

2017 Refuse Rate Application Narrative Summary



December 13, 2016

**Recology Sunset Scavenger
Recology Golden Gate
Recology San Francisco**

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I. OVERVIEW

A. Management of Resources in San Francisco

The City of San Francisco (“City”) has been a model of sustainability for municipalities worldwide. After achieving 80% landfill diversion in 2012, the City has challenged itself to achieve Zero Waste by 2020 as a part of its 0-50-100 Climate Action Plan.

Recology Sunset Scavenger, Recology Golden Gate, and Recology San Francisco (“Recology”) are proud to partner with the City to achieve this goal. Although the City continues to make great strides towards Zero Waste, approximately 1,100 tons of unprocessed material is sent to the landfill every day. Much of this material has the potential to be diverted from the landfill and put to better use.

This 2017 Refuse Rate Application outlines a number of necessary changes to advance the City’s Zero Waste goals. These include:

1. Capital improvements to existing infrastructure

Passage of the Mandatory Recycling and Composting Ordinance in October 2009 helped residents and businesses effectively separate recyclables, compostables, and trash to minimize the amount of material sent to the landfill. Diversion rates significantly increased, particularly among multi-family and commercial customers.

In order to support the City’s Zero Waste goals, Recology has updated the processing infrastructure at the Pier 96 Materials Recovery Facility (MRF), designed the West Wing facility for improved organics collection and transfer operations, and tested trash processing efforts to help recover material from the landfill-bound stream.

2. Adjustments to collection services

Recology proposes the following adjustments to its collection practices and base service levels for customers, with the goal of continuing to encourage greater participation in recycling and composting:

- a. Additional recyclables: With the upgrades to Pier 96 MRF processing equipment, Recology is able to accept additional recyclables in customers’ blue bins. These include cartons, bagged textiles, metal, and wood. Recology will promote these new services in customer communications.
- b. Service level adjustments: Single family homes with curbside service will be encouraged to dispose less trash through a smaller, 16-gallon black bin, while increasing the level of their recycling and organics service. Recology will promote similar service level adjustments for multi-family and commercial customers.
- c. Routing changes: To coincide with the service level adjustments, Recology will redesign its existing routes using single-chamber trucks to collect recyclables and split-chamber trucks to collect organics and trash.

- d. Route Management System: To help streamline the collection process, Recology will install onboard Route Management Systems (RMS) in all collection vehicles. The RMS will electronically process real-time service information including schedule changes, missed pickups, extra collections, improperly sorted materials, and photo documentation.
- e. Multi-Unit Diversion Program: Recology will commence a multi-faceted program at select apartment buildings to increase tenant engagement in diversion programs.
- f. Improved Household Hazardous Waste (HHW) collection and management: Recology will add one additional collection vehicle and one additional driver/technician to service the Home Collection Program and Retail Drop-off Program, helping to collect the rising volume of HHW in need of recycling or proper disposal.
- g. Outreach and education: Recology will offer additional outreach to educate customers on their service changes. A comprehensive outreach program – including multiple mailings, cart hangers, social media, news, radio and community based outreach – will guide customers as they further shift services from trash to recycling and compost.

3. Methodology to measure progress

To better communicate the level of progress the City has made towards its Zero Waste goals, Recology proposes a disposal-based reporting methodology developed by the California Department of Resources Recycling and Recovery (CalRecycle). This methodology measures jurisdictional progress based on program implementation and per capita disposal reductions.

In addition, Recology proposes to streamline Table 3 in the quarterly rate reports to include in-bound tonnage by program and diversion and disposal by facility.

Recology is also offering to expand its customer compliance reporting in Table 4 to include residential and apartment customers.

B. Rate Application Goals and Objectives

The 2017 Refuse Rate Application seeks approval for just and reasonable rates that will allow Recology to implement the infrastructure improvements and collection practices necessary to help the City achieve Zero Waste by 2020.

The application requests revenue adjustment equal to 16.65% for covered customers, including the use of Tier 1 and 2 ZWI funds received during prior rate years to help offset the first year of rate increases for customers. (residences and apartment buildings of 600 rooms or less). Similar revenue adjustments for commercial customers, including larger apartment buildings, are projected in the rate model consistent with past methodology.

C. Rate Application Process

The rate application process follows the Rules of Procedure outlined in Department of Public Works (DPW) Order No. 185-078. Recology is proposing a one-year rate period beginning on July 1, 2017 and ending on June 30, 2018. Cost of Living Adjustments (COLA) would be applied in subsequent rate years until new rates are established as a result of a new application process.

D. Website: www.SFZeroWasteRates.com

To promote transparency in the rate application review process, Recology maintains a website to make information on the rates easily available to San Francisco residents. Customers can find information at www.SFZeroWasteRates.com.

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II. PROGRAMS INCLUDED IN THE RATE APPLICATION

A. Current Programs

This rate application assumes that programs currently provided to the City's residential and commercial customers will continue in the new rate period. These programs play an integral role in achieving the City's diversion goals. The core of the system is the three-stream collection of recyclables, compostables, and trash from residential, apartment, and commercial customers. In addition, the three-stream program is augmented by a variety of specialized collection and processing operations.

Current programs and operations to be continued include:

1. **COMINGLED RECYCLABLES COLLECTION (Blue Stream):** Residential and commercial collection of comingled recyclables, including paper, glass, aluminum, tin cans, and hard plastics (cups, tubs, lids, buckets, and toys without wires or metal parts).
2. **COMPOSTABLES COLLECTION (Green Stream):** Residential and commercial collection of food scraps, plant materials (yard waste), and soiled paper.
3. **TRASH COLLECTION (Black Stream):** Residential and commercial collection of non-recyclable and non-compostable materials.
4. **BULKY ITEM RECYCLING (RecycleMyJunk.com):** Special collection and recovery of bulky items, such as appliances, electronics, furniture, scrap metal, and wood through scheduled pick-ups to facilitate customer participation and maximize recycling.
5. **CURBSIDE BATTERY RECYCLING:** Customers place batteries in zip-lock bags and place them on top of their black bins. Trash collectors place them in a special bucket in the collection truck. Workers at the transfer station then sort the batteries according to Department of Transportation (DOT) rules and ship them to battery recycling facilities.
6. **CHRISTMAS TREE RECYCLING:** Christmas trees are collected at the curb during the first two weeks of January, chipped, and used at biomass facilities.
7. **CONSTRUCTION AND DEMOLITION (C&D) DEBRIS RECYCLING:** As buildings are constructed, remodeled or demolished, metal, wood, sheetrock, rigid plastic, and other construction materials are captured in debris boxes, and taken to Recology's C&D recycling facility (iMRF) for sorting. The Recology operation is registered with the City's Construction and Demolition Debris Recovery Program.
8. **PUBLIC DISPOSAL AND RECYCLING AREA (PDRA):** The Tunnel Road Facility receives self-haul C&D, trash, compostables, recyclables, and reusable items from San Francisco residents, small contractors, and businesses. Material hauled by the public

is weighed and processed on a Ptarmigan Sorting line. The facility is open seven days a week.

9. **HOUSEHOLD HAZARDOUS WASTE DROP-OFF:** Recology operates the San Francisco Household Hazardous Waste Collection Facility (HHWCF), where residential customers can drop off household hazardous wastes (e.g., paint, oil, pesticides, and household chemicals) three days per week for safe recycling and disposal. This facility has been open since 1987 and was the first permanent HHWCF in the nation.
10. **DOOR-TO-DOOR HOUSEHOLD HAZARDOUS WASTE COLLECTION:** Recology collects household hazardous wastes directly from homes using specialized trucks for handling and transporting these materials.
11. **VERY SMALL QUANTITY GENERATOR PROGRAM:** Qualifying small business generators of hazardous waste in San Francisco may use the HHWCF by appointment for a fee on designated days each month.
12. **E-WASTE RECYCLING:** Most electronic waste is banned from landfill in California. Fluorescent tubes, monitors, televisions, computers, and other electronics are collected from drop-off locations, curbside collection appointments, and the transfer station. The material is then shipped to facilities specializing in recycling specific types of e-waste.
13. **SAFE NEEDLE PROGRAM:** The San Francisco Safe Needle Disposal Program (SFSNDP) provides San Francisco residents with safe, convenient disposal of home-generated sharps at more than 70 pharmacies throughout the City. Residents can pick up empty sharps containers at participating pharmacies, fill them, and then return them for disposal as medical waste.
14. **SELF-HAUL RECYCLING:** Recology operates a special sorting line to recycle wood, metal, rigid plastic, and other materials self-hauled by individuals and small contractors to the Public Disposal and Recycling Area (PDRA) at the Tunnel Avenue facility.
15. **PERFECTLY-GOOD REUSE PROGRAM:** Recology pulls items that are in good condition for reuse (e.g., bicycles, furniture, clothing) from loads brought to the PDRA by individuals and small contractors. The re-useable items are either donated directly or given to organizations (e.g., St. Vincent DePaul) that process them for distribution in thrift stores.
16. **MATTRESS RECYCLING:** Mattresses from residents, hotels, PDRA drop-offs, and designated collection trucks are loaded into trailers at the Tunnel Avenue facility and transported to a local company specializing in mattress recycling.

17. **TEXTILE DROP-OFF AND COLLECTION:** Residents and businesses can drop off textiles at the PDRA. In addition to the drop-off, Recology collects source separated textiles from businesses that manufacture clothing and cut garment patterns. Residents can also have textiles collected through Bulky Item Recycling. The textiles are sent to reuse and recycling markets.
18. **TOILET RECYCLING:** Old toilets are segregated from the waste stream and transferred to a company that specializes in porcelain recycling. Prior to shipment, toilet seats and lids are removed and baled with other rigid plastics for recycling.
19. **TIRE RECYCLING:** Used tires are handled separately at the Tunnel Avenue facility and then taken to a company that shreds and recycles the rubber.
20. **STYROFOAM DROP-OFF:** Residents and businesses can drop off clean Styrofoam blocks at the PDRA for recycling. Recology San Francisco operates a special densifier that compacts loose pieces of Styrofoam into cubes, which are recycled into such products as base boards and moldings.
21. **FILM PLASTIC DROP OFF:** Residents and businesses drop off clean polyethylene film plastic (e.g., plastic bags) at Recycle Central at Pier 96 and the PDRA for recycling. The film plastic is baled and shipped to plastic recycling markets.
22. **PUBLIC REFUSE RECEPTACLE COLLECTION:** Recology collects from over three-thousand public litter cans distributed around the City. Each can is emptied at least once per day, and some cans are regularly emptied as many as three times per day. Cans emptied more than once are emptied outside of the regular route service and on demand within 2 hours of notification of service necessity by the City.
23. **PUBLIC REFUSE RECEPTACLE MAINTENANCE:** Recology replaces/repairs liners and doors for all concrete public litter cans, as needed.
24. **DISTRICT CLEAN-UP EVENTS:** Special clean-up events are held at least annually in each of the City's eleven Supervisorial Districts to allow residents to drop off items too big to fit in the regular collection bins, including all three refuse streams. Motor oil, batteries, and fluorescent lamps are also accepted.
25. **EVENT RECYCLING:** Recology provides recycling and composting collection services to neighborhood festivals and major functions such as the Chinese New Year Parade and the Pride Parade.
26. **ABANDONED MATERIALS COLLECTION:** Recology collects abandoned waste identified through the City's 311 reporting system, as well as material identified by Recology personnel. Drivers are assigned to a specific service area, and are routed to collect abandoned materials reported through the 311 system. The company responds to abandoned waste requests within a four-hour window on weekdays and an eight-hour window on weekends and holidays.

27. **CONCRETE AND ASPHALT RECYCLING:** Recology's Sustainable Crushing operation crushes and recycles concrete, asphalt, bricks, and porcelain into recycled construction products. The aggregate and engineered-fill products not only displace virgin materials, but they play an integral role in a closed-loop recycling system, whereby old City streets and structures are recycled back into similar construction uses within the City by local companies.
28. **CONCRETE REUSE:** Recology also utilizes excess wet concrete from cement companies for creating building-block products as well as on-site construction applications.
29. **BUY-BACK CENTERS:** Recology operates buy-back centers for customers who want to bring in bottles and cans for deposit redemption.
30. **ARTISTS IN RESIDENCE:** Recology sponsors an artist in residence program to demonstrate the possibilities of creative reuse of materials and to promote recycling. The Company sponsors about eight residencies per year through this award-winning program, providing work space, access to materials, administrative support, and exhibition opportunities.
31. **EDUCATIONAL TOUR PROGRAM:** Recology provides educational tours to thousands of children and adults annually. The focus of the tour is recycling, composting, reuse, and resource conservation. The tour includes visits to Recycle Central and Tunnel Avenue facilities.
32. **COMPOST GIVEAWAY:** Periodically, Recology provides free compost to San Francisco residents at various locations in the City. In addition, free compost is provided at District Clean Up events. The compost is derived from food and garden wastes generated in San Francisco, collected by Recology, and composted at one of Recology's composting facilities.

Recology and the City have worked together for many years to provide the public education and outreach needed to support these programs, and the continued success of the programs requires ongoing public education and outreach efforts. General outreach and specialized, targeted outreach programs will continue through the rate period and beyond.

B. Infrastructure Upgrades and New Programs

To help the City move toward its Zero Waste goals, Recology proposes to:

1. Implement capital improvements to existing infrastructure, giving the City greater capacity to divert material.
2. Adjust aspects of its collection services to help facilitate greater diversion by customers.
3. Utilize a new, disposal-based methodology to measure and communicate progress.

The costs associated with these changes are included in the base rate application. Details of the new upgrades and programs are described below. Recology endeavors to hire qualified San Francisco residents whenever possible to staff these new initiatives.

1. Capital Improvements to Existing Infrastructure

In support of the City's Zero Waste goals, Recology has updated the processing infrastructure at the Pier 96 Materials Recovery Facility (MRF), embarked on designing the West Wing to replace the Organics Annex for organics collection and transfer, and will increase its trash processing efforts to divert more material from the landfill.

Pier 96 MRF upgrade: Recology has completed an \$11.6 million upgrade to the sort lines and equipment at the Pier 96 MRF (also known as Recycle Central). Funding for this project was made available through tier 3 and 4 Zero Waste Incentive Funds (ZWIA). Approximately \$9M of the project was funded through reserves from prior years; the remaining \$2.5M balance is anticipated to be funded through 2017 ZWIA funds.

This upgrade is critical to increase landfill diversion rates, and to meet the City's stated goals for best and highest use of recovered materials. The upgrade increases the throughput capacity of the system and enables the recovery of additional material not previously diverted, such as aseptic containers, gable-topped cartons, textiles, bagged film plastic, small pieces of metal, and unpainted wood.

West Wing Construction: Currently, Recology recovers more than 650 tons per day of organic material collected in the City. Participation in the organics collection program has been so successful that the Organics Annex is no longer capable of handling this volume. If funding is approved, the West Wing facility will replace the operations of the Organics Annex, increase Recology's ability to meet the growing volumetric needs of organics processing and minimize negative impacts on surrounding communities. The new facility will offer 14,546 square feet of space and will include a state-of-the-art Best Available Control Technologies (BACT) odor control system.

Trash Processing: Recology is piloting a program to determine how to best recover recyclables and organics that remain in the trash. The process begins with selecting organics-rich trash loads, which are then shredded and screened. Material screened from the larger mixed materials (such as fiber, plastic, bottles, cans, and trash) require further processing. The remaining smaller fines are then placed into the OREX Press under high pressure to extract the organic material.

The resulting organic product is used to create energy and digestate through anaerobic digestion at East Bay Municipal Utility District (EBMUD). If funding is approved, Recology will commence scheduled production to process 100 tons per day (tpd) of trash during RY2018. Diversion of organic and recyclable materials will include the production of an organic product for conversion to energy, as well as recovery of recyclables from the larger mixed materials.

Approximately 10% of the trash is anticipated to be retrieved as organics-rich paste, while 15% of the trash retrieved will consist of recyclables that may be marketable. Proposed installation of additional equipment at Recycle Central at Pier 96 will enable Recology to sort and recover divertible material that traditionally would have been bound for the landfill.

2. Adjustments to Collection Services

In the last seven years since the passage of the Mandatory Recycling and Composting Ordinance, Recology has witnessed an increase in the amount of recyclables and organics collected within the City, paired with a decrease in the overall volume of trash.

To meet the City's evolving needs, Recology proposes the following adjustments to its collection practices and base service levels for customers, with the goal of continuing to facilitate greater participation in recycling and composting services.

Additional recyclables: With the upgrades to Pier 96 MRF processing equipment, Recology will be able to accept additional recyclables in customers' blue bins. This includes aseptic containers and gable-topped cartons (Grade 52), textiles, small pieces of metal, and unpainted wood.

Service level adjustments: In support of the Zero Waste 2020 initiative, single family, multi-family, and commercial customers will be encouraged to divert more material through targeted adjustments to their service levels, with a focus on downsizing trash and increasing recycling.

Currently, single family homes can choose from 96-gallon, 64-gallon, 32-gallon, or 20-gallon bins for trash, recycling, or organics service. The most commonly chosen size in each stream is 32-gallon.

Under the new service levels, single family homes will have a default 16-gallon trash bin, with the option to request a 32-gallon, or 64-gallon trash bin. Customers will be asked to select a larger recycling and composting bin as part of this trash service level change. Recycling bins will continue to be available in 96-gallon, 64-gallon, or 32-gallon sizes. Organics bins will continue to be available in 64-gallon or 32-gallon sizes.

These adjustments are designed to encourage greater participation in the recycling and organics programs. The single family service level changes are expected to be implemented on a rolling basis over a two-year period beginning in July 2017. Upon completion of the rollout, Recology estimates 10% of currently landfilled materials will be recycled or composted totaling 16,680 tons per year with the reduction in trash and increase in recycling service levels.

Recology will encourage similar service level adjustments for multi-family and commercial customers. These customers will be asked to downsize their trash service, while increasing the level of their recycling and organics participation levels.

Routing changes: Currently, Recology employs split-chamber vehicles to collect recyclables and trash within the City; the trucks are designed with two separate compartments to separately hold recyclables and trash. Single-chamber trucks are used to collect organics.

However, the volume of recyclables collected has begun to exceed the capacity of the split-chamber vehicles. In addition, the infrastructure upgrades at the Pier 96 MRF allow Recology to capture additional recyclables not currently diverted.

Recology is therefore proposing to redesign existing routes to use single-chamber vehicles for recyclables and split-chamber trucks to collect organics and trash. Under this proposal, a total of 189 Fantastic 3 trash and composting collection routes would be necessary for RY2018, an increase of 23 collection routes in total. More routes would be needed because currently organics collection trucks need to stop at only one out of approximately every three residences, whereas the new collection system would require split-chamber organics/trash trucks to stop at every residence. These new routes would be rolled out over a two-year period, beginning in July of 2017.

Route Management System: RSS and RGG will begin installing onboard Route Management Systems (RMS) in all collection vehicles. The system electronically processes and records service data, including details on individual stops; this will eliminate manual data entry and manual processing of driver service tickets.

The RMS will consist of a tablet-based onboard computer system offering electronic route lists, GPS guidance, and cameras. On each screen, drivers will be able to view stop-by-stop service comments, including special service requests. Dispatch and management will be able to view live route service information for the fleet.

Furthermore, the RMS allows drivers, dispatchers, and customer service to communicate in real-time. Critical information such as schedule changes, missed pickups, and extra collections could be shared through the RMS, helping to contribute to a positive customer experience.

The RMS archives service record data by customer, allowing RSS and RGG to access detailed historical collection records. Information available includes service times and relevant photo documentation. This will enable RSS and RGG to better monitor customer compliance with diversion programs. For example, if a driver identifies a customer with improperly sorted material, the customer's information would be available to Recology's Customer Service Representatives, who will then follow up with additional customer education.

Multi-Unit Diversion Program: Multi-unit apartments, defined as buildings with six or more dwelling units, face numerous barriers to diversion, including low tenant participation, program accessibility, and limited quality control. Beginning in RY2018, Recology will commence a Multi-Unit Diversion Program, focusing on new apartment buildings (2010 and newer) with 50 or more units, as well as apartments with large volumes of potentially divertible material.

The Tenant Engagement & Education component of the program will include:

- Outreach material, including a Welcome and Exit packet for tenants during move-in and move-out periods.
- Delivery of compost pails coupled with education on pail usage.
- Email blasts and mailings for property management to distribute to tenants.
- Waste Zero Ambassadors at each building, responsible for motivating their neighbors to sort properly.
- A social media group platform to facilitate tenant discussion and engagement.

The program will also include a Facility Management and Infrastructure component, which will:

- Implement appropriate service subscription levels at new buildings, to provide ample capacity for diversion.
- Communicate the requirements of the Mandatory Recycling and Composting Ordinance with property management.
- Install signage and internal bins to improve resident access, when necessary.
- Close trash chutes or convert the chutes to recycling, where applicable.
- Conduct training for facility and maintenance staff, focusing on contamination identification and the importance of properly labeled containers.

Improved Household Hazardous Waste (HHW) Collection and Management: Recology proposes to add one new specialized collection vehicle and one new driver/technician position during Rate Year 2017 to service the Home Collection Program and the Retail Drop-off Program. Recology currently uses three dedicated vehicles and three driver/technicians to collect and transport wastes from the programs. The addition of a dedicated vehicle and driver/technician will allow Recology to service eight to nine additional pickups per operating day. This will support the Department of the Environment's goal of increasing the weight of HHW collected for safe management and diversion from black carts by 25% over FY 2015/16 amounts.

In addition, Recology will contract with PaintCare Inc., a product stewardship organization, beginning in RY2018 for certain paint recycling and disposal services, with the goal of recycling as much paint as possible. The paint management funds received from PaintCare will be on a per-unit basis (per gallon or per drum) and are expected to be around \$250,000 to \$300,000 per year. These funds will provide a new source of revenue to help offset the cost of HHWCF paint handling activities and to reduce HHWCF operating expenses by covering the costs of paint transportation, recycling, and drums and other shipping supplies.

Outreach and Education: Customer education is essential to the successful implementation of the new collection practices. Recology will therefore offer additional outreach and education materials to facilitate participation and create a sense of excitement around customers' higher level of diversion services.

Additional staff will also be available to distribute the new information. Educational material will include introductory letters, follow-up postcards, cart hanger notices, website information, and potentially other resources.

3. Methodology to Measure Progress

Historically, the City has measured the success of its diversion programs based on the tons of material diverted. The calculation includes material recycled or composted through the City's collection programs, as well as C&D debris and other industrial recovery. Using the diversion-based methodology, the City exceeded 75% diversion in 2010. However, this method no longer aligns with the City's goal to reduce disposal or California statute; furthermore, it has created confusion among residents, businesses, and other stakeholders trying to understand the City's progress.

Recology therefore proposes to realign the methodology for measuring and communicating progress with the current California Department of Resources Recycling and Recovery (CalRecycle) disposal methodology.

CalRecycle measures jurisdictional progress based on program implementation and per capita disposal reductions. This simpler, more timely, and less costly measurement system better aligns with the City's goal to reduce disposal by 2020. It will also resonate more directly with residents and businesses.

Calculating diversion rates is a complicated process with many variables. For example, the average home or business in the City is diverting at a lower rate than the citywide rate. This is because the citywide rate takes into consideration C&D debris and other industrial recovery. The high recovery rates and heavy weights of these materials increase the citywide diversion rate.

This dissonance does not help motivate people to better separate their material. Voters in the City are divided on the credibility of the citywide diversion rate: 42% of voters surveyed in 2014 believed the metric was exaggerated. Others believe the City is performing well and so are less motivated to improve. Furthermore, jurisdictions in California and beyond, as well as media outlets, are increasingly questioning diversion rates in part because measurement methodologies are not consistent around the world.

Under the adjusted reporting methodology, Recology would streamline its quarterly reports to detail inbound tons by customer type and diversion by facility. The quarterly reports submitted to the City would no longer need to contain diversion by program, since this information requires some estimation and allocation. Recology's adjustments to the reporting process will continue to be consistent with the reporting methodologies used by the State.

Between 2000 and 2012, San Francisco cut its disposal in half, to the lowest level on record. The most recent State-approved numbers show San Francisco disposing 2.9 pounds per resident per day (43% less disposal than the State target) and 4.4 pounds per employee per day (42% less disposal than the State target). Since 2012, citywide disposal has increased by 16% during one of the largest construction and economic booms in the City's history. Much of this increase is due to construction materials that are disposed at landfills not operated by Recology, as opposed to being properly recovered.

Achieving Zero Waste by 2020 will require further commitment from consumers, producers, the City, and Recology. Using the proposed disposal metrics will better communicate progress to all stakeholders.

C. Contingent Schedules

Recology is proposing two contingent schedules, which would go into effect upon receiving the necessary permitting approval. Costs for these programs are not included in the base rate application.

The first project involves relocating the iMRF from the Tunnel Avenue facility to a permitted industrial site. This would allow Recology to install updated C&D sorting technology to handle larger volumes of material, while creating more space for trash processing at the Tunnel Avenue facility.

1. C&D Facility

Recology's Construction and Demolition (C&D) recovery facility (known as the iMRF), located at the Tunnel Avenue facility in San Francisco, is undersized to process the more than 600 tons of C&D debris received daily.

Constructed in 1996, this facility largely depends on antiquated technology and manual sorting. Because C&D is heavy and represents a significant volume of the waste stream, recovery of this material has great immediate potential for additional diversion.

Recology is currently working to construct a new C&D debris recovery facility at a permitted industrial site. It is anticipated that the facility will require an enclosed building and mechanical sorting equipment. The facility is expected to be capable of processing 1,000 tons per day. Pending permitting approval, construction is anticipated to be completed by December 2019. There will be no interruption of C&D processing during construction.

Once the iMRF is relocated, Recology will have 46,000 square feet of space at its Tunnel Avenue facility. This space will be available for trash processing to capture additional organics and recyclables from the trash (black bin) waste stream. Recology's contingent schedule for trash processing is described below.

2. Trash Processing

To achieve Zero Waste by 2020, the City must process all of its trash to capture additional divertible tons. Recology proposes to construct a Zero Waste processing system in the space currently occupied by the iMRF facility at the Tunnel Avenue facility. Divertible materials will be identified, sorted and transported off-site for further processing.

The proposed facility would be capable of handling 1,100+ tons per day of black bin material generated by residential, apartment, commercial, and industrial customers. Recent waste characterization studies indicate that:

- Approximately 25% to 30% of black bin material is organic matter, consisting primarily of food and soiled paper that could be recovered for further processing into energy and/or composting;
- An additional 10% of black bin material is recyclable glass, cans, and bottles;
- Another 10% to 15% is soiled film plastic; and
- The remaining 50% is a mixture of materials with no market value such as diapers, soiled textiles, old shoes, etc.

Construction is expected be completed by December 2020, following the completion of the new C&D facility.

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III. CHANGES TO RATE-SETTING METHODOLOGIES

A. Residential Rate Structure

To help propel the City towards its Zero Waste goal, Recology proposes to de-emphasize residential customers' trash service by offering a 16-gallon black bin as the default service level. Customers will still have the option for a 32-gallon, 64-gallon, or 96-gallon trash bin. Recology will also encourage multi-family complexes to decrease their trash subscription levels while increasing recycling and organics.

To ensure revenue is maintained during the service level adjustments, Recology's proposed rate structure for residential customers features a \$20.00 charge for each residential dwelling unit to cover the fixed system costs, including capital costs, administrative costs, and regulatory costs. In addition, the proposed rate structure maintains the nominal charge of \$5.25 per 32-gallons of capacity for the recycling and composting streams to cover a portion of the operational costs for these services, and a \$10.50 fee per 32-gallons of trash.

Recology is proposing to charge 16-gallon trash customers \$5.25, or 50% of the 32-gallon rate. In addition, 16-gallon customers will be subject to the charges for recycling and composting services discussed above. Recycling and composting services are provided to all residential customers, including 16-gallon trash customers, in 32-gallon increments only.

Individual residential customer rate increase percentages will vary depending on their respective volume and composition of service. Below is an example of the adjusted rates.

Trash	Recycling	Compost	Rate
16-gallon	32-gallon	32-gallon	\$35.75
16-gallon (proposed default levels)	64-gallon	32-gallon	\$41.00
32-gallon (current default levels)	32-gallon	32-gallon	\$41.00

B. Apartment Rate Structure

During the last rate process, Recology implemented a discounted volumetric apartment rate structure modeled after the commercial rate structure adopted in 2006. This structure included a fixed charge and equal volumetric charges for all service volume, irrespective of the type of service. These volumetric charges are partially offset by discounts for the proportional amount of recycling and composting service.

As previously noted, Recology will encourage apartment customers to downsize their trash service during the upcoming rate period. These customers will be asked to increase the level of their recycling and organics participation levels, in an effort to meet the Zero Waste goals. To meet this objective, Recology proposes to increase the landfill diversion discount floor from 10% to 25%. This change is to provide apartment customers with an incentive to continue their efforts to increase diversion. Additionally, Recology proposes a decrease in

both the volumetric charge and dwelling unit charge to incentivize customers to reduce their waste stream.

The proposed structure includes volumetric charges equal to \$24.75 per 32 gallons of weekday service, irrespective of the type of service. The dwelling unit charge would decrease to \$5.00 per unit.

Discounts of up to 100% of the volumetric charges are calculated from each customer's diversion as a percentage of total volume, less 25%. The first 25% of diversion is not eligible for a discount due to the fact that there is a minimum level of diversion service required by the Mandatory Ordinance.

This evolution of the discount structure rewards customers that have more diversion services and encourages others to migrate towards diversion service. As customers increase their recycling and composting services and their discount percentage, they will be able to partially mitigate the rate increase.

As an example, if a customer has three equal size bins (one for each of the black, blue and green streams) they have a 67% gross volumetric discount rate. The discount they would receive on their volumetric charges is 42% (67% minus 25%). If the customer added another recycling bin, the discount would become 50% (75% minus 25%).

C. Commercial Rate Structure

Discounts of up to 100% of the variable component of each commercial bill is still available based on the proportion of recycling and composting service in excess of 25%, up to 100%. The first 25% is no longer eligible for a discount since there is now a minimum level of recycling and composting service required by the Mandatory Ordinance.

For example, if a commercial customer has one 96-gallon bin for trash, one for recycling, and one for composting service, all collected once a week, then total diversion service volume represents 67%. The discount for this customer would be 42% (67% minus 25%). If a customer has one 2 cubic-yard bin for trash, one 1 cubic-yard bin for recycling, and one 1 cubic-yard for composting, all collected once a week, then total diversion service volume is 50% and the discount would be 25% (50% minus 25%).

D. Zero Waste Incentive Funds

Recology receives Zero Waste Incentive Funds (ZWI) from the City for meeting and exceeding diversion requirements. These funds are an opportunity for Recology to increase its investments in the services and infrastructure it provides to the City, its residents, and its businesses.

In the event that diversion goals are not met, Recology is planning to utilize approximately \$2.5 million of the Tier 3 and 4 ZWI funds it receives in 2017 to cover the balance (approximately \$2.5M) of the \$11.6 million invested in the Pier 96 MRF upgrades. Details of these upgrades are provided in Schedule C: Summary of Significant Assumptions for

Recology San Francisco (RSF), Section III: Diversion Programs. The approximately \$2.5 million from the ZWI funds will offset any additional required capital from the rate application for completion of the Pier 96 MRF upgrades.

In addition, Recology is proposing the use of Tier 1 and 2 ZWI funds received during prior rate years to help offset the first year of rate increases for customers. Recology is also proposing to rebate the remaining funds in the Special Reserve Fund in the form of a reduction to the proposed increase over the next years. As a result, Recology is proposing to reduce its revenue requirement by \$14 million in rate year 2018, and \$2.5 million in rate years 2019 and 2020.

As the City and Recology pursue the goal of zero waste, recycling incentives must evolve to focus on further processing of materials and alternatives to landfill. As with the current zero waste incentives, there would be four operating ratio reward tiers of 0.5% each.

For rate years 2018, 2019, and 2020, the Tier 1 would be equal to projected total disposal tons in RSF Schedule E, adjusting to account for the new, anticipated reduction of residue resulting from the recent upgrade to Pier 96 and selective trash processing. Tier 2 would include 50% of the expected disposal reduction from the roll-out of the 16-gallon black cart and 64-gallon blue for residential customers.

To ensure a timely and effective roll-out, Tier 3 and 4 would be based on the expected reduction in disposal tonnage from the 16-gallon black cart and 64-gallon blue for residential customers. Tier 4 would be a further 0.5%, 1%, and 1.5% reduction in landfilled tons for rate years 2018, 2019, and 2020, respectively.

For rate years 2021 and 2022, Recology proposes to use the preceding year's Tier 2 goals as the new Tier 1 goal, Tier 3 goal as the new Tier 2 goal, and Tier 4 goal as the new Tier 3 goal. Tier 4 represents a further 1% decrease in landfilled tons from the Tier 3 goal for both years.

	RY 2018	RY 2019	RY 2020	RY 2021	RY 2022
Tier 1	398,116	398,116	398,116	389,776	381,435
Tier 2	396,031	391,861	389,776	381,435	375,463
Tier 3	393,946	385,605	381,435	375,463	337,917
Tier 4	391,955	381,624	375,463	337,917	304,125

The collection and distribution of ZWI funds when goals are met would remain the same as the current diversion incentives. Since disposal reductions and consequently ZWI goals will be more challenging in future years, Recology proposes that when ZWIs are not achieved, Recology could use those funds for new diversion programs, subject to Department of the Environment and Department of Public Works approval for all four tiers.

Additionally, Recology proposes that it be allowed one rate year to develop its proposal upon the completion of a rate year. For example, any unachieved goals during RY2018 would remain available for one rate year and, if unused, would be rebated to customers as an offset to the RY2020 cost of living adjustment. In the event that the funds exceed any cost of living

adjustment, the funds would remain available to Recology for investments in diversion programs for an additional rate year.

E. COLA

Recology proposes to continue the use of the approved Cost of Living Adjustment (COLA) from the 2013 rate application with two modifications:

1. The weighting of the cost components is adjusted to reflect Recology's current cost structure based on the cumulative costs from the previous year's quarter-ending March 31st rate reports.
2. The pension component of the COLA calculation is removed as an individual item and these costs are included in the variable labor component of the calculation.

The proposed modified COLA is designed to ensure that Recology fairly recover costs that increase during the periods subsequent to the 2018 rate period until a new rate is established through a new rate proceeding. This annual adjustment will protect both ratepayers and Recology by increasing or decreasing rates in conjunction with economic trends. This will eliminate the need for Recology to submit an application for changes to the rates in the absence of significant new programs and/or facilities cost.

F. Discount for E-Bill Customers

To encourage source reduction, E-bill customers will continue to be credited \$1 for each bill presented and paid electronically. Costs associated with providing this discount to existing customers is included in the rate application as a reduction to existing revenue. Costs for discounts provided to additional customers that sign up for paperless billing will be borne by Recology, as the cost will be partially offset by cost savings associated with reductions in printing and postage costs and Recology recognizes that it is an important sustainability issue.

IV. PROPOSED RATE STRUCTURE

A. Rate-Setting Basis

The rate application is based upon the combined revenues and expenses of Recology. Revenue requirements and a consequent tipping fee are calculated at RSF, with the consequent disposal and processing costs passed through to the Recology Sunset Scavenger and Recology Golden Gate (the Collection Companies). The costs of the Collection Companies are then used to calculate the individual rates charges for collection services.

Revenues and expenses are provided in 2017 dollars.

B. Revenue Requirements

The revenue requirement for the Collection Companies represents an increase of 21.98% over current revenues received by the Collection Companies. The major components of the need for additional revenue are (1) cost increases associated with a new landfill disposal contract and regulatory compliance at composting facilities, (2) a new labor agreement and inflationary cost increases, and (3) new programs to support zero waste initiatives and support clean city programs.

C. Proposed Rates

As described in Section III, Recology is proposing that residential rates include (1) a fixed charge, (2) a volumetric trash charge, (3) a volumetric recycling charge, and (4) a volumetric composting charge. The proposed monthly residential rates for weekly weekday collection are:

- Fixed Charge = \$20 per household dwelling unit
- Volumetric Trash Charge = \$10.50 per 32-gallons of bin capacity
- Volumetric Recycling Charge = \$5.25 per 32-gallons of bin capacity
- Volumetric Composting Charge = \$5.25 per 32-gallons of bin capacity

The proposed monthly apartment rates for weekly weekday collection are:

- Fixed Charge = \$5.00 per household dwelling unit
- Volumetric Charge = \$24.75 per 32-gallons of bin capacity
- Discount of up to 100% of volumetric charge based on diversion capacity percentage minus 25%

All volumetric charges for residential and apartment customers, respectively, are proportional to the 32-gallon rates.

D. Breakdown of Cost Components

Following is an approximate breakdown of operating costs for Recology:

- Labor represents the largest cost. Labor and benefits amount to nearly 64% of total costs.

- The next largest category is truck-operating costs, which represent approximately 14% of total costs. Truck-operating costs include fuel, oil, repair and maintenance, licenses, and City permits.
- Disposal and recycling processing costs (exclusive of labor and benefits costs) account for about 10% of total costs.
- Facility operating and maintenance costs represent about 4% of costs. Facility costs cover Recycle Central and the Tunnel Avenue facility, including the iMRF, transfer station, Public Reuse and Recycling Area PDRA, Household Hazardous Waste Collection Facility, scale facilities, administrative offices, and maintenance and related operational facilities.
- The remaining 8% of total costs consist of supplies, professional services, contract services, information technology, environmental and safety compliance, human resources, and accounting.

E. Breakdown of Revenue Increase

The costs described above result in a revenue increase requirement of 21.98%. The contribution of major items is as follows:

1. Increase in disposal costs due to a new landfill disposal agreement increases the required revenues by 3.4%.
2. Composting tip fee increased the required revenues by approximately 2.3%.
3. Increase in labor costs increases required revenues by 4.3%.
4. Changes to collection programs increases required revenues by 2.5%.
5. Increases in workers compensation increases required revenues by 2.6%.
6. Increase in Special Reserve funding 1.5%.
7. Decrease in recycling revenue 1.0%.
8. Increases to Pier 96 rent totaling 0.7%.
9. Other expenses increase the required revenues by approximately 3.7%.

V. CONCLUSION

Together, Recology and the City have made great strides towards attaining Zero Waste. However, more progress must be made to reduce the amount of material sent to the landfill and maintain the City's place as a model for diversion practices.

To help the City meet its Zero Waste goals, Recology is (1) implementing capital improvements to enable its existing infrastructure to better divert more material, (2) adjusting its collection services to facilitate diversion on the customer level, and (3) proposing a new, disposal-based methodology developed by CalRecycle to better communicate progress to all stakeholders.

These new program developments are supported by a reasonable rate adjustment that will enable Recology and the City to continue to move towards Zero Waste.

DRAFT