

DEPARTMENT OF PUBLIC WORKS

LYLE TABATA, ACTING COUNTY ENGINEER

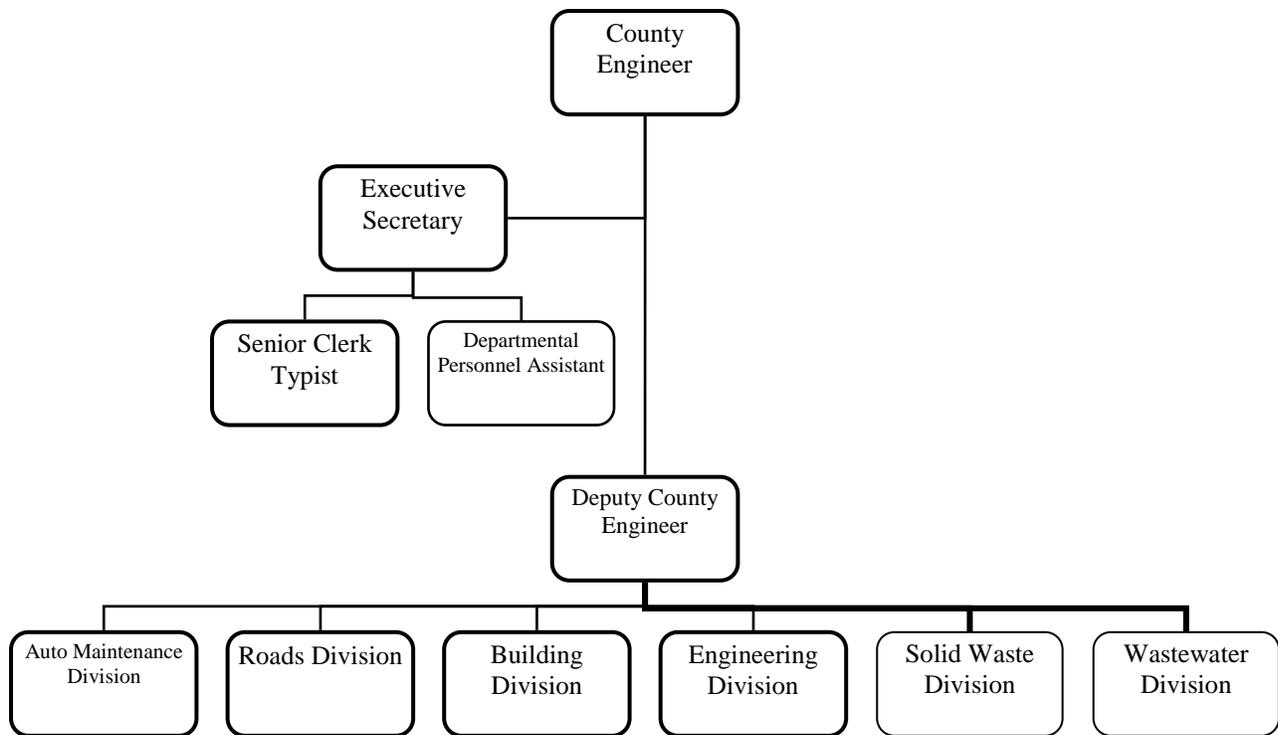
ADMINISTRATION

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. Substantially completed Phase I of the Puhi Road Federal Highway Administration (FHWA) Fed Aid 80/20 funded reconstruction Project, Phase II design is presently in process.
 - b. Kapahi Bridge another FHWA funded bridge replacement project has been substantially completed and the project is in process of being closed out.
 - c. The Kawaihau Spur of He Ala Makalae called the Elevated Boardwalk has been completed with the partnership of FHWA funding and the Department of Defense Innovative Readiness Training Grant.
 - d. United States Department of Transportation Federal Highway Administration (FHWA) \$13.8 million Transportation Improvement Generating Economic Recovery (TIGER) Project for the Līhu'e Town Core Mobility and Revitalization project has cleared the National Environmental Policy Act (NEPA) process and completed 35% design and has been cleared to complete the Design/Build procurement.
3. Key County Solid Waste initiatives:
 - a. Kekaha Landfill (LF) existing needs; LF Gas extraction construction was completed by the December 2016 deadline and placed into operation, the operational contract was implemented by May of 2017.
 - b. Kekaha LF; consultant AECOM continues work toward approval of the ground water monitoring plan by the Department of Health (DOH).
 - c. Kekaha LF Lateral Expansion Cell 2; Permit was completed and submitted to DOH September 2016. Consultant AECOM is assisting with responses to DOH comments. After discussions with DOH Clean Water Branch (CWB) on utilizing Sewer Revolving Fund (SRF) funding for this project we were told to procure a new contract to start the process. A general solicitation went out and we expect resumes to be able to review at the end of July. We will award the contract for the design of the Lateral Expansion of Cell 2 soon after.
 - d. The New Landfill Environmental Impact Statement (EIS) has completed the required Wildlife Hazard Management Plan to address Federal Aviation Administration (FAA) and Department of Transportation (DOT) Airports Division concerns and a 6th New Landfill access road for the Traffic and Roadway

Engineering Feasibility Study (TREFS). The Draft EIS will be ready to be published for public comment by fall of 2017.

- e. County's four Refuse Transfer Stations; In July 2017 will select design consultant continue to work on construction plans to improve facilities. These actions will then result with moving forward to construction and bring the County of Kauai out of our NOVO status.

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 the 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 Communications 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 \$48.5 million, a Capital Improvement Budget of \$17.2 million and federal/state grants of \$42.8 million. This Section is responsible for the payroll of approximately 233 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 2017, a total of 1,578 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 2017. 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 – Program Support Technician II
- 1 – Storeroom Clerk
- 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

Position Elimination: The Repair Shop Supervisor position has been eliminated due to the recommendation of the VRC

New Hires: One (1) Heavy Vehicle and Construction Equipment Mechanic
One (1) Utility Lubrication Worker

Retirees: One (1) Heavy Vehicle and Construction Equipment Mechanic
One (1) Utility Lubrication Worker

Total Personnel: 20

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

A. PROGRAM OBJECTIVES:

- Repair and maintain all DPW vehicles and heavy equipment.
- Repair and maintain all Kaua'i Police Department (KPD) vehicles and equipment.

- Repair and maintain vehicles from other agencies including Parks Department, Planning, Housing, Finance, Agency on Elderly Affairs and Real Property, etc.
- Perform DOT inspections for all County vehicles, including Department of Water vehicles.
- Assist Fire Department with maintenance and repair issues periodically
- Fueling and servicing of field equipment.
- Tire repair services.
- Welding services.
- Machine shop services.
- Auto 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 four (4) major 800 mhz. repeater sites.
- Service and maintain levee pumps and flood gates at Hanapēpē and Waimea levees.
- Repair and maintenance of Refuse Compacting Transfer Stations at Hanalei, Kapaa and Hanapēpē.
- Monitoring, maintenance and management of a Fleet maintenance program for all County owned vehicles.
- Operation, monitoring and maintenance of the Fuelmaster computerized fuel management system.
- Managing and maintaining four (4) County owned vehicle and equipment re-fueling sites (Hanapepe, Līhu‘e , Kapaa, and Princeville).
- 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. Update the 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 has recently completed updating and renovating the Princeville refueling site, complete with new fuel storage tank and new fuel dispensers.

New Equipment Received in FY17 includes:

- (1) Hook Lift Truck – Solid Waste
- (2) Side Load Refuse Trucks – Solid Waste
- (1) Backhoe – Parks/Golf Course

BUILDING DIVISION

I. **MISSION STATEMENT:** The Division of Buildings is responsible for code enforcement, facility development, building construction and maintenance, and janitorial services. All programs are responsible for providing the people of Kaua'i with safely constructed public and private facilities, and well-maintained County 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, Mayors Office, and the Parks and Recreation Department.

PROGRAM HIGHLIGHTS: Construction started for the Kawaihau Elevated Boardwalk phase of the Lydgate-Kapaa Bike/Pedestrian Path. Design/Build construction funds secured for the Lihue Town Core Mobility and Revitalization Project.

Other major projects for which the Section is providing planning, design, and construction management work include Piikoi Building Renovation, Kapa'a Police Substation, Lihu'e Kauai Police Athletics League building, Kaua'i Fire Department Helicopter Hangar, Kauai Police Evidence Warehouse Mezzanine, Kalaheo Gymnasium Re-Roofing Project, Lihue 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 hosted the annual meeting of Hawai'i Association of County Building Officials (HACBO). As a part of this organization Code officials from all four counties get together annually to discuss code related issues and to explore practical solutions for common problems facing our industry. This year's meeting included one full day of training with separate workshops for building, electrical, and plumbing code issues and one and a half days of joint meetings with informational presentations and work group break out sessions.

The Building Division has continued to place emphasis on its electronic plan review (EPR) system. High level meetings were held with agencies and stakeholders to work on improving the system.

In order to further promote the electronic plan process, the Building Division continues to give the highest priority for plans submitted electronically. Paper plans are still accepted, but the plan review process favors electronic submittals. Eventually, paper plans will be phased out altogether.

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:

	Estimate	Actual
Residential	30	24
Commercial	45	72
Code Enforcement Inspections	Estimate	Actual
Building Code Inspections	10,000	7,522
Electrical Code Inspections	7,000	4,566
Plumbing Code Inspections	7,000	5,673
Total Code Inspections	24,050	17,761
Code Permits Issued	Estimate	Actual
Building Code Permits	1,800	765
Electrical Code Permits	1,800	1,887
Plumbing Code Permits	1,600	1,126
Sign Code Permits	180	410
Photovoltaic/Solar		702
Total Code Permits Issued	4,380	4,890
Building Permit Valuations	\$300,000,000	\$307,329,595

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 the county agencies and oversee the Code Enforcement Section. New facilities for the Police Department, Fire Department, improvements to Līhu'e Civic Center, and Lihue Town Core Mobility and Revitalization Project are being worked on.

The Building Codes Enforcement Section ability to provide efficient and timely service to the public was challenged by significant staffing problems. With the hiring of temporary staff through the use of the revolving fund and increased training of existing staff, the permit response and approval time have rebounded to a reasonable level.

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 4 \$1.00 funded positions)	7
Salaries & Wages	\$ 400,533
Operations	\$ 5,515
Equipment	\$ 0
PROGRAM TOTALS	<u>\$ 406,048</u>

BUILDING CODES ENFORCEMENT

Equivalent Personnel (Includes 4 contract hires)	20
Salaries & Wages	\$ 1,515,047
Operations	\$ 15,545
Equipment	\$ 4,000
PROGRAM TOTALS	<u>\$ 1,534,592</u>

VI. HOLO HOLO 2020 PROJECTS & STATUS

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

- Implement Complete Streets
 - Secured Design/Build construction funds for the Lihue Town Core Mobility and Revitalization Project.
- Extend Ke Ala Hele Makalae coastal path
 - FHWA funding and the Department of Defense Innovative Readiness Training Grant were secured for the Kawaihau Elevated Boardwalk project. Materials were secured and construction started.
 - 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

- (1) Civil Engineer VII
- (2) Clerical Assistant (on extended leave for the 2nd half of the fiscal year)
- (1) Senior Clerk (Temporary Section 3 hire)

Regulatory/Permitting/Design:

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

Construction Inspection/Project Management/Design:

- () Civil Engineer VI (vacant)
- (10) Civil Engineer VI
- (11) Civil Engineer V
- (12) Civil Engineer IV
- () Civil Engineer III (vacant)
- (13) Civil Engineer I
- (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

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, other County Departments, and based on requests of 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, which replaces the Storm Drainage Standards dated February 1972. 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). Formerly called the "grading ordinance," this ordinance regulates the construction of all grading, grubbing, and stockpiling activities in the County. This ordinance allows for agricultural exemptions for 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. Flood Plain Management Ordinance Number 831 (Kaua'i County Code Chapter 15, Article 1). This ordinance regulates the County's Flood Plain Management program. The County of Kaua'i is a participant of the National Flood Insurance Program (NFIP) which enables property owners in flood-prone areas of the County to obtain flood insurance and to assure 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 with flood zones for compliance with the Flood Plain 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 and comments and recommendations on subdivision applications, including full review and approval of subdivision construction drawings for roadway and utility 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, flood plain 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 the property owner.
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, school bus stops, and public transportation 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:

- The following construction projects were completed this year:

- Island-wide Bus Stops Improvement, Phase 2: This project constructed an additional 17 accessible bus shelters at various locations on Kauaʻi.
- Kōloa Road Safety Improvements, Federal Aid Project HRRP-0530(001), 90% Federal; 10% County: This project added guardrail to mitigate hazards created by steep slopes and power poles, added warning signs, re-striped pavement markings, added centerline rumble strips, and realigned a curve with a decreasing radius that likely contributed to the crash problem. Construction is complete, although the project remains open in order to finalize an easement document for a relocated power pole necessary to install additional guardrail that was added by change order to further increase safety.
- KPD Parking and Security Gates: This project installed security gates at the KPD parking lot. This project was designed and managed in house.
- The following planning and design projects were completed this year:
 - ʻAnini Bridge #2 Bridge Temporary Replacement: Engineering Division executed a change order with our bridge inspection consultant (Infrastructure Engineers) to develop a design to span the existing bridge using precast abutments and beams
 - Kapaia Swinging Bridge Towers Reconstruction: The work on the bridge has not been completed, but the County is no longer involved with the project. Engineering Division worked with the Kapaia Foundation, Grove Farm, and others to transfer ownership of the bridge to the Foundation, and give the funding for the repair of the bridge to the Foundation. County Council approved a resolution in March 2017 to transfer the bridge and funds to the Kapaia Foundation.
- The following construction projects are ongoing:
 - ʻAnini Bridge #2 Bridge Temporary Replacement: The contractor has been given Notice to Proceed, and the bridge installation is scheduled for the week of August 28.
 - Island-wide Bus Stops Improvement, Phase 3: This project will construct an additional 17 accessible bus shelters at various locations on Kauaʻi, and make improvements to 5 existing bus shelters. Construction starts in July 2017.
 - 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) is installed and was opened to the public in June 2017. The contractor is currently working on finalizing the bridge railing and approach guardrail – there has been some delay because of change orders necessary due to unanticipated field conditions.
 - Poʻipū Road Crosswalk at Kīpuka Street: This project will install a crosswalk across Poʻipū Road at Kīpuka Street, including rectangular rapid flashing beacons. This project has been bid out and NTP has been issued. Actual construction is anticipated to begin in August 2017.
 - Puhi Road Rehabilitation Phase 1 (Kaumualiʻi Highway to Kaneka Street), Federal Aid Project STP 5010(001), 80% Federal, 20% County: This project includes reconstructing Puhi Road as a concrete roadway to support industrial traffic, as well as sidewalks, bike lanes, and paved parking. Construction is largely complete and open to the public; the contractor is working on change order work and punch list items.
 - 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

- bridge was opened to the public in February 2017. The project is still open as roadway guardrail will be installed, pending execution of a change order.
- The following planning and design projects are ongoing:
 - ‘Aliomanu Road Repair: This project is intended to reconstruct ‘Aliomanu Road to be a two-lane road, since the road has been damaged by erosion due to wave action. Installation of sand bags was completed this year, to temporarily shore up a portion of the roadway embankment. During this fiscal year the consultant completed the draft environmental documents and revised preliminary design. Several public meetings were held about the project.
 - Auto Shop Mezzanine Floor: Project is on hold due to the extended leave by and subsequent retirement of Kuppusamy Venkatesan. Revisions were being made to the drawings based on comments received from Automotive Division.
 - Bridge Inspections and Appraisals 2016: All bridges were inspected as scheduled during this fiscal year. A contract modification was executed during this fiscal year to have the inspection consultant design the temporary replacement for Anini Bridge #2. Another contract modification is being executed to have the inspection consultant complete the load ratings for all of the bridges, due to Kuppusamy Venkatesan’s retirement.
 - Collector Roads Improvements, Federal Aid Project, 80% Federal, 20% County: This project will resurface (and reconstruct where needed) several collector roads in the Kawaihau District: The project was split out of a larger project that also included Maluhia Road. The project was originally proposed to be designed in house, but the current plan is to use a consultant to design this project, and focus in-house resources on local road resurfacing. Construction anticipated to begin in 2019 or 2020.
 - Halekō Road Restriping: This project proposes to restripe Halekō Road to add left turn lanes, a marked pedestrian walkway, and bicycle lanes. This project is being designed in house and is currently on hold before going to County Council for a resolution.
 - Hanapēpē Bridge Repairs, Federal Aid Project BR-0545(001): Project delayed after Kuppusamy 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; charrette report has been completed; topographic survey has been completed; preliminary design has been completed; final design by the consultant (AECOM) is on hold due to FHWA/HDOT requirements while the environmental documentation and permits are being completed in house by Engineering Division staff.
 - Islandwide Road Resurfacing 2018: This project will resurface various non-federal aid roads on Kaua‘i, as recommended by Roads Division based on pavement condition indices. This project is being designed in-house by Engineering Division staff, who have created base maps for the projects and started to lay out the plan sheets.
 - Kanaele Road Slope Stabilization: This project will stabilize slopes along Kanaele Road that have subsided over the years. This fiscal year the design consultant (RM Towill) completed preliminary design and met with County staff in the field to confirm the details for final design.

- Kawaihau Road, Hau‘a‘ala Road, Ma‘ilihuna Road Complete Street and Safety Improvements, Federal Aid Project STP 0700(071), 80% Federal, 20% County: Project includes a roundabout at the intersection of the three project roadways, sidewalks, bicycle facilities, and other features. The consultant contract was delayed significantly due to new FHWA and HDOT consultant selection and approval processes. Notice to Proceed to the design consultant (Wilson Okamoto) is anticipated in August 2017. Construction anticipated to begin in 2019 or 2020.
- Kilauea Road Pedestrian and Bicycle Access and Resurfacing: The FHWA Central Federal Lands (CFL) Division is currently working on designs for pedestrian and bicycle access to Kilauea Point, funded by the Federal Lands Access Program (FLAP). This project is currently in the planning and 30% design stage. Kilauea Road is a Federal Aid road eligible for STIP funding for resurfacing, which needs to occur sometime within the foreseeable future. County staff are working with FHWA-CFL staff and consultants to merge the pedestrian and bicycle access project with the forthcoming need to resurface Kilauea Road into a single project funded by FLAP funds, STIP funds, and a County match. We propose to add this project to the next STIP, potentially for approximately Federal Fiscal Year 2020 or 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 \$13,800,000 TIGER grant from the US Department of Transportation for this project. This fiscal year, SSFM worked as a consultant to prepare 35% plans and the design/build procurement documents. This phase of project has been 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. FHWA and HDOT approved the plans and design/build procurement package; procurement of the design-builder is currently underway.
- Mahea Road Sidewalks: This project is funded by Community Development Block Grant (CDBG) Program, managed by the County Housing Agency. This project will construct sidewalks along Mahea Road between Kaumuali‘i Highway and the ‘Ele‘ele Iluna and Lima Ola housing developments. This project is being designed in house, final design anticipated in August 2017, with construction scheduled to begin December 2017.
- Maluhia and Kōloa Road Improvements; Federal Aid Project, 80% Federal, 20% County: This is a new project that was split out of the next Collector Roads Resurfacing project. This project will improve Kōloa Road and portions of Maluhia Road, including resurfacing (and reconstruction where needed) the pavement, widen paved shoulders where feasible, improve drainage facilities, and replace guardrails and other infrastructure where needed. We are currently in negotiation with the design consultant. Construction is anticipated to start by April 2019.
- Moi Road Sidewalks: This project will add a sidewalk on Moi Road between Hanapēpē Road and Ali‘i Road. This project will be designed in house; we are currently working on scheduling the topographic survey
- ‘Ōpaeka‘a Bridge Rehabilitation; Federal Aid Project, 80% Federal, 20% County: The design consultant (Kai Hawai‘i) is working on finalizing the environmental

document, other permits, and 100% plans. Construction anticipated to begin in 2018, although this project may be pushed out to a future federal fiscal year in order to fund other more critical projects (this bridge has improved structural integrity due to new girders added several years ago).

- Po‘ipū Road Multimodal Improvements, Federal Aid Project STP 0520(004), 80% Federal, 20% County: Design charrette completed in May 2013 proposed roundabouts, sidewalks, medians, bike lanes, and other features on Po‘ipū Road. The consultant contract was delayed significantly due to new FHWA and HDOT consultant selection and approval processes. Notice to Proceed to the design consultant (Austin, Tsutsumi & Associates) is anticipated in September 2017. Construction anticipated to begin in 2019 or 2020.
- 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. During this fiscal year, two stakeholder meetings and two public meetings were held, and the consultant (Austin, Tsutsumi & Associates) completed most of the environmental documentation and the 30% design. Construction is anticipated to begin in 2019.
- Pu‘u Road Improvement Study: This is a study of the safety and design concerns on Pu‘u Road. Draft final project plans and cost estimate have been received from the consultant, pending final review by the County.
- Pu‘u‘ōpae Bridge Replacement; Federal Aid Project BR-0700(59), 80% Federal, 20% County: This project experienced delay this fiscal year due to HDOT comments regarding installation of a permanent pedestrian bridge or to widen the bridge. Engineering Division worked closely with HDOT to resolve this issue, and then worked with the consultant (Kai Hawai‘i) to finalize the construction plans and all other PS&E items in time to meet the May 31, 2017 deadline for submittal to FHWA and HDOT. The final request for federal funding obligation has been submitted by HDOT to FHWA, with obligation anticipated for September 2017. Construction anticipated to begin in April 2019.
- Safe Routes to School – Kalāheo Elementary School: This federally funded SRTS project will reconstruct a sidewalk on Pu‘u Road and add a new sidewalk on Hokua Road. We have received concurrence from FHWA and HDOT on the RFQ; procurement for the consultant will begin soon.
- Safe Routes to School – King Kaumuali‘i Elementary School and Kōloa Elementary School: This federally funded SRTS project includes sidewalks and crosswalks at several locations near King Kaumuali‘i Elementary School as well as sidewalks, bike lanes, and other improvements near Kōloa Elementary School. During this fiscal year, a public meeting was held for King Kaumuali‘i Elementary School. The project scope has been modified based on the public meetings. The design consultant (AECOM) has completed the preliminary as part of the final design contract.
- Safe Routes to School Rectangular Rapid Flashing Beacon project: This project includes sidewalks along Alae Road near Kekaha Elementary School; and crosswalk improvements at Kekaha Elementary School, Kalāheo Elementary School, and Kapa‘a Middle School. This project was designed in house by Engineering Division staff. During this fiscal year, construction was delayed due to reviews by HDOT,

- FHWA, and other entities. Bidding for this project is anticipated in the next few months, with construction anticipated to begin in early 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. During this fiscal year, several meetings were held with the public and the salt pond farmers, and the design consultant completed 30% design.
 - Twin Reservoirs: A consultant (AECOM) has been selected for this project and the notice of award was sent early in this fiscal year. 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.
 - Waikomo Road Pedestrian Improvements: This project intended to restripe Waikomo Road to provide a pedestrian walkway to Kōloa School and other destinations within Kōloa Town. During public meetings held in 2016, members of the public expressed significant concerns about the conceptual design as presented. As a result, this project has been put on hold, pending further public workshops.
 - Ongoing development of Policies and Standard Operating Procedures setting formal performance standards to better manage processes within the division along with the development of systems to manage capital improvement projects.
 - Working with the Planning Department, Engineering Division has produced a final document for the County Street Design Manual. Final approvals of this document are anticipated soon, pending final discussions with the County Attorney's office and Planning Department on how to address the manual relationship to items in the subdivision code.
 - Engineering Division continues to scan existing plans and maps in our map room on an ongoing basis; we are evaluating options to improve and expand digital document development and archiving.
 - Grading, grubbing, stockpile, and road permits are being tracked in a database, including mapping in GIS.
 - Engineering Division is developing a 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.
 - 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.
 - Assisted various Departments and Divisions with the following survey requests:
 - Mahea Road Sidewalk survey for plan development construction.
 - Kawaihau Elevated Boardwalk construction staking.

V. PROGRAM MEASURES:

- Construction plan review has been completed for the following large subdivisions or developments:
 - Brydeswood Subdivision Phases II and III (S-93-50 and S-2006-04)
 - ‘Ele‘ele Iluna Subdivision, Phase II, Increment 1 sidewalk construction
 - ‘Ele‘ele Iluna Subdivision, Phase II, Increment 2 (S-2006-49)
 - Kōloa Village
 - Kukui‘ula Kula Makai (Parcel A) Subdivision (S-2013-16)
 - Kukui‘ula Major Project Road (Ala Kukui‘ula) Phase 3
 - Kukui‘ula Wastewater Pump Station C
 - Makahuena Estates Subdivision (S-2015-14)
 - Puakea Subdivision, Phase I (S-2006-27)
 - Solar City Kapaia Solar Farm
 - Village at Po‘ipū access (Hoaka Street Extension)
- Construction plan review is ongoing for the following large subdivisions or developments:
 - Adolescent Treatment Center
 - Ahukini Makai Subdivision (S-2005-41)
 - Coconut Beach Resort
 - Hōkūala Resort (formerly Kaua‘i Lagoons)
 - Kukui‘ula Kahela (Parcel H) Subdivision (S-2016-02)
 - Kukui‘ula Manuhonuhonu Borrow Site, phase 3
 - Kulana Subdivision restart (S-99-49)
 - Moloaa Bay Ranch Grading
 - Morita Subdivision (S-2013-23)
 - 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 has been completed or is ongoing for the following Department of Water projects:
 - Plans Approved
 - Job No. 11-10 – DOW Halewili Water Line
 - Job No. 12-01 – DOW Hanalei Town Water Line
 - Plan review Ongoing
 - Job No. ANI-01 – DOW Anini Road Water Line
 - Job No. 11-02 – DOW Grove Farm Tank
 - Job No. 15-07 – DOW Hanapēpē Road 6-Inch Main Replacement
 - DOW Kalāheo Clearwell Reservoir
 - Job No. K-01 – DOW Kalāheo Waterline
 - Job No. 02-14 – DOW Kapahi Water Tank
 - DOW Kaumuali‘i Highway 16-inch waterline – ‘Ele‘ele
 - DOW Kukuilono 0.5 MG Water Tank

- Job No. 11-04 – DOW Lawai Omao Water Line
- Construction plan review is ongoing for the following State of Hawai‘i projects:
 - Kealia Reservoir; Department of Hawai‘ian Homelands (DHHL)
- Construction Section is currently inspecting the following major subdivisions or projects:
 - ‘Ele‘ele Iluna Subdivision, Phase II, Increment 1 sidewalk construction
 - Ho‘oluana at Kohea Loa (S-2006-24)
 - DOW Admin Building
 - DOW Halewili Water Line
 - DOW Waila‘au Road Water Line
 - ‘Ele‘ele Iluna Subdivision, Phase II, Increment 1 sidewalk construction
 - ‘Ele‘ele Iluna Subdivision, Phase II, Increment 2 (S-2006-49)
 - Hōkūala Resort (formerly Kaua‘i Lagoons)
 - Kilauea Lighthouse Village and the associated Ala Namahana Parkway reconstruction.
 - Kaniko‘o (Rice Camp) Senior Housing Phase II onsite and offsite
 - Kōloa Landing
 - Kōloa Village
 - Kukui‘ula Kula Makai (Parcel A) Subdivision (S-2013-16)
 - Kukui‘ula Major Project Road (Ala Kukui‘ula) Phase 3
 - Makahuena Estates Subdivision (S-2015-14)
 - Philippine Cultural Center
 - Pili Mai
 - Puakea Subdivision, Phase I (S-2006-27)
 - Solar City Kapaia
- Construction Section is has completed inspection of the following major subdivisions or projects:
 - Kolopua Affordable Housing
 - Kukui‘ula Kainani (U/AA) Subdivision (S-2011-21)
 - Servco Pacific (Toyota Dealership)
- The following permits have been issued, inspected, and/or closed out:
 - Grading Permits
 - Issued: 35
 - Inspected and closed out: 23
 - Road Permits
 - Issued: 25
 - Inspected and closed out: 14
 - Driveway Permits
 - Issued: 63

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 - Assistant Chief of Field Operations & Maintenance
- 1 - Civil Engineer
- 1 - Administrative Services Assistant
- 1 - Field Coordinator
- 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
- 4 - Equipment Operator III
- 13 - Equipment Operator II
- 3 - Equipment Operator I
- 5 - Tractor Mower Operator
- 1 - Baseyard Attendant (Hanalei)
- 2 - Laborer Working Supervisor (Hanapēpē, Kapa'a)
- 16 - 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
- 77 - Total Personnel**

FUNCTIONS:

The Roads Division is composed of three Sections: Administrative, Technical and Field Operations. Field Operations consists of the following Branches: Roads Maintenance, consisting of District Base Yards; Roads Construction, consisting of Equipment Logistics Mobilization, Bridge & Road Construction, and Traffic Signs & Pavement Markings. Roads Division manages approximately 309.6 miles of roads: 307.4 paved and 2.2 unpaved. Notes: Private roads are not managed by Roads Division

IV. 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.

PROGRAM HIGHLIGHTS:

- FourWinds Group with M.PET (Maintenance Productivity Enhancement Tool) MMIS (Maintenance Management Information System) Field Operations Program. Roads Field Operation Staff is getting comfortable in the use of M.PET MMIS.
- iWorQ's Pavement Management Program has GIS Mapping and improved budget reporting capability. Another pavement condition survey/collection took place October 2016.
- Generate and assist IWRR List of Collector Roads for Engineering Division. Assisted Engineering with List of Mill & Fill treatments for: Kōloa Road, Maluhia Road, Olohena Road, Kukui Ulu Streets, & Haleko Road.
- 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.

V. PROGRAM MEASURES/ACCOMPLISHMENTS

- Principal Project Manager retired.
- Notice of Completion for Contract#9257 IWRR FY2014-2015 Local Roads has been sent and final payment made.
- Contract # 9390 for FY 2015-2016 IWRR-Seal Coating Project on Local Roads has been successfully completed with Notice of Completion January 30, 2017 and final payment made.
- Contract 9497 IWRR FY2016-2017 Local Roads has been executed, notice to proceed has been sent and project #1.) Queens Bath Parking has been paved soon to be striped went well. Project #2.) Lāwa'i Hillside Sub Division and surrounding side roads. Project #3.) Kōloa Road, Project #4.) Maluhia Road, Project #5) Kahau Road Kapa'a, Project #6.) Anahola Residual Lots Makai Hillside.

- Contract # 9515 for FY 2016-2017 IWRR-Seal Coating Project on Local Roads has been executed, notice to proceed has been issued, and project is going well.
- Hanapēpē and Waimea Levees Grassing Irrigation Project Contract 8950 notice of completion date was January 24, 2017 and final payment made.
- IFB 3522 for Po‘ipū Road Crosswalk at Kipuka Street has been put out and Contract #9528 will be executed in September 2017.
- Hanapepe 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 requirements.
- Continuing the development of Roads Operations and Maintenance Policy Manual; and Roads Safety and Health Manual.

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

Kekaha Landfill Phase I AECOM continues providing post-closure services. The work consists of inspections of the site and ground water monitoring and reports.

Phase II of Kekaha Landfill. The Kekaha Landfill Operation accepted and buried 86,889 tons of municipal solid waste during Fiscal Year 2016-2017. This figure includes solid waste from residential and commercial sources. This is an increase of 3,149 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 (WMH) d.b.a. Sanifill of Hawai'i with 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 2017 Annual Operating Report Kekaha Sanitary Landfill Phase II prepared by Waste Management of Hawaii, Inc. dated July 24, 2017 indicates that the Airspace Utilization Factor (tons/cy) went up to 0.76 as compared to 0.67 in the prior year. This factor compares the tons of solid waste received at the landfill versus the volume consumed. More efficient compaction and daily cover operations contribute to this success.

The Division has taken steps to initiate a reorganization of the landfill personnel that would increase supervisory capacity at the site to improve support for operations, documentation and accountability, and safety. The need for the proposed reorganization stems from the landfill operation having recently experienced more than its share of operational issues including personnel and safety related matters. Consultation with UPW is required since the reorg would include the reallocation of a vacant blue collar position to a working supervisor position. The objective is to complete the reorganization process and recruit for involved positions by the end of the year.

Halehaka Landfill AECOM continues providing post-closure services for the Halehaka Landfill. The work includes ground water monitoring and operation of the flare system as needed. This year they are under contract to provide design drawings to fix and upgrade the electrical and parts of the gas control system. Once the drawings are complete toward the end of the year we will move forward and put the construction out to bid. We are also looking into options at upgrading security at the site.

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.

Table 1 <u>RTS Location</u>	<u>Total MSW</u> <u>Received FY1516 (Tons)</u>	<u>Tonnage</u> <u>Change from FY15</u>
Hanapepe	8,355	-995
Lihue	14,416	-2,663
Kapaa	8,467	+3597
Hanalei	6,324	+367

- During the FY, we implemented new Best Management Practice upgrades for storm water runoff. Discussions with DOH Clean Water Branch (CWB) on acquiring SRF funding for RTS Storm Waster Improvements project resulted the need to procure a new contract to start the process. At the end of July resumes will be coming in so the selection process can move forward selecting the most qualified consultant to design repairs and improvements that will bring the County into compliance with DOH. Progress to date on with DOH CWB on the issues with the NOVO; submitted the Solid Waste permits for all 4 transfer station in for renewal. Designs for 2 facilities are in for final review and 2 facilities are in for draft review. Further a draft Storm Water Pollution Prevention Plan (SWPPP) for the Hanapepe Transfer Station was submitted to DOH CWB for review. Comments are forth coming which would be incorporated to us to help us on the SWPPP for the other sites. We continue to keep in contact with DOH to make sure we are on the same page and providing them with what they request. We have also purchased aggregate and speed humps that were suggested to us by the consultant for immediate improvements at the transfer stations. We continue to move forward implementing the immediate improvements.
- AECOM has been contracted for another year to provide the County of Kauai storm water testing at all the transfer station sites. Services related to compliance with the National Pollutant Discharge Elimination System (NPDES) general permit. Semi-annual inspection and storm water sampling and reporting.
- 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 provide service County bus stops on Tuesdays and Thursdays, currently at 30 locations. The plan is to add an additional 10 locations by December 2017. We are currently in the process of switching all 32 gallon trash cans with our 64 gallon to be serviced by the Semi-Automated Refuse Collections Truck Driver.
- 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, 2017, the refuse collection program had 19,402 residential collection accounts and 280 business accounts, including Transient Vacation Rentals. Customer choice of cart size includes 96 and 64 gallon options. This operation is supplemented by a 'Modified Manual Refuse Collection crew on Fridays, servicing customers in the Waikoko through Hā'ena areas and also Moloa'a Road and 'Anini Road areas. 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 444 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 in FY 2017
 - a. (1) Transfer Trailer
 - b. (2) Side Load Refuse Trucks
 - c. (1) Excavator
 - d. (1) Loader
 - e. (5) 30 cu. yd. Hook Lift Bins

3. Waste Characterization Study:

- Contracted Cascadia Consulting to perform a Waste Characterization Study to collect data about on waste accepted at Kekaha Landfill. This study involved the hand sorting randomly selected loads of waste from private haulers, commercial accounts, and residential accounts, and materials dropped off at transfer stations.
- A total of 162 samples were sorted over two seasons: first season in late July/early August 2016, and the second season in late September/early October 2016.
- Materials were sorted into 71 *Material Types* and 11 *Material Classes*: Paper, Glass, Plastic, Metal, Food, Other Organics, Inerts and Other C&D, Electronics and Appliances, Household Hazardous Waste, Special Waste, and Mixed Residue.
- The study revealed that Organic Waste and Construction Demolition Debris had the highest rate of landfill disposal. Food waste was only 10% of waste going to landfill, which is much lower than the nation average.

- Results were provided to the Mayor and County Council and the final report was posted to the County website at: <http://www.kauai.gov/WDR>. The report also included information on waste generation, including the impact of waste diversion programs on each of the material classes.
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, or a 96 gallon refuse cart for \$18 per month. If customers opt out of refuse service, the base assessment still applies at \$6 per dwelling per month; this base fee is imbedded in the \$10 and \$18 collections fees and is not in addition to these fees.
 - The RRCA revenue for FY 2017 was approximately \$3.5 million for 19,402 parcels. The RRCA program revenues have increased about \$100,000 from the prior year.
 - The RRCA fees are collected through Real Property Tax Collection, which is a massive administrative assistance to the division. However, the Billing Section of DSWM manages all other aspects of the RRCA program including customer notifications, education, commencement of service, changes in service, cancellation of service, cart deliveries, retrievals, repairs and switches, and manual refunds.
 - Beginning July 1, 2012 pursuant to Section 21-9.1 (a) of Ordinance 905, TVR’s were no longer eligible for refuse collection service under the Residential Refuse Collection Assessment which was established for residential accounts. At the end of the FY we had 272 combined TVR & Business accounts with 84 selecting 64 gallon carts at a rate of \$64 per month, and 226 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, are projected to generate total revenues \$302,000 in FY 2017.
 - Kaua’i DSWM Staffing
 - After ongoing recruitment, we were able to interview a Civil Engineer IV needed to assist the DSWM with CIP and other critical operations projects. The hiring took place the end of July 2016.
 - Our Recycling Specialist III and two State Funded HI5 Recycling Specialists resigned at the end of the FY. Their responsibilities have been split among the

remaining Recycling Specialist III, and the SW Programs Coordinator. We are hopeful to rehire positions at the beginning of next FY.

- Kaua'i Resource Center (KRC)
 - Recycling Operations: Contract #7495, concessionary contract with Garden Isle Disposal (GID) for redemption services and non-HI5 recycling drop off at the Kaua'i Resource Center, expired December 16, 2016. GID stopped accepting both DBC and non-DBC material on December 14, 2016 to allow time for demobilization at the facility.
 - The County solicited a concession contract to operate a HI5 redemption center and a non-HI5 recycling drop off at the KRC. Contract #9454 was awarded to the sole bidder, Kaua'i Community Recycling Services Inc. (KCRS, Inc.). Services commenced on December 21, 2016. This was a 24 month concession contract under which the County was paid \$2,000.00 per month by the operator who was renting County space. Under this contract, the concessionaire also received and processed recyclables, including beverage containers delivered by certified redemption center operators. The Certified Redemption Center at the KRC was to become operational once DOH certified this new operator, and enters into a contract to operate a redemption center.
 - Issues arose when KCRS Inc. received quantities in excess of the estimated tonnages that were listed in the original IFB 3488. The County's position is that there were no maximum or minimum amounts set. Hence, KCRS Inc. was not able to perform services as specified in the Contract, and there were legal disputes regarding contractual terms, so the County settled with KCRS Inc in the amount of \$235,000 for monetary damages, and improvements to the KRC. The contract was terminated on April 21, 2017.
 - During this fiscal year, the KRC diverted a total of tons 966 of material from the landfill, which is a 53 ton increase from FY 2016 even with no material being accepted in May and June. The breakdown was as follows: tons (T) 265 cardboard (22 ton increase), 6 T newspaper (no change), 64 T mixed paper (18 ton increase), 17 T non-deposit beverage container (DBC) glass (2 ton increase), 0.5 T #1 molded plastic (0.5 ton increase), 0.5 T #2 non-DBC plastic (0.5 ton increase), 434 T DBC glass (6 ton decrease), 74 T DBC aluminum (5 ton increase), 103 T DBC plastic (9 ton increase).
 - The County established an interim solution with Garden Isle Disposal to accept commercially generated recyclables at their facility. This included HI5 containers generated by Certified Redemption Centers. This solutions allowed businesses to comply with the landfill restrictions on commercial cardboard, and the Certified Redemption Centers throughout the island to remain open.
 - At this time there are no recycling operators working out of the KRC. A concession solicitation for a Certified Redemption Center (no non-HI5 collection or processing) was issued in July 2017 and opens August 3. The service will commence after all State permits, certifications, and contracting processes are completed, which is anticipated to take approximately 3 months. The State has notified us that certification and permitting may take longer than

normal due to multiple agencies being involved with new site clearances. The KRC will be designated as a new site since the location will be under a new redemption center state contract (separate from the county contract). The County contract term is for 36 months.

- Home Composting

- 358 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 continues with Malama Kaua'i who distribute the bins in Kīlauea, and serve north shore residents that do not want to drive to Līhu'e. The distribution process is the same at Malama Kaua'i.
- We received 550 additional bins in FY 2017. The price per bin was \$55 including shipping. Funding is in place to purchase a full shipping container of bins in FY 2018, equal to 868 bins which is a two year supply. It is financially advantageous to purchase a full shipping container at a time, as the fixed cost for shipping is approximately \$12,500.
- A survey was conducted in FY 2016 and sent to over 900 valid emails collected through the Home Composting program. The response rate was significant at 35.3%. With 90% of the respondents reporting they were happy with the functions of the Earth Machine Home Composting bin and 81.86% rated the system good or excellent. 89% said County education was good or excellent, while 91% think we should invest tax dollars in more bins. Due to a shortage of staff a survey was not conducted in FY 2017.
- Each bin diverts an estimated average of 1,900 lb. of food and yard waste per year. This is our most economical waste diversion program at an estimated cost of \$6 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

- A new two (2) year contract (#9453) has been established with the sole offeror to respond to IFB 3479, Garden Isle Disposal. 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
 - Newspaper

- #1 & #2 plastic bottles and containers
 - Mixed paper including junk mail, food boxes, magazines, phone books, 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 7 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: 911 tons
 - Newspaper: 163 tons
 - Glass: 294 tons
 - Aluminum: 0.36 tons
 - Steel: 55 tons
 - Plastic: 63 tons
 - Mixed Paper: 588 tons

Annual Total – 2,074
 - Under the current contract, we have become more stringent with enforcing the maintenance of the drop-off site areas resulting in fewer complaints from the public about overflowing bins and bin cleanliness.
 - We relocated the recycling bins at ‘Ele‘ele Shopping Center to an area fronting the Hanapēpē Refuse Transfer Station (RTS) as of July 1, 2016. The relocation provides a one stop drop for users of the Hanapēpē RTS.
- Acceptable Non-Deposit (ADF) Glass Recovery and Recycling Contract
 - The County accepted, but will forfeit ADF glass funds for FY 2017. The hope was that the funds could be used in conjunction with the KRC in glass sand production or other diversion programs which included a buy-back option which is required by the state. We will continue to investigate how the County can participate in the ADF program next FY considering the small amount of funding available, limitations of the State program, and past reluctance of local processors to develop buy-back programs with limited funding available.
- Deposit Beverage Container (DBC) Program
 - The State Department of Health provided annual funding under ASO Log 14-047 Modification 4. The total program budget was \$246,639. The contract supports local administration of the Deposit Beverage Container (DBC) program for the 2017 FY. The contract covered essential services including the funding of two County staff positions that monitor retailers and redemption centers, the contracting of two certified redemption centers in Kōloa and Kekaha, public outreach and assistance, and providing administrative functions.
 - Currently both HI5 Recycling Specialist positions are vacant. Both employees moved back to the mainland.

- 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 10 surveys done at hotels, bars, vacation rentals and restaurants to assist with HI5 recycling and to assess the impact of the HI5 program on these entities.
- The state has agreed to reduce these duties to zero until the two specialist positions can be filled. Though the county has agreed to continue to manage the Kekaha/Koloa redemption center contracts, compliance response, phone coverage for DBC issues, website management, bidding out the new CRC at the Kauai Resource Center, HI5 bin event loaners, quarterly reporting, and other related tasks.
- 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 continue 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 2017, several CRC locations were impacted by unscheduled closures due to the issues with commercial recycling through the Kauai Resource Center, repaving of KCRS, LLC warehouse and other issues with their storage and trucks, as well as staffing shortages. Overall, there has been closures or decreased services for 93 days in FY 17.
- KCRS, LLC has notified the County that they will not operate their Kapa'a location on Mondays due to low staffing issues. They hope that this is temporary and that they can increase their staffing to start service again on Mondays.
- Additionally, CRC at the County's Kaua'i Resource Center closed when the Concession Contract terminated in December. The plan was for the new Concessionaire to open a CRC at the facility, but they were unable to get certified by the State prior to their contract terminating. As mentioned above, a new solicitation for a CRC operation at this location is currently out to bid.
- 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, 13 presentations were conducted, reaching a total of 750 attendees. HI5 program information is distributed or disseminated at these presentations.
- 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 410 recycling bins, 94 trash cans, and 4 compost bins were distributed for short term use. While 13 blue recycling bins were distributed to non-profits to encourage recycling by their participants.
- According to the latest published State annual report, the statewide redemption rate for HI5 recycling was 67% (FY 2016).

- Funding for FY 2018 has been secured, and the scope of services remains the same.
- 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 Hanalei, Hanapepe and Lihue Transfer Stations and at the Kapa’a Baseyard during this FY. The events were held on October 1 & 2, 2016 with a total of 203 residents attending, and and April 29 & 30, 2017 with 250 residents attending.

Item	October 2016	April 2017
Automotive Batteries, each	24	40
Lithium Batteries, 5 gal. drum	15 lbs.	10 lbs.
Household Batteries, 55 gal. drum	5,600 lbs.	6,400 lbs.
Oil Base Paints, & Ignitables, 55 gal. drum	6,075 lbs.	10,800 lbs.
Toxic Liquids, 55 gal drum	2,025 lbs.	4,000 lbs.
Corrosive Liquid, Acid, 55 gal. drum	375 lbs.	600 lbs.
Corrosive Liquid, Basic, 55 gal. drum	225 lbs.	600 lbs.
Mercury	5 lbs.	0 lbs.
Aerosols	100 lbs.	100 lbs.
Oxidizers	60 lbs.	20 lbs.
Fluorescent Straight Lamps	80 lbs.	0 lbs.
Fluorescent Lamps/Mixed Bulbs, each	293 lbs.	440 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. Under this contract, 3,271 tons of metals was collected and processed including white goods, scrap metals and autos.. RRS service includes removal of tires, batteries, oil, fuels, and other liquids, and the compaction and transport of metals to market. The breakdown of items collected was as follows: 1,277 autos processed, receipt of 607 loads of scrap metals, acceptance and processing of 5,626 large appliances without Freon and 4,854 large appliances containing Freon.
 - On May 15, 2017 RRS initiated commercial fees at a rate schedule that was reviewed and approved by the County. These fees were required as the metal commodity price has been significantly reduced for an extended period of time and RRS would be unable to continue operating without the fee implementation. The program remains free to residents.
 - Contract 8930 has an initial term of 5 years and is scheduled to terminate in May 2018. At this time RRS has indicated they cannot continue operating at the current contracted price of \$660,000 per year. The County has initiated discussions to determine the estimated price increase and consider executing

the first of two five year extensions available for this contract. Should the price increase be significant, we may need to issue a new RFP for services to assure a competitive price.

➤ 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. We have requested to DOH three different options, one option is that the soil could be used as select waste for the beginning layer of the Cell 2 expansion, also daily cover at the landfill, or alternate daily cover. Some of those options would require a change to our permit. We are awaiting DOH's response to our request.

• 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 4:30 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 October 2, 2016 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, and one (55-gallon) drum of Lithium batteries, (27.5 gallons full). Batteries were transported to Total Reclaim, LLC in Seattle, Washington.
- On April 30, 2017, the same contractor hauled three (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 (estimated to be 18.33 gallons). Batteries were transported to Total Reclaim, LLC in Seattle, Washington.
- A new three year contract for HHW collection is currently being reviewed by purchasing. Once the new contract has been approved and a contractor is chosen, dates for the upcoming events will be announced.
- To reduce cross contamination of the batteries, a floor mat which points to and describes each barrel was placed at the collection point at the Kaua'i Resource Center.
- To increase participation in logging battery drop-offs a podium was purchased and placed in the center of the lobby at the Kaua'i Resource Center to emphasize and increase convenience of battery logging. Signage was placed on both sides of the podium to direct residents to login when they drop off batteries.

- To increase participation in taping of 9 volt and lantern batteries, cut pieces of reused labels were placed on the podium next to the login form in a plastic container.
- Contamination and un-taped 9 volt batteries continue to be an issue.
- 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 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 has ended funding for eWaste recycling in all Counties.
 - In June of 2016, Resource Recovery Solutions began an eWaste recycling program at Puhi Metals Recycling Center at no cost to the County, residents and businesses. They have also increased drop off times to Monday through Saturday from 8am-4pm.
 - RRS accepted and shipped 183 tons of eWaste in FY 2017. Product was processed at IMS Electronics Recycling in Vancouver WA.
 - Small appliances are also accepted along with eWaste under the new program, making Puhi Metals Recycling Center a one stop drop for eWaste and appliances of all types. Small appliances that are now accepted for recycling include: fans, blenders, coffee makers, hair dryers, toasters, vacuum cleaners, etc.

- Levels of eWaste recycled per month is half of what they were under the previous contract, averaging 15 tons a month. We assume lower rates are attributable to reduced urgency to drop eWaste since the program availability has increased, a reduction in promotion when State funds were no longer available, and/or that the previous contract removed a major portion of eWaste off island which had been built up over time.
- Construction/Demolition Diversion and Recycling Ordinances:
 - In FY 2015 and 2016, the groundwork was laid to pass proposed ordinances requiring recycling of designated recyclables generated by businesses and C&D projects. The Proposed Ordinances were presented to the Administration, individual Council Members, and trade associations and business groups over that two year period. An Advisory Committee of stakeholders reviewed and discuss the ordinances at length and provided input and recommendations for improvement
 - The proposed legislation has been shelved until there are viable and reliable options for remote commercial recycling drop points, and more support from stakeholders who were resistant to the legislation. We are now considering development of a green business recognition program to support voluntary waste diversion efforts.
- 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 2017, 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 green waste processing to three State Permitted contractors around the island. Contract 9437 Heart and Soul Organics, received and shredded green waste from Hanalei RTS and 2/3 of Kapaa RTS. In Hanalei, we collected 1,804 tons and Kapaa we collected 8,031tons of which 6,135 was processed by Heart and Soul Organics. Contract 9436 Kauai Nursery and Landscaping, received and shredded 1/3 of Kapaa RTS green waste, 1,895 tons and Lihue RTS 2,686 tons. Contract 9438 ShredCo, received and shredded 6,658 tons from Hanapepe RTS and 1,177 tons from the Kekaha Landfill.

- Scrap Tire Recycling
 - The current Contractor, E-H International agreed to extend the contract which will be expiring August 31, 2017. A new contract is currently being executed with E-H International for a three year term.
 - In the last year, a total of 16,760 tires were collected at all transfer stations and the landfill by E-H International. The tires were hauled from the refuse transfer stations, containerized, and shipped off-island where they were chipped into crumb rubber and provided to 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 Lihue. Contractor has agreed to exercise the final option to extend contract for a period of one (1) year and will be expiring on September 30, 2018. Under this contract, refuse centers are serviced a minimum of twice per week; Kekaha LF is serviced one per week. A total of 2,594 tons of white goods from the RTS's and Kekaha LF 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
 - Resource Recovery Solutions is under a formal Contract for services to remove and recycle pressurized propane tanks from the transfer stations which will be expiring on December 21, 2017. There are no other contractors in the state of Hawaii that has shown interest in bidding for services and therefore we will be negotiating with RRS to execute a new contract.
 - A total of 1,410 propane tanks were collected at RTSs and were recycled throughout the course of the FY.

- 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.
 - State Funding Contract- the State stopped funding for this long running grant program in FY16. We used carryover funds from prior years to run the program last year.
 - In the past, the State of Hawaii, Department of Health 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 State DOH 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.

- 14,387 gallons of used Spec Oil Recycling was collected and recycled over the period. Unitek Solvent Services provided services for removal and recycling of recovered oil. Oil is shipped to Oahu, where it is recycled.
- No Off-spec Oil Disposal/No contaminated oil was reported.

- Motor Oil Filter Recycling – Motor oil filter collection drums continue to be in place at all RTSs. Public participation in the program is increasing. Five 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 Refuse Transfer Stations through the State DOH 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 calculated annually based on figures from annual reports sent to the Department of Health as well as to County collected data from Contracts, and interviews with businesses. Our last WDR was conducted in FY 2016. This data showed a decrease of 1% diversion to 43%. This information has been posted on the County Website.

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 conceptual design and permit application process continued through the reporting period. Majority of work was completed with exception of final details on the proposed groundwater monitoring program. Completion of this work is anticipated to be achieved in August or September 2016. Once completed, the permit application will be submitted to the DOH - Solid and Hazardous Waste Branch (DOH – SHWB), and an approximate 1 year period for review and approval will commence. 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 Maal 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. This process will add another 2 years to the schedule and the new target completion date for publishing of the DEIS is pending submittal of comments from the State Department of Transportation (DOT) – Airports Division.
- 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 is nearing completion which includes the installation of a condensate tank and road way crossings to get around the gas piping around the site. All construction activity related to the Gas Collection and Control System should be completed by the end of August 2017.
- Lateral Expansion Cell 2. The permit 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. After discussions with DOH CWB on utilizing SRF funding for this project we were told to procure a new contract to start the process. A general solicitation went out and we expect resumes to be able to review at the end of July. We will award the contract for the design of the Lateral Expansion of Cell 2 soon after.
- Host Community Benefits
 - The Office of Economic Development now oversees the Kekaha Citizen’s Advisory Committee and the associated Host Community Development projects.

IV, Operational and Equipment Maintenance Projects

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

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

The recycling rate, also known as the waste diversion rate, is remaining steady at 44%. To increase diversion, we will focus on impacts to large waste stream categories identified in the Waste Characterization Study including Organic waste and Construction Demolition Debris.

The Department is moving forward with two State Revolving Fund (SRF) 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. The selection of the SRF loan was chosen over Bond Issue due to lower interest rate provided under the loan program, the County will realize a substantial 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 2017

RESOURCES

<u>PROGRAM</u>	<u>(FTEs)</u>
1. Administration	11
2. Deposit Beverage Container Program	2
3. Solid Waste Operations	<u>57</u>
TOTAL FTEs	70
 TOTAL BUDGET (Adjusted)	 \$20,577,725

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. Fill the vacant Division Head position after Edward Tschupp retired on 7/31/17

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 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 16-17 design activities included the initiation of new design projects for rehabilitation of portions of the sewage collection systems in Wailua. Design consultants were selected and contracts negotiated for these two projects.

In addition to new design projects, progress was made on five existing design projects, including: the Wailua WWTP Process, Electrical and Disinfection Improvements, Phase 2 project; the Preliminary Engineering and Environmental Assessment for the Waimea R-1 Distribution System; the plans and specifications for cleaning of Līhu‘e WWTP injection wells; design for rehabilitation of Wailua Sewage Pump Station (SPS) No. 3; the Hanamā‘ulu Sewer Collection System Rehabilitation project and the engineering services for the Coco Palms Sewer Collection System Odor Control project. The Waimea project is partially funded by a U. S. Environmental Protection Agency (EPA) grant, with matching County funds. Other design projects are County-funded.

During FY 16-17, two consultant studies that were required for the Wailua WWTP as a result of the County’s National Pollutant Discharge Elimination System (NPDES) permit were completed. The permit, issued with an effective date of November 1, 2013, required the County to conduct a Zone of Mixing Dilution Study and an Effluent Limits Compliance Alternatives Evaluation Study. The Effluent Limits Compliance Alternatives Evaluation Study was completed and submitted to the Department of Health (DOH), as required. Field work for the Zone of Mixing Dilution Study was completed and also submitted to the DOH. The conclusion and recommendation of the Effluent Limits Compliance Alternatives Evaluation Study identified the need for a design project that is included in the FY 17-18 budget.

- **Construction of Capital Improvements.** During FY 16-17 the Division has had two major CIP projects under construction, the \$4.2 million ‘Ele‘ele WWTP Process Equipment, Electrical System and Disinfection System Improvements project and the \$5 million Island-Wide Wastewater SCADA System project. Both of these projects have been completed. Additionally, the Division had a well cleaning project for two of its injection wells at the Līhu‘e WWTP (\$185,000) and a valve and piping improvement project at the Marriott SPS (\$160,000). Both of these projects were completed in FY 16-17 using with County funding.

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 ‘Ele‘ele WWTP Process Equipment, Electrical System and Disinfection System Improvements construction project was funded by SRF funds. It is anticipated that the Wailua SPS 3 Rehabilitation construction project, the Hanamā‘ulu Sewer Collection System Rehabilitation construction project, the Improvements to the Existing Hanamā‘ulu and Kapaia Wastewater Pump Stations and the

‘Ele‘ele Subdivision Collection System Rehabilitation construction project will be funded by SRF funds.

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 nineteen 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 Building, 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 Credit (CEU’s) needed to maintain Operator licensing.

One of the training programs used by the County is the University of Hawai‘i (UH) program, which provides the curricula, on-island training opportunities and CEU credits from the program formerly run by the

Statewide Wastewater Operator Training Program. In addition this year the County coordinated with the Hawai'i Rural Water Association. The Division recognizes that there continues to be a need for alternate training opportunities, and that higher costs associated with training should be anticipated for the future.

- **Collection System and WWTP Operation and Maintenance.** Operation and Maintenance activities for the County's four WWTP's, nineteen 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 35 full time positions, 27 positions are allocated directly to operation and maintenance.

Staffing levels for each WWTP has been standardized at 5 Treatment Plant Operators and Assistant Operators, most of whom are individually licensed as Treatment Plant Operators by the State of Hawai'i. The WWTP operators are also responsible for the operation of the pump stations situated within the collection system served by the respective treatment plant. In addition, the plant operators are supported by a crew of mechanics, an electrician, and a crew of 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, Līhu'e and Waimea WWTPs) or disposed via injection wells (Waimea, Eleele 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 State

DOH. Annually, the DOH 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. The injection well permit for the 'Ele'ele WWTP expires on October 27, 2017. A renewal application has already been submitted to the DOH.

In November 2013, the Wailua WWTP National Pollution Discharge Elimination System (NPDES) permit was issued by the State of Hawai'i, Department of Health (DOH). 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 16-17, 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 HR Department; during FY 15/16 several new employees were hired to fill vacant positions, however, several key vacancies exist, particularly for Grade IV Operators.

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 most or all program measures, and during FY 17-17 the Wastewater Division did not experience many significant weather-related challenges or significant sewage spills. 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 16-17 budget are summarized for the Division as a whole, including administration and operations.

OPERATIONAL COSTS

• Equivalent Personnel Positions	35
• Wages and Other Direct Costs	\$ 3,565,700
• Operations (Equipment, supplies, vehicles, etc.)	\$ 1,014,600
• Utilities (Electrical, Water, Gas, Telephone)	\$ 1,787,500
• Contracted Services (Repairs, Laboratory, etc.)	\$ 1,777,600
• Debt Service	\$ 1,718,400
PROGRAM TOTAL	\$9,863,800

OPERATIONAL REVENUES

Estimated FY 17-18 Revenues	\$ 9,339,700
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VI. STATISTICS

<u>Measure</u>	<u>Number</u>
• CIP Projects under construction	3
• Total number of sewer units	5,435
• Bills processed in FY 16-17	25,384
• Number of customers receiving sewer credits	556
• Spills reportable to DOH	7
• Wastewater processed (average - million gallons per day)	2.1
• DOH unacceptable inspections	0
• DOH acceptable inspection	1
• % of flow being reused (approximate)	45