2017 Refuse Rate Application
Schedule C: Summary of Significant Assumptions

Recology
San Francisco
WASTE ZERO

December 13, 2016

Recology San Francisco

The following schedule describes the projected revenues and expenses for Recology San Francisco ("RSF"), as well as the assumptions underlying those revenue projections.

I. Overview

RSF operates material processing facilities located at the Tunnel Avenue facility, as well as Piers 94 and 96 in San Francisco.

At the Tunnel Avenue facility, RSF operates a transfer station, construction and demolition debris recovery facility (iMRF), an enclosed Public Disposal And Recycling Area (PDRA) with an adjacent covered sort line (known as the Ptarmigan line), an organics transfer area (Organics Annex), a household hazardous waste facility, and scale facilities.

RSF recycles concrete and asphalt at Pier 94. At Pier 96, RSF operates Recycle Central, which is a large-scale material recovery facility that processes residential and commercial recyclables.

II. Tonnage

A. Incoming Tons

Total tonnage is based on incoming tons for the 12 months ending June 2016 adjusted for the number of days in the period. Detailed tonnage projections are provided in Schedule E. Overall, total tons in all material streams are increasing annually, driven by one of the largest economic booms in the history of San Francisco. More customers are adopting diversion services, and the total volume of recyclables and organics therefore continues to rise.

Furthermore, it is assumed that changes in container manufacturing practices (such as the development of lighter weight plastic bottles and cans), the movement from glass containers to plastic, and consumer spending habits (such as the increased consumption of digital media and online shopping) will continue to reduce the newspaper and mixed paper content of the recyclables while increasing the amount of cardboard.

RSF is conducting capital improvements to its existing infrastructure to accommodate these changes volumes. Improvements include an $11.6 million investment in upgraded sort lines at Recycle Central. Details of these capital improvements are provided in Section III: Diversion Programs below.

Tonnage shifts are also expected at the Tunnel Avenue facility. Today, incoming organic tons have surpassed 650 tons per day (tpd), outgrowing capacity at the Organics Annex. As additional organics are diverted through enhanced outreach, new subscriptions, and trash processing efforts, organics tonnage is expected to grow. RSF is therefore proposing to invest approximately $19 million in the West Wing construction project at Tunnel Avenue, building a facility that will better accommodate growing volumes. Details of these capital improvements are provided in Section III: Diversion Programs below.

Some material, including City-generated waste material from public litter cans and street sweepings, is excluded from the revenue tonnage base used for setting rates. Total revenue tons are the tonnages for which revenues are received.

B. Disposal Tons

"Disposal tons" are defined as the tons of trash delivered to the landfill. Disposal tons are calculated by subtracting diverted tons from the total incoming tonnage.

Projected disposal tons are based on incoming tons for the 12 months ending June 2016, with an adjustment to account for the anticipated reduction in disposal tons resulting from the facility improvements at Recycling Central and trash processing.

C. Diverted Tons

"Diverted tons" are defined as incoming tons that are diverted from the landfill. Diverted tons include commodities recovered at Recycle Central and the Tunnel Avenue facility. Diverted tons have been adjusted to reflect the facility improvements completed at Recycle Central during RY 2017 as well as planned selective trash processing.

III. Diversion Programs

A. Recycle Central

Located at Pier 96 in San Francisco, Recycle Central processes material collected under the Fantastic 3 curbside recycling program and the mixed commercial recycling program. Recycle Central has undergone an $11.6 million upgrade to its processing equipment, designed to increase the facility's processing capacity and recover additional commodities. The previous MRF equipment was installed in 2002. Although this equipment was the most advanced of its time, it could no longer adequately meet Recycle Central's processing demands.

The upgraded system can now target and separate new materials not previously captured, including textiles, wood, metal, and plastic film. Installation was completed on September 30, 2016, and the equipment became fully operational in October of 2016. It has the capacity to process 45 tons per hour of recyclable material, yielding as much as 126,000 tons annually.

Below is an overview of the upgraded processing system at Recycle Central:

1. Comingled Recyclables Processing (Fantastic 3 and Mixed Commercial)

Material collected under the Fantastic 3 curbside recycling and the mixed commercial recycling programs is processed through the upgraded system, which comprises:

a. Drum fed charge hopper: This hopper helps material flow at a consistent rate to the presort conveyor and material separation screens. This improves sorting efficiency.

b. Extended manual sorting capabilities: The presort conveyor was significantly extended, and now provides for a maximum of 14 sorting positions. The increase

allows RSF to target new commodities for diversion, such as textiles, wood, medal, bagged film plastic, and bulky rigid plastics. A total of four new sorting positions have been added in the following areas:

i. Up to four dedicated sorters positions per shift for textiles, metal, and wood (for a total of eight sorters over two shifts).
ii. All sorters working the new line will assist in removing plastic film from the conveyor and inputting it into the film plastic recovery system.

c. Film plastic recovery system: This vacuum-based system transports film plastic that is manually removed by sorters. All film plastics captured through the system are collected and compacted into a plastic casing.

d. Material screens: Three new material screens were added to improve material separation, including:
   i. One old corrugated cardboard (OCC) screen. OCC accounts for approximately 20% of the entire recycling stream.
   ii. Two fiber screens, to enhance the dimensional separation and yield cleaner paper/container outputs.

e. Glass cleaning system: This feature removes dimensionally smaller and lighter contaminants, as well as glass fines. The screen minimizes downstream contamination and the amount glass in the residual stream.

f. Two additional optical sorters: Recycle Centrals previously used two optical sorters to sort plastics. As part of the upgrade, two additional optical sorters were added: one to automatically identify aseptic packaging (Grade 52) and 3-7 plastics missed by the existing optical units, and another to reprocess residual waste and identify fiber and containers for reintroduction into the system.

2. Mixed Paper Processing

The mixed paper sort line continues to process dry materials with high paper content for customers on a co-collection program. This material is sorted by discarding the bagged trash so that the remaining dry paper and cardboard can be sorted and sent to a baler for recycling.

3. Source Separated Processing

The source separated program consists of collected material that is pre-sorted by the customer, as well as buyback and drop-off material. These materials require no sorting and are ready to bale or store in bunkers for shipment with similar commodities. Volumes for source separated materials are projected to remain relatively constant during the upcoming rate period.

B. Construction and Demolition Debris Recovery

Construction and Demolition (C&D) debris is currently processed for recovery at the Integrated Material Recovery Facility (iMRF) at the Tunnel Avenue facility. The iMRF has been in operation since July 1, 2003.

During the upcoming rate period, RSF plans to operate the iMRF with two shifts Monday through Friday and one shift on Saturday. Occasionally, a Sunday shift will be run to process C&D during extraordinarily heavy periods.

Throughput is expected to remain at over 600 tpd, with consistent recovery and diversion. Metal, wood, and fines comprise the largest volume of diverted material. Metal, plastics, and wood provide commodity revenues, while almost all other recovered materials require a disposal or processing fee.

C. Compostables Transfer: The West Wing

In the previous RY2013 application, Recology proposed to expand the Tunnel Avenue facility to facilitate onsite testing and development of processing technologies. The contingent cost increase for the construction of this building was not to exceed 0.13% or $0.04 on the 32-gallon bin rate. This contingent amount approved in 2013 was designated for preliminary engineering costs only. The contingent schedule will be triggered by Recology in December of RY 2017.

However, the purpose and design of the West Wing Project has evolved since 2013. Initially, the West Wing expansion was intended to provide additional space to conduct trash processing research and development. RSF is currently dedicating the west side of the Transfer Station to trash processing, and therefore proposes to use the new West Wing facility to receive and transfer organics.

Currently, RSF uses a dedicated compostables tipping and load-out area, known as the Organics Annex, in an existing building adjacent to the Transfer Station. More than 650 tpd of organic material is collected in the City; participation in the program has been so successful that the Organics Annex is no longer capable of handling this volume.

Due to design parameters of the current Organics Annex, only one collection truck can offload material at a time, making operations slow and cumbersome. Furthermore, the Annex can no longer properly contain liquids or odor associated with the organic material. This greatly impacts residents in the nearby Little Hollywood neighborhood.

The new West Wing addition is therefore essential to minimizing negative impacts on surrounding communities, while allowing Recology to sufficiently meet the volumetric needs of the City's growing organics participation. The new facility is designed to include:

- 14,546 square feet of space, with an additional 296 square foot utility room for recovery and treatment of washwater effluent
- A state-of-the-art Best Available Control Technologies (BACT) odor control system
- A tipping floor that can accommodate highly corrosive and putrescible material
- Push walls, a load out area, and a scale that can be more effectively cleaned to minimize residue accumulation
- Automatic high speed doors within West Wing, existing Transfer Station, and associated load out areas
- Photovoltaic panels on the roof to generate some of the electricity required by the new processing equipment

RSF is requesting that building costs be added to the rate base following submittal of proof of first payment to the building contractor. Construction costs are estimated to be $19 million and will be amortized over the estimated life of the facility. The final design review is underway with the City of San Francisco Planning Department, and construction drawings are in process. Construction is expected to begin in April 2017 and is targeted for completion by January 1, 2018.

D. Public Disposal and Recycling Area (PDRA)

Materials from the public and commercial customers with vehicles not suited to use the Transfer Station are accepted at the PDRA seven days per week. RSF operates a covered sorting line six days a week, 10 hours per day (with frequent overtime) to further process material from the PDRA. These include self-hauled C&D and related materials totaling 52,000 tons.

E. Trash Processing

As the City works toward its goal of Zero Waste by 2020, it has become necessary to identify new ways to recover material that was originally bound for the landfill. In order to maximize resource recovery at the Transfer Station, RSF has begun a test program that processes a portion of trash (black bin) material on the west side of the existing Transfer Station.

The trash designated for processing (consisting of black bin loads with high volumes of organic content) is unloaded onto the Transfer Station floor and then loaded into a shredder to open any bags and reduce the size of the material to 12 inches or under. From the shredder, the material is fed to a rotating disk screen and sorted by a four-inch screen. Materials too large to pass through the screen (overs) are intended to be sorted for recovery (e.g., metals, glass, paper, plastic containers). Small material that passes through the two-inch screen (unders) is loaded into the OREX Press, a specialized piece of equipment that separates the organic matter from waste.

The material that is sent through the OREX Press is placed in an extrusion chamber under extremely high pressure, extracting an organic-rich paste suitable for anaerobic digestion and/or composting. The press achieves approximately 10% recovery on gross tonnage input. The organic paste is transported to the East Bay Municipal Utility District (EBMUD) for conversion into energy and digestate through anaerobic digestion. The resulting digestate product is used as a soil amendment and alternative daily cover (ADC).

Following completion of the test program, and if approved and made fully operational, RSF expects to run the OREX Press for one shift a day (totaling 8 hours), five days a week, with the intention of processing up to 100 tons per day to capture and divert 10 tons per day of organic-rich paste suitable for anaerobic digestion. The personnel required include one Loader Operator, one Equipment Operator, and one Material Handler, totaling three additional personnel.

To process 100 tons per day, approximately half of the all the trash would cycle through the OREX Press. What remains would be transported to Recycle Central at Pier 96. The diversion rate for this portion of the transferred material is unknown; however, expected recovery of marketable materials such as plastic, bottles, cans, and paper is 15 tons per day. This effort, in

conjunction with paste extracted by the press, would yield an additional 25 tons per day of diverted material that is currently landfilled.

In order to sort the overs from the screen, RSF will have to implement a two-fold equipment enhancement to first capture the material and then process it. The screen would need a new conveyor system installed to collect and direct the overs onto the floor of the transfer station; these overs would be sent from the Tunnel Avenue facility to Recycle Central at Pier 96.

RSF would also modify the screen to include a bypass to the press, making it possible for RSF to run the SSI shredder and the screen independently of the press. This modification would grant RSF flexibility to generate more overs if needed, or to respond to a malfunction of the press.

Once the overs are transferred from the Tunnel Avenue facility to Recycle Central, they would be ready for processing. The new sorting equipment would be installed in the south east corner. Upon arrival, the material will be loaded by an excavator onto a vibrating feeder to ensure that no large items are sent through the equipment. The vibrating feeder will move material into an optical unit programmed to eject all plastics. These will travel to the ballistic sorter for separation into 2D (film) and 3D (containers) before baling. The non-plastic stream will be diverted through a cross belt magnet and eddy current to remove metals for recovery. The residuals will then go through a second Titech to eject fiber.

This sorting system will require two new employees to preform quality control and one equipment operator to load the material, for a total of three new full-time employees. Quality control will take place on the non-plastic stream from the first optical sorter, the residual stream from the second optical sorter, and on the outgoing fiber stream. These positions will ensure that the recovered materials are free of contamination to meet market standards for viable reuse.

F. Contingent Schedule 1: C&D Facility

The City is undergoing one of the largest construction booms in its history. As a result, the C&D iMRF has experienced extraordinary increases in tonnage, resulting in regular overtime and assistance from third party processors. The capacity of the iMRF is 400 tpd; however, the current incoming tonnage often exceeds 600 tpd. To meet the demands for C&D Recycling, RSF is proposing a contingent schedule for development of a new iMRF C&D Recycling Center.

RSF is proposing to construct a state-of-the art C&D recycling system on permitted industrial land in the City. In addition to C&D loads, material from the PDRA at Tunnel and Beatty would be hauled to this facility for classification. The facility would operate five to six days per week, using an innovative dual stream design to accommodate up to 1,000 tpd of C&D and PDRA material.

In the event that Recology pursues this Contingent Schedule, the PDRA Ptarmigan line operation will be terminated and the existing line will be used to transload the material into transfer trailers for processing at the new C&D facility. This move will consolidate all C&D material sorting and hauling operations. The employees who currently work on the Ptarmigan line will be redeployed to the new C&D facility.

Construction of this new facility is anticipated to take 24 months, and could begin December 2017. There will be no interruption of C&D processing during the construction. The new facility would be operational by January 2020.

G. Contingent Schedule 2: iMRF Project/Zero Waste Building/Trash Processing

RSF proposes repurposing the 45,000 square foot space currently occupied by the iMRF at the Tunnel Avenue facility into a Zero Waste facility designed to recover material from landfill-bound loads. The proposed facility would be capable of handling 1,100 tpd of black bin material generated by residential, apartment, commercial, and industrial customers.

The facility would use the existing Transfer Station pit to receive material seven days per week. Material would be processed six days per week. A complete Zero Waste facility design and corresponding operating costs are underway. Construction is expected to begin January 2020, following the completion of the new iMRF facility (described above in Contingent Schedule 1).

The new facility would extract recyclable, compostable, and digestible materials from loads of trash and prepare them for further processing off-site. As a result, the amount of trash sent to landfill would be reduced, with the goal of dramatically decreasing the City's per capita disposal rate.

IV. Hazardous Waste Programs

The Household Hazardous Waste Collection Facility (HHWCF) operates six days per week (Monday through Saturday). It is open to the public three days per week (Thursday through Saturday) for residential waste and twice a month for Conditionally Exempt Small Quantity Generator businesses.

The facility accepts paint, batteries, used motor oil, solvents, household cleaners, pesticides and other hazardous wastes. Activities at the facility include customer service, bulking, lab packing, laboratory analysis to identify unknown waste materials, record keeping, manifesting and hazardous waste shipments. The projections for the base program costs are based on current expenses and volumes at the facility.

A. Increased Availability of Household Hazardous Waste Pickup Programs

The City and RSF have worked together for the past 25 years to develop innovative and convenient programs that properly dispose of hazardous wastes generated by City residents and small businesses. These programs include:

- Resident drop off at the HHWCF
- Home pickup service for household hazardous waste ("Home Collection Program")
- Resident drop-off at over 150 local stores for batteries, fluorescent tubes & bulbs, and paint ("Retail Drop-off Program")
- Curbside Cart-top and Apartment Building Battery Collection
- Business drop-off at the HHWCF for qualifying small business generators

Together these programs collected 1.3 million pounds of hazardous waste from residents and businesses in FY 2015-16. An additional one million pounds of hazardous electronic waste

(computers, TVs, and other electronic products) was collected by RSF at the PDRA and through the Bulky Item Collection Program.

Despite these efforts, current estimates suggest that less than 50% of household and small business hazardous waste is being properly disposed. Furthermore, the City's population is growing and is expected to rise by 1% to 2% per year through the end of this decade.

To support the City's zero waste goals, the Department of the Environment's Toxics Reduction Program is expanding outreach programs to inform residents and small businesses about products which are classified as hazardous. Outreach efforts will also inform residents on the HHW programs available to them, with the goal of maximizing diversion from landfill.

Through these efforts, the City and RSF hope to:

- Increase the collection weight for household batteries by 10% by the end of FY2018-19,
- Increase in the number of home collections by 20% by the end of FY2019-20, and
- Increase the overall collection of all non-electronic HHW by 25%, to 1.625 million pounds, by the end of FY2020-21.

In FY2015-16, about 19% of household hazardous waste was collected through the Retail Drop-off Program and 17% of household hazardous waste was collected through the Home Collection Program. Federal, State and local laws require household hazardous wastes to be specially packaged and handled for public safety and the protection of the environment. Compaction equipment cannot be used to collect hazardous wastes.

RSF currently uses three dedicated delivery van-style vehicles and three hazardous waste certified driver/technicians to collect and transport wastes from both the Retail Drop-off and Home Collection Programs four days per week (Wednesday through Saturday). In FY2015-16, the three RSF HHW drivers averaged 6.4 pickup operating days, with an average weight of:

- 194 pounds per pickup at Retail Drop-off locations
- 19.6 Home Collection pickups per operating day, with an average weight of 56 pounds per pickup, based on a standard pickup size of 15 gallons

This gives an average of a little under nine pickups per driver per operating day. Both programs provide service, on average, within ten calendar days of a request. Due to storage space considerations at the retail drop-off locations and residential service expectations, the goal is to provide service within seven days of a request.

With the anticipated increases under both programs due to expanded outreach efforts, RSF proposes to add one new HHW collection vehicle and one new driver/technician position. Assuming an overall increase of 25% by weight in the amount of HHW collected, and assuming that the percentage by Program and weight per pickup remain the same, RSF will need to service an additional 1,308 pickup requests per year, or 6.67 pickups per day assuming a four day operating week and 49 operating weeks per year.

The remaining eight to nine pickups per operating day, which the additional vehicle and driver would be available to service, will be used for one or more of the following:

- Implementation of a Pilot Program to collect hazardous waste from qualifying small businesses, if variance from California manifest requirements can be obtained. Over 95% of San Francisco's 29,000 businesses are small to medium in size and could qualify for such a service.
- Increased use of the Home Collection Program by SF Housing Authority residents as they relocate several times over the next few years due to Housing Authority property renovation.
- Increased use of both Programs due to San Francisco population increase.

A fourth HHW collection vehicle and driver will also provide back-up service in the event of equipment maintenance and/or HHW staffing schedules.

B. Paint Product Stewardship Revenue for Residential Paint Management Activities
PaintCare Inc. is a non-profit 501(c) (3) organization that represents paint manufacturers (paint producers) and operates a Paint Product Stewardship Program in California. Product Stewardship is a policy approach established by the Department of the Environment and endorsed by the San Francisco Board of Supervisors.

Product Stewardship, sometimes called Extended Producer Responsibility or EPR, requires producers of difficult-to-dispose products to fund and operate collection and disposal programs to reduce the health and environmental impacts of their product and to reduce rate-payer costs associated with disposal.

Approximately 50% of all non-electronic HHW collected in the City consists of latex and oil-bases paint. The PaintCare program was approved by the California Department of Resources Recycling and Recovery (CalRecycle) in July of 2012.

The City, through the Department of the Environment, started contracting with PaintCare in June of 2014 to enable PaintCare to utilize the City's well-developed infrastructure for waste paint management. In order to provide for a more streamlined system and to help offset the costs of waste paint management, RSF will contract directly with PaintCare to receive payment for certain paint recycling and disposal services at the HHWCF, effective July 1, 2017.

Paint collected through the Home Collection Program, the Retail Drop-off Program, and residential drop-off at the HHWCF will continue to be recycled for reuse and donated, or packaged for shipment to off-site recycling. RSF manages all paint according to a policy of "highest, best use," with the goal of recycling as much useable 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.

C. Waste Acceptance Control Program

The Waste Acceptance Control Program (WACP) ensures that all material received at the Tunnel Avenue facility and Recycle Central are free from prohibited and hazardous wastes. The WACP is incorporated by reference into the Landfill Disposal Agreement between The City and County of San Francisco and RSF. Loads at the various processing locations system wide, including the iMRF, PDRA, Organics Annex, and Recycle Central are inspecting for materials not allowed in the landfill. Any material identified is properly sequestered and disposed of in accordance with local, State and Federal regulations. Projections for the program costs are based on current expenses.

D. San Francisco Safe Needle Disposal Program

The Safe Needle Program is designed to encourage the proper disposal of residentially generated hypodermic needles, syringes, and sharps. Convenient disposal options and containers are provided at more than 80 participating pharmacies and drop off locations. All other projections for program costs are based on current expenses, with a modest increase forecast of two new pharmacies to be added to the program per year.

V. Other Programs

A. Solar Energy at the West Wing, Transfer Station, and iMRF

During RY2017, RSF will construct the West Wing building to better accept organic material. As a part of this project, RSF will install photo voltaic cells on the roof of the West Wing, the Transfer Station, and the iMRF.

The cells will generate approximately 640 kW of energy at their peak. RSF intends to enter into a Solar Power Purchase Agreement (PPA) to install the photovoltaic panels. The PPA is a financial arrangement whereby a solar power provider designs, permits, finances, installs, and maintains a solar energy system on the property at little or no additional cost. Solar power generated onsite offsets demand for electricity from the grid. The PPA provider recoups their investment by selling the power generated to the host customer at a fixed rate that is typically lower than the utility retail rate. The PPA agreement will not have any significant impact on the current refuse rates but could potentially provide savings over the life of the installation as energy tariffs rise.

VI. Revenues

A. Tipping Fees

Tipping fees for processing, hauling, and disposal of materials delivered by the collection companies Recology Sunset Scavenger and Recology Golden Gate (RSS and RGG) and other customers are determined by dividing total revenue requirements by total revenue tons.

A system-wide tipping fee is used for all of RSF's operations, including all operations at the Tunnel Avenue facility and Recycle Central. The tipping fees will be adjusted by a COLA

mechanism, as described in the Narrative Summary, in the years following RY2018, until a new Rate Order is issued.

B. Recycling Revenues

The recycling commodity price assumptions for materials processed at Pier 96 are based on the average of the actual prices received for the previous five years. All market risks for the price variances will be borne by RSF. Recycling revenue is calculated based on the projected recycling tons of each commodity, multiplied by the assumed price per ton based on the five-year average for each commodity.

D. Operating Ratio

The rate application uses a base operating ratio (OR) of 91%, along with the Zero Waste Incentives equivalent to up to 2% OR, if the companies achieve targets described in the Narrative Summary.

VII. Expenses

A. Wages

Union wages included in the rate application contain an anticipated $0.50 per hour increase, effective as of July 1, 2017. Future increases will be included in the COLA described in the Narrative Summary.

Payroll expenses are computed based on the projected employee count and wage increases, as described above. The employee count assumes changes to operations to meet the City's diversion goals. For example, employees would be added to the Tunnel Avenue facility to accommodate trash processing.

Trash hauling to the landfill is based on projected outgoing tons, and recyclables and compostables hauling are based on increasing diversion volumes sent to end-market processors.

B. Payroll Taxes

Payroll taxes are projected based on current city, state, and federal tax rates.

C. Health and Welfare (including post-retirement)

Health and welfare programs are offered to Recology employees through several service providers. Programs include medical, prescription drug, dental, and vision coverage, as well as long-term disability and life insurance.

During the last several years, RSF has experienced significant increases in the cost of health care coverage. The current cost of coverage is over $2,029 per employee per month and is expected to exceed $2,088 per employee per month in RY2018.

RSF has implemented changes to the non-union health benefits in an effort to control costs, including increased co-payments and benefit reductions. Union programs are governed by the contractual obligations and program changes are limited.

The projected health and welfare benefit cost contained in this rate application is based on anticipated calendar year 2017 costs, inflated by 2.7% for the second half of the year (health insurance rates are set on a calendar year basis and adjusted for the rate years). The inflation factor was developed by RSF's outside actuaries and is based on historical cost increases.

Post-retirement costs in this rate application represent the cost of participation in the Retirement Security Plan (RSP), sponsored by the Teamsters Benefit Trust. The RSP provides post-retirement medical benefits to union members who qualify under the terms of the collective bargaining agreements. The RSP cost is paid monthly for each eligible employee. These costs have increased approximately 8.2% per year over the last few years. The currently monthly cost of the base program is $677 per eligible employee per month, and is expected to increase 8.2% to $733 per eligible employee per month as of July 1, 2017.

D. Pension

Pension costs are based on projected contributions required to meet Employee Retirement Income Security Act (ERISA) pension plan funding requirements, as determined by RSF's pension plan actuary.

RSF's contributions are expected to be $5,008,750 in RY2017 and $6,685,750 in RY2018. Based on analysis from RSF's third-party actuaries, future contributions will be stable at approximately $7,000,000 based on current expectations for discounted rates, returns on assets, and relatively static employment levels.

RSF also provides pension benefits for employees represented by the Operating Engineers Local 3 under a separate union-sponsored plan. The plan is funded as a cost per hour for each participating employee. The contribution per hour for that plan is expected to increase 6.9% in 2017 and another 8.7% in 2018, based on historical increases to the plan's funding improvement payment.

E. Workers' Compensation

Workers' compensation expense covers the costs associated with workers injured on the job. These costs arise from temporary and permanent disability, medical care and medical evaluation, claims administration, insurance premiums, legal fees, and ancillary administrative functions. RSF participates in a risk pool with all other Recology operating companies. Workers' compensation rates and allocations are established based on the specific historical experience of each company as prepared by a third-party administrator.

Workers' compensation costs have risen in general over the past several years due to increases in indemnity payments and double-digit medical inflation. Changes in legislation that led to decreases in some areas in the mid-2000s have been undercut by increases in benefits attributed to recent court decisions, and more liberal rules regarding disputes and appeals.

RSF continues to focus on safety training, return to work programs, and improvement in work processes. In spite of those efforts, workers' compensation costs remain high and are expected

to increase during the rate period. The cost of workers' compensation to remain relatively consistent with RY2016.

F. Property Rent

Property rent represents the cost for the lease payments to the Port of San Francisco for the Pier 96 recycling facility, as well as the concrete and asphalt recycling operations at Pier 94. The monthly lease rates are determined by the signed lease. The lease rates are adjusted annually by a cost of living index and also adjusted every five years to fair market rate.

During RY2018, the costs of RSF's lease with the Port of San Francisco for Pier 96 is increasing by 92% from $148,333 to $285,696 per month.

G. Liability Insurance

RSF participates in a risk pool with all other Recology operating companies to effectively cost manage the Recology insurance program. Liability insurance premium projections are based on information provided by RSF's insurance brokers and actuaries, along with projected claims costs associated with fleet operations. Claims costs are allocated to RSF based on its individual claims experience. Other costs are allocated based on a series of measures developed to reflect the company's relative size and risk profile.

H. Hauling and Disposal Costs

The disposal costs for RY 2017 and RY2018 are projected based on estimated tonnage and the disposal rate according to the disposal agreement with Hay Road Landfill. Disposal tonnage includes residual trash from Recycle Central, as well as tonnage placed directly in transfer trailers at the Tunnel Avenue facility. All trash is hauled by RSF. Compostable material is likewise hauled by RSF personnel.

The hauling costs for Recycle Central operations for RY 2017 and RY2018 are projected based on estimated recycled commodity tonnage. Certain recyclables are hauled by RSF's long-haul fleet; most recycled commodities are hauled to market by outside trucking companies. Costs associated with hauling to recycling markets are based on current haul prices, adjusted for expected chassis surcharges applied by the shipping lines used by RSF.

I. Other Processing Costs

Compostables require a processing fee determined by the third party processors. Such fees are included in the processing costs and are based on tipping fees charged by the compost facilities used by RSF, including Recology Blossom Valley Organics and Jepson Prairie Organics. Tipping fees charged by these compost processors are set at market rates.

J. Equipment and Vehicle Parts

Costs related to equipment and vehicle repairs are based on the costs incurred since the transition to Hay Road Landfill adjusted for inflation. Parts for equipment are expected to remain consistent with previous years adjusted for inflation.

K. Fuel and Oil

Fuel and oil costs are projected based on total tonnage volume and miles driven for the transfer fleet. Cost projections for support equipment are based on historical usage. Fuel costs are based on $2.62 per gallon for renewable diesel, $2.55 per gallon for off-road diesel, $2.67 per gallon for unleaded gasoline, and $1.23 per gallon equivalent for liquefied natural gas (LNG), and $3.43 per gallon for propane.

L. Maintenance Costs

Maintenance costs at Recycle Central and the Tunnel Avenue facility are projected based on a three-year historical analysis, adjusted for inflation.

M. Utilities

Utility costs at Recycle Central and the Tunnel Avenue facility are projected based on historical usage, adjusted for new equipment.

N. Operating and Office Supplies

Costs for operating and office supplies at Recycle Central and the Tunnel Avenue facility are projected based on historical averages with an adjustment for inflation.

O. Tax, Licenses, and Permits

Costs for taxes, licenses, and permits are based on existing fees or agreed-upon fees. Existing fees have been adjusted for inflation at 2.5% and 3.0% for RY2017 and RY2018, respectively. For agreed-upon fees, the actual cost has been used for both RY2017 and RY2018.

P. Professional and Contract Services

Cost projections for professional and contract services are based on current experience and expected future needs for services during the next rate period. Engineering costs have been adjusted for anticipated costs associated with facility development projects including permitting for an anaerobic digestion facility and trash processing.

Q. Corporate Services

Human Resources (HR) provides benefits, employment law, employee training, and employee management support services. The cost projections are based on RY2016 costs associated with Recology Inc.'s HR Department, adjusted for inflation. These costs are allocated to RSF based on the percentage of its employees proportional to the total Recology employee count.

Corporate Management provides general operations and corporate support services. Corporate Management cost projects are based on RY2016 costs of management services provided by the Corporate Office, adjusted for inflation. These costs are allocated to RSF based on its percentage of Recology Inc.'s total revenue.

Environmental Compliance provides planning, permitting, and compliance support services. Environmental Compliance costs are based on RY 2016 costs of Recology Inc.'s Environmental Compliance Department, adjusted for inflation. These costs are allocated to RSF based on its percentage of Recology Inc.'s total revenue.

Information Technology (IT) provides systems development support for all technologies, including computers, phones, etc. IT costs are based on the RY 2016 costs of Recology Inc.'s IT Department, adjusted for inflation. These costs are allocated to RSF based on a series of measures that approximate computer usage: the percentage of Recology Inc.'s checks written and customer counts that are attributable to RSF.

Corporate Accounting provides audit, internal audit, treasury, and other financial services. Accounting costs are based on RY2016 costs of Recology Inc.'s Finance Department, adjusted for inflation. These costs are allocated to RSF based on its percentage of Recology Inc.'s total revenue.

Sustainability provides support for sustainability issues, including emerging technologies, green energy, and water initiatives, and regulatory support related to sustainability and air, water, and land issues. Sustainability costs are based on RY2016 costs, adjusted for inflation. These costs are allocated to RSF based on its percentage of Recology Inc.'s total revenue.

R. Office, Telephone, and Supplies Expense

Costs related to telephone and office expenses are based on the RY2016 costs, adjusted for inflation at 1% and 3% for RY2017 and 2018, respectively.

S. Other Expenses

Other expenses include repairs, equipment rentals, security, janitorial services, facility repairs, utilities, and miscellaneous expenses. RY2017 and 2016 are reduced by reimbursements from the Special Reserve Fund for increased disposal and transportation costs associated with the Hay Road Landfill Agreement. RY2017 are calculated as cost incurred to date plus anticipated expenditures for the remainder of the rate year. RY2018 assumes recurring costs will increase by 3.0%.

T. Capital Expenses

Capital requirements for trucks, equipment, and leasehold improvements are projected over the rate period. Costs are added as equipment is acquired and leased over specified lease years. Generally, lease terms are assigned as follows:

Trucks and rolling equipment:	7 years
Stationary equipment:	10 years
Furniture and fixtures	8 years
Facility improvements:	15 years or shorter

The lease rates are calculated based on the asset lives shown above utilizing an implicit interest rate of 1.7%. The interest rate is reset on a monthly basis, based on the cost of Recology Inc.'s capital. RSF believes adequate financing will be available for all capital expenditures from Recology Inc.'s line of credit, lease lines with third party lessors, and/or California Pollution Control Financing Authority financing.