

## **DEPARTMENT OF PUBLIC WORKS**

### **LYLE TABATA, ACTING COUNTY ENGINEER**

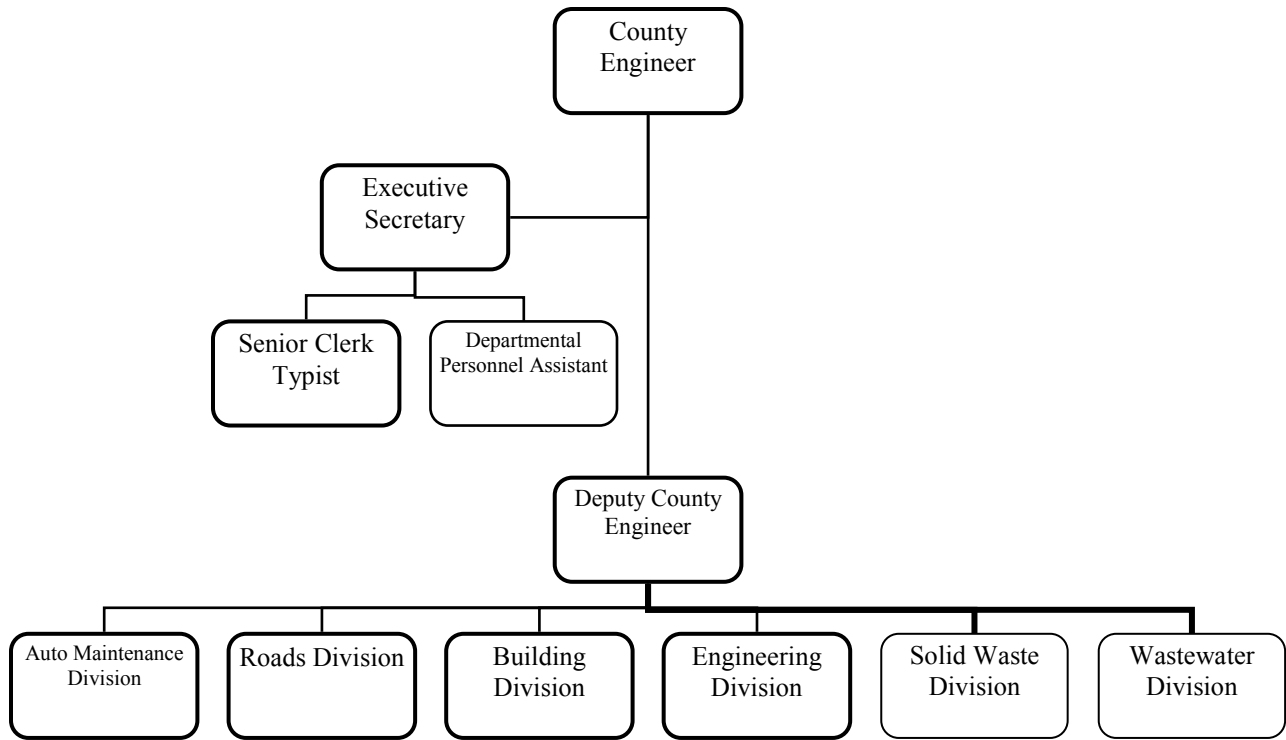
#### **ADMINISTRATION**

The Department of Public Works (DPW) is responsible for the planning, design, and construction of all new improvements to County-owned facilities, excluding Department of Water projects. Manages the collection and disposal of garbage and refuse, oversees and maintains the collection and treatment of sewage, administers the review and enforcement of the various codes and other regulations pertaining to public and private construction work.

Facilities managed by the DPW include:

- Four sanitary sewerage facilities
  - Wailua Wastewater Treatment Plant
  - Līhu‘e Wastewater Treatment Plant
  - ‘Ele‘ele Wastewater Treatment Plant
  - Waimea Wastewater Treatment Plant
- Kekaha Landfill
- Kaua‘i Resource Center
- Four refuse transfer stations
  - Hanalei Refuse Transfer Station
  - Kapa‘a Refuse Transfer Station
  - Līhu‘e Refuse Transfer Station
  - Hanapēpē Refuse Transfer Station
- Three road construction and maintenance baseyards
  - Hanalei Baseyard
  - Kapa‘a Baseyard
  - Hanapēpē Baseyard
- Approximately 309.6 miles of roadways

Duties and functions of DPW are directed by an administrative staff consisting of the County Engineer (through February 15, 2016), the Deputy County Engineer (through February 15, 2016) which changed to Acting County Engineer, Executive Assistant, Executive Secretary, Departmental Personnel Assistant II, Senior Clerk Typist, Fiscal Office and six Divisions. The six divisions are: Auto Maintenance; Building; Engineering; Roads Construction and Maintenance; Solid Waste Management; and Wastewater Management. Detailed information for these divisions is provided in the pages that follow.



### **Mission**

The Mission of the Department of Public Works (DPW) is to deliver excellent service to our constituents and support the health and safety of their communities with sustainable services and solutions.

### **Goals & Objectives**

1. The DPW Administration seeks to support the Goals and Objectives of the six Divisions within the Department, ensuring manpower, equipment and materials needs are met adequately.
2. Implement the Goals and Objectives of the County Administration, including Holo Holo 2020.
3. Ensure the health, safety and welfare of the public.

### **Challenges**

1. Planning for future improvements while continuing to meet the day to day needs and demands of the community.
2. Utilizing funds in the most efficient and effective manner to improve levels of service to our internal and external customers.
3. Succession planning and recruiting qualified hires.
4. Continuing to maintain a positive working relationship with our union partners.
5. Improve operational efficiency and effectiveness with outcomes of cost reduction.

### **Significant Improvements**

1. Focus on external/internal customer delivery of services with assistance of Human Resources (HR) training.
2. Capital Improvement Program (CIP) project delivery through timely follow up of processes.
3. Department wide commitment towards addressing personnel capability with support of HR to address union contract administration.

## **Key Successes and Achievements**

1. Implemented Key components to provide significant improvement of the County permitting processes between Planning, Building and Engineering.
  - a. Scoping a land management software solution which will aid in dealing with land use zoning needs, permit processing and a host of other items which will benefit from a Geographic Information System (GIS)-based database was completed.
  - b. Continue refinement of ePlan solutions with our customers in our community.
  - c. Working on digitizing all County property maps into GIS.
2. CIP Projects
  - a. TIGER Grant
    - i. Started Design/Build construction for the Lihue Town Core Mobility and Revitalization Project.
  - b. Kaua'i Adolescent Treatment and Healing Center construction started.
  - c. Extend Ke Ala Hele Makalae coastal path
    - i. The Kawaihau Elevated Boardwalk project was completed using Federal Highway Administration (FHWA)
    - ii. funding and the Department of Defense Innovative Readiness Training Grant for labor and equipment.
    - iii. Land acquisition ongoing for the Nāwiliwili-Ahukini Bicycle/Pedestrian path and for the Lydgate Park to Kapa'a Bicycle/Pedestrian Path Phases C & D.
    - iv. Environmental planning on going for the Ahukini-Lydgate Park Bicycle/Pedestrian and Nāwiliwili-Ahukini Bicycle/Pedestrian paths projects.
  - d. 'Anini Bridge #2 Temporary Replacement: This project installed abutments and beams to span the existing structure.
  - e. Island-wide Bus Stops Improvement, Phase 3: This project constructed 17 accessible bus shelters at various locations on Kaua'i, and made improvements to 5 existing bus shelters.
  - f. Kapahi Bridge Replacement, Federal Aid Project BR-0700(53), 80% Federal, 20% County: This new bridge at the end of Kawaihau Road (at the intersection of Kahuna Road) was fully completed.
  - g. Kaua'i Bus Driveway Reconstruction: This project replaced the main driveway at the Kaua'i Bus baseyard. This project was designed, managed, and inspected in house.
  - h. Mahea Road Sidewalks: This project was funded by Community Development Block Grant (CDBG) Program, which is managed by the County Housing Agency. This project constructed sidewalks along Mahea Road between

- Kaumuali‘i Highway and the ‘Ele‘ele Iluna and Lima Ola housing developments. This project was designed, managed, and constructed in house.
- i. Po‘ipū Road Crosswalk at Kīpuka Street: This project installed a crosswalk across Po‘ipū Road at Kīpuka Street, including rectangular rapid flashing beacons.
  - j. Puhi Road Rehabilitation Phase 1 (Kaumuali‘i Highway to Kaneka Street), Federal Aid Project STP 5010(001), 80% Federal, 20% County: This project included reconstructing Puhi Road as a concrete roadway to support industrial traffic, as well as sidewalks, bike lanes, crosswalks, and paved parking.
  - k. Wailana Bridge #2 Pedestrian Walkway: This project installed a new pre-fabricated pedestrian walkway to replace the existing walkway that had fallen into disrepair. The project also installed new guardrail for approaches to the adjacent roadway bridge.
3. Key County Solid Waste initiatives:
- a. Infrastructure Improvements, Phase II of the Kekaha Landfill.  
Lateral Expansion Cell 2 final design and permit process continued through the reporting period. Completion of this work is anticipated to be achieved in August or September 2018. Note that the Department secured approval for funding in the amount of \$18,600,000 required for all remaining engineering and construction work under a loan from the State Revolving Fund (SRF) program.
  - b. New Landfill.  
The Mā‘alo site was selected as the New Landfill site. Under Contract No. 8561, AECOM completed the updated New Landfill Siting Study, the Resource Recovery Park Feasibility Study, the Final Environmental Assessment/Environmental Impact Statement Preparation Notice (FEA/EISPN), and conducted several public meetings and one County Council briefing during the reporting period. The contract was amended to incorporate a Wildlife Hazard Assessment (WHA) to address potential impacts to the Līhu‘e Airport. The required WHA and Wildlife Hazard Mitigation Plan will ensure that all safety measures are implemented in the design and operation of the New Landfill to address Federal Aviation Administration (FAA) guidelines for the safe operation of the Līhu‘e Airport.. The Final EIS is expected to be posted in August 2018.
  - c. 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. The project has been closed out as of June 2018.
4. Key Wastewater Management Improvements:
- a. Emergency repair of a structurally deficient manhole on Kūhiō Highway at the intersection with Haleilio Road. This manhole was identified as a major concern when the manhole was inspected as part of another CIP project. The Division was able to work with a consultant and the State DOT-Highways in order to safely repair the existing manhole with a new fiberglass manhole.
  - b. Emergency repair of two sewer main sections on Kūhiō Highway in Kapaia. The Division has had multiple sewage spills in the vicinity of Kapaia Bridge in the recent past. The Division found broken pieces of clay pipe to be the cause of the blockages and spills. The Division inspected the upstream portion of the sewer

collection system that was likely the cause of the spills and identified the broken section of pipe. In addition to the broken section of pipe, the Division also identified that the sewer main on Kapaia Bridge to be deteriorated and in need of repair. The Division hired a contractor to perform the lining using a trenchless method to shorten the construction time and impact to the community.

## **Upcoming Initiatives**

1. **Strengthen Community Partnerships:** The DPW acknowledges the issues and opportunities that affect the quality of life of our residents and visitors. DPW will continue to seek opportunities for joint community involvement of infrastructure development in our communities and to develop partnerships to further the department's mission.
2. **Increase Education and Public Participation:** DPW seeks to work with the community in developing solutions that benefit and meet the public's expectations. DPW intends to do this by providing community groups and organizations with information exchange sessions and presentations for the planning and development of upcoming projects, while learning more about the community's needs and concerns. The department will also work with the County's Public Information Office to disseminate information regarding the initiatives and work being accomplished by the department via social media networks, the County website, newspaper and radio agencies, and other media venues.
3. **Providing Quality Customer Service:** Employees in every division of DPW interact with residents and visitors on a daily basis. DPW will strengthen its delivery of customer service by developing strategies to increase efficiency and response times to requests for service, communication with the public, and our ability to transition smoothly from routine operations to emergency operations during times of need.

## **FISCAL OFFICE**

Staffed by a Business Management Officer, a Budget/Fiscal Specialist and a Payroll Specialist, the primary duties of this section are the preparation and monitoring of the DPW's Operating Budget of approximately \$52.6 million, a Capital Improvement Budget of \$40.6 million and federal/state grants of \$53.8 million. This Section is responsible for the payroll of approximately 239 employees, providing support for the Solid Waste and Wastewater billing program, the Department's inventory of approximately \$251,575,490 and also for the preparation of the required financial reports and the reimbursement of federal funds for capital improvement projects including:

- Federal Emergency Management Agency (FEMA) Hazard Mitigation Grants
- Federal Highway Administration (FHWA)
- Environmental Protection Agency (EPA)

For Fiscal Year 2018, a total of 897 man-hours of salaries were reimbursed under federal grants. Continued recovery of salaries is expected as we continue to move into construction of roadways, bridges, bike/pedestrian paths, wastewater treatment plant upgrades and distribution systems of R-1 treated water funded through federal grants in FY 2018. Additionally, the Fiscal section will be tasked in the preparation of the required financial reports and reimbursement requests from State agencies that include the DOH and DOT.

## **AUTOMOTIVE DIVISION**

**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:**

1. Modernize the County's vehicle and equipment fleet, providing all agencies with economical and reliable vehicles and equipment, allowing the County to operate effectively and efficiently.
2. Provide rapid vehicle and equipment service and repair turnaround, enabling all agencies to perform their duties and responsibilities.
3. Offer support and disaster relief services to all agencies and the community in emergency situations.

Automotive Division personnel include:

- 1 – Superintendent
- 1 – Repair Shop Supervisor
- 1 – Program Support Technician II
- 1 – Storeroom Clerk
- 1 – Heavy Vehicle & Construction Equipment Mechanic II
- 4 – Heavy Vehicle & Construction Equipment Mechanic I
- 1 – Auto Mechanic II
- 5 – Auto Mechanic I
- 2 – Welder
- 1 – Auto Body Repairer
- 1 – Machinist
- 1 – Field Service Attendant
- 1 – Lubrication Worker
- 1 – Utility Worker

New Hires: One (1) Repair Shop Supervisor

Two (2) Auto Mechanic I

Retirees: Two (2) Auto Mechanic I

**Total Personnel: 22**

**III. PROGRAM DESCRIPTION:** The Automotive Division performs all aspects of Automotive and Construction Equipment repair and includes the following services:

PROGRAM OBJECTIVES:

- Repair and maintain all DPW vehicles and heavy equipment.
- Procurement of new vehicles and equipment to continuously update the County's vehicle and equipment fleet
- Repair and maintain all Kaua'i Police Department (KPD) vehicles and equipment.

- Repair and maintain vehicles from other departments and agencies within the County including Parks Department, Planning, Housing, Finance, Agency on Elderly Affairs and Real Property and all Motor Pool vehicles
- Perform Department of Transportation (DOT) inspections for all County vehicles, including Department of Water (DOW) vehicles.
- Assist Fire Department and Transportation with maintenance and repair issues periodically
- Fueling and servicing of field equipment.
- Tire repair services.
- Welding services.
- Machine shop services.
- Body repair and repainting of vehicles and equipment.
- Emergency callout services on weekends and after-hour emergencies.
- Support all County agencies in emergency situations.
- Service and maintain all emergency standby generators.
- Service and maintain generators at all five (5) major 800 mhz. repeater sites (Kukui, Kukuiolono, Kalepa, Anahola and Kīlauea).
- Service and maintain levee pumps and flood gates at Hanapēpē and Waimea levees.
- Repair and maintain all Refuse Compacting Transfer Stations (Hanalei, Kapa‘a and Hanapēpē).
- Monitoring, maintenance and management of the Fleet Maintenance program for all County vehicles.
- Operation, monitoring and maintenance of the Fuelmaster computerized fuel management system.
- Management and maintenance of four (4) County owned fueling sites (Hanapēpē Baseyard, Līhu‘e Auto Shop, Kapa‘a Baseyard, and Princeville Police/Fire Substation).
- Provide generator power for community events.

**IV. PROGRAM MEASURES:**

1. We strive to promote safety and provide safe working conditions within the facility for all employees and visitors.
2. Perform preventive maintenance on all vehicles and equipment to prolong service life and minimize costly repairs.
3. Continuously update the County fleet with the most technologically advanced vehicles and equipment available, enabling the County to conserve fuel and reduce greenhouse gas.

**V. ACCOMPLISHMENTS / EVALUATION:**

The Automotive Division recently completed a roof repair, sealing and painting project on Building “B” of the Auto Maintenance Facility. We have also recently completed major structural repairs at the Hanapēpē, Kapa‘a and Hanalei Refuse Compactor Stations.

New Equipment Received in FY18 includes:

- (1) JD 210 Excavator – Solid Waste
- (1) Wilkens Refuse Trailer – Solid Waste
- (1) Case 621G Loader – Solid Waste
- (2) Autocar ACX64 Side Loading Refuse Trucks – Solid Waste
- (4) JD Bushwacker Mowers – Roads
- (4) JD Tractor Mowers – Roads



## **BUILDING DIVISION**

I. **MISSION STATEMENT:** The Building Division is responsible for code enforcement and facility development. All programs are responsible for providing the people of Kaua'i with safely constructed public and private facilities.

### **II. DIVISION GOALS**

1. To develop new facilities and replace old, dilapidated, overcrowded buildings and structures.
2. To ensure compliance with the minimum construction standards contained within the current Kaua'i County Code and referenced building trade codes.
3. To continually update the Kaua'i County Code to reflect the latest industry standards, changing technologies, and local conditions.
4. To provide effective training and adequate staffing to increase the efficiency of services to the public in the review, issuance, and enforcement of building, electrical, plumbing, and sign permits.

### **III. PROGRAM DESCRIPTION**

#### **ADMINISTRATION**

The Building Division's Administrative Section manages facility development and construction. The Section also oversees the Building Codes Enforcement Section.

*PROGRAM OBJECTIVES:* The Administrative Section is currently tasked with the development of new facilities for the Fire Department, Police Department, Department of Finance, and the Parks and Recreation Department.

*PROGRAM HIGHLIGHTS:* Construction completed for the Kawaihau Elevated Boardwalk phase of the Lydgate-Kapa'a Bike/Pedestrian Path. Design/Build construction started for the Līhu'e Town Core Mobility and Revitalization Project. Construction started for the Kaua'i Adolescent Treatment and Healing Center.

Other major projects for which the Section is providing planning, design, and construction management work include Pi'ikoi Building Renovation, Kapa'a Police Substation, Līhu'e Kaua'i Police Athletics League building, Kaua'i Fire Department Helicopter Hangar, Kaua'i Police Evidence Warehouse Mezzanine, Kalāheo Gymnasium Re-Roofing Project, Līhu'e Town Core Mobility and Revitalization Project, Lydgate-Kapa'a Bike/Pedestrian Path, Ahukini-Lydgate Bike/Pedestrian Path, Kuna Bay-Anahola Bike/Pedestrian Path, the Nāwiliwili-Ahukini Bike/Pedestrian Path.

#### **BUILDING CODE ENFORCEMENT SECTION**

The Building Code Enforcement Section is responsible for the review of projects, plans, specifications, and related documents to ensure compliance and enforcement of all applicable building codes and ordinances associated with building construction. As the central coordination agency in the building permitting process, the program is responsible for the circulation, tracking, and consolidation of comments from County, State, and Federal agencies, prior to

permit approval. The program is also responsible for building, electrical, plumbing, energy, and sign code enforcement, as well as inspections of the above as part of the overall process.

*PROGRAM OBJECTIVES:* The ongoing objectives of this program are to:

- provide the highest level of customer service to our customers.
- address fire, life, health, and safety concerns through the use of locally adopted model codes.
- promote the design of safe residential and commercial buildings from conception through the plan review and inspection process.
- ensure that these structures are built according to the approved set of plans.
- assist the public in their understanding of the County's adopted codes and ordinances and the process that will ultimately result in safe buildings for our community.
- issue Certificates of Occupancy and Certificates of Inspection
- provide code related training to State and County plans examiners as well as architects, engineers, as other design professionals.
- respond to code related complaints such as illegal signs, or structures that are built without a permit.

*PROGRAM HIGHLIGHTS:* The Building Division has continued to place emphasis on its electronic plan review (EPR) system and the transition to 100% EPR was completed in early 2018. High level meetings were held with agencies and stakeholders to work on improving the system.

The Building Division continues to give the highest priority for plans submitted electronically. Paper plans are still accepted for smaller projects that do not require professional design services.

The Building Division processes all Board of Appeals applications and coordinates meetings with the seven members of this commission.

Looking to the future:

1. Staff will explore ways for the County to implement on-line electronic applications.
2. Staff will explore ways for the County to implement on-line payment of plan check and permit fees.
3. Efforts are already underway to update the Building Division's presence on the County's website. Updates include new and revised material, a greater emphasis on electronic plan review, and an easier to follow format.

Representing the County of Kaua'i on the State of Hawai'i Building Code Council, we are currently updating our building, energy, electrical and plumbing codes with the goal to have complete uniformity of codes throughout the State of Hawai'i.

In conjunction with the adoption of the new codes, a number of training seminars have been offered to provide updated code information to County code officials as well as interested persons from the design and construction community

**IV. PROGRAM MEASURES/EVALUATION**

**BUILDING CODES ENFORCEMENT**

Number of days for permits to be approved by all reviewing agencies:

	FY 2017	FY 2018
Residential	24	19
Commercial	72	56
Code Enforcement Inspections	FY 2017	FY 2018
Building Code Inspections	7,522	7,632
Electrical Code Inspections	4,566	4,884
Plumbing Code Inspections	5,673	6,296
<u>Sign Inspections</u>	<u>27</u>	<u>27</u>
Total Code Inspections	17,761	18,839
Code Permits Issued	FY 2017	FY 2018
Building Code Permits	765	774
Electrical Code Permits	1,887	1,367
Plumbing Code Permits	1,126	1,139
Sign Code Permits	410	449
<u>Photovoltaic/Solar</u>	<u>702</u>	<u>383</u>
Total Code Permits Issued	4,890	4,112
Building Permit Valuations	\$307,329,595	\$269,720,265

For all programs within the Building Division, the program objectives were met this past fiscal year. Our goal to meet or exceed the estimated program measures had varying results.

The Administration Section has continued to develop new facilities for county agencies and oversee the Code Enforcement Section. New facilities for the Police Department, Fire Department, improvements to Līhu‘e Civic Center, Kaua‘i Adolescent Treatment and Healing Center, and Līhu‘e Town Core Mobility and Revitalization Project are being worked on.

The Building Division concentrated its efforts to provide adequate and efficient services to the public. Our overall mission of providing the people of Kaua‘i with safely constructed public and private facilities, and well-maintained County facilities was accomplished.

**V. BUDGET BY PROGRAM**

**ADMINISTRATION & FACILITY DEVELOPMENT**

Equivalent Personnel (includes 3 \$1.00 funded positions)	6
Salaries & Wages	\$ 304,000
Operations	\$1,345,000
Equipment	\$ 0
<b>PROGRAM TOTALS</b>	<b><u>\$1,649,000</u></b>

<b>BUILDING CODES ENFORCEMENT</b>		
Equivalent Personnel	(Includes 4 contract hires)	19
Salaries & Wages		\$ 1,414,724
Operations		\$ 18,270
Equipment		\$ 0
<b>PROGRAM TOTALS</b>		<b><u>\$ 1,432,994</u></b>

## **VI. HOLO HOLO 2020 PROJECTS & STATUS**

The Division is working on the following Holo Holo 2020 Projects:

- Implement Complete Streets
  - Started Design/Build construction for the Līhu‘e Town Core Mobility and Revitalization Project.
- Kaua‘i Adolescent Treatment and Healing Center construction started.
- Extend Ke Ala Hele Makalae coastal path
  - The Kawaihau Elevated Boardwalk project was completed using FHWA funding and the Department of Defense Innovative Readiness Training Grant for labor and equipment.
  - Land acquisition ongoing for the Nāwiliwili-Ahukini Bicycle/Pedestrian path and for the Lydgate Park to Kapa‘a Bicycle/Pedestrian Path Phases C & D.
  - Environmental planning on-going for the Ahukini-Lydgate Park Bicycle/Pedestrian and Nāwiliwili-Ahukini Bicycle/Pedestrian paths projects.

## **ENGINEERING DIVISION**

I. **MISSION STATEMENT:** Protection of the public's health, safety, and property, as well as the environment through proper planning, design, development, 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, driveway approaches, land use, and complete streets.

### **II. DIVISION GOALS:**

1. Protection of public health and safety by planning, designing, and developing safe and cost-effective roadway, bridge, and drainage systems.
2. Protection of public safety and assurance of high quality of life by administering and enforcing subdivision, grading, drainage, complete streets, and other ordinances, regulations, and resolutions.
3. Protection of public safety and investment through effective operation and maintenance of County facilities, roadways, bridges, and drainage systems through systematic planning, systems, processes, and programs.

### **III. PROGRAM DESCRIPTION:**

#### PERSONNEL

##### **Division Chief and Admin Staff**

- (1) Civil Engineer VII
- (2) Clerical Assistant (on extended leave for the entire fiscal year)
- (1\*) Senior Clerk (\*Temporary Section 3 hire)

##### **Regulatory/Permitting/Design:**

- (3) Civil Engineer VI
- (4) Civil Engineer III
- (5) Civil Engineer III
- (6) Civil Engineer I
- ( ) Civil Engineer I (vacant)
- (7) Engineering Support Technician III
- (8) Engineering Support Technician III
- (9) Engineering Support Technician I

##### **Project Management/Design:**

- (10) Civil Engineer VI
- ( ) Civil Engineer III (vacant)
- (11) Civil Engineer I
- (12) Engineering Drafting Technician II

##### **Construction Inspection/Design:**

- (13) Civil Engineer VI
- (14) Supervising Construction Inspector
- (15) Construction Inspector III
- (16) Construction Inspector III

**Survey :**

( ) Unable to recruit a licensed land surveyor; Land Surveyor II position reallocated; Topographic surveying for design is being completed by Civil Engineering Staff; Other surveying is being done by an on-call consultant.

Total Number of Personnel: 16 full time staff, 1 temporary hire, 2 vacant positions

**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 project funding. The Division is tasked with the 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 and speed tables on County roadways.
5. Excavation and Repairs of Streets and Sidewalks Ordinance (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.

In addition, the Engineering Division 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, and variances.
  - 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 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, street lights, parking restrictions, and bus stops. This work includes preparing resolutions for County Council, when required by County ordinances.
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.

#### **IV. PROGRAM HIGHLIGHTS AND ACTIVITIES:**

- Engineering Division has provided significant services in response to the RAIN18 flood that occurred on April 15, 2018, including the following:

- Initial Damage Assessments: During the days following the flood, all Civil Engineers assisted with damage assessment of roads, bridges, parking lots, and other public facilities.
- Kahiliholo Road Culvert Replacement: This project will be funded by Floodplain Emergency Management Agency (FEMA) and will replace approximately 100 feet of culvert that was washed out during the flood. Design of this project was completed in house and construction is anticipated to begin in September 2018.
- Kahuna Road Embankment Reinforcement along Kapa‘a Stream: This project will be funded by the National Resource Conservation Service (NRCS) and will install boulders to stabilize the Kapa‘a Stream bank adjacent to approximately 380 linear feet of Kahuna Road, and at two culvert crossings of Kahuna Road. Design is underway in house; a construction timeline has not been developed yet.
- Wainiha Powerhouse Road Repairs: This project will be funded by FEMA and will replace broken or poorly located culverts, add new culverts, install wingwalls, provide embankment stabilization, and repair broken pavement surfaces. Design is underway in house; a construction timeline has not been developed yet.
- Weke Road Repair: This project will be funded by FEMA and will reconstruct approximately 350 feet of Weke Road that was washed out during the flood. Design of this project was completed in house, with construction anticipated to begin in November 2018.
- Construction Management for RAIN18 projects. Procurement is underway for one or more consultants to provide construction management services for the above projects.
- The following construction projects were completed this year:
  - ‘Anini Bridge #2 Temporary Replacement: This project installed abutments and beams to span the existing structure.
  - Island-wide Bus Stops Improvement, Phase 3: This project constructed 17 accessible bus shelters at various locations on Kaua‘i, and made improvements to 5 existing bus shelters.
  - Kapahi Bridge Replacement, Federal Aid Project BR-0700(53), 80% Federal, 20% County: This new bridge at the end of Kawaihau Road (at the intersection of Kahuna Road) was fully completed.
  - Kaua‘i Bus Driveway Reconstruction: This project replaced the main driveway at the Kaua‘i Bus baseyard. This project was designed, managed, and inspected in house.
  - Mahea Road Sidewalks: This project was funded by Community Development Block Grant (CDBG) Program, which is managed by the County Housing Agency. This project constructed sidewalks along Mahea Road between Kaumuali‘i Highway and the ‘Ele‘ele Iluna and Lima Ola housing developments. This project was designed, managed, and constructed in-house.
  - Po‘ipū Road Crosswalk at Kīpuka Street: This project installed a crosswalk across Po‘ipū Road at Kīpuka Street, including rectangular rapid flashing beacons.
  - Puhi Road Rehabilitation Phase 1 (Kaumuali‘i Highway to Kaneka Street), Federal Aid Project STP 5010(001), 80% Federal, 20% County: This project included reconstructing Puhi Road as a concrete roadway to support industrial traffic, as well as sidewalks, bike lanes, crosswalks, and paved parking.



- Wailana Bridge #2 Pedestrian Walkway: This project installed a new pre-fabricated pedestrian walkway to replace the existing walkway that had fallen into disrepair. The project also installed new guardrail for approaches to the adjacent roadway bridge.
- The following planning and design projects were completed this year:
  - Bridge Inspections and Appraisals 2016: All bridges were inspected as scheduled during fiscal year 2017. During fiscal year 2018, this contract was modified to provide design of the temporary replacement for Anini Bridge #2 and to complete load ratings for the federal aid bridges.
  - Island-wide Bus Stops Improvement, Phase 4: This project will construct 9 accessible bus shelters at various locations on Kauaʻi. Consultant design and contractor procurement are complete. Construction is estimated to start in September 2018.
  - Island-wide Road Resurfacing 2018: This project will resurface various non-federal aid roads on Kauaʻi, as recommended by Roads Division based on pavement condition indices. This project was designed in-house by Engineering Division staff.
  - ʻŌpaekaʻa Bridge Replacement; Federal Aid Project, 80% Federal, 20% County: Federal funding obligation is pending, with construction anticipated to begin in April 2019.
  - Puʻu Road Improvement Study: This is a study of the safety and design concerns on Puʻu Road. Final project plans and cost estimates have been received from the consultant. There is no current schedule for construction, as this is a low volume roadway with low priority.
  - Safe Routes to School Rectangular Rapid Flashing Beacon project: This project includes sidewalks along ʻAlae Road near Kekaha Elementary School; and crosswalk improvements at Kekaha Elementary School, Kalāheo Elementary School, and Kapaʻa Middle School. This project was designed in house by Engineering Division staff. This project was delayed due to the need to obtain more funding because of high construction bids, but construction is anticipated to start in September 2018.
  - Salt Pond Sewer Effluent Disposal System: This project will construct a sewer line to carry sewage from the Salt Pond Park comfort stations to an existing sewer line on Lele Road. Design and construction bidding are complete; bids came in higher than the cost estimate and construction will start soon after additional funding is secured, in approximately October 2018.
- The following construction projects are ongoing:
  - Puʻuʻōpae Bridge Replacement; Federal Aid Project BR-0700(59), 80% Federal, 20% County: Utility relocation work is underway, but the project has been delayed due to a staffing shortage within the Department of Water Construction Section. Bridge closure for construction is anticipated during September or October 2018.
  - Pua Nani Street Drainage Improvements: This project is rehabilitating large corrugated metal pipes (CMPs) by pouring new concrete inverts and “spincasting” a fiber reinforced concrete liner inside the existing CMPs. Construction is nearing completion.
- The following planning and design projects are ongoing:
  - ʻAliomanu Road Repair: This project is intended to reconstruct ʻAliomanu Road to be a two-lane road, since the road has been damaged by erosion due to wave action. During this fiscal year the consultant completed the final environmental documents.

- Bridge Inspections and Appraisals 2018: Due to time constraints, the initial primary bridge inspections are going to be completed through Hawai'i Department of Transportation's (HDOT's) consultant. A County consultant is also being procured for follow-up work.
- Halekō Road Restriping: This project will restripe Halekō Road to add left turn lanes, a marked pedestrian walkway, and bicycle lanes, after resurfacing by Roads Division during fiscal year 2019. This project is being designed in house.
- Hanapēpē Bridge Repairs, Federal Aid Project BR-0545(001): Project on hold after Kuppasamy Venkatesan's retirement. Engineering Division is working on a solution to finalize the plans for this project, potentially using the bridge inspection consultant.
- Hanapēpē Road Resurfacing: Project includes resurfacing and construction of sidewalks/walkways. Public involvement charrette was held in August 2014. During this past fiscal year, the environmental documentation and permits were completed in house by Engineering Division staff. Final design by the consultant (AECOM) is underway, but the project has been pushed out to federal fiscal year 2021 in the State Transportation Improvement Program (STIP), due to fiscal constraints. We are considering implementing part of the restriping with County funds prior to the STIP project.
- 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. Consultant procurement is nearly complete.
- 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 during fiscal year 2019. This project is being designed in house.
- Kanaele Road Slope Stabilization: This project will stabilize slopes along Kanaele Road that have subsided over the years.
- 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. The design consultant has completed detailed conceptual designs, which will be presented to the public during September 2019. Construction is anticipated to begin in 2020.
- Kīlauea Road and Kolo Road (Route 562) Resurfacing and Multi-Modal Access: The FHWA Central Federal Lands (CFL) Division is currently working on designs for pedestrian and bicycle access to Kīlauea Point, funded by the Federal Lands Access Program (FLAP). This project is currently in the planning and 30% design stage. The FLAP funds for multi-modal access will be merged with a resurfacing project into a single project funded by FLAP funds, STIP funds, and a small County match. This project is on the 2019-2022 STIP for Federal Fiscal Year 2021.
- Līhu'e Town Core Mobility and Revitalization Project (TIGER): This project includes various transportation improvements in several areas within the Līhu'e Town Core, including significant changes to Rice Street. The County received a \$15,100,000 TIGER grant from the US Department of Transportation for this project. This project is being managed by Doug Haigh of Building Division, but Engineering

Division has been heavily involved in the design review and is assisting with project management, with anticipation that the project will transition fully to Engineering Division in the future. The design-build contractor/consultant is on board and final design is underway.

- Maluhia Road and Kōloa Road Improvements; Federal Aid Project, 80% Federal, 20% County: This project will improve 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. The environmental documentation and final design are underway. Construction is anticipated to start by August 2019.
- Material Testing On-Call Services – Procurement is underway for a consultant to perform material testing on County projects – this is a service that is challenging for Engineering Division to perform in house.
- 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; the design is nearing completion, with construction anticipated for early 2019.
- Niūmalu Bridge Replacement: Consultant procurement is underway.
- 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 during fiscal year 2020. This project is being designed in house.
- Olohena Road (Rte 581, Kukui Street (Rte 581), and Ulu Street (Rte 5805) Improvements, Federal Aid Project, 80% Federal, 20% County: This project will resurface (and reconstruct where needed) these collector roads in the Kawaihau District, add paved shoulders where feasible, and install sidewalks in some areas within Kapa‘a Town. The consultant procurement for this project is nearly complete. Construction is anticipated to begin in 2020.
- On-Call Surveying Services: This fiscal year, a contract was executed with a survey consultant, to perform surveys at various locations. The first task order has been completed, to survey the Princeville Fire and Police Substation property for the purpose of relocating the Princeville Fuel Tank.
- 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, medians, bike lanes, and other features on Po‘ipū Road. The design consultant has produced detailed conceptual designs, which will be used for follow-up public involvement. The first phase of this project is funded in the STIP in federal fiscal year 2020.
- Princeville Substation Fuel Tank Relocation: This project will relocate the existing fuel tank, which is currently partially located on adjacent private property. Survey work has been completed via a consultant. Design work in house is underway.
- 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 potential 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 2023 on the STIP, as the interim paving project completed in 2016 is holding up well. The project will be “shovel ready” by 2019 – if federal funds become available, the project may be constructed sooner than 2023.
- Safe Routes to School – Kalāheo Elementary School: This federally funded Safe Routes to School (SRTS) project will reconstruct a sidewalk on Pu‘u Road and add a new sidewalk on Hokua Road. This project is being designed in house; survey work is underway.
  - 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. The design consultant is working on final design. This project is funded during federal fiscal year 2020.
  - 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. The design consultant is working on final design. Construction is anticipated to start in March 2020.
  - Twin Reservoirs: A consultant (AECOM) has been selected for this project and the notice of award has been sent. However, the notice to proceed has not been issued, because the County is still working with the adjacent private landowners on obtaining right of entry agreements in order to conduct surveys. Once surveys are completed, the consultant will next 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.
  - Waimea River Ford Crossing: Funds have been received from Hawai‘i State Department of Land Natural Resources for design and permitting/environmental work to install a concrete ford crossing downstream of the Waimea Swinging Bridge. The contract has been awarded to Kai Hawai‘i for permitting and design.
  - 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. Consultant procurement is nearly complete.
  - Ongoing development of Policies and Standard Operating Procedures to better manage processes within the division and manage capital improvement projects.
    - Street Design Manual: The design manual has been finalized by Engineering Division, in conjunction with Planning Department, including coordination with the subdivision code. Rulemaking to adopt the document is anticipated to start in September 2018.
    - 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.
- Construction Notes: Construction Section proposed and implemented changes to Engineering Division's Construction Notes were added to require better surveying and staking, and improve the County's ability to ensure that private projects are constructed per plan.
- 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.
- Completed the following surveys in house:
  - Moi Road Sidewalk survey for design purposes.
  - Kalāheo Safe Routes to School survey for design purposes

## **V. PROGRAM MEASURES:**

- Construction plan review was completed for the following large subdivisions or developments:
  - Adolescent Treatment Center
  - AES Solar (Lāwa'i)
  - Koa'e Affordable Housing Project
  - Kōloa Village Commercial Site Fine Grading and Offsite Plans
  - Waihohonu CPR (Kōloa Camp) – Recertification
- Construction plan review is ongoing for the following large subdivisions or developments:
  - Ahukini Makai Subdivision (S-2005-41)
  - Coconut Beach Resort
  - Hōkūala Resort (formerly Kaua'i Lagoons)
  - Kukui'ula HH-II (S-2011-20)
  - Kukui'ula Kahela (Parcel H) Subdivision (S-2016-02)
  - Kukui'ula Lopaka Paipa Boulevard Extension
  - Kulana Subdivision restart (S-99-49)
  - Lima Ola Affordable Housing
  - Puakea Golf Course Mass Grading
  - Puakea Subdivision, Phase II (S-2009-21)
  - Tonokawa Makaio & Lalena Estates (S-2004-33)
  - Waiola Subdivision, Phase I (S-2009-13)
  - Waiola Subdivision, Phase II (S-2009-14)
  - Waiola Subdivision, Phase III (S-2009-15)
- Construction plan review was completed or is ongoing for the following Department of Water projects:
  - Plans Approved
    - Job No. 15-07 – DOW Hanapēpē Road 6-Inch Main Replacement

- DOW Kaumuali‘i Highway 16-inch waterline – ‘Ele‘ele
  - Plan review Ongoing
    - Job No. ANI-01 – DOW Anini Road Water Line
    - Job No. 11-02 – DOW Grove Farm Tank
    - DOW Kalāheo Clearwell Reservoir
    - Job No. K-01 – DOW Kalāheo Waterline (3 plan sets)
    - Job No. 02-14 – DOW Kapahi Water 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:
  - AES Solar
  - ‘Ele‘ele Iluna Subdivision, Phase II, Increment 2 (S-2006-49)
  - Hōkūala Resort (formerly Kaua‘i Lagoons)
  - Kīlauea Lighthouse Village and the associated Ala Namahana Parkway reconstruction.
  - Koa‘e Affordable Housing
  - Kōloa Village
  - Kukui‘ula Kula Makai (Parcel A) Subdivision (S-2013-16)
  - Kukui‘ula Major Project Road (Ala Kukui‘ula) Phase 3
  - Kukui‘ula Manuhonuhonu Borrow Site, phase 3
  - Puakea Subdivision, Phase I (S-2006-27)
- Construction Section completed inspection of the following major subdivisions or projects:
  - DOW Admin Building
  - DOW Halewili Water Line
  - DOW Waila‘au Road Water Line
  - ‘Ele‘ele Iluna Subdivision, Phase II, Increment 1 sidewalk construction
  - Ho‘oluana at Kohea Loa (S-2006-24)
  - Kaniko‘o (Rice Camp) Senior Housing Phase II onsite and offsite
  - Kōloa Landing
  - Makahuena Estates Subdivision (S-2015-14)
  - Philippine Cultural Center
  - Pili Mai
  - Solar City Kapaia
- The following permits have been issued, inspected, and/or closed out:
  - Grading Permits
    - Issued: 17
    - Inspected and closed out: 21
  - Road Permits
    - Issued: 31
    - Inspected and closed out: 5
  - Driveway Permits
    - Issued: 70

## **DIVISION OF ROADS**

### **I. MISSION STATEMENT**

To maintain County roadways in a manner that will safely convey vehicular and pedestrian traffic; to maintain major drainage facilities and levees; and to provide county wide support with equipment and labor.

### **II. DIVISION GOALS**

1. To make County roadways and bridges safe for public use
2. To anticipate and address road, bridge, drainage and levee needs
3. To make the best and most efficient use of the Division's resources
4. To improve internal and public communication
5. To instill pride in the jobs that we perform

### **III. PERSONNEL**

- 1 - Chief of Field Operations & Maintenance
- 1 - Civil Engineer VI
- 1- Principal Project Manager IWRR (Recruiting)
- 1- Project Assistant (Contract - Recruiting)
- 1- Engineering Support Technician III (Contract - Recruiting)
- 1 - Administrative Services Assistant
- 1- Assistant Chief of Field Operations & Maintenance
- 1- Field Coordinator (Recruiting)
- 3 - District Road Overseer (Hanapepe, Kapa'a, Hanalei)
- 1 - Highway Construction & Maintenance Supervisor II (Hanapepe)
- 6 - Highway Construction & Maintenance Supervisor I (Hanapepe, Kapaa, Hanalei)
- 3 - Field Operations Clerk (Hanapepe, Kapaa, Hanalei)
- 1 - Equipment Operator IV
- 5 - Equipment Operator III
- 12 - Equipment Operator II
- 4 - Equipment Operator I
- 4 - Tractor Mower Operator
- 3 - Laborer Working Supervisor (Hanapēpē, Kapa'a, Hanalei)
- 18 - Laborers
- 1 - Equipment Logistics Mobilization Supervisor
- 1 - Equipment Operator IV
- 2 - Equipment Operator III
- 1 - Bridge Maintenance Worker II
- 2 - Bridge Maintenance Worker I
- 1 - Traffic Signs & Markings Supervisor
- 1 - Traffic Sign Painter
- 1 - Traffic Signs & Markings Crew Leader
- 1 - Traffic Marker
- 2 - Traffic Signs & Markings Helper
- 1 - Traffic Signs & Markings Laborer
- 82 - Total Personnel**

#### **IV. FUNCTIONS**

The Roads Division is composed of four sections: Administrative, Technical, Field Operations and Projects. Field Operations consists of the following branches: Roads Maintenance, consisting of District Baseyards; Roads Construction, consisting of Equipment Logistics Mobilization, Bridge & Road Construction, and Traffic Signs & Pavement Markings. Roads Division manages approximately 310.1 miles of roads: 307.9 paved and 2.2 unpaved. Notes: Private roads are not managed by Roads Division

#### **V. PROGRAM DESCRIPTION**

The Roads Construction and Maintenance Division performs maintenance and repair of road pavements, shoulders, bridges, sidewalk/driveway/curb/gutter, levees and appurtenances maintenance and repairs; installation and maintenance of traffic and safety devices; installation and maintenance of traffic signs, pavement markings and guardrails. The Roads Construction and Maintenance Division support the Solid Waste Division and the Department of Parks and Recreation on a regular basis and supports other agencies on an as needed basis. During times of emergency disaster declarations, Roads Division forces respond to the immediate safety needs of the people in the sever damaged areas.

##### **PROGRAM HIGHLIGHTS**

- Drafted Cleaning and Maintaining County Right of Way ORDINANCE, sent County Engineer for review, then to County Attorney and Mayor. Sending to County Council has been put on hold.
- Four Winds Group with M.PET (Maintenance Productivity Enhancement Tool) MMIS (Maintenance Management Information System) Program. Working with Roads Field Operation Staff to post completed jobs as quickly as possible to provide managers with more accurate, quantifiable information in near real time.
- iWorQ's Pavement Management Program has GIS Mapping and improved budget reporting capability. Latest pavement condition survey/was conducted in October 2016, next pavement condition survey/assessment is schedule for 2019.
- Another successful annual Maluhia Road Tunnel of Trees vegetation control and ground maintenance cleanup of the "Gateway to the South Shore" by the community, Hotel Association and County Crews. This was in preparation for Kōloa Plantation Days.

#### **VI. PROGRAM MEASURES/ACCOMPLISHMENTS**

- Notice of Completion for Contract # 9497 IWRR FY2016-2017 Local Roads has been sent and final payment made.
- Notice of Completion for Contract # 9515 Island Wide Crack Filling & Surface Seal Coating Local Roads FY2016-2017 has been sent and final payment made.



- Contract # 9663 IWRR FY2017-2018 Local Roads has been executed, notice to proceed has been sent, and project has started.
- Contract # 9666 for Island Wide Crack Filling and Surface Seal Coating of Local Roads FY 2017-2018 has been executed and notice to proceed has been issued.
- Contract # 9528 Po‘ipū Road Crosswalk at Kipuka Street was executed, work completed, Notice of Completion sent and final payment made.
- Hanapēpē and Waimea Levees United States Army Corps of Engineers Annual inspection achieved passing grades thanks to Hanapēpē Base Yard Crews, Supervisors and Field Operation Manager coordination.
- Roads Division employees on-going with re-training on equipment and trucks; annual safety and re-certification that are mandatory requirement.
- Continuing the development of Roads Operations and Maintenance Policy Manual; and Roads Safety and Health Manual.
- During April 2018 Flooding (RAIN18), Roads Division responded to immediate safety needs in the areas of: Kumu Road; Wainiha Powerhouse Road; Ala Eke Road; Ananalu & Anahulu,Roads; Weke Road; Kalihiwai Ridge; Kapaia Bridge; Wailaau Road; Waihohonou Stream; Kōloa Town; ‘Anini Road.

## **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 Kaua'i, and maximize waste diversion on Kaua'i by providing cost-effective, convenient, and reliable waste diversion opportunities to Kaua'i residents through source reduction, reuse, and recycling programs.

### **II. DIVISION GOALS:**

1. Maintain a balance of reliability, efficiency, and cost effectiveness for County solid waste disposal and diversion programs.
2. Identify and implement appropriate integrated programs to divert solid waste from the County landfill. In concert with the recently adopted "Zero Waste Resolution", the goal of the Division is to achieve 70% waste diversion source reduction, reuse, recycling and composting by the year 2023.
3. 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.
4. Conduct County solid waste management programs and operations in accordance with applicable government regulations.
5. Keep abreast of new technologies to maintain a modern and cost effective solid waste management system for the Island of Kauai.

### **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**

1. 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.

2. 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

b. Highlights

Phase II of Kekaha Landfill. The Kekaha Landfill Operation accepted and buried 91,425 tons of municipal solid waste during Fiscal Year 2018. This figure includes solid waste from residential and commercial sources. This is an increase of 4,536 tons from the previous fiscal year.

The landfill tip fee for commercial customers is currently \$119 per ton, effective July 1, 2014. Operations continued with Waste Management of Hawai'i who are contracted to provide primary oversight responsibility over the management of the landfill daily operations. The County provides the equipment operators and labor workforce to perform operations to accept and compact solid waste in the landfill and for site maintenance. The 2018 (July 1, 2017 through June 30, 2018) Annual Operating Report for Kekaha Sanitary Landfill Phase II prepared by Waste Management of Hawaii, Inc. dated July 26, 2018 indicates that the Airspace Utilization Factor (tons/cy) is 0.66 as compared to 0.76 in the prior year. This factor compares the tons of solid waste received at the landfill versus the volume consumed.

The Division completed reorganization of the landfill personnel to increase supervisory capacity at the site to improve support for operations, documentation and accountability, and safety. After consultation with United Public Workers union, DSWM reallocated a vacant blue collar position to a working supervisor position. A Landfill Working Supervisor started employment on June 16, 2018.

See CIP project section narrative for activities related to Phase II of the Kekaha landfill.

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.

<b>Table 1</b>	<b>Total MSW</b>	<b>Tonnage</b>
<b><u>RTS Location</u></b>	<b><u>Received FY 18 (Tons)</u></b>	<b><u>Change from FY 17</u></b>
Hanapēpē	9,176	+821
Līhu‘e	15,128	+712
Kapa‘a	8,494	+27
Hanalei	6,259	-65

- Last FY, we implemented new Best Management Practice upgrades for storm water runoff. We have awarded the design contract to Jacobs (formerly CH2M) and we are moving ahead with the conceptual design. We are currently applying for additional money from the Department of Health, Clean Water Branch DOH CWB, Sewer Revolving Fund (SRF) funding to increase the scope of the transfer stations improvements. In working with DOH CWB to show progress on the issues with the notice of violation and order (NOVO), we submitted the solid waste permits for all 4 transfer stations for renewal. In December 2017 we received approval for a 5 year extension for the permits at all transfer station sites. In dealing with the DOH CWB we have submitted a draft Storm Water Pollution Prevention Plan (SWPPP) late in 2017 for all the transfer stations. It is currently under review and we were informed that comments would be provided to us to help us work on the SWPPP. We continue to keep in contact with DOH CWB to ensure we are on the same page and providing them with what they request. We currently have been removing metals from berms at Hanapēpē and will be re-grading the green waste area in the coming month. We also plan to install a concrete curb at Hanapēpē to help with the storm water flow. We continue to move forward implementing the immediate improvements.
- AECOM has been contracted for another year to provide the County of Kaua‘i storm water testing at all the transfer station sites. Services related to compliance with the National Pollutant Discharge Elimination System (NPDES) general permit. The semi-annual inspections have been taken on by office staff.
- Refuse Collection at County Facilities. . Refuse collection at 31 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 approximately 205 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 service County bus stops on Tuesdays and Thursdays, currently at approximately 40 locations.
  - Island-Wide Automated Curbside Refuse Collection.
    - Automated Refuse Collection. The DSWM converted all customers to automated refuse service in July 2015. As of June 30, 2018, the refuse collection program had 20,528 residential collection accounts and 279 business accounts, including Transient Vacation Rentals (TVRs). Customer choice of cart size includes 96 and 64 gallon options. This operation is supplemented by a ‘Modified Manual Refuse Collection crew servicing customers on Mondays, 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 1,281 carts per week.
    - Refuse Collection Staff. The memorandum of understanding executed by the UPW and County in April 2015 continued to be an effective management tool for the DSWM. The unassigned collectors have embraced their new roll with the DSWM in supporting the refuse collection operation as well as RTS and landfill operations.
  - Heavy Equipment Purchases Budgeted in FY 2018
    - a. (1) Transfer Trailer
    - b. (2) Side Load Refuse Trucks
3. Integrated Solid Waste Management Plan (ISWMP)
- Per HRS 342G-24 (2) Counties shall submit revised ISWMP to the State DOH every 10 years. The current ISWMP was Adopted by Council Resolution in 2009. We will be soliciting for Professional Services to update the plan this FY.
4. Waste Diversion Programs: These programs are implemented to manage materials that are prohibited from the landfill and also to divert recyclable material 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. 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 Residential Refuse Collection Assessment (RRCA) revenue for FY 2018 was approximately \$3.5 million for 20,528 parcels. The RRCA program revenues have increased about \$22,300 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.
  - Beginning July 1, 2012 pursuant to Section 21-9.1 (a) of Ordinance 905, TVRs were no longer eligible for refuse collection service under the RRCA which was established for residential accounts. At the end of the FY we had 279 combined TVR & business accounts with 84 selecting 64 gallon carts at a rate of \$64 per month, and 256 selecting the 96 gallon cart at a rate of \$84.00 per month. These commercial refuse accounts, which are tracked and billed separate from RRCA accounts, were projected to generate total revenues of \$281,000 in FY 2018. There was a \$20,000 decrease due to the April 2018 (RAIN18) flooding which affected 53 accounts servicing 62 carts that did not get billed in April, May and June 2018. Areas affected included Kalihiwai Valley, Hanalei and Waikoko to Haena.
- Kaua'i DSWM Staffing.
    - Our acting Division Chief resigned in January. We have been recruiting for a replacement.
    - Our Departmental Contracts Officer retired at the end of December. The position was transferred to Waste Water.
    - Our Solid Waste Civil Engineer hired to assist the DSWM with CIP and other critical operations projects resigned June 2018 We are recruiting a new Civil Engineer at this time.
    - In November and December, we hired 2 State funded HI5 Recycling Specialists Trainee positions that were vacant for 6 months. Staff were fully trained and performing all activities specified under the State Deposit Beverage Container Program as of the end of FY18.
    - Our Recycling Specialist III resigned at the end of FY17. We reallocated the position to a SW Project Assistant in January 2018. The position assists the Civil Engineer 80% of the time and Recycling Programs 20% of the time.
  - Kaua'i Resource Center (KRC) HI5 Recycling Operations
    - Posted an Invitation for Bid for HI5 Recycling Concession on July 7, 2017. The solicitation was for a contract to operate a Certified Redemption Center (CRC) for HI5 beverage containers with a term length of 36 months. The contract does not include collection of non-HI5 recyclables, or processing of materials on site. On August 17, the County sent Intent to Award to Shredco. On September 5, Reynold's protested the award. The protest was rejected by the County Attorney on September 28. On October 6, the County Issued Notice of Award to Shredco. On November 20, Purchasing sent the Contract

for Shredco execution. At the end of March 2018, Shredco provided the necessary Certificates of Insurance which allowed the County to move forward with Contract execution. Contract 9552 was executed on April 6, 2018 under which Shredco will pay a concession fee of \$1,667.50 per month to the County. The Contractor spent the remainder of the FY obtaining their Permit, Certification, and Contract for container fee reimbursements from the State DOH. The HI5 CRC at the Kauai Resource Center is scheduled to open in October 2018.

- Processing of Commercially Generated Recyclables

- In May of the prior FY, the County established Contract 9518 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 9518 has 3 year term with 2 one year options to extend by mutual agreement between the parties.
- The annual tonnages for each recyclable collected under the program are as follows:
  - Corrugated cardboard: 3,060 tons
  - Mixed Paper: 191 tons
  - HI5 Glass: 1,667 yond
  - Non-HI5 Glass: 327 tons
  - Aluminum: 226 tons
  - HI5 Plastic: 342 tons
  - Non-HI5 Plastic: 342 tons**Annual Total – 5,831 tons**

- Home Composting

- 197 Earth Machine Home Composting Bins were distributed to Kaua'i residents this FY free of charge.
- The main distribution point is at the Kaua'i Resource Center. Residents watch a brief training video to obtain a free bin. Bins are distributed from 8:00 am to 3:30 pm on Fridays without an appointment. This distribution schedule has worked for residents and staff and has allowed us to bypass the process of making appointments which was administratively burdensome.
- The agreement for a satellite distribution point has ended with Malama Kaua'i due to staffing issues and possible relocation of the non-profit, but services for north shore residents will continue through an agreement with Kaua'i Worms in Kīlauea. The company will distribute bins during onsite distribution of their vermiculture units or during the Anaina Hou Community parks Farmer's Market. These services allow distribution of the bins to north shore residents

that do not want to drive to Līhu‘e. Residents will be required to watch the training video online on the County’s composting website [www.kauai.gov/composting](http://www.kauai.gov/composting).

- We received 868 additional bins in FY 2018. The price per bin was \$47.45 including shipping.
  - A survey was conducted in FY 2017 and sent to over 900 valid emails collected through the Home Composting program. The response rate was significant at 34.1%. With 93.65% of the respondents reporting they were happy with the functions of the Earth Machine Home Composting bin and 86.2% rated the system good or excellent. 86.2% said County education was good or excellent, while 87.2% think we should invest tax dollars in more bins. A 2018 Survey will be sent out in September.
  - Each bin diverts an estimated average of 2,039.63 lbs. of food and yard waste per year. This is our most economical waste diversion program at an estimated cost of \$4.65 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
    - Contract 9453 with Garden Isle Disposal (GID) entered into its second and final year in FY18. 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 containers
      - 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.
    - The annual tonnages for each recyclable collected under the program are as follows:
      - Corrugated cardboard: 897tons
      - Mixed Paper (incl. newspaper): 540 tons
      - Glass: 302 tons
      - Aluminum: 0.33 tons
      - Steel: 71 tons
      - Plastic: 103 tons
- Annual Total – 1,993**



- In August 2017, China announced to the World Trade Organization that they will stop accepting waste (recyclables) from other nations in January 2018. China is the main destination for American recyclables. This has had drastic impacts on recycling programs throughout the U.S. As a result, the commodity value of recyclables has tanked, and GID has lost approximately \$100,000 revenue in FY18 and markets are currently worse than ever.
  - Due to China's rejection of recyclables, GID was unable to market plastic trays and clamshells collected under the program. In March 2018 SW announced the program change to only accept #1 and #2. We also announced that newspaper can now be commingled with mixed paper which increased convenience and opened up space at the drop bins. Signs on the bins were changed, but the public has been slow to change their habits.
- Acceptable Non-Deposit (ADF) Glass Recovery and Recycling Contract
    - The County will forfeit ADF glass funds for FY 2018. We attempted to develop a program, but the current funding level provided by the State is not sufficient to cover all costs involved in receiving, processing, and managing a buy-back and recycling program as required by the Department of Health.
- Deposit Beverage Container (DBC) Program
    - The State Department of Health provided annual funding under ASO Log 14-047 Modification 5. The total program budget was \$254,861.81. 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 that monitor retailers and 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, outreach and assistance, and providing administrative functions.
    - HI5 Recycling Specialist positions were vacant from August to the beginning of November and are now filled. One position was filled on November 16, 2017 and the other on December 3, 2017.
    - HI5 Recycling Specialists perform island-wide compliance inspections of retail outlets selling beverage containers at a rate of 16 per month. They also conduct 4 Certified Redemption Center (CRC) inspections per month as well as completing 10 surveys at hotels, bars, vacation rentals and restaurants to assist with HI5 recycling and to assess the impact of the HI5 program on these entities. 2 CRC's and eight 8 dealer locations were visited in the month of December 2017 and January 2018, the two new HI5 recycling specialists performed these inspections as their training. 4 Certified Redemption Centers and 8 dealer locations were visited in the month of February and March. Beginning in the 4<sup>th</sup> Quarter, HI5 Recycling Specialists performed the amount of inspections specified in the contract. Mercury Tsubata from the State Department of Health performed an onsite visit with the two HI5 recycling specialists on January 31, 2018.
    - There are currently six CRC operations throughout the island, of which, 4 are privately operated and 2 are contracted by the County. Kaua'i Community

Recycling Services, LLC (KCRS) operates Kekaha and Kōloa Fire Station events 2 days per week at each location at a State subsidized rate of \$360.50 per event.

- In FY 2018, several CRC locations were impacted by unscheduled closures due to staffing issues and unforeseen weather conditions. Overall, there has been closures or decreased services for 19 days in FY18.
- KCRS, LLC has notified the County that they will not operate any of their sites on Mondays.
- See report above on the Kaua‘i Resource Center for an update on the CRC at that location.
- The County has a right-of-entry agreement with Kekaha Agriculture to lease the space for the Kekaha CRC. The monthly lease price is \$500 and is paid through the State DBC contract.
- Educational Outreach: Onsite educational presentations are conducted upon request. Throughout the period, 1 presentation was conducted, reaching a total of 90 students in the Kindergarten classes. HI5 program information is distributed or disseminated at this presentation.
- We continue to manage various HI-5 recycling bin programs under which HI5 bins were distributed at all County parks and neighborhood centers, given to schools and non-profits upon request to be used for their HI5 collection activities, provided for use in business break rooms, and loaned out for special events. 28 events were conducted with 316 recycling bins, 94 trash cans, and 10 compost bins distributed for short term use.
- According to the latest published State annual report, the statewide redemption rate for HI5 recycling was 63.9% (FY 2017).
- Funding for FY 2019 has been secured, and the majority of the scope of services remains the same, the only change made was to increase the amount of dealer inspections from sixteen (16) to twenty (20) and remove the 10 surveys done at hotels, bars, vacation rentals and restaurants.

- Household Hazardous Waste (HHW) Collections

- The County contracts with EnviroServices and Training Center to perform bi-annual HHW collections at 4 locations. Collection events took place at the Anaina Hou Community Park in Kīlauea, Hanapēpē and Kapa‘a Baseyards, and the Kaua‘i Resource Center in Lihue this FY. The events were held on January 13 & 14, 2018 with a total of 240 residents attending, and June 30, and July 1, 2018 with 167 residents attending.
- The next HHW collection events are scheduled for January 26 and 27, 2019, and July 13 and 14, 2019.

Item	January 2018	June/July 2018
Automotive Batteries,	1,435 lbs.	1,015 lbs.
Lithium Batteries,	100 lbs.	25 lbs.
Household Batteries,	1,600 lbs.	130 lbs.
Oil Base Paints, & Ingnitables,	8,400 lbs.	7,600 lbs.
Toxic Liquids,	4,000 lbs.	3,200 lbs.

Item	January 2018	June/July 2018
Corrosive Liquid, Acid,	1,200 lbs.	800 lbs.
Corrosive Liquid, Basic,	1,200 lbs.	800 lbs.
Mercury	5 lbs.	5 lbs.
Oxidizers	50 lbs.	50 lbs.
Fluorescent Lamps/Mixed Bulbs	190 lbs.	55 lbs.

- 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 8930 and 4,377 tons of metal consisting of white goods, scrap metals and autos were collected and processed. Services are anticipated to continue with a new contract.
  - RRS continues to charge commercial fees for businesses. There have been negative feedback from tow truck operators who now pay a \$63 fee per vehicle they bring in without paperwork submitted from a resident.
  - Contract 8930 has an initial term of 5 years and is scheduled to terminate in May 2018. The County extended the contract to fiscal year 2019 at a new price point of \$78,000 for the months of June and July. This allows funding to be allocated for a new metal recycling contract.
  - Metals recycling prices continue to stagnate exacerbated by the potential shutdown of China markets for scrap metal.
  - With the increased fee structure RRS has agreed to waive fees for residents that cannot complete a Junking Affidavit for vehicles up to three times a year. RRS is implementing stricter policies to prevent abuse of the program by unauthorized peoples and businesses.
  - Clean Up of Puhi Metals Site
    - We have submitted to DOH Solid Waste Branch reports done by Grove Farm and Resource Recovery Solutions that provide information to start the discussion on what disposal options would be feasible. DOH has agreed to the County proposal to use the soil as select waste for the beginning layer of the Cell 2 expansion.
  
- 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 as noted below.
  - 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)
  - On January 12, 2018 Enviro Services and Training Center, LLC accepted and hauled batteries in conjunction with the HHW collection events. Four (55-gallon) drums of Alkaline (dry cell) batteries; one (55-gallon) drum of NiCad

batteries (27.5 gallons full), and one (55-gallon) drum of Lithium batteries, (15 gallons full). Batteries were transported to Total Reclaim, LLC in Seattle, Washington.

- Contamination and un-taped 9 volt batteries continue to be an issue, as well as unauthorized use by businesses.

- Zero Waste Resolution

- Zero Waste Resolution adopted 10/19/11 calling upon all County agencies, residents, businesses, and visitors to adopt Zero Waste practices to meet the goal of 70% diversion by the year 2023.
- County staff attend monthly meetings of Zero Waste Kaua‘i to keep abreast of the group’s activities and to provide support as needed.

- Plastic Bag Reduction Law

- We continue to enforce the Ordinance based on customer and retailer complaints.
- The Recycling Office staff still recommends revisions to the Plastic Bag Reduction language in the County Code. The need to modify the code for “housekeeping” purposes continues to arise as large retailers offer thick plastic bags compliant on other islands as “reusable”. We continue to successfully enforce the ordinance and obtain retailer compliance, even though the bag thickness clause has a typo (stating the minimum thickness in millimeters instead of mils).
- Recommended modifications to the ordinance include:
  - incentivizing the use of reusable bags by mandating a minimum fee for paper 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 per McDonald’s request.

- Electronics Recycling (eWaste Recycling)

- The State Department of Health (DOH) has re-implemented funding to all counties for the management of eWaste material. In April of 2018 we received \$45,000, and next FY we will receive \$160,000. The funding will be used to support the eWaste collections as described below, to conduct radio and news ads promoting recycling, and to pay for County administrative costs to run the program.
- Puhi Metals has agreed to conduct mobile collection of eWaste under contract 9575. The contract also stipulates greater tracking of Covered Electronic Devices and Televisions as well the submission of Certificates of Recycling from R2 and e-steward certified facilities.

- Mobile collections now occur once a month in Kīlauea at the Anaina Hou Community Park on the last Sunday of every month, and at the Hanapepe Base Yard parking lot the last Saturday of every month.
  - Contract 9575 is fully funded through the State Department of Health eWaste grant.
  - Under the original metals recycling contract 8930, Resource Recovery Solutions has recycled approximately 151 tons of eWaste, 32 tons less than FY 2017.
  - RRS no longer ships material to IMS Electronics Recycling in Vancouver, WA. RRS now coordinates with the County's previous eWaste contractor T & N Computer Recycling Services to source certified end destination recyclers.
  - The lower tonnage of material could be attributed to the reduction in weights of eWaste devices and the previous recycling of bulky material such as cathode ray tube (CRT) televisions. With the implementation of mobile collections, we're hoping to see an uptick in quantities recycled.
- Programs Operated at Refuse Transfer Stations and the Kekaha Landfill:
    - Limits on Cardboard, Metals, and Green Waste
      - Ordinance 902 was signed in to 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.
      - During FY 2018, no loads were flagged as non-compliant. There is an average of 970 commercial loads delivered to the landfill each month, so this program is extremely effective. When there were non-compliant loads in the past, SWMD conducted follow up investigation and education with non-compliant generators to prevent future violations.
    - Green Waste Diversion
      - The County contracts our green waste processing to three State Permitted composting facilities throughout the island. We manage C9437 with Heart and Soul Organics, C9438 with Shredco, and C9436 Kauai Nursery and Landscaping. These contracts service regional locations.
      - Collections at County facilities were as follows:
        - a. Hanalei Refuse Transfer Station (RTS)- 2,642 tons
        - b. Kapa'a RTS - 5,198 tons
        - c. Līhu'e RTS - 2,790 tons
        - d. Hanapēpē RTS – 5,843 tons
        - e. Kekaha Landfill – 669 tons

- Scrap Tire Recycling
  - The current Contractor, E-H International agreed to a three year contract in 2017 expiring March 2020.
  - In the last year, a total of 15,655 tires were collected at all RTS and the landfill by E-H International. 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
  - Hooklifts Hawai'i has been contracted to load and haul white goods from all County RTSs except Līhu'e. Contractor has agreed to the option to extend the contract for 180 days after its current expiring date on September 30, 2018, leaving the new expiring date at March 29<sup>th</sup>, 2019. Under this contract, refuse centers are serviced a minimum of twice per week; Kekaha Landfill is serviced one per week. A total of 3,252 tons of white goods from the RTSs and Kekaha Landfill were delivered to the Puhi Metals Recycling Center during this period.
  - This program provides customer convenience, increases recycling, and reduces illegal dumping of large items such as appliances.
  
- Propane Tank Recycling
  - Contract 9159 for propane tank recycling has terminated, and Resource Recovery Solutions has agreed to incorporate propane tank hauling from County Refuse Transfer Stations and propane tank processing under the Metals Recycling Contract 9575 with no quantity limits or size restrictions. Propane tanks are still restricted to 10 gallons or 40 lbs. at RTSs due to DOH permitting, but the County will not be charged more if the contractor must pick these up from the transfer stations.
  - A total of 1,156 propane tanks were collected at RTSs and were recycled throughout the course of the FY under contract 9159.
  
- 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.
  - In the past, the State of Hawai'i, Department of Health (SDOH) awarded funds to the County in order to implement the Used Motor Oil and Used Motor Oil Filter collection programs. The County received approximately \$63,000 each year for the collection of used motor oil and filters, public promotion including supplies and materials, cleaning supplies, equipment

and wage reimbursement to County staff. Unfortunately, the SDOH will no longer be funding this program. Continuation of this critical program is necessary to avoid illegal dumping. Consequently, county funding has been appropriated to continue the program in the amount of \$50,000.

- 15,543 gallons of used Spec oil 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.
- A total of eight 55 gallon drums were determined by Unitek to be Off-spec/contaminated oil from the Kapa'a RTS this year. Enviroservices, LLC was able to properly dispose of the contaminated oil in accordance with the SDOH. Immediately following the discovery of the contaminated oil, a news release was sent out indicating proper disposal techniques including the appropriate containers to store and transport used motor oil for recycling.

- Motor Oil Filter Recycling – Motor oil filter collection drums continue to be in place at all RTSs. Public participation in the program is increasing. Four 55-gallon drums of used filters were removed in the last year.
- Used Cooking Oil -This program was funded, but difficulties with permitting collection points at the RTSs through the SDOH prevented the launch this FY. We are hopeful to reinstate next FY as the disposal of liquid waste is presenting a problem in refuse hauling.
- Waste Diversion Rate – The Waste Diversion Rate (WDR) for the County is normally calculated annually based on figures from annual reports sent to the SDOH and provided to the County. The County also collected data from contracts, and interviews with businesses. Due to reduced staffing and inability by the State to comply with our request for annual reports our last WDR was conducted in FY 2016. This data showed a decrease of 1% diversion to 43%. We will be requesting updated annual reports again from the State, but if they are unable to comply with our request, we will work with our current collected data sets for County programs and phone interviews to populate a FY 2018 WDR.

##### 5. Capital Improvement Projects (CIP) and Other Major Planning Activities

- Development of a Materials Recovery Facility (MRF)
  - Consultant contract 8993 with CalRecovery remains open but is inactive.
  - Currently the MRF is not funded under the CIP budget.
- Infrastructure Improvements, Phase II of the Kekaha Landfill.
  - Lateral Expansion Cell 2 final design and permit process continued through the reporting period. Completion of this work is anticipated to be achieved in August or September 2018. Note that the Department secured approval for funding in the amount of \$18,600,000 required for all remaining engineering

and construction work under a loan from the State Revolving Fund (SRF) program.

- New Landfill.
  - The Maalo site was selected as the New Landfill site. Under Contract No. 8561, AECOM completed the updated New Landfill Siting Study, the Resource Recovery Park Feasibility Study, the Final Environmental Assessment/Environmental Impact Statement Preparation Notice (FEA/EISPN), and conducted several public meetings and one County Council briefing during the reporting period. The contract was amended to incorporate a Wildlife Hazard Assessment WHA to address potential impacts to the Lihue Airport. The required WHA and Wildlife Hazard Mitigation Plan will ensure that all safety measures are implemented in the design and operation of the New Landfill to address FAA guidelines for the safe operation of the Lihue Airport.. The Final EIS is expected to be posted in August 2018.
- 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. The project has been closed out as of June 2018.
- Halehaka Landfill. Consultant AECOM continues providing post-closure services for the Halehaka Landfill. The work includes ground water monitoring and operation of the flare system as needed. This year we will reduce scope and bid out the repairs again to hopefully fall within our projected budget. We are also looking into options at upgrading security at the site, Roads Division brought and placed logs to help to prevent driving on to the site.
- Kekaha Landfill Phase I. Waste Management is providing post-closure services for the Kekaha Landfill Phase I. The work consists of inspections of the site and ground water monitoring and reports.
- Lateral Expansion Cell 2. The permit application was completed and submitted to DOH September 2016. We received comments back and have AECOM on board to reply to those comments to move the process along. We have awarded the design of the Lateral Expansion of Cell 2 to AECOM and we are scheduled to complete the final design September 2018.

#### IV, Operational and Equipment Maintenance Projects

- Puhi Metals Environmental Cleanup:
- Kekaha Landfill Liner Investigation
- Kekaha Landfill Office Mildew Mitigation and Flood Repair
- Kaua‘i Resource Center Drain Repair
- Līhu‘e Refuse Transfer Station Fire Sprinkler Repair
- Hanalei Refuse Transfer Station New Chain Link Fencing and Gates

#### V. PROGRAM MEASURES - ACCOMPLISHMENTS / EVALUATION



The SW Division maintains a variety of waste diversion and public education programs to maintain a waste diversion rate above 40%. To increase diversion, we would need to increase staffing and focus on impacts to large waste stream categories including organic waste and construction demolition debris and would need to implement ordinances requiring commercial recycling and increase program convenience.

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.

Progress towards completion of CIP projects continue as various issues are addressed. The complexity of various issues have caused schedules to lengthen due to the time required to formulate resolutions. Close coordination and cooperation from sister agencies on the State level will be increasingly important for the New Landfill Project, especially Department of Transportation – Līhu‘e Airport Division.

**VI. BUDGET AND PROGRAM RESOURCES FY 2018**

**RESOURCES**

<u>PROGRAM</u>	<u>(FTEs)</u>
1. Administration	7
2. Deposit Beverage Container Program	2
3. Solid Waste Operations	<u>57</u>
<b>TOTAL FTEs</b>	<b>66</b>

**TOTAL BUDGET (Adjusted) \$20,181,817**

## **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**

1. Protect public health, safety, and the environment through the efficient operation and maintenance of County wastewater systems.
2. Comply with all permit conditions and applicable regulatory requirements.
3. Receive approval for a new Project Manager position. This is necessary in order to be able to plan for future improvements and expansion of our utility.
4. Receive increased funding in order to upgrade our facilities. The Division needs to replace equipment and structures in order to be able to reliably treat wastewater to regulatory standards. The Division has held off on many improvements due to budget constraints but this cannot be continued because of the age and condition of existing assets.
5. Upgrade the Division's accounting system in order to allow for automatic bill pay and efficient coordination with the Water Department's accounting system. Automatic bill pay is a highly requested service from our customers. An additional benefit is having less sewer delinquencies because customers will be able to pay their sewer bills automatically with a credit card. Currently, the Division provides sewer bills to our customers every other month. This is necessary because we need to manually determine the commercial sewer bills (it is based on a customer's water usage). Having a system that can automatically retrieve the water usage from our commercial customers will greatly enhance our efficiency and ability to provide monthly bills. Also, it would allow the Division to evaluate billing residential customers based on water usage, as opposed to a flat rate regardless of how much water is being used.

### **III. PROGRAM DESCRIPTION**

#### **1. Wastewater Administration and Engineering Program**

Administration manages the overall planning and implementation of the Division's operations to meet the Division's goals and objectives; administers customer accounts and the sewer user charge system; and budgets and monitors revenues and expenditures. It also receives, evaluates and responds to correspondence, information requests and inquiries; 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. Program 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 community development plan objectives of the County.
- Operate the County's sewerage system in full compliance with permit conditions and environmental requirements, including regulation of wastewater discharges into the County Systems; efficient disposal and reuse of 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. Program Highlights

- **Sewer 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 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 rate-payer. Current rates were established via a Wastewater Rate Study completed in 2010, with scheduled annual rate increases through July 1, 2014. During FY 16-17, progress was made on a new rate study and it is anticipated that it will be finalized in FY 18-19. Due to staffing issues (the previous Division Chief, Ed Tschupp retired on 7/31/2017, the current Division Chief, previously the Division's Engineer VI, was hired on 2/1/18, and the current Division Engineer VI was hired on 6/18/18), the Rate Study contract was put on hold for FY 17-18.

- **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 completed in 2008 with an update of all four of the County's Wastewater Treatment Plant (WWTP) Facility Plans. The Facility Plan updates provide a comprehensive summary of the wastewater system and identified long term CIP needs for each facility, providing a management tool to schedule and prioritize among various projects. Several current CIP projects were identified in the 2008 Facility Plan updates.

More recently, additional focus has been directed at the energy requirements for wastewater operations. With the assistance of the County's Office of Economic Development, energy audits were conducted for County Wastewater facilities. Energy audits identified capital improvement projects to improve wastewater treatment processes, efficiency of operations, and for renewable energy development. Going forward, the County will be pursuing energy efficiency improvements via our pending and future CIP projects.

Operational planning uses the Division's Maintenance Management Information System (MMIS) for scheduling and documentation of maintenance activities and requirements. Recently, the MMIS system was migrated to being hosted as an internet Cloud application.

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 17-18 design activities included the initiation of two key design projects. The first project is the Wailua WWTP Alternative Effluent Disposal System Design. The first phase of the project will provide the design direction in order for the County to abandon the Wailua WWTP's ocean outfall, which is used for backup disposal. The next phase will provide bid documents and will be finished in FY 18-19.

The next project is the Līhu'e WWTP Process Improvements project. The first phase will provide bid documents to allow the Līhu'e WWTP to meet its permitted treatment capacity of 2.5 million gallons per day (MGD). The second phase of this project, which will be performed in FY 18-19, will allow for other necessary upgrades, such as providing a redundant primary treatment method, replacing the existing blowers with properly sized energy efficient blowers, and evaluating what will be needed to reuse biosolids and prevent this resource from being disposed of at the landfill.

In addition to these new design projects, progress was made on an existing design project, the Wailua SPS 1 rehabilitation. This project will convert the existing pump station into a submersible pump station and provide long term reliability.

- **Construction of Capital Improvements.** During FY 17-18 the Division was working on the design phase of upcoming CIP projects. It is anticipated that construction will begin in either late FY 18-19 or early FY 19-20.

Project funding for larger projects continues to be derived primarily through the State of Hawai'i Department of Health administered Water Pollution Control Revolving Fund (SRF) Loan Program, which provides low-interest loans for wastewater infrastructure projects. The Division has traditionally used the SRF loan program to fund construction, however, the County has been informed that SRF loans can be granted for the design phase of these projects. The Division will start funding design work using SRF loans where appropriate.

2. **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 preventive 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 WWTP's and twenty pump stations, and periodic cleaning and maintenance of the sewage collection systems. Wastewater personnel also routinely respond to after-hour trouble calls either occurring at facilities or generated by sewer service problems from the public.

The Division also routinely provides equipment and manpower support to other County agencies such as the Department of Parks and Recreation, and the Roads and Solid Waste Divisions of the Department of Public Works. 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. Program 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 (CEU's) credits needed to maintain Operator licensing.

The two training programs used by the County is the University of Hawai'i (UH) program and the Hawai'i Rural Water Association program. Both programs provide on-island training opportunities and CEU credits. 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 SPS's and approximately 50 miles of sewage collection system comprise the majority of the Divisions activities, assets, and equipment and staff resources. Of the Division's 37 full time positions, 29 positions are allocated directly to operation and maintenance.

Staffing levels for each WWTP has been standardized at 5 Wastewater 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 treatment plant. In addition, the plant operators are supported by a crew of 4 mechanics, an electrician, and a crew of 4 sewer maintenance repairers (line crew). The support mechanics, electrician, and line crew, along with the Divisions' two chemists, the field superintendent and field 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 replacements to address ongoing equipment maintenance for wastewater treatment plants and sewage pump stations. Typical replacements include 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 plant operation, monitoring effluent and receiving water quality and management of bio-solids (sewage sludge). Effluent is either reused as irrigation water (Wailua and Līhu'e WWTPs) or disposed via injection wells (Waimea, 'Ele'ele and Līhu'e WWTPs) or via the Wailua WWTP ocean outfall.

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 SDOH. Annually, the SDOH performs inspections of plant operations to document the status of completion of all required activities for each plant.

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

In November 2013, the Wailua WWTP National Pollution Discharge Elimination System (NPDES) permit was issued by the SDOH. The new permit significantly increased requirements for water quality monitoring, particularly with respect to receiving waters (Pacific Ocean), and imposed new and highly restrictive effluent limitations. The NPDES permit acknowledged that immediate compliance with the new permit limits is not possible, and interim limits were established, along with compliance schedules for permit-required studies. The County does not agree that the new permit effluent limits were justified by the available data, and has petitioned for a contested case hearing on the new NPDES permit. Nonetheless, the County has proceeded with the permit-required studies. As a result of the Zone of Mixing Study, it was determined that the data supported the County's petition for a contested case hearing on the NPDES permit. However, it was ultimately determined according to the Effluent Limits Compliance Alternatives Evaluation Study that it would be in the County's best interest to construct a new backup disposal method and abandon the ocean outfall.

The main permits for the other County WWTP's are Underground Injection Control (UIC) permits issued by the DOH. UIC permit conditions also include monitoring and reporting requirements, including annual injection well status reports, which the County contracts with a consulting engineering firm to complete. Monthly and annual water quality monitoring reports are prepared in-house for the Wailua WWTP pursuant to the NPDES permit. Semi-annual water quality monitoring reports pursuant to UIC permits are prepared in-house along with semi-annual and annual reports to document the management of bio-solids from all the WWTPs.

The Division's Sanitary Chemists perform the required sampling and analyses and administers laboratory service contracts for compliance with our NPDES and UIC permits.

#### **IV. PROGRAM MEASURES AND EVALUATION**

##### **A. 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 capital improvement program activities.

During FY 17-18, 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 public works administration and the County Human Resources department; during FY 17-18 several new employees were hired to fill vacant positions. This included two temporary Operator Assistants and a Maintenance Mechanic I. However, several key vacancies exist, particularly for Grade IV Operators (which require operators obtaining a Grade IV license).

With respect to our Capital Improvement Program (CIP), 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.

#### B. Wastewater Collection and Treatment Facilities Program

Facility operations continue to meet program measures. However, during FY 17-18 the Wastewater Division experienced two weather-related challenges that resulted in sewage spills. There were two storm events in Waimea that caused a spill of secondary effluent from at the Waimea WWTP. The pumps that convey the treated effluent to the UIC wells could not keep up with the incoming stormwater-influenced flow, resulting in a spill. Wastewater operations staff responded to numerous call-outs 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 clean-up and mitigate sewage spills and to operate the treatment plants within operational parameters.

### V. BUDGET

All revenues for the Division's routine program costs are from sewer user fees. Approximate actual program costs (rounded) from the FY 17-18 budget are summarized for the Division as a whole, including administration and operations.



OPERATIONAL COSTS

• Equivalent Personnel Positions	37
• Wages and Other Direct Costs	\$ 3,909,261
• Operations (Equipment, supplies, vehicles, etc.)	\$ 1,868,759
• Utilities (Electrical, Water, Gas, Telephone)	\$ 1,768,000
• Contracted Services (Repairs, Laboratory, etc.)	\$ 1,032,100
• Debt Service	\$ 1,729,540
PROGRAM TOTAL	\$10,262,904

OPERATIONAL REVENUES

Estimated FY 18-19 Revenues	\$ 8,500,000
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**VI. STATISTICS**

<u>Measure</u>	<u>Number</u>
• CIP Projects under construction	0
• Total number of sewerred units	5,455
• Bills processed in FY 17-18	25,457
• Number of customers receiving sewer credits	514
• Spills reportable to DOH	6
• Wastewater processed (average - million gallons per day)	2.3
• DOH unacceptable inspections	3
• DOH acceptable inspection	0
• % of flow being reused (approximate)	35