



Department of Public Works

Fiscal Year 2023 Annual Report

July 1, 2022 – June 30, 2023

Troy Tanigawa, P.E.
County Engineer

ENGINEERING DIVISION

Michael Moule, P.E., Chief of Engineering

I. MISSION STATEMENT

Protection of the public's health, safety, and property as well as the environment through proper planning, design, construction, operation, and maintenance of the County's infrastructure, and through administration of codes, ordinances, and resolutions related to sediment and erosion control, storm water runoff, floodplain management, driveway approaches, land use, traffic calming, and complete streets.

II. DIVISION GOALS

- A. Protection of public health and safety by planning, designing, and developing safe and cost-effective roadway, bridge, and drainage systems.
- B. Protection of public safety and assurance of high quality of life by administering and enforcing subdivision, grading, drainage, floodplain management, complete streets, driveway approach, traffic calming, complete streets, and other ordinances, regulations, and resolutions.
- C. Protection of public safety and investment through effective operation and maintenance of County facilities, roadways, bridges, and drainage systems through systematic planning, inspections, processes, and programs.
- D. Provide excellent customer service to the public. Respond to all matters quickly, accurately, professionally, and with aloha.

III. PROGRAM DESCRIPTION

A. Objectives

The Engineering Division provides civil and general engineering services for the Department of Public Works, for other County Departments, and based on requests from the County Council and the public. It is responsible for rehabilitation and repair projects for roads, bridges, drainage facilities, and flood control facilities. Project design and construction management is accomplished by in-house personnel or via professional consultant services, depending on the complexity and scope of the project and the availability of personnel and project funding.

Ordinance Administration

Engineering Division is tasked with administration of the following Ordinances:

1. Drainage Ordinance Number 778 (Kaua'i County Code Chapter 22, Article 16). This Ordinance adopts the Stormwater Runoff System Manual dated July 2001. The Ordinance provides guidelines and standards for the handling of drainage runoff systems within the County of Kaua'i.

2. Sediment and Erosion Control Ordinance Number 808 (Kaua'i County Code Chapter 22, Article 7). This ordinance regulates the construction of all grading, grubbing, and stockpiling activities in the County. This ordinance allows for permit exemptions for government-controlled projects and agricultural properties that fall under conservation plans approved by the East and West Kaua'i Soil and Water Conservation Districts. The Engineering Division issues grading permits, grubbing permits, and stockpile permits in compliance with this ordinance.
3. Driveway Approach Ordinance Number 170 (Kaua'i County Code Chapter 15, Article 2). This ordinance regulates the construction of driveway approaches within County street rights-of-way. The Engineering Division issues Driveway Permits in compliance with this ordinance.
4. Traffic Calming Ordinance Number 1095 (Kaua'i County Code Chapter 16, Article 22). This ordinance regulates the construction of traffic calming measures on County streets. The Engineering Division reviews public requests for traffic calming measures, evaluates streets for installation of traffic calming measures, and makes recommendations to County Council for approval of traffic calming resolutions for installation. This ordinance also provides for the County Engineer to temporarily install traffic calming measures for a trial period of up to twelve (12) months without County Council approval, to test the traffic calming measures and assess community support, safety, and other factors.
5. Excavation and Repairs of Streets and Sidewalks (Kaua'i County Code Chapter 18, Article 3). This ordinance controls and regulates all construction work within County street right-of-way. The Engineering Division issues Road Permits in compliance with this ordinance.
6. Floodplain Management Ordinance Number 831 (Kaua'i County Code Chapter 15, Article 1). This ordinance regulates the County's Floodplain Management Program. The County of Kaua'i is a participant in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP), which enables property owners on Kauai to obtain flood insurance and assures future federal financial assistance for the County. The purpose of the ordinance is to promote public health, safety, and general welfare; and to minimize public and private losses due to flood conditions. The Engineering Division reviews proposed development in flood zones for compliance with the Floodplain Management Ordinance and the regulations of the NFIP.

The Engineering Division administers these ordinances by reviewing construction plans, flood and drainage studies, traffic impact and geotechnical reports, road permit and driveway permit applications, and other documents for projects by private developers as well as other public agencies. When these projects go to construction, the Engineering Division then inspects and provides construction engineering for these projects.

Support Services

The Engineering Division also provides the following support services:

1. Assist the Planning Department in the administration of the Subdivision Ordinance, the Comprehensive Zoning Ordinance, and the Shoreline Setback and Coastal Protection Ordinance by:
 - a. Providing review comments and recommendations on subdivision applications, including full review and approval of subdivision construction drawings for roadway and utility improvements; inspecting construction of subdivision improvements.
 - b. Providing review comments and recommendations for all zoning changes and amendments, use permits, shoreline management permits, Special Management Area (SMA) permits, variances, and proposed ordinance changes.
 - c. Calculating whether improvements to a structure constitute a “substantial improvement” per the regulations in the Shoreline Setback and Coastal Protection Ordinance.
2. Assist the Building Division in the review process of building permits including review of sediment and erosion control, driveway approaches, floodplain management, and conditions imposed by the Planning Department and Planning Commission related to zoning permit, use permit, and SMA permit conditions for which the Engineering Division is responsible.
3. Provide street addressing and building numbering services, including:
 - a. Assigning new addresses for houses and other buildings as part of the Building Division review process.
 - b. Verifying addresses for existing houses and buildings when requested by other County Departments, other public agencies such as the US Postal Service, or members of the public.
 - c. Changing addresses or creating new addresses for existing houses and buildings when requested by property owners.
4. Respond to personal requests and inquiries from the County Council; provide testimony as required.
5. Respond to requests from other County Departments, other Divisions of Public Works, and members of the public regarding:
 - a. Solutions to engineering problems related to streets, drainage, and flooding.
 - b. Definition of land boundaries, mapping for land acquisitions, easements, rights-of-way, and other land matters.
6. Respond to requests for changes to and/or relocation of traffic signs, pavement markings, other traffic control devices; streetlights; parking restrictions; and bus stops. This work includes preparing resolutions for County Council when required by County ordinances or resolutions.
7. Conduct field investigations for potential violations to County Codes and Ordinances as requested by residents with concerns or complaints.
8. Work with other County Departments and other Divisions of Public Works to implement the Complete Streets Resolution, ensuring that the County plans for, designs, and

constructs transportation improvement projects to safely accommodate travel by pedestrians, bicyclists, public transit, and motorized vehicles.

Project Management

Engineering Division is responsible for design and construction of approximately 45 ongoing County projects; these projects are primary road and bridge projects, but there are other projects as well. All projects support the RISE mission, primarily the Mobility, Home, and Connections levels. Below is a list of Engineering Division's larger projects, organized by the stage of construction and/or design completion.

- Construction was completed on the following projects this fiscal year:
 - Lydgate-Kapa'a Phase C; Federal Aid Project with 100% Federal funding: This project extended Ke Ala Hele Makalae from the Uhelekawawa Canal to the Sheraton Kaua'i Coconut Beach Resort.
 - Lydgate-Kapa'a Phase C2 - Uhelekawawa Canal Bridge; Federal Aid Project with 100% Federal funding: This project widened the existing Kūhiō Hwy Bridge to construct an extension of Ke Ala Hele Makalae. Engineering Division inherited this project from Building Division in late 2022.
 - Maluhia Road and Kōloa Road Improvements; Federal Aid Project, 80% Federal, 20% County: This project improved Maluhia Road and Kōloa Road, including pavement resurfacing (and reconstruction where needed), shoulder widening where feasible, drainage improvements, guardrail installation and replacement, turn lane improvements, and a roundabout on Kōloa Road at Ala Kalanikaumaka, which was formerly a high crash location for the County.
 - King Kaumuali'i Elementary Safe Routes to School (SRTS): This 100% federally funded SRTS project constructed sidewalks and crosswalks on Hanamā'ulu Road and 'Ākuli Street.
- Construction is underway on the following projects:
 - Kawaihau Road, Hau'a'ala Road, Mailihuna Road Complete Street and Safety Improvements; Federal Aid Project, 80% Federal, 20% County: This project includes a roundabout at the 5-way intersection of the three project roadways, sidewalks, improved crosswalks, paved shoulders, and other features, which will improve safety and mobility for road users in this area, including students traveling to and from Kapa'a High School, Kapa'a Elementary School, and St. Catherine's School. The construction of the project is largely complete, with a handful of minor remaining items, including finishing areas where utility poles have yet to be moved by the utility companies.
 - Lydgate-Kapa'a Phase D; Federal Aid Project with 100% Federal funding: This project extends Ke Ala Hele Makalae from Papaloa Road to the vacant lot north of the Kaua'i Beach Boy. The primary path connection is now complete and open, making Ke Ala Hele Makalae continuous between Lydgate Park and Palikū (Donkey) Beach, except for the segment in front of the vacant lot on Aleka Loop; however, that segment has an existing dirt road that path users can use. The remaining work on this project includes punch list work on the path connection and completion of a trailhead adjacent to Kūhiō Highway.
 - Olohena Road (Route 581) Improvements, Federal Aid Project, 80% Federal, 20% County: This project will resurface (and reconstruct where needed) Olohena Road

- between Ka‘apuni Road and Kāmalū Road, adding paved shoulders where feasible, and reconfigure the oddly-shaped intersection of Olohena Road and Ka‘apuni Road. Construction started in September 2023.
- Puhi Road Rehabilitation Phase 2 (Kaneka Street to Haleukana Street), Federal Aid Project, 80% Federal, 20% County: This project includes reconstructing Puhi Road with a stronger pavement section to support industrial traffic, as well as sidewalks, bike lanes, and parking improvements. Thanks to additional federal funding allocated to the County of Kaua‘i from the Infrastructure Investment Jobs Act passed by Congress in 2021, this project was moved up on the STIP from federal fiscal year (FFY) 2026 to FFY 2022. This represents a successful effort by Engineering Division staff to get this project “shovel ready”, allowing the County to take advantage when federal funds became available. The contractor is mobilizing for construction to start in October 2023.
 - Kōloa Elementary Safe Routes to School: This 100% federally funded SRTS project includes sidewalks, bike lanes, and other improvements on Po‘ipū Road and Pa‘anau Road near Kōloa Elementary School. Most of the sidewalks have been completed on this project. Crosswalk improvements, paving, striping, and major punch list items are anticipated to be completed in October 2022.
 - Waimea Levee Repair: This project is repairing and upgrading levee equipment near Ala Wai Road in Waimea. The new sluice gates have been installed; the remaining work is placement of the new pump station. Completion is anticipated in December 2023.
- Planning and design are completed for the following projects, so these projects will be headed to construction soon:
 - ‘Aliomanu Road Repair: This project is intended to reconstruct ‘Aliomanu Road to repair damage due to erosion from wave action. The contract with the construction contractor has been executed, but the work has not started because are waiting for a a right of entry agreement from the Department of Hawaiian Homelands. Construction is anticipated to start in November 2023 and completed by September 2024.
 - Hanapēpē Bridge Repairs, Federal Aid Project: This project will repair spalling concrete, add structural support to the deck, and repair the existing elevated pedestrian walkway of the historic 1911 bridge. Bidding for this project is anticipated to take place in fall 2023, with construction starting soon in early 2024.
 - Kīpū Bridge Repair: This project will conduct structural repairs to the existing bridge on Kīpū Road over Hulē‘ia Stream. Bidding for this project is anticipated to take place in early 2023.
 - Kōloa Bridge Repair: This project will conduct structural repairs to the existing bridge on Kōloa Road over Waikomo Stream. Bidding for this project is anticipated to take place in fall 2023, with construction starting soon in late 2023 or early 2024.
 - Planning and design are underway for the following projects:
 - Hanapēpē Road Resurfacing: Project includes resurfacing and construction of sidewalks/walkways. Environmental permitting is complete. Final design by the consultant (AECOM) is underway; we have received the 60% plans for review.
 - Island Wide Bus Stop Pedestrian Access: This project is funded by the Statewide Planning and Research Grant Program to develop conceptual plans and preliminary cost estimates to construct pedestrian access to existing bus stops. Procurement for the planning consultant will begin soon.

- Kālepa Street, Nuhou Street, Kaneka Street, and Pikake Street Restriping: This project proposes to restripe these streets to convert from four lane undivided to two lanes with center turn lanes and buffered bicycle lanes, after resurfacing by Roads Division. This project is being designed in house, but staffing shortages have delayed the development of plans. There is currently no timeline for completion, although this project continues to be an important project. Kaneka Street was paved in August 2021, with temporary striping in place at this time.
- Kanaele Road Slope Stabilization: This project will stabilize slopes along Kanaele Road that have subsided over the years. Design is underway by the consultant. This project has been on hold for a while, due to staffing shortages for project management staff and other projects with higher priority.
- Kawaihau Road Improvements: This proposed Federal Aid project includes pavement resurfacing and reconstruction, possible shoulder widening, and pedestrian and bicycle facility improvements between Hau‘a‘ala Road and Ka‘apuni Road. Public workshops to develop the conceptual design were held in March 2023. The consultant is currently working on the 30% plans and environmental permitting.
- Kekaha Road Improvements: This proposed Federal Aid project includes pavement resurfacing and reconstruction, as well as pedestrian and bicycle facility improvements on for the entire lengths of Kekaha Road and ‘Akialoa Road, connecting to Kaumuali‘i Highway at both ends of the project. Public workshops to develop the conceptual design were held in February 2023. The consultant is currently working on the 30% plans and environmental permitting.
- Kīlauea Road and Kolo Road (Route 562) Resurfacing and Multi-Modal Access: This project includes pavement resurfacing and reconstruction of portions of Kolo Road and Kīlauea Road, two mini-roundabouts at the intersections of Kīlauea Road with Kolo Road and Keneke Street, and improved pedestrian facilities to provide access to the Kīlauea National Wildlife Refuge. A portion of the project is funded by the Federal Lands Access Program (FLAP), which also means that the Federal Highway Administration (FHWA) Central Federal Lands (CFL) Division is managing the design of the project , through their consultant. Other funding will be provided by Federal Aid funds on the STIP and a County match. FHWA-CFL’s consultant is currently working on final design and permitting, with construction anticipated to start in 2024.
- Kukui Street and Olohena Road (Route 581) Improvements, Federal Aid Project: This project will resurface (and reconstruct where needed) this collector road from Kūhiō Highway to the Kapa‘a Bypass, add paved shoulders or bicycle lanes where feasible, install sidewalks in some areas, and construct a roundabout at the intersection of Olohena Road, Lehua Street, and Kahau Road. Conceptual design has been completed; environmental permitting and final design was started before this project was split out from the Olohena Road Improvements Project. This project is currently on hold until the Olohena Road project construction is in full swing.
- Moi Road Sidewalks: This project will add a sidewalk on Moi Road between Hanapēpē Road and Kane Road. This project is being designed in house and the design is in final review. This project has been delayed due to staffing shortages within Engineering Division.
- Niumalu Bridge Replacement: The consultant is working on producing the final plans for this project.
- Po‘ipū Road Multimodal Improvements, Federal Aid Project STP 0520(004), 80% Federal, 20% County: A public design charrette completed in May 2013 proposed

roundabouts, sidewalks, bicycle lanes, improved crosswalks, bus stops, turn lanes, and raised medians on Po'ipū Road. 90% plans are currently under review, with construction anticipated to start in late 2024. As discussed below, this project is being funded by a RAISE Grant from the United States Department of Transportation.

- Repair of Anahola Landing Bridge, Ākulikuli Bridge #2, and Puhi Ditch (Kawaihau Road) Bridge: This project will repair or replace these bridges, all found to be structurally deficient during bridge inspections in 2021. The County's consultant is currently working on the designs for all three bridges. Based on the complexity of the design and environmental permitting for each bridge, the current projected design completion dates for each bridge are as follows:
 - ◆ Kawaihau Road Bridge (formerly called Puhi Ditch Bridge but actually goes over an unnamed stream) – 12/20/23
 - ◆ Ākulikuli Bridge #2 (Kahuna Road over an unnamed stream) – 5/3/24
 - ◆ Anahola Landing Bridge (Anahola Road over Olokauha Stream) – 11/15/24
- Safe Routes to School – Kalāheo Elementary School: This project will reconstruct a sidewalk on Pu'u Road and add a new sidewalk on Hokua Road. 30% plans have been submitted and reviewed; a contract amendment is currently in process to proceed toward final design.
- Waimea River Ford Crossing: Funds were received from Hawai'i State DLNR for design and permitting/environmental work to install a concrete ford crossing downstream of the Waimea Swinging Bridge. Final design is underway, but citizen concerns about the design of the project have delayed completion.
- West Side Shared Use Path: This project is funded by the Statewide Planning and Research Grant Program to develop preliminary plans, preliminary cost estimate, and environmental documentation for a shared use path between Waimea and Kekaha, and to develop concept plans and a preliminary cost estimate for a shared use path from Hanapēpē to Salt Pond Beach Park. Notice to proceed has been issued and planning work is underway.

Bridge Inspections

Engineering Division has two programs for inspecting existing bridges and culverts under County Jurisdiction.

- Federal Aid Bridge Inspections and Appraisals: Bridges over 20 feet long are considered by the Federal Highway Administration to be federal aid bridges and therefore federal funding is provided to inspect these bridges on a biannual basis. These bridge inspections are funded with 80% federal funds and 20% County funds.
 - Federal Fiscal Year 2022: Bridge inspections were completed by our consultant in September 2022.
 - Engineering Division is working with Roads Division to have them perform repairs identified in past inspection reports. Larger repair projects are being developed using a consultant.
 - Federal Fiscal Year 2024: Funds for the next round of inspections will be obligated sometime after the new federal fiscal year starts on October 1, 2024.
- Using funding allocated from the General Excise Tax revenues, in fiscal year 2021 Engineering Division kicked off a long-planned effort to inspect minor bridges under County Jurisdiction. 50 bridges were inspected in January 2021; most bridges had not had a comprehensive inspection in many years. Load rating reports were completed in August

2021, and revised weight limits will be posted for many of the bridges in September and October 2021. Engineering Division anticipates scheduling inspection for these minor bridges every 4 to 5 years.

IV. BUDGET

General Fund – Fiscal Year Ending June 30, 2023

Division/Expense Type	Budget
Engineering	\$ 2,574,367
Employee & Related	\$ 2,462,170
Training, Travel	\$ 9,350
Services, Dues, Consult., Grants	\$ 63,846
R&M, Facilities, & Equip.	\$ 31,001
Claims, Rental, Loans, Debt Svc.	\$ 8,000

V. ACCOMPLISHMENTS/EVALUATION

ACCOMPLISHMENTS

- In August 2022, the County was approved for a \$24.8M Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant from the United States Department of Transportation (USDOT) for the Po’ipū Road Safety and Mobility project. This project will add roundabouts, sidewalks, bicycle lanes, improved crosswalks, bus stops, turn lanes, and raised medians, improving safety and mobility for people traveling by all transportation modes, both in the town of Koloa where many residents live, and in Po’ipū , Kaua’i’s largest resort area. Funding the Po’ipū Road project through this grant will free up federal funding for other County federal aid projects; therefore, this grant ultimately helps improve transportation for the entire island. The project is in the final design phase, with construction anticipated to start by late 2024.
- In January 2023 the Federal Emergency Management Agency (FEMA) verified that the County of Kaua’i met the criteria for a Class 8 rating for the National Flood Insurance Program (NFIP) Community Rating System (CRS). This rating qualifies the County of Kaua’i for a 10 percent discount on the cost of flood insurance premiums for most NFIP policies issued or renewed on or after April 1, 2023, to reflect the reduced flood risk resulting from the community’s efforts that address the goals of the program.

EVALUATION

- Construction plans for major development or other agency projects reviewed during Fiscal Year 2023: 41 plan sets, with an average review time of 66 days:
 - Construction plan review was finalized for the following large subdivisions, developments, or other agency projects:
 - Ahukini Makai Subdivision (S-2005-41)
 - Ka Ua Noe O Kōloa Phase 1A and 1B Fine Grading and Construction Plans

- Ka Ua Noe O Kōloa Roadway Improvements
 - Construction plan review is ongoing for the following large subdivisions or developments:
 - Ahukini Trunk Sewer Line
 - Kōloa Village - Residential Site Construction Plans
 - Kauanoē O Kōloa Phase 2
 - Kukui'ula NTBG Tram Road
 - Kukui'ula Parcel A2F2F3
 - Kukui'ula Parcel HH Subdivision (S-2022-06)
 - Kukui'ula Parcel J1A Subdivision (S-2023-04)
 - Rice Street Apartments Workforce Housing
 - Timbers Kaua'i Townhomes Phase II Buildings D&E and Mass Grading
 - Uahi Ridge Housing, Phase I
 - Waiola Subdivision Phase III
- Construction Section is currently inspecting the following large subdivisions, developments, or other agency projects:
 - HDOT Kūhiō Highway Short Term Improvements
 - Hōkūala Subdivision 4
 - Kaua'i High School Gymnasium
 - Ka Ua Noe O Kōloa Mass Grading
 - Ka Ua Noe O Kōloa Phase 1A and 1B Fine Grading and Construction Plans
 - Kukui'ula Parcel I Subdivision
 - Kukui'ula Manuhonuhonu Borrow Site, phase 3
 - Prince Golf Course Renovation, Princeville
 - Waiola Subdivision, Phase I (S-2009-13)
 - Waiola Subdivision, Phase II (S-2009-14)
- Construction Section completed inspection of the following major subdivisions or projects:
 - Department of Water Hanapēpē Road 6-Inch Main Replacement
 - Department of Water Kaunualii Highway 16-inch waterline – 'Ele'ele
 - Hōkūlei Village Phase II – Road A (connection to Nuhou/Kaneka roundabout)
 - Kōloa Community Sewer Main
 - Kukui'ula Parcel CC-West Phase II (S-2020-xx)
 - Kukui'ula Kāhela (Parcel H) Subdivision (S-2016-02)
 - Kūlana Subdivision restart (S-99-49) (three different permits)
- The following numbers of permits were issued during FY2023:
 - Grading Permits
 - Issued: 22
 - Road Permits
 - Issued: 21
 - Driveway Permits
 - Issued: 73

ROADS DIVISION

Bryson Vivas, Executive Assistant to the Mayor

I. MISSION STATEMENT

To maintain County roadways in a manner that will safely convey vehicular, pedestrian and multi modal-traffic, maintain drainage facilities and levees, and assist other agencies and departments in special situations and emergencies.

II. DIVISION GOALS

- A. Maintain County roadways and bridges for safe use of the public.
- B. Provide a safe work environment for employees.
- C. Maintain our levees to meet the guidelines set forth by the Army Corps of Engineers.
- D. Use Division resources efficiently and effectively.
- E. Improve internal and public communication.
- F. Instill pride in the jobs that we perform.
- G. Respond to natural or manmade emergencies on our road system as quickly, efficiently, and safely as possible.

III. PROGRAM DESCRIPTION

The Roads Division is composed of two sections: Administrative and Field Operations. Field Operations consists of the following branches: three (3) District Baseyards, Equipment Logistics Mobilization, Bridge Maintenance and Construction, and Traffic Signs & Markings. The Roads Division maintains approximately 310.1 miles of roads: 307.9 miles paved and 2.2 miles unpaved. Private roads are not maintained by the Roads Division.

The Roads Division performs maintenance of road pavements, sidewalks, grass shoulders, drainage systems, guardrails, and signs. The duties of the Roads Division field worker consist of installing pothole patch material, repairing pavement edges, cutting vegetation, trimming trees and bushes and grading of road shoulders. Workers are also specialized in repairing bridges, culverts, sidewalks, and curbs and installing new pavement markings, signs, and guardrails. The Roads Division cleans, maintains, and repairs both the Waimea Levee and the Hanapepe Levee. The Roads Division crews also respond to natural disasters and manmade emergencies for the health and safety of the public. The Roads Division supports and coordinates work operations with various Divisions and Departments within the County of Kauai, which include Solid Waste Division, Parks Department, Kauai Police Department, Kauai Fire Department, and the Mayor's Office. The Roads Division also funds and manages various construction projects including guardrail installation and large tree removal.

HIGHLIGHTS

- Assisted Solid Waste Division with mobilization of Division equipment. Provided additional labor, equipment and trucking support when requested.
- Assisted Parks Department with the biannual parking lots maintenance and repair in the Hanalei and Wainiha Districts.
- Assisted Kauai Fire Department with heavy equipment to allow access to a burning structure in the Wailua Homesteads
- Assisted various Departments with cones, signs, and traffic control support for community events.
- Filled vacant Administrative and Field Operation positions with more positions anticipated to be filled during next fiscal year.
 - Administrative Assistant
 - Senior Project Manager
 - Field Operations Clerk
 - Equipment Logistics Crew Leader
 - Equipment Operator IV
 - Equipment Operator III
 - Equipment Operator II (2 positions)
 - Equipment Operator I
 - Tractor Mower Operator
 - Laborer I (6 positions)

IV. BUDGET

Fiscal Year Ending June 30, 2023

Division/Expense Type	Budget	Actual + Encumbrances	\$ Variance	% Variance
Roads Admin Salary	126,432	11,538.00	114,894	90.1%
Streetlights	500,000	498,763.52	1,236.48	0.25%
Baseyard Salaries	3,838,263	3,428,290.78	409,972.22	10.7%
Baseyard Other Supplies	897,500	642,247.88	255,252.12	28.4%
GF Account Salaries	70,000	24,103.02	45,896.98	65.6%
GF Account Other Services	70,000	84,467.58	-14,467.58	-20.7%
GF Account Other Supplies	445,632	275,991.38	169,640.62	38.1%

PERSONNEL

Administrative Staff

- (1) Highway Maintenance and Operations Manager
- (1) Senior Project Manager
- (1) Administrative Assistant

Field Operations

- (3) District Road Overseer
- (1) Program Support Technician II
- (2) Field Operations Clerk

- (1) Highway Construction & Maintenance Supervisor II
 - (6) Highway Construction & Maintenance Supervisor I
 - (1) Equipment Operator IV
 - (6) Equipment Operator III (1 vacant)
 - (12) Equipment Operator II
 - (4) Equipment Operator I (1 vacant)
 - (5) Tractor Mower Operator
 - (2) Labor Working Supervisor (1 vacant)
 - (17) Laborer I and II (5 vacant)
 - (1) Bridge Maintenance Worker II
 - (2) Bridge Maintenance Worker I
 - (1) Equipment Logistics Crew Leader
 - (3) Equipment Logistics Crew Operator (1 vacant)
 - (1) Traffic Signs and Marking Supervisor
 - (1) Traffic Signs and Marking Leader
 - (1) Traffic Sign Painter
 - (1) Traffic Marker
 - (1) Traffic Signs and Marking Helper (1 vacant)
- Total = 75 positions, 10 vacant positions

V. ACCOMPLISHMENTS/EVALUATION

- Located and repaired an existing drainage inlet on Kuai Road to eliminate nuisance flooding in the area.
- Constructed a new sidewalk approach and installed a concrete swale at the end of Nana Pali Road to improve pedestrian connectivity and correct drainage issues.
- Demolished, paved, and striped existing planter islands within the KPD Headquarters Parking Lot to increase the number of parking stalls. Installed curbing, gravel, and concrete blocks to create a pad for KPD storage containers.
- Completed repairs and maintenance work on various County bridges. Initiated the bridge maintenance and repair project with direction from the Engineering Division.
- Performed extensive maintenance and cleaning of the two Levee systems in preparation for the USACE annual inspections. Excellent coordination and effort of the Hanapepe Baseyard Levee and Road crews contributed to a productive inspection.
- Annual cleaning of Maluhia Road and Tunnel of Trees completed in August 2022.
- Construction of the new Hanalei Base Yard.
- On-going training and HR certification for Roads Division employees on equipment and trucks. Appropriate training on various equipment allows managers and supervisors to plan work efficiently with minimal disruption to daily operations.

DIVISION of SOLID WASTE MANAGEMENT

Allison Fraley, Environmental Services Manager

- I. **MISSION STATEMENT:** To help maintain public health, safety, and the environment by providing reliable programs to properly manage municipal solid waste (MSW) for the Island of Kauaʻi, and maximize waste diversion on Kauaʻi by providing cost-effective, convenient, and reliable waste diversion opportunities to Kauaʻi residents through source reduction, reuse, and recycling programs.

- II. **DIVISION GOALS:**
 - A. Maintain a balance of reliability, efficiency, and cost effectiveness for County solid waste disposal and diversion programs.
 - B. Identify and implement appropriate integrated programs to divert solid waste from the County landfill.
 - C. Conduct County solid waste management programs and operations in accordance with applicable government regulations.
 - D. Further maximize waste diversion by promoting all existing waste diversion opportunities to the residential and commercial sectors as appropriate. Provide technical assistance to the commercial sector and private recyclers. Provide public education in schools and to the community at large.
 - E. Keep abreast of new technologies to maintain a modern and cost-effective solid waste management system for the Island of Kauaʻi.

DUTY AND FUNCTION.

The County of Kauaʻi Division of Solid Waste Management (DSWM) plans and implements solid waste collection and disposal operations, and integrated solid waste management (ISWM) programs within the scope of Departmental and Divisional policies and applicable Hawaiʻi State regulations. ISWM programs incorporate modern concepts of diversion and disposal to responsibly manage solid waste on the island of Kauaʻi.

III. DESCRIPTION OF DSWM PROGRAMS

Administration

The DSWM administrative section oversees solid waste management operations and integrated program activities.

A. Objective

Provide administrative support to further progress towards achieving DSWM goals.

B. Highlights

Tasks include: (1) develop and administer operating and capital improvement project (CIP) budgets, (2) develop and administer policies and standard operating procedures for DSWM programs and employees, (3) maintain appropriate records, (4) develop and maintain systems to compile data, information, and monitor progress on programs/ projects/ various contracts and agreements, (5) regulatory compliance, (6) inter-governmental/public relations.

Solid Waste Management Operations

This Section oversees the day-to-day operation of the County's various solid waste management facilities and operations.

A. Objectives.

- Provide reliable and sanitary disposal and diversion services to manage solid waste.
- Operate facilities within regulatory requirements.
- Maintain staff training and safety regulations.

B. Highlights

County Landfill Operations

In November of 2021, the County entered into a new professional services contract with Geosyntec Consultants to provide technical assistance, monitoring, special waste management, and reporting for Kekaha Landfill. The contract term is 3 years with two one-year options to extend. Geosyntec was also contracted for another 3-year term to operate, monitor, maintain and report on the Gas Collection Control System at Kekaha Landfill. This contract also has two one-year options to extend.

The landfill continued to use the Paua Valley site as daily soil cover resource under an interim agreement with the State Agribusiness Development Corporation (ADC) and Kekaha Agricultural Association (KAA). At the end of November 2021, a five-year agreement with options to extend was executed by the parties. The NPDES permit initiated by DPW Engineering was utilized to comply with DOH requirements.

KAA has started operations to remove rocks from the Paua site, but they continue to be an operational issue that has affected our NPDES BMP compliance. We will be working with KAA in early 2024 to discuss rock removal and impacts to our BMP installations at the site.

Disposal Quantities and Airspace

The Kekaha Landfill Operation accepted and buried 88,242 tons of municipal solid waste during Fiscal Year 2023. This figure includes solid waste from residential and commercial sources. This is a decrease of 1,999 tons from the previous fiscal year.

The Annual Operating Report for Kekaha Landfill prepared by Geosyntec showed that the landfill is now scheduled to reach capacity in May of 2027, and increase of 7 months longer the estimate in the previous report. The increased capacity is attributed to a decrease in waste

acceptance, improved compaction effort, waste settlement, and decreased cover soil usage. These landfill life estimates were made based on topographic surveys of the landfill performed by RM Towill.

The Solid Waste Division is continuing its work with our consultant Tetra Tech to develop the design for a vertical expansion of Kekaha Landfill which will add approximately 3 years of landfill life.

Landfill Construction Projects

No large-scale projects were conducted in FY 23. Small repairs requiring fusion of 8- and 12-inch pipes were implemented to improve the functioning of the gas collection systems.

Refuse Transfer Stations (RTS)

Table 1, below, provides tonnage of mixed solid waste received and transported to the landfill during the reporting period and shows the change in quantity transported compared to the prior Fiscal Year.

Table 1 RTS Location	Total MSW Received FY23 (Tons)	Tonnage Change from FY22
Hanapepe	8,172	-2,320
Līhu‘e	15,112	-1,124
Kapa‘a	9,850	+1,011
Hanalei	5,984	-193

- There were many equipment failures this fiscal year which resulted in facility closures and overtime. The auto shop has been understaffed which exacerbated this situation.
- The DOH Permits for RTSs are for five years and expire on September 4, 2022. The DSWM submitted applications for permit renewals in February of 2022. At this time, we have not received the approved DOH permits. This does not impact operations or other services at our RTS as per DOH rules we can continue operating as outlined on our renewal request until we receive further instruction from DOH.
- Continuing to conduct Best Management Practices (BMP) for National Pollutant Discharge Elimination System (NPDES) at the Refuse Transfer Stations. Perform and log weekly site inspections. Conducting in-house staff training for BMPs. Contracted with Element Environmental (E2) to perform storm water testing and assist with NPDES compliance at all the transfer station sites. E2’s services were also expanded to our Paua site to assist the Solid Waste Division with oversight for that location as well.
- In FY 23 the permitting process for RTS improvements started along with initial negotiations for CM of the project. We anticipate the construction contract to be let around the new calendar year or shortly thereafter.
- Finalized Standard Operating Procedures (SOP) for all Transfer Station operations, Solid Waste Equipment Training SOP, Equipment Preventative Maintenance SOP, Personal Protective Equipment SOP. Next step is to consult with UPW before implementation.

Island-Wide Curbside Refuse Collection.

Automated Refuse Collection. TAs of June 30, 2023, the refuse collection program had 22,350 residential collection accounts and 494 business accounts, including Transient Vacation Rentals. Customer choice of cart size includes 96-gallon and 64-gallon options. This operation is supplemented by a Modified Manual Refuse Collection crew servicing customers on Mondays and Fridays, throughout the island from Kekaha to Hā'ena. The Modified Manual Collection crew utilizes the small rear loader truck fitted with a cart tipper and three solid waste workers (driver plus two men to position carts) to service approximately 759 carts per week.

Refuse collection performed at County facilities with the Semi-Automated Refuse Collection operation, consisting of a one-man operation using the single axel side-loader refuse collection truck and refuse carts. The weekly collection route includes pickup of residential customers not accessible by the larger double axel side loader refuse collection truck. A two-man crew is utilized to provide service County bus stops.

Heavy Equipment Purchases Completed in FY 2023

Grader for Landfill

(2) Automated Refuse Trucks

(2) Modified Rear Loader Refuse Trucks

Backhoe for Kapa'a RTS

Waste Diversion Programs

These programs are implemented to manage materials that are prohibited or recyclable from the landfill.

A. Objectives

- Provide the public with reliable and convenient options to divert and recycle materials and manage special solid waste.
- Decrease the volume of recyclable solid waste landfilled.

B. Highlights

- Pay As You Throw (PAYT) In July 2015, Kaua'i became the first County in the State to institute a "Pay As You Throw" variable rate for refuse collection ordinance. Kaua'i is the only County with such a program. Under this rate structure, customers can get weekly refuse collection and chose a 64-gallon refuse cart for \$10 per month, or a 96-gallon refuse cart for \$18 per month. If customers opt out of refuse service, the base assessment still applies at \$6 per dwelling per month; this base fee is imbedded in the \$10 and \$18 collections fees and is not in addition to these fees.
 - The RRCA revenue for FY 23 was approximately \$3.8 million for 22,350 parcels. The RRCA program revenues have increased by about \$100,000 from the prior year.

- The RRCA fees are collected through Real Property Tax Collection, which is a massive administrative assistance to the division. However, the Billing Section of DSWM manages all other aspects of the RRCA program including customer notifications, education, commencement of service, changes in service, cancellation of service, cart deliveries, retrievals, repairs and switches, and manual refunds.
 - Revenues from Transient Vacation Rentals have increased exponentially with the reopening of the state and county along with travel restrictions being lifted.
 - Kaua'i Resource Center (KRC) HI5 Recycling Operations
 - The County administers Contract 9766 for a CRC Concession at the Kaua'i Resource Center in Līhu'e. Under the Contract, Reynold's Recycling pays the County \$208 per month to rent the KRC space and covers annual property taxes. Hours of operation are Monday through Saturday; open 9 am to 5 pm with a lunch break from noon to 1:30pm.
 - The contract commenced on April 4, 2019, and the original term was for 3-years with the potential to extend. In FY22, the County amended the Contract to extend the service period for 3 years under the same terms and conditions. The new contract end date is April 4, 2025.
 - During FY23, the total number of customers serviced was 16,715 and the total number of redeemable containers was as follows: 8,546,881 aluminum cans, 1,411,852 glass bottles, 4,418,507 plastic containers and 91,634 bimetal containers, for a total of 14,468,921 containers. (See Deposit Beverage Container (DBC) section for information on other HI5 programs.)
 - Processing of Commercially Generated Recyclables
 - Entered into the third year of the Sole Source contract with Garden Isle Disposal (GID) to accept and process commercially generated recyclables at their facility. GID is the only permitted recycling facility on island with the capacity to bale and ship recyclable materials to market. The Contract provides a recycling drop point for non-HI5 recyclables that are self-hauled by businesses, as well as HI5 containers generated by Certified Redemption Centers. This Contract allows businesses to adopt recycling programs and comply with the landfill restrictions on commercial cardboard. It also enables Certified Redemption Centers throughout the island to operate.
 - Contract 212818 commenced on August 1, 2020, and has a 5-year term.
 - Markets for recyclables continue to recover which is good news for the contractor who owns and markets the materials recovered through the program.
 - Tonnages were as follows:
 - Corrugated Cardboard: 2,796 (up 150 tons from last FY)
 - Mixed Paper: 18 (down 1 ton from last FY)
 - Non-HI5 Glass: 331 tons (up 126 tons from last FY)
 - Aluminum: 132 tons (up 1 ton from last FY)
 - HI5 Glass: 777 tons (down 113 tons from last FY)
 - HI5 Plastic: 281 tons (down 9 tons from last FY)
 - Non-HI5 Plastic: .43tons (down .01 ton from last FY)
- Annual Total – 4335 tons up 140 tons from last FY)**

- Home Composting
 - 328 Earth Machine Home Composting Bins were distributed to Kauaʻi residents this FY free of charge. An increase of 11 units than the year before.
 - The main distribution point is at the Kauaʻi Resource Center. Residents watch a brief training video online to obtain a free bin. An addendum to the video has been uploaded to assist residents with common issues with bin setup and proper compost management. We no longer require residents to watch the video in our office, but an appointment must be made over the phone or by email to obtain the resident's contact information for surveying later (discussed below). Bins are distributed from 8:00 am to 3:30 pm Monday through Friday by appointment. Bins are left at the front of the facility with the resident's name on it for pick up. While there are still residents who stop by unannounced requesting a bin, we do our best to accommodate these residents while letting them know to spread the word that their friends and neighbors should make an appointment to pick-up a bin.
 - The County of Kauai has partnered with two north shore non-profit organizations to distribute compost bins starting in May of 2023. The distribution is through the Aina Hookupo O Kilauea and the Hanalei Initiative.
 - A survey was conducted in FY 22 and sent to over 1,049 valid emails collected through the Home Composting program. The response rate was lower than in previous years, but still significant at 23.9%. With 90% of the respondents reporting, they were happy with the functions of the Earth Machine Home Composting bin and 88% rated the system good or excellent. 86.2% said County education was good or excellent, while 93% think we should invest tax dollars in more bins.
 - Based on the latest survey, each bin diverts an estimated average of 1,098 lbs. of food and yard waste per year, only half the amount from previous surveys. This could be due to new users' hesitancy to put as much material as previous users. Our specialists will endeavor to educate customers on the full use of their bins to bring material diversion back up to where it was in the past. Even with the reduction in diversion, the Earth Machine Home Composter is our most economical waste diversion program at an estimated cost of \$7.28 per ton over the 10-year life of the bin. This program requires no hauling or processing and is by far our least expensive waste diversion program.

- Kauaʻi Recycles Residential Recycling Program
 - Continued to manage Contract 9748 with Garden Isle Disposal (GID). Under this contract, the County pays a flat monthly fee for rental and maintenance of recycling drop bins, hauling of the bins, cleaning of the sites, and processing of the recyclables. The contract has a 5-year term and ends 12/14/23. A new sole source contract will be negotiated next FY.
 - There are eight (8) drop sites located throughout the island for residents to deposit source separated recyclables into the following categories:
 - Aluminum food/beverage cans, foil plates/pans, steel food cans.
 - Glass bottles and jars,
 - Corrugated cardboard
 - #1 & #2 plastic bottles and jars (no trays or clamshells)
 - Mixed paper including junk mail, food boxes, magazines, phone books, newspaper, office paper, kraft paper bags, etc.

- Bins are hauled on a frequency that accommodates public use. Sites with heavy traffic such as Hanalei, Kapaʻa, and Līhuʻe are hauled more than 8 times per week, and sites with lower traffic are hauled approximately every other day. The County tracks overflow of bins, illegal dumping, and other issues and notifies the Contractor of any problems.
- Markets for FY 23 experienced decreasing commodity market.
- The recycling rate is down from last year and has significantly dropped for glass for the second year in a row. The reason for this drop has not been determined. Annual tonnages for each recyclable collected under the program are as follows:
 - Corrugated cardboard: 1032 tons (up 51 tons from last FY)
 - Mixed Paper: 159 tons (down 16 tons from last FY)
 - Glass: 267 tons (down 57 tons from last FY)
 - Aluminum: 0.23 tons (down .13 tons from last FY)
 - Steel: 85 tons (down 19 tons from last FY)
 - Plastic: 45 tons (down 1 ton from last FY)
 - County Programs: 55 tons (up 4 tons from last FY)

Annual Total – 1,644 (down 36 tons from last FY)
- Advance Disposal Fee (ADF) Glass Recovery and Recycling Contract
 - Allocated State funding for Kauaʻi is inadequate to operate the programs required for County reimbursement. The necessary programs are very expensive to operate with little impact on waste diversion. Funds declined by Kauaʻi go back to the pool of monies used by the other Counties for use in their ADF programs.
 - Garden Isle Disposal made the business decision to stop crushing glass at their Līhuʻe facility. Now all glass collected on Kauai is shipped to the mainland for reprocessing into new material as the process of converting the glass to an aggregate was too space intensive for our Contractor to continue producing.
- Deposit Beverage Container (DBC) Program
 - **Overview:** The State Department of Health provided annual grant funding under ASO Log 19-024 Modification 5. The total program budget was \$330,507.01. The contract supports local administration of the Deposit Beverage Container (DBC) program. The contract covers essential services including the funding of two County staff positions. These positions monitor retailers who charge the deposit fee to customers, Certified Redemption Centers (CRC's) who pay redemption fees to customers, the contracting of two mobile CRC's in Kōloa and Kekaha, the lease of space for a CRC in Kekaha, educational outreach, technical recycling assistance, and provide administrative functions.
 - **Duties:** HI5 Recycling Specialists perform island-wide compliance inspections of retail outlets selling beverage containers with a quota of 20 retailers per month. They also conduct 4 Certified Redemption Center (CRC) inspections per month. They field customer questions and complaints on the HI5 program and provide technical recycling assistance to businesses upon request.
 - **Redemption centers:** There were 5 CRC operations throughout the island during FY23. Two were privately operated and three were contracted with the County. Due to the COVID-19 pandemic, Reynold's Recycling put their plans on hold for reopening a Kapaʻa location. The KRC Reynold's site in Līhuʻe continues to serve the community for six out of seven days a week.

- Under Contract 210917, Kaua'i Community Recycling Services (KCRS) operates mobile collection events 2 days per week each in Kekaha and Kōloa at a State subsidized rate of \$480.00 per event.
 - The KCRS Kekaha Mobile Redemption Center site operated at the Kekaha Mill site which is leased from the State Agribusiness Development Corporation. The County continues to lease the space for \$500 a month that is paid through the State DBC contract.
 - KCRS serviced 5,775 customers and collected 6,609,130 containers at the Kekaha Mobile Redemption Center. Total containers by material type included 3,773,695 aluminum cans, 527,040 glass bottles, 2,209,066 plastic bottles and 22,895 bimetal containers.
 - At the Kōloa Mobile Redemption Center, KCRS serviced 6,672 customers collecting a total of 6,618,453 containers. Total containers by material type included 4,070,640 aluminum cans, 503,854 glass bottles, 1,991,746 plastic bottles and 52,213 bimetal containers.
 - Weather caused several CRC closures during the year. Overall, there were closures or decreased services for eighteen days in FY 2023.
 - **Educational Outreach:** Throughout FY23, twenty-three presentations were conducted, reaching a total of 651 students. Students were in preschool through 8th grade and several presentations were for adults. HI5 program information is the focus of these presentations and slight modifications are made for each presentation based on the age of the students and the needs of the classes.
 - **Other programs:** We continued to manage various HI-5 recycling bin programs. These programs include: HI5 bins for all County parks and neighborhood centers, HI5 bins for schools or non-profits to be used for their HI5 collection activities, bins for use in business break rooms, HI5 bins for retailers and HI5 trash and compost bins that can be loaned out for special events. Twenty-three events were conducted with 197 recycling bins and 170 trash cans utilized for short term use.
 - **Training:** Both Recycling Specialists completed a course in "Project Management Fundamentals" at Kaua'i Community College.
 - **Statistics:** According to the latest published State annual report, the statewide redemption rate for HI5 DBC recycling was 59.87% (FY 2022).
 - **Outlook:** Funding for FY 2024 was secured and the majority of the scope of services remains the same.
- **Household Hazardous Waste (HHW) Collections**
 - The County contracts for bi-annual HHW collections at 4 locations around the island. Collection events take place at the Anaina Hou Community Park in Kīlauea, Hanapēpē and Kapa'a base yards, and the Kaua'i Resource Center in Lihue.
 - In FY 23 one event was held on September 24 and 25 and a second event was held on March 25 and 26. Percent increases for FY 23 are significant when compared to FY22 as there was only one (1) collection event in FY 22. Hence, we experienced increases of 107% in Līhu'e, 67% in Hanapēpē, 85% in Kīlauea, and 68% Kapa'a.
 - In past years this program has diverted as much as 20 tons of household hazardous material from the landfill annually. For FY 23, we collected a total of 13.64 tons.

- Processing of Junk Vehicles, White Goods (Appliances), and Scrap Metal
 - Resource Recovery Solutions Operations (RRS) continued to provide service at the Puhi Metals Recycling Center under Contract 9718 (see below). Under this contract, 2,534.60 tons of metal was collected and processed including white goods, scrap metals and autos. RRS service includes removal of tires, batteries, oil, fuels, and other liquids, and the compaction and transport of metals to market as well as eWaste collection for shipment to Certified Recyclers who carry R2 or e-steward certifications, and the collection and processing of propane tanks from County Refuse Transfer Stations. The breakdown of items collected was as follows: 1,177 autos processed, receipt of 283 loads of scrap metals, acceptance, and processing of 4,935 large appliances without Freon, 3,012 large appliances containing Freon.

- Household Battery and Compact Fluorescent Bulb Recycling Program
 - The County hosts a residential battery and fluorescent bulb collection program at the Kaua'i Resource Center (KRC) in Līhu'e. Both are accepted Monday through Friday from 7:45 am to 4:15 pm. Materials collected through the program are regularly hauled offsite during the bi-annual Household Hazardous Waste (HHW) events.
 - Per the State permit, batteries are being accepted in 55-gallon plastic barrels in 3 separate categories:
 - Lithium batteries, common uses are electronics, cameras, computers
 - NiCad batteries rechargeable battery, common uses are hand-held tools
 - Alkaline (Dry Cell) general purpose household (9-volt, D, C, AA, AAA)
 - Contamination and un-taped 9-volt batteries continue to be an issue, as well as unauthorized use by businesses.
 - Bulbs are collected in cardboard boxes specifically created to house and hold tube bulbs. CFL's are collected in 5-gallon buckets.
 - All batteries and bulbs were hauled to Total Reclaim, Inc. In Seattle, WA for disposal.

- Plastic Bag Reduction Law
 - We continue to enforce the Ordinance based on customer and retailer complaints. In FY 23 there were no registered complaints regarding the use of banned plastic bags.

- Polystyrene Ban
 - Ordinance 1079 restricting the use and sale of Polystyrene foam food service containers was signed by Mayor Kawakami on September 15, 2020. The SW Division worked with County Attorneys to draft Administrative Rules associated with the legislation. The Ordinance goes into effect January 1, 2022. In FY 23 there were no registered complaints regarding the use of banned polystyrene.

- Mayor's Plastic Reduction Policy
 - Continue to promote the Mayor's Policy to Prohibit the Purchase, Use, or Distribution of Disposable Plastics on County Property which went into effect on 1/20/21.
 - We continue to educate the public on the policy and so far, we've received positive feedback on the overall policy though the exception for 20-ounce bottles or above has been a concern for the Division. We recommend meeting with the Mayor's Office to discuss modifying or removing this exemption.

- The Solid Waste Division greatly appreciates the work of the Parks Department who educates their users about the policies to ensure they are followed. Parks staff has been a major factor in the Policy's effectiveness.
- Electronics Recycling (eWaste Recycling)
 - The State Department of Health (DOH) awarded the County \$45,000.00 in grant funding for FY 2023. The Metals Recycling contract 9718 includes eWaste as a material to be managed by Resource Recovery Solutions at their Puhi Metals Recycling Facility. Contract 9718 is fully funded by the County without State grants.
 - In FY 23 Resource Recovery Solutions recycled approximately 114 tons of eWaste (14 tons more than FY22).
 - As part of the eWaste grant, the County held a an eWaste contest that included all County schools. \$4,000 in award monies, (ten 10 \$400.00 gift certificates) to area stores were provided to ten randomly selected students that recycled eWaste through Puhi Metals during the contest period.
 - RRS coordinates with Prudent IT- Tech Asset Recovery, Inc. In Ontario, CA to accept and process eWaste.
- Programs Operated at Refuse Transfer Stations and the Kekaha Landfill:
 - Limits on Cardboard, Metals, and Green Waste
 - Ordinance 902 was signed into law in August 2010, restricting the disposal of commercially generated loads that exceed 10 percent of the volume for corrugated cardboard, ferrous and non-ferrous metal, and green waste. The SWMD has developed and implemented policies and procedures for enforcement of this law. At this time, the focus is to educate haulers and generators about compliance instead of penalizing them. No loads were flagged as non-compliant at the landfill in FY23.
- Green Waste Diversion
 - The County accepts green waste at all Refuse Transfer Stations (RTS's) and contracts the processing of green waste with three State Permitted composting facilities. The County hauls green waste to these processors, who scale the material and are paid by the ton.
 - The County entered into a Sole Source Contract with Shredco for shredding green waste generated from Kekaha Landfill. The contract commenced on November 4, 2020 and has a 5-year term.
 - The County entered into contract with Heart & Soul Organics to weigh and shred green waste delivered from Hanalei, Kapa'a, and Lihu'e RTS. The contract commenced on April 19, 2021 and has a 3-year term.
 - The County entered into contract with Kauai Nursery and Landscaping to weigh and shred green waste delivered from Hanapepe RTS. The contract commenced on September 19, 2021 and has a 3-year term.
 - Green Waste collections at County facilities were as follows:
 - Hanalei Refuse RTS- 1,807 tons (increase of 197 tons from last FY)
 - Kapa'a RTS – 7,111 tons (increase of 1,956 tons from last FY)
 - Lihu'e RTS – 2,070 tons (decrease of 464 tons from last FY)
 - Hanapēpē RTS – 2,029 tons (decrease of 456 tons from last FY)

Kekaha Landfill – 753 tons (increase of 26 tons from last FY)
TOTAL – 13,770 tons (increase of 1,259 tons from last FY)

- Scrap Tire Recycling
 - Unitek Solvent Services, Inc is the current Contractor and agreed to a three-year term expiring August 2023.
 - In FY23, a total of 14,710 tires were collected at all RTS, the auto shop, and Kekaha Landfill by Unitek Solvent Services, Inc. The tires were containerized and shipped off-island where they were chipped into crumb rubber and burned for fuel.
 - This program provides customer convenience, increases recycling, and is critical in reducing illegal dumping of this item that is banned from disposal.

- White Goods and Scrap Metal Collection and Hauling
 - The County contracts with Green Earth Matters (GEM) to haul scrap metal from the various transfer station and white goods from the Kekaha landfill. Due to staffing shortages, a Solid Waste permit mod to add in scrap metal recycling at the Kekaha landfill has not been completed.
 - Total of 2,231.79 tons of scrap metal was hauled in FY 23.
 - This program provides customer convenience, increases recycling, and reduces illegal dumping of large items such as appliances.

- Propane Tank Recycling
 - Propane tanks are accepted at all refuse transfer stations but are restricted to 10 gallons or 40 lbs. due to State Department of Health Permitting, but the County will not be charged more if the contractor must pick these up from the transfer stations.
 - A total of 1,543 propane tanks were collected at RTSs and were recycled in FY 23 under contract 9718.

- Lead Acid Battery Recycling
 - DSWM personnel transported lead acid batteries on an ongoing basis, to PS&D. PS&D accepts batteries at no charge. Lead acid batteries are abandoned at County refuse transfer stations on a regular basis.
 - Lead Acid Batteries are accepted under the Bi-Annual HHW program described above.

- Used Motor Oil Recycling
 - 16,576 gallons of used Spec Oil Recycling was collected and recycled over the period at all Refuse Transfer Stations and the Kekaha Landfill. Unitek Solvent Services provided services for removal and recycling of recovered oil. No contaminated oil was found in FY 23.

- Motor Oil Filter Recycling
 - Motor oil filter collection drums continue to be in place at all RTSs. Public participation in the program is increasing. Six 55-gallon drums of used filters were removed in FY 23.

- Waste Diversion Rate
 - The Waste Diversion Rate (WDR) for the County is normally calculated annually based on figures from annual reports sent to the Department of Health as well as to County collected data from Contracts, and interviews with businesses. In FY 22 error corrections were done on our FY 20 WDR, but the overall tons diverted held steady at 43% or 67,865.79 tons out of 155,561.79 tons generated. The Solid Waste Division is working on reviewing and updating the WDR in FY 24

- Waste Diversion Grants
 - Late in FY 22 Zero Waste Kauai applied for and received a \$7,500 grant to research food producing businesses and if they compost, use pig farmers or trash their organic waste. This data will be vital in updating our waste diversion rate in the future as we may receive more data on the quantity of food waste that is diverted via composting or pig farming. Further, as the County works toward a food residual composting program, the producers have been identified. This project is wrapping up and final figures and reporting should be delivered in the first quarter of FY24.

 - In FY 23 two (2) Recycling and Waste Diversion Grants were awarded. First, Sustainable Coastline Hawaii in partnership with Compost Kauai was awarded \$48,470.00 to hire a consultant to obtain a Solid Waste Management Permit so they can compost food residuals at their facility. In addition, the monies will help with equipment and site improvements. Second, Ho'omalua Ke Kai was awarded \$48,470.00 to take plastic marine debris and upcycle it into items useful to Kaua'i. Further, they will provide educational and volunteer opportunities about the importance of removing debris from the ocean environment. Monies will also help with their first year of operational costs.

Capital Improvement Projects (CIP) and Other Major Planning Activities

- New Landfill
 - ADC has provided approval to investigate a new landfill site west and mauka of the current Kekaha landfill. The Solid Waste Division has executed a ROE to allow access to conduct a review of the location for site viability/feasibility. A consultant contract to assess the site feasibility is in progress.
- Kekaha Landfill Vertical Expansion
 - Tetra Tech, Inc. continues to assist the County with the Vertical Expansion project
 - In FY 23 the design was 90% complete for the vertical expansion and the Draft EA Scoping process began. Following the completion of the EA process in FY 24, the County will seek a renewed landfill permit with the State Department of Health.
- Halehaka Landfill
 - In FY 22 Tetra Tech, Inc. was contracted to continue post-closure services for the Halehaka Landfill. The work includes ground water monitoring and operation of the flare system as needed.
 - Tetra Tech has confirmed that the old flare system on site cannot be operated.
 - The Solid Waste Division obtained CIP funding to install a small solar flare system in lieu of refurbishing the original system as it is now oversized for the amount of gas produced at the site.

- The lease for the Halehaka site expires 12/31/23. DSWM is working with Grove Farm to extend the lease so that the solar flare can be installed, an updated post-closure plan can be developed, and the parties can part in the near future.
- Kekaha Landfill Phase I Post Closure Services
 - Geosyntec continues to provide post-closure services for the Kekaha Landfill Phase I. The work consists of inspections of the site and ground water monitoring and reports.
- Alternative Technologies to Landfill Study and RFP
 - HDR provided a report to assess the feasibility of contracting an entity to provide alternative technologies to manage MSW. The report was presented to Council. HDR drafted a Stage 1 RFP to accept proposals for this project. The draft RFP is under County review.

IV. BUDGET

The Budget is split into 3 categories:

- Solid Waste Disposal – Includes Administrative and Landfill Costs = \$10,741,838
- Solid Waste Collections – Includes Operation of Refuse Transfer Stations and Refuse Collection - \$7,116,925
- Solid Waste Recycling – Includes Recycling Programs and operation of the Kaua’i Resource Center - \$4,805,415

Other contributions for employee benefits, R&M vehicles, gas and diesel are also added.

Total operating budget for FY23 was \$22,664,178

RESOURCES

<u>PROGRAM</u>	<u>(FTEs)</u>
a. Administration	10 (Includes 4 HGEA Operation supervisors)
b. Deposit Beverage Container Program	2
c. Solid Waste Operations	58

TOTAL FTEs 70

V. ACCOMPLISHMENTS / EVALUATION

The DSWM continues to operate the Kekaha Landfill and four refuse transfer stations and manage dozens of contracts and programs to maintain regulatory compliance at these sites and to provide waste diversion opportunities to the public. There has also been a vacant position for a Solid Waste Engineer for several years which has been converted to a Project Manager position. Filling this position is critical to making headway in managing the landfill crisis, properly overseeing multiple contracts, and dealing with the everyday problems that the division faces such as staffing issues and equipment breakdown. The hiring of this positions is anticipated to have a positive impact on the division.

DIVISION OF WASTEWATER MANAGEMENT

Donald Fujimoto, Chief; Division of Wastewater Management

I. MISSION STATEMENT

To protect the public's health, safety, and the environment by developing and operating the County's wastewater infrastructure.

II. DIVISION GOALS

- A. Protect public health, safety, and the environment through the efficient operation and maintenance of County wastewater systems.
- B. Comply with all permit conditions and applicable regulatory requirements.

III. PROGRAM DESCRIPTION

Wastewater Administration and Engineering Program

Administration manages the overall planning and implementation of the Division's operations; strives to meet the Division's goals and objectives; and administers customer accounts, sewer user charge system, budgeting and monitoring of revenues and expenditures. It also receives, evaluates and responds to correspondence, information requests and complaints; coordinates environmental monitoring and regulatory compliance activities; and administers planning, operations and financial activities of the Division. Engineering staff oversee and monitor the Division's Capital Improvement Program (CIP), review subdivision construction plans, land use permit applications and building permit plans.

A. Objectives

To administer the County's sewer infrastructure and operations, planning and engineering, and management of the customer accounts and user charge system.

- Plan for, secure funding, design and construct the County wastewater CIP projects to ensure adequate wastewater infrastructure is in place to support existing infrastructure of the County.
- Provide for operation of the County's sewer systems in full compliance with permit conditions and environmental requirements, including regulation of wastewater discharges into the County's sewer systems; efficient disposal and reuse of the treated effluent; and proper management of sludge (biosolids).
- Perform reporting and communication with government agencies and the public to provide public information; communicate wastewater system needs and requirements; comply with the regulatory requirements; and promote public awareness of the activities of the Division.

B. Highlights

- **User Charge System.** Customer billing and account management is a core function of Wastewater Administration, including processing sewer service applications and account changes; processing bills; customer accounting; and collection efforts. Customer account management includes administration of the County's sewer credit program that involves annual application and processing for renewal of income-qualified customers' sewer bill discounts.

The purpose of the system of rates and charges is to generate sufficient operational revenue for the County's wastewater utility functions to cover operational costs with user fees that are consistent with the cost of providing wastewater service to each class of ratepayer.

Current rates were established via a Wastewater Rate Study completed in 2010, with scheduled annual rate increases through July 1, 2014. New sewer rates and fees were approved by Council and the Mayor and became effective July 1, 2023 (FY 23/24)

- **Wastewater Collection System.** Online payment was initiated in FY 21-22 to provide customers an option to pay their wastewater fees. In FY 22-23 Wastewater Division has successfully worked with the Department of Water to create a data file of the water meter readings to address consumption-based accounts to interface with the County AS 400 system. This will reduce transposition errors and streamline the wastewater billing system. Due to the recent rate increases, the next goal is to change the billing period from every other month to monthly to allow consumers to better plan and budget for the higher rates.
- **Planning and Plan Reviews.** Planning efforts include management planning for Division operations and development of CIP projects to implement capital improvements. Major planning studies were last completed in 2008 with an update of all four of the County's Wastewater Treatment Plant (WWTP) Facility Plans. All of the facility plans should be updated since it has been 12 years since the last plans were completed. The Facility Plans provide a comprehensive summary of the wastewater system and identify short- and long-term CIP needs for each facility, providing a management tool to schedule and prioritize among various projects. In FY 22-23 the Eleele Facility Plan was completed. Lihue Facility Plan was expanded to address the potential for the Grove Farm, Hanamaulu-Lihue Master Development. Wailua Facility Plan was awarded and started. Waimea Facility Plan will be awarded in FY 23-24.

In addition to planning activities for management of the Wastewater Division, administration and engineering staff perform review of building permits, land use permits and subdivisions along with other similar private developer plans, as one of the Counties' reviewing agencies for those processes.

- **Design of Capital Improvements.** The Division's CIP project design work is funded via budget appropriations for initiation of design projects. The CIP generally follows the improvement priorities identified in the Facility Plans, as modified by more recently identified priority projects.

FY 22-23 design activities included on the completion of the 'Ele'ele Subdivision Collection System Rehab, and the Eleele Facility Plan, updating the Līhu'e Facility Plans, Wailua WWTP Phase 2 Process (headworks and primary treatment), Electrical and Disinfection Improvements, and the Wailua SPS No. 3 Rehabilitation project. Wailua SPS 4 and 5 Rehabilitation and Wailua Facility Plans were awarded and commenced design. Finally, the Eleele Collection System upgrades project was completed.

- **Construction of Capital Improvements.** During FY 22-23, the Division completed two major CIP projects under construction: Waimea R-1 Storage Tank and Distribution System which cost \$6.8 million and the Wailua SPS 1 Rehabilitation which cost \$2.3 million. Construction work that was started in FY 22-23 includes the Leho Road SPS Rehabilitation Project which costs 0.9 million and Wailua Coco Palms SPS Emergency Generator Building Rehabilitation Project which cost \$1.2 million.

The aforementioned construction projects are funded by the State of Hawai'i via a Clean Water State Revolving Fund (CWSRF) Loan administered by the Department of Health, Wastewater Branch (DOH WWB). Project funding for larger projects continues to be derived primarily through the State of Hawai'i DOH WWB administered CWSRF Loan Program, which provides low-interest loans for wastewater infrastructure projects.

\$70 million in SRF projects are scheduled for FY 23-24. The following projects included are:

1. \$10 million - Lihue WWTP Process Improvements (Phase 3) design
2. \$50 million – Wailua WWTP Electrical and Process Improvement construction
3. \$5 million – Wailua SPS 3 Rehabilitation construction
4. \$4.5 million – Hanamā'ulu Sewerline Rehabilitation construction

Wastewater Collection and Treatment Facilities Program

The Wastewater Collection and Treatment Facilities Program is focused on operation and maintenance of all County wastewater collection, treatment, and disposal facilities. Program Objectives include consistent and reliable level of performance of the sewer collection system and treatment facilities necessary to protect health and the environment. Activities include preventative maintenance, treatment process control, wastewater effluent reuse and/or disposal, solids management, safety and training and laboratory monitoring for regulatory compliance. Ongoing field activities include daily operation of the four WWTPs and twenty pump stations and periodic cleaning and maintenance of the sewage collection systems. Wastewater personnel also routinely respond to after-hour trouble calls generally initiated by the County's Supervisory Control and Data Acquisition (SCADA) system or police dispatch.

The Division also routinely provides equipment and manpower support to other County agencies such as the Solid Waste and Roads Divisions of the Department of Public Works and the Department of Parks and Recreation. There are many situations where our knowledgeable staff and specialized equipment, such as our Vactor truck, pumper truck, crane and camera system, are highly useful to assist other agencies with their operational needs.

A. Objectives

- To provide a safe working environment and ensure that all employees are properly trained.
- To comply with all permits and related regulatory requirements.
- To minimize wastewater spills and odor complaints from the public.
- To operate, maintain and repair all County Wastewater facilities efficiently and effectively.

B. Program Highlights

- **Personnel Safety and Training.** The County seeks to provide for our operating personnel monthly on-island continuing education opportunities on a variety of topics relevant to operation of wastewater systems. The program offers Continuing Education Units (CEUs) needed for our operators to maintain their licensing.

One of the training programs used by the County is the University of Hawai'i (UH) program, which provides the curriculum, on-island training opportunities and CEUs from the program formerly run by the Statewide Wastewater Operator Training Program. In addition, the County receives training from the Hawai'i Rural Water Association. The Division recognizes that there continues to be a need for alternate training opportunities and that higher costs associated with training should be anticipated for the future.

In FY 22-23 Wastewater Drafted a comprehensive Safety Plan for its Division. The Safety Plan is currently being endorsed by the HGEA, ILWU and County Human Resources. The comprehensive Wastewater Safety Plan will ensure a safe working environment at the Wastewater Division.

- **Collection System and WWTP Operation and Maintenance.** Operation and Maintenance activities for the County's four WWTP's, twenty SPSs and approximately 50 miles of sewage collection system comprise the majority of the Division's activities, assets, equipment and staff resources. Of the Division's 37 full time positions, 29 positions are allocated directly to operation and maintenance crews.

Staffing levels for each WWTP has been standardized at 5 Treatment Plant Operators and Assistant Operators, most of whom are individually licensed as Treatment Plant Operators by the State of Hawai'i. The WWTP operators are also responsible for the operation of the pump stations situated within the collection system served by the respective WWTP. In addition, the plant operators are supported by mechanics, an electrician and a crew of sewer maintenance repairers (line crew). The support mechanics, electricians and line crew, along with the Divisions' two chemists, the Wastewater Operations Superintendent and Program Support Technician are based at the Līhu'e WWTP and support all four of the County's wastewater system operational staff.

In an ongoing effort of scheduled maintenance, the Division staff, with the assistance of our contractors and suppliers, completed various projects to address ongoing equipment

maintenance for wastewater treatment plants and sewage pump stations. Typical projects include replacing pumps, flow meters, fluid level sensors, etc., all of which are subject to periodic replacement as part of ongoing maintenance expenditures. Day to day plant operations and maintenance activities required to keep the wastewater systems operating properly on a 24/7 basis involves a focus on safety, continuous improvements for work processes, work order scheduling, implementation of maintenance procedures and maintenance scheduling. In FY 21-22 the unbudgeted equipment costs required for replacement was over \$263,000.00.

- Regulatory Compliance and Monitoring.** The County’s wastewater operations are subject to various regulations governing WWTP operation, management of biosolids (e.g., sewage sludge) and monitoring effluent and receiving water quality. Effluent is reused as irrigation water (Wailua, Līhu‘e and Waimea WWTPs) and/or disposed via injection wells (Waimea, ‘Ele‘ele and Līhu‘e WWTPs) or an ocean outfall (Wailua WWTP). Regulatory compliance requires periodic (in some cases daily) water quality monitoring, testing and evaluation of injection well capacity and periodic reporting on various plant operational activities to the DOH. Annually, the DOH performs inspections of plant operations to document the status of all required activities for each plant.

Permits for effluent disposal, via either injection wells or the ocean outfall, are renewed at five-year intervals. All permits are current.

The permits for the County’s Underground Injection Control (UIC) injection wells are issued by the DOH Safe Drinking Water Branch (SDWB). UIC permit conditions include monitoring and reporting requirements, including injection well status reports which the County contracts with an engineering firm to complete. UIC sampling as required by the permit is performed in-house where possible. For tests that cannot be done in-house, they are contracted to a private laboratory.

The National Pollution Discharge Elimination System (NPDES) Permit for the County’s Wailua WWTP ocean outfall is issued by the DOH Clean Water Branch. NPDES sampling as required by the permit is performed in-house where possible. For tests that cannot be done in-house, they are contracted to a private laboratory. Monitoring reports are also prepared in-house.

Annual biosolids reports are also created for all 4 WWTPs.

IV. BUDGET

All revenues for the Division’s routine program costs are from sewer user fees. Approximate program costs (rounded) from the FY22-23 budget are summarized for the Division as a whole, including administration and operations.

OPERATIONAL COSTS

• Equivalent Personnel Positions	37
• Wages and Other Direct Costs	\$4,847,141
• Operations (Equipment, Supplies, Vehicles, Etc.)	\$2,538,022

• Utilities (Electrical, Water, Gas, Telephone)	\$2,072,000
• Contracted Services (Repairs, Laboratory, etc.)	\$2,733,000
• Debt Service	<u>\$3,214,640</u>
•	
PROGRAM TOTAL	\$15,405,503
OPERATIONAL REVENUES	
Estimated FY 22-23 Revenues	\$ 9,400,000

V. ACCOMPLISHMENTS/EVALUATION

Wastewater Administration and Engineering Program

Program Measures include those measures associated with sewer billing, processing of building and land use permits, administrative support for operations such as budget, purchasing, personnel management, training, regulatory compliance support, etc. and management of the Division’s CIP activities.

During FY 21-22, administrative functions including billings, plan review activities, personnel support, etc. were successfully completed maintaining existing levels of support and service to customers and other agencies. Annual Division budget and purchasing processes were successfully completed, resulting in all major goods and services required by the Division being acquired. All required regulatory compliance reports and activities were completed. Staffing needs resulting from retirements and periodic turn-over require on-going assistance from the Department of Public Works administration and the Department of Human Resources.

With respect to our Capital Improvement Program, the major CIP projects in progress required considerable management oversight. Our pending CIP projects addressing WWTP needs, and collection system upgrades will continue to modernize facilities, improve system reliability and improve effluent water quality. These projects lead directly to improving our compliance with environmental regulations and providing higher effluent water quality for reuse as a valuable resource.

Wastewater Collection and Treatment Facilities Program

Facility operations continue to meet most or all program measures. During FY 22-23 the Operations personnel continue to meet all the challenges, responding quickly to emergency conditions in order to prevent or cleanup and mitigate sewage spills and to operate the treatment plants within operational parameters.

VI. STATISTICS

• CIP Projects Under Construction	5
• Total Number of Sewered Units	5744
• Bills Processed in FY 22-23	26,847

- Number of Customers Receiving Sewer Credit 379
- Spills Reportable to the DOH 0?
- Wastewater Received and Treated (avg./day) 2.4 MGD?
- Wastewater Reused (avg./day) 0.65 MGD
- % of Wastewater Reused 27%
- DOH acceptable inspections 4?
- DOH unacceptable inspections 0