

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. The maintenance, repair and upkeep of all County facilities, the collection and disposal of garbage and refuse, the collection and treatment of sewage, the review and enforcement of the various codes and other regulations pertaining to public and private construction work are also responsibilities of this Department.

Facilities managed by the DPW include:

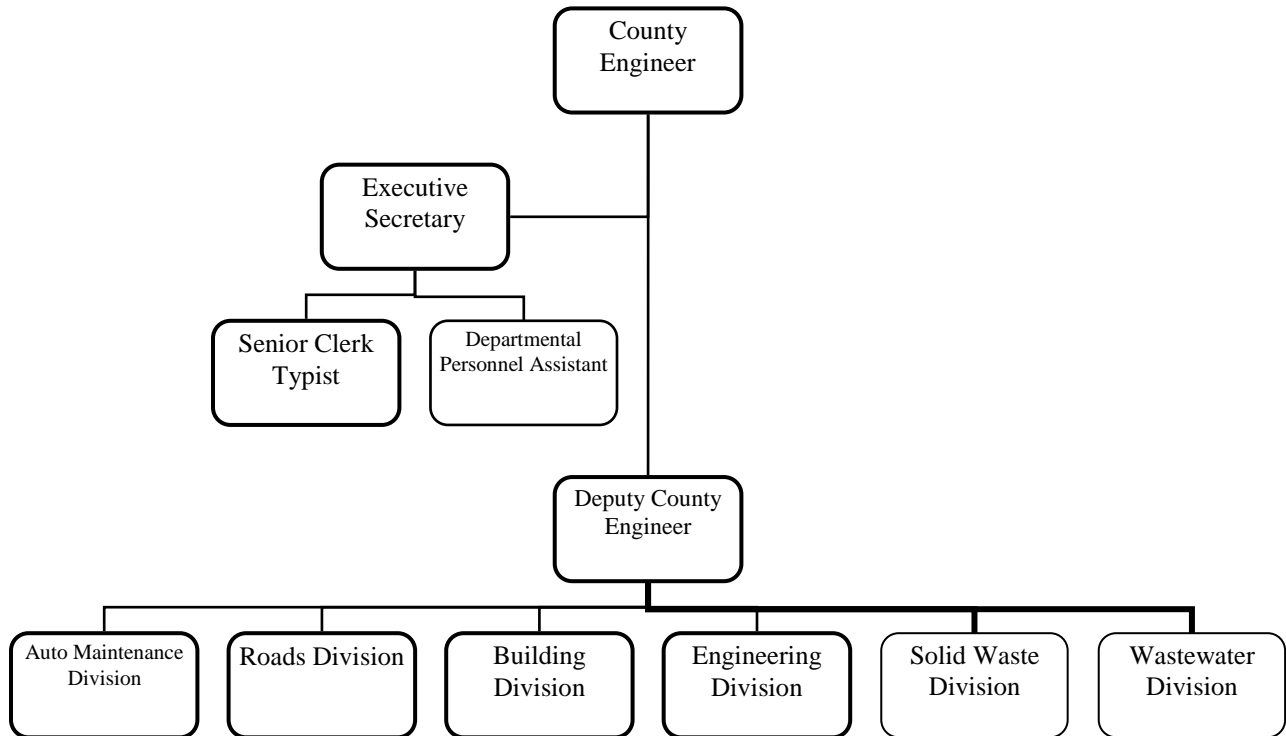
- Four sanitary sewerage facilities
 - Wailua Wastewater Treatment Plant
 - Līhu‘e Wastewater Treatment Plant
 - ‘Ele‘ele Wastewater Treatment Plant
 - Waimea Wastewater Treatment Plant
- Kekaha Landfill
- Kaua‘i Resource Center
- Four refuse transfer stations
 - Hanalei Refuse Transfer Station
 - Kapa‘a 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 308 miles of roadways

DPW also provided repair and maintenance and/or custodial services for the following:

- Vidinha Stadium
- Hanapēpē Stadium
- Kaua‘i War Memorial Convention Hall
- Līhu‘e Civic Center
- Historic County Building and Annex
- Police Department / Civil Defense Agency / Transportation Agency
- Ten Neighborhood Centers
- County Parks

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. Transfer (effective July 1, 2016) of Building Maintenance and Janitorial sections of Building Division function and personnel to the Department of Parks and Recreation.
2. Implemented Key components to provide significant improvement of the County permitting processes between Planning, Building and Engineering.
 - a. Participate in 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.
 - b. Continue refinement of ePlan solutions with our customers in our community.
 - c. Working on digitizing all County property maps into GIS.
3. CIP Projects
 - a. Completed the Hardy Street Complete Streets construction upgrades.
 - b. United States Department of Transportation Federal Highway Administration (FHWA) awarded \$13.8 million Transportation Improvement Generating Economic Recovery (TIGER) Grant to County of Kaua'i for the Līhu'e Town Core Mobility and Revitalization project.
 - c. Completed Hō'ala to Rice shared use path construction.
4. The Four tracks towards a County Solid Waste sustainable solution:
 - a. Kekaha Landfill (LF) existing needs; LF Gas extraction construction in process, Department of Health (DOH) approved ground water monitoring plan, and DOH approved lateral expansion design.
 - b. The New Landfill Environmental Impact Statement (EIS) in process includes; Wild Life 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).
 - c. Materials Recovery Facility (MRF) preliminary design and environmental assessment design is in contract.

- d. Solid Waste system solution Phase I Request for Proposal (RFP) that meets the long term needs of the County's Integrated Solid Waste Management Plan (ISWMP).

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 \$53.8 million, a Capital Improvement Budget of \$19.1 million and federal/state grants of \$42.0 million. This Section is responsible for the payroll of approximately 294 employees, providing support for the Solid Waste and Wastewater billing program, the Department's inventory of approximately \$238,164,584 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 2016, a total of 2,226 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 2016. Additionally, the Fiscal section will be tasked in the preparation of the required financial reports and reimbursement requests from State agencies that include the DOH and DOT.

AUTOMOTIVE DIVISION

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

II. DIVISION GOALS:

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

Automotive Division personnel include:

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

**New Hires: One (1) 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: 21

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 refueling 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 the renovation of the Kapaa Baseyard refueling site, complete with new fuel storage tank and new fuel dispensers. We are currently underway with the renovation of the Princeville refueling site performing basically the same scope of work as was completed at Kapaa Baseyard. Construction is scheduled to be complete by mid-September of 2016. Renovation of the Hanapepe Baseyard and Līhu‘e Automotive Maintenance Facility refueling sites will follow. We have also contracted the services of SUDZ Car Wash to provide vehicle washing for qualifying fleet vehicles.

New Equipment Received in FY16 includes:

- (1) 6” Water Pump - Wastewater
- (2) Aluminum Open Top Refuse Trailers – Solid Waste
- (1) Utility Pickup - Building
- (1) Ford F250 Crewcab - Parks

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.
5. To clean and maintain County office buildings and neighborhood centers.
6. To provide repair and construction services to prolong the life and maintain the value of all County facilities.
7. To provide necessary services in the preparation and management of construction and service contracts.

III. PROGRAM DESCRIPTION

ADMINISTRATION

The Building Division's Administrative Section manages facility development and construction. The Section also oversees the operation of the Facility Maintenance Section, and 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, Planning Department, Liquor Control, Public Works, and the Parks and Recreation Department.

PROGRAM HIGHLIGHTS: Construction completed for the New Chiller for the Līhu'e Civic Center, Hardy Street Improvements project, Pono Kai Seawall Repairs, and Moanakai Road Seawall Repairs and Reconstruction.

Other major projects for which the Section is providing planning, design, and construction management work include Piikoi Building Renovation, Kapa'a Police Substation, Līhu'e Kauai Police Athletics League building, Kaua'i Fire Department Helicopter Hangar, Lydgate-Kapa'a Bike/Pedestrian Path, Ahukini-Lydgate Bike/Pedestrian Path, Kuna Bay-Anahola Bike/Pedestrian Path, the Nāwiliwili-Ahukini Bike/Pedestrian Path.

REPAIR & MAINTENANCE AND JANITORIAL SERVICES SECTION

The Facility Maintenance Section consists of building trades repair and maintenance workers, and janitorial services workers. The personnel are responsible for providing necessary services to repair, maintain, and clean County facilities located between Kekaha and Haena. Additionally, the program has also been called upon to handle various new construction and major renovation projects for the County.

PROGRAM OBJECTIVES: The Repair & Maintenance and Janitorial Services Section are directly responsible for the maintenance and cleaning of all multi-agency County facilities. The Section also provides requested maintenance and janitorial support to the Parks and Recreation Department, Wastewater Division, Police Department, Fire Department, Civil Defense Agency, the Housing Agency, and Agency of Elderly Affairs with various construction, repair, and janitorial needs.

PROGRAM HIGHLIGHTS: The Section managed and assisted with the construction work to complete major repair contracts at various County facilities. In addition to the completed projects, the Section has also been tasked with the development of plans, specifications, and contract documents for new Capital Improvement Projects. The Section continued on work to upgrade the County's Energy Management System at our major office facilities, to help with monitoring and controlling our energy usage and cost.

The Section's electrical trade personnel continued with the lighting retrofits at various County facilities. Energy efficient types of light fixtures, bulbs, and equipment are continually being installed or upgraded, replacing older fluorescent and incandescent light fixtures. A significant effort was made to ensure that County facility lighting was retrofitted to meet 'bird friendly' requirements. With the installation of newer, more efficient equipment, the staff has been able to direct more of their job hours to preventive maintenance types of work. This has reduced the amount of emergency and/or urgent repairs arising throughout the County, and has also reduced the amount of general maintenance repairs job orders being requested by the users.

The plumbing trade personnel continued with work to replace old plumbing fixtures at County park facilities. With the completion of the individual wastewater system upgrades to various types of septic systems at many of the County facilities, the staff has taken on additional work with training, and developing a systematic procedure for the inspection and maintenance of all the new systems.

Required work to repair and/or replace items due to vandalism continues to be a problem, requiring many man-hours and material cost, which could be spent on a multitude of other projects and facilities. Many community groups have assisted with needed man-power in painting over graffiti, and doing minor repair work at numerous sites around the island to help address the increased amounts of work associated with these acts of vandalism.

BUILDING CODE ENFORCEMENT SECTION

The Building Code Enforcement Section is responsible for the review of projects, plans, specifications, and related documents to ensure compliance and enforcement of all applicable building codes and ordinances associated with building construction. As the central coordination

agency in the building permitting process, the program is responsible for the circulation, tracking, and consolidation of comments from County, State, and Federal agencies, prior to permit approval. The program is also responsible for building, electrical, plumbing, energy, and sign code enforcement, as well as inspections of the above as part of the overall process.

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

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

PROGRAM HIGHLIGHTS: The Building Division has continued to place emphasis on its electronic plan review (EPR) system. 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.

Staff members of this Section actively participate in the 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.

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

REPAIR & MAINTENANCE AND JANITORIAL SERVICES

Facilities Managed by Building Division	<u>Actual</u>
West/South District	0
Central District (square feet)	153,256
East/North District	0
Facilities w/ Maintenance Assistance	
West/South District (square feet)	206,844
Central District (square feet)	297,267
East/North District (square feet)	114,810
Job Orders Processed	2,741
Job Orders Completed	2,860
Ave Days from Request Submittal to Job Completed	45
Ave Days from Job Start to Job Completion	22
Ave Days for Specialized Job & Projects (145 Jobs)	75
Ave Days for Electrical Shop Jobs (663 Jobs)	18
Ave Days for Janitorial Shop Jobs (120 Jobs)	18
Ave Days for All Maintenance Shop Jobs	22
Hanapēpē Shop (215 Jobs)	1
Līhu'e Shop (405 Jobs)	11
Kapa'a Shop (201 Jobs)	23
Ave Days for Plumbing Shop Jobs (907 Jobs)	18

BUILDING CODES ENFORCEMENT

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

	Estimate	Actual
Residential	30	134
Commercial	45	109
Code Enforcement Inspections	Estimate	Actual
Building Code Inspections	10,000	9,125
Electrical Code Inspections	7,000	5,328
Plumbing Code Inspections	7,000	6,598
Total Code Inspections	24,050	21,443

Code Permits Issued	Estimate	Actual
Building Code Permits	1,800	788
Electrical Code Permits	1,800	1,222
Plumbing Code Permits	1,600	1,257
Sign Code Permits	180	4762
Photovoltaic/Solar		663
Total Code Permits Issued	4,380	4,406
Building Permit Valuations	\$300,000,000	\$217,945,537

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 and Repair & Maintenance and Janitorial Sections. New facilities for the Police Department, improvements to Lihū'e Civic Center, and Hardy Street are being worked on.

The Repair & Maintenance and Janitorial Services Section have kept pace with the ever increasing amounts of work order requests being made. The Section received 2,741 new job orders, and worked on and/or completed 2,860 job orders, for work requests submitted for our services during the past fiscal year. However, staffing shortage issues continually force maintenance and janitorial staff to be taken away from their normal duties to cover services needed in other unassigned areas. Vandalism issues continue to waste valuable man-hours and funding that could be directed towards preventive maintenance, or increasing our efficiency for completing requested jobs on schedule. Our standard for completion of normal job orders is 10 days from the time the job order is issued. For FY2015, on an average we were approximately 11 days late in meeting the scheduled completion time for the 2860 job orders that were completed.

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	\$ 273,440
Operations	\$ 6,000
Equipment	\$ 2,750

PROGRAM TOTALS \$ 282,190

REPAIR & MAINTENANCE AND JANITORIAL SERVICES BUDGET

Personnel	46.5
Salaries & Wages	\$ 3,139,026
Operations	\$ 2,519,600
Equipment	\$ 447,450
PROGRAM TOTALS	<u>\$ 6,106,076</u>

BUILDING CODES ENFORCEMENT

Equivalent Personnel (Includes 2 contract hires)	20
Salaries & Wages	\$ 1,496,922
Operations	\$ 10,500
Equipment	\$ 0
PROGRAM TOTALS	<u>\$ 1,507,422</u>

VI. HOLO HOLO 2020 PROJECTS & STATUS

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

- Implement Complete Streets
 - Completed construction of the Hardy Street Improvements Design/Build Project which is a complete streets upgrade for Hardy Street.
- Extend Ke Ala Hele Makalae coastal path
 - Lydgate Park – Kapa‘a Bicycle/Pedestrian Phases A & B construction completed.
 - FHWA funding and the Department of Defense Innovative Readiness Training Grant were secured for the Kawaihau Elevated Boardwalk project with actual construction to start in Winter 2017.
 - 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 – MICHAEL MOULE, P.E., DIVISION CHIEF

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

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:

- (9) Civil Engineer VI
- (10) Civil Engineer V
- (11) Civil Engineer V
- (12) Civil Engineer IV
- () Civil Engineer III (vacant)
- (14) Supervising Construction Inspector
- (15) Construction Inspector III
- (16) Construction Inspector III

Survey:

- () Land Surveyor II

Total Number of Personnel: 16, plus 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.
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.
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.
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 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.

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.
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.
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.
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:
 - Collector Roads Resurfacing 2014 (Ma‘ilihuna Road, Olohena Road, Hau‘a‘ala Road), Federal Aid Project STP-0700(068), 80% Federal, 20% County: Design completed in house; Construction started in June 2015; Anticipated completion October 2015.
 - Hardy Street Improvements (Federal Aid Project STP 572): This project was managed by Building Division, but Engineering Division Staff provided significant input and review of the plans and construction, in order to ensure the best possible design for complete streets, drainage, etc.
 - Hō‘ala to Rice Shared Use Path: This project was funded by Community Development Block Grant funds, managed by the County Housing Agency. The project constructed a 10 foot wide shared use path connecting residences including two major housing projects on Hō‘ala Street, to Rice Street and other areas of Līhu‘e.
 - Island-wide Bus Stops Improvement, Phase 1: This project constructed the first round of accessible bus shelters at various locations on Kaua‘i, including 6 stops.
 - Lae Road Guardrails: This project installed guardrail along Lae Road adjacent to ‘Elua Reservoir.
 - Wāwae Road Guardrail: This project installed guardrail along a portion of Wawae Road where significant steep slopes are located.
- The following planning and design projects were completed this year:
 - Kawaihau Roads Safe Routes to Schools, County CIP W10045: The project assessed the needs for improvements to Kawaihau Road and other roads in the area around Kapa‘a Elementary School, Kapa‘a High School, and St. Catherine School. The County has received the final concept drawings and cost estimates, which are being used as the basis for the Kawaihau Road, Hau‘a‘ala Road, Ma‘ilihuna Road Complete Street and Safety Improvements project.

- Līhu‘e Mauka Road Feasibility Study, Federal Aid Project SPR-0100(34): This project studied the feasibility of constructing a new road along existing cane haul roads mauka of Hanamā‘ulu, Līhu‘e, and Puhi.
- The following construction projects are ongoing:
 - Island-wide Bus Stops Improvement, Phase 2: This project will construct an additional 17 accessible bus shelters at various locations on Kaua‘i. Construction is starting in August 2016.
 - Kapahi Bridge Replacement, Federal Aid Project BR-0700(53): The old bridge has been demolished and the steel beams for the new bridge have been ordered. The contractor is currently working on the bridge abutments.
 - Kōloa Road Safety Improvements, Federal Aid Project HRRP-0530(001), 90% Federal; 10% County: Construction began in June 2015 and is largely completed. A change order was made during the project to increase the length of the guardrail being constructed, in order to further increase safety. The guardrail extension is the only remaining work to be completed; this work should occur during the next few months.
 - KPD Parking and Security Gates: This project will install security gates at the KPD parking lot. This project was designed and managed in house.
 - Puhi Road Rehabilitation Phase 1 (Kaumuali‘i 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 currently underway, with substantial completion of the project anticipated by the end of the calendar year.
 - Wailana Bridge #2 Pedestrian Walkway: Construction began in June 2015; the old bridge has been removed, abutments have been installed. Bridge installation and pedestrian ramp installation are anticipated to occur by Fall 2016.
- 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. A contract has been negotiated with a consultant to conduct final design.
 - ‘Anini Bridge #2 Bridge Replacement. The draft geotechnical study has been submitted.
 - Auto Shop Mezzanine Floor: Drawings were submitted to Automotive Division. Revisions are currently being made to the drawings based on comments received.
 - Bridge Inspections and Appraisals 2016: This contract to inspect all of the County’s Federal Aid bridges is being executed in July 2016. Bridge inspections are scheduled to begin in September 2016.
 - Collector Roads Resurfacing 2017, Anticipated Federal Aid Project, 80% Federal, 20% County: Design to be completed in house.
 - 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 anticipated to go to construction in early 2017.
 - Hanapēpē Bridge Repairs, Federal Aid Project BR-0545(001): Project delayed due to the need to separate out road bridge repairs from pedestrian walkway repairs. Final permitting is underway. Bid process anticipated to occur in Fall 2016.

- Hanapēpē Road Improvements: 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; final design is underway.
- Kanaele Road Slope Stabilization: Survey completed this fiscal year; final design to start this year.
- Kapaia Swinging Bridge Towers Reconstruction: The County is working to transfer ownership of the bridge to the Kapaia Foundation, and provide the dedicated funding to the Foundation for repair of the bridge.
- 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. A consultant has been selected for final design; notice to proceed on the design will occur shortly. Construction anticipated to begin in early 2018.
- 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. Engineering Division developed the conceptual designs used in the application, public meetings, Council meetings, and to guide the final design. Engineering Division will also be heavily involved in the design details as the project moves toward construction. A consultant has been selected to develop the preliminary design and design/build documents.
- 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 will be designed in house, with construction scheduled to begin by March 2017.
- ‘Ōpaeka‘a Bridge Rehabilitation; Federal Aid Project, 80% Federal, 20% County: Consultant is working on 90% plans; awaiting final SHPD approval of Section 106. Construction anticipated to begin in 2017 or 2018.
- Po‘ipū Road Crosswalk at Kīpuka Street: This project will install a crosswalk across Po‘ipū Road at Kīpuka Street, including rectangular rapid flashing beacons. This project was designed in house and construction is anticipated for Fall 2016.
- 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. A consultant has been selected for final design; notice to proceed on the design will occur shortly. Construction anticipated to begin in 2018 or 2019.
- 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. Construction anticipated to begin in 2018 or 2019.

- Pu‘u Road Improvement Study: This is a study of the safety and design concerns on Pu‘u Road. Draft report received from Kodani Associates; working on contract amendment to revise final product.
- Pu‘u‘ōpae Bridge Improvements, Federal Aid Project BR-0700(59), 80% Federal, 20% County: Consultant is working on 100% plans; final design details are being worked out with the Hawai‘i Department of Transportation based on their comments. Construction anticipated to begin in 2017.
- Safe Routes to School Rectangular Rapid Flashing Beacon project: 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. Bidding for this project is anticipated in the next few months, with construction anticipated to begin in late 2016.
- Safe Routes to School for King Kaumuali‘i Elementary School and Kōloa Elementary School: This project includes sidewalks and crosswalks at several locations near King Kaumuali‘i Elementary as well as sidewalks, bike lanes, and other improvements near Kōloa Elementary; A consultant has been selected for final design; notice to proceed on the final design is anticipated to occur soon.
- 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. Design by a consultant is underway.
- Twin Reservoirs: A consultant has been selected for this project and the contract is anticipated to be awarded during Summer 2016. The consultant will first 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.
- ‘Umi Street Restriping: This project will install bike lanes and back-in angled parking on ‘Umi Street. This project was designed in house and construction is anticipated for Fall 2016.
- Waikomo Road Pedestrian Improvements: This project will restripe Waikomo Road to provide a pedestrian walkway to Kōloa School and other destinations within Kōloa Town. The project was designed in house. A final public meeting is scheduled for August 2016, and the resolution is scheduled to go back to Council in September 2016. Construction is anticipated in early 2017.
- 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.
 - Informal system in place for scanning existing plans and maps in our map room; 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.
 - 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.

- Working with the Planning Department to develop a new County Street Design Manual.
- Assisted various Departments and Divisions with the following survey requests:
 - Hō‘ala to Rice Shared Use Path survey for construction of the path
 - Kawaihau Elevated Boardwalk alignment location and staking

V. PROGRAM MEASURES:

- Construction plan review has been completed for the following large subdivisions or developments:
 - S-2011-21 Kukui‘ula Subd U-AA
 - Philippine Cultural Center
 - Kaniko‘o (Rice Camp) Senior Housing Phase II onsite and offsite
- Construction plan review is ongoing for the following large subdivisions or developments:
 - S-93-50 Brydeswood Subdivision Phase II
 - S-2004-33 Tonokawa Makaio & Lalena Estates
 - S-2005-41 Ahukini Makai Subdivision
 - S-2006-04 Brydeswood Subdivision Phase III
 - S-2006-49 ‘Ele‘ele Iluna Subdivision, Phase II, Increment B.
 - S-2009-13 Waiola Subdivision, Phase I
 - S-2009-15 Waiola Subdivision, Phase III
 - S-2009-21 Puakea Subdivision, Phase II
 - S-2013-16 Kukui‘ula Parcel A Subdivision
 - S-2013-23 Morita Subdivision
 - S-2015-14 Makahuena Subdivision
 - Coconut Beach Resort
 - Hōkūala Resort (formerly Kaua‘i Lagoons)
 - Kōloa Village
 - Kukui‘ula Kahela Subdivision
 - Kukui‘ula Major Project Road (Ala Kukui‘ula) Phase 3
 - Moloaa Bay Ranch Grading
 - Puakea Golf Course Mass Grading
 - Solar City Kapaia Solar Farm
 - Village at Po‘ipū access (Hoaka Street Extension)
- 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
 - DOW Wailaau Road Water Line
 - Plan review Ongoing
 - Job No. ANI-01 – DOW Anini Road Water Line
 - Job No. 11-02 – DOW Grove Farm Tank
 - Job No. 12-01 – DOW Hanalei Town Water Line
 - 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 Kukuioolono 0.5 MG Water Tank
- Job No. 11-04 – DOW Lawai Omao Water Line
- Construction plan review has been completed or is ongoing for the following State of Hawai‘i projects:
 - Kealia Reservoir; Department of Hawai‘ian Homelands (DHHL)
 - Nāwiliwili Road Improvements; Hawai‘i Department of Transportation, Highways Division (HDOT)
 - Nāwiliwili Road Resurfacing; HDOT
- Construction Section is currently inspecting or completed inspection of the following major subdivisions or projects
 - S-2006-24 Ho‘oluana at Kohea Loa
 - S-2006-49 ‘Ele‘ele Iluna Subdivision, Phase II, Increment A.
 - S-2011-21 Kukui‘ula Subd U-AA
 - DOW Admin Building
 - DOW Halewili Water Line
 - DOW Waila‘au Road Water Line
 - Hōkūala Resort (formerly Kaua‘i Lagoons)
 - Kaniko‘o (Rice Camp) Senior Housing Phase II onsite and offsite
 - Kōloa Landing
 - Kukui‘ula Kainani Villas
 - Pili Mai
- The following permits have been issued, inspected, and/or closed out:
 - Grading Permits
 - Issued: 23
 - Inspected and closed out: 25
 - Road Permits
 - Issued: 35
 - Inspected and closed out: 29
 - Driveway Permits
 - Issued: 19
 - Inspected and closed out: 46

DIVISION OF ROADS

I. MISSION STATEMENT: To maintain County roadways in a manner that will safely convey vehicular and pedestrian traffic; to maintain major public 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 - Principal Projects Manager (IWRR & Other Division Projects)
- 1 - Administrative Services Assistant
- 3 - District Road Overseer (Hanapepe, Hanalei, Kapaa)
- 1 - Highway Construction & Maintenance Supervisor II (Hanapepe)
- 5 - Highway Construction & Maintenance Supervisor I (Hanapepe, Kapaa, Hanalei)
- 3 - Field Operations Clerk (Hanapepe, Kapaa, Hanalei)
- 3 - Equipment Operator III
- 13 - Equipment Operator II
- 2 - Equipment Operator I
- 5 - Tractor Mower Operator
- 1 - Baseyard Attendant (Hanalei)
- 2 - Laborer Working Supervisor (Hanapēpē, Kapa‘a)
- 14 - Laborers
- 1 - Levees Highway Construction Supervisor I (Hanapēpē)
- 1 - Equipment Operator IV
- 1 - Equipment Operator III
- 1 - Equipment I
- 2 - Laborers
- 1 - Equipment Logistics Mobilization Supervisor
- 1 - Equipment Operator IV
- 2 - Equipment Operator III
- 1 - Bridge Maintenance Worker II (Working Supervisor)
- 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**

IV. FUNCTIONS

The Roads Division is composed of four sections: Administrative, Technical, Field Operations and Projects. Field Operations consists of the following branches: Roads Maintenance, consisting of District Base Yards; Special Construction, consisting of Equipment Logistics Mobilization, Bridge & Road Construction, and Traffic Signs & Pavement Markings. Roads Division manages approximately 309.5 miles of roads: 307.3 paved and 2.2 unpaved. Notes: Private roads are not managed by Roads Division

V. PROGRAM DESCRIPTION

The Roads Construction and Maintenance Division performs maintenance and repair of road pavements, shoulders, bridges, sidewalk/driveway/curb/gutter, levees and appurtenances maintenance and repairs; installation and maintenance of traffic and safety devices; installation and maintenance of traffic signs, pavement markings and guardrails. The Roads Construction and Maintenance Division support the Solid Waste Division and the Department of Parks and Recreation on a regular basis and supports other agencies on an as needed basis.

VI. PROGRAM HIGHLIGHTS

- NOTE: County Engineer with Roads staff will schedule a final review meeting shortly with Deputy County Attorney to move draft ordinance to the following next steps. Draft: Cleaning and Maintaining County Right of Way ORDINANCE with Mayor and finally to County Council.
- FourWinds Group with M.PET (Maintenance Productivity Enhancement Tool) MMIS (Maintenance Management Information System) Program. Roads Field Operation Staff is well knowledgeable in and assuming the responsibility of the use of the M.PET MMIS.
- iWorQ's Pavement Management Program has GIS Mapping and improved budget reporting capability. Another pavement condition survey/collection will take place this August September 2016.
- Revising 5-year Pavement Management Resurfacing Plans working lists since requested GET funds was denied.
- Create and assist IWRR List of Collector Roads for Engineering Division.
- 2/13/2016 Maluhia Road Project by Roads Field Operation; Maluhia Road Tunnel of Trees removal of hazardous dead branches and tree trimming with County Roads Crews, coordinated by Roads Field Operations Manager and in partnership with County Dept. of Parks & Recreation's Arborist..

VII. PROGRAM MEASURES/ACCOMPLISHMENTS

- In-House reorganization and creation of the Principal Project Manager position and iWorQ's Pavement Management Program have enhanced Roads Projects Section and aided the development of an inventory of Kaua'i County Existing Roads Pavement. This enabled the identification of existing County roads, distressed pavement areas, guardrails, manholes, gratings, survey monuments, and miscellaneous on County Right-of-Ways, scheduling of in-house road pavement core sampling and assists Engineering Division with Complete Streets/Safe Routes to Schools island-wide program.
- Notice of Completion for Contract #9257 IWRR FY2014-2015 Local Roads has been sent and final payment made.
- IFB for IWRR FY2016-2017 Local Roads to be finalized when plans are completed and approved.
- Contract # 9390 for FY 2015-2016 IWRR-Seal Coating Project on Local Roads is executed and has been sent to GP Roadway Solutions, Inc. Notice To Processed to be issued shortly.
- IFB for FY 2016-2017 IWRR-Seal Coating Project on Local Roads to be announced upon review of plans by State Disability & Communication Access Board.

- Hanapepe and Waimea Levees' United States Army Corps of Engineers Annual Inspection received passing grades thanks to Hanapēpē Base Yard & Levees Crews, Supervisors and Field Operation Manager coordination.
- Hanapēpē and Waimea Levees Grassing Irrigation Project is partially completed. Hanapepe Levee is 100% completed and Waimea Levee is anticipated for 100% completion by the end of 2016.
- Roads Division Employees, Supervisors & Managers on-going re-training on equipment and trucks. Conducting mandatory annual safety and re-certifications. Completed training on Policy Against Discrimination & Retaliation, Leadership Work Essentials, Drug & Alcohol Reasonable Suspicion, EAP & Managing Stress in the Workplace and Conducting Proper Workplace Investigation, to name a few important ones..
- Ongoing 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

Phase II of Kekaha Landfill. The Kekaha Landfill Operation accepted and buried 83,740 tons of municipal solid waste during Fiscal Year 2015-2016 . This figure includes solid waste from residential and commercial sources. This is an increase of 2,255 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. 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 County the GPS and software system fixed to the landfill compactor has experienced intermittent problems that are currently being evaluated. The Compactor's self-cleaning compactor wheels however seems to be the most reliable aid to landfill operators in achieving optimum compaction of waste.

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.

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 Received FY16 (Tons)</u>	<u>Tonnage Change from FY 15</u>
Hanapepe	9,350	+1,287
Līhu‘e	17,079	+1,165
Kapaa	4,870	-2,008
Hanalei	5,957	+531

The Division has taken steps to initiate a reorganization of the RTS personnel that would increase supervisory capacity at each site to improve support for operations, documentation and accountability, and safety. The RTS operations have recently experienced operational issues including regulatory, personnel and safety related matters. One of the more severe cases was the Notice of Violation and Order (NOVO) issued by the Hawaii State Department of Health, Clean Water Branch (DOH-CWB) for polluted stormwater discharge violations, which included a fine of \$138,600. Consultation with UPW is required since the reorg would include the reallocation of vacant blue collar positions to a working supervisor position at each site. The objective is to complete the reorganization process and recruit for involved positions by the end of the year.

- Refuse Collection at County Facilities. . Refuse collection at 29 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 175 residential customers not accessible by the larger double axel sideloader 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 11 locations. The plan is to add an additional 8 locations by December 2016. At this time, 32-gallon trash cans are utilized. Service includes removal of the trash can liner with contents, and replacement with a new liner.
 - Island-Wide Automated Curbside Refuse Collection.
 - 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.
 - Automated Refuse Collection. The DSWM converted approximately 9,214 customers to automated refuse service, beginning July 5, 2015. Carts of variable sizes were distributed to customers at the end of FY2015 and into the beginning of the fiscal year. This operation is supplemented by a ‘Modified Manual Refuse Collection crew on Fridays, servicing customers in the Wainiha through Haena areas and also Moloaa Road area. The Modified Manual Collection crew utilizes the small rear oader truck fitted with a cart tipper and three solid waste workers (driver plus two men to position carts) to service approximately 308 carts per week. As of June 30, 2016 , the curbside collection program had 18,650 residential collection accounts and 275 business accounts, including Transient Vacation Rentals.
 - Heavy Equipment Purchases in FY 2016.
 - a. One (1) Tarp Machine
 - b. Five (5) Roll off Containers
 - c. Two (2) Automated Refuse Trucks
 - d. One (1) Hooklift Truck
3. Integrated Solid Waste Management Programs. Integrated solid waste management 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
 - Residential Refuse Collection Assessment (RRCA): On October 8, 2014 the County passed a “Pay As You Throw” variable rate for refuse collection

ordinance. Under this rate structure, customers can 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 month. The ordinance went into effect in July 2015. .

- After the passage of the PAYT ordinance, we surveyed residents to determine what sized carts to purchase. The survey revealed that 56% of customer would select a 64 gallon cart; 26% would select a 96 gallon cart, and 18% would opt out of service. The actual subscription data was: 37% selected 64 gallon carts, 52% selected 96 gallon carts, and only 11% opted out of service.
- The RRCA revenue for FY 2016 was approximately \$3.4 million on 18,650 parcels. The RRCA program revenues have increased about \$600,000 from last year. Revenue increases were mainly attributed to conversion to automated refuse collection service. When we switched to automated service, only households with refuse collection accounts received County issued refuse carts. If carts were not issued, property owners needed contacted the County to determine why they didn't get a cart. During this process, it was discovered that a fair number of households did not have refuse accounts. Additionally, as shown above, more customers than anticipated have 96 gallon collection service.
- 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, 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 of \$292,326 in FY 2016.

- Kaua'i DSWM Staffing.

- On July 16, 2015, our Senior Account Clerk position was filled. With the implementation of the SW RRCA PAYT program, the Senior Account Clerk has been a tremendous relief in assisting the SW Accounting Technician.
- We hired a new Collections Supervisor position to oversee collections crew starting next fiscal year. As his first task, the Collections Supervisor oversaw the distribution of refuse carts to new automated customers.
- The SW Accounting Technician and the Collections Supervisor were nominated and named Public Works Employee of the Year at last year's

award banquet. This was a well-deserved acknowledgment of the dedication and hard work displayed by these employees.

- 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 anticipated hire date for the new staff person was July 16, 2016.
- Kaua'i Resource Center (KRC).
 - Recycling Operations: Garden Isle Disposal (GID) continued to provide services at this facility under concession contract 7495 under a second six month extension. The operator pays the County \$1,000 per month to use the space to provide a public drop point for segregated recyclables, a certified redemption center for residential and commercial use, and a drop point for commercial recyclables at no charge to individual businesses as well as haulers. This contract will expire in December 2016.
 - We plan to draft a new solicitation for this space, and have received legal direction that a concession is the most appropriate method of solicitation. The term of the concession would be limited, as the Materials Recovery Facility (MRF) is planned at this site. See more on the MRF below.
 - During this fiscal year, the KRC diverted a total of tons 913 of material from the landfill, which is a 59 ton increase from FY 2015 on a large increase in cardboard recycling while all other commodities showed slight decreases from 2015 numbers. The breakdown was as follows: tons (T) 243 cardboard (86 ton increase), 6 T newspaper, 46 T mixed paper, 15 T non-deposit beverage container (DBC) glass, 0 T #1 molded plastic, 0 T #2 non-DBC plastic, 440 T DBC glass, 69 T DBC aluminum, 94 T DBC plastic.
- Home Composting
 - 331 Earth Machine Home Composting Bins were distributed to Kaua'i residents this FY.
 - 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.
 - A new agreement for a satellite distribution point was made 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 purchased 550 additional bins in FY 2016 which are due to be delivered early in FY 2017. The price per bin was \$55 including shipping. Funding in FY 2017 is not sufficient for further purchases of the Earth Machine Home Composting Bins. Increased funding will be required in FY 2018 to continue this program as our current level of bins is estimated

to be exhausted in the second quarter of FY 2018 if current rates of distribution continue.

- 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.
- 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.

- Kaua`i Recycles Residential Recycling Program

- In 2012, we signed a three (3) year contract with two (2) one year options to extend with Garden Island Disposal. We exercised our first extension for six months through December 2015, and our second and final extension expires in December 2016.
- We are going out to bid for a new, five (5) year contract that is set to begin in December 2016.
- There are eight (8) drop bins located throughout the island for Kauai’s residential recycling convenience. The program accepts the following items: aluminum food/beverage cans, foil plates/pans, steel food cans. and. glass bottles and jars, corrugated cardboard, , newspaper, #1 & #2 plastic bottles and containers, and mixed paper.
- Due to the high volume of mixed paper, the Hanalei, Kapa‘a and Līhu'e sites are now equipped with 10-cubic yard mixed paper bins, which replaced the 3-cubic yard bins under the prior contract. The existing 6-cubic yard bins are used for plastics #1 and #2 collection only:

Līhu'e, Kapa‘a and Hanalei sites:

- One compartmentalized 34-cubic yard bin for source separated cardboard, newspaper, and glass
- One 6-cubic yard bin for plastic #1 & #2
- One 3-cubic yard bin for aluminum and steel
- One 3-cubic yard bin for mixed paper
- One additional, up to 34-cubic yard bin for cardboard on the weekends
- One additional 6 cubic yard bin for plastics #1 & #2 has been added to the Hanalei TS on Saturdays

Recycling bins are currently hauled at the frequency shown below

Location	# Hauls per week
Hanalei	11
Kapa‘a*	11
Līhu'e*	10
Po'ipū	6
Lāwa‘i	8

'Ele'ele	4
Waimea	4
Kekaha	3

*Figure includes weekends when two sets of containers are left on site to accommodate the public.

The average monthly tonnages for each recyclable collected under the program are as follows:

- Corrugated cardboard: 68.50 tons
 - Newspaper: 7.30 tons
 - Glass: 21.53 tons
 - Aluminum: .02 tons
 - Steel: 3.97 tons
 - Plastic: 5.84 tons
 - Mixed Paper: 41.73 tons
-
- Under the current contract, we have become more stringent with enforcing the maintenance of the drop-off site areas, making it clear that it is the contractor's responsibility to thoroughly clean drop sites every time the containers are hauled. As a result, there have been less complaints from the public about overflowing bins and bin cleanliness. In addition to radio and television ads placed by the vendor, the County recycling office continues to field calls and provide program information through quarterly distributions of our Recycling Guide and various special events.
 - We recently added recycling opportunities for plastic, glass, and metal at the Līhu'e Civic Center in the loading dock area of the former Big Save. An additional cardboard drop bin was also added to this location. The receptacles are similar to the Kauai Recycles drop bins and are designed to provide County employees with a convenient drop-off location for recyclables that are collected in break rooms. These bins are serviced on an on-call basis. At this time, there is a homeless camp in close proximity to these bins. We have experienced contamination in the bins because the homeless have used them as waste receptacles. The homeless have urinated near the bins frequently, causing issues with our Recycling hauler and County employees who are reluctant to recycle at this location. We are hopeful that the camp will move, resulting in a cleaner site.
 - 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. This location allows our RTS attendants to recommend recycling to customers, and to monitor the bins if they are overflowing or if there is illegal dumping. The property managers at 'Ele'ele Shopping Center were pleased to have the program relocated off site. We promoted the relocation through radio ads, signage, and on our website. We have not had any complaints about the relocation.

- Acceptable Non-Deposit (ADF) Glass Recovery and Recycling Contract
 - The County did not accept ADF funds in FY 2016 because the State DOH requires a buy-back program and the local processor was not interested in establishing a buy-back program at any price. We will continue to investigate how the County can participate in the ADF program considering limitations of the State DOH and the local processor.
 - The Kauaʻi Recycles and Kauaʻi Resource Center programs collected an estimated 260 tons of ADF glass, with Garden Isle Disposal reusing over 400 tons of material for commercial and residential use.

- Deposit Beverage Container (DBC) Program
 - The State Department of Health provided annual funding under ASO Log 14-047 Modification 3 in the amount of \$228,751.20 to support local administration of the DBC program for the 2016 FY. The contract covered essential services, and paid for two County staff positions that ran the program, reimbursement of administrative oversight of the grant, and the contracting of two certified redemption centers in Koloa and Kekaha
 - The Recycling Specialist positions working on this program were paid through State DOH grant funds and implemented local program administrative and inspection tasks. These positions are being utilized to oversee all recycling projects that are related to DBC recycling, including school education, parks recycling, special event recycling, and general public education.
 - 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.
 - During this fiscal year, Reynolds Recycling, a private CRC operator, cut services throughout the state. On Kauaʻi Reynolds shut down their Lāwaʻi site, and cut services on Mondays in Līhuʻe and Kapahi. The reduction of service by Reynolds resulted in a loss to the public of a total of 5 operating days each week.
 - There are seven CRC operations throughout the island, of which, 5 are privately operated and 3 are contracted by the County. The County contracted CRC operations continue near the Kekaha Sugar Mill, at the Koloa Fire Station, and the Kauaʻi Resource Center.
 - Several CRC locations were impacted by unscheduled closures. These closures were due to multiple scale failures at the single facility which processes all HI-5 material redeemed throughout the County. Closures severely affected Kauai Community Recycling Services (KCRS) operations as they operate 3 mobile redemption centers as well as their main fixed location in Kapaa, where there is limited warehouse capacity. When the processor is unable to receive material, KCRS's warehouse

space fills quickly, forcing them to cease operations until the processor can begin receiving material again. The effect to the public of these equipment failures was the loss of 17 days of CRC operation at a total of 5 locations. These periods of closure were lengthened due to scale repair technicians needing to travel from Oahu.

- 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 \$312.50 per event. Nine events at these location were cancelled due to equipment problems addressed above.
- 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, 12 presentations were conducted, reaching a total of 633 attendees. HI5 program information distributed at the presentations.
- 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. 29 events were conducted with 383 recycling bins and 51 trash cans distributed for short term use. While 40 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 68% (FY 2015).
- Funding for FY 2017 has been increased for the program to \$246,639.30 from \$228,751 FY 2016 budget.

- 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 Līhu‘e Transfer Stations and at the Kapa‘a Baseyard during this FY. The events were held on October 17 & 18, 2015 and April 9 & 10, 2016.

Description	October, 2015	April 2016
Automotive Batteries, each	50	60
Lithium Batteries, 5 gal. drum	1	1
Household Batteries, 55 gal. drum	8	8
Oil Base Paints, & Ignitables, 55 gal. drum	22	18
Toxic Liquids, 55 gal drum	10	16
Corrosive Liquid, Acid, 55 gal. drum	4	3
Corrosive Liquid, Basic, 55 gal. drum	2	2
Oxidizer	25 lbs	60 lbs
Mercury, 5 gal. Drum	1	1
Fluorescent Lamps/Mixed Bulbs, each	197	298

- 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, 4,363 tons of metals was collected and processed including white goods, scrap metals and autos. The service is free to residents and businesses, with small fees charged for commercially generated items with Freon. 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: 1,115 autos processed, receipt of 1,311 loads of scrap metals, acceptance and processing of 7,795 large appliances without Freon and 5,696 large appliances containing Freon.
 - The position of Abandoned Vehicle Coordinator was transferred to the Kaua'i Police Department.

- Clean Up of Puhi Metals Site
 - Grove Farm and Resource Recovery Solutions commenced soil screening operations in July 2015 and completed screening in October 2015. Currently efforts are being made to clear the soil for use as daily cover for landfill operations. .

- Household Battery Recycling Program
 - 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 18, 2015 Enviro Services and Training Center, LLC collected batteries in conjunction with the County of Kaua'i's Household Hazardous Waste (HHW) collection events. Three (55-gallon) drums of Alkaline (dry cell) batteries; one (55-gallon) drum of NiCad batteries, estimated to be 27.5 gallons, and one (55-gallon) drum of Lithium batteries, estimated to be 27.5 gallons. Five drums total were removed by the contractor and transported to Burlington Environmental Inc., in Kent, Washington.
 - On April 10, 2016 Enviro Services and Training Center, LLC collected batteries in conjunction with the County of Kaua'i's HHW collection events. Three drums (55-gallon) of Alkaline (dry cell) batteries; one (55-gallon) drum of NiCad batteries (estimated to be 27.5 gallons); and one (55-gallon) drum of Lithium batteries (estimated to be 18.33 gallons) were removed by the contractor and transported to Total Reclaim, LLC in Seattle, Washington.
 - The next events are scheduled for October 1 and 2, 2016.

- To reduce cross contamination of the batteries a floor mat which points to and describes each barrel was placed 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.
- In the new fiscal year, magnets will be purchased so they can be placed directly on the bins and reused. The magnets will directly label each bin to help residents in sorting their batteries.
- 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 municipalities.
 - Contract 8886 operated by T&N Computer Recycling Services, LLC to provide eWaste recycling collection events 2nd Friday/Saturday of the

month at the County's Kaua'i Resource Center in Līhu'e at no charge to the County ended in May 2015

- By the end of the three year contract with TXN, Kaua'i residents and businesses were recycling about 240 tons of eWaste per year.
 - When the Contract ended, the State DOH permit to operate eWaste activities at the Kaua'i Resource Center has been closed
 - Resource Recovery Solutions has begun eWaste recycling at their 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.
 - 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.
 - The increase in availability of eWaste recycling on the island is a huge boon for the island adding convenience and availability while reducing the need for added County resources for oversight and tracking.
- Construction/Demolition Diversion and Recycling Ordinances:
 - on the groundwork has been 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 a two year period. We formed an Advisory Committee of stakeholders to review and discuss the ordinances, and provide input and recommendations for improvement
 - The proposed legislation is currently on hold until there are viable and reliable options for commercial recycling processing and hauling. This will depend on whether are successful in soliciting a vendor for the Kaua'i Resource Center operation for a medium term of 2 to 3 years, and in the long term, a Materials Recovery Facility (MRF) is built to streamline recycling processing and improve feasibility for private business recycling programs. .
 - 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 or green waste. The SWMD has developed and implemented policies and procedures for enforcement of this law. At this time, the focus is on educating haulers and generators about compliance instead of penalizing them.
 - During FY 2016, no loads were flagged as non-compliant. This is a decrease from the four non-compliant loads in FY 2015. There was an average of 600 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- Greenwaste collected and/or shredded at all Transfer Stations and the Landfill. In FY 2016, the incoming volume of greenwaste at the Hanalei RTS Operation continued at a pace level to FY 2015. Overall, other sites at Hanapepe, Līhu‘e and Kapa‘a continued greenwaste diversion during the reporting period. Also, all greenwaste operations are susceptible to weather, however operations at the Hanalei, Kapaa and Hanapepe RTSs shut down due to muddy conditions most often since drop off areas are unpaved.
- Scrap Tire Recycling-
 - The current Contractor, E-H International agreed to exercise their second and last option to extend the contract for a period of 12 months. There was a total of 14,220 tires 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 Līhu‘e . Under this contract, refuse centers are serviced twice per week; Kekaha LF is serviced one per week. A total of 2,715 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
 - Refrigerant Recycling is under a formal Contract for services to remove and recycle pressurized propane tanks from the transfer stations.
 - A total of 812 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 FY16We used carryover funds from prior years to run the program last year.

- 15,075 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. .
- 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
- Notice of Violation and Order for National Pollutant Discharge Elimination System
 - By state federal and state law, the County is required to have an National Polutant Discharge Elimination System (NPDES) permit for the Hanalei, Kapa'a, Līhu'e , and Hanapepe RTSs. Based on stormwater samples taken in FY 2015 to maintain compliance with respective NPDES permit, the Hawaii State Department of Health - Clean Water Branch (DOH-CWB) performed inspections at each RTS. Based on findings from the inspections, DOH-CWB issued a Notice of Violation and Order (NOVO) for polluted stormwater discharge violations at each RTS, which included a fine of \$138,600. Immediate steps were taken to mitigate specific conditions that led to the violations cited in the NOVO. Plans are to secure approval from DOH-CWB, for a process and timeline for install immediate and long term improvements at each RTS necessary to achieve compliance and avoid future penalties.

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

- Development of a Materials Recovery Facility (MRF)
 - Continued consultant contract 8993 with CalRecovery to develop a conceptual design, perform an Environmental Assessment (EA), and provide procurement assistance for the design and operation stages of the project.
 - CalRecovery performed an Environmental Assessment (EA) of the MRF. The Draft EA was transmitted to the State Office of Environmental Quality Control for posting on February 20, 2016. There was a public meeting to explain the project and accept comments on March 16, 2016. The comment period ended on April 7, 2016, and the Final EA and FONSI was submitted on May 18, 2016.
 - The Contract with CalRecovery is currently on hold while the Waste Diversion Facility procurement is underway.
- 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 wa 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 Maalo site was selected as the New Landfill site. Under Contract No. 8561, AECOM completed the updated New Landfill Siting Study, the Resource Recovery Park Feasibility Study, the Final Environmental Assessment/Environmental Impact Statement Preparation Notice (FEA/EISPN), and conducted several public meetings and one County Council briefing during the reporting period. The contract was amended to incorporate a Wildlife Hazard Assessment WHA to address potential impacts to the Līhu'e Airport. The required WHA and Wildlife Hazard Mitigation Plan will ensure that all safety measures are implemented in the design and operation of the New Landfill to address FAA guidelines for the safe operation of the Līhu'e 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.
- 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
- Līhu'e Refuse Transfer Station Fire Sprinkler Repair
- Hanalei Refuse Transfer Station New Chain Link Fencing and Gates

V. PROGRAM MEASURES - ACCOMPLISHMENTS / EVALUATION

The County of Kaua'i became the first County in the State to pass a Pay As You Throw variable rate for refuse fees, which are proven to significantly reduce waste destined for landfill. This program was launched this FY at the same time that we transitioned all customers to our automated refuse collection program. The Residential Refuse Collection Assessment program is functional and generating revenue of approximately \$3.4 million per year.

The recycling rate, also known as the waste diversion rate, has increased to 44%. In order to achieve our goal of 70% diversion, we need to implement curbside recycling, commercial recycling ordinances, and develop programs for food waste diversion. Food waste diversion has gained national attention, as 40% of food is wasted in the US. The Recycling Office has been

and expenditures. It also receives, evaluates and responds to correspondence, information requests and complaints; coordinates environmental monitoring and regulatory compliance activities; and administers planning, operations and financial activities of the Division. Engineering staff oversee and monitor the Division's Capital Improvement Program (CIP), review subdivision construction plans, land use permit applications and building permit plans.

a. 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.
- Provide for operation of the County's sewerage systems in full compliance with permit conditions and environmental requirements, including regulation of wastewater discharges into the County Systems; efficient disposal and reuse of the treated effluent; and proper management of sludge (biosolids).
- Perform reporting and communication with government agencies and the public to provide public information; communicate wastewater system needs and requirements; comply with the regulatory requirements; and to promote public awareness of the activities of the Division.

b. Program Highlights

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

The purpose of the system of rates and charges is to generate sufficient operational revenue for the County's wastewater utility functions to cover operational costs, with user fees that are consistent with the cost of providing wastewater service to each class of 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 15-16, progress was made on a new rate study.

- **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 provided 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 15/16 design activities included the initiation of new design projects for rehabilitation of portions of the sewage collection systems in 'Ele'e and Hanamā'ulu, and replacement of a flow meter at the Līhu'e WWTP. Design consultants were selected and contracts negotiated for these three projects.

In addition to new design projects, progress was made on four existing design projects, including: the Wailua WWTP Process, Electrical and Disinfection Improvements, Phase 2 project; and 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; and design for rehabilitation of Wailua Sewage Pump Station (SPS) No. 3. 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 15/16, two consultant studies were underway at the Wailua WWTP, which are requirements of the County's National Pollutant Discharge Elimination System (NPDES) permit. 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, with the final report to be submitted to DOH later this year. The conclusions and recommendations of these studies are anticipated to lead to future design and construction of capital improvements at the Wailua WWTP.

- **Construction of Capital Improvements.** During FY 15/16 the Division has had three major CIP projects under construction. These include: the \$4.2 million Eleele WWTP Process Equipment, Electrical System and Disinfection System Improvements project; the \$5 million Island-Wide Wastewater SCADA System project; and the second phase of Coco Palms Pump Station Odor Controls (\$115,000). All three of these projects are now at the 95% plus completion level. Construction work that will be performed during FY 16/17 includes well cleaning for two of the Līhu'e WWTP injection wells (\$185,000), and Value and Piping improvements at the Marriott SPS (\$160,000). Both of these projects were bid during FY 15/16, 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 Eleele WWTP Process Equipment, Electrical System and Disinfection System Improvements project, is funded by SRF funds. The Island-Wide SCADA project and the Coco Palms Pump Station Odor Control Project were funded with County Bond 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 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, crane and camera system, are highly useful to assist other agencies with their operational needs. During FY 14/15, the Division took delivery of a new 3,500 gallon sewage pumper truck, expanding our capability to provide septic system and related pumping and hauling services to County facilities that are not connected to County sewer systems.

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 37 full time positions, 29 positions are allocated directly to operation and maintenance crews.

Staffing levels for each WWTP has been standardized at 5 Treatment Plant Operators and Assistant Operators, most of whom are individually licensed as Treatment Plant Operators by the State of Hawai'i. The WWTP operators are also responsible for the operation of the pump

stations situated within the collection system served by the respective 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, management of bio-solids (sewage sludge) and monitoring effluent and receiving water quality. 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.

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.

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 15/16, 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 15/16 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 2014-2015 budget are summarized for the Division as a whole, including administration and operations.

OPERATIONAL COSTS

• Equivalent Personnel Positions	37
• Wages and Other Direct Costs	\$ 3,473,000
• Operations (Equipment, supplies, vehicles, etc.)	\$ 1,262,000
• Utilities (Electrical, Water, Gas, Telephone)	\$ 1,404,000
• Contracted Services (Repairs, Laboratory, etc.)	\$ 2,622,000
• Debt Service	\$ 1,484,000
PROGRAM TOTAL	\$10,245,000

OPERATIONAL REVENUES

Estimated FY 15/16 Revenues	\$ 9,200,000
-----------------------------	--------------

VI. STATISTICS

<u>Measure</u>	<u>Number</u>
• CIP Projects under construction	3
• Total number of sewer units	5,388
• Bills processed in FY 15/16	25,256
• Number of customers receiving sewer credits	579
• Spills reportable to DOH	6
• Wastewater processed (average - million gallons per day)	2.4
• DOH unacceptable inspections	0
• DOH acceptable inspection	1
• % of flow being reused (approximate)	65