



Department of Public Works

Fiscal Year 2021 Annual Report

July 1, 2020 – June 30, 2021

Troy Tanigawa, P.E.
Acting County Engineer

AUTOMOTIVE DIVISION

Russel Izumo, Automotive Equipment Superintendent

I. MISSION STATEMENT

The DPW Automotive division strives to update and maintain the vehicle and equipment fleet of the Department of Public Works and other county Agencies, enabling the County of Kaua'i to provide core services to all communities on the island.

II. DIVISION GOALS

- A. Modernize the County's vehicle and equipment fleet, providing all agencies with economical and reliable vehicles and equipment, allowing the County to operate efficiently and effectively.
- B. Provide a speedy and efficient vehicle and equipment service and repair turnaround, enabling all agencies to perform their duties and responsibilities.
- C. Offer support and disaster relief services to all agencies and the community in emergency situations.

III. PROGRAM DESCRIPTION

The Automotive Division performs all aspects of Automotive, Heavy Truck and Construction Equipment repair and includes the following services:

- Repair and maintain all DPW vehicles and equipment
- Procurement of new vehicles and equipment to continuously update the county's fleet.
- Repair and maintain all of Kaua'i Police Department's vehicles and equipment.
- Repair and maintain vehicles from other departments and agencies.
- Provide and perform Department of Transportation (DOT) safety checks for all County vehicles.
- Assist Fire Department with maintenance and repair issues periodically.
- Fueling and servicing of field equipment.
- Tire repair and replacement.
- Welding and fabrication services.
- Limited machining services.
- Body and fender repair, paint services for all equipment and vehicles.
- Emergency call out services on weekends and after hour emergencies.
- Service and maintenance of all emergency standby generators.
- Service and maintenance of all 800 MHz repeater generators
- Support for all county agencies in emergency situations.
- Maintain and repair of Refuse Transfer Stations (Hanalei, Kapa'a and Hanapepe).
- Management of fleet maintenance program for all county equipment.
- Operation and monitoring fuel master fuel system, and the four fueling sites.
- Provide generator power for community events.

IV. PROGRAM MEASURES:

1. We are striving to promote a safe working environment with an emphasis on safety to protect employee's and visitors.
2. Perform preventive maintenance on all vehicles and equipment to cut down costly repairs.
3. Continuously update County fleet with the most technologically advance vehicles, to keep up with all changing emissions laws and to control greenhouse gases.
4. Gathering and researching options for electrifying the County of Kaua'i fleet of vehicles.

V. ACCOMPLISHMENTS / EVALUATION:

1. The shop mezzanine is completed and is now going to be put into service.
2. The DPW received new equipment:
 - 4 Peterbilt automated side loading refuse trucks
 - 1 Case excavator, 1) CAT loader, 1) Takeuchi excavator, for Landfill
 - 5 Peterbilt truck tractors for Solid Waste
 - 3 Peterbilt dump trucks (various sizes) for Roads
 - 1 Peterbilt Vac Con truck for Wastewater
 - 15 Pick-up trucks for various departments

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.

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 general 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.

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 road rights-of-way. The Engineering Division issues Driveway Permits in compliance with this ordinance.
4. Speed Hump Ordinance Number 720 (Kaua'i County Code Chapter 16, Article 22). This ordinance regulates the construction of speed humps on County streets. On August 4, 2021, this ordinance was amended by the Traffic Calming Ordinance Number 1095.
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 the County Road 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 National Flood Insurance Program (NFIP), which enables property owners in flood-prone areas of the County 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.

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

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 issues, and conditions imposed by the Planning Department and Planning Commission related to zoning, use, 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 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. 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.

B. Highlights

- This fiscal year, Engineering Division continued to provide services in response to the RAIN18 flood that occurred on April 15, 2018, including the following:
 - Waioli Irrigation System Repairs: This project was funded by Act 12 funds and was substantially completed in March 2020.
 - Anahulu Road concrete swale repair: This project was funded by FEMA to reconstruct a portion of an existing concrete swale along Anahulu Road. Construction was completed in July 2020.
 - Wainiha Powerhouse Road Repairs: This project was funded by FEMA and replaced broken or poorly located culverts, added new culverts, installed wingwalls, provided embankment stabilization, and repaired broken pavement surfaces. Construction was completed in January 2021.
- Engineering Division is responsible for design and construction of dozens of County projects. All of these projects support the RISE mission, primarily the Mobility, Home, and Connections levels. Below is a list of Engineering Division's projects, organized by the stage of construction and/or design completion.
 - Construction was completed on the following projects this fiscal year:
 - Lihu'e Town Core Mobility and Revitalization Project (TIGER): This project includes various transportation improvements in several areas within the Lihu'e Town Core, including conversion of Rice Street from four lanes to two lanes with a center turn lane. The County applied for and received a \$15,100,000 TIGER grant from the US Department of Transportation for this project. This project was managed by Doug Haigh of Building Division, but Engineering Division was heavily involved in design review and assisted with project management.

- ‘Ōpaeka‘a Bridge Replacement; Federal Aid Project, 80% Federal, 20% County. This project replaced the ‘Ōpaeka‘a Bridge on ‘Ōpaeka‘a Road near Pulana Road with a new structure that maintains the historical aesthetics including the iron truss and one-lane nature of the bridge.
 - Construction is underway on the following projects:
 - Kawaihau Road, Hau‘a‘ala Road, Mailihuna Road Complete Street and Safety Improvements, Federal Aid Project STP 0700(071), 80% Federal, 20% County: This project includes a roundabout at the 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. Notice to Proceed was issued to the contractor in June 2021, although the contractor did not start work for approximately three months after NTP.
 - Maluhia Road and Kōloa Road Improvements; Federal Aid Project, 80% Federal, 20% County: This project improves Maluhia Road and Kōloa Road, including pavement resurfacing (and reconstruction where needed), shoulder widening where feasible, drainage improvements, guardrail installation and replacement, and a roundabout on Kōloa Road at Ala Kalanikaumaka. Construction on Maluhia Road is complete except for change order items to make improvements to existing drainage infrastructure and address roadside safety at existing bridges. Construction on Kōloa Road is complete except for work at the roundabout, punch list items, and change order items to make improvements to existing drainage infrastructure.
 - 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. Plans are completed but this project is not funded in the County’s current CIP budget, so a construction start date is not determined at this time.
 - 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 Kamalu Road, adding paved shoulders where feasible. Planning and Design are completed, except that we are waiting on the final environmental documentation. Construction is scheduled to start in summer 2022.
 - Safe Routes to School – King Kaumuali‘i Elementary School: This federally funded SRTS project includes sidewalks and crosswalks on Hanamā‘ulu Road and Akuli Street. This project was delayed due to issues related to the federal funding. Recommendation of Award has been issued for this project and it is scheduled to go to construction in Fall 2021.
 - Safe Routes to School – Kōloa Elementary School: This federally funded SRTS project includes sidewalks, bike lanes, and other improvements on Po‘ipū Road and Pa‘anau Road near Kōloa Elementary School. This project was delayed due to issues related to the federal funding. Recommendation of Award has been issued for this project and it is scheduled to go to construction in Fall 2021.

- Planning and design are underway for the following projects:
 - Hanapēpē Bridge Repairs, Federal Aid Project BR-0545(001): This project will repair spalling concrete, add structural support to the deck, and repair the existing elevated pedestrian walkway of the historic 1911 bridge. Environmental permitting and final design plans are being prepared by the County's bridge inspection consultant.
 - Hanapēpē Road Resurfacing: Project includes resurfacing and construction of sidewalks/walkways. Environmental permitting is complete. Final design by the consultant (AECOM) is underway.
 - 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. The contract will be awarded soon for the planning consultant.
 - Kalepa 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, with plans to conduct public involvement and submit a resolution to Council by Summer 2022.
 - Kanaele Road Slope Stabilization: This project will stabilize slopes along Kanaele Road that have subsided over the years. Design is underway by the consultant.
 - 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. Notice of Award has been issued to the consultant, and the contract is under review.
 - Kekaha Road Improvements: This proposed Federal Aid project includes pavement resurfacing and reconstruction, as well as pedestrian and bicycle facility improvements on Kekaha Road between Kaumuali'i Highway and 'Amakihi Road. Notice of Award has been issued to the consultant, and the contract is under review.
 - 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 and bicycle facilities to provide access to the Kīlauea National Wildlife Refuge. The FHWA Central Federal Lands (CFL) Division is producing the design, and a portion of the project is funded by the Federal Lands Access Program (FLAP). Other funding will be provided by normal Federal Aid funds and a County match. FHWA-CFL's consultant is anticipated to begin final design in Fall 2021.
 - Kīpū Bridge Repair: This project will conduct structural repairs to the existing bridge on Kīpū Road over Hulē'ia Stream. The design consultant has completed the design; the remaining steps are to finalize the documents for bidding and execute property adjustment agreements with private property owners.

- Kōloa Bridge Repair: This project will conduct structural repairs to the existing bridge on Kōloa Road over Waikomo Stream. The design consultant has completed the design; the remaining steps are to finalize the documents for bidding and execute property adjustment agreements with private property owners.
- Kukui Street and Olohena Road (Route 581) Improvements, Federal Aid Project, 80% Federal, 20% County: This project will resurface (and reconstruct where needed) this collector road from Kūhiō Highway to the Kapaʻa Bypass, add paved shoulders where feasible, and install sidewalks in some areas. Conceptual design has been completed and environmental permitting and final design was begun before this project was split out from the Olohena Road Improvements Project. This project is currently on hold until the Olohena Road project is headed toward construction.
- 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.
- Niūmalu Bridge Replacement: 60% construction plans have been received for this project.
- Nuhou Street and Kaneka 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, with improved crosswalks, after resurfacing by Roads Division. This project is being designed in house. Kaneka Street was paved in August 2021, so this design is scheduled to be completed in September 2021 to provide to the public and send a resolution to Council for their approval by the end of calendar year 2021.
- On-Call Surveying Services: Several task orders have been completed for both Public Works and Parks and Recreation. A second procurement was completed in fiscal year 2021 to perform continued services in 2021 and beyond.
- Poʻipū Road Multimodal Improvements, Federal Aid Project STP 0520(004), 80% Federal, 20% County: A public design charrette completed in May 2013 proposed roundabouts, sidewalks, medians, bike lanes, and other features on Poʻipū Road. Environmental permitting is nearing completion and the final design phase is underway.
- Princeville Substation Fuel Tank Relocation: This project will relocate the existing fuel tank, which is currently partially located on adjacent private property. This project is on hold.
- Puhi Road Rehabilitation Phase 2 (Kaneka Street to Haleukana Street), Federal Aid Project STP 5010(002), 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. Preliminary design and environmental documentation are complete, and the consultant is working on final design. Due to fiscal constraints, this project has been pushed out to federal fiscal year 2026 on the STIP, as the interim paving project completed in 2016 is holding up well. The project is scheduled to be “shovel ready” by early 2022 – if federal funds become available, the project may be constructed sooner than 2026.

- Safe Routes to School – Kalāheo Elementary School: This project will reconstruct a sidewalk on Pu‘u Road and add a new sidewalk on Hoku Road. Notice of Award has been issued to the consultant, and the contract is under review.
 - Twin Reservoirs Decommissioning: The consultant is working on the initial flood studies to revise the flood maps for the drainage basins affected by the reservoirs, based on past analysis that shows that actual flood elevations are currently higher than the flood maps currently indicate. Then the consultant will design a project to decommission the reservoirs. This project has been delayed due to the complexities of working with FEMA on the flood mapping.
 - 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 of Award has been issued to the consultant, and the contract is being finalized.
- Engineering Division is involved with ongoing development of Policies and Standard Operating Procedures to better manage processes within the division and manage capital improvement projects.
 - Electronic Filing System: Engineering Division continues to scan existing plans and maps from our map room on an ongoing basis; we are evaluating options to improve and expand digital document archiving.
 - Permit Tracking: Grading, grubbing, stockpile, and road permits are being tracked in a database, including mapping in GIS.
 - Traffic Count Program: All old counts have been entered into a database which will be mapped in GIS; the program will eventually include regular traffic counts on major roadways. Traffic count information received biannually from HDOT is also being regularly used for projects and other purposes.
 - Crash Data: Engineering Division is regularly tracking crash databases received from HDOT including high crash locations on County Roads; this information is being used to inform decisions for road projects and development review.
 - Road Permit ordinance changes: Construction Section has proposed changes to the County Ordinances to give the County more ability to enforce Road Permit provisions, including increasing the ability to enforce permit closeout. Part of these changes include instituting a fee for road permits.
- In Fiscal Year 2021, Engineering Division worked with the Fire Department, Police Department, the Office of the County Attorney, and the Mayor’s Office to draft a new Traffic Calming Bill that was passed by County Council as Ordinance 1095 on August 4, 2021. This bill expanded the existing Speed Hump ordinance to cover additional types of traffic calming, including the possibility of installation of traffic calming measures on collector streets. Rules for implementing the new ordinance

are currently being developed. Several requests from residents have come in since the approval of the new ordinance.

- 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.
 - Federal Fiscal Year 2020: These bridge inspections were completed during County Fiscal Year 2021 by our bridge inspection consultant.
 - Federal Fiscal Year 2022: Procurement for the bridge inspection consultant is underway.
 - 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. Four bridges had critical findings, as follows:
 - Anahola Landing Bridge on Anahola Road over Olokauha Stream: Due to severely deteriorated structure, this bridge was closed immediately after the inspection.
 - Puhi Ditch Bridge on Kawaihau Road: This bridge was closed briefly until an emergency repair could be implemented. The weight limit on this bridge has been posted at 3.5 tons, the minimum possible weight limit.
 - Yasutake Bridge on Kamalu Road over Kamalu Stream: The weight limit on this bridge has been posted at 3.5 tons, the minimum possible weight limit.
 - Akulikuli Bridge #2 on Kahuna Road: The weight limit on this bridge has been posted at 3.5 tons, the minimum possible weight limit.

IV. BUDGET

General Fund – Fiscal Year Ending June 30, 2021

Division/Expense Type	Budget	
Engineering	\$	1,855,091
Employee & Related	\$	1,754,600
Training, Travel	\$	2,938
Services, Dues, Consult., Grants	\$	77,945
R&M, Facilities, & Equip.	\$	13,055
Claims, Rental, Loans, Debt Svc.	\$	6,553

V. PROGRAM MEASURES

- Construction plans for major development or other agency projects reviewed during Fiscal Year 2020: 19 plan sets, with an average review time of 60 days. COVID-19 resulted in delays in plan reviews by County staff early in the fiscal year, and then resulted in a slowdown of major projects submitted to the County later in the fiscal year:
 - Construction plan review was finalized for the following large subdivisions or developments:
 - Kaua'i High School Gymnasium
 - Kōloa Community Sewer Main
 - Kukui'ula Parcel CC-West Phase II (S-2020-xx)
 - Waiola Subdivision, Phase I (S-2009-13)
 - Waiola Subdivision, Phase II (S-2009-14)
 - Pua Loke Affordable Housing
 - Construction plan review is ongoing for the following large subdivisions or developments:
 - Ahukini Makai Subdivision (S-2005-41)
 - Hōkūala Subdivision 4
 - Hokulei Village Phase II – Road A (connection to Nuhou/Kaneka roundabout)
 - Ka Ua Noe O Kōloa
 - Kukui'ula Parcel I Subdivision
 - Timbers Kaua'i Townhomes Phase II Buildings D&E and Mass Grading
 - Construction plan review was completed or is ongoing for the following Department of Water projects:
 - Plans Approved
 - Job No. K-01 – DOW Kalāheo Waterline (3 plan sets)
 - Plan reviews Ongoing
 - Job No. ANI-01 – DOW Anini Road Water Line, Phase 2
 - Job No. 11-02 – DOW Grove Farm Tank
 - DOW Kukuiolono 0.5 MG Water Tank
 - Job No. 11-04 – DOW Lawai Omao Water Line
- Construction Section is currently inspecting the following major subdivisions or projects:
 - DOW Hanapēpē Road 6-Inch Main Replacement
 - DOW Kaumuali'i Highway 16-inch waterline – 'Ele'ele
 - Kaua'i High School Gymnasium
 - Kōloa Community Sewer Main
 - Kukui'ula Manuhonuhonu Borrow Site, phase 3
 - Kukui'ula Parcel CC-West Phase II (S-2020-xx)
 - Kukui'ula Parcel E
 - Kukui'ula Parcel FF
 - Kukui'ula Parcel G
 - Kukui'ula Kahela (Parcel H) Subdivision (S-2016-02)
 - Waiola Subdivision, Phase I (S-2009-13)
 - Waiola Subdivision, Phase II (S-2009-14)

- Kulana Subdivision restart (S-99-49)
- Pua Loke Affordable Housing
- Construction Section completed inspection of the following major subdivisions or projects:
 - DOW Kapahi Water Tank
 - Hōkūala Resort (formerly Kauaʻi Lagoons)
 - Koaʻe Affordable Housing
 - Waimea Huakai Affordable Housing
- The following permits have been issued, inspected, and/or closed out:
 - Grading Permits
 - Issued: 29
 - Inspected and closed out: 9
 - Road Permits
 - Issued: 17
 - Inspected and closed out: 2
 - Driveway Permits
 - Issued: 78

DIVISION of SOLID WASTE MANAGEMENT

- 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 Kaua'i , 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 Hawai'i State regulations. ISWM programs incorporate modern concepts of diversion and disposal to responsibly manage solid waste on the island of Kaua'i .

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

This was the first full fiscal year that the County was the official operator of the Kekaha Landfill after terminating the contract with Waste Management of Hawai'i on December 1, 2020. The old bulldozer and compactor that were purchased under that agreement were not in working order. For the majority of the FY, the County continued to rent all necessary equipment to operate the landfill including: a landfill compactor, landfill bulldozer, smooth drum roller, excavator, loader, 4,000-gallon water truck, super dump truck, and dump truck. These heavy equipment items were

purchased in the prior FY under a money bill and began being delivered at the end of the FY.

The used compactor that had previously been rented and was purchased the prior fiscal year. It broke down several times during the period, culminating in being down for 3 months at the end of the FY, causing a major loss in landfill space due to improper compaction. The used landfill dozer also broke down several times during the period. The rented super dump truck and dump truck that were utilized to haul landfill soil incurred significant repair costs during the rental period.

Geosyntec continued to provide technical assistance, monitoring, special waste management, and reporting under a professional services contract which is scheduled to expire in November of next FY.

The landfill began using the Paua Valley site as daily soil cover resource. An interim agreement was executed with the Kekaha Agricultural Association. The NPDES permit initiated by DPW Engineering was utilized to comply with DOH requirements. The permanent agreement and a revised NPDES permit will be completed in next FY.

Disposal Quantities and Airspace

The Kekaha Landfill Operation accepted and buried 88,100 tons of municipal solid waste during Fiscal Year 2021. This figure includes solid waste from residential and commercial sources. This is an increase of 384 tons from the previous fiscal year.

While disposal quantities remained flat, the Annual Operating Report for Kekaha Landfill prepared by Geosyntec showed that the landfill is now scheduled to reach capacity in January of 2027 when the prior year report had the closure scheduled for June of 2027. The loss of space is due to the breakdown of the compactor mentioned above. These landfill life estimates were made based on topographic surveys of the landfill performed by RM Towill.

Landfill Construction Projects

Worked with Geosyntec to develop specifications for Cleanout Riser and Gas Collection installation for 13 cleanouts. The cost for this construction project came in significantly higher than the Engineer's estimates for the work. Prior to construction, the cleanouts posed a challenge to landfill operators who worked around them so they would be clear for construction. The contract for the project was executed at the end of the FY and construction started promptly in FY22.

Continued to explore solutions to reduce the water level in the leachate pond. Kekaha has been subject to more rain than usual and the leachate pond which had previously been dry, has not gone down significantly after heavy rains. Worked with Geosyntec to develop specifications for floating aerators to be installed in the pond to assist with evaporation.

Despite SW Admin efforts, we were unable to procure improvements to the fire hydrant at Kekaha Landfill. The plans are finalized and approved by all parties, but

Department of Water has not signed off on the plans due to concerns about the water supply.

Refuse Transfer Stations (RTS)s

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

Table 1 RTS Location	Total MSW Received FY 21 (Tons)	Tonnage Change from FY20
Hanapepe	11,099	+622
Lihue	18,045	+3,092
Kapaa	7,887	-2,383
Hanalei	6,156	+65

- Continuing to conduct new 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 a new consultant, Element Environmental, to perform storm water testing and assist with NPDES compliance at all the transfer station sites.
- Continued work with Jacobs for RTS improvements which include NPDES permit compliance and operational design changes. Near the end of the fiscal year, Jacobs submitted a contract amendment proposal that the division has been reviewing. This is a priority project to complete the design and bid out in FY 22.

Refuse Collection at County Facilities

Refuse collection at County facilities continued 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.

Refuse Collection at County Bus Stops

A two-man crew is utilized to provide service County bus stops.

Island-Wide Automated Curbside Refuse Collection.

Automated Refuse Collection. TAs of June 30, 2021, the refuse collection program had 21,918 residential collection accounts and 454 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, Wednesdays, Thursdays, and Fridays, throughout the island from Kekaha to Haena. 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 1,023 carts per week.

Heavy Equipment Purchases Budgeted in FY 2021

(2) Automated Refuse Collection Trucks

Integrated Solid Waste Management Plan (ISWMP)

Continued to work with JACOBS on the ISWMP Update. Completed the fifth and final Solid Waste Advisory Committee Meeting and developed a Draft Plan that was posted for public review on the County website on May 19, 2021. The draft plan was actionable and considered funding and resource restrictions for implementation. Promoted a two-month public review period and hosted a Public Hearing on June 17, 2021. Steps for next FY are to review public comments and incorporate into the plan, develop a final draft plan, present it to Council, and have it Adopted through a Council Resolution.

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, 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 21 was approximately \$3.59 million for 21,918 parcels. The RRCA program revenues have decreased by about \$40,000 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 Lihue. Under the Contract, Reynold's 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 has a 3-year term. The contract may be extended on a month-to-month basis or terms, or an additional period or periods not to exceed a total of thirty-six (36) months with the same terms and conditions.
 - During FY21, the total number of customers serviced was 15,896 and the total number of redeemable containers was as follows: 12,504,066 (7,163,874 aluminum cans, 387,062 glass bottles, 1,015,750 plastic containers and 16,660 bimetal containers). (See DBC section for more information on Reynold's Recycling operations.)

- Processing of Commercially Generated Recyclables
 - Negotiated a new 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 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 recovered significantly over the course of the fiscal year, which is good news for the contractor who owns and markets the materials recovered through the program.
 - The annual tonnages for each recyclable collected under the program were significantly lower this FY due to COVID business closures.
 - Tonnages were as follows:
 - Corrugated cardboard: 1,957 (down 909 tons from last FY)
 - Mixed Paper: 40 tons (down 106 tons from last FY)
 - Non-HI5 Glass: 55 tons (down 356 tons from last FY)
 - Aluminum: 92 tons (down 43 tons from last FY)
 - HI5 Glass: 949 tons (down 331 tons from last FY)
 - HI5 Plastic: 227 tons (down 90 tons from last FY)
 - Non-HI5 Plastic: .18 tons (down 21.8 tons from last FY)

Annual Total – 3,360 tons (down 1,797 tons from last FY)

- Home Composting
 - 427 Earth Machine Home Composting Bins were distributed to Kaua'i residents this FY free of charge. An increase of 46 more units than the year before.

- Under COVID the requests for compost bins continue to be high. We received a new shipment of bins during the FY which should last until mid to late FY 22.
- The main distribution point is at the Kaua'i 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. Due to COVID 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 confirm all the resident's information. Bins are distributed from 8:00 am to 3:30 pm Monday through Friday based on the resident's appointment time. The switch to appointment only distribution has allowed the us to continue distributing bins under COVID and has been well accepted by residents who appreciate knowing that they can come in on a date and time that works for them, though 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.
- Satellite distribution with Kaua'i Worms has been discontinued. Due to the lack of a farmer's market at the Anaina Hou Community Park under COVID Kaua'i Worms has had to downsize their operations, but they are hopeful to distribute bins in the future as COVID impacts subside.
- No Educational outreach was conducted in FY 21 due to COVID restrictions.
- A survey was conducted in July 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.
- Kaua'i Recycles Residential Recycling Program
 - Continued to manage Contract 9748 with GID which has a 5-year term and ends 12/14/23. The contract allows for two 12-month extensions under the same terms and conditions. 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.

- There are eight (8) drop bins 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, Kapa‘a, and Līhu‘e 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 recyclables have significantly recovered over the fiscal year.
- In FY 21 Kaua‘i Sailing Association applied for and received a grant of \$5,650.00 to produce several videos of various lengths to educate the public about the proper use of the Kaua‘i Recycles Drop bins including background information on the Kekaha landfill. We hope to have these videos completed in mid to late FY 22.
- The annual tonnages for each recyclable collected under the program are as follows:
 - Corrugated cardboard: 1,109 tons (up 61 tons from last FY)
 - Mixed Paper: 521 tons (down 271 tons from last FY)
 - Glass: 583 tons (up 217 tons from last FY)
 - Aluminum: 0.39 tons (same as last FY)
 - Steel: 101 tons (up 15 tons from last FY)
 - Plastic: 63 tons (down 25 tons from last FY)
 - County Programs – 56 tons (down 12 tons from last FY)

Annual Total – 2,434 (down only 15 tons from last FY)
- Advance Disposal Fee (ADF) Glass Recovery and Recycling Contract
 - Allocated State funding for Kaua‘i 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 Kaua‘i go back to the pool of monies used by the other Counties for use in their ADF programs.
- Deposit Beverage Container (DBC) Program
 - **Overview:** The State Department of Health provided annual funding under ASO Log 19-024 Modification 3. The total program budget was \$316,662.56. 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, Certified Redemption Centers (CRC’s), 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. Technical recycling assistance is provided to businesses upon request.
- HI5 specialists conduct four park inspections per month. These inspections are an opportunity for immediate improvements to be made to the bins. Several damaged bins were also replaced. These inspections were paused in January 2021 due to a staffing change but got back on track in June 2021.
- **Redemption centers:** There were 5 CRC operations throughout the island during FY21. Three were privately operated and two were contracted with the County. Due to the COVID-19 pandemic, Reynold's Recycling put their plans on hold for reopening a Kapa'a location. The KRC Reynold's site 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.
- In FY21, the KCRS Kekaha Mobile Redemption Center site moved back 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 6,138 customers and collected 6,471,480 containers at the Kekaha Mobile Redemption Center. Total containers by material type included 3,666,364 aluminum cans, 689,664 glass bottles, 2,101,061 plastic bottles and 14,391 bimetal containers.
- At the Kōloa Mobile Redemption Center, KCRS serviced 7,006 customers collecting a total of 5,515,019 containers. Total containers by material type included 3,231,022 aluminum cans, 671,372 glass bottles, 1,590,112 plastic bottles and 22,513 bimetal containers.
- Weather caused several CRC closures during the year. Overall, there were closures or decreased services for ten days in FY 2021.
- **Educational Outreach:** Onsite educational presentations were put on hold during FY21 due to the COVID-19 pandemic. Throughout FY21, three virtual presentations were conducted, reaching a total of 120 students. Students were in grades Kindergarten through 2nd grade. 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.
- **County Fair:** The County Fair was cancelled for FY21 due to the COVID-19 pandemic.
- **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. One event was conducted with 2 recycling bins, 4 trash cans, and 2 compost bins utilized for short term use. Demand for event loaner bins was virtually non-existent due to the COVID-19 pandemic.

- In FY20 a plan was developed to convert the State HI5 bins to replace the stock in the event bin loaner program. A total of 119 bins will be converted. Steps in the conversion process continued throughout FY21 with cleaning, organizing and applying new stickers to relabel the bins.
 - **COVID:** Retailer and CRC inspections continued throughout FY21 with minor modifications for safety guidelines.
 - **Training:** One HI5 specialist transitioned to another County job as a Project Manager for the SW department in January 2021. All duties and inspections were covered by the remaining HI5 specialist until a Recycling Specialist trainee was hired in mid-May, 2021. Training went smoothly in FY21, and the Recycling Specialist trainee was able to perform inspections independently by the end of FY21. Training continues into FY22.
 - **Statistics:** According to the latest published State annual report, the statewide redemption rate for HI5 DBC recycling was 61% (FY 2019).
 - **Outlook:** Funding for FY 2022 has been secured. 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.
 - Due to COVID concerns and as the contract was expiring, no events were scheduled in FY21. We are hoping to get one event contracted in FY 22 and two events each in FY 23 and 24.
 - This program normally diverts approximately 20 tons of household hazardous material from the landfill annually. Residents are eager for this program to resume as they have been holding on to material for almost a year now in anticipation of a new event.
- **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, 4,510 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: 2213 autos processed, receipt of 797 loads of scrap metals, acceptance, and processing of 2,892 large appliances without Freon, 3,227 large appliances containing Freon.
 - RRS continues to charge commercial fees for businesses. Due to ongoing issues with businesses abusing the system of payment for non-residential programs, the free vehicle disposal system utilizing the vehicle waiver form was discontinued in early FY 22, but residents can still dispose of an

- unlimited number of vehicles if they're able to properly junk the vehicle through the MVR.
- In FY 21, the only buyer of catalytic converters pulled out of Kaua'i. The hope is that since there are no buyers for the catalytic converters on island the number break-ins and burglaries happening at the Puhi Metals Recycling facility will go down. The Solid Waste Division will check in with the contractor to review the situation in FY 22.
 - Contract 9718 began August 1, 2018 and has a term of 10 years. Contract 9718 now explicitly includes eWaste and propane tank processing including the pick-up of propane tanks from County Refuse Transfer Stations. The cost for the new contract is \$936,000 per year an increase of \$336,000 per year over contract 8930. The price increase was necessary to allow the contractor to continue servicing Kaua'i Residents free of charge and provide recycling services to businesses at a cost.
 - Metals recycling prices continue to stagnate and paired with the increased cost of shipping and labor there may be issues continuing service at the current contracted price. The Solid Waste Division will be requesting cost and pricing from Puhi Metals in FY 22 to assess the situation and make recommendation for price changes in FY 23.
- Clean Up of Puhi Metals Site
 - The Solid Waste Division has received updated direction from County Attorneys regarding the Puhi Metals Recycling Facility remediation which will be brought to Public Works Administration for discussion in FY 22.
 - Household Battery Recycling Program
 - The County hosts a residential battery collection program at the Kaua'i Resource Center (KRC) in Līhu'e. Batteries are accepted Monday through Friday from 7:45 am to 4:15 pm. Batteries collected through the program are regularly hauled offsite during the bi-annual Household Hazardous Waste (HHW) events, but due to the cancellation of events in FY 21 a small purchase contract solicited the removal of the batteries in FY 21. Service was conducted on 3/18/21 by Cameron Chemical Corp. During this event small quantities of hazardous waste including oil-based paints, and contaminated motor oil was also removed.
 - 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)
 - All batteries were taken to Hawaii Integrated Services and Supplies in Oahu for disposal.
 - Contamination and un-taped 9-volt batteries continue to be an issue, as well as unauthorized use by businesses.
 - Plastic Bag Reduction Law
 - We continue to enforce the Ordinance based on customer and retailer complaints.

- The Recycling Office staff still recommends revisions the Plastic Bag Reduction language in the County Code. There is a need to modify the code for “housekeeping” purposes. Recommended modifications to the ordinance include:
 - incentivize the use of reusable bags by mandating a minimum fee for paper bags. Store owners could keep the bag fees to support the cost of bags
 - editing Section 1 Findings and Purpose to address mandatory fees for the distribution of paper shopping bags
 - revise “reusable bag” definition to exclude thick plastic film bags
 - remove “biodegradable bags”
 - remove the requirement to display the word “reusable” on recyclable paper 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.

- Mayor’s Plastic Reduction Policy
 - Due to the finding that disposable plastic is harmful to our environment and contributes to the potential death of marine and avian life, Mayor Derek Kawakami drafted and signed a Policy declaring that the County shall prohibit the purchase, use, or distribution of disposable plastics with County funds, at County permitted events, by County employees, or by County Facility Users. The County will invest in environmentally preferred alternatives to disposable plastics. This policy went into effect on 1/20/21. The DSWM is providing promotion and education around the policy.
 - In FY 21 Zero Waste Kaua’i received grant funding in the amount of \$9,240 to track usage of the Kaua’i Recycles Drop bins as well as to educate the public and event coordinators (that use County facilities) about the Mayor’s Plastic Reduction Policy. This grant will carry on into FY 22. Due to COVID restrictions the overall impact that Zero Waste Kaua’i has on events may be reduced.

- Electronics Recycling (eWaste Recycling)
 - The State Department of Health (DOH) awarded the County \$48,000.00 in grant funding for FY 2021, down from FY 20 where \$160,000.00 related to the removal of mobile eWaste collection and eWaste tracking which includes documentation related to final disposal of electronic goods. All eWaste is being recycled properly, but there is an extreme lag in processing that can take well over a year to occur which impacts the County’s ability to fully comply with the States documentation requirement. The mobile events that occurred in Hanapēpē and Kīlauea were not highly trafficked with less than 20 people per event which resulted in a high cost per person ratio. Other than that, there are no reduction in service for the public and eWaste

- recycling remains free for residents and businesses. The current funding was used to support the eWaste collections as described below and to conduct radio and news ads promoting recycling, as well as to pay for County administrative costs to run the program.
- The Metals Recycling contract 9718 specifies eWaste recycling as part of the materials to be managed by Resource Recovery Solutions at their Puhi Metals Recycling Facility. Contract 9718 is fully funded by the County without State grants.
 - Resource Recovery Solutions has recycled approximately 103 tons of eWaste 46 tons less than FY 2020.
 - RRS coordinates with T & N Computer Recycling Services to source certified end destination recyclers.
- 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 FY21.
 - Green Waste Diversion
 - The County contracts our green waste processing two State Permitted composting facilities throughout the island. We manage contracts with Heart and Soul Organics and Shredco, who accept and process the green waste. At the end of FY21 we began weighing loads and paying by the ton instead of by paying by volume. For reporting below, volume is reported for the beginning of the FY and tonnage for the end of the FY.
 - Collections at County facilities were as follows:
 - Hanalei Refuse Transfer Station (RTS)- 11,973 cubic yards plus 355 tons.
 - Kapa'a RTS – 26,786 cubic yards plus 1,377 tons
 - Lihue RTS – 14,294 cubic yards plus 715 tons
 - Hanapepe RTS – 18,777 cubic yards plus 820 tons
 - Kekaha Landfill – 800 tons
 - 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. On June 4, 2021 it came to the County's attention that Shredco's green waste permit expired. The County stopped accepting green waste at Kekaha Landfill until the permit was restored on July 12, 2021. Shredco paid liquidated damages during the time of non-performance.
 - 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 is in the process of contracting services for Hanapēpē green waste shredding. For the first time in decades the County has started to haul green waste off site for shredding. Onsite shredding stopped on May 3, 2021. Since that time, services have been performed offsite under a PO with Kauaʻi Nursery and Landscape.
 - Scrap Tire Recycling
 - E-H International contract expired on August 20, 2020. On Unitek Solvent Services, Inc is the new Contractor and agreed to a three-year term expiring August 2023.
 - In FY21, a total of 2,212 tires were collected at all RTS, the auto shop, and Kekaha Landfill by E-H International. A total of 15,683 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 shortage a Solid Waste permit mod to add in scrap metal recycling at the Kekaha landfill has not been completed.
 - Total of 2,039.33 tons of scrap metal was hauled in FY 2021.
 - 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 2,194 propane tanks were collected at RTSs and were recycled throughout the course of the FY 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.
 - Do-it-Yourselfer (DIY) Used Motor Oil Recycling at the Kekaha Landfill and RTSs.
 - 18,998 gallons of used Spec Oil Recycling was collected and recycled over the period. Unitek Solvent Services provided services for removal

and recycling of recovered oil. Oil is shipped to Oahu, where it is recycled.

- Motor Oil Filter Recycling – Motor oil filter collection drums continue to be in place at all RTSs. Public participation in the program is increasing. Twenty-Five 55-gallon drums of used filters were removed in the last year.
- 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. We are happy to announce that due to the summer intern program that Human Resources hosted at the end of FY 21 allowed us to update our waste diversion rate and catch up with some other programs and projects that have been delayed. Though there wasn't an increase to our rate which is still at 43% from 2016 we have a battle handle of the material tonnages that have been diverted from the landfill.
- Highlights for the 2021 Diversion rate is a large decrease to the tonnage that was diverted for asphalt and concrete recycling. The company that does processes these materials let us know that the tonnages reported in 2016 was an odd occurrence and they usually do much lower material throughput, but to balance this out our intern was able to do on-site and phone surveys of many restaurants, hotels, and other food distribution establishments. This paired with a list of permitted food establishments provided by the Department of Health we were able to extrapolate a much higher tonnage of food waste diversion via pig farming on Kaua'i. This industry is a shadow industry for the most part so hard data directly from the farmers is hard to come by, but the indirect data from businesses strongly support the work that this industry does.

Capital Improvement Projects (CIP) and Other Major Planning Activities

- New Landfill
 - Gathering updated information on land ownership transfer, Land use upgrade, Final design and permitting for the Landfill and access road.
- Gas Collection and Control System
 - The flare system was started up in May 2017 and operated by Geosyntec. The flare has been operating without any major problems since that time. Geosyntec continues to maintain and monitor.
- Halehaka Landfill
 - AECOM continues providing post-closure services for the Halehaka Landfill. The work includes ground water monitoring and operation of the flare system as needed. We went let a construction bid for site improvements, but the bids came in significantly higher than the Engineer's Estimate. Looking at other options for low-cost site improvements next FY.
- Kekaha Landfill Phase I Post Closure Services
 - In December 2019, Geosyntec began providing post-closure services for the Kekaha Landfill Phase I. The work consists of inspections of the site and ground water monitoring and reports

IV. BUDGET

The Budget is split into 3 categories:

- Solid Waste Disposal – Includes Administrative and Landfill Costs = \$9,327,404
- Solid Waste Collections – Includes Operation of Refuse Transfer Stations and Refuse Collection - \$6,784,695
- Solid Waste Recycling – Includes Recycling Programs and operation of the Kaua'i Resource Center - \$4,876,488

Other contributions for employee benefits, R&M vehicles, gas and diesel are also added
The total operating budget for FY21 was \$21,882,401

RESOURCES

<u>PROGRAM</u>	<u>(FTEs)</u>
a. Administration	8
b. Deposit Beverage Container Program	2
c. Solid Waste Operations	59
TOTAL FTEs	69

V. ACCOMPLISHMENTS / EVALUATION

The services provided by the DSWM are essential during the COVID19 pandemic. All facilities continued to operate, and all programs and services continued during the pandemic. Essential staff worked their normal schedules. At the beginning of the pandemic, some field staff expressed concern about exposure to the virus but this FY, all employees reported to work and performed their duties with minimal to no impact from COVID19. CDC and SWANA circulars were distributed to all staff regarding the use of PPE and protocols to avoid contraction of the virus. PPE continues to be provided to staff. Large sandwich board signs were posted at the entrance and exit of all facilities requiring customers to use masks and practice social distancing. When orders changed, the signs were taken down.

The Department has continued with two State Revolving Fund loan projects involving the Kekaha Landfill and Refuse Transfer Stations in close collaboration with DOH CWB. These projects estimated total is \$23.1 Million dollars. Due to the lower interest rate provided under the SRF loan program, the County will realize a substantial amount of savings in loan repayments.

DIVISION OF WASTEWATER MANAGEMENT

Vacant, Chief of Wastewater Division

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; efforts 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. During FY 19-20, progress was made on a new rate study. However, during FY 20-21 due to the COVID-19 pandemic, it was decided again to hold off on proposing new rates for the County Council to approve.

- **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. In FY 20-21, consultants continued to work on the Līhu'e and 'Ele'ele Facility Plans. 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 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 20-21 design activities included continued work on the 'Ele'ele Subdivision Collection System Rehab, updating the Līhu'e and 'Ele'ele Facility Plans.

In addition to new design projects, progress was made on two existing design projects: the Wailua WWTP Process, Electrical and Disinfection Improvements, Phase 2 project and the Wailua SPS No. 3 Rehabilitation project. These projects are County funded.

Finally, two design projects were completed: Wailua Manhole rehabilitation on Kūhiō Highway fronting Leho Drive. The Līhu'e Wastewater Treatment Plant Roof Repairs and Digester Control Room Improvements design was also completed.

- **Construction of Capital Improvements.** During FY 20-21, the Division had two major CIP projects under construction: the Improvements to Existing Hanamaulu and Kapaia Wastewater Pump Stations, which cost \$3.5 million and is anticipated to finish in the February 2022; and the Līhu'e WWTP Process Improvement Project, which costs \$3.8 million and is anticipated to finish in October 2021. These 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). Construction work that will be performed during FY 21-22 includes the Waimea R-1 Wastewater Distribution System Upgrade Project, which costs \$6.2 million and the Wailua SPS No. 1 Rehabilitation Project. Both projects will be funded by the DOH WWB via a CWSRF Loan.

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.

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 efficiently and effectively operate, maintain and repair all County Wastewater facilities.

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.

- **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 Lihu'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.

- **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 FY20-21 budget are summarized for the Division as a whole, including administration and operations.

OPERATIONAL COSTS

• Equivalent Personnel Positions	37
• Wages and Other Direct Costs	\$4,299,000
• Operations (Equipment, Supplies, Vehicles, Etc.)	\$1,083,000
• Utilities (Electrical, Water, Gas, Telephone)	\$1,838,000
• Contracted Services (Repairs, Laboratory, etc.)	\$2,412,000
• Debt Service	<u>\$2,555,000</u>

PROGRAM TOTAL OPERATIONAL REVENUES	\$12,187,000
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Estimated FY 20-21 Revenues	\$ 8,949,000
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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 20-21, 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 20-21 the Wastewater Division experienced challenges which lead to 1 reportable wastewater spill in the Lihue service areas. Wastewater operations staff responded to numerous callouts for emergency conditions resulting from power outages, equipment failures and other unanticipated conditions. 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 2
- Total Number of Sewered Units 5,647

•	Bills Processed in FY 20-21	26,544
•	Number of Customers Receiving Sewer Credit	461
•	Spills Reportable to the DOH	1
•	Wastewater Received and Treated (avg./day)	2.0
•	Wastewater Reused (avg./day)	TBD
•	% of Wastewater Reused	TBD
•	DOH acceptable inspections	0
•	DOH unacceptable inspections	0