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Calaveras County, CA



Integrated Waste Management Comprehensive Review and Fee Study

May 9, 2023



Innovative, Sustainable Solutions for Solid Waste Management

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Integrated Waste Management Comprehensive Review & Fee Study

May 9, 2023

GERSHMAN, BRICKNER & BRATTON, INC.

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1 - Introduction

1.1 - Study Objective

The objective of this study is to evaluate and assess the quality of service, cost, efficiency, and overall effectiveness of the current solid waste management system in Calaveras County, CA, and to provide recommendations and implementation strategies for system improvements moving forward. In Calaveras County (County), solid waste management exists within a complex system of finance, infrastructure, policy, and public use. It intersects with many other County goals, departments, programs, and initiatives, including public health, sustainability, and equity. The following analysis examines various elements of the current solid waste management system to develop recommendations for improvements that align with the priorities of Calaveras County Integrated Waste Management (IWM) and the County.

1.2 - Methodology

This assessment was completed by Gershman, Brickner & Bratton, Inc. (GBB), a solid waste management consulting firm that has been helping clients find innovative, equitable, and cost-effective solutions to their waste challenges for over forty years. GBB partnered with Raftelis and worked collaboratively with the IWM Director and other staff through an in-person site visit and several meetings in which information was collected for analysis. This process included a review of the current system's waste tonnages, planning area information, regulatory and legal information, and existing financial and collection systems information. Once these details were obtained, the team completed an in-depth financial analysis as well as a technical review of the current facilities, equipment, operations, and organizational structure.

In December of 2022, GBB personnel visited the County Landfill as well as a selection of transfer stations and observed the site conditions and operations. Interviews with several IWM site operations employees were conducted. The purpose of these interviews was to obtain information related to the procedures followed to operate the site. GBB interviewed:

- Jennifer Casci (Director)
- Paul Feriani (Operations Manager)
- Mark Davis (Engineer)

- Dan Johnson (Equipment Operator)
- Don Brand (Operations Supervisor)
- Ray Satkamp (Operations Foreman)
- Richard Djonorh (Operations Supervisor, assigned to the Landfill)

GBB considered best practices that incorporate efficient, cost-effective, and environmentally sound operations. GBB also evaluated technology that could be applied to improve efficiency (e.g. landfill compaction equipment); staffing; type of equipment; condition of equipment; use of landfill cover materials management; leachate treatment and disposal; personnel assignments and operating hours.

1.3 - Baseline Solid Waste Information

As shown in the following table, 35,584 tons of landfill waste¹ were processed in Calaveras County in 2022. Based on historical population trends and assumptions, the tonnage forecast was held constant. While population has declined, the projection assumes that the population will stabilize. If the population does

¹ Landfill Tonnages include compacted and uncompacted waste, residuals for MRF, and Mixed Demolition/Clean Fill Debris and minor amounts of other waste.



continue to decline, then the County would be landfilling less waste and the life of the landfill could be extended. The tonnage statistics are summarized in Appendix A – Responses to RFP Questions.

2 - Organizational Review

Integrated Waste Management is headed by the Director of Integrated Waste (IWM) who oversees the three departmental leads: Integrated Waste Manager, Department Analyst, and Engineer. Currently, two Operations Supervisors report directly to the Integrated Waste Manager and supervise the two main areas of operations staffed by County personnel; the Municipal Recycling Facility (MRF) and the Landfill. Additionally, a department Administrative Assistant reports to the Department Analyst. The Engineer supports the operations of both facilities, and the department Financial Analyst supports the Director of IWM in management, accounting, and budget development.

The MRF supervisor oversees ten (10) Waste Workers. The Landfill supervisor oversees three Foreman, three Equipment Operators, and a Waste Worker II. IWM currently has two experience levels within the Waste Worker position; four are Waste Worker II, and the remaining six are Waste Worker I. Both supervisors are responsible for scheduling staff assigned to the two facilities for open hours and for work after facility open hours as well as providing staff appropriate time off.

A large component of the Calaveras IWMM system operations includes the transfer stations, which are further described in the Operational Assessment section of this report. The six transfer stations are currently operated and maintained under a contract by Gambi Disposal, Inc. (Gambi). Typically, one (1) Gambi employee per transfer station is assigned to staff the facility during open hours. There are also two Annexes, co-located with the transfer stations Wilseyville and Red Hill, which provide yard waste material management. These Annexes are operated and maintained by employees of IWM separate from Gambi's operations. At these locations, the facility collects and temporarily stores wood waste, electronics, latex paints, used oil, antifreeze, and white goods/appliances. While Gambi does not typically provide the grinding services, they do on occasion help transport the chips from the annex to Rock Creek.

Calaveras County maintains a franchise agreement with the hauling company California Waste Recovery Systems, LLC (Cal-Waste) for residential and commercial collection services.

2.1 - Overall Staffing

Overall, the organizational structure is meeting the solid waste management needs of the County. Listed below are initiatives that may help maintain and enhance the smooth and efficient running of the organization.

- Job descriptions and responsibilities need to be reviewed and updated to accurately reflect current assigned duties and responsibilities.
- Reassess adequate staff capacity at Landfill and MRF facility to allow for consistent, regular time off and to allow flexibility in staffing assignments.
- Add one maintenance staff to be dedicated to the Rock Creek Facility to serve dual responsibilities at both the Landfill and Transfer Station/MRF.
- Adjust organizational responsibilities and re-assign operational and management tasks to enhance efficiency in operations and make best use of staffing talent. This should address the need for a Project Manager position to execute ongoing and new CIP projects on an ongoing basis.



• Supervisory training in the area of Operations, Maintenance, and Finance for supervisors below the Director is needed to enhance the capabilities of staff and make an investment in personnel.

2.2 - Operational Staffing

Currently, IWM is able to staff without relying on overtime. Staff scheduling is typically flexible and staff are generally willing to help provide coverage as needed. However, relying on staff flexibility and willingness to cover as needed is not sustainable in the long run. Furthermore, the ability for staff to take time off is limited given the vacant positions and the need to have additional staff to cover for staff on sick leave or vacation in addition to regular time off.

While it appeared from interviews that staff have been flexible in adjusting to staffing needs when asked, over time this can become burdensome and a cause of burnout and fatigue when staff are asked to work more than 40 hours in jobs on an ongoing week after week basis. There also seems to be a need for an **Operations Superintendent for Landfill Operations**. The current Operations Supervisor manages the Transfer stations with annexes and the IWM Manager oversees all operations. A Landfill Superintendent with engineering experience would benefit the Landfill Operations and allow for the Operations Manager to supervise more effectively the MRF and Transfer Station locations and actively manage collections contracts.

There also seems to be a need for a full-time **Operations Superintendent for Transfer Station Operations** alone. The current IWM Operations Manager is stretched considerably thin with all six Transfer Station locations as well as the MRF and Landfill.

Additionally, with regard to maintenance support, it may be advantageous for IWM, given the estimate of 30% of manhours used of 6 DPW maintenance staff totaling about 3,800 hours, to bring on a full-time maintenance staff dedicated to the specialty equipment IWM has in operation at the landfill and MRF. This person can be located full-time at the landfill, working from the Office/Maintenance Shop and serve a dual role for both the Landfill and the Transfer Station/MRF.

3 - Operational Review

This section describes the current operations of the IWM system. It includes an assessment of current contracts, data gathering and tracking methods, current and projected system capacity, and equipment life-cycle assessment.

3.1 - Overview

IWM is a division of Calaveras County Administration and is responsible for the solid waste management programs that serve the County. All solid waste operations, including waste collection and disposal and recycling services to residents and businesses in Calaveras County, fall under IWM. Prior to IWM being under the Administration umbrella, it was a division of the Calaveras County Department of Public Works (DPW) for over 40 years.

Calaveras County retains a comprehensive solid waste system that consists of six (6) transfer stations, one Class II landfill with a MRF and one closed Class III landfill. IWM implements and manages all programs within the system including household hazardous waste collection services, recycling/diversion programs, and green waste collection/recycling services. Residential and commercial services are facilitated through



a franchise agreement with Cal-Waste. The Calaveras County solid waste management system serves a population of 46,220 residents as of 2021.

3.1.1 - Enterprise Fund

IWM is an enterprise fund that is primarily funded through a solid waste parcel fee that was established in 1976. This annual fee is based on the "residential equivalent," defined as the average amount of solid waste generated by a single-family dwelling. The parcel fee allows County residents to dispose of two cubic yards of household trash per day, at no additional charge, to any of the disposal facilities within the County. This parcel fee structure has been in-place for over 40 years with the rate gradually increasing from \$28 to the current fee of \$150 per residential equivalent. This current fee of \$150 per household has been in place, and not been increased, since 1991. The total cost of solid waste disposal in Calaveras County is described in the Capital Structure section of this report.

3.1.2 - Service Area

From the standpoint of solid waste management, there are two service areas within Calaveras County: the unincorporated areas of the County, and the City of Angels. The County has a Joint Powers Agreement (JPA) with the City of Angels, and except for the permitting of privately-owned solid waste collection vehicles, IWM administers solid waste services for the City of Angels as well as for all unincorporated areas of the County. Additionally, the County has a JPA with the western portion of Alpine County, which was established in 1974.

3.2 - Collection Programs

IWM manages residential and commercial waste and recyclables collections services through a Franchise Agreement with Cal-Waste located in Galt, CA. The Franchise agreement provides Cal-Waste the exclusive right to perform residential and commercial waste and recyclables collections services throughout the County. Cal-Waste pays the County a franchise fee, established by County resolution, for the exclusive right to perform the specified services. The Franchise Fee represents a percentage of the gross collection revenues received by Cal-Waste from the County residential and commercial customer base. The Franchise Fee is paid within 45 days of the end of each quarter. In addition to the Franchise Fee Cal-Waste must pay the County \$200.00 per front-line collection vehicle and \$50.00 per backup collection vehicle operated in the County.

The term of the Franchise Agreement is September 13th, 2016, through June 30th, 2026. The County may extend this Agreement for up to 6 months, in any increment of time or times, by providing Cal-Waste with one month's notice before any such extension is to take effect. Cal-Waste may request and may be granted up to two five-year extensions of the Agreement, the first for five years and the second for five years, if the County determines in its sole discretion that the company has provided satisfactory service throughout the term of the agreement.

Cal-Waste is responsible for providing an out-of-county disposal option for the solid waste collected within the County as part of the contracted collection services. The residue generated as the result of the processing of the recyclables collected from the residential and commercial customers located within the County is permitted to be disposed of at the Rock Creek Solid Waste Facility Landfill with no applicable disposal charges.

The company must offer and provide the following services when requested by residents and commercial establishments as part of the Franchise Agreement:



- Curbside collection of residential recyclables on a bi-weekly basis
- Collection of recyclables on a weekly basis from multi-family residences, commercial businesses, hotels, resorts and schools within seven days of request
- Information to C & D customers on diversion of debris
- Hauler will help organize and service recycling programs for schools
- Hauler must provide solid waste and bulky waste collection services upon request to residential units and commercial establishments.

Details pertaining to fees charged for various collection services are outlined in Appendix E – Waste Collection Fees and Details.

3.3 - Transfer Stations

The system of transfer stations (also known as convenience centers) provides for the drop-off and collection of solid waste, recyclables, green waste, and household hazardous waste. The six transfer stations are located throughout the County to provide access for the residents and limit travel time to the facilities. The transfer stations all utilize a system of roll-off-based compactor units for the collection of solid waste and source-separated cardboard. The solid waste is transported to the Rock Creek Solid Waste Facility for disposal. Single-stream recyclables are collected through the use of 20-yard multi-port covered roll-off containers located at each of the transfer stations. Green waste is accepted at some of the transfer stations and stockpiled onsite until sufficient quantities are accumulated and then shredded by IWM through the use of a tub grinder unit. The shredded green waste is then transported to the Rock Creek Solid Waste Facility for use as an alternative daily cover and for slope stabilization.

As indicated in Table 1, all County transfer stations, as well as solid waste hauling trucks, are operating well below their permitted capacities.

	Tons/day		Trucks	Trucks/month	
Transfer Stations	Permitted	Received	Permitted	Received ²	Received
Avery Recycling & Disposal	54	8	750	478	9,564
Copperopolis	38	7	560	204	6,111
Paloma	38	3	560	31	923
Red Hill	80	8	N/A	290	4,641
San Andreas	38	7	560	200	3,200
Wilseyville	80	8	N/A	185	2,967

Table 1 - Transfer Stations and Haulers Permitted vs. Received Tons

The transfer stations are operated for the County by Gambi in accordance with a Professional Services Agreement. The Gambi Agreement details are summarized in Appendix C – Gambi Operations Agreement

² The number of trucks received per day based on actual monthly figure divided by average number of days open per month for each facility.



Details. Based on discussions with IWMM personnel, Gambi is performing its contractual responsibilities well and is responsive to the needs of the County.

3.3.1 - Transfer Stations Operational Assessment

Each County transfer station is profiled in Appendix D – Transfer Stations Operational Details. The following assessments were made after a site visit, document reviews, and conversations with staff. (The Rock Creek transfer stations is discussed in the following section, which outlines all the facilities co-located at the Rock Creek site.)

Avery Recycling & Disposal Transfer Station

The facility appears to be in good condition, operating properly and in accordance with the requirements of the IWM.

Copperopolis Transfer Station

The facility appears to be in fair condition, operating properly and in accordance with the requirements of the IWM. It is important to note that this facility was constructed in 1974 and requires basic infrastructure maintenance such as pavement resurfacing, updated signage, and stormwater management improvements.

Paloma Transfer Station

The facility appears to be in fair condition, operating properly and in accordance with the requirements of the IWM. It should be noted that it was constructed in 1974 and requires basic infrastructure maintenance such as pavement resurfacing, improvement of signage and stormwater management improvements.

Red Hill Transfer Station

The facility appears to be in fair condition, operating properly and in accordance with the requirements of the IWM. The quantity of yard waste stockpiled at the facility appeared to be significant and may at times pose a potential fire hazard.

It should be noted that the facility was initially constructed in 1974 and the yard waste, HHW, appliances and the tires management area was developed in 1998. The overall site requires basic infrastructure maintenance such as pavement resurfacing, improvement of signage and possible stormwater management controls.

San Andreas Transfer Station

The facility appears to be in fair condition, operating properly and in accordance with the requirements of IWM. It should noted that the facility was constructed in 1974 and requires basic infrastructure maintenance such as pavement resurfacing and improvement of signage. The onsite compactor units appeared to require refurbishment or possible replacement.

Wilseyville Transfer Station

The facility appears to be in fair condition, properly operating and in accordance with the requirements of IWM. The quantity of yard waste stockpiled at the facility, however, may at times represent a potential fire hazard and sufficient fire break corridors should be maintained in accordance with established standards.

It should be noted that the facility was initially constructed during 1974 and the Annex was developed in 1998. The overall site is in need of basic infrastructure maintenance such as pavement resurfacing, improvement of signage and possible stormwater management controls.



3.4 - Rock Creek Solid Waste Facility

The Rock Creek Solid Waste Facility consists of both the Rock Creek Landfill and Rock Creek Transfer Station/ MRF. Each facility is discussed separately but both are listed as permitted operations under one solid waste facility permit for the site. 500 tons per day can be disposed of at the landfill and 500 vehicles per day may enter the facility to drop off either trash or recyclables.

3.4.1 - Rock Creek Landfill

Details pertaining to the Rock Creek Landfill are included in Appendix F – Rock Creek Landfill Details and Observations and contain general information about the landfill as well as observations made over the course of the site visit and discussions with key staff.

Equipment and Staffing

The landfill is characterized by a number of conditions and staffing issues that may be improved so that the County can execute its mission pertaining to solid waste management. The most critical consideration pertains to equipment that is old and beyond its service life for efficient operation and maintenance. In such cases, the equipment is not achieving desired compacting effort, resulting in a loss of landfill airspace and increasing costs. A landfill equipment list and suggested improvements are **provided in the Financial Model** (Excel document accompanying this report).

Employees need to be hired to provide personnel resources to better manage infrastructure, equipment and provide redundancy in personnel.

3.4.2 - Rock Creek Transfer Station & Municipal Recycling Facility (MRF)

The Rock Creek MRF was built in 2006 and provides consolidation and material management of special waste streams in addition to MSW and SSR. GBB staff observed MRF operations, receiving, consolidation, recycling, roll-Off operations, and discussed with IWM staff to make performance observations. GBB considered best practices that incorporate efficient, cost-effective, and environmentally sound operations. GBB also evaluated technology that could be applied to improve efficiency (e.g., baler equipment); roll-off routing, staffing, type of equipment; condition of equipment; operation of equipment; management of traffic pattern, customer experience; personnel assignments and operating hours. A detailed account of GBB observations are included in Appendix G - Rock Creek Transfer Station & MRF Details and Observations.

In regard to cleanliness, the facility exhibits good housekeeping practices with no debris buildup in and around the facility.

In regard to safety, the staff and personnel appeared to conduct a safe operation.

In regard to facility repair needs, the facility has had considerable wear and tear that has not been repaired or replaced for an extended period of time. The three primary areas of concern are outlined below, with supporting photographs contained in Appendix G – Rock Creek Transfer Station & MRF Details and Observations.

Building exterior cladding and framing

Much of the exterior metal sheeting that once enclosed the facility along the container bays, as well as the associated steal structural members that have been struck by material and equipment and are no longer structurally intact. With missing panels across large areas, the tip floor locations are no longer protected



from weather and wind which in turn causes air quality issues in the facility impacting worker and residential respiratory safety.³

Concrete push wall

The concrete push wall located at the south wall is in disrepair and needs structural restoration.

Container Aprons

Concrete aprons where containers are off loaded and loaded are grooved and worn needing repair and restoration. The aprons, as originally designed, do not extend out far enough to allow for ease of loading and off-loading container.

3.5 - Vehicle and Equipment Maintenance Program

The DPW Maintenance Department is responsible for maintaining the IWM's vehicles, support equipment and heavy equipment. In addition, the DPW also maintains the Rock Creek Solid Waste Facility's environmental systems, such as the methane gas recovery system, and John Zink for the maintenance of the flare system. It is estimated that 30% of the DPW Maintenance Department's budget and work hours are spent on maintaining the IWM's vehicles, heavy equipment and infrastructure systems. The Maintenance Department contracts with the HOLT Caterpillar to perform all preventative maintenance tasks for the IWMD's heavy equipment.

The DPW Maintenance Department maintenance facilities appear to be in good condition and meet the needs of the Department. The Maintenance Department employs 6 full-time mechanics & uses approximately 1.5 FTEs to support the IWM. The Manager of the Maintenance Department estimates that the Department could use 1 to 2 additional mechanics or assistant mechanics to handle Pre-trip and Post-trip repairs for IWM operations. Alternatively, this need could be augmented by IWM hiring one full-time mechanic to be based at the Rock Creek maintenance facility to perform a dual role of maintenance for equipment at both the Landfill and Transfer Station/MRF facility as well as maintenance of facilities as needed.

The Maintenance Department utilizes a Cost Accounting Management System (CAMS) software program for scheduling preventative maintenance tasks, maintenance history, parts inventory and tracking of expenses. The data is entered into the CAMS system by an Administrative Assistant. The CAMS software program appears to be well-maintained and useful to track all related costs and maintenance activities.

The relationship between the DPW Maintenance Department and the IWM appeared to be positive and cooperative. In addition, the continued support of maintenance services provided by the DPW Maintenance Department should be augmented by one full-time staff either a DPW personnel or a IWM personnel staffed at the Rock Creek Facility to be sufficient for the required operations and services required of the IWM going forward.

4 - Capital Structure Assessment

The foundation of the rate study and the primary objective of the solid waste rates are to reasonably recover the cost of providing service, cost of infrastructure investment and compliance with covenants of

³ As of March 6, 2023, the damaged siding was replaced, and heavy steel was placed on the inside to protect the siding from future damage as waste is pushed into bins.



internal fiscal targets (referred to as the "Revenue Sufficiency" evaluation). The full cost accounting assesses the total cost of solid waste disposal in Calaveras County. The numbers are based on reports and information provided by the County including the County's Operating Budget, Rate Resolutions, Resolution of Parcel Fees, and the Annual Closure and Corrective Action Submittal.

Ensuring adequate cash reserves and appropriate cash flows generally results in a sustainable long-term financial plan that can mitigate the financial and operating risk from unanticipated or sudden events to operations (i.e., changes in market conditions affecting operations and recovered materials revenues, continued reduced growth or tonnages, unanticipated or extraordinary expenses, unfunded mandates, etc.). The identified revenue requirements to be funded from rates are then allocated based on the type and level of service.

The Financial Model, an Excel document accompanying this report, details current and projected Revenues, Expenses to arrive at the Net Revenue Requirements.

4.1 - Revenues

There are three streams of revenues through the County's fees: Solid Waste Fee (Gate/Tip Fees), Secured Solid Waste (Parcel Fees), and Non-secured Solid Waste (Parcel Fees for non-taxable properties).

Additional Income and Funds from Other Sources that are accounted for are:

- Revenue from Use of Money/Property
- Licenses, Fees, and Permits
- Intergovernmental Revenue
- 4.2 Expenses

The following expense categories are captured in the Financial Model:

Operating Expenses

- Personnel
- Professional Services
- Franchise Contractual Services
- Other Contractual Services
- General Operating

- Utilities
- **Operating Supplies**
- Insurance
- Bad Debt
- Capital Outlay

Debt Service Requirements (if any)

Other Revenues

- Transfers •
- Closure
- Other Expenses

- Contingencies
- Capital

4.3 - Net Revenue Requirements

In the full cost accounting table, to reach an estimated unit cost per equivalent parcel, the Net Revenue Requirements (Operating Expenses, Transfers, Closure, Contingencies, Capital) were subtracted from the Solid Waste Fee (Gate/Tip Fees) Revenue, to understand the costs that are needed to be recovered through

- **Miscellaneous Revenue**
- Other Financing Sources



the parcel fees. This cost differential was then divided across the assumed billing units (parcels) to reach an estimated unit cost per parcel.

4.4 - Solid Waste Fee and Cost of Service Study

4.4.1 - Background

Raftelis Financial Consultants Inc. (Raftelis) was tasked as a subconsultant to GBB on behalf of the County Integrated Waste Management (IWM or System) to perform a solid waste fee and cost of service study (Study). The primary purpose of the engagement was to:

- I. Develop a forward-looking financial model of solid waste operations through Fiscal Year 2029 to project funding requirements and examine the sufficiency of existing fee revenues to fund such costs;
- II. Assess the cost of service associated with providing service to County properties; and
- III. Provide fee recommendations for the Board of Supervisors (Board) consideration.

To assess the sufficiency of the County's charges for service Raftelis developed a dynamic 7-year cost-ofservice model of the County's solid waste program operations comprising the Fiscal Years 2023 through 2029 (Forecast Period). The model was based on a variety of data including but not limited to three (5) years of historical tonnage and financial data, private contractor agreements, current operating and capital budgets, landfill closure cost estimates, landfill air space utilization reports and other information. The financial model incorporates several underlying working papers that calculate key contract services and variable costs such as the contracted cost of transfer station operations and landfill closure costs.

Figure 1 shown presents an overview of the methodology used in assessing the sufficiency of revenues to cover the revenue requirements or cost of service. The revenue requirements of the solid waste system include operating expenses, capital funding requirements, landfill air space replacement and closure fund deposits, and working capital reserve deposits. If the revenue requirements exceed the gross revenues of the system, the operations are considered deficient, while producing gross revenues more than revenue requirements are referred to as a surplus. The Study forecasted and evaluated the revenue sufficiency for the solid waste funds over the forecast period included the Fiscal Year 2023 through 2029 (Forecast Period). The forecasted revenue sufficiency was used to determine the projected ending fund balances of the solid waste system over the



Forecast Period as shown in Table 17 and Table 18 of this report.

The cost of service was calculated for the Fiscal Year 2024 representing the fiscal year of the proposed rate increases. The cost of service for Parcel Fees was determined by identifying the gross revenue requirements



and netting out all other applicable revenues resulting in a net revenue requirement to be funded from the respective fees. The applicable equivalent unit billing determinants as presented within the statistical section of this report, were used to determine the unit cost of service as presented in Table 8.

It should be noted that the information reported herein is believed to be accurate to the best of our knowledge and is assumed to be reasonable for the purposes of estimating the cost of service with fee recommendations pursuant to Government Code Sections 25830 and the Proposition 218 Omnibus Implementation Act at Gov. Code 53750. In addition to recommending fees, the intent of providing this information is to help support a general understanding of the County's financial needs to support the System programs operations and services.

4.4.2 - Parcel Fee and Equivalent Residential Units (ERU)

The County's current parcel fee was established by Ordinance 2510 in 1997 at a rate of \$150 charged per equivalent residential unit (ERU) and has not increased since such time. Over 80% of IWM revenues are derived from the parcel fees. The County adopted a change to the ordinance to allow for establishing the parcel fee by resolution. The current fees for service are adopted pursuant to Resolution No. 20210608r061 (Rate Resolution). Due to the voluntary nature of collection service and to promote economic flow control the County charges a parcel fee to recover the cost of service for the System. Table 2 - Existing Parcel Fee provides a summary of the parcel fee by customer class.

Table 2 - Existing Parcel Fee

Customer Class	Parcel Fee				
Single Family Residential (SFR) Parcel	\$150 per residential unit				
Multi-Family Residential (MFR) Parcels	\$150 per residential unit				
Non-residential / Commercial Parcels Varies by ERU Factor by Land Use Code					
Please note that the County provides fee exemptions by application for (a) all unimproved properties; and (b) any					

additional properties owned by Calaveras County residents (other than the one containing their primary residence) that are used solely for personal use (e.g. not commercial or income-generating).

Pursuant to the original ordinance that adopted the parcel fee in 1997, non-residential and commercial parcels are billed pursuant to an ERU factor as shown in Table 3. As can be seen, these factors vary based on the type of property. Based on current billing data pursuant to the property assessor data the number of ERUs for the commercial / non-residential class total 3,035 and was calculated by dividing the total reported revenue for the Fiscal Year 2022 for such parcels by the parcel fee for 1 ERU at \$150. The ERUs per commercial / non-residential parcel approximate an average equivalency factor of 2.44x. Table 4 shown below presents a summary of the property assessor parcel data and equivalency factors.

Table 4 - Existing Parcel and ERU Statistics

Class	Parcels	ERUs
SFR	25,107	25,647
MFR	493	2,032
Non- Residential	1,245	3,035 (2.44x)
Total	26,845	30,714

As can be seen from Table 4, the County charges approximately 26,845 parcels and the equivalent of 30,714 parcel fees at \$150 corresponding to approximately \$4.5 million annually. It should be noted that the parcel fee does not recover the cost of voluntary collection service which is directly charged by the County's franchised hauler to customers for service.

	- 5 alde 1	Existing	Parcel Fee	
B.	Classification of Parcels. La accordance with various uses the average volume of waste classifications. Applicable s multipliers of the "residential use classification in accoro Residential Equivalents (Multi	and within to which occurring solid was equivaler dance wi ipliers)	n the County has been of the land is put and in accor- g from each of the designat ste generation rates (exp nt" re hereby established for th the following schedule	classified ordance wil ed land us pressed a or each lan e: <u>Table</u>
	Apartment (per unit)	1.00	Lumber Yard	
	Auto Repair	2.00	Mobile Home	
	Bank	1.00	Mobile Home Park (per sp 1.00).
	Bar	2.00	Motel/Hotel (per unit)	0.2
	Campground (per site).	0.17	Professional/Business	1.0
	 Cemetery	0.00	Residential Dwelling	0 1.0
	Church	0.50	Restaurant	0
				3.0
	Fire Station (staffed)	1.00	Restaurant (large)	6.0
	Fire Station (unstaffed) .	0.50	Restaurant (drive-in)	4.0
	Fire Station (unstaffed)	0.50	Restaurant (drive-in)	0 4.0
	Gas Station with mini-mart	2.50	Retail (small)	0 1.0
	Golf Course	1.00	Retail Store (large)	0 2.0
	Grocery (small)	2.00	School (per student)	0 0.0
	Grocery (medium)	5.00	Theater	3 1.0
	Guest Cottage	1.00	Unimproved property	0 0.0
	Hardware Store	2.00	Unoccupied building	0
			g ,	0.0
	Lodge Hall	1.00		-

4.4.3 - Customer Statistical

The cost of service has a direct link to the County's underlying population and waste generation statistics since the use of landfill and facilities needs are dependent on customer demands. Table 5 presents a recent history and projection of population growth. The forecast by the California Department of Finance indicates a slight decline for 2023 with minor growth thereafter. Based on this we have assumed no growth in System demands due to population growth for the Forecast Period.

Source	Year	Population	Change
US Census:	2010	45,578	
Actual	2020	45,292	(0.6%)
	2023	44,222	(2.4%)
	2024	44,325	0.2%
California Department of Finance:	2025	44,443	0.3%
Population Projections	2026	44,551	0.2%
(https://dof.ca.gov/forecasting/demographics/projections/)	2027	44,677	0.3%
	2028	44,824	0.3%
	2029	44,877	0.1%

Table 5 - Population Statistics

With respect to waste generation within the County, IWM receives and processes approximately 35,000 tons of waste annually, which is estimated based on a review of waste generation statistics for the last five (5) years. This amount does not include waste that is disposed of out of County by the franchise hauler as required pursuant to the 2016 franchise agreement (Franchise Agreement). The current Franchise Agreement required diversion of waste out of County to help extend the life of the current landfill cell. We estimate the tons leaving the County at approximately 13,000 per year based on tonnage reports provided by the franchise hauler (reference Table 7). With respect to the waste processed within the County, approximately 10,000 to 11,000 tons per year are processed through the County's six (6) transfer stations throughout the County. Table 6 shown below summarizes the County's Board of Equalization (BOE) tonnage reports by type of waste.

Table 6 -	BOF	Tonnage	Statistics	bv	Waste	Type
Tubic 0	DOL	ronnage	Julistics	Юy	vvasic	Type

Category	Year	Landfill	Green Waste	C&D	Other	Less Outbound ⁽¹⁾	Net Landfilled	Transfer Station
Historical	2018	28,770	8,417	1,247	935	(2,173)	37,197	n/a
	2019	27,846	6,698	659	620	(2,749)	33,073	n/a
	2020	30,266	5,777	1,168	1,287	(2,531)	35,968	n/a
	2021	28,118	6,192	3,347	235	(2,067)	35,826	11,544
	2022	26,415	4,300	2,272	487	(2,110)	31,364	10,448
	2023	26,415	4,300	2,272	487	n/a	35,584	10,448

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Category	Year	Landfill	Green Waste	C&D	Other Less Outbound ⁽¹⁾		Net Landfilled	Transfer Station
	2024	26,415	4,300	2,272	487	n/a	35,584	10,448
Forecast	2025	26,415	4,300	2,272	487	n/a	35,584	10,448
Forecast	2026	26,415	4,300	2,272	487	n/a	35,584	10,448
	2027	26,415	4,300	2,272	487	n/a	35,584	10,448
	2028	26,415	4,300	2,272	487	n/a	35,584	10,448
	2029	26,415	4,300	2,272	487	n/a	35,584	10,448
	(1) Outb	ound tons inc	lude but are	not limited	to tires, re	covered metals,	and cardboard	1.

The County's franchise hauler provided waste generation statistics by customer class and region. Pursuant to the franchise collection agreement the contractor is required to take waste out of the County to preserve capacity and delay the need for the landfill cell expansion. Based on discussions with County staff some of the waste collected by the contractor is delivered to the County's landfill including waste from Alpine County and Angel Camp. It should be noted that any tons delivered to the landfill would be accounted for within the BOE landfill tonnage reports as previously presented in Table 6. Table 7 was primarily relied upon to determine the equivalent residential unit (ERU) factor for the commercial class and to estimate the quantity of potential out-of-county waste.

	2020	2021	2022	Avg.	MF Unit Tons ¹	Adj. Tons	Billing Units ²	Tons /Unit	ERU Ratio ³		
Calaveras											
Industrial 846 890 1,241 992 n/a n/a n/a									n/a		
Commercial	5,873	6,759	6,523	6,385	n/a	n/a	n/a	n/a	n/a		
Residential	5,215	5,595	5,580	5,463	n/a	n/a	n/a	n/a	n/a		
Total	11,934	13,244	13,344	12,840	n/a	n/a	n/a	n/a	n/a		
Alpine County ⁴											
Industrial	208	292	12	171	n/a	n/a	n/a	n/a	n/a		
Commercial	136	213	191	180	n/a	n/a	n/a	n/a	n/a		
Residential	n/a	n/a	120	120	n/a	n/a	n/a	n/a	n/a		
Total	344	505	323	391	n/a	n/a	n/a	n/a	n/a		
Angels Camp (AC) ^₄											
Industrial	119	187	315	207	n/a	n/a	n/a	n/a	n/a		
Commercial	1,439	1,623	1,513	1,525	n/a	n/a	n/a	n/a	n/a		
Residential	718	814	777	769	n/a	n/a	n/a	n/a	n/a		
Total	2,276	2,623	2,605	2,501	n/a	n/a	n/a	n/a	n/a		

Table 7 - Franchised Hauler Statistics and Equivalent Unit Determination

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	2020	2021	2022	Avg.	MF Unit Tons ¹	Adj. Tons	Billing Units ²	Tons /Unit	ERU Ratio ³	
Total										
Industrial	1,173	1,369	1,568	1,370	n/a	n/a	n/a	n/a	n/a	
Commercial	7,449	8,595	8,227	8,090	(1,778)	6,312	1,276	4.95	5.45	
Residential	5,933	6,408	6,476	6,272	n/a	6,272	6,915	0.91	1.00	
Total	14,554	16,372	16,272	15,733	n/a	n/a	n/a	n/a	n/a	
Less AC/Alpine Tons ⁴	(2,620)	(3,128)	(2,928)	(2,892)	n/a	n/a	n/a	n/a	n/a	
Est. Out of County Waste⁴	11,934	13,244	13,344	12,840	n/a	n/a	n/a	n/a	n/a	

(1) Pursuant to County staff, the franchise hauler reports multi-family (MF) tons within the commercial waste classification. In order to determine the commercial waste tons we estimated the MF-class waste based on the reported number of MF units pursuant to the property assessor data times the residential waste generation per unit at 0.91 tons.

(2) Billing units for the commercial class is based on the property assessor data. This calculation assumes all commercial parcels receive franchise collection service. Billing units for residential service represent the # of residential accounts represented as the number of bins/containers collected as reported by the franchise hauler.

(3) The equivalent residential unit (ERU) billing ratio is calculated based on the ratio of waste generation per billing unit in ratio to the residential waste generation per unit to determine the equivalent residential unit (ERU) factor for the commercial class.

(4) Based on discussions with County staff the Franchise Hauler may deliver all or a portion of waste from Alpine County and Angels Camp. The net tons shown represent the potential out-of-county waste that could be repatriated once the County's new landfill cell is constructed pending a contract amendment with the franchise hauler.

Pursuant to Table 7, the ERU factor for the commercial class is calculated to be greater than the current factor as adopted by the Rate Resolution as previously presented in Table 8. The proposed ERUs will be relied upon later in the determination of the calculated cost of service per ERU as presented in Section 4.4.8 of this report.

Class	Parcels	Existing ERUs	Proposed ERUs
Single Family Residential (SFR)	25,107	25,647	25,647
Multi-Family Residential (MFR)	493	2,032	2,032
Commercial / Non-Residential	1,245	3,035 (2.44x)	6,790 (5.45x)
Total	26,845	30,714	34,469

Table 8 - Existing Parcel and ERU Statistics

4.4.4 - Operating Expenditure Funding Requirements

Operating expenses represents the principal funding requirements for the System. The operating expense forecast was based on: (i) a review of three (3) years of historical expenses; (ii) the adopted FY 2023 operating budget; (iii) estimated FY 2024 budget totals; and (iv) review of contract service agreements; and (v) various escalation assumed by category of expense based on discussions with County staff. Table 9 presents a summary of the forecasted operating expense relied upon in determination of the funding requirements of the system.

	2023	2024	2025	2026	2027	2028	2029
Contractual Services	\$2,718,300	\$2,838,648	\$2,919,562	\$3,018,924	\$3,121,687	\$3,227,965	\$3,337,879
Personnel	2,189,345	2,273,982	2,361,917	2,453,278	2,548,201	2,646,824	2,749,293
Maintenance	795,500	819,365	843,946	869,264	895,342	922,203	949,869
Contingency ¹	609,967	-	-	-	-	-	-
General Operating / Supplies	293,166	310,516	319,340	329,049	339,055	349,367	359,993
Professional Services	235,200	246,960	249,524	257,009	264,720	272,661	280,841
Gas, Oil, Utilities	226,500	240,090	247,293	254,711	262,353	270,223	278,330
Rentals/Leases	52,000	55,120	56,774	58,477	60,231	62,038	63,899
Subtotal	\$7,119,978	\$6,784,682	\$6,998,355	\$7,240,714	\$7,491,589	\$7,751,281	\$8,020,104
Indirect Services and A-87	630,583	668,238	688,195	708,751	729,924	751,731	774,193
Total	\$7,750,561	\$7,432,458	\$7,686,550	\$7,949,465	\$8,221,513	\$8,503,012	\$8,794,297
(1) Amounts show	wn reflect enci	imbrances of i	inspent prior i	neriod appropr	iations assum	ed to he spent	in EY2023

Table 9 - Operating Expense Forecast by Category

Contractual services represent the primary funding requirement of the system. The majority or approximately \$2 million of the contracted expenses are related to the operation of the County's six (6) convenience / transfer stations located throughout the County. The contracted service includes transport of waste to the County's Rock Creek Landfill. Table 6 presents a summary of the total tons processed and transferred by the contractor. The remainder of contracted services is primarily for landfill operations and monitoring and various other contract services such as recycling and household hazardous waste. Contracted services were escalated by approximately 4% a year based on the Bureau of Labor Statistics Garbage and Trash Index. The charges for service by the contractor principally represent fixed fees for service. The next single greatest expense is personnel expenses which were escalated at a rate of 4% per year. Together contract services and personnel expenses account for approximately \$5.1 million or 69% of total operating expenses. The balance of operating expenses is for maintenance, repayment of indirect services (i.e., Indirect / A-87 expenses), and other expenses. In aggregate the operating expenses of the System are estimated to increase by 3.5% annually.



4.4.5 - Deposits and Repayment Funding Requirements

Deposits and repayment funding requirements consists of five (5) main components as listed below:

- **Capital Fund Deposits:** Determined based on the average annual deposit required to fund the projected Capital Improvement Plan.
- **County Capital Repayment:** Assumes a 8 year pay-back of the \$4 million loan to help finance the landfill cell expansion.
- Landfill Airspace Replacement Deposits: Based on the estimated cost to construct a cubic yard of capacity times the projected amount of airspace consumed annually.
- Landfill Closure Deposits: Based on the estimated cost to close the landfill per cubic yard of remaining capacity times the projected amount of airspace consumed annually.
- Working Capital & Capital Reserve Deposits: Represents the required deposits to maintain a minimum amount of cash reserves equal to the sum of (a) the working capital reserves equal to the months of operating expenditures to be held at the outset of the fiscal year for the period of time the County does not generate revenue from Parcel Fees; and (b) the capital reserves based on the sum of the required buildup of reserves for airspace replacement plus one (1) year of budgeted capital fund transfers.

Capital Fund Deposits & County Capital Fund Repayment

The capital fund deposits were determined based on the nature of the capital expenditure and the assumed funding source. The capital expenditures of the System were identified by County and GBB staff. In total the forecast assumes \$17.8 million in capital expenditures through the Forecast Period. Table 10 provides a summary of the capital funding requirements for the Forecast Period.

	FY23-FY29	Required Annual Deposit	Funding
New Cell Expansion	\$10,778,668	N/A	Cash / County Capital Loan
Equipment	\$2,798,900	\$0.4 m	Revenue Deposits
Facility	\$4,223,957	\$0.7 m	Revenue Deposits
Subtotal	\$7,022,857	\$1.1 m	Revenue Deposits
Total	\$17,801,525	N/A	
County Capital Fund Repayment	\$4,000,000	\$500,000	8 yr payback at 0% interest

Table 10 - Capital Expenditure Summary by Funding Source

Table 11 presented on the ensuring page provides additional detail concerning the capital expenditures of the System. The majority or 61% of the capital expenditures assumed during the forecast period are related to the new landfill cell expansion. The new cell expansion is funded from existing cash of the System and a \$4 million loan from the Count Capital Fund to be repaid over an eight (8) year period based on direction from the County Board of Supervisors. In order to fund the balance of capital expenditures the forecast assumes required annual deposits in excess of \$1.1 million per year. Table 17 and Table 18 provide a summary of the projected deposits assumed for the forecast period.

Table 11 - Detailed Capital Improvement Program (CIP)

Solid Waste System Projects	2023	2024	2025	2026	2027	2028	2029
Rock Creek Phase III	691,307	0	0	0	0	0	0
Rock Creek MRF Improvements	0	51,500	0	0	0	0	0
MRF Exterior Cladding Refurbishments	0	0	0	0	20,600	0	0
Repair Push Wall	0	0	0	0	0	25,750	0
New Signage - For Materials and Traffic Control	0	15,450	0	0	0	0	0
Asphalt & Concrete Refurbishment - Avery	0	0	0	0	0	0	103,000
New Signage - For Materials and Traffic Control - Avery	0	0	12,875	0	0	0	0
Asphalt & Concrete Refurbishment - Cooperopolis	0	0	103,000	0	0	0	0
E & S Controls/Improvements - Cooperopolis	0	0	15,450	0	0	0	0
New Signage - For Materials and Traffic Control - Cooperopolis	0	0	10,300	0	0	0	0
Asphalt & Concrete Refurbishment - Paloma	0	0	0	103,000	0	0	0
E & S Controls/Improvements - Paloma	0	0	0	15,450	0	0	0
New Signage - For Materials and Traffic Control - Paloma	0	0	10,300	0	0	0	0
Asphalt & Concrete Refurbishment - Red Hill	0	0	0	103,000	0	0	0
E & S Controls/Improvements - Red Hill	0	0	0	15,450	0	0	0
New Signage - For Materials and Traffic Control - Red Hill	0	0	10,300	0	0	0	0
E & S Controls/Improvements - Rock Creek	0	0	0	0	0	15,450	0
Asphalt & Concrete Refurbishment - San Andreas	0	0	0	0	103,000	0	0
New Signage - For Materials and Traffic Control - San Andreas	0	0	10,300	0	0	0	0
Transfer Station - Wileysville - Grant HHW Facility Upgrade	180,000	0	0	0	0	0	0
Asphalt & Concrete Refurbishment - Wileysville	0	0	0	0	0	103,000	0
E & S Controls/Improvements - Wileysville	0	0	0	0	0	15,450	0
New Signage - For Materials and Traffic Control - Wileysville	0	0	12,875	0	0	0	0
Landfill Improvements	0	51,500	51,500	51,500	0	0	0





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Solid Waste System Projects	2023	2024	2025	2026	2027	2028	2029			
Transfer Station / MRF										
Facility Upgrade	0	0	0	0	0	51,500	206,000			
Equipment/Vehicles - Avery	0	0	51,500	0	0	0	0			
Other - Avery	0	0	0	0		103,000	0			
Other - Cooperopolis	0	0	0	0	515,000		0			
Other - Paloma	0	0	0	515,000	0	0	0			
Facility Upgrade - Red Hill	0	0	0	0	0	515,000	0			
Equipment/Vehicles - Red Hill	0	0	51,500	0	0	0	0			
Shelter over Special Waste Management Drop Offs - Red Hill	0	0	5,150	0	0	0	0			
Other - Rock Creek	0	0	0	0	0		0			
Other - San Andreas	0	0	0	0	0	0	515,000			
Equipment/Vehicles - Wileysville	0	0	51,500	0	0	0	0			
Shelter over Special Waste Management Drop Offs - Wileysville	90,000	0	0	0	0	0	0			
		Landf	ill							
Landfill Development Phase III	7,855,262	2,923,406	0	0	0	0	0			
Polaris Commercial OHV	0	25,750	0	0	0	0	0			
Compactor Certified Rebuild/Refurbishment	0	0	515,000	0	0	0	0			
Compactor Wheels Resurfacing	0	51,500	0	0	0	0	0			
Cat 826 Landfill Compactor New	0	0	0	0	978,500	0	0			
Cat D-6 Bulldozer Replacement/Refurbishment	0	0	0	566,500	0	0	0			
Other Heavy Equipment/Vehicles	0	0	0	0	0	154,500	103,000			
Other Heavy Equipment / Vehicles / RO Containers	0	0	0	56,650	0	0	0			
Total	8,816,569	3,119,106	911,550	1,426,550	1,617,100	983,650	927,000			

Landfill Airspace Replacement

The cost to replace landfill airspace capacity is determined based on the quantity of landfill airspace utilized for a given year times the cost per cubic yard of capacity. Funding deposits to the IWS reserves in proportion to the cost of the use of airspace capacity ensures: (i) customers pay their proportionate share of the use of landfill capacity; and (ii) provides adequate reserves for future cell airspace replacement. Table 12 provides the basis for the determination of the cost of the use of airspace.

Table 12 - Landfill Airspace Replacement						
Description	Cost per Cubic Yard					
Current Construction Costs	\$10,778,668					
Airspace Capacity in Cubic Yards	1,700,000					
Cost per CY of Capacity	\$6.34					

Table 13 presents the projected deposits for landfill airspace replacement. The deposits are calculated based on the unit cost of airspace per cubic yard as presented in Table 12 and applied to the forecast of airspace consumption. The unit costs were assumed to escalate at a rate of 3% annually. The projection of airspace consumption is determined based on the tonnage landfilled as initially presented in Table 6 and converted from tons to cubic yards based on an assumed in-place compaction of 1,100 pounds or 0.55 tons per cubic yard. This implies that for every ton of waste landfilled 1.82 cubic yards of airspace is consumed. The airspace consumption was determined based on an analysis of airspace consumption reports and BOE landfill tonnage reports. The projected deposits average approximately \$449,000 annually for the forecast period. It should be noted that should the County repatriate out-of-County waste the projected transfers assumed herein would increase above those forecasted herein.

	2023	2024	2025	2026	2027	2028	2029
Landfilled Tons	35,584	35,584	35,584	35,584	35,584	35,584	35,584
Air Space Used (1,100lbs/CY)	64,698	64,698	64,698	64,698	64,698	64,698	64,698
Cost per Cubic Yard	\$6.34	\$6.53	\$6.73	\$6.93	\$7.14	\$7.35	\$7.57
Required Deposit	\$410,211	\$422,517	\$435,193	\$448,248	\$461,696	\$475,547	\$489,813

Table	13 -	Landfill	Airspace	Replacement	Deposits
labic	тJ	Lanann	Anspace	neplacement	Deposits

Landfill Closure Deposits

The state of California has established regulations and guidelines for landfill closure and post-closure maintenance, which include requirements for the amount of financial assurance that landfill owners and operators must provide to ensure that funds are available for closure and post-closure care. CalRecycle is responsible for enforcing these regulations and guidelines, and they oversee the process of assessing and approving the financial assurance plans submitted by landfill owners and operators. CalRecycle requires landfill owners and operators to provide financial assurance in the form of cash, bonds, letters of credit, or insurance policies to cover the estimated cost of landfill closure and post-closure care. Landfill permits are contingent upon the demonstration of the financial assurance requirement.

Similar to the determination of the landfill airspace replacement deposits, the landfill closure deposits are calculated based on an estimated cost per cubic yard times the projected airspace consumed. The cost per cubic yard is derived from the County's financial assurance compliance calculations. Table 14 presents the calculated cost per cubic yard based on the cost of closure divided by the remaining airspace outstanding as of the outset of the forecast period.

Table 14 - Landfill Closure Cost per Cubic Yard

Description	Cost per Cubic Yard
Current Construction Costs	\$9,207,689
Remaining Airspace (CY)	6,830,658
Cost per CY of Remaining Capacity	\$1.35



Table 15 presents the projected deposits for landfill closure. The deposits are calculated based on the unit cost of airspace per cubic yard as presented in Table 14 and applied to the forecast of airspace consumption. The unit costs were assumed to escalate at a rate of approximately 3.5% annually. The projection of airspace consumption is determined based on the tonnage landfilled as previously discussed. The projected deposits average approximately \$100,000 annually for the forecast period. It should be noted that should the County repatriate out-of-County waste the projected transfers assumed herein would increase above those forecasted herein.

	2023	2024	2025	2026	2027	2028	2029
Landfilled Tons	35,584	35,584	35,584	35,584	35,584	35,584	35,584
Air Space Used (1,100lbs/CY)	64,698	64,698	64,698	64,698	64,698	64,698	64,698
Cost per Cubic Yard	\$1.35	\$1.40	\$1.45	\$1.51	\$1.57	\$1.63	\$1.69
Required Deposit	\$87,213	\$90,537	\$93,994	\$97,590	\$101,330	\$105,220	\$109,268
Required Fund Balance	\$2,468,224	\$2,558,761	\$2,652,755	\$2,750,345	\$2,851,675	\$2,956,895	\$3,066,163
Projected Fund Balance	\$2,468,224	\$2,558,761	\$2,652,755	\$2,750,345	\$2,851,675	\$2,956,895	\$3,066,163

Table	15 -	Landfill	Closure	Denosits
TUDIC	10	Lununn	CIOSUIC	Deposits

Working Capital Deposits and Targeted Reserve Balances

Represents the required deposits to maintain a minimum amount of cash reserves equal to the sum of:

A - The working capital reserves equal to the months of operating expenditures to be held at the outset of the fiscal year for the period of time the County does not generate revenue from Parcel Fees. An increasing percentage of revenues are derived from parcel fees ranging from 80-90% during the Forecast Period. Parcel fee revenues are primarily collected between December – February and therefore no parcel fee revenues are generated from the outset of the Fiscal Year commencing July 1st. IWS must maintain a minimum working capital reserve at the end of each fiscal year to cover the portion of operating expenditures incurred during the initial several months of the Fiscal Year;

and

B - The capital reserves based on the sum of the required buildup of reserves for airspace replacement plus one (1) year of budgeted capital fund transfers. The minimum reserves for airspace replacement is based on the cumulative amount of required deposits for airspace replacement as presented in Table 13. The requirement of reserving one (1) year of capital fund deposits as presented in Table 10 is necessary to ensure the ability of the County to fund capital and provides a minimum prudent reserve in the event that either revenues fall below or expenses are greater than budget. The reserve allowances provide the County with at least one year of capital reserves to adjust parcel fees should the County underperform financially relative to the adopted budget.

Table 16 presents the required deposits to build adequate reserves to address minimum working capital and cash reserve targets. As can be seen from the exhibit the County is below target until the Fiscal Year 2027. The County should review the need for required deposits annually.

Table 16 - Working Capital and Capital Reserve Targets

	2023	2024	2025	2026	2027	2028	2029
Annual Operating Expenses	\$6,510,011	\$6,764,220	\$6,998,355	\$7,240,714	\$7,491,589	\$7,751,281	\$8,020,104
Target 180 days / 6 Months	~50%	~50%	~50%	~50%	~50%	~50%	~50%
Working Capital Target	\$3,210,417	\$3,335,780	\$3,451,243	\$3,570,763	\$3,694,482	\$3,822,549	\$3,955,120
Capital Reserve Target ¹	\$90,000	\$1,155,476	\$1,590,669	\$2,043,881	\$2,514,002	\$3,001,566	\$3,094,013
Combined Target	\$3,300,417	\$4,491,256	\$5,041,912	\$5,614,644	\$6,208,484	\$6,824,115	\$7,049,133
Required Deposit	N/A	\$740,554	\$521,809	\$838,299	\$579,901	\$310,283	\$907,323
Ending Cash Balances	\$2,174,435	\$732,222	\$1,507,741	\$1,785,264	\$1,798,776	\$2,462,127	\$3,201,656
Over / Under Target	\$2,084,435	(\$423,254)	(\$82,928)	(\$258,617)	(\$715,226)	(\$539,439)	\$107,642

(1) Capital reserve target is determined based upon the sum of (a) the projected capital reserves for airspace replacement pursuant to required deposits as presented in Table 13 plus one (1) year of capital expenditure transfers at \$1.1 million as presented in Table 10.

4.4.6 - Revenue Sufficiency and Rate Revenue Adjustments

The revenue sufficiency for the IWM fund is determined based on a comparison of the revenues relative to the funding requirements of the System as previously discussed in Section 4.4.1 and presented in Figure 1. Table 17 presents a summary of the cashflow requirements based on the assumptions and forecasts of revenues and expenditures discussed in prior sections of this report. The forecast recommends a 120% rate increase, however, due to the bill impacts to commercial parcels as discussed in Section 4.4.7 and based on Board Direction an adjustment to the commercial parcel increases was recognized resulting in a reduction to the rate revenues. It is assumed that the commercial parcel fees will be adjusted to full cost recovery by the Fiscal Year 2025.

Table 17 - Operating Fund 1170 Cashflows and Revenue Sufficiency

Description	2023	2024	2025	2026	2027	2028	2029
Beginning Balance	\$2,656,984	\$222,006	\$155,004	\$1,047,146	\$2,258,565	\$3,214,395	\$3,903,437
Operating Expenses							
Personnel	\$2,189,345	\$2,273,982	\$2,361,917	\$2,453,278	\$2,548,201	\$2,646,824	\$2,749,293
Professional Services	\$235,200	\$242,256	\$249,524	\$257,009	\$264,720	\$272,661	\$280,841
Contractual Services	\$2,718,300	\$2,823,488	\$2,919,562	\$3,018,924	\$3,121,687	\$3,227,965	\$3,337,879
General Operating / Supplies	\$293,166	\$309,918	\$319,340	\$329,049	\$339,055	\$349,367	\$359,993
Gas, Oil, Utilities	\$226,500	\$240,090	\$247,293	\$254,711	\$262,353	\$270,223	\$278,330
Rentals / Leases	\$52,000	\$55,120	\$56,774	\$58,477	\$60,231	\$62,038	\$63,899
Maintenance	\$795,500	\$819,365	\$843,946	\$869,264	\$895,342	\$922,203	\$949,869
Subtotal Operating Expenses	\$6,510,011	\$6,764,220	\$6,998,355	\$7,240,714	\$7,491,589	\$7,751,281	\$8,020,104
Indirect Services, A-87, Refunds	630,583	668,238	688,195	708,751	729,924	751,731	774,193
Contingency/Budget Carryforward	609,967	0	0	0	0	0	0
Total	\$7,750,561	\$7,432,458	\$7,686,550	\$7,949,465	\$8,221,513	\$8,503,012	\$8,794,297
County Capital Payback	0	500,000	500,000	500,000	500,000	500,000	500,000
Other Revenue Requirements							
Capital Improvement Fund Deposits	90,000	1,577,993	1,590,669	1,603,725	1,617,172	1,631,023	1,645,289
Closure Fund Deposits	87,213	90,537	93,994	97,590	101,330	105,220	109,268
Working Capital Deposits	0	740,554	521,809	838,299	579,901	310,283	907,323
Gross Revenue Requirements	\$7,927,774	\$10,341,542	\$10,393,022	\$10,989,079	\$11,019,916	\$11,049,538	\$11,956,177
Less Income and Funds from Other Sources							
Calculated Interest Income	\$10,796	\$1,414	\$4,508	\$12,396	\$20,524	\$26,692	\$30,816
Rents & Leases	35,000	37,100	39,326	40,506	41,721	42,973	44,262
State Grants	232,000	0	0	0	0	0	0
Other Sales (Recycling Revenue)	220,000	233,200	247,192	254,608	262,246	270,113	278,217
Solid Waste Fees (Tip Fees)	480,000	508,800	539,328	555,508	572,173	589,338	607,018
Total	\$977,796	\$780,514	\$830,354	\$863,018	\$896,664	\$929,116	\$960,313
Net Revenue Requirements	\$6,949,978	\$9,561,028	\$9,562,668	\$10,126,061	\$10,123,252	\$10,120,422	\$10,995,864
Identified Rate Revenue Adjustment ¹	0.00%	120.00%	0.00%	5.70%	0.00%	0.00%	0.00%
Recognized Rate Revenue Adjustment ¹	0.00%	105.00%	0.00%	5.70%	0.00%	0.00%	0.00%
Parcel Fee Revenues	\$4,515,000	\$9,933,000	\$9,933,000	\$10,499,181	\$10,499,181	\$10,499,181	\$10,499,181
Reduction from Adj. Commercial Fee Implementation	\$0	(\$1,179,528)	\$0	\$0	\$0	\$0	\$0
Adjusted Parcel Fee Revenues	\$4,515,000	\$8,753,472	\$9,933,000	\$10,499,181	\$10,499,181	\$10,499,181	\$10,499,181
Net Deposit to / (Use) of Reserves	(\$2,434,978)	(\$807,556)	\$370,332	\$373,120	\$375,929	\$378,759	(\$496,683)
Ending Balance ²	\$222,006	\$155,004	\$1,047,146	\$2,258,565	\$3,214,395	\$3,903,437	\$4,314,077
Torget							
Target	\$3,210,417	\$3,335,780	\$3,451,243	\$3,570,763	\$3,694,482	\$3,822,549	\$3,955,120

(1) Based on direction of the Board of Supervisors at the April 25, 2023 public meeting, IWM staff and the GBB and Raftelis project team were advised to assume the recommended fees based on the 120% rate revenue increase, however commercial fees were to be limited to the lesser of 120% or the calculated parcel fee per ERU as presented in Table 19 and Table 20.

(2) Amounts shown exclude closure fund reserves. Reference Table 15 for a projection of closure fund reserves

Table 18 presents a summary of the capital improvement fund related cashflows. Based on projected capital improvement fund deposits as presented in Table 17 the County is expected to meet the minimum targeted reserve balance by the end of the forecast period.

	Table 18 - Capital Improvement Fund 5465 Cashflows									
Description	2023	2024	2025	2026	2027	2028	2029			
Beginning Balance	\$6,779,427	\$2,174,435	\$732,222	\$1,507,741	\$1,785,264	\$1,798,776	\$2,462,127			
Transfers In										
Transfers in from Operating Fund	\$90,000	\$1,577,993	\$1,590,669	\$1,603,725	\$1,617,172	\$1,631,023	\$1,645,289			
Transfer from County Capital Fund	\$4,000,000	\$0	\$0	\$0	\$0	\$0	\$0			
Transfer from SRF	\$88,000	\$88,000	\$88,000	\$88,000	\$0	\$0	\$0			
Total	\$4,178,000	\$1,665,993	\$1,678,669	\$1,691,725	\$1,617,172	\$1,631,023	\$1,645,289			
Transfers Out										
Capital Funded by Cash	\$8,816,569	\$3,119,106	\$911,550	\$1,426,550	\$1,617,100	\$983,650	\$927,000			
Net Deposit To / (Use) of Reserves	(\$4,638,569)	(\$1,453,113)	\$767,119	\$265,175	\$72	\$647,373	\$718,289			
Calculated Interest Income	\$33,577	\$10,900	\$8,400	\$12,349	\$13,440	\$15,978	\$21,239			
Ending Balance	\$2,174,435	\$732,222	\$1,507,741	\$1,785,264	\$1,798,776	\$2,462,127	\$3,201,656			
Targeted Balance	\$90,000	\$1,155,476	\$1,590,669	\$2,043,881	\$2,514,002	\$3,001,566	\$3,094,013			
Above/Below Target	\$2,084,435	(\$423,254)	(\$82,928)	(\$258,617)	(\$715,226)	(\$539,439)	\$107,642			
(1) Capital reserve target is determ deposits as presented in Table 13 p	nined based upon Ilus one (1) year c	the sum of (a) the f capital expendit	e projected cap ure transfers a	ital reserves for t \$1.1 million as	airspace repla presented in T	cement pursua able 10.	nt to required			

4.4.7 - Cost of Service and Fee Design

Cost of service and parcel fee design is based on the summary of funding requirements net of other System revenues resulting in the net revenue requirements to be funded from parcel fees. The net revenue requirements are then divided by the ERUs to calculate the recommended parcel fee per ERU (Table 19).

Fiscal Year 2024 Cost of Service	Exhibit Reference / Source	Total Costs
Operating Expenses	Table 9	\$7,432,458
County Capital Repayment	Table 10	\$500,000
Deposits to Capital Fund	Table 10	\$1,155,476
Airspace Capacity Replacement	Table 13	\$422,517
Landfill Closure	Table 15	\$90,537
Working Capital Deposits	Table 16	\$740,554
Gross Cost of Service		\$10,341,542
Less Other Revenues:		
Investments/Recycling/Rents	Table 17	(\$276,154)
Tip Fees	Table 17	(\$508,800)
Net Cost of Service		\$9,556,588
Total ERUs	Table 8	34,469
Unit Cost per ERU		\$277.30



Based on the cost of service as presented in Table 19 and based on direction from the Board of Supervisors at the April 25, 2023 board of supervisors meeting we have identified the following recommended parcel fees. It is recommended that the commercial fees be reviewed next year and new ERU factors are established by property assessor land use code.

Talala	20		ام مر م	Dueueeeee	Deveel	
rapie	20 -	Existing	and	Proposed	Parcerre	ee.

Customer Class	Existing Parcel Fee	Proposed Parcel Fee						
Single Family Residential (SFR) Parcel	\$150 per residential unit	\$277.30 per residential unit						
Multi-Family Residential (MFR) Parcels	\$150 per residential unit	\$277.30 per residential unit						
Non-residential / Commercial Parcels	Varies by ERU by Land Use Code	Lesser of (a) \$1,512.29 ² OR (b) 2.2x the current fee						
 (1) Fees vary based on the equivalency factor identified by land use classifications as described in Resolution No. 202110608r061. (2) Commercial parcels are calculated assuming a ~5.45 ERU factor based on reported waste generation statistics as presented in Exhibit 3-4 								

Please note that the County provides fee exemptions by application for (a) all unimproved properties; and (b) any additional properties owned by Calaveras County residents (other than the one containing their primary residence) that are used solely for personal use (e.g. not commercial or income-generating). Table 21 presents the residential customer bill impacts from the proposed parcel fees.

Class	Land Use Code	Land Use Description	Parcels with Disposal Fees	Equivalent Residential units (ERUs)	Current Avg. Rate per ERU	Proposed ERU Rate	Current Revenues	Proposed Revenues	\$ Increase / Decrease	% diff.
SFR	1100	SFR ON SFR SITE	18,710	18,795	\$151	\$277	\$2,819,232	\$5,210,986	\$2,391,754	85%
SFR	7100	RANCHETTE 5-20 ACRES	2,843	2,906	\$153	\$277	\$435,863	\$805,636	\$369,773	85%
SFR	1500	MANUFACTURED HOME	845	852	\$151	\$277	\$127,725	\$236,083	\$108,358	85%
SFR	7300	RANCH - > ACRES WITH IMPROVEMENTS	712	756	\$159	\$277	\$113,438	\$209,675	\$96,237	85%
SFR	7101	RANCHETTE 5-20 AC W/MANUFACTURED HOME	577	597	\$155	\$277	\$89,550	\$165,522	\$75,972	85%
SFR	1200	2 + SFR's ON SFR SITE	266	529	\$298	\$555	\$79,350	\$146,668	\$67,318	85%
SFR	7102	RANCHETTE 5-20 ACRES WITH 2+SFRS	238	330	\$208	\$555	\$49,425	\$91,356	\$41,931	85%
SFR	1900	MISCELLANEOUS IMPROVEMENTS ON SFR SITE	150	152	\$152	\$277	\$22,800	\$42,143	\$19,343	85%

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Class	Land Use Code	Land Use Description	Parcels with Disposal Fees	Equivalent Residential units (ERUs)	Current Avg. Rate per ERU	Proposed ERU Rate	Current Revenues	Proposed Revenues	\$ Increase / Decrease	% diff.
SFR	7302	RANCH >20 ACRES WITH 2+ SFRS	102	133	\$196	\$277	\$19,950	\$36,875	\$16,925	85%
SFR	7301	RANCH >20 ACRES WITH MANUFACTURED HOME	102	106	\$156	\$277	\$15,900	\$29,389	\$13,489	85%
MFR	1400	CONDOMINIUM	268	270	\$151	\$277	\$40,463	\$74,790	\$34,327	85%
SFR / MFR	Varies	ALL OTHERS	787	2,254			351,233	624,948	\$273,716	78%
		TOTAL	25,600	27,679			\$4,164,927	\$7,674,070		

Based on direction provided by the Board of Supervisors at the April 25, 2023 public meeting commercial fee increases will be limited to no more than 120% or the calculated commercial parcel fee as presented in Table 20. Table 22 presents the commercial parcel fee increases assuming implementation of the recommended fees.

Table 22 - Non-Residential Property Assessor Data and Bill Impact Calc	ulation
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Land Use Code	Land Use Description	Parcels w/ Disposal Fees	Current Revenues	Proposed Revenues	Current Avg. Fee / Parcel	Proposed Avg. Fee per Parcel	% Dif.
3100	RETAIL BUILDINGS	194	\$73,875	\$118,679	\$381	\$612	63%
9801	NON TAXABLE GOVERNMENT OWNED	42	\$50,728	\$23,825	\$1,208	\$567	(52%)
3900	MIXED USE	99	\$46,563	\$72,641	\$470	\$734	58%
3300	OFFICE BUILDING	106	\$25,575	\$54,255	\$241	\$512	113%
7900	AG PRESERVE	138	\$23,400	\$51,480	\$170	\$373	120%
4000	LOCAL SHOPPING CENTER	22	\$22,200	\$25,735	\$1,009	\$1,170	19%
4900	SPECIAL PURPOSE COMMERCIAL	31	\$17,850	\$18,780	\$576	\$606	7%
4500	RESTAURANT	34	\$16,875	\$32,226	\$496	\$948	94%
4300	MOTEL/HOTEL/B&B	33	\$16,670	\$26,550	\$505	\$805	62%
6200	SCHOOLS	9	\$10,568	\$10,498	\$1,174	\$1,166	3%
3400	MEDICAL/DENTAL OFFICE	17	\$9,525	\$11,631	\$560	\$684	24%
5200	LIGHT INDUSTRIAL	38	\$9,000	\$19,194	\$237	\$505	115%
7960	GRAZING	44	\$8,160	\$17,952	\$185	\$408	120%
6400	CHURCH	62	\$7,988	\$16,829	\$129	\$271	113%
5600	MINI STORAGE	28	\$7,800	\$15,426	\$279	\$551	100%
4100	NEIGHBORHOOD SHOPPING CTR	6	\$7,650	\$7,698	\$1,275	\$1,283	4%
9000	COMMON AREA/RESIDENTIAL	13	\$6,600	\$5,802	\$508	\$446	(11%)
3700	AUTO SERVICE	24	\$6,000	\$13,062	\$250	\$544	119%
6800	GOLF COURSE	14	\$5,610	\$8,166	\$401	\$583	49%

Calaveras County, CA Integrated Waste Management Comprehensive Review and Fee Study

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Land Use Code	Land Use Description	Parcels w/ Disposal Fees	Current Revenues	Proposed Revenues	Current Avg. Fee / Parcel	Proposed Avg. Fee per Parcel	% Dif.
3000	COMMERCIAL – VACANT	21	\$4,950	\$10,752	\$236	\$512	118%
6600	RECREATIONAL/HEALTH CLUB	10	\$4,650	\$6,132	\$465	\$613	33%
3610	GAS STATION WITH MINI-MART	14	\$4,350	\$9,570	\$311	\$684	120%
4600	CONVALESCENT HOSPITAL	5	\$3,810	\$5,004	\$762	\$1,001	34%
Varies	ALL OTHERS	241	\$67,302	\$121,099	\$606	\$242	(60%)
	TOTAL	1,245	\$457,700	\$702,987	\$518		

4.4.8 - Landfill Cost Allocation and Cost per Ton

Raftelis allocated system costs for the Fiscal Year 2024 based on the funding requirements as presented in Table 17 and based on allocation data (i.e., personnel salaries, statistical data, etc.) supplied by and discussions with IWM staff. Table 23 presents the determination of the tip fee cost of service. It should be noted that the fee calculation excludes the County Capital Fund loan repayment since deposits to airspace replacement are identified. Including such repayments in the fee calculation would result in an increase from the calculated fee of \$75.27 to \$89.32 per ton.

Description	2024	Landfill Allocation	% of Total	Basis / Notes
Operating Costs:				
Personnel	\$2,273,982	\$595,864	26%	Allocated based on FTE costs
Professional Services	\$242,256	\$8,899	4%	Composite allocation for some general PS only.
Contractual Services	\$2,823,488	\$400,076	14%	Landfill Engineering Svc / Monitoring, etc.
General Operating / Supplies	\$309,918	\$161,049	52%	Stormwater Permit / other landfill costs.
Gas, Oil, Utilities	\$240,090	\$70,996	30%	Based on landfill vehicles fuel consumption
Rentals / Leases	\$55,120	\$12,278	22%	Composite allocation
Maintenance	\$819,365	\$344,467	42%	Estimated based on 15% of landfill vehicle costs (conservative estimate)
Subtotal Operating Expenses	\$6,764,220	\$1,593,629	24%	Calculated composite allocation factor
Other Revenue Requirements				
Indirect Cost Allocations (Other- A-87)	\$668,238	\$157,435	24%	Composite allocation
Deposits to Capital Improvement Fund	\$1,155,476	\$239,750	21%	Est. based on amortization of landfill equipment.
Deposits for Airspace Replacement	\$422,517	\$422,517	100%	Direct cost
Deposits for Closure	\$90,537	\$90,537	100%	Direct cost
Deposits for Working Capital	\$740,554	\$174,472	24%	Composite allocation
Total Allocated Costs	\$9,841,542	\$2,678,340	27%	Landfill Cost Allocation
Annual Tons Disposed	n/a	35,584		
Calculated Cost per Ton	n/a	\$75.27		

Table 23 - Landfill Cost per Ton



4.4.9 - Key Findings and Summary

The following provides a summary of the key findings and recommendations of the Cost-of-Service evaluation:

- 1. Existing Fees Not Adjusted Since 1991
- 2. Existing Revenues Insufficient to Fund Operations
- 3. Recommend Front Loaded 120% Revenue Increase Option
 - Would require further general fund subsidies to continue operations with no fee action
- 4. Change in Rate Structure Results in Significant Increase to Commercial Parcels
 - Rec'd Only Increasing the Lesser of 120% or the Parcel's Existing fee
 - Reduces increase in revenues from 120% to ~90% for FY24
- 5. Perform More Detailed Analysis of Commercial Waste Generation and Return Recommendations for FY24-25
- 6. Recommend charging no less than \$75.27/ton Cost of Service Charge to Alpine pursuant to the JPA.
- 7. Consider Bringing Back Curbside Waste to County Landfill After Cell Construction to Lower Costs to Residents / Businesses and Review Parcel Fees. This pertains to the commercial waste collected by the Franchise Hauler which is currently disposed of at an out of county facility.



5 - Recommendations and Case Studies

5.1 - Benefits of Parcel Fee Increase

- The Enterprise fund will have the capability to pay off outstanding loaned funds from the County Capital fund and the General Fund will realize fewer unknown, potential negative impacts. The absence of variability associated with having to support the County's solid waste system will be significantly reduced and subsequently free up of funds for schools, public safety and other community needs.
- Sustainment of the investment previously made in the IWM system infrastructure will ensure that the system continues to function properly and serve the needs of the County's residents.
- Assures that the CalRecycle Financial Assurance Requirements can be met by the Enterprise Fund
- Continue to ensure the very popular Transfer Stations are maintained and improved as necessary (Improved safety for Users with improved signage that can also reduce contamination in recyclable commodities generating higher value)
- Provide the needed capital to purchase much-needed heavy equipment which is necessary to ensure the proper operation of the Rock Creek Landfill and improved compaction of the received solid waste as well as extending the capacity and life of the landfill. The purchase of the needed new heavy equipment and the associated reduction of outdated inventory will also reduce equipment operations and maintenance costs for IWM.
- Provides staff hires needed to allow for flexibility in working hours to prevent fatigue and loss of trained and experienced personnel.

5.2 - Case Studies

The following is a brief description of solid waste management fees in comparable counties.

- In Madera County, CA the public tipping fees at the Fairmead Landfill are \$62.85/ton for MSW, \$32.59 per ton for Wood Waste, and \$21.73 per ton for Green/Yard Waste. These rates became effective July 1, 2021.
- The Public tipping fees at the North Fork Transfer Station are as follows: \$113.47 per ton for MSW, \$32.59 per ton for Wood Waste, and \$21.73 per ton for Green/Yard Waste. Tipping fees for franchise haulers are \$55.00 per ton.
- The Trinity County, CA solid waste parcel fee for the fiscal year 2019/2020 is \$100.00 per unit. In addition to a solid waste parcel fee, tipping fees are required for all permitted waste at the transfer site at the time of disposal.
- The El Dorado County, CA annual solid waste parcel fee system has been in place since 1989. The current fee is \$17.00 per EDU (Equivalent Dwelling Unit) which has been stable since 1992, larger waste generators such as supermarkets, shopping centers, restaurants, etc. are assessed a higher



parcel fee via an EDU multiplier. There is also an annual household hazardous waste parcel fee of \$3.00 per EDU which is assessed Countywide. The solid waste parcel fee generates approximately \$1.0 million dollars per year.

• Sierra County, CA charges a loose cubic yard rate (LCY) of \$18.38 per LCY. Residential parcels are then charged a fee based on 18 LCY per residential unit, equaling to a fee of \$330.84 per year per residential unit. Non-residential solid waste parcel fees, businesses, or parcels improved with more than four residential units, are calculated utilizing the hauler route slips for actual pickup between April 1 and March 31 of each year and based on rate of \$18.38 per LCY.

The above examples of solid waste management fees indicate that a variety of revenue-generating systems are in place for the identified comparable counties consisting of both tipping fee and parcel fee structures. It is assumed that the fee structures were developed based on the individual circumstances and available solid waste system infrastructure of the different counties. The consistent characteristic of the different solid waste management fees systems is that they consist of tipping fees and/or parcel fees systems based most likely on the previous history and available infrastructure of each county.



Appendix A – Responses to RFP Questions

Operational Structure

a) How does Calaveras County Integrated Waste Management solid waste system compare to other similar inter-government solid waste management systems?

Response – There is a broad range of county-run solid waste systems in California and across the U.S. For its population size, land area, and generally rural character, Calaveras County Integrated Waste Management solid waste system has a well-established footprint across the county that was, for all apparent characteristics, well-conceived upon its initial development. It was designed, at the time, to provide relatively easy-to-access locations evenly distributed across the county to serve as transfer stations where residents without curbside subscription collection services could drop off municipal solid waste and recyclables. In addition, residential and commercial services for curbside collection are managed currently through a county franchise agreement.

The County, like many other counties, believed that the solid waste system should 'pay for itself' and so established Integrated Waste Management (IWM), as an enterprise fund. The framework of the system is comprehensive and 'full service' compared to similar inter-governmental solid waste management systems. The County has also retained the majority of the operational control of the system which in most cases is a valuable county asset that helps to control costs to the residents and commercial entities for a service that is viewed as a public health imperative – an essential service to be provided by government.

b) Can transfer stations contracts be modified to increase the value of operations?

Response - We generally viewed the existing contract with Gambi as a reasonable, well-constructed agreement for the management of the operation of the transfer stations. We would need to confirm the term 'value' in this context before making suggestions. However, generally, if value is taken to mean 'worth', then generally yes contracts can be modified to increase their value to the County operational goals. The agreement with Gambi Disposal, Inc. allows for the County to modify the Scope of Work specified by the agreement to require additional services to be performed by the contractor following receipt of written notice from the County. The County will adjust Gambi Disposal, Inc.'s compensation accordingly following receipt of a proposal from the contractor to perform the additional services.

c) Can solid waste collection services be expanded or reduced to increase the value to the public?

Response - Solid waste collection services can be increased to increase value to the public. Ways to do so may be increased collection areas for curbside collection or increased material types taken both at curbside and at all Transfer Stations. Increase value again needs to be defined here and should be from the perspective of the public? An appropriate way to establish value is to conduct public surveys to gauge what 'value' means in the county relative to collection services.

d) Is the current methodology used for calculating waste comply with industry standards and is it sufficient for IWM to continue to utilize?

Response – Predominantly, measurement by weight, tons and pounds, is used, however, there is a broad range of options. The current methodology is acceptable, however, it could be improved upon.

e) After analyzing the proposed plans for the new cell at Rock Creek Landfill, would there be an alternative approach that would be more advantageous to explore?

Response - Based on our review of the plans for Rock Creek new cell Phase IIIA, not at this time.

Organizational Structure

a) Is the current staffing appropriate for the demands of the department?

Response – There are some suggested changes that can help with greater accountability, flexibility, redundancy and improved focus on core responsibilities. Below we have listed several potential changes as recommendations:

- Establish a mechanics position to be located at the Rock Creek maintenance facility to serve both the landfill and transfer station/MRF. The basis of this position being located at the site may provide more consistent coverage and attention to the ancillary systems for the landfill as well as to the mobile equipment and building management systems.
- Hire additional personnel for Rock Creek to lessen the dependence on existing staff to be available at all times currently, it is reported that there is not enough redundancy additional personnel to fill in when staff are sick, or on leave or turnover occurs. With increased staffing hires, such as part-time staff, greater retention of existing experienced staff can be realized.
- There is a need for an Operations Manager to serve the Rock Creek facility alone, by separating the supervisory role of transfer stations and annexes to a separate Manager. This change in organizational structure may be accomplished without adding an additional staffing position dependent on the skill sets of the current personnel.
- The Department may wish to add a Project Manager position to the organization to ensure the proper management of capital projects and the implementation of revised or new operations-related programs. This would allow Managers of the systems to focus the management of the overall operations and related services.

b) Can we modify current positions to better meet the demands?

Response – Yes, as addressed in the report, while the organizational structure is meeting current demands it could be enhanced to provide greater flexibility for operations and improved focus on core responsibilities. As an example, the Department may wish to add a Project Manager position to the organization to ensure the proper management of capital projects and the implementation of revised or new operations-related programs. This would allow Managers of the systems to focus the management of the overall operations and related services.

c) Would it be beneficial to modify where staff positions are located?

Response - The only opportunity where it is more advantageous to modify where staff is located is for a mechanic to be located at the landfill to support landfill and MRF/Transfer Ops. Otherwise, no obvious material changes.

Capital Structure Request for Proposal

a) After analysis of operating costs, and if it is determined the County needs to restructure fees, what would be the best strategy to modify and implement a new fee structure to properly fund IWM?

Response - After analysis of the operating costs - we should be able to say that the County costs are above or below what other similar systems are incurring, and secondly finalize the strategy to update and implement a new fee structure to properly fund IWM.



b) What would be the most preferable approach to fund current necessary capital improvement projects?

Response – Funding with available cash is preferable to all other approaches, however, rate increases could be lowered if capital improvement projects are financed versus cash if large amounts are needed over a short time period.

c) After analyzing costs, would it be more advantageous for the County to contract out solid waste and recycling?

It should be noted that currently a significant component of the solid waste management system services are already contracted out to Gambi Disposal & CalWaste.

Response - Analyzing the costs would not determine whether it would be more advantageous for the County to contract out services or to bring more services in-house. It would only provide information to compare with other jurisdictions whether they were paying more or less for a service than other similar Systems. Based on our evaluation of IWM, the County is paying reasonable and comparable costs for services found elsewhere. In general, we believe it is more advantageous for the County to operate the essential services of its system to provide the control on costs of the essential services they now provide and to periodically evaluate whether or not to bring in-house services that are now contracted out. However, it is not currently advantageous, for example, for the County to operate its own Material Processing Facility given current tonnages generated – much higher tonnages are required to consider this system attribute. The County would have to pull together several counties' material tonnage to make a MPF feasible.

It would seem at this time that the County has developed an acceptable blend of in-house and contracted services for managing the system's present responsibilities. Private sector forces are forever working to gain a monopoly on services within communities to cut out competition eventually at the expense of the municipality or government entities' ability to control the cost of service that it is mandated to provide all community members, and not those only who are able to pay.

d) What is the best approach to funding and implementing a capital equipment replacement schedule?

Response - The best approach to funding and implementing a capital equipment replacement would be to generate cash reserves from an improved revenue structure such as increased parcel fees & tipping fees. Funding with available cash is preferable to all other approaches, however, rate increases could be lowered if capital improvement projects are financed versus cash if large amounts are needed over a short time period. The County may also want to explore capital lease arrangements for heavy equipment & vehicles to better manage significant capital outlays.

e) Can IWM continue with the current fee structure and maintain the current services provided?

Response - It would seem doubtful that the current funding structure is able to support the system's future operations, unless the County is willing to continue to provide supplemental funding from the General Fund. Allocating funding generated by the IWM system would provide for improved accountability & management of expenses associated with the system's operations.

f) Can IWM improve the status or adjust the structure of the Financial Assurance requirements of CalRecycle?

Response – IWM is now ideally structured and appropriately funded.



Integrated Waste Management Comprehensive Review and Fee Study

May 9, 2023

Appendix B – Tonnage Statistics at Transfer Stations and Landfill

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Population Factor	n/a	n/a	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
County Population	44,153	44,150	44,222	44,325	44,443	44,551	44,677	44,824	44,877	44,919	45,031	45,085
Tonnage Statistics - Gambi Trans	fer Station	Tonnages										
San Andreas	1,697	1,452	1,452	1,452	1,452	1,452	1,452	1,452	1,452	1,452	1,452	1,452
Copper	2,070	1,943	1,943	1,943	1,943	1,943	1,943	1,943	1,943	1,943	1,943	1,943
Red Hill	2,056	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920
Avery	3,262	2,758	2,758	2,758	2,758	2,758	2,758	2,758	2,758	2,758	2,758	2,758
Paloma	572	564	564	564	564	564	564	564	564	564	564	564
Wilseyville	1,888	1,812	1,812	1,812	1,812	1,812	1,812	1,812	1,812	1,812	1,812	1,812
Subtotal Transfer Station	11,544	10,448	10,448	10,448	10,448	10,448	10,448	10,448	10,448	10,448	10,448	10,448
Board of Equalization Tonnages	Board of Equalization Tonnages											
Landfill ⁽¹⁾	28,118	26,415	26,415	26,415	26,415	26,415	26,415	26,415	26,415	26,415	26,415	26,415
Green Waste ⁽²⁾	6,192	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300	4,300
Tires	34	3	3	3	3	3	3	3	3	3	3	3
Appliances	2	1	1	1	1	1	1	1	1	1	1	1
Concrete & Rubble	3,347	2,272	2,272	2,272	2,272	2,272	2,272	2,272	2,272	2,272	2,272	2,272
Household Hazardous Waste	0	0	0	0	0	0	0	0	0	0	0	0
Floor Sorts	114	407	407	407	407	407	407	407	407	407	407	407
Clean Soil	86	76	76	76	76	76	76	76	76	76	76	76
Subtotal BOE Tonnages	37,893	33,474	33,474	33,474	33,474	33,474	33,474	33,474	33,474	33,474	33,474	33,474
Outbound Tonnages (3)	2,067	2,110	2,110	2,110	2,110	2,110	2,110	2,110	2,110	2,110	2,110	2,110
Tonnage Totals	39,960	35,584	35,584	35,584	35,584	35,584	35,584	35,584	35,584	35,584	35,584	35,584

Landfill Tonnages include compacted and uncompacted waste, residuals for MRF, and Mixed Demolition / Clean Fill Debris and minor amounts of other waste.

Green Waste is predominately used for Alternative Daily Coverage Outbound Material primarily includes recovered metals

(1) (2) **(3)**



Appendix C – Gambi Operations Agreement Details

Calaveras County contracts with Gambi of San Andreas CA to operate the County's six transfer stations under a 10-year professional services agreement, which commenced on January 1, 2021 and will expire on December 31, 2031 unless extended by the Director of IWM for an additional 5 year period. The agreement requires Gambi to provide all necessary vehicles, equipment, containers compactor units, onsite office space and personnel to operate the County's six transfer stations safely and properly in accordance with all IWM requirements. Gambi is also responsible for the transportation of the collected solid waste from the transfer stations to the Rock Creek Solid Waste Facility, and the recyclables received, which go to a nearby MRF.

The County pays Gambi a monthly Basic Facility Fee of \$133,035.94 for the operation of the six transfer stations and the monthly fee is subject to an annual Consumer Price Adjustment on July 1st of each contract year effective July 1, 2023.

In accordance with the agreement's requirements, Gambi must maintain insurance coverage as indicated below and provide proof of the insurance coverage to the County.

- Comprehensive General Liability Insurance: Includes broad form property damage insurance. No less than \$1,000,000 per occurrence & \$2,000,000 in the aggregate.
- Workers' Compensation insurance as required by the State of California.

Performance Bond Requirements: Gambi must provide the County with a Performance Bond or Letter of Credit on an annual basis which is equal to 50% of the annual Basic Facility Fee.

The professional services agreement requires Gambi to participate in a biennial Performance Review which addresses the following areas of contractual obligations:

- Compliance with terms of the agreement & applicable laws.
- Overall organizational structure and management systems/procedures.
- Transfer stations efficiency of operations.
- Employee job and safety training.
- Management of received loads.
- Procedures for receiving and resolving nuisance complaints.
- Procedures for maintaining and replacement of equipment.
- Utilization and management of facilities, equipment, and personnel.
- Compliance with monthly record-keeping and reporting requirements.
- Submittal of an audit by Certified Public Accountant which documents that the company's financial statements are accurate and free of material misstatement.

Based on discussions with IWMM personnel, Gambi is performing its contractual responsibilities well and is responsive to the needs of the County.



Appendix D – Transfer Stations Operational Details

Avery Recycling & Disposal Transfer Station

- •4541 Segale Road, Avery, CA
- Days of Operation: Friday through Tuesday
- •Operating Hours: 8:00 AM to 4:30 PM
- •General Requirements: Must provide proof of county residency to access the facility.
- Materials accepted:
- •Household solid waste
- •Source separated cardboard
- •Single-stream recyclables
- •HHW (fluorescent lights, household batteries, scrap metal, and electronics)

Residents enter the facility after checking in with gate personnel at the facility entrance. They then proceed to unload the solid waste and source-separated cardboard into above-ground stationary compactor units utilizing roll-off compactor containers which are located below grade. Single-stream recyclables are unloaded by residents into below grade open-top roll off containers. The roll-off compactor and open-top containers are removed as needed and transported to the Rock Creek Solid Waste Facility for either disposal or consolidation for transporting to a Material Recovery Facility for processing depending on the material. The collected household hazardous waste (HHW) is either consolidated and transported to the Rock Creek Solid Waste Facility or picked up by the County's contracted HHW management company.

The facility is permitted to accept 54 tons per day of solid waste and recyclables and currently receives an average of 8 tons per day. The facility is also permitted to service up to 750 vehicles per day and handled an average of approximately 9,564 vehicles per month during the period of January through August in 2022.

The basic operation of the facility consists of checking in residents who are delivering the above-specified waste materials and/or recyclables, directing the residents to the appropriate drop-off area, servicing the roll-off containers as needed, general site housekeeping, maintenance of the compactor units, providing sufficient roll-off containers for the facility's operations, and securing the site during non-operating hours.

Copperopolis Transfer Station

- •3831 O'Brynes Ferry Road, Copperopolis, CA
- •Operating Hours: 8:00 AM to 4:30 PM
- •General Requirements: Must provide proof of county residency to access the facility.
- Materials accepted:
- •Household solid waste
- •Single-stream recyclables
- •Source separated cardboard
- •Wood and yard waste

Residents enter the facility at the main entrance gate and are directed to the appropriate area for unloading after site personnel verify proper residency requirements. The residents then proceed to unload the solid waste, cardboard and/or wood/yard waste into stationary compactor units which utilize roll-off compactor



containers. The accepted single-stream recyclables are unloaded by residents into open-top and multi-port roll-off containers. The roll-off compactor containers and single-stream containers are removed as needed and transported to the Rock Creek Solid Waste Facility for either disposal or consolidation for transportation to a MRF for processing. The wood and yard waste compactor container is also transported to the Rock Creek Solid Waste Facility for shredding and subsequent use a compost and/or alternate daily cover material by the site's landfill.

The facility is permitted to accept 38 tons per day of solid waste and recyclables and currently receives an average of 7 tons per day. The facility is also permitted to service up to 560 vehicles per day, and handled an average of approximately 6,111 vehicles per month during the period of January through August in 2022.

The basic operation of the facility consists of checking in residents who are delivering the above-specified waste materials and recyclables, directing the residents to the appropriate drop-off area, servicing the roll-off containers as needed, general site housekeeping, maintenance of the compactor units, providing sufficient roll-off containers for the facility's operations and securing the site during non-operating hours.

Paloma Transfer Station

- •4347 Paloma Road, Paloma, CA
- •Operating Hours: 10:00 AM to 4:30 PM
- •General Requirements: Must provide proof of county residency to access the facility.
- Materials accepted:
- •Household solid waste
- •Single-stream recyclables

Residents enter the facility at the main entrance gate and are directed to the appropriate area for unloading after site personnel verify proper residency requirements. The residents then proceed to unload the solid waste into above-ground stationary compactor units which utilize a below-grade roll-off compactor container for consolidation and transportation of the solid waste. A ground-level compactor unit is utilized for receiving and consolidating the source-separated cardboard into a compactor roll-off container for transportation of the collected material. The single-stream recyclables are unloaded by residents into multi-port roll-off containers. The roll-off compactor and single-stream roll-off containers are removed as needed and transported to the Rock Creek Solid Waste Facility for either disposal and consolidation for transportation to a MRF for processing.

The facility is permitted to accept 38 tons per day of solid waste and recyclables and currently receives an average of 3 tons per day. The facility is also permitted to service up to 560 vehicles per day and handled an average of approximately 923 vehicles per month during the period of January through August in 2022.

The basic operation of the facility consists of checking in residents who are delivering the above-specified waste materials and recyclables, directing the residents to the appropriate drop-off area, servicing the roll-off containers as needed, general site housekeeping, general maintenance of the compactor units, providing sufficient roll-off containers for the facility's operations, and securing the site during non-operating hours.



Red Hill Transfer Station

- •5314 Red Hill Road, Vallecito, CA The Red Hill Transfer Station has an annex that is a functionally separate space located on the same site, regulated under the same permit
- Days of Operation: Friday through Monday
- •Operating Hours: 8:00 AM to 4:30 PM
- •General Requirements: Must provide proof of county residency to access the facility.
- Materials accepted:
- Household solid waste
- •Single-stream recyclables
- •Source separated cardboard
- •Wood and yard waste
- •HHW: Electronics, fluorescent lights, household batteries, auto batteries, latex paint, oil, oil filters and antifreeze
- Appliances: Washers, dryers, refrigerators, freezers, stoves, ovens, air conditioners & water coolers
- Tires
- •Scrap metal

Residents enter the facility at the main entrance gate and are directed to the appropriate area for unloading after site personnel verify proper residency requirements. They then proceed to unload the solid waste into the above-ground stationary compactor unit which utilizes a roll-off compactor container which is located on a below-grade level. The accepted source-separated cardboard wood is loaded into a compactor unit which is located at ground level and single-stream recyclables are unloaded by residents into open to and multi-port roll-off containers. The roll-off compactor and single-stream containers are removed as needed and transported to the Rock Creek Solid Waste Facility for either disposal or consolidation for transportation to a MRF for processing. The HHW, appliances and tires are unloaded at a separate area and consolidated for shipment to the Rock Creek Solid Waste Facility. The wood and yard waste is stockpiled onsite for periodical shredding and subsequent transporting to the Rock Creek Solid Waste Facility.

The facility is permitted to accept 80 tons per day of solid waste and recyclables and currently receives an average of 8 tons per day. The facility handled an average of 4,641 vehicles per month from January through August 2022.

The basic operation of the facility consists of checking in residents who are delivering the above-specified waste materials and recyclables, directing the residents to the appropriate drop-off area, servicing the roll-off containers as needed, general site housekeeping, general maintenance of the compactor units, stockpiling of the accepted yard waste, proper storage of the HHW, appliances and tires as well providing sufficient roll-off containers for the facility's operations and securing the site during non-operating hours.



San Andreas Transfer Station

- •4285 Highway 49, San Andreas, CA
- Days of Operation: Friday through Monday
- •Operating Hours: 8:00 AM to 4:30 PM
- •General Requirements: Must provide proof of county residency to access the facility.
- Materials accepted:
- Household solid waste
- •Single-stream recyclables
- •Source separated cardboard

Residents enter the facility at the main entrance gate and are directed to the appropriate area for unloading after site personnel verify proper residency requirements. The residents then proceed to unload the solid waste into an above-ground stationary compactor unit which utilizes a roll-off compactor container which is located on a below-grade level. The accepted source-separated cardboard wood is loaded into a compactor unit which is located at ground level and single-stream recyclables are unloaded by residents into open to and multi-port roll-off containers. The roll-off compactor and single-stream containers are removed as needed & transported to the Rock Creek-Solid Waste Facility for either disposal or consolidation for transportation to a MRF for processing.

The facility is permitted to accept 38 tons per day of solid waste and recyclables and currently receives an average of 7 tons per day. The facility is also permitted to service up to 560 vehicles per day and handled an average of 3,200 vehicles per month from January through August 2022.

The basic operation of the facility consists of checking in residents who are delivering the above-specified waste materials and recyclables, directing the residents to the appropriate drop-off area, servicing the roll-off containers as needed, general site housekeeping, general maintenance of the compactor units, providing sufficient roll-off containers for the facility's operations and securing the site during non-operating hours.



WilseyvilleTransfer Station

•4598 Blizzard Mine Road, Wilseyville, CA

Like Red Hill Transfer Station noted above, Wilseyville has an annex that is a functionally separate space located on the same site, regulated under the same permit.

- Days of Operation: Friday through Monday
- •Operating Hours: 8:00 AM to 4:30 PM
- •General Requirements: Must provide proof of county residency to access the facility.
- Materials accepted:
- •Household solid waste
- Single-stream recyclables
- •Source separated cardboard
- •Wood and yard waste
- •HHW: Electronics, fluorescent lights, household batteries, auto batteries, latex paint, oil, oil filters and antifreeze
- Appliances: Washers, dryers, refrigerators, freezers, stoves, ovens, air conditioners & water coolers
- Tires
- •Scrap metal

Residents enter the facility at the main entrance gate and are directed to the appropriate area for unloading after site personnel verify proper residency requirements. They then proceed to unload the solid waste into the above-ground stationary compactor unit which utilizes a roll-off compactor container which is located on a below-grade level. The accepted source-separated cardboard is loaded into a ground-level compactor unit and single-stream recyclables are unloaded by residents into open to and/or multi-port roll-off containers. The roll-off compactor and single-stream containers are removed as needed and transported to the Rock Creek Solid Waste Facility for either disposal and consolidation for transportation to a MRF for processing. The HHW, appliances and tires are unloaded in a separate area referred to as the Annex and consolidated for shipment to the Rock Creek Solid Waste Facility. The wood and yard waste is stockpiled onsite for periodical shredding and subsequent transportation to the Rock Creek Solid Waste Facility for use as compost and/or alternate daily cover material by the site's landfill.

The facility is permitted to accept 80 tons per day of solid waste and recyclables and currently receives an average of 8 tons per day. The facility handled an average of 2,967 vehicles per month during the period of January through August in 2022.

The basic operation of the facility consists of checking in residents who are delivering the above-specified waste materials and recyclables, directing the residents to the appropriate drop-off area, servicing the roll-off containers as needed, general site housekeeping, general maintenance of the compactor units, stockpiling of the accepted yard waste, proper storage of the HHW, appliances and tires as well as providing sufficient roll-off containers for the facility's operations and securing the site during non-operating hours.



Appendix E – Waste Collection Fees and Details

The following collection service options and rate summary contains information for the period of July 1, 2022 to June 30, 2023.

Residential Waste and Recycling Collection Services

The basic residential collection services offered by Cal Waste include the following options for residents.

Residents located below Forest Meadows based on different monthly rates:

Trash cart serviced weekly	Recycling cart serviced bi-weekly	Green waste serviced bi-weekly	Monthly rate
35-gallon	95-gallon	65-gallon	\$27.14
65-gallon	95-gallon	65-gallon	\$58.61
95-gallon	95-gallon	65-gallon	\$97.47

Residents located above Forest Meadows based on different monthly rates:

Trash cart serviced weekly	Recycling cart serviced bi-weekly	Container provided per year based on customer's request	Monthly rate
One 32-gallon	One 32-gallon	3.5 cubic yard	\$27.14
Two 32-gallon	One 32-gallon	3.5 cubic yard	\$58.61
Three 32-gallon	One 32-gallon	3.5 cubic yard	\$97.47

In addition to these services, California Waste offers a variety of on-call and special services to residents such walk in/backyard and long driveway service options for various service rates.

Commercial Waste and Recycling Collection Services

The basic commercial and recycling collection services offered by offered by California Waste include the following service options.

Commercial Waste Cart Collection Services:

Waste cart picked up	Frequency per week	Monthly rate dependent of frequency of service
32-gallon or 35-gallon	1 to 5 times	\$27.14 to \$181.88
65-gallon	1 to 5 times	\$58.61 to \$392.69
95-gallon	1 to 5 times	\$97.47 to \$653.11

It should be noted that customers who require more than one cart are serviced based on a rate schedule which reflects the cost for servicing multiple carts and the frequency of the required service.



Commercial Waste Container Collection Services:

Cubic yard container	Frequency per week	Monthly rate dependent of frequency of service
1	1 to 5 times	\$85.92 to \$575.65
2	1 to 5 times	\$171.83 to \$1,151.31
3	1 to 5 times	\$274.94 to \$1,842.10
4	1 to 5 times	\$373.75 to \$2,504.09
5	1 to 5 times	\$463.96 to \$3,108.53
6	1 to 5 times	\$558.47 to \$3,741.75

It should be noted that customers who require more than one container are serviced based on a rate schedule which reflects the cost for servicing multiple carts and the frequency of the required service.

Commercial Recycling Cart Collection Services:

Recycling cart picked up	Frequency per week	Monthly rate dependent of frequency of service
One to three 32-gallon or one 95-gallon	1 to 5 times	\$82.86 to \$555.14

It should be noted that customers who require more than three 32-gallon carts or more than one 95-gallon are serviced based on a rate schedule which reflects the cost for servicing multiple carts and the frequency of the required service.

Commercial Recycling Container Collection Services:

Cubic yard container	Frequency per week	Monthly rate dependent of frequency of service
1	1 to 5 times	\$49.98 to \$489.31
2	1 to 5 times	\$75.02 to \$ 978.61
3	1 to 5 times	\$233.70 to \$1,565.78
4	1 to 5 times	\$317.68 to \$2,128.48
5	1 to 5 times	\$394.36 to \$2,642.26
6	1 to 5 times	\$474.70 to \$3,180.49

It should be noted that customers who require more than three 32-gallon carts or more than one 95-gallon are serviced based on a rate schedule which reflects the cost for servicing multiple carts and the frequency of the required service.

In addition to the above-specified basic services, the company offers unscheduled collection services based on various service rates as well as special services such as walk-in and long driveway service options for various service rates.



Roll-Off Collection Services

All areas up to and including Forest Meadows:

Container	Cost
10 cubic yard	\$475 per load + \$64 per ton (Transfer station charge)
20 cubic yard	\$630 per load + \$64 per ton (Transfer station charge)
30 cubic yard	\$795 per load + \$64 per ton (Transfer station charge)

All areas above Forest Meadows:

Container	Cost
10 cubic yard	\$475 per load + \$64 per ton (Transfer station charge)
20 cubic yard	\$630 per load + \$64 per ton (Transfer station charge)
30 cubic yard	\$795 per load + \$64 per ton (Transfer station charge)

The collection service rates are subject to an annual CPI increase on July 1st of each contract year.



Appendix F – Rock Creek Landfill Details and Observations

Items for consideration as site or operational improvements are indicated in **bold**.

The Landfill main entrance off Hunt Road and the access road, Coyote Ridge Drive, has an adequate queuing length for incoming traffic at current incoming tonnages. Additionally, no reported queuing issues at higher tonnages are experienced at the facility. There is a single 70-foot scale for incoming weighing which is used for outgoing tares as needed. Hunt Road is a two-lane county road and experiences below-design volume traffic most of the time. There is an opportunity to add a right turn queuing lane for eastbound traffic to the facility if needed and a left turn lane for westbound traffic to the facility entrance as well for future expansion or changes in operations.



The Scale Office houses the scale operations and is staffed full-time by one scale clerk at any time. There is a Roll-Off yard/park of approximately 0.2 acres past the scale area on the left side of the main entrance road going to the landfill proper capable of storing at least 25 roll-off containers. Adjacent to the Roll-off yard/park is the Leachate Collection and Removal Tanks and System as well as the Gas Collection Control System Flare. The main Access and Egress Road (from the Scale Area to the Landfill Cells and perimeter road) is a well-maintained paved roadway provides full and safe access to Landfill Perimeter Road.

The Landfill Perimeter Road is a maintained graveled single lane road primarily along the landfill perimeter toe of slope and property line along the west boundary and majority of the eastern boundary. It is located within portions of the setback from property boundaries as well as within the unconstructed future cell areas providing access to the entire facility, bulk green material recycling area and soil borrow area.

Landfill Access Road (Operations Road) begins at the toe of the filled waste slopes to provide access to the 'Working Face' or daily landfilling operations area for waste off-loading. It is constantly maintained and moved as part of the fill sequence planning conducted by landfill operations. Stormwater management is



a main responsibility to keep run-on stormwater to active waste areas at a minimum. Roads are usually steeply sloped to gain elevation quickly.

The Landfill Disposal Area is currently in Phase II-B of the site masterplan. It is characterized as follows:

- Working Face: 50 feet slope length by 50 feet working face width.
- Operations seeks to achieve space for 2-3 unloads at a time.
- Has a Tip Area sized to keep down blowing material and dust and it is all-weather prepped.
- Litter Screening (Blowing Material Fence) Topdeck and working face have at least 1400 ft of 8-ft fence in place to minimize blowing material.

Stormwater Run-on

• Most cell slopes drain away from working face to the south and east and therefore minimal to no opportunity for run-on stormwater in the present filling locations near the top of Phase II. To the west and north there are higher slope that are intercepted with temp berms to divert stormwater.

Waste Compaction and Airspace Utilization

- Implement the current operations goal to achieve 1,100-1,200 annual average in-place density of compacted waste. Currently in place density is approximately 1,000 lbs per cubic yard, based on annual surveys. The operational goal is to maximize airspace by ensuring daily effective compacting effort with existing equipment, by maximizing the number of equipment passes over placed waste.
- The waste composition is predominantly typical MSW (observed on December 14, 2022) and with loads of a high volume of residual processing materials from Cal-Waste containing a high percentage of plastics.

Daily Cover Operations

- Daily cover observed on December 14, 2022 from previous days work was the application of alternative daily cover (ADC)— chipped green waste. Tarping was also reported to be used for daily cover in addition to green waste as an alternative to soil across the working face after waste placement.
- Operations soil is used sparingly as needed for access to the working face and maintenance of roadways and drainage channels.

Intermediate Covered Areas

• Adjacent cell areas to the Working Face Daily Operations were covered with intermediate cover – a primarily sand, clayey/silt sand mixture.

Housekeeping and Vector and Odor Control

- Landfill has permanent litter screening in place at the perimeter and operates a crew with routine cleaning and removal along its length.
- Daily cover in place except working face during site visit December 14, 2022 to control odors
- From interviews with Ms. Casci and Mr. Feriani, there were no ongoing odor complaints or issues.



Leachate Management

- Leachate is collected in a lined leachate pond designated Phase II Leachate Pond. This pond provides for leachate treatment through evaporation.
- Given local annual precipitation, Ms. Casci and Mr. Feriani describe the landfill as a dry landfill much lower than average leachate generation based on national average.

Safety

- Safety operational and structural controls in place to manage traffic to and from the working face.
- Operations manager onsite throughout the day (December 14, 2022)
- Tonnage Daily 100 tons per day
 - Made up of broad categories of MSW and Residuals from processing of recyclable materials including:
 - Municipal (Household, Commercial and Government) Solid Waste or Trash
 - Animal Carcasses
 - Construction Debris
 - Old Furniture

Working Face Mobile Equipment

- A list of mobile equipment available at the Landfill site was obtained from site IWM personnel prior to the visit. GBB's focus was primarily on the equipment needed at and around the immediate area of the Landfill. Most equipment on the list categorized as Landfill operations equipment was observed onsite by GBB either while in use or parked at various locations around the site. According to site personnel interviewed, all of this equipment is currently operational.
 - Working Face usually:
 - 2 Dozers: D6R, D6T
 - 2 Compactors: Cat 826; Al-Jon 500AV (backup)
 - One Cat Front End Loader
 - One 10-yard dump truck
 - 2 Cat D-6 bulldozers are operational with one machine approaching 10,000 hours of service and possible certified rebuild.
 - 1 Cat 826 Compactor is operational however the machine should be considered for certified rebuild in the near future and/or replacement as a frontline machine. In addition, the unit's wheels are in need of resurfacing and teeth replacement.
 - 1 Aljon compactor is operational on a limited basis as a backup machine only due to high hours of usage and age of the machine.
 - **Other** Other equipment observed onsite included mobile equipment used for the soil borrow area:
 - Cat 623 Scraper
 - Cat Front End Loader

Gas Management

Landfill operates an enclosed flare currently producing 120 square cubic feet per minute (SCFM) which is a low gas flow. It can produce up to 360 SCFM with seasonal variations. The system is 10 years old (2012) and if fully operational and in compliance with regulations. It was noted that this system had fell into



disrepair and out of compliance due to lack of regular maintenance and there has been a substantial investment in the system to make it functional and in compliance with regulations.

Stormwater Management

Facility operates and maintains a system of stormwater conveyance and control structures to manage stormwater onsite for bit the Landfill and the Transfer Station/MRF facility. Stormwater management is a priority at landfill facilities to minimize impacts to it and the surrounding downstream watershed environment. Stormwater management constantly needs modifications to changes of the landfill and requires ongoing and continual maintenance, monitoring and compliance. Stormwater management typically has its own line item in the budget.

Landfill Staffing

Landfill staffing ranges from a minimum of 2 to a maximum of 5 personnel each day depending on the day of the week as each day needs more or less staffing depending on average anticipated tonnage. Friday through Monday are typically lighter tonnage days than Tuesday through Thursday.

Gatehouse/Scale – Operations provides 1 person full-time daily 7 days a week. Primary person assigned to the Gatehouse works 5 days per week. On the weekend there are two additional staff that rotate to cover. Other staff is rotated on the 7 work days each week to provide full coverage. Gatehouse staffing can also be consider part of the Transfer Station/MRF staffing.

Working Face - Operations provides 2 to 4 persons full-time daily 7 days a week. 5 personnel are used to staff the 2-4 positions to allow for time off, sick leave and vacation time. On a typical day, one person is typically assigned to the compactor, and one to a dozer. On days with 3 to 4 personnel, additional staff is used to haul soil or ADC to the working face, provide a spotter for incoming loads to off-load, litter fence cleaning, and additional earthwork needed to effectuate operations.

Equipment Maintenance – IWM does not staff equipment maintenance personnel and relies on DPW to provide maintenance services. DPW has 6 mechanics and they estimate that 30% of their total manhours is used to support IWM. DPW staff typically are dispatched to the landfill to work on large mobile equipment in the Office/Maintenance Shop Building at the landfill. The building has four bays for equipment maintenance. The building has two diesel fuel storage tanks and backup power generation.

DPW uses a software system to track Maintenance which provides preventive maintenance schedules and regular maintenance notifications. DPW keeps IWM parts inventory maintained.



Appendix G – Rock Creek Transfer Station & MRF Details and Observations

Facility Footprint and Property Area

• 24,000 square feet on approximately 1.5 acres immediately around the facility.

Equipment/System Details:

- Main equipment Manufactures Baler (cardboard)
- Equipment:
 - o Two Cat 908 Front End Loaders
 - o One Cat Forklift P6000

Overview of existing capabilities & materials processed.

• Facility provides for residential drop-off of Trash, Mixed Recyclables, Cardboard from residential carts, residential trailers, and Roll-off Containers.



- Tip Floor Areas, Transfer, and Storage
 - Tip floor locations for 6 20-yd roll-off containers
 - 2 Tip Floor locations for roll-off containers of Scrap Metal
 - 2 Tip Floor locations for mixed recyclables from Residential drop-off
 - 2 Tip Floor locations for trash from Residential drop-off
 - 2 Semi-Trailer Load-out Bays for Mattresses, and Electronics
 - o Cardboard Baler/Compactor
 - Consolidation Bay
 - o Latex Paints
 - Household Hazardous Wastes
 - o Appliances
 - o Sharps
 - o Fluorescent Light Bulbs



Appearance of Facility and Equipment

Building exterior cladding and framing

(Exterior Cladding and Framing near the container loading areas)



Concrete push wall





Calaveras County, CA Integrated Waste Management Comprehensive Review and Fee Study May 9, 2023



Push Wall – Current conditions

Container Aprons







Staffing

In general, MRF staffing ranges from a minimum of 2 to a maximum of 4 personnel each day depending on the day of the week as each day needs more or less staffing depending on average anticipated tonnage. Friday through Monday are typically lighter tonnage days than Tuesday through Thursday.

Gatehouse/Scale – Operations provides 1 person full-time daily 7 days a week. Primary person assigned to the Gatehouse works 6 days week. Other staff is rotated on the 6th and 7th workday each week to provide full coverage. Gatehouse staffing is primarily considered part of the Landfill staffing but also must be there for Transfer Station/MRF operations.

Transfer Station/MRF Operations provides 2 to 4 persons full-time daily 7 days a week. 6 personnel are used to staff the 2-4 positions needed daily and to allow for time off, sick leave and vacation time.

Equipment Maintenance – IWM does not staff equipment maintenance personnel and rely on DPW to provide maintenance services. This was further discussed in the Landfill staffing in a section above.



Thank you for this opportunity to serve Calaveras County and its residents

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