekly collection service is \$425,000. This would result in an additional 2 percent rate increase for cart, bin, and compactor customers. In the open comments section of the food scraps pilot survey, 18 participants expressed a desire for weekly recycling (7 percent of all survey respondents). In a random survey of 1,000 households conducted in 2011 during development of the new collection services contract, 41 percent of 212 respondents indicated an interest in weekly recycling and a willingness to pay for it. Weekly recycling is mostly a convenience. Analysis completed by consulting firm HF&H at the time the new collection services agreement was developed indicated that only a 1 percent to 3 percent increase in recyclables collected would result from the increased collection frequency. To handle large-volume recyclers, the City currently allows two extra boxes or bags to be placed out on collection day and offers multiple or larger recycling carts. In addition, because the SMaRT Station processes all incoming waste to retrieve recyclables before landfilling, any overflow that residents cannot fit in their recycling carts and put in their garbage carts instead still has a high probability of being recycled.

If the Council is interested in implementing weekly recycling services, staff will need to have further discussions with Recology about the timing. However, it would be highly desirable to begin a change in recycling collection frequency simultaneous with any changes in yard trimmings collection for a new food scraps program.

SUMMARY

A summary of the three food scrap program options is presented below. With regard to annual costs, in response to a survey question, 65 percent of pilot respondents indicated a willingness to pay more per month for some type of food scraps program [\$2.00 (24 percent), \$3.00 (17 percent), or \$5.00 (24 percent)].

	Option 1 Weekly Garbage	Option 2 EOW Garbage	Option 3 Split Garbage
Organics Service	Weekly (includes food)	Weekly (includes food)	Every Other Week (no food allowed)
Garbage Service	Weekly	Every Other Week	Weekly (food in yellow side)
Recycling Service	Every Other Week	Every Other Week	Every Other Week
Tons Diverted Annually	2,350 ¹	3,525	2,765
Reduction in Residential Waste Generated	26%	40%	31%
Reduction in Overall City Tons to Landfill	4.5%	6.7%	5.3% ²
Increase in City Diversion Rate (76% current)	1.3%	1.8%	1.5%
Annual Costs ³	\$435,000	\$80,000	\$340,000 – \$620,000
Cost/Ton Diverted	\$185	\$23	\$123 – \$231
One Time Costs ⁴	\$210,000	\$210,000	\$450,000
Rate Impact – Carts Only ⁵	8%	1%	6% – 11%
Rate Increase – 32-gal (per month)	\$2.15	\$0.30	\$1.60 – \$2.95

¹ Likely to decline over time.

² Could be less, depending on residual after processing.

³ Includes collection, processing, and avoided disposal.

⁴ Includes outreach materials and initial supplies for residents (pails, compostable bags, delivery).

⁵ In addition the 10 percent cart rate increase recommended for Fiscal Year 2016-17.

The service frequencies, food scrap programs, and current (Fiscal Year 2015-16) rates for Mountain View and neighboring cities are shown in the table below. The table also

illustrates Mountain View rates based on the estimated costs for each option presented in this report.

City	Garbage Service	Organics Service (allows food)	Yard Trimmings Only	Recycling Service	32-Gallon Cart Rate (monthly)
Los Altos	Weekly	Weekly		Weekly	\$31.50
Palo Alto	Weekly	Weekly		Weekly	\$43.75
Sunnyvale	Weekly		Weekly	Weekly	\$36.94
Mountain View - Current	Weekly		EOW	EOW	\$26.60
Mountain View - Option 1	Weekly	Weekly		EOW	\$28.75 ¹
Mountain View - Option 2	EOW	Weekly		EOW	\$26.90 ¹
Mountain View - Option 3	Weekly Split Cart		EOW	EOW	\$29.55 ^{1,2}

¹ Not including 10 percent cart rate increase recommended for Fiscal Year 2016-17.

² Based on highest cost estimate.

RECOMMENDATION

Staff requests direction from Council on the following questions:

- Is the Council interested in establishing a food scraps collection program? If so, which option does the Council prefer?
- If Option 2 (EOW Garbage) is the preferred alternative, should staff investigate optional weekly service (for an additional monthly fee to be determined) for customers with diapers, pet waste, or other extraordinary needs?
- Is the Council interested in implementing weekly recycling services for residential customers that use split-recycling carts at an additional cost of 2 percent to monthly rates?

NEXT STEPS

The next steps towards implementing a food scraps program would vary depending on the direction provided by Council regarding the following options:

Option 1: Provision of weekly organics collection service is already included in the Recology contract at a prenegotiated price. Staff would work with Recology to establish a starting date for the service. The SMaRT Station operator would finalize an agreement with Harvest Power for composting services. If the processing agreement is acceptable (length of term, allowable price adjustments, minimum quantity requirements, etc.), staff would confirm implementation of the program with Council. Outreach and kitchen pail delivery to residents could begin as early as fall 2016.

Option 2: Prior to Council approval of an EOW garbage collection schedule, staff recommends broad noticing to residents be done describing the potential change, including some community meetings conducted by staff. Additional analysis is also recommended to determine: (1) the potential for cart upsizing among customers with smallest-size carts; (2) whether an optional weekly service for customers with diapers and pet waste is feasible and what the extra monthly charge would need to be; and (3) the additional labor and vehicle costs related to the garbage and yard trimming collection frequency change (currently estimated at \$70,000). A follow-up Council meeting to accept public comment, review additional analysis, and establish an implementation schedule could be scheduled in late fall or winter 2016.

Option 3: Prior to Council approval of a split-garbage collection program, staff recommends broad noticing to residents be done describing the potential change, including some community meetings conducted by staff. Due to the equipment changes needed, this option would require a material change to Recology's contract. Material changes in excess of \$100,000 must be agreed on between the City and Recology and then approved by Council. There are many details of the program that still need to be addressed, but staff believes the contract amendment could likely be brought to Council in late fall or early winter 2016, along with an implementation schedule. A rate analysis to accommodate the change from four cart sizes to two cart sizes would also need to be completed, along with a determination of when the new rates could go into effect. Further discussion with Finance staff is necessary to determine when this analysis could be completed.

PUBLIC NOTICING

In addition to agenda posting, notice of the Council Study Session was provided to all residents that participated in the pilot. The meeting notice was also posted on the City's website, social media channels, and on KMVT.

MAF-LF-LT/3/CAM

944-04-26-16SS-E

- Attachments:
1. Final Data Report, Mountain View Residential Food Scraps Pilot
 2. Sunnyvale Residential Split-Garbage Pilot, Summary Findings
 3. Sustainable Alternatives Feed Enterprise Facility Brochure