

DEPARTMENT OF WATER

**ANNUAL REPORT
FISCAL YEAR 2010 – 2011**

I. MISSION STATEMENT

The following mission statement serves as the guiding principle for the Department of Water. The mission statement was developed during Fiscal Year 2000 as a collaborative effort by several employees from every division of the Department of Water.

Department of Water – Mission Statement

“Together, we provide safe, affordable and sufficient drinking water through wise management of our resources and with excellent customer service for the people of Kaua‘i.”

II. ORGANIZATION (County Charter, §17.01)

There shall be a Department of Water Supply consisting of a Board of Water Supply, a Manager and Chief Engineer and the necessary staff.

A. BOARD OF WATER SUPPLY: (County Charter, §17.02)

The Board of Water Supply shall consist of seven (7) members, four (4) of whom shall be appointed by the Mayor, with the approval of the Council; one (1) of whom shall be the State District Engineer of the Department of Transportation; and two (2) of whom shall be the County Engineer and the Planning Director.

<u>For FY 2011:</u>	<u>Term Expires</u>
Roy Oyama, Chairperson.....	12/31/12
Daryl Kaneshiro, Vice Chairperson.....	12/31/12
Randall Nishimura, Secretary.....	12/31/13
Clyde Nakaya, Member.....	12/31/13
Raymond McCormick (State District Engineer).....	(ex-officio)
Lawrence Dill (County Engineer).....	(ex-officio)
Michael Dahilig (Planning Director).....	(ex-officio)

1. Power & Duties of the Board (County Charter, §17.03)

The Board shall manage, control and operate the waterworks of the County and all property thereof, for the purpose of supplying water to the public and shall collect, receive, expend and account for all other moneys and property provided for the use or benefit of such waterworks.

- a. The Board shall maintain accounts to show its complete financial status and the results of management and operations.
- b. The Board may provide for a reserve fund, issue revenue bonds, provide for payment of bonds, expend bond funds and other funds, establish rates and charges,

acquire property, sue and be sued, and engage in and undertake all other activities as provided for in Chapter 145-A, Revised Laws of Hawai‘i 1955, and as may be hereafter provided for by law.

- c. The Board may make and, from time to time, alter, amend, and repeal rules and regulations relating to the management, control, operation, preservation and protection of the waterworks. Such rules and regulations shall have the force and effect of law. Penalties for the violation of any rule or regulation shall be set forth in the rules and Regulations.

B. STAFF: (County Charter, §17.04)

The Board shall appoint an engineer duly registered under Hawai‘i State laws pertaining to registration of engineers. He shall be known as the Manager and Chief Engineer, and shall be head of the Department. He shall have the powers and duties prescribed by the Board.

For FY 2010-2011, The Department had one hundred three (103) positions funded. There are five (5) divisions under the administration of the Manager and Chief Engineer.

1. Administration Division

The Department’s Manager and Chief Engineer is David Craddick, P.E. The administrative staff included fifteen (15) budgeted positions for FY 2010-2011. The administration division is responsible for the overall management of the Department and coordination between the Department and the public, including customers, governmental organizations, and public inquiries; personnel management; contract management; management of Board affairs; and providing service to, and oversight of the operation of each of the other four (4) divisions.

Program Description

Administration manages the activities of the Department and provides administrative support for the Divisions of the Department, including: personnel services, clerical support, legal support, community relations, information technology (IT), training and safety; intergovernmental coordination with Federal, State and County agencies; and coordination of long-range planning and departmental programs and activities among the divisions.

Program Objectives

- a. Provide support for the Board of Water Supply in its role to manage, control and operate the waterworks of the County, and all property thereof; adoption of the Department’s budget and establishment of water service rates and charges; and facilitate development and implementation of administrative rules and Board policies.
- b. Administer the Department’s staff and provide support for the operating divisions of the Department, through provision of clerical, personnel, legal and IT services; coordination of Department-wide programs; establishing goals, objectives and

- assignments for the operating divisions; and providing operational financial and procurement oversight for the Divisions.
- c. Provide leadership for the Department's community relations and intergovernmental coordination with other federal, state, and county agencies.
 - d. Coordinate Department-wide initiatives and programs, including long range planning, development of business and capital improvement program strategies, staff and organizational development, water system security and adoption and integration of new technologies.

Program Highlights

During Fiscal Year 2010-2011, the Department continued working on WP2020 projects. Public outreach to promote water conservation and environmental education, including sponsoring Project WET (Water Education for Teachers), and coordinating of the Make-A-Splash Festival (MAS). The Department is continuing its Geographic Information System (GIS) which shows assets in an electronic format tied to the county land map system.

The following summary is an overview of some of the key Department-wide accomplishments for FY2011

Board of Water Supply Items

- a. Approved in concept the reprioritization and updating of the Water Plan 2020 (WP2020) Project Priority List.
- b. Approved funding request in support of the Administration's training efforts and staff reorganization.
- c. The Department prepared for Board action, the annual budget as well as various contracts, agreements and recommendations to obtain necessary Board approval and policy direction for the proper management of the waterworks of the County.

Departmental Programs

- a. Tracking American Water Works Association (AWWA) Performance Indicators in areas of finance, customer service, operations and system replacement.
- b. Reduce operational costs by filling vacant positions and reducing overtime. This may be reducing due to furloughs in the past year and the added OT to cover needed functions.
- c. The Department continues to provide leadership in emergency preparedness through our participation in the County's Energy and Utility Council as assigned through the County's Emergency Operations Plan.

I.T. Accomplishments

The I.T. group, aside from maintaining databases for our core Financial (Great Plans) and Maintenance Management System (M-PET), is responsible for maintaining and updating Document Imaging System and Water Plan 2020 databases. The staff of two (2) supports both the entire Department's Business and SCADA Local Area Networks and website development.

Over thirty (30) computers and servers were replaced in FY 2010-2011.

In the area of hardware/software, email capabilities were upgraded to allow for a more mobile workforce, allowing for email access via phone and mobile/remote computers. Redundant firewalls were installed and configured, I preparation of increasing remote applications via the internet. In conjunction with installing redundant firewalls, a new point of access to the Honolulu Board of Water Supply was created (VPN), making for a quicker connection to CAS for our customer support staff. Our Sharepoint server application was upgraded and is mainly being used in support of new GIS Systems.

I.T. is part of an implementation team that started up G.I.S, (Geographical Information System) at the department. I.T. is responsible for creating and developing geodatabases for both Puhi-Līhu'e-Hanamaulu and Hanapēpē-'Ele'ele Water Systems during this fiscal year. In support of GIS, as-built drawings were scanned and indexed in Sharepoint, which provides easy retrieval by engineers, Operations and GIS users. Maps using GIS technology were developed or maintained in support of Water Plan 2020.

I.T. staff also provides G.I.S. training and Pictometry to some Engineering and Operations staff.

I.T. supports all divisions with consumption/customer information and data to be populated into our hydraulic water model. These reports also serve as a basis for determining water needs for water service inquiries.

Internet tools, such as Skype and GotoMeeting continue to be used to allow us to expand our capabilities I hiring new employees and inviting out of state consultants to be part of our procurement process.

Community Outreach

- a. Community outreach activities continued, including periodic radio and newspaper advertising to promote water conservation, and attendance at various school and community events to provide public education on water issues. In September, the Department sponsored the 7th Annual MAS Festival providing an event focused on water issues for hundreds of school children.
- b. The Department continues to support efforts of various environmental, educational and conservation organizations, such as the East and West Soil and Water conservation Districts and participation in the Annual Agriculture and Environmental Awareness Day. We continue to fund research on water resources in the Līhu'e District by the United States Geological Survey (USGS). This coming year, the Department provided funding for cooperative research by the University of Hawai'i to provide a 50 year rain fall projection for Kaua'i. The Department participates with the State and County Drought Councils, established to monitor and mitigate the effects of periodic droughts.
- c. The Kaua'i Watershed Alliance, an organization for mauka landowners dedicated to watershed conservation, completed preparation of the watershed management plan, and has hired The Nature Conservancy of Hawai'i (TNCH) as the coordinator for the alliance. The Department, although not a landowner, is a member of the

Alliance, and continues to support the conservation goals and efforts of this group in recognition of the critical importance of the watershed for maintenance and enhancement of the water resources of the island.

2. Water Resources & Planning Division

Program Description

The Water Resources and Planning Division are responsible for long-range planning and research and conducts analytical studies to meet the water needs of Kaua'i . Part of this planning includes interaction with our customers, developers and the County Planning Department for the review and planning of water systems of proposed developments to assure compatibility with the Department's water general plan. This Division also supports the Department's public education and water conservation efforts, and maintains the engineering records and mapping function of the Department. The Division also administers the Cross Connection and Backflow Control Programs. There were six (6) permanent positions budgeted for the Division for FY 2010-2011. In April 2011, the budgeted Civil Engineer II position was created.

Program Objectives

- a. Conduct the review and planning of water systems of proposed developments to assure compatibility with the Department's planning and service availability requirements including the review of subdivision, zoning, land use and general plan amendments, building permits, and water service requests.
- b. Conduct investigations to obtain and analyze data to determine existing and future water system capacity requirements including long-range planning and research and analysis of water consumption and maximum demand to meet the water needs of Kaua'i .
- c. Determine hydraulic criteria for reservoirs, pumping stations and water mains and evaluate and develop water network requirements.
- d. Conduct water resources investigations for the development of potential sources and conduct and/or administer studies relating to the protection of watersheds and water resources.
- e. Perform various long-range planning efforts for the Department, including an update of WP2020, and completion of the Department's Vulnerability Assessments and Emergency Response Plan Update.
- f. Maintain maps and records of all water facilities.
- g. Prevent contamination of its water system from other liquids, mixtures, gases or other substances through the implementation and enforcement of the Cross Connection and Backflow Prevention Program.

Program Highlights

- a. For FY 2010-2011, the Division reviewed and processed the following applications and requests for water service:

Subdivisions.....	22
Zoning, Use Permit, Land Use, GPA/Z.....	38
Additional Dwelling Clearance.....	26
Water Service Inquires.....	32
Water Meter Requests.....	221
Building Permits.....	745

- b. The Division has completed the review and approval of several water master plans for large development projects and/or subdivisions. One of the master plans included the Water Master Plan for the Līhu‘e-Hanamā‘ulu Water Mast Plan, Līhu‘e Land Co. that was completed in July, 2009.

The Division is currently reviewing the water master plans for the following: Kapa‘a Highlands Project, Waimea Plantation Development for Kikiaola Land Co., Workforce Housing Project for Kukui‘ula Development co., and ‘Ele‘ele Industrial park Subdivision and Residential Site for A & B Properties. The Division will also review the ongoing Extended Period Simulation Engineering Study for the Grove Farm Līhu‘e-Hanamā‘ulu Master Planned Community Development.

- c. The Division continues to utilize and amend WP2020, adopted in 2001, as our long-range facilities plan and financial plan as a basis for the Department’s CIP/CRP program. Since FY 2006-2007, the Division has participated in the development of the Strategic and Business Plan and in review and development of the WP2020 Sustainability Program. On March 24, 2011, the Division completed and the Board approved an update of the prioritized project listing for Phase I (FY 2009-2013) and for Phase 2 (FY 2014-FY 2018) and for Phase 3 (FY 2019-FY 2029) of WP 2020. The Division assisted the Administration division and provided updated WP2020 project costs to prepare and complete the Department’s \$60,000,000 bond float application with the County. The Division is assisting the Department in the preparation of a Needs Assessment Study and Facilities Reserve Charge Update report and the 2010 Kaua‘i Water Rate Study & Financial Planning Analysis.

The Division provided several members to the Department’s Core Team who prepared the 2007-2012 Strategic Plan and Annual Business Plan. A clearly stated vision and an outline for achieving it are highlights of the plan. The Division provided one member to co-champion the morale issue committee.

- d. The Division is currently assisting in the review and development of Department policies regarding meter restrictions, Facilities Reserve Charge (FRC) offsets, additional dwelling unit meter restriction, private water system developments, boundary adjustments, large lot subdivision exemption, leak rebate refund rule and private well policies.
- e. The Division continues to assist in the Department’s annual conservation programs. These included the Department’s public education campaign for water conservation.

- f. The Division assisted with the Department's Project WET program which included teacher education activities and the annual MAS Festival that invites students to learn about water through fun, hands-on activities.
- g. The Division assisted with new service applications and provided support to management, operations, fiscal and engineering divisions. During FY 2010-FY 2011, the division assisted the Fiscal Division with the Honolulu Board of Water Supply "Loihi" Customer Information System conversion for the Kaua'i DOW billing and backflow prevention programs. The Division provided staff and input to assist in the development of the Kaua'i DOW program.
- h. The Division remains responsible for the design and implementation of capital improvement source development, storage and transmission mainline projects as assigned by the manager.
- i. During FY 2009-2010, the annual backflow device test program continues to be refined and expanded. The Division continues to review and approve backflow device construction plans as well as maintain an inventory and status of each device. The Division supported the Administrative Division effort to revise the water rate threshold schedule and require the installation of backflow devices prior to qualifying for the Department Rules during June, 2010.
- j. The Division was assigned to administer the Department's security programs. Security programs include: security fence projects, security directives, vulnerability assessment & emergency response plans. Emergency exercises and training, etc. The Division completed and submitted the vulnerability assessment of the Department to EPA in June 2004. In Fiscal Year 2004-2005, the Division administered the update of the Department's Emergency Response Plan (ERP) that includes response to man-made malevolent act. The Department continues to subscribe to the Water Information Sharing and Analysis Center (Water ISAC) water security information and reporting information system.
- k. The Division participated in meetings with various drought and watershed groups and community planning committees. The Division continues to assist Kaua'i's local Drought Committee to develop County mitigation strategies and drought mitigation projects for Kaua'i. The Division supports the activities of the Kaua'i Watershed Alliance. The Division participated in the County's Kapa'a Development Plan Citizens Advisory Committee meetings.
- l. The Division coordinated and administered the USGS cooperative research program that includes ground water data collection and a USGS study on lowering ground water levels for the Lihu'e-Kapa'a areas.
- m. The Division represents the Department at the County's Affordable Housing Task Force (AHTF) meeting that are conducted on a monthly basis. The AHTF continues to facilitate the development and approval of affordable housing projects on the island. The AHTF also addresses the development of affordable County rental projects on six (6) State land parcels in Kekaha and Kapa'a.

3. ENGINEERING DIVISION

The Engineering Division is comprised of the Special Projects Division and the Design and Construction Division. The Special Project Division is responsible for the design, construction and inspection of water projects such as reservoirs, pumping facilities and pipelines by planning, contracting for design and conducting design review, preparing

construction bid documents and subsequent construction management, and inspecting water system improvements funded by the Department as outlined in Water Plan 2020. The Design and Construction Division is responsible for the design, review and construction inspection of water facilities by private parties for dedication to the Department. The Engineering division is also responsible for the administration of the Department's laboratory and performing the water quality monitoring for our water systems.

There are fourteen (14) permanent positions budgeted for the division for FY 2010-2011. Of the fourteen positions, the positions are filled with the Special Projects Division currently having four (4) staff members, Design and Construction having three (3), and the water quality section having three (3) members.

Program Description

The Special Projects Division administers the majority of the Capital Improvement Projects (CIP) and Capital Rehabilitation and Replacement Projects (CRP/CRPL) and provides engineering and inspectional services to the Operations Division during emergencies.

The Special Projects Division administers engineering consultant and construction contracts; evaluates the feasibility of pipeline alignments and sites for water facilities; prepares plans and specifications and bid documents for new water facilities and implements and inspects Department's standards and policies. The Division performs all necessary construction plan review and construction inspection for Water Plan 2020 projects.

The Design and Construction Division maintains the Water System Standards, provides service to private developers who design and build water system improvements that will be dedicated to the County by performing construction plan review, construction inspection and reviewing and approving post-construction documents for water facilities that are being dedicated to the County.

The Engineering Division coordinates and administers the activities and functions of the Microbiological laboratory. Their responsibility is to monitor water quality and see that it meets all the parameters required by EPA's Safe Drinking Water Act. This entails both chemical and microbial sampling/reporting. The Laboratory maintains State Certification for microbial analysis. Limited physical and chemical testing is performed by the Laboratory as well. The Division also receives, evaluates and responds to information and complaints on the water quality and prepares the data for the annual "Consumer Confidence Reports" (CCR) as required by the Safe Drinking Water Act amendments.

Program Objectives

The Engineering Division is committed to conduct its business and operations in a safe and efficient manner and to achieve the following objectives:

- a. Implementation of the capital programs identified in WP2020, including new facilities (well sources, storage tanks and waterline) through its CIP Program, and

- maintaining and upgrading existing water facilities through the CRP/CRPL Programs.
- b. Expansion of the water system by design of the Department's projects and plan review for integration of private development water system improvements into the Department's systems.
 - c. Providing the necessary construction, engineering and inspection services to ensure the construction of water facilities adheres to the standards and policies of the Department.
 - d. Performing water quality testing, as required under the Safe Drinking Water Act (SDWA) for all required microbiological and chemical constituents. As part of water quality assurance, the Division is also designated to receive, evaluate and respond to consumer complaints regarding water quality.

Program Highlights (Special Projects Division)

During FY 2010-2011, the Department's Special Projects Division has made substantial progress in utilizing the \$60 million Build America Bond (BAB) issuance of March 2010. In the process, the Special Projects Division completed construction on several projects and several other projects are nearing completion. Design has progressed or been initiated on several WP2020 projects to improve source, storage or transmission infrastructure in various parts of the island.

The major project accomplishments by the Special Projects Division on the Department's Water Plan 2020 Projects during the period of July 1, 2010 through June 30, 2011 include:

- a. The Department completed the design and construction of the following projects:
 - KW-14 – 12-inch Waterline along Kaumuali'i Highway and Waimea Canyon Drive, Waimea
 - KW-16 – Waimea Main Replacement, Waimea
 - KW-24 – Hardening of Generator Shelter for Kapilimao Valley Well, Kekaha
 - KW-25 – Kapilimao 0.5 Million Gallon Storage Tank, Kekaha
- b. The Special Projects Division completed the design of the following projects and will be bidding shortly or have been bid on and contracts awarded:
 - KW-20 – Waimea Well A Renovations, Waimea
 - HE-08 – Rehabilitate 'Ele'ele Twin 0.4 MG Steel Tanks, 'Ele'ele
 - PLH-25 – Eiwa, Umi, Akahi, Elua and Hardy Streets, Alohi Place, Uiki Place and Lalei Place, 8-inch Main Replacement, Līhu'e
 - PLH-30 – Nāwiliwili, Niumalu, and Kupolo Pipeline Replacements, Līhu'e
 - WK-36 – Pipeline Replacement along Wailua, 'Ohana, Anolani and Kuamoo Roads, Wailua
 - WK-12 – Waipouli Main Replacement (County Roads), Kapa'a
 - H-01, H-02, H-03 – Maka Ridge Renovations, Hanalei

- c. In the Kekaha District, the Department completed construction of the Kapilimao 0.5 MG Storage Tank and the Hardening of Generator Shelter for Kapilimao Valley Well. We are proceeding with water quality testing to use an existing (AMFAC) water source. Kekaha (Waipao) Well “BB” is under construction and should be completed by the end of the year.
- d. In the Waimea District, the Department completed the construction for the Installation of a 12-inch Waterline along Kaumuali‘i Highway and along Waimea Canyon Drive. The Waimea Main Replacement project construction was completed and the Waimea Well “A” Renovations is under construction.
- e. In the Hanapēpē District, the construction for the Rehabilitation of the ‘Ele‘ele Two (2) 0.4 MG Steel Tanks is in progress. The Department has also awarded a design contract for the new 6-inch main from Lele Road to Salt Pond.
- f. In the Kalāheo District, the Department is currently designing various water system improvements which include a new 0.5 MG Tank and Clear Well Storage System with Connecting Pipelines.
- g. In the Lāwa‘i-Oma‘o District, the Piwai 0.5 MG Tank is under construction.
- h. In the Līhu‘e District, the Department completed design of another Līhu‘e Main Replacement for the area north of the County Civic Center and is currently in the construction phase of the project.

The Department completed the design of the Nāwiliwili-Kupolo Main Replacements and has awarded the construction contract to the low bidder.

The Department is nearing completion of the Master Plan for the Līhu‘e Baseyard Improvements, Phase I. Design will commence once land transfer request for adjacent parcel is granted by County of Kaua‘i.

The Kokolau Tunnel improvements are being reevaluated and a treatment plant is planned for the new Grove Farm Tank site that is currently in design.

The Department issued a Request for Proposals (RFP) for the Kahili Horizontal Directional Drilled Well and will be recommending a selection to the Board shortly.

- i. In the Kapa‘a District, the design for various waterlines in the Kapaa Homesteads area has been completed and the construction contracts awarded. Construction is in progress for Kapa‘a Homesteads Pipeline Replacement (Phase II) and the Pipeline Replacement for Vivian Heights and Kanaele Road.

We completed the design for the Wailua Main Replacements (Wailua/Kuamoo Road area), and Waipouli Main Replacement (County Roads). Construction contracts were awarded but are on hold while we conduct archaeological work and environmental assessments.

The designs for the Wailua Houselots Pipeline Replacement and the Waipouli Main Replacement (Kūhi‘ō Highway) are progressing and should be completed shortly.

The design for the Waipouli/Hauiki Roads Main Replacement has resumed after revision to original scope of work.

Design and construction of the Kapahi 1.0 MG Tank has been stalled due to various issues but is progressing.

The Akulikuli Tunnels Rehabilitation project is being reevaluated and a treatment facility is planned at the new Kapahi 1.0 MG Tank site.

- j. In the Moloa‘a District, the design of the Koolau Pipeline Improvements and the Moloa‘a 0.10 MG Tank has been stalled due to issues with the acquisition of an easement from the landowner.
- k. In the Kīlauea District, the Department has selected a site for a 1.0 MG tank and well to supplement the East Kīlauea area. The project has been stalled due to land acquisition issues.
- l. In the ‘Anini District, the ‘Anini and Kalihiwai Road 6-inch Main Replacement design contract was awarded and is in progress.
- m. In the Hanalei District, the design of renovations to the Maka Ridge Well and Tank Pipeline and Access Road Renovations has been completed and will be advertised shortly.
- n. In the Wainiha-Hā‘ena District, the construction for the Wainiha Booster Pump and 0.10 MG Tank Renovation is being delayed. We are awaiting response from Public works with regards to drainage concerns before starting construction. The design for additional wells in the Hanalei and Wainiha areas are progressing.

In summary, the Special Projects Division is currently managing approximately thirty-three (33) design consultant contracts with a total combined value of approximately seven (7) million dollars. Another fifteen (15) projects are in varying stages of construction, with a total contract value of approximately thirty-six (36) million dollars. The design and construction projects managed by the Special Projects Division which includes planning, permitting, design review, construction management, and all associated contract management of the Department’s CIP, CRP and CRPL projects have a total value in excess of forty-three (43) million dollars as detailed in table 1 below.

TABLE 1: Design/Construction Totals for CIP, CRP and CRPL Projects

	DESIGN	CONSTRUCTION	TOTAL
CIP	\$3,449,269.80	\$11,127,000.00	\$14,576,269.80
CRP	\$1,154,821.10	\$ 7,851,865.94	\$9,006,687.04
CRPL	\$2,364,713.00	\$17,340,589.48	\$19,705,302.48
TOTAL	\$6,968,803.90	\$36,319,455.42	\$43,288,259.32

Program Highlights (Design and Construction Division)

The Design and Construction Division has managed the Kaumuali'i Highway Widening Project which includes a pipeline upgrade during the State DOT's project. The Division also manages the 12-inch waterline along Ulaula and Uliuli Road in 'Ele'ele and the new booster pump installation at the Nāwiliwili Tank for the fire flow protection which are Water Plan 2020 Projects. They have provided plan review or/and construction inspection to approximately one hundred thirty-six (136) private projects ranging in size from individual water service installations to very large residential subdivisions, including the construction of wells and storage tanks with a total value of approximately forty-two (42) million dollars.

Projects of note:

- Kōloa District: The Manuhonuhonu Tanks and connecting pipelines, Piwai Wells no. 2 & 3 and connecting pipeline, M1M4 subdivision.
- Līhu'e District: The Kohea Loa Subdivisions, Wailani Ahukini Makai Subdivision, Wailani Molokoa Subdivision, and the Waiola Subdivisions.
- Kawaihau District: The Kulana Subdivision.

4. FISCAL DIVISION

Program Description

The Fiscal Division is responsible for administering the fiscal programs of the Department. Under the direction of the Waterworks Controller, the division consists of an Accounting Section and a Customer Service/Billing Section. There were eighteen (18) permanent positions budgeted for the division for FY 2010-2011. Programs of the Division include:

- a. Administers the general and customer accounting systems including cash management, cost accounting, payroll, leave records, accounts payable, utility plan accounting, consumer billing and accounting and meter reading.
- b. Prepares financial and statistical reports; Conduct internal audits and financial and statistical studies of the Department for reports and rate making.
- c. Assists the Manager in the development of the annual budget.

Program Objectives

Waterworks Controller

- a. Administer the affairs of the Fiscal Division and all programs assigned to it.
- b. To preserve the financial integrity of the Department through internal control and annual financial audits.
- c. To generate a return of investments and to insure deposits with financial institutions are fully collateralized.
- d. Ensuring the availability of funds to meet cash flow requirements.

Accounting

- a. To provide accurate, complete and timely recording and reporting of the financial transactions and activities of the Department.
- b. To process the Department's payroll in a timely manner.
- c. To process accounts payable and issue payments in a timely and efficient manner.
- d. Accountability of the Utility Plant Assets and Property.

Customer Service

- a. To provide timely billing, collection, accounting and depositing of water bills and jobbing invoices.
- b. Process meter applications and new services.
- c. Service customers who inquire about billing, payment and collection matters.
- d. Maintain records of accounts receivable.

Program Highlights

- a. Water sales revenues for the Fiscal Year ended June 30, 2011 amounted to \$19,737million. The Department provided water service to approximately twenty on thousand one hundred forty eight (21,148) customers and the quantity of water sold totaled 4.263 billion gallons.
- b. Operating expenses and debt service amounted to \$18.347 million; \$5.740 million of which was for debt service, while cost of water purchased and electrical power purchased for pumping amounted to \$1.513 million and \$2.739 million respectively which represents the other major components of our total operating expenses.
- c. The Department has been working with the Honolulu Board of Water Supply towards the implementation of the LOIHI project; a major component of this project is the conversion of the bi-monthly billing into a monthly billing system. This conversion is expected to be implemented in mid December, 2011.
- d. A summary of changes in the physical assets of the Department is included in "APPENDIX A".

5. OPERATIONS DIVISION

Program Description

The Operations Division is responsible for maintaining and operating the Department's water distribution network, water storage facilities and water producing sources. This infrastructure provides potable water to approximately twenty-thousand (20,000) metered services in sufficient quantities, at adequate pressures, with minimum interruptions and of a quality safe and suitable for human consumption as mandated by the United States Environmental Protection Agency (USEPA) and the Safe Drinking Water Act (SDWA).

As water is an essential commodity, emergency repairs and trouble calls are provided round-the-clock on an as-needed basis. In order to accomplish its mission, the Operations Division maintains and stocks a complete inventory of materials and supplies for assurances that repairs are completed in a timely manner. This Division handles the smaller construction projects and participates in large pipeline installation projects. It also initiates field engineering to ensure efficient operations. Along with the responsibilities of providing potable water, it provides the Department's fleet

management functions and is responsible for the maintenance, repairs and replacement of vehicles and equipment.

Under the direction of the Chief of Operations, the Division consists of the Plant Operations Section and the Field Operations Section. There are fifty-one (51) permanent positions budgeted for the Division for FY 2010-2011.

Program Objectives

Our daily activities are centered along the following:

- a. Operating, monitoring and maintaining fifty-one (51) deep-well pumping stations, nineteen (19) booster pumping stations along with its associated electrical motor control centers and chlorination disinfection equipment, four (4) tunnel sources, sixty (60) storage tanks, and seventy-five (75) control valve stations.
- b. Maintaining, repairing, and replacing mechanical and electrical malfunctioning components, equipment and infrastructure to maintain water service.
- c. Maintaining and repairing the Department’s forty-six (46) vehicles, two (2) backhoes, four (4) skid steer loaders along with their various attachments, one (1) portable air compressor, eleven (11) trailers, seventeen (17) trailer-mounted generators ranging in sizes from seventy (70) KW to four hundred (400) KW, two (2) light towers, two (2) directional arrow boards and numerous motorized hand-operated construction equipment.
- d. Operating, monitoring and maintaining four hundred (400)+ miles of pipelines and approximately twenty-thousand (20,000) consumer water service connections and meters, four thousand (4,000)+ valves, twenty-four hundred (2400) hydrants and standpipes.
- e. Installing new service connections and meters including the replacement of defective meters and those in service for twenty (20) years. Providing temporary water services through hydrant meter connections for construction activities like dust control and landscaping.

Program Highlights

<u>Field Operations Section Statistics</u>	FY 2010-2011
Repair Mainline Leaks.....	116
Repair Service Lateral Leaks.....	122
Repair Leaks within Meter Boxes.....	27
Respond to Report of Leak, Customer Side.....	16
Install Service Lateral.....	17
Install New Meters.....	99
Replace Defective Meters.....	22
Replace Meter Box and Cover.....	17
Live Taps and Contractor Waterline Shutdowns.....	108
Once Call Center Tickets.....	103
Hydrant Preventative Maintenance.....	269
Hydrant Corrective Maintenance and Replacements.....	59
Temporary Hydrant Meter Installations.....	27

Besides our daily activities, some of the major occurrences and tasks performed by the Operations Division during FY 2010-2011 were:

- a. Operations Division reorganization was approved by Department of Personnel Service. Two (2) key positions were added with this reorganization effort: “Water Field Operations Superintendent” and “Water Plants Superintendent”. The Assistant Chief of Operations position was eliminated.
- b. The following vacant positions were filled in the last fiscal year: (1) Chief of Operations, (1) Water Plants Superintendent, (1) Water Service Supervisor, (2) Lead Pipefitter, (1) Pipefitter Helper, and (1) Operations Account Clerk.
- c. Operations Division survived and successfully operated water systems through approximately 24 furlough days.
- d. A total of five (5) Operations Division employees passed the Distribution System Operator (DSO) examinations.
- e. The Department of Health conducted Sanitary Surveys in our Hā‘ena-Wainiha Water System this past fiscal year.
- f. We worked with our CMMS contractor to begin electronic timesheets. It is the Department's goal to have all Operations Division employees submit electronic timesheets that will be seamlessly utilized by the Fiscal Division for labor distribution and payroll.
- g. Operations Division participated in the statewide Water Conservation/Leak Detection work group.
- h. Deep well pump replacements at Anahola Well 90-B, Kalāheo Well #1 and Kalāheo Well #2 were completed.
- i. Our Water Plant Operators are working at some of our deepwell sites to convert the existing gas chlorination disinfection systems to liquid sodium hypochlorite disinfection systems. This fiscal year, they converted four (4) sites.
- j. Operations Division crews worked with Special Projects team to bring online three (3) new water storage tanks: Makaleha 0.5 MG, Stable 1.0 MG and Kapilimao 0.5 MG.
- k. Our crews completed the installation of a variable-frequency-drive (VFD) booster pump and the abandonment of the Kalāheo backwash tank.
- l. Several remote access roads damaged during storms and heavy rains were repaired by Operations Division crews.
- m. Operations Division is teaming up with Special Projects Division on the rehabilitation of the twin ‘Ele‘ele Steel Tanks project.
- n. Maintenance crews constructed an addition to the Nonou Well “B” control building. The new addition will be used to house a new sodium hypochlorite disinfection system for the well water.
- o. Completed the Kiowea Road (Kekaha) project to replace approximately 720 feet of 2-inch diameter galvanized steel pipe (circa 1924) with new 6-inch diameter Ductile Iron pipeline and a new hydrant.
- p. Several segments of old and troublesome pipelines in Kōloa were replaced.
- q. A project on Kūhi‘ō Highway in Anahola to replace approximately 200 feet of old and leaky galvanized steel pipe with new 2-inch diameter PVC pipe was completed. Five (5) service laterals were also replaced and connected to the new pipeline.

- r. A project to abandon a 4-inch diameter GS pipeline (1924) on Kūhi'ō Highway and Malolo Road in Hanalei was completed. Several service laterals were transferred from the 4-inch pipeline to a parallel 8-inch diameter AC pipeline.
- s. Operations Division and Microlab staff responded to reports of dirty water on Waiakalua Road in Kilauea. The source of dirty water was identified as a cross-connection of potable water line and a non-potable water line within the private property. The customers' meter was immediately removed and a large-scale water system flush was conducted.
- t. Two (2) new vehicles were purchased and received; a 26,000 lb GVWR dump truck and a hybrid SUV. One (1) new compact excavator with trailer was also purchased.
- u. Our maintenance crews installed and overhauled two (2) storage containers for use in the Department's baseyard for temporary storage until a new building is designed and constructed.
- v. Rehabilitation of a water buffalo was completed. We now have three (3) mobile 400 gallon buffaloes available to deliver potable water. We acquired seven (7) buffaloes from the US Army several years ago and have been rehabilitating as time allows.

APPENDIX A
Department of Water
County of Kaua'i

General Plant Additions
For the Period of July 1, 2010, through June 30, 2011

<u>Date</u>	<u>PO</u>	<u>Vendor</u>	<u>Quantity</u>	<u>Description</u>	<u>Cost</u>
-	-				
<u>Account 391.4 Microlab Furniture and Equipment</u>					
-	-				
11/30/2010	PO-36339	Rutan Refrigeration Inc.	1	#39140076-1, Compressor and Miscellaneous Materials	1,262.77
					1,262.77
<u>Account 391.5 Computer Hardware and Software</u>					
5/31/2011	PO-37249	ESRI, Inc.	1	#39150243-1, Trimble GEOXH w/ Floodlight/Arcpad	9,062.44
5/31/2011	PO-37249	ESRI, Inc.	1	#39150244-1, Trimble GEOXH w/ Floodlight/Arcpad	9,062.44
7/31/2010	PO-35764	HP Direct	1	#39150245-1, HP Designjet T1200ps 44-in Printer, SER #: CN0562H04M	6,739.20
7/31/2010	PO-35764	HP Direct	1	#39150246-1, HP 3y Nbd Designjet T1200 44-in HW S	1,080.56
7/31/2010	PO-35864	Technology Integration Group	1	#39150247-1, 16Port 1U RM KVM Switch 17 in. LCD Console Keyboard Touchpad (MPN: B020-016-17) w/ USB Cable Kit	1,933.32
6/30/2011	PO-37236	Arc - Pacific	1	#39150248-1, OCE Plotwave 300 2-Roll PS w/ Scan	19,965.25
					47,843.21
<u>Account 392 Transportation Equipment</u>					
7/1/2010		Public Works - Wastewater Management Division	1	#3920075-1, CK1476,1995 International 2654 Vactor Truck, VIN: 1HTGMADR3SH660560 (Mileage: 57,170)	183,736.06
7/31/2010	Con 509	Cummins West, Inc. dba International Trucks of HI	1	#3920076-1, CK2128, 2011 International 4400 Dump, VIN: 1HTMKAZM8BH338342	96,983.12
9/30/2010		Public Works - Automotive Division	1	#3920077-1, CK1380, 1993 International Flatbed w/ Ton Manitex Crane, VIN: 1HTSDPNN6PH483308 (Mileage: 31,639)	48,870.00
2/28/2011	Con 527	Servco Pacific, Inc.	1	#3920078-1, CK2134, 2010 Toyota Highlander Hybrid 4X4 MPVH, VIN: JTEBW3EH6A2046957	40,004.48
					369,593.66

<u>Date</u>	<u>PO</u>	<u>Vendor</u>	<u>Quantity</u>	<u>Description</u>	<u>Cost</u>
<u>Account 394 Tools, Shop and Garage Equipment</u>					
2/28/2011	PO-36567	Miller Industries, Inc.	1	#3940199-1, Rotary FC5710 Rolling Air Jack 15,000 lbs. Capacity, Serial No. #JBH11A0038	6,661.42
2/28/2011	PO-36803	USA Blue Book	1	#3940200-1, Fisher M97 (11' Coil) & M66 Carrying Case	1,104.93
7/31/2010	PO-35242	Allied Machinery Corp.	1	#3960030-1, GEA 108018, 66" 4 in 1 Bucket	3,834.35
					11,600.70
Total General Plant Additions, FY 2010 - 2011					430,300.34

**General Plant Assets Retired
For the Period of July 1, 2010 through June 30, 2011**

<u>Quantity</u>	<u>Description</u>	<u>Original Cost</u>
<u>Account 391.1 Engineering Furniture and Equipment</u>		
1	(#39110024-1) HP 48SX Scientific Calculator	260.50
		260.50
<u>Account 391.5 Computer Hardware and Software</u>		
1	(#39150218-2) Toshiba Satellite, Pro 460CDX 32 MB	3,054.59
		3,054.59
<u>Account 394 Tools, Shop and Garage Equipment</u>		
1	(#3940084-3) Gas Detector	2,195.00
		2,195.00
Total General Plant Retirements, FY 2010 - 2011		5,510.09

Utility Plant Additions
For the Period of July 1, 2010 through June 30, 2011

<u>Work Order Number/Job Number</u>	<u>Quantity</u>	<u>Description</u>	<u>Cost</u>
<u>Account 325 Electric Pumping Equipment</u>			
Various Work Orders	ls	Various Assets (Main Breaker and Electric Service Equipment)	15,627.45
Job EA 196 Anahola Well #90-B	ls	Pump Assembly	84,542.93
C101454 Kalaheo Well 1 Repair	ls	Pump Assembly	184,898.48
			<hr/> 285,068.86
<u>Account 343 Transmission and Distribution Mains</u>			
Job 05-01-KW-16, Waimea Main Replacement	24 ea.	ARV, 1"	70,393.84
Job 02-03 12" Water Line	14 ea.	ARV, 1"	68,614.57
Various Work Orders	ea.	Backfill eroded pipeline sections & Backflow Preventer	22,834.19
Job Kukuiula Dev't. Co. - Major Project Road Phase I	4	Blowoff Line, 6"	27,599.67
Various Jobs	11 ea.	Cleanout, Various Sizes	24,342.61
Job 05-01-KW-16, Waimea Main Replacement	203 ea.	Concrete jacket, Various Sizes	43,037.24
Various Jobs and Work Orders	53 lf	Copper, Various Sizes	55,782.46
Various Jobs and Work Orders	16,972 ea.	DI, Various Sizes	3,450,418.63
Job 05-01-KW-16, Waimea Main Replacement	2 ea.	Flange joint restrainer, DI, 8"	370.83
Job 05-01-KW-16 & Job 02-03	134 ea.	Gate Valve, Various Sizes	320,910.98
Job 05-01-KW-16, Waimea Main Replacement	381 ea.	Mechanical joint restrainer, Various	32,910.42
C091385 Repair damaged 2" PVC pipe	20 lf	PVC, 2"	2,137.63
Job 05-01-KW-16, Waimea Main Replacement	7,997 lf	PVC, Various Sizes	2,430,021.93
Job 05-01-KW-16, Waimea Main Replacement	62 ea.	Valve Box for Gate Valve	17,307.15
			<hr/> 6,566,682.15

<u>Work Order Number/Job Number</u>	<u>Quantity</u>	<u>Description</u>	<u>Cost</u>
<u>Account 345 Services</u>			
Job Kauai Community FCU	1 ea.	Abandon Existing Water Service	1,841.64
Various Jobs and Work Orders	261 lf	Copper, 1"	257,041.20
Various Work Orders	205 lf	Copper, 1", Additional Cost	17,661.26
Various Jobs and Work Orders	167 lf	Copper, Various Sizes	476,916.76
Job 05-01-KW-16 & Job 02-03	142 ea.	Meter Box, Type B	22,966.26
Job 05-01-KW-16 & Job 02-03	12 ea.	Meter Box, Type X	3,104.77
C080435 Replace 1.25" Galv. M/L & S/L yo PVC & Copper	200 lf	PVC, 2"	2,092.10
			<u>781,623.99</u>
<u>Account 346 Meters</u>			
Various Work Orders	2 ea.	Turbine, Various Sizes	3,347.43
Various Jobs and Work Orders	267 ea.	Meters, Various Sizes	108,128.38
			<u>111,475.81</u>
<u>Account 348 Hydrants</u>			
Various Jobs and Work Orders	115 ea.	(1) 4.5" x (1) 2.5"	335,712.16
Job Calipjo, Green, Kyno Fire Service	1 ea.	Copper, 2", Lateral	23,554.47
Various Jobs	3 ea.	DI, Lateral, Various Sizes	38,339.30
Job 05-01-KW-16, Waimea Main Replacement	1 ea.	FH Guard Bollard	676.32
Various Jobs	10 ea.	Fire Hydrant Assembly	67,734.45
Various Jobs	31 ea.	Gate Valve, Various Sizes	169,345.87
Job 05-01-KW-16, Waimea Main Replacement	3 ea.	Meter Box, Type III	1,247.64
			<u>636,610.21</u>
		Total Utility Plant Additions FY 2010 - 2011	<u>8,381,461.02</u>

Utility Plant Retired
For the Period of July 1, 2010 through June 30, 2011

<u>Work Order Number/Job Number</u>	<u>Quantity</u>	<u>Description</u>	<u>Cost</u>
<u>Account 332 Water Treatment Equipment</u>			
Various Work Orders	8 ea.	Pumps, Various	4,496.93
			<u>4,496.93</u>
<u>Account 343 Transmission and Distribution Mains</u>			
Job 05-07 & C101770	10 ea.	ARV, 1"	9,428.36
Job 05-07 Main Replacement	2 ea.	Gate Valve	1,846.79
Job 05-07 Main Replacement	1,500 lf	Galvanized Steel Pipes	4,627.49
Job 10-02	1 ea.	Abandon 6" CI Pipeline	156.29
Job 10-02	918 ea.	16' Transite	14,181.90
Job 05-07 Main Replacement	4,300 lf	PVC, Various Sizes	23,850.71
			<u>54,091.54</u>
<u>Account 345 Services</u>			
Various Jobs and Work Orders	332 ea.	PVC, Various Sizes	48,337.10
Various Jobs and Work Orders	40 ea.	Copper, Various Sizes	18,318.46
Job 10-02	1 ea.	Fire Line & Vault	1,889.34
Kakela Makai Subdivision	9 ea.	DI, 8"	53,838.27
			<u>122,383.17</u>
<u>Account 346 Meters</u>			
Various Jobs and Work Orders	212 ea.	Meters, Various Sizes	24,102.56
			<u>24,102.56</u>
<u>Account 348 Hydrants</u>			
Various Work Orders and jobs	65 ea.	Various sizes	10,069.65
			<u>10,069.65</u>
		Total Utility Plant Retirements FY 2010 - 2011	<u><u>215,143.85</u></u>