

**DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI**

**Annual Report for
Fiscal Year 2017**



EXHIBIT M-1

Front cover: Mahinahina Water Treatment Plant, Direct Filtration. Mixed filter media. Anthracite coal and sand. Production: 2 million gallons per day.

**DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI**

Annual Report for Fiscal Year 2017

ANNUAL REPORT

**Fiscal Year Ending June 30, 2017
Department of Water Supply, County of Maui**

**Alan M. Arakawa, Mayor
County of Maui**

**Council Chair and
Members of the Maui County Council**

Mike White, Council Chair

Robert Carroll, Council Vice-Chair

Alika Atay, Councilmember

Elle Cochran, Councilmember

Stacy Crivello, Councilmember

Don S. Guzman, Councilmember

G. Riki Hokama, Councilmember

Kelly T. King, Councilmember

Yuki Lei Sugimura, Councilmember

Wailuku, Maui, Hawaii

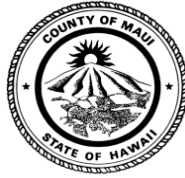
**DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI**

ANNUAL REPORT FOR FISCAL YEAR 2017

Table of Contents

Letter from the Deputy Director of Water Supply	6
Overview	7
Director's Reports	
Engineering	9
Field Operations	12
Plant Operations	20
Water Treatment Plants	25
Water Resources & Planning	30
Fiscal/Customer Service	38
Administration	40
Human Resources	40
Auditor's Report and Financial Statements	44
Schedules and Statistics	90
Five-Year Summary	97

ALAN M. ARAKAWA
Mayor



DAVID TAYLOR, P.E.
Director

GLADYS C. BAISA
Deputy Director

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
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WAILUKU, MAUI, HAWAII 96793-2155
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Honorable Alan M. Arakawa
Mayor, County of Maui
and Chairperson and Members of the
Maui County Council
Wailuku, HI 96793

Ladies and Gentlemen:

I am proud to present the annual report for Fiscal Year 2017. This report reflects the hard work of the Department of Water Supply's 194 employees on Maui and Molokai to produce high quality water for our community.

This report includes the highlights and accomplishments of the Department of Water Supply (DWS), construction projects completed and in progress, reports on operations, finances, planning, and the Independent Auditor's Report. I hope you will find this information helpful in learning about your drinking water.

The DWS operates under the authority of the Mayor, and the Board of Water Supply serves as an advisor to the Director of Water Supply, the Mayor, and the County Council in all matters concerning the county's water system. There are nine BWS members appointed by the Mayor and approved by the County Council and two ex-officio non-voting members – the Director of Planning and Director of Public Works.

I am most proud of the efforts of our staff to restore water service after the heavy storm of September 2016, to adjust our Upcountry water production after the shutdown of HC&S and the Wailoa Ditch which supplies the Kamole Water Treatment Plant, the new Wailuku Well 2 for the Central Water System, and the 51 applicants who were offered water service Upcountry. We also provided grants for water resources protection, assisted in the county's MAPPS permitting database migration project, and made significant progress on the Water Use and Development Plans.

I would like to express my appreciation to the members of the Board of Water Supply; to Governor Ige and the State Legislators for their support of our water programs; to Mayor Arakawa and the Maui County Council; to the county, state and federal agencies for their cooperation and continued support throughout the year, and to everyone who contributes to our success.

Sincerely,

A handwritten signature in cursive script that reads "Gladys C. Baisa".

GLADYS C. BAISA
Deputy Director of Water Supply

By Water All Things Find Life

OVERVIEW

The Mission of the County of Maui Department of Water Supply (DWS) is to:

Provide Clean Water Efficiently.

The DWS is an agency of the County of Maui and is responsible for providing clean, safe drinking water to customers on the islands of Maui and Molokai. The DWS provided 11.62 billion gallons of water in fiscal year (FY) 2017 to 36,365 water meters. The DWS operates with its own revenues which are kept in a separate fund and are such to make the DWS self-supporting in compliance with the County Charter.

The DWS operates under the authority of the Mayor. The Board of Water Supply acts as an advisor to the Director, the Mayor, and the County Council in all matters concerning the County's water system. Nine of the eleven Board Members are appointed by the Mayor and approved by the County Council; and other two ex-officio non-voting members are the Director of Planning and the Director of Public Works.

The DWS is subject to the rules and regulations of the U.S. Environmental Protection Agency's Safe Drinking Water Act, which is enforced by the Hawaii State Department of Health Safe Drinking Water Branch. The DWS Laboratory tested thousands of water samples over the past year to ensure that the water provided is of the best possible quality. The Water Treatment Facility operators also took thousands of samples to ensure high quality water from the surface water treatment plants (WTP).

The DWS operates six surface water treatment facilities: three in Upcountry, two in West Maui, and one in Wailuku. These supplement the 19 groundwater sources in the Central Maui water system; three wells in Upcountry; four wells in the Hana area; nine wells in West Maui; and five groundwater sources on Molokai.

Financial Overview of Program Expenditures:

Below is a financial overview of program expenditures:

<u>Program:</u>	<u>FY2017 Budgeted</u>	<u>FY2017 Actual</u>	<u>FY2016 Actual</u>
Water Administration Program	13,137,600	10,722,984	11,837,643
Department-wide Expenses	20,131,157	19,965,159	20,262,415
Water Operations Program	\$33,398,746	\$24,747,166	\$24,965,295

The Water Administration Program and Department-wide Expenses spent 8% less than the budgeted \$33.3 million in FY2017. Savings are primarily due to capitalization of engineering

salaries and wages attributable to capital improvement projects, debt service decrease and refund for mainline.

The Water Operations Program expended 26% less than the budgeted \$33.4 million in FY2017. Nearly \$5.6 million of the variance is due to savings in electricity expense. The Department of Water Supply advocates contingency planning as a late-year rate change may not generate sufficient revenue to offset a spike in either electricity usage and/or electric rates.

DIRECTOR'S REPORTS

ENGINEERING DIVISION

The Engineering Division consists of the Capital Improvement Program (CIP) section, the Building Permits section, the Central District section, and the East District section.

Additional responsibilities of the Engineering Division:

- Review applications for subdivisions, developments, building permits, and water service requests to assure adequate water supply for the project.
- Implement and enforce the applicable sections of Maui County Code and the Water System Standards.
- Analyze existing water system for current and future water demand.
- Plan for the department's long-term capital project needs.
- Manage capital improvement projects.
- Secure land rights for existing and future water system improvements.
- Prepare construction documents for water system improvements.
- Provide inspection for new water system improvements.
- Provide engineering support to other divisions.
- Review all amendments to the Water System Standards.
- Prepare and maintain the fire protection maps and other maps for the department.

ACTIVITIES BY PROGRAM SECTION

Capital Improvement Program:

The CIP section plans, designs, oversees consultant and construction contracts, and inspects for water system improvements in accordance with the Water System Standards. The CIP section supports the goal of the Maui Island Plan for water infrastructure with an environmentally sustainable, reliable, safe, and efficient water system. This is accomplished through the development of new water sources to meet the growing needs of our community and through replacement or upgrade of our existing facilities to address our aging water system.

There were 15 design contracts in progress during FY2017. The following is a list of new design contracts issued in FY2017:

- Baldwin Avenue Waterline Replacement
- Hobron Avenue Waterline Replacement
- Opaepilau Water System Analysis
- Mahinahina Water Treatment Plant Motor Control Center Upgrade
- West Maui Well #2 Development
- Omaopio Tank Booster Pump Replacement

There were 20 construction contracts in progress during FY2017. The following is a list of new construction contracts issued in FY2017:

- Pookela Well “B” Exploratory Backup
- Holokai Road Waterline Upgrade
- Kamole Water Treatment Plant Chlorine Scrubber and Containment
- Lower Kula Transmission Line Tree Removal
- NASKA Baseyard Roof Replacement

Of the 20 construction contracts in progress, the following projects were completed and put into service in FY2017:

- Emergency Generator at Hamoa Wells (July 2016)
- Iao Intake Waterline Replacement (October 2016)
- Haliimaile Tank Replacement (October 2016)
- Wakiu Well "C" (December 2016)
- Emergency Generator at Ualapue Well (December 2016)
- Holokai Road Waterline Upgrade (March 2017)
- Ulupalakua Tank Replacement (April 2017)
- Hamakuapoko Tank and Booster Pumps (April 2017)
- Emergency Generator at Napili Well “C” (May 2017)
- Maui Meadows #17 Booster Pumps (May 2017)
- Maui Meadows #18 booster Pumps (June 2017)
- Kualapu`u Well Motor Control Center Upgrades (June 2017)

Responding to Hawaii One Call requests is another responsibility of the Engineering Division staff. Upon receipt of a request, the known location of subsurface waterlines in the area of excavation is marked to provide advance warning to the excavator. During FY2017, a total of 1,156 ticket requests were received, of which there were 190 in West Maui, 265 in Upcountry Maui, 508 in Central Maui, 152 in Kihei/Makena, 19 in Hana, and 22 on Molokai.

Maintenance of the Department’s Fire Protection mapping and GIS mapping is utilized for various functions in the Department, including the processing of building permits, water service applications, subdivision applications, design of capital improvement projects, and maintenance and operation of the water system. In FY2017, a total of 168 construction projects, either publicly or privately funded, were incorporated into the Department’s water system.

Building Permits:

The Building Permits section reviews, processes, and inspects building permit applications in conformance with the rules of the Department and the applicable sections of the Maui County Code. During FY2017, 925 building permits were processed, of which 743 were approved.

Central District and East District:

The Central District and the East District review, process, and inspect subdivisions, developments, and water service requests in accordance with the rules of the Department and the applicable provisions within the Maui County Code.

During FY2017, the districts received 23 new subdivision applications, issued preliminary subdivision approval on 20 applications, and issued final subdivision approval on 44 applications.

The Central District received a new ground water source, Wailuku Well 2, in May 2017. This well is capable of producing 1,400 gallons per minute and is anticipated to be a dependable source of potable water.

From the November 3, 2016 Upcountry District list, 23 properties were offered water meters pending water system improvements, if applicable. Pursuant to Ordinance No. 4255, 28 properties, who declined water service after January 1, 2013, were re-offered water service. Therefore, a total of 51 applicants were offered water service during FY2017.

FIELD OPERATIONS DIVISION

The Field Operations Division is responsible for approximately 780 miles of water transmission and distribution lines, servicing 34,552 consumers throughout Maui and 1,659 consumers throughout Molokai. Field Operations Division's responsibilities cover a wide scope of work on a 24/7 basis, while ensuring compliance with Hawaii State Department of Health regulations. The Division's responsibilities include responding to consumer complaints and concerns; installing, maintaining, repairing, and replacing pipelines, laterals and services; constructing, maintaining, and replacing water storage tanks; flushing waterlines; and responding to emergency hurricane and tsunami events. This Division also provides support to other divisions within the DWS.

Field Operations has a total of 83 positions including Chief of Operations, Supervisors, Pipefitters, Pipefitter Helpers, Valve Repair Pipefitters, Construction Equipment Mechanics, Equipment Operators, Carpenters, Welder, Water Meter Mechanics, Water Meter Mechanic Helpers, Laborers, Dispatchers and clerical staff. There are four satellite baseyards – Hana, Lahaina, Makawao (Upcountry), and Molokai. The main baseyard and dispatch office are located in Kahului.

OVERVIEW OF SECTIONS

Central Maintenance:

The biggest and busiest district is Central Maintenance, which includes Kihei, Wailea, Wailuku, Waihee/Waiehu and Kahului. Central maintenance personnel includes a Water Service Supervisor II, Pipefitters I/II, Pipefitter Helpers and Laborers. In FY2017 they responded to 1,005 consumer complaints during regular working hours and 103 after-hour calls. The Central crew made system adjustments throughout the year in the Kihei, Wailea, Wailuku, Waihee/Waiehu and Kahului areas. They assisted the Construction section, Hana, Lahaina and Upcountry maintenance sections when needed.

Other daily projects included the service replacement program, main line valve replacement, trench/road patching, SCADA alerts, patching sidewalks, conducting inspections for agriculture water rate requests, complying with Department of Health (DOH) Sanitary Survey requirements, and traffic control for projects. Some of the services or duties that the Central crew conducted included leak detection, hurricane and tsunami preparedness, valve cleaning, and requests for One Call Utility locations. Training classes were conducted for Distribution System Operator (DSO) certification, drug testing, Hawaii Rural Water Association classes and DOT testing.

The Central Maintenance crew replaced the following;

- 231' of ¾" copper pipe
- 1,445' of 1" copper or drisco pipe
- 805' of 1 ¼" of copper pipe
- 93' of 1 ½" of copper pipe
- 940' of 2" of copper pipe

- 10' of 2 ½" of copper pipe
- 19' of 4" of ductile iron (DI) pipe
- 46' of 6" of DI pipe
- 18' of 8" of DI pipe
- 8' of 12" of DI pipe

The Crew responded to 100 shut and open meter requests from consumers, 47 consumer complaints of dirty water or no water, and 51 high or low pressure complaints. Central personnel participated in 37 tie-ins, bores, taps and other contractor-related projects, many of which were after hours and night work which resulted in additional overtime expense. The crew also replaced or repaired 43 relief valves and/or gate valves/stopcocks, replaced or repaired approximately 314 meters, repaired approximately 113 service laterals, and repaired or replaced 41 hydrants, and responded to 36 field activity requests.

The Laborers in the central crew flushed the Upcountry water system daily for water quality purposes (a total of 6,154 hydrants flushed and 8,780,500 gallons of water) and performed tank and grounds maintenance in the Central, Lahaina, and Upcountry Districts. The procedures for both the hurricane and tsunami emergency plans were updated for the Central district which covers all areas from Makena to Waihee to Sprecklesville, and all of the Kahului and Wailuku areas.

Upcountry Maintenance:

The Upcountry district is the second largest water system, and the maintenance crew consists of Water Service Supervisor II, Pipefitters I/II and Pipefitter Helpers. They responded to 661 consumer complaints during regular working hours and 75 complaints after hours throughout the FY2017. The crew completed 30 job orders which consisted of shutting down and opening of valves for tie-ins, installing corporation taps and bores for contractors. They also completed 13 field activities which consisted of relocating meters, raising meters, closing and reopening meters, installing service laterals and meters.

There were small and large main lines repaired and replaced ranging from 2" to 12". Approximately 52 lines were repaired and 37 replaced totaling 956'8". A total of 300' of 4" AC pipe was eliminated off the system. Maintenance personnel repaired service laterals that ranged from 1" to 1 ½". There were 101 services that were repaired and approximately 92 replaced, totaling 2,151'. A total of 47 hydrants or standpipes were either repaired or replaced in the Upcountry District. The crew repaired 80 meter leaks, responded to 87 leaks that were determined to be private leaks, 29 high/low psi complaints, and 33 dirty or no water complaints.

They assisted 49 consumers to shut down and reopen services so consumers could do repairs on their side.

The Upcountry Maintenance crew completed 31 inspections for agricultural water rates. Proactively the crew also exercised and located valves in preparation for hurricane and tsunami events. Hawaii One Call was notified for all utility locations before excavating. The crew also participated in Sanitary Survey work.

Lahaina Maintenance:

The Lahaina maintenance crew is made up of a Water Service Supervisor II, Pipefitters I/II and a Pipefitter Helper. They responded to 240 consumer complaints during regular working hours and 11 after-hours calls outs. The crew completed 352 field activities for the Fiscal Office, including investigating illegal hook ups, picking up closing meter readings, verifying meter and transponder numbers, hanging tags, locking and unlocking meters, unlocking meter covers and working with meter mechanics to change the internal parts of the larger compound and turbine meters.

There were 16 main line repairs done ranging from 2" to 12" totaling up to 15' of pipe replaced. The crew changed 5 polyethylene (PE) services to copper, a total of 140' of pipe. A total of 17 service repairs were done on water services ranging from ¾" to 2 ½". The crew maintained and serviced 75 hydrants. They changed 2 galvanized iron services to copper a total of 145' of pipe. The crew completed 3 bores and taps for contractors. Lahaina personnel collected water payments and also confirmed meter readings and final readings for fifth floor. The crew adjusted the Wahikuli system as needed. Personnel also completed concrete repairs on driveways, sidewalks and donuts for valves.

The crew assisted contractors on tie-ins by shutting water off. When projects were completed, the crew opened and flushed the lines till water was clean and took chlorine readings. They repaired leaking meters and services. The crew also changed 5/8" through 6" meters. A continuous problem area for Lahaina maintenance is the Honokahau Valley water system which they maintain over 7 miles of 2", 3" and 4" PE main line pipe. Weekly the crew walked the entire line, cleared the trail along the way and then repaired leaks. Some of their other tasks included cleaning and maintaining the Lahaina baseyard and water tanks.

Hana Maintenance:

The Hana Maintenance Crew is made up of Water Service Supervisor I, Pipefitters I/II and a Helper. The Hana district covers Keanae to Kaupo and includes a lot of rough terrain. FY2017 the Hana Maintenance crew responded to 71 consumer complaints and 37 standby calls. They completed 463 field activities which consisted of replacing 254 meters and 184 meter transponders. They also completed 5 job orders for contractors.

The Hana crew routinely performed daily system checks from Koali to Keanae. On a weekly basis the crew performed the following tasks: ensured that all chlorine containers were topped off at 4 different tank sites, maintained 7 tank sites, from landscaping, tree trimming to painting if needed. Monthly, the crew read 549 meters from Keanae to Kaupo and uploaded reading reports for Fiscal for billing, locked out meters, collected monthly payments as well from delinquent accounts. The crew also picked up meter readings at the EMI ditch at Makapipi for Fiscal. They collected chloride samples from 3 different well sites monthly and delivered samples to laboratory. On occasions the crew collected microbiological samples for chlorinated lines, wells etc.

The Hana crew continued working to reduce leaks by actively replacing sections of piping from 4" mains to 1" service lines when 2 or more leaks occurred on any line. This has become a standard policy in Hana. The DWS leak detection crew has been very active in Hana, and have identified leaks and located lines.

In October the crew prepared well, tank, intake sites and the district for the Sanitary Survey on system 219 and 220. In preparation the crew pressure washed tanks, well heads and piping. They painted all well heads and piping, including booster pumps and ensured that all fencing and signs were up to par. The crew cleaned all tank sites, especially Keanae due to the aging tank, which needed a lot of work.

On October 14, 2016 the Department of Health conducted the survey of Makapipi, Nahiku and Keanae systems. No significant deficiencies were found during that survey. Two recommendations that were identified were repaired in October. Pictures of the repairs were taken and sent to the SDWB inspector.

Throughout the year, the crew has kept all hydrants and standpipes in good appearance and physical working order. They flushed semi-annually and painted the hydrants as needed. Numerous standpipe risers have been replaced due to corrosion. The crew has actively replaced old air relief valves on the distribution systems.

Starting in April the Hana crew began a meter replacement program for the entire district. All of the outlining areas such as Keanae, Wailua, Nahiku, Waianapanapa, and Kaupo have all been completed along with the Wakiu area in Hana. Presently the Hana Maintenance crew are more than half way completed with the remaining areas from Koali to Hana.

The Hana crew attended training classes including microbiology collection training at DWS lab, CPR classes, and distribution system operator (DSO) classes.

Molokai Maintenance:

The Molokai crew is made up of a Water Service Supervisor II, Pipefitters I/II, a Pipefitter Helper, Equipment Operator and a Treasury Clerk. The crew checked daily on chlorine residuals, flushed hydrants on the east side and rotated pumps at Kamiloloa, Ualapue and Kawela. Weekly they checked and filled hypo at all tank site areas, took pH readings, and maintained the baseyard, storeroom, equipment and vehicles. Monthly they picked up meter readings, re-read approximately 150 to 200 high or low readings due to faulty and unregistered meter readings, hung tags for delinquency, locked meters, picked up bacti sampling at well sites, picked up freight from Young Brothers, and inspected transmission lines. The maintenance crew has replaced defective transponders and meters to lessen faulty meter readings.

FY2017 Molokai responded to approximately 200 consumer complaints for low pressure, no water, leaking meters or services or main line leaks. A total of 20 service lines were repaired ranging from ¾" to 2" lines and 160' of pipe line was replaced ranging from 2" to 12". Due to either traffic accidents or normal wear and tear, 4 fire hydrants or standpipes were replaced. A

new 8" gate valve off of the main highway and 12 new service lines were installed. Throughout the year 7 main line breaks were repaired.

Aside from the normal job duties, the crew attended AWWA classes and DSO classes. One of Molokai's biggest challenges this year was installing numerous meters to avoid the price hikes starting in July.

The crew assisted Inspectors with inspections and Plant Operations to change out the Kualapu'u electrical cabinets, SCADA system, and upgrade the electrical and telemetry systems and the finishing stages for the Kamalo CIP project. Molokai maintenance crew assisted Maui's Construction crew with replacing the Kamehameha V Highway main line project.

Construction Section:

The Construction crew consists of a Water Service Supervisor II, Pipefitters I and II, and Pipefitter Helpers. Some of the daily projects that the crew worked on FY2017 included patching roads, sidewalks and trenches. They also assisted the Maintenance sections of the Central, Hana, Lahaina, Molokai Districts with replacements, repairs, taps, cleaning etc. of main lines and valves, service laterals, hydrants, standpipes, meters, traffic control, sanitary survey requirements, and Hawaii One Call utility location requests.

This fiscal year the crew replaced 600' of chain link security fence, posts, top rails and barbed wire fencing at the Olinda WTP, Grand Champions tank and Waipuka tank sites. They pressure washed, primed and painted North Waihee, Wailuku Heights, Wailea Blue and Kilohana #17 water tanks and replaced valves.

Personnel cut down, cleared and hauled away trees encroaching into the transmission pipeline areas in Lower Kula, Waikamoi, Kekaulike Highway, Maalaea, Pookela Tank, Wailuku Heights Tank, Napili A, Honokahau Valley, Iao Valley, and the Piiholo and Olinda Water Treatment Plants. The crew walked the Lower Kula transmission line running through Piiholo and Waikamoi and cleared pipeline area and trails, serviced all air relief valves (ARV), and repaired pump roads.

The Leak Detection crew surveyed 889 miles of pipe in the Central, Hana, Lahaina, Molokai and Upcountry Districts and found 70 leaks. They also located main lines, valves, and services throughout Maui and Molokai for Hawaii One Call utility, Maintenance, Water Treatment Plant, Plant Operations, and Engineering (Inspectors).

Some of the other projects that the Construction crew completed FY2017 were:

- Iao Valley – Damages due to storm Lester. They installed 4" PVC main line and 300' of 8" plastic flush line. They cut the roadway and trees for new 12" water line and replaced 840' of 10" and 12" AC and cast iron (CI) main line, with 12" DI pipe. Installed 12 – 12" bends, 3 – 12" gate valves, 1 – 12"x 12" tee and poured 14 concrete kickers. Tapped and installed 3 – 12" x 2" saddles, laid 160' of 2" copper pipe, 300' of 2" drisco and 200' of 1 1/2" drisco pipe. Tapped and installed new 1" service lateral with 5/8" meter and

relocated 1 – 2” meter, 1 – 1 ½” meter and 1 – 1” meter. The crew dug footing and poured cement for 12” flush out line head wall and rerouted and cemented spill way. They assisted the Department of Parks and Recreation with tracing, flushing, rerouting and locating water lines, along with assisting contractors and reinstalled wheel stop curbs in parking lot.

- Kamehameha V Highway, Molokai – Replaced 2,200’ of 2” PE and 1 ½” galvanized iron (GI) main line with 2,200’ of 4” DI pipe. They installed 3 standpipes with 4 -4” gate valves, 84’ of 2 ½” GI pipe, 5 – 4” main line valves, tapped and installed 2 type A single and 2 type A1 service laterals, 2 – 1” laterals with 2 – ¾” ARV’s, 60’ of 1 ½”, 300’ of 1” and 20’ of ¾” copper pipe. Poured 7 concrete kickers, 7 donuts and 2 manhole covers.
- Haiku Road – Replaced 330’ of 6” AC main line was replaced with 6” DI pipe, 5- 6” bends, poured 6 concrete kickers, tapped and replaced damaged 1” service lateral and transferred 3 – 5/8” back to existing laterals.
- Makena Road – Replaced 2” main line with 100’ of 2” copper and 1,100’ of 2” drisco and replaced 2 – 1” service laterals.

Support Services Section:

The Support Section consists of a Support Services Supervisor, Construction Equipment Mechanics I/II, an Automotive Mechanic I, Water Meter Technicians I/II, Valve Repair/Pipefitter I/II, Equipment Operators III/IV, Carpenters, a Welder and Waterworks Maintenance Helpers.

The Support Service Section maintained and serviced the entire fleet of vehicles, large and small equipment, buildings and offices from all the divisions. The Support Section also maintained fire hydrants and standpipes, reservoir and tank sites, system hydraulic valves, heavy equipment, water meters as well as provided carpentry for new construction, maintenance, repairs and renovations of various projects throughout the department.

The meter shop replaced 896 defective transponders, replaced 482 defective meters, tested 1,723 meters and found them all working properly, tested 468 meters and found them faulty so replaced them, installed 98 new meters, installed 10 construction meters, reinstalled 37 meters, upgraded 21 meters, removed 9 construction meters, removed 21 meters due to NRP or non-payment, replaced 21 plastic meter boxes or covers, replaced 37 ci meter box covers, installed 151 tamper proof screws, replaced internal parts for 9 meters, remounted 10 transponders, glued down 1 transponder, checked 2 transponders to see if it was working, checked 2 meters to see if it was hooked up, turned on 1 transponder, replaced 16 inline checks and expansion couplings, replaced 1 ci meter box cover, checked 2 meters for illegal hookup, reinstalled 1 meter to the correct location, relocated 1 construction meter, repaired 1 meter box cover and verified 5 meters reading and checked for leaks.

The mechanic shop worked on the entire department’s vehicles and equipment throughout the year. Work ranged from brakes, front end, body damage, engine work, electrical work, pre-

inspections, and preventive maintenance. On average the shop worked on 20 to 30 vehicles per month. The repair shop maintained generators, dump trucks, backhoes, trailers, portable lights for night work and fuel levels at generator sites and baseyard fueling stations. In addition the mechanics repaired small equipment such as water pumps, chainsaws, weed eaters, riding lawn mowers, road saws, flat plate tampers, tapping machines, and power threading machines.

The valve maintenance crew assisted in the Sanitary Survey and repaired tanks and valve box deficiencies at various sites. The crew monitored tank heights and made corrections and serviced regulator boxes at various locations throughout Maui and Molokai. The crew also painted and cleaned regulator boxes throughout the island and checked on low and high pressure complaints.

The hydrant maintenance section repaired and serviced 357 hydrants or standpipes in Central and Upcountry Districts.

The Equipment Operators have been involved in numerous jobs all over the island, from Hana to Honokohau Valley. They have dug out main and service lines so that leaks could be repaired. Operators have repaired roads and cut brush in remote well sites in the Lahaina District from Mahinahina to Honokahau Valley. The Operators delivered chemicals and chlorine to well sites and treatment plants throughout the island. They also worked on the Iao treatment plant construction project, where they excavated the site to install a new distribution line and separated the rocks to be used for headwalls. The Operators also ran the screen plant at the baseyard to minimize the amount of material that needs to be purchased for backfill. Some of the Operators worked on Molokai on the Kamehameha V Highway CIP project.

The Heavy Equipment & Construction Welder worked on the Sanitary Survey deficiencies in the Central, Hana, Lahaina and Upcountry Districts. All tank hatches and gaskets were replaced as needed. All vent screens with nylon screen was changed. The Welder worked on Kanaha Valley and repaired hand rails, intake drain valve and fabricated new grading due and did repairs to the Iao chlorination building all due to storm damage. The welder worked on equipment from the various departments and replaced meter box covers throughout the island. The welder also fabricated valve wrenches, meter box wrenches and various tools.

The Carpenters worked on repairs in compliance with the Sanitary Survey to remove deficiencies on water tank ranging from replacing screens to roof vent repairs. They repaired sidewalks, and driveways and valve boxes throughout the island. The Carpenters worked in the Iao tunnel and replaced the redwood in the dam wall, and installed a spillway for when water levels get high. The crew worked on the chlorination building and added a containment wall and door, and installed a concrete staircase and fencing. The crew repaired the driveway at the Hawaii Nature Conservancy Center in Iao Valley and made a flush out and spillway for the 12" distribution line.

They also worked in Kanaha Valley to repair the containment walls that were damaged in the flood and extended walkways near the intake. The Carpenters also worked at Honokahua Well B's Electrical control room where they demolished the old structure and constructed a new building. The Carpenters also worked on various projects for other sections within the department including Fiscal, Engineering, Planning, Plant Operations and the various Water Treatment Plants.

Dispatch Office:

The Field Operation's Dispatch office is made up of a Water Service Clerk Dispatcher (Supervisor), Clerk Dispatcher and a Clerk. Personnel provided support to the Field Operations Chief, Supervisors and personnel on a daily basis with various tasks. This section also provides support and data for Accounting, Administration, Engineering, Fiscal, Inspectors, Planning, and Purchasing as needed. Dispatch personnel processes and distributes all paper work which includes but not limited to daily attendance reports, attendance logs, time sheets, all regular and after hour complaint forms, field activities, job orders, agriculture applications, inventory control expense data for equipment, tools and vehicles, job orders, maintenance contracts, police reports, requisitions, purchase orders, radio logs, field activities, stand by schedules and logs, travel per diems, travel arrangements, budget, vehicle assignment logs, and various daily, weekly, monthly, quarterly and annual reports. Office personnel monitors and documents daily baseyard and tank site security entries and exits.

The staff also provides support to the Plant and WTP Operations on a daily basis for various tasks such as maintaining daily attendance/assignments reports, and maintains the Supervisory Control and Data Acquisition (SCADA) system daily. SCADA duties includes, responding to all alarms to all booster, tank and well sites on Maui as well as Molokai. Dispatch staff responds to each alarm, taking appropriate action and informs proper personnel while keeping supporting documentation of all activities. Personnel turned off alarms when authorized personnel entered sites and turned alarms back on when personnel exited sites. They also acknowledged and followed proper protocol to all other alarms which included; unauthorized or unreported intrusions, chlorine alerts, tank level alarms, communication failures, pressure problems, generator, pump and booster failures, power failures, etc..

For the FY2017 the Dispatch Office answered 2,458 incoming telephone and trouble calls and determined the nature of each call so appropriate action could be taken and dispatched them out as needed. The office staff answered all complaints and inquiries on water source maintenance in compliance with the department's rules, regulations, policies, ordinances, and services related to water distribution. The staff processed, inputted and retrieved all data reported from daily activities for statistical records and various internal and external reports used by various divisions within the department for various consumer claims, improvements, planning, future CIP projects, etc.

After normal working hours the dispatch staff provided 24/7 stand by coverage to assure that calls and alarms were answered and issues were addressed in a timely manner while calling out the appropriate manpower when needed, documented all activities and maintained required reports.

Emergency plans for both hurricane and tsunami emergency plan responses are maintained and updated on a regular bases to keep everyone up to date in case an event should occur. Dispatch responds to both hurricane and tsunami alerts and events.

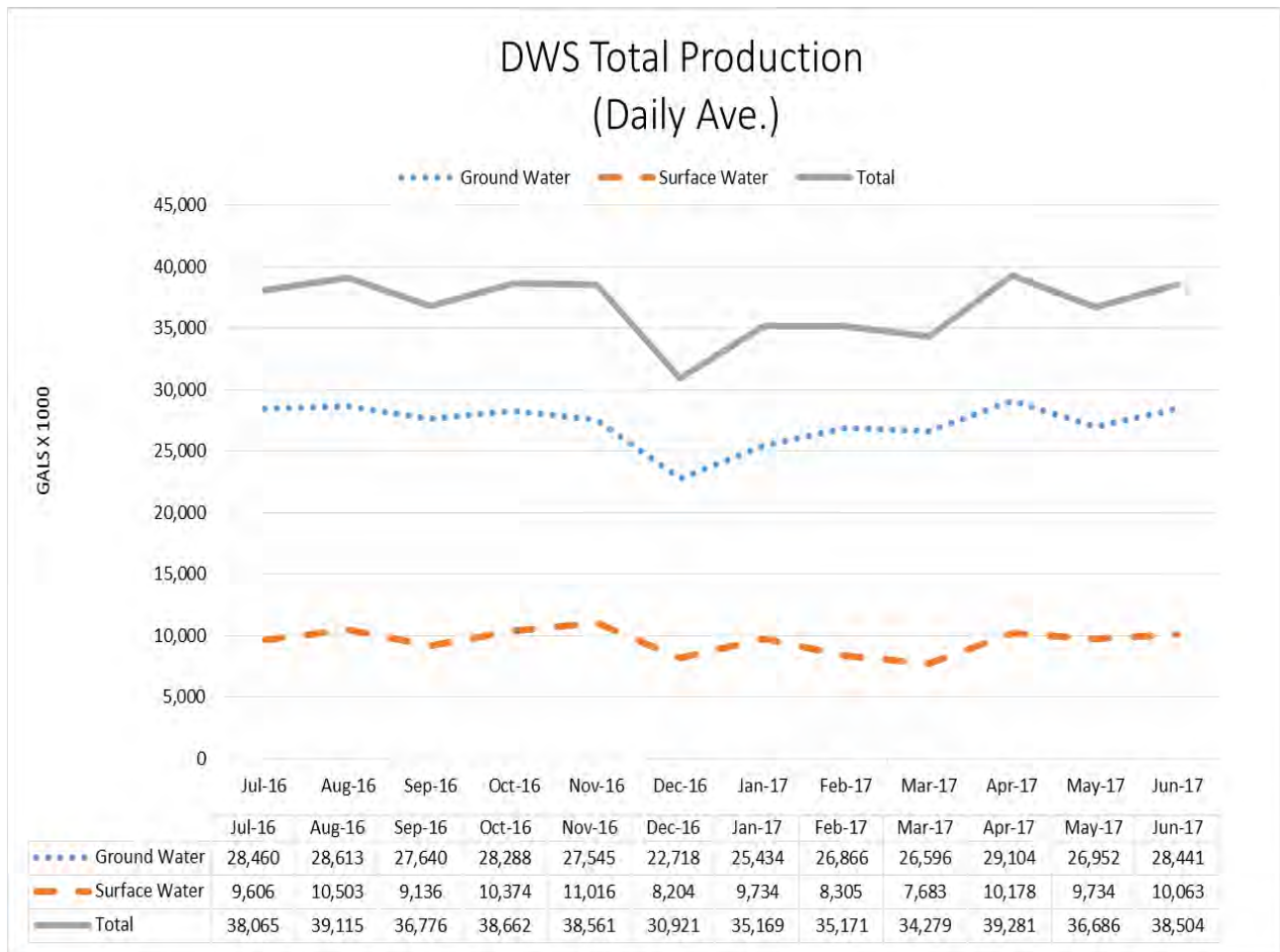
PLANT OPERATIONS DIVISION

The Plant Operations Division consists of 33 employees in five sections: Electrical, Mechanical, and Electronics, Water Quality Laboratory, Backflow Prevention. Each section plays an integral role in the daily operations of the Department of Water Supply.

OVERVIEW OF SECTIONS WITHIN DIVISION

Electrical, Mechanical, and Electronics:

The Electrical, Mechanical, and Electronic Sections maintain and operate 49 ground water sources (approximately 70% of the Department’s total daily production), 79 booster pumps, UV and GAC treatment facilities, 24 disinfection systems, and 143 remote Supervisory Control and Data Acquisition System (SCADA) sites. The SCADA System provides 24x7x365 control of the distribution system, alarming, real time, and historic information. The Electrical and Electronic sections also provide technical support for 6 surface water treatment facilities.



Total production of ground and surface water for FY2017

Aside from normal daily operations and maintenance, notable in-house and CIP projects for FY2017 include:

- Planned and completed in-house control system design / installation and programming for programmable logic control system and SCADA integration at Wailuku Well #2, Wakiu Wells B&C, Maui Meadows #18, Upcountry Phase 6 boosters, and Kualapuu Well on Molokai.
- Continued upgrades to online chlorine analyzers at wells and tank sites under US EPA method 334 for ground water rules.
- NELAC (National Environmental Laboratory Accreditation Conference) audit for FSMO (Field Sampling and Measurement Organization).
- CIP of new emergency generators at Ualapue Well, Hamoa Well, and Napili C Well with SCADA integration.
- Completion of Waihee 579 well pump replacement.
- Completion of Wakiu B well pump replacement.
- Source water flow meter calibration for the Central, Upcountry, and Lahaina districts.
- Installation of new compliance chlorine analyzer at Ualapue tank, Molokai.
- Conversion from UV disinfection to liquid chlorine at Iao Tunnel.

Scheduled and Unscheduled Maintenance Events

	Electrical	Mechanical	Electronics
Central	44	27	295
Upcountry	11	9	151
Lahaina	2	5	26
Napili	4	4	26
Molokai	13	0	44
Hana	43	13	47
Water Treatment Facilities	39	<i>na</i>	103
Preventive Maintenance	263	56	190



Start up and testing of Wailuku Well #2

Water Quality Laboratory:

The Water Quality Laboratory strives to ensure that all sampling and analysis are done competently and all data produced is legally defensible and has documented precision and accuracy. The laboratory maintains accreditation with the State of Hawaii, Department of Health for Chemistry and Microbiology; ORELAP (Oregon Environmental Accreditation Program, an accrediting body with the National Environmental Laboratory Accreditation Program); FSMO (Field Sampling and Measurement Organization).

Microbiology reported the following:

- 2562 compliance samples collected & analyzed
- 120 non-compliance samples collected & analyzed
- 6 total coliform positive samples
- 2 E.coli positive samples resulting in two boil-water incidences

Chemistry:

One of two tri-annual compliance samples for the 2017-2019 monitoring period completed for all systems.

Process control samples analyzed in house: 16,381

Analytes include fluoride, nitrates/nitrites, sulfate, chloride, and phosphate, total organic carbon, dissolved organic carbon, total & free chlorine residual.

The DWS submitted applications to the Department of Health for approval of Revised Total Coliform Rule (RTCR) Level 2 Assessors. Fifteen personnel were approved to conduct Level 2 assessments in the event of an E.coli violation in any of our water systems. The RTCR rule, which became effective in April 2016, states that if an E.coli violation occurs, the water purveyor must submit an assessment within 30 days of the triggering event and note what corrective actions the purveyor will take to correct the sanitary defects that caused the violation.



Electronic Technician Lawrence Lee performing field calibration for online chlorine analyzer.

Backflow and Cross-Connection Control:

The Backflow and Cross-Connection Control Section continues to conduct final inspections and testing of backflow preventer installations and on-site field surveys. Our staff assists with efforts ongoing within our own Department, such as the Engineering Division, Distribution Section, Support Services Section, Water Treatment Plant Division, Water Resources and Planning Division, and the Fiscal Division. Our staff also assists agencies, businesses, and customers outside of our Department, such as other County of Maui and State of Hawaii departments, residential property owners, agricultural owners, farmers, bed & breakfasts (B&B) establishments, condominium property regimes (CPRs), transient vacation rentals (TVRs), commercial property owners, property management companies, construction & plumbing contractors, engineering consultants, and engineering firms.

The Backflow and Cross Connection Control Section is also actively involved with the American Backflow Prevention Association (ABPA) Hawaii Chapter - Backflow Testers Certification & Re-Certification Program.

The Backflow & Cross-Connection Control Section conducted 121 final inspections and 770 field surveys. There were 20 requests to install backflow preventers issued. Currently 3,374 backflow preventers are being tracked in our database. There are 16 temporary domestic and construction water meters on Maui and Molokai. All of these temporary construction meters are monitored to ensure that they comply with the County of Maui, DWS, Rules & Regulations, Cross-Connections and Backflow Protection Section 3-20.

Reclaimed water has not expanded beyond the South Maui District. The Backflow and Cross Connection Control Section works closely with the County of Maui Wastewater Reclamation Coordinator to be sure that all sites have a Reduced Pressure Backflow Preventer (RPBP) installed at their water meter to avoid any contamination of water to the DWS distribution system.



CIP upgrade of new pumps and motor control center at Maui Meadows #18 booster station

WATER TREATMENT PLANTS DIVISION

The Water Treatment Plant (WTP) Division consists of 29 staff members in two Districts, East and West. This includes the Division Chief and Staff Services Assistant. The Staff Services Assistant works under the directive of both the WTP and Plant Operations Division Chief.

In the East District there are 17 employees. 1 Operations/Maintenance Supervisor and 1 Assistant Supervisor, 11 state certified Water Treatment Plant Operators, 1 Plant Worker and 3 Maintenance Mechanics. The East District includes treatment plants at Olinda, Pi`iholo, Kamole and Iao.

In the West District there are 10 staff members. 1 Operations and Maintenance Supervisor and 1 Assistant Supervisor, 5 state certified Water Treatment Plant Operators, 2 WTP Trainees and 1 Plant Worker. The West District includes treatment plants at Mahinahina and Lahaina.

The Water Treatment Plants Division is fully staffed at this time.

These 6 facilities are surface water treatment plants which filter and disinfect rain runoff water from streams and ditches, supplying approximately 30% of Maui's demand for drinking water. The remaining 70% is provided by groundwater sources, which is managed by Plant Operations.

EAST DISTRICT

Olinda Water Treatment Facility:

FY2017 production total: 485,600,000 gallons, or 1.33 MG daily average

The DWS has continued its working relationship with Dr. Steven Duranceau and his graduate students from the University of Central Florida, with maximizing treatment process and cost management as collaborative goals. During 2016-17, data collection on raw and finished water in the upper Kula system have continued and are being used to determine seasonal organic levels in the water requiring total organic carbon (TOC) reduction techniques. Organic carbon creates regulated contaminants when mixed with chlorine. These are known as disinfection by-products (DBP's). Thus far, the Treatment Division has successfully met and exceeded regulatory requirements in this regard by using chlorine and ammonia together as its disinfectant at Olinda due to its decreased capacity to create DBP's. Historically, raw water sources at Olinda, (Upper Kula), have had the highest levels of TOC thereby having the greatest potential to create DBP's.

The goal is to find a means to decrease organic carbon levels prior to treatment and allow this plant to convert over to free chlorine as a disinfectant rather than chloramine. If the DWS can find a means to achieve this, the main benefit will be a consistent chlorine disinfectant in upper and lower Kula systems allowing the transfer and blending of waters during drought conditions. Many hours were dedicated this fiscal year to reaching this goal.

Work with UCF, EVOQUA, (membrane manufacturer), and DWS staff on treatment process evaluation and optimization during this fiscal year has also resulted in cost savings to the county for this facility alone, in excess of \$15,000 on average per year in chemical costs. This was achieved through a re- assessment of past operational procedure that had resulted in excessive chemical usage.

The treatment plant at Olinda has now run continuously since March of 2015. This is the longest period on record that the plant has run without stoppage due to drought.

Pi`iholo Water Treatment Facility:

Production total: 1,182,296,000 gallons, or 3.24 MG daily average.

The dual disinfection by-product removal system of granular activated carbon (GAC) and air-stripping at the Lower Kula treatment plant continues to give excellent results in terms of reducing regulated contaminant levels for THM's and HAA5's. (trihalomethanes and haloacetic acids).

On-line instrumentation called UV-254 monitors were installed and tied into the SCADA plant automation system in FY2017. These monitors allow operators to gauge the effectiveness of the DBP reduction system as well as the percentage of spent carbon in the GAC system and anticipate replacement intervals.

The Pi`iholo Water Treatment Plant continued to be the big producer for this fiscal year, same as last year. In times of drought conditions at higher elevations in the Upper Kula system, the Pi`iholo WTP is more than adequately prepared to supplement the Olinda system though what is termed as "phase 6 pumping."



GAC Filters at Pi'iholo WTP

Kamole Water Treatment Facility:

Production total: 374,360,000 gallons, or 1.03 MG daily average.

With Pi`iholo and Olinda's higher elevation raw water reservoir levels remaining at or near capacity during FY2017, the Kamole plant has been shut down regularly for necessary repairs and maintenance on the 8 continuous microfiltration machines and other process components. When the unexpected but welcome rain storms eventually subside, the largest microfiltration facility in the state will be ready to reliably meet system demand with whatever volumes of water are available to us in the Kamole weir ditch system.

Some of the repairs and improvements at Kamole are:

- A new plant process air compressor. This is an Ingersol-Rand model which we have begun replacing the original equipment Atlas-Copco units with. These compressors have been found to be more reliable and cost effective in terms of parts replacement.
- A new Soda Ash pump system for pH adjustment.
- A new plant influent water valve and actuator assembly. This critical component replaces original equipment installed in the 1980's which had been frequently malfunctioning.
- A new radiator for the emergency generator. This radiator is 11' X 11' and replacement of the original was not easy but absolutely necessary. Field Operations staff performed this change out.
- A manual removal of debris from the Kamole weir ditch around the plant intake. With reduced volume and velocity in the ditch due to mandated flow diversions, the buildup of decaying debris began to pose a problem for water quality and needed to be addressed.

Iao Water Treatment Facility:

Production total: 129,704,000 gallons, or 0.355 MG daily average.

The originally designed "temporary" microfiltration facility built at the Iao site in 2000 continues to produce high quality water as ditch flows and raw water quality permit. This is an open air facility, exposed to the elements, and running on mostly original equipment parts. It is a testament to operator diligence and dedication that this facility is still able to produce.

The big storm of September 13, 2016 caused total blockage of the intake in the Iao River to the treatment plant. After excavation, flow was reinstated and the plant went back online on November 28, 2016.

Construction of the new, permanent Iao plant began in January 2017, and is on or ahead of schedule. This state-of-the-art facility will utilize on-site generation (OSG) of liquid chlorine with salt and electricity in place of chlorine gas currently in use.

WEST DISTRICT

Mahinahina Water Treatment Facility:

Production total: 683,080,000 gallons, or 1.87 MG daily average.

All exterior lighting replaced at this plant in FY2017.

The chlorine one-ton cylinder hoist was renovated and repainted by treatment plant staff. Annual inspection completed and passed on 10/11/16.

In May 2017 NASKA baseyard crews graded and added base rock to the dirt road leading up to the Mahinahina baseyard facility. ML&P has stopped taking care of the access road and with heavy rains, erosion had taken its toll.

New control system design work began this year on the SCADA automated plant control system. The current system is outdated and limited in its capabilities. Many critical components are no longer available or difficult to obtain and overpriced.

Lahaina Water Treatment Facility:

Production total: 630,113,000 gallons, or 1.73 MG daily avg.

Lahaina WTP had many problems with two critical plant process air compressors this year, resulting in continued expense for repairs. Treatment plant staff budgeted and received funding for replacement of the Atlas-Copco units with Ingersol-Rand compressors. The retrofit of these new, large compressors was completed by staff at Lahaina along with assistance from treatment plant mechanics and NASKA electronic technician staff members. These compressors are performing very well and being American-made, parts are readily accessible and more cost efficient than the Belgian original equipment.

On September 13, 2016 the large weather system that moved through the islands did considerable damage to the intake system for Lahaina WTP and caused a plant shutdown due to blockage to intake piping. Assistant Supervisor Damon Gill and his staff members made the initial entry into Kanaha Valley to perform a manual cleanout of the intake canal and removal of debris from storm runoff to get the plant back online ASAP. This was done with shovels and digging bars. Support from Lahaina baseyard and Field Operations crews came in the days to follow to clear the obstructions and repair any damage. All crews came together along with valley resident Hans Michel, to complete repairs to the road, removal and replacement of boulders and concrete repair work to the intake ditch walls by September 27th.

Treatment plant staff poured a concrete slab and installed an air conditioned cabinet to house a new streaming current monitor device for chemical control dosing on the plant intake piping line. This is sensitive electronic equipment. The cabinet is weather resistant and climate controlled inside to prolong the life of the monitor.

Work began and was completed in June 2017 to repair some of the buried valves coming to and from the pre-sedimentation basin at the plant. Some of the valves were excavated and repaired due to being inoperable. Baseyard staff and excavators were extremely helpful. At this time, the

sludge drying bed was excavated after many years. Dried material was removed and disposed of. New base, felt and sand were installed (percolation material).

Total FY2017 Production West District: 1,313,193,000 gallons

Total FY2017 Production East District: 2,171,960,000 gallons

Total FY2017 Production WTP Division: 3,485,153,000 gallons

WATER RESOURCES AND PLANNING DIVISION

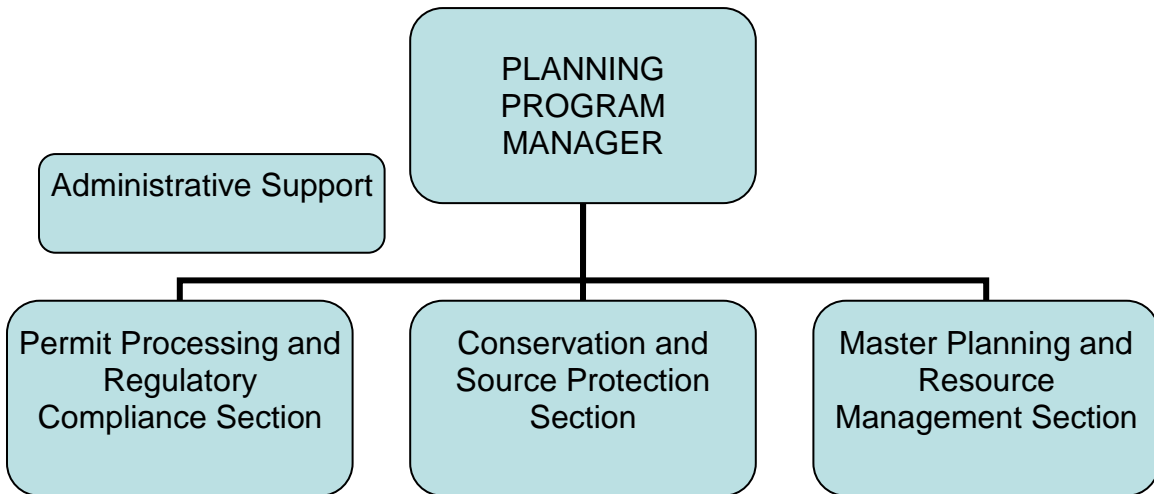
GOALS

1. Maintain and improve water service and quality
2. Provide master and area planning support and research necessary to meet department needs
3. Provide timely and pertinent permit review, responses and information to other agencies, divisions and the public
4. Accelerate water conservation supply and demand side measures, and streamline and improve data collection and analysis to quantify conservation results

OBJECTIVES

1. Support watershed protection and rehabilitation programs by maintaining the number of grant subsidies awarded to non-profit agencies
2. Formulate long range goals of the department and support development of capital improvement program
3. Ensure quality and efficiency in all communications
4. Standardization in data collection, permit processing and grant administration.
5. Deploy conservation program measures with quantifiable savings

ORGANIZATIONAL CHART



The division has eight employees, with one vacancy at the end of the fiscal year. Two internships were established through the University of Hawaii Maui College.

HIGHLIGHTS

This division is responsible for department long range and area planning and resource management; planning and geospatial information systems; discretionary permit review and processing of meter reservations and other permits and assessments. The division provides oversight and department support of regulatory compliance, including dam safety programs and emergency action plans, sanitary surveys, requirements for ground and surface water management areas. The division manages water source protection and conservation programs, including the watershed protection and restoration grants program. The division identifies water resource data and research needs and administers resource data monitoring and research contracts.

DIVISION ACTIVITIES

Watershed Partnerships Grant Management

DWS strives to support projects that protect the county's watersheds and freshwater resources. The Department has provided financial support to ten watershed partnerships and organizations on Maui and Molokai to ensure perpetual protection of upland watersheds. The watershed partnerships collectively address a variety of threats to the watershed through activities such as ungulate control through fencing and targeted hunting practices; eradication of invasive plants; reforestation and vegetation of upland areas and other habitats critical to the recharge and protection of water supply and suppression and management of wild land fires resulting in the loss of forests.

This fiscal year, DWS provided a total of \$2.1 million in grants to the following watershed partnerships and organizations aimed at protecting water resources:

- Honokowai and Wahikuli Source Protection Project – The Nature Conservancy
- Waikamoi Haipua'ena Source Protection Project – The Nature Conservancy
- East Maui Watershed Partnership –University of Hawai'i Office of Research Services (UH ORS)
- Leeward Haleakala Restoration Watershed Partnership – UH ORS
- West Maui Mountains Watershed Partnership - UH ORS
- East Molokai Watershed Partnership- The Nature Conservancy
- Maui Invasive Species Committee - UH ORS
- Hawaii Agriculture Research Center
- Pu'u Kukui Watershed Preserve – Tri-Isle RC&D
- Auwahi Forest Restoration Project - UH ORS

The DWS Watershed Protection Grant Application was updated to be released for FY2018. The most significant improvement was digitizing all required submission forms to help collect better data on the progress of our grantees. The improved application will also increase transparency, streamline the application process with standardized forms, and make it easier for DWS to benchmark project deliverables.

Resource Management

The division maintained contracts with the United States Geological Survey (USGS) for ground and surface water monitoring; assessment of groundwater availability in the Waikapu, Iao and Waihee aquifer systems; a study to assess impacts of land-cover changes on groundwater recharge, a cooperative study with State Department of Hawaiian Homelands and the Office of Hawaiian Affairs to study groundwater recharge and availability in Molokai; and a study to quantify the impacts of high-priority non-native and dominant native plant species on freshwater availability on Maui. The findings are expected to improve resource management, distribution of pumpage and sustainable source development and provide additional research support for watershed protection efforts.

Discretionary Permit and Water Meter Reservation Processing

The division processed 61 discretionary permits, responses to Environmental Assessments, Environmental Impact Statements, Well Construction Permits and other consultation requests. Educational materials on groundwater protection and water conservation were distributed with the division's responses. The reviews included analysis and recommendations to address any potential impacts on water resources and system infrastructure.

The division processed 10 applications for meter reservations, representing 25 meters, and 37 reservation extensions representing 114 water meters.

Public Inquiries

64 public inquiries from the public, businesses, non-county agencies and consultants on topics such as water consumption, DWS water purchases, water production, water rates, Upcountry priority list, hydrological data, water distribution system data, subdivision ordinance applicability, demand queries, water availability, water quality, source water assessment, meter data, empirical use, best management practices, conservation measures etc.

Conservation

The DWS water conservation plan lays out and integrates multiple projects and initiatives designed to help reduce overall water consumption in Maui County. Other goals include improving data collection and information on water savings and losses and streamlining public outreach. The program components include water audit, leak detection in collaboration with Field Operations Division, demand side measures and incentives, and public outreach.

A new law, Hawaiian Plants Act 233, went into effect, requiring new developments to include native plants into its landscaping. The law complements the DWS outreach to increase xeriscaping and reduce planting water intensive landscaping plants in dry areas.

Water Audit and Leak Detection

- Hawaii State Act 169 was signed into law by Governor David Ige in June 2016. All county-owned public water systems are required to submit annual water audits to the Commission

beginning July 1, 2018. DWS completed its first water audit this fiscal year and is on track to complete the mandatory water audit by July 2018.

- Updated methodology and recommendations to effectively detect leaks in the distribution system was developed in cooperation with DWS Field Operations. Efforts continued on distribution system evaluation and developing a process for digitally mapping, collecting, handling, storing, and managing the data required to conduct a thorough and reliable water system audit.
- Results from the first water audit provided more reliable data and knowledge about water losses in the distribution system—the results of which yielded targeted recommendations for conservation CIP improvements.
- A contract to replace PE (drisco) service laterals in Wailuku Heights was initiated.

Public Outreach

Public outreach about the importance of water conservation and other home improvements to reduce water consumption included staffing educational events, and developing and publishing outreach materials. For the first time, the Department also implemented the use of iPads and digital surveys to gather data at events. The new approach has helped to increase public interaction, productivity, and significantly reduced administrative costs for public outreach events. Another technology utilized, with the help of the University of Hawaii (UH) who provided the use of their facilities, helped link satellite locations for Agricultural Source Protection workshops. Real-time participation was made available to all Maui and Molokai residents at designated UH locations.

Advertisements in the following local newspapers, magazines and radio stations were published:

<u>Media Outlet</u>	<u># of Advertisements</u>
Maui Family Magazine	5
Hanaside News	2
Pacific Media Group	1,872
KAOI Radio	1,080
 Total:	 2,959

Two 22” x 28” water conservation and source protection posters were displayed at the busiest location at Queen Kaahumanu Center. An announcement on the First Source Water Protection Video Contest was also placed at the mall which resulted in several entries received from high school students.

The following events and direct outreach efforts were undertaken:

- Annual MECO in Our Community booth
- Maui County Ag Fest
- Maui Fair booth
- Construction Industry of Maui Home Expo booth
- Lihikai School 3rd Grade Science Day presentations
- Ho’olaule’a Booth – Molokai event

- Two (2) Kamehameha Schools Iao Tank site visit presentations
- East Maui Taro Festival booth
- Arbor Day at MNBG
- Two (2) Public Ag Source Protection Workshops
- Old Lahaina Luau Employee Health & Wellness Fair
- Annual Water Conservation Grade School Poster Contest
- First Annual Source Water Protection Video Contest
- Ridge to Reef Celebration
- Maui High School Conservation and Source Protection Presentation

Fixture Distribution

<u>Fixture Type</u>	<u># of Fixtures</u>
Showerheads (1.25 – 1.5 gpm)	1,623
Bathroom Faucet Aerators (1.0 gpm)	1,573
Kitchen Faucet Aerators (1.5 gpm)	1,291
Hose Nozzles (max flow – 2.4 gpm)	1,536
Toilet Tank Bags (displace .08 gpf)	362
 Total	 6,385

Leak detection tablets to check for leaks in toilets and dish scrapers were also distributed to the public.

Pre Rinse Spray Nozzle Trade-Out Program

The Department continues to provide pre-rinse spray nozzles for food service establishments. The 1.15 gpm, high efficiency, high velocity pre-rinse nozzles are being offered in exchange for the old, less efficient nozzles. The device helps save on water and energy. Three were distributed in FY2017.

Park Showers Retrofit Pilot

In cooperation with the County of Maui Department of Parks and Recreation, DWS has initiated the replacement of a number of park showers with high efficiency, ADA-approved showers. Procurement includes meters set to collect data at each new shower location. An initial estimate indicates consumptions reduction of up to 85%, which translates to tens of millions of gallons a year in savings.

Toilet Rebate Program

The groundwork has been laid to begin a new toilet rebate program beginning in FY2018. Public participants who qualify may obtain a free high-efficiency toilet from DWS. A limited supply will be available and installation and applicable rules apply.

Source Protection

Grant funded wellhead protection activities in Department well capture zones this fiscal year included:

- Re-surveying Maui's Potentially Contaminating Activities (PCAs) in sensitive areas around the Department's 2-year capture zone areas.
- West Maui, Mahinahina, PCA cleanup around DWS water infrastructure within the 2-yr capture zone area
- Two public source protection workshops were conducted. The focus was on agricultural practices and best management practices (BMP) in DWS well capture zones

Planning Information Systems

The division maintained the following databases:

- Water meter reservations
- Pumps and Tanks
- Well use permits vs. aquifer sustainable yield
- Discretionary projects
- Source availability
- Monthly billed consumption by district, premise type, meter size and demographics
- Monthly production
- GIS data digitizing and updating various resource and infrastructure layers
- DWS water purchases from EMI 2003-present
- Population Projection Demand
- Storage Service Area

Regulatory Compliance/ Legislative Research & Testimonies

- Responses were coordinated for Sanitary Survey Reports for three DWS systems.
- Assistance was provided to Department of Land & Natural Resources inspections for dam safety for six (6) DWS dams. Emergency Action Plans and Operation and Maintenance manuals for five (5) dam facilities are updated.
- Tracking and modification requests for current water use permits in Groundwater Management Areas to ensure pumping compliance on a 12 month moving average basis.
- Tracked relevant water industry bills and provided testimonies to 3 bills related to conservation rebates, watershed protection funding and plant quarantine rules
- Data support to corporation counsel regarding evidence for contested case proceedings

Water Use & Development Plan

The Water Use and Development Plan (WUDP) required by state law and Maui County Code Section 2.88A sets forth a plan by which water needs will be met, inventorying short and long term resources; allocating water to land uses; and discussing regulatory framework, watershed protection and restoration, traditional and customary uses while considering a 20-year time frame for planning. Targets for FY2017 were completion of the island wide WUDP and to initiate work on the Molokai WUDP. Part I and II of the Maui WUDP (island wide technical approach, water resource management, strategies and recommendations) were completed in FY2017. Part III – Regional Plans were drafted based on a last round of public meetings in four island regions

held in November 2016. Regional plans are targeted for completion in the first two quarters of FY2018.

Work in FY2017 focused on Ka Pa`akai analysis, mandated since 2016 by the Commission on Water Resource Management to be incorporated in county water use and development plans. Additional tasks included community outreach, policy board and committee presentations. Staff collaborated with the Department of Planning Long Range Division in identifying water demand projections and resource needs for the Molokai Community Plan process. Challenges in meeting targeted plan completion this fiscal year involved characterizing and projecting Native Hawaiian uses, departure of key staff and other demands on staff resources. In summary the public and policy board outreach process included 9 meetings:

- Community meetings were held regionally in Central/South, West, Upcountry, and East Maui.
- Presentations of draft chapters provided to Board of Water Supply (2), and the Commission on Water Resource Management (1); and the Department of Planning (1)
- Presentation and request for input from the Cultural Resources Commission.

MAJOR ACCOMPLISHMENTS

- The division was a key participant in the development of the MAPPS countywide permitting system with Energov/Tyler Technologies. Staff developed permit and plan business processes and an interface for future wellhead protection permit process. Final surveys were completed as well as a discretionary permit processing standard procedure.
- Division manager participated in the Statewide Water Security Advisory Group established by Act 172 and the State Department of Land & Natural Resources Chairperson. This initiative evaluated and selected grant proposals for funding that increase water security throughout Hawaii.
- The Department of Water Supply's 8th Annual Water Conservation Poster Contest drew 770 entries from 58 teachers in 23 schools countywide as well as Boys and Girls Club Maui and an Art Studio. The theme this year is "By Water All Things Find Life". Submitted artwork was judged based on three criteria: water conservation message, originality, visual effectiveness (neatness and creativity). Winning posters will be featured in the 2018 Water Conservation Calendar. The award ceremony was held during Drinking Water Week. Mr. Michael Molina, representative from the Mayor's Office, Ms. Gladys Baisa, DWS Deputy Director and Councilmember Alike Atay, Chair of the Water Resources Committee gave short talks during the ceremony on the importance of saving water for this and future generations.

FISCAL YEAR 2018 GOALS

1. To provide accurate and timely information on water use by various types, regions and demographics, the department billing data must be available in a format that can be queried

and analyzed by multiple parameters. The division will work with the consultant for the new billing data system CC&B to acquire the necessary report functions and training.

The report and data development is dependent on consultant’s completion contract deliverables for the Department’s Fiscal Division’s billing data system upgrade to CC&B.

2. The department’s watershed protection grant program will continue to fund eligible projects that provide benefits to the freshwater resources utilized by the department systems. Studies on the impact of watershed protection on freshwater hydrology, including groundwater recharge, will be promoted and funded to provide improved quantitative benchmarks for the watershed protection grant program.

3. Completion of the Maui Island Water Use and Development Plan is anticipated by the second quarter of FY18, allowing Board of Water Supply review and submittal to County Council by the end of FY18. Subsequent approval by the Commission on Water Resource Management is anticipated in FY19.

The public process for development of the Molokai Water Use and Development Plan is anticipated to commence in the third quarter of FY18.

4. A water audit for calendar year 2017 based on current AWWA standards and software will be completed by the end of the fiscal year, in accordance with Act 169. The water audit continues to guide conservation CIP and leak detection priorities.

PERFORMANCE MEASUREMENTS

GOAL/OBJECTIVE	SUCCESS MEASUREMENT	FY2017 ESTIMATE	FY2017 ACTUAL
Support watershed protection and rehabilitation programs by maintaining the # of grant subsidies awarded to non-profit agencies	# of agencies with grants for environmental protection and rehabilitation	8	9

FISCAL/CUSTOMER SERVICE DIVISION

The Fiscal Division of the Department of Water Supply is divided into three areas, the Purchasing section, the Customer Service section, and the Accounting section.

The Purchasing section is responsible for the procurement of goods and services relative only to the Department of Water Supply. Such procurement may require technical knowledge and complex product customization. This section must adhere to the rules and regulations of the State of Hawaii and the County procurement code. The purchasing section also manages the DWS warehouses; and is responsible for the control and maintenance of over 1,000 inventory items in the Stores Inventory Subsystem of IFAS.

Customer Services is responsible for a wide variety of services. These services include meter reading, pre-auditing and billing, collections, new customer accounts, jobbing, cashiering, and related customer service functions for 36,365 subsidiary accounts.

The Accounting unit provides general ledger reporting services and compliance with budgeting requirements for the Department and its Board. The functions of this unit include payroll processing, accounts payable processing, fixed asset tracking, depreciation calculation, expense and revenue recognition and reconciliation, and capital improvement project reconciliation and capitalization. The annual operating budget for FY2017 was \$89.4 million including \$22.75 million for the Capital Improvements Program.

The total consumption for FY2017 of water billed was 10.5 billion gallons for general consumption and 1.1 billion gallons for agriculture for a total of 11.6 billion gallons. A total of \$62 million was recorded for all water sales.

MAJOR ACCOMPLISHMENTS

The Purchasing unit continues to monitor all four warehouses for the Department with the IFAS Stores Inventory Subsystem. The warehouse continues to reorganize and enhance operating efficiencies.

The Accounting section is closing financials on a timely basis. CIP projects are being capitalized in a timely manner. Accounting continues to strive to meet the strict guidelines of our audit and have done an excellent job. Accounting is participating in the human resources/payroll system that the County will be converting to in 2019.

The Customer Service section continues to overcome the challenges of working on the cloud version of the CC&B (Oracle) Billing system. The Department has converted from the Honolulu Board of Water Supply CC& B system to a cloud based upgraded CC&B system jointly with County of Kauai.

FISCAL YEAR 2018 GOALS AND EXPECTATIONS

- To continue to maintain the Department's financial soundness as demonstrated by an annual independent audit with a clean opinion and with no significant findings.

- To continue to improve the quality (timely, accurate, professional) of services to internal and external customers by training and review of procedures.
- Continue reviewing existing systems and processes and look for ways to streamline worksheets and accounting processes.
- Implementing a bar code system capability for Stores Inventory which will aid in the management of inventory and budgeting. Continue to completely categorize and label shelves properly by fitting type and size at the Molokai warehouse.
- Continue with reorganizing warehouse, eliminating old stock.
- Reassess staffing and assignments which may have changed due to the cloud based billing system. Evaluate positions and descriptions to enable a more efficient and effective process utilizing existing resources.
- Continue with Cloud based billing system.
- Utilize the Network Fleet reports to better utilize our vehicles, meter readers and collectors.
- To continue to test new wireless reading technology for our meter reading program. Pilot program is in process on Molokai. Continue testing new transponder registers used by either drive-by or wireless devices.
- To work with Field Operations to set up large meter testing.
- Increase effective communication throughout the division.
- To participate with the County of Maui in the implementation of a new payroll/personnel system.

ADMINISTRATION

Administration provides overall support to the Department, including management, human resources, and public relations. Administrative staff coordinated meetings and agendas for the Board of Water Supply, prepared daily water supply updates for Upcountry, prepared press releases, maintained the human resources for the Department, and managed the DWS website www.mauewater.org.

Administration personnel worked on workers compensation; relations with unions, position reallocations, promotions, transfers, reorganizations, leave accruals, enforcement of County policies, drug and alcohol testing for UPW employees, and training.

BOARD OF WATER SUPPLY HIGHLIGHTS FOR FY ENDING JUNE 30, 2017

Twelve meetings were held during this period at the Department of Planning Conference Room located at 250 S. High Street, Wailuku.

Board Members Robert Joslin and Michael Suzuki fulfilled their commitment to the Board of Water Supply when their terms ended March 31, 2017. Norman Franco and Michael Nakashima were appointed to the Board of Water Supply effective April 1, 2017 and their terms will end March 31, 2022.

The Board started their review of the Maui Island Water Use and Development Plan in June 2016. They reviewed and approved the proposed bill relating to cross-connection and backflow control and water for fire service ordinance in August. They sent their recommendation to the County Council on August 25, 2016. The Board approved the DWS FY2018 Operating and Capital Improvements Budget on April 20, 2017 and sent their recommendation to the County Council.

During this fiscal year, 2 new appeals were received. The Board heard 3 appeals, 1 was denied (department won), 1 was withdrawn and 1 is still pending as of June 30, 2017.

HUMAN RESOURCES

At the end of FY2017, the Department of Water Supply had a head count of 201 employees. There were 22 new hires, 3 resignations, 1 termination, 8 transfers to other departments, and 9 retirements.

New Hires and Promotions:

The Department of Water Supply welcomed those who were hired and congratulated those who were promoted within FY2017 as follows:

1. Administration:
 - **Gladys C. Baisa** was appointed Deputy Director.
2. Fiscal:

- **Lori Perreira** was promoted from Customer Relations Assistant to Accountant Trainee.
- **Colin Yoshida** was promoted from Meter Reader I to Field Collection Representative
- **Joyce Higuchi** accepted a voluntary demotion to Clerk III
- **Rory Honda** was promoted from Laborer II in Field Operations to Meter Reader I
- **Dell Estudillo** transferred from the State as a Pre-Audit Clerk I
- **Lisa Texeira** was hired as a Cashier II.

3. Engineering

- **Wendy Taomoto** accepted a promotion to Engineering Program Manager. She was previously the CIP Coordinator for the County.
- **Sharon Matsunaga-Berdel** was promoted from a Cashier II in Fiscal to Land Use Permit Clerk
- **Derek Takahashi** accepted a promotional opportunity from Civil Engineer IV at Department of Environmental Management to Civil Engineer V
- **Jordan Molina** was reallocated from Civil Engineer I to Civil Engineer II
- **Kekoa Babcock** was promoted from Water Service Supervisor II in Field Operations to Waterworks Inspector II
- **Kawika Chang** was promoted from Pipefitter I in Field Operations to Waterworks Inspector II
- **Jason Zolotow** was promoted from Water Service Supervisor II in Field Operations to Waterworks Inspector II.

4. Water Resources and Planning

There were no new hires, promotions or reallocations in the Water Resources and Planning Division.

5. Field Operations

- **Allen Purdy** was promoted from Pipefitter II to Water Service Supervisor II
- **Wesley Purdy** was hired as a Pipefitter Helper
- **Kekoa Tom** was hired as a Laborer II
- **Scottie Rapanot** was hired as a Laborer II
- **James Chester** was promoted from Construction Equipment Mechanic I to Construction Equipment Mechanic II
- **Daniel Watanabe** was promoted from Laborer II to Pipefitter Helper
- **Wilbert Pascua** was hired as a Waterworks Maintenance Helper
- **Stacey Quiniones** was hired as a Laborer II
- **Tyson Kauhi** was hired as a Pipefitter Helper
- **Avismarie “Lei” Salzer** transferred from the State to the Clerk III position
- **Jimmy Yanos** was hired as a Pipefitter Helper
- **Rogelio “Roy” Balala** was hired as a Pipefitter Helper
- **Pualani Fukuda** was hired as a Laborer II
- **Cullen Falces** was promoted from Pipefitter I to Water Service Supervisor II

- Automotive Mechanic **Richard Okuda** transferred from the Department of Parks and Recreation to the Department of Water Supply.
6. Water Treatment Plant Operations
 - **David Haddock** was promoted from Water Treatment Plant Operator IV to WTP Operations/Maintenance Supervisor for the west district
 - **Jason Koskey** was reallocated from WTP Operator Trainee to WTP Operator II
 - **Miki Mukai** was hired as a WTP Worker, then reallocated to WTP Operator Trainee
 - **Daniel Paman** was hired as a WTP Worker
 - **Francis “Koa” Martin** was hired as a limited term Water Plant Maintenance Mechanic I.
 7. Plant Operations
 - **Ehren Kimo Ching** was reallocated from Backflow/Cross-Connection Technician I to Backflow/Cross-Connection Technician II
 - **Linette Suehiro** was promoted to Staff Services Assistant. She was previously a Clerk III in Field Operations
 - **Ann Yanagi** was promoted from Laboratory Technician to Water Microbiologist I
 - **Michael Amano** was hired as an Electronic Technician I
 - **Ian Cabatingan** was hired as a Water Plant Maintenance Mechanic Helper

Departures

A total of nine employees retired this year. In Administration, Deputy Director **Paul Meyer** retired (5 years). In the Fiscal Division, Clerk III **Joyce Tsubaki** (10 years) retired. Waterworks Inspectors **Garrick Motooka** (36 years), **Joseph Duarte** (21 years) and **Richard Tawney** (18 years) retired from the Engineering Division. In the Field Operations Division three people retired this year: Water Service Supervisor II **George Medeiros** (36 years), Pipefitter Helper **Arthur Maddela** (15 years) and Construction Equipment Mechanic II **James Almeida** (9 years) retired. Water Plant Maintenance Mechanic Supervisor **Michael Cabral** (30 years) retired.

Resignations included Planner VI **Pamela Townsend** from the Water Resources & Planning Division, Waterworks Inspector **Charles Wire** from the Engineering Division, and **Scottie Rapanot** from Field Operations.

Eight employees transferred to other departments. From the Fiscal Division, Pre-Audit Clerk **JoAnn Nagata** accepted a promotional transfer to the Department of Public Works – Development Services Administration. Cashier II **Helaine Borge** transferred to the Department of Environmental Management – Wastewater Reclamation Division, and Customer Relations Assistant **Naomi Esquivel** transferred to Department of Finance – Division of Motor Vehicles and Licensing. Engineering Support Technician I **James Aarona** accepted a promotional transfer to Department of Planning. Two employees accepted promotional transfers at the Department of Parks & Recreation: Water Plant Maintenance Mechanic Helper **Joshua Meier** and Waterworks Maintenance Helper **Jayson Valdez**. From Plant Operations, Water Microbiologist II **Anne Hill** accepted a promotional transfer to Department of Environmental

Management – Wastewater Reclamation Division. In addition, from Plant Operations, Laboratory Technician I **Travis Barut** transferred to the State.

Perfect Attendance for Calendar Year 2016

The following employees were recognized for perfect attendance for 2016.

Leonore Amano	Warren Sardinha
Michael Cabral	Cari Sumabat
Ray Hirata	Wendy Taomoto
Chris Maeda	Dave Taylor
Michele Sakuma	Colin Yoshida

Employee Recognition

Congratulations to **Scott Rarick** for his nomination as DWS Employee of the Year. Scott is the Upcountry Assistant WTP Operations/Maintenance Supervisor. Scott’s attendance, availability and reliability, whether it be regular or after hours, is highly commendable. He also has a wealth of historical knowledge with his 26 years of employment with the DWS, and is highly innovative and a quick-thinking problem solver.

Congratulations also to Pipefitter I **Helaman Aiwohi** for his nomination for DWS Manager of the Year. Helaman has been performing temporary assignment (TA) to the Central District Water Service Supervisor II position. He is very well organized as he plans and schedules the work for the Department’s largest and busiest district, and maintains composure and flexibility under pressure. Helaman fosters teamwork so that he and his crew efficiently complete projects, saving the county time and expense.

The following employees are to be congratulated for their many years of admirable service:

10 Years

Chris Maeda
Lauren Farmer
Kekoa Babcock
Gladys C. Baisa
Jason Wakamatsu
Rizal Tumacder, Jr.
Helaman Aiwohi
Federico “Pocho” Quitevis
Joyce Tsubaki

15 Years

Sharon Matsunaga-Berdel

20 Years

Celeste Guillermo
Timothy Galbraith

25 Years

Edna Manzano
Dave Taylor

30 Years

Michael Cabral
Joyce Takahashi

35 Years

Cullen Falces

**DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
(A Proprietary Fund of the County of Maui)**

FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION
WITH INDEPENDENT AUDITOR'S REPORT

Fiscal Years Ended June 30, 2017 and 2016



**DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI**

TABLE OF CONTENTS

	<u>Page</u>
INDEPENDENT AUDITOR'S REPORT	46 - 48
FINANCIAL STATEMENTS	
Statements of Net Position	49 - 50
Statements of Revenues, Expenses, and Changes in Net Position	51
Statements of Cash Flows	52 - 53
Notes to Financial Statements	54 - 82
SUPPLEMENTARY INFORMATION	
Schedule I - Schedule of Capital Assets	84
Schedule II - Schedule of Long-Term Debt - General Obligation Bonds	85 - 88

INDEPENDENT AUDITOR'S REPORT

To the Honorable Mike White, Chair,
and Members of the Council
County of Maui
Wailuku, Maui, Hawaii

Report on the Financial Statements

We have audited the accompanying financial statements of the Department of Water Supply of the County of Maui (the Department), a proprietary fund of the County of Maui, as of and for the fiscal years ended June 30, 2017 and 2016, and the related notes to the financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express

no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Department, as of June 30, 2017 and 2016, and the changes in its financial position and its cash flows for the fiscal years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 1, the financial statements of the Department, are intended to present the financial position, the changes in financial position, and cash flows of only that portion of the business-type activities of the County of Maui that is attributable to the transactions of the Department. They do not purport to, and do not present fairly the financial position of the County of Maui as of June 30, 2017 and 2016, the changes in its financial position, or its cash flows for the fiscal years then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Adoption of New Accounting Principle

As discussed in Note 13 to the financial statements, the Department adopted new accounting guidance that clarifies standards for accounting and financial reporting for pensions that are provided to the employees of state and local governmental employers. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Management has omitted management's discussion and analysis, the schedules of proportionate share of net pension liability, contributions, and funding progress, that accounting principles generally accepted in the United States require to be presented to supplement the financial statements. Such missing information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. Our opinion on the financial statements is not affected by this missing information.

Other Information

Our audit was conducted for the purpose of forming an opinion on the Department's financial statements. The supplemental schedules of capital assets and of long-term debt-general obligation bonds as of June 30, 2017, are presented for purposes of additional analysis and are not a required part of the financial statements.

The schedules of capital assets and of long-term debt-general obligation bonds are the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 13, 2017 on our consideration of the Department's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Department's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Department's internal control over financial reporting and compliance.

N&K CPAs, Inc.

Honolulu, Hawaii
December 13, 2017

**Department of Water Supply
County of Maui
STATEMENTS OF NET POSITION
June 30, 2017 and 2016**

	2017	2016 (as restated)
CURRENT ASSETS		
Equity in pooled cash and investments held in County Treasury	\$ 52,515,728	\$ 44,162,398
Customer receivables		
Billed	3,815,384	3,470,475
Less: allowance for doubtful accounts	<u>(76,667)</u>	<u>(141,524)</u>
	3,738,717	3,328,951
Unbilled	<u>3,027,172</u>	<u>2,677,024</u>
Total customer receivables	<u>6,765,889</u>	<u>6,005,975</u>
Materials and supplies	1,534,476	1,411,131
Other current assets	<u>1,556,006</u>	<u>244,832</u>
Total current unrestricted assets	<u>62,372,099</u>	<u>51,824,336</u>
RESTRICTED ASSETS		
Equity in pooled cash and investments held in County Treasury	<u>19,993,443</u>	<u>18,013,522</u>
Total current assets	<u>82,365,542</u>	<u>69,837,858</u>
CAPITAL ASSETS		
Utility plant in service	593,223,938	564,620,814
Less accumulated depreciation	<u>(287,921,052)</u>	<u>(273,532,918)</u>
	305,302,886	291,087,896
Construction work in progress	<u>34,854,382</u>	<u>40,902,841</u>
Total capital assets	<u>340,157,268</u>	<u>331,990,737</u>
TOTAL ASSETS	<u>422,522,810</u>	<u>401,828,595</u>
DEFERRED OUTFLOWS OF RESOURCES		
Deferred outflows of resources related to pensions	12,970,330	3,490,904
Unamortized loss on advanced refunding	<u>158,295</u>	<u>228,730</u>
TOTAL DEFERRED OUTFLOWS OF RESOURCES	<u>13,128,625</u>	<u>3,719,634</u>
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	<u>\$ 435,651,435</u>	<u>\$ 405,548,229</u>

See accompanying notes to financial statements.

**Department of Water Supply
County of Maui
STATEMENTS OF NET POSITION (Continued)
June 30, 2017 and 2016**

	2017	2016 (as restated)
CURRENT LIABILITIES		
Payable from unrestricted current assets		
Bonds payable, current portion	\$ 2,447,357	\$ 2,352,483
Notes payable, current portion	1,318,665	1,301,828
Accounts payable	2,286,694	2,294,685
Accrued vacation, current portion	888,443	817,781
Construction contracts payable, including retainages	646,121	818,919
Claims and judgments	1,676,718	1,239,213
Accrued interest payable	302,353	293,126
Customer advances for utility construction	<u>106,973</u>	<u>40,666</u>
	9,673,324	9,158,701
Payable from restricted assets		
Construction contracts payable, including retainages	2,597,664	2,317,913
Customer deposits	764,306	609,343
Refundable advances	<u>1,000,000</u>	<u>1,000,000</u>
	<u>4,361,970</u>	<u>3,927,256</u>
Total current liabilities	<u>14,035,294</u>	<u>13,085,957</u>
NON-CURRENT LIABILITIES		
Bonds payable, non-current portion	22,083,619	24,932,975
Notes payable, non-current portion	27,849,760	20,957,731
Net pension liability	39,134,359	26,679,011
Accrued vacation, non-current portion	<u>1,292,463</u>	<u>1,226,308</u>
Total non-current liabilities	<u>90,360,201</u>	<u>73,796,025</u>
TOTAL LIABILITIES	<u>104,395,495</u>	<u>86,881,982</u>
DEFERRED INFLOWS OF RESOURCES		
Deferred inflows of resources related to pensions	1,289,870	2,006,618
Unamortized gain on advanced refunding	<u>180,272</u>	<u>450,680</u>
TOTAL DEFERRED INFLOWS OF RESOURCES	<u>1,470,142</u>	<u>2,457,298</u>
NET POSITION		
Net investment in capital assets	288,741,142	284,873,905
Restricted	16,923,769	14,825,370
Unrestricted	<u>24,120,887</u>	<u>16,509,674</u>
TOTAL NET POSITION	<u>329,785,798</u>	<u>316,208,949</u>
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	<u>\$ 435,651,435</u>	<u>\$ 405,548,229</u>

See accompanying notes to financial statements.

**Department of Water Supply
County of Maui
STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
Fiscal Years Ended June 30, 2017 and 2016**

	2017	2016 (as restated)
OPERATING REVENUES		
Water sales	\$ 62,814,311	\$ 59,917,911
Other revenues	<u>818,924</u>	<u>625,701</u>
Total operating revenues	<u>63,633,235</u>	<u>60,543,612</u>
OPERATING EXPENSES		
Depreciation and amortization	14,406,243	16,254,652
Administrative and general	20,547,256	17,899,266
Power and pumping	11,157,903	10,826,084
Transmission and distribution	6,777,635	7,030,067
Purification	6,127,226	6,271,993
Customers' accounting and collection	2,317,896	1,555,614
Source of supply	<u>484,398</u>	<u>1,517,429</u>
Total operating expenses	<u>61,818,557</u>	<u>61,355,105</u>
Operating income (loss)	<u>1,814,678</u>	<u>(811,493)</u>
NONOPERATING REVENUES (EXPENSES)		
Interest expense, net of interest capitalized of \$509,611 for 2017 and \$64,488 for 2016	(389,602)	(919,220)
Interest and investment earnings	<u>785,552</u>	<u>610,572</u>
Total nonoperating revenues (expenses), net	<u>395,950</u>	<u>(308,648)</u>
Income (loss) before capital contributions	2,210,628	(1,120,141)
Capital contributions	<u>11,366,221</u>	<u>6,465,141</u>
Change in net position	13,576,849	5,345,000
NET POSITION		
Beginning of year, as previously reported	316,208,949	311,492,733
Restatement adjustment: cumulative effect of implementation of new accounting standard	<u> --</u>	<u>(628,784)</u>
Beginning of year, as restated	<u>316,208,949</u>	<u>310,863,949</u>
End of year	\$ <u>329,785,798</u>	\$ <u>316,208,949</u>

See accompanying notes to financial statements.

**Department of Water Supply
County of Maui
STATEMENTS OF CASH FLOWS
Fiscal Years Ended June 30, 2017 and 2016**

	<u>2017</u>	<u>2016</u> (as restated)
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from customers and others	\$ 62,859,449	\$ 60,548,141
Payments to suppliers for goods and services	(37,307,583)	(37,087,634)
Payments to employees for services	(8,592,919)	(10,264,298)
Receipts (refunds) of utility construction advances	<u>221,270</u>	<u>(129,123)</u>
Net cash provided by operating activities	<u>17,180,217</u>	<u>13,067,086</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Interest and investment earnings received from investments	<u>785,552</u>	<u>610,572</u>
Net cash provided by investing activities	<u>785,552</u>	<u>610,572</u>
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Cash paid for acquisition of construction of capital assets, including capitalized interest	(18,152,428)	(19,081,112)
Principal paid on bonds and notes	(3,661,394)	(9,203,987)
Proceeds from bonds and notes payable	8,218,402	9,247,860
Cash received from capital contributions	7,455,486	2,996,313
Interest paid on bonds and notes payable	<u>(1,492,584)</u>	<u>(1,608,839)</u>
Net cash used in capital and related financing activities	<u>(7,632,518)</u>	<u>(17,649,765)</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	10,333,251	(3,972,107)
CASH AND CASH EQUIVALENTS AT BEGINNING OF FISCAL YEAR	<u>62,175,920</u>	<u>66,148,027</u>
CASH AND CASH EQUIVALENTS AT END OF FISCAL YEAR	\$ <u>72,509,171</u>	\$ <u>62,175,920</u>
RECONCILIATION OF CASH AND CASH EQUIVALENTS TO THE STATEMENTS OF NET POSITION		
Unrestricted	\$ 52,515,728	\$ 44,162,398
Restricted	<u>19,993,443</u>	<u>18,013,522</u>
	\$ <u>72,509,171</u>	\$ <u>62,175,920</u>

See accompanying notes to financial statements.

**Department of Water Supply
County of Maui
STATEMENTS OF CASH FLOWS (Continued)
Fiscal Years Ended June 30, 2017 and 2016**

	2017	2016 (as restated)
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating income (loss)	\$ 1,814,678	\$ (811,493)
Adjustments to reconcile operating income (loss) to net cash provided by operating activities:		
Depreciation and amortization	14,406,243	16,254,652
Provision for doubtful accounts	(23,843)	26,174
Pension expense	4,532,361	2,257,225
Changes in assets, deferred outflows, liabilities and deferred inflows:		
Customer receivables	(736,071)	(60,068)
Materials and supplies	(123,345)	(186,945)
Other current assets	(1,311,174)	592,543
Deferred outflows of resources related to pensions	(2,273,187)	(2,246,455)
Accounts and construction contracts payable	89,143	(2,820,646)
Claims and judgments	437,505	(205,782)
Other liabilities and deposits	367,907	267,881
Net cash provided by operating activities	\$ 17,180,217	\$ 13,067,086
SUPPLEMENTAL DISCLOSURE OF NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES		
Capital contributions	\$ 3,910,735	\$ 3,468,828
Amortization of deferred loss on refunding	\$ 70,435	\$ 67,731
Amortization of deferred gain on refunding	\$ 270,408	\$ 225,338
Amortization of bond premium	\$ 402,625	\$ 416,544

See accompanying notes to financial statements.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 1 - ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

- (1) **Organization** - The Department of Water Supply (the Department) operates as a proprietary fund in the County of Maui, State of Hawaii (the County), to develop adequate water sources, storage, and transmission for both urban and agricultural uses for the County. The County Charter amendment (effective January 2, 2003) provides the following:
- The Department is a regular County of Maui agency subject to the Mayor's executive management and Council's legislative oversight.
 - The current Board of Directors of the Department is an advisory body (with power to recommend budget proposals and rate adjustments).
 - The Mayor has the power to appoint the Director (with approval of Council).
 - The Department has the responsibility to survey public and private water sources.
 - The Department must prepare and annually update a long-range capital improvement plan (subject to Council approval) and implement such approved plans. The Council has the power to issue general obligation bonds and provide appropriations for capital improvements of the water system.
- (2) **Financial Statement Presentation** - The Department is a proprietary type fund of the County (the primary government). The accompanying financial statements present only the financial position and activities of the Department, and do not purport to, and do not present the financial position of the County, the changes in financial position, or its cash flows in conformity with accounting principles generally accepted in the United States of America (GAAP).
- (3) **Measurement Focus and Basis of Accounting** - The accompanying financial statements are presented using the economic resources measurement focus and the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.
- (4) **Use of Estimates** - The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities, deferred inflows of resources, and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include the carrying amount of capital assets, valuation allowances of receivables, accrued workers' compensation, and post-retirement benefits. Actual results could differ from those estimates.
- (5) **Cash Equivalents** - For purposes of the statements of cash flows, the Department considers all equity in pooled cash and investments held in the County's Treasury (including restricted assets) to be cash equivalents.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

**NOTE 1 - ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Continued)**

- (6) **Cash and Investments** - The Department's cash and investments are maintained in an investment pool with the County's Treasury. The Department's share of the pooled cash and investments and income and losses arising from the investment activity of the pool are allocated to the Department based on the percentage of the Department's total cash and investment balance to the total cash and investments maintained by the County's Treasury.

Investments in time certificates of deposits and repurchase agreements are carried at cost, which approximates fair value. Investments in U.S. Treasury, U.S. agencies obligations, and commercial paper are reported at fair value.

- (7) **Customer Receivables and Allowance for Doubtful Accounts** - Customer receivables are net of an allowance for doubtful accounts. The Department considers accounts delinquent once they have reached 31 days past due. Management charges off uncollectible customer receivables to expense and turns over delinquent accounts for collection when it is determined the amounts will not be realized. The allowance for doubtful accounts is based on the Department's prior experience of collections.

Total accounts receivable past due for over 90 days amounted to approximately \$266,000 and \$259,000 as of June 30, 2017 and 2016, respectively.

- (8) **Materials and Supplies** - Materials and supplies are stated at weighted average cost (which approximates the first-in, first-out method). The cost of materials and supplies are recorded as expenses when consumed rather than when purchased.
- (9) **Restricted Assets** - Funds received by the Department, which are refundable or restricted as to use, are recorded as restricted assets.
- (10) **Capital Assets** - Utility plant in service is stated at cost and include contributions by governmental agencies, private developers, and customers at their cost or estimated cost. Capital assets include individual assets or group of similar assets with an initial cost of more than \$5,000 and an estimated useful life in excess of one year.

Major replacements, renewals and betterments are capitalized. Interest costs are capitalized during the construction period of major capital projects. Maintenance, repairs, and replacements that do not improve or extend lives of the assets are charged to expense. Gains or losses resulting from the sale, retirement, or disposal of utility plant are charged or credited to operations.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

**NOTE 1 - ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Continued)**

Depreciation is computed over the estimated useful lives of the individual assets using the straight-line method. The estimated useful lives of the utility plant's capital assets are as follows:

Office equipment	5 - 20 years
Transportation and construction equipment	5 - 10 years
Improvements	10 - 50 years

- (11) **Debt Premium and Discounts** - Debt premium and discounts arising from the issuance of debt securities are amortized over the terms of the related issues on the bonds outstanding method. Amortization of debt premiums is recorded as a reduction of interest expense.
- (12) **Deferred Amounts on Advance Refundings** - For advance refunding resulting in defeasance of debt, the difference between the reacquisition price and the carrying amount of the old debt is deferred. This amount is amortized as a component of interest expense using the bonds outstanding method over the remaining life of the old debt or the life of the new, whichever is shorter. The amount deferred is reported as a deferred inflow or outflow of resources.
- (13) **Compensated Absences** - Employees earn vacation benefits at one and three-quarters working days for each month of service. Each employee is allowed to accumulate a maximum of 90 days of vacation as of the end of the calendar year. Unused vacation benefits are converted to pay upon termination of employment.
- (14) **Deferred Outflows of Resources and Deferred Inflows of Resources** - Deferred outflows of resources represent a consumption of net position that applies to a future period and will not be recognized as an outflow of resources (expense or expenditure) until that time. Deferred inflows of resources represent an acquisition of net position that applies to a future period and will not be recognized as an inflow of resources (revenue) until that time.
- (15) **Net Position** - Net position represents the difference between assets and deferred outflows of resources less liabilities and deferred inflows of resources. The three components of net position are defined as follows:
- *Net investment in capital assets* - This component of net position consists of capital assets, net of accumulated depreciation, and reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. If there are any significant unspent related debt proceeds at fiscal year-end, the portion of the debt attributable to the unspent proceeds are not included in the calculation of net investment in capital assets. Rather, that portion of debt is included in the same net position component as the unspent proceeds.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

**NOTE 1 - ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Continued)**

- *Restricted* - This component of net position consists of constraints placed on net position use through external constraints imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments or constraints imposed by law through constitutional provisions or enabling legislation. The Department's policy is generally to use restricted net position first, as appropriate opportunities arise.
- *Unrestricted* - This component of net position consists of net position that does not meet the definition of "restricted" or "net investment in capital assets."

(16) **Operating Revenues and Expenses** - Revenues and expenses are distinguished between operating and non-operating.

- **Operating Revenues** - Operating revenues generally result from providing goods and services in connection with the Department's principal ongoing operations. The principal operating revenues of the Department are fees for water service.

The Department's policy is to bill customers on a monthly basis for water usage. An estimated accrual for unbilled water revenues to the end of the fiscal period is made based on prorated actual usage from the first meter reading date subsequent to June 30th.

- **Operating Expenses** - Operating expenses include the costs associated with production, treatment, and transmission of water, including administrative expenses and depreciation on capital assets.

All revenues and expenses not meeting these definitions are reported as non-operating revenues and expenses.

(17) **Water System Development Fee** - A water system development fee is levied against all new developments requiring water from the Department's systems, except those developments that have paid for and installed a complete water system, including source, transmission, and daily storage facilities. The amounts collected, net of costs incurred for water credits used to acquire additional water supply, are recorded as capital contributions.

(18) **Capital Contributions** - The Department receives Federal and State of Hawaii grants to pay for portions of construction costs related to various capital projects. The Department also receives development fees and dedications of infrastructure assets for various developments. The amounts received are recorded as capital contributions in the accompanying statements of revenues, expenses, and changes in net position.

(19) **Pensions** - For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions and pension expense, information about the fiduciary net position of the Employees' Retirement System of the State of Hawaii (ERS) and additions to/deductions from the ERS's fiduciary net

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

**NOTE 1 - ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Continued)**

position have been determined on the same basis as they are reported by the ERS. For this purpose, employer and employee contributions are recognized in the period in which the contributions are legally due and benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at their fair value.

- (20) ***New Accounting Pronouncements*** - The Government Accounting Standards Board (the "GASB") issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The Statement replaces GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*. The Statement will require the liability of employers for defined benefit OPEB to be measured as the portion of the present value of projected benefit payments to be provided to current active and inactive employees that is attributed to those employees' past periods of service, less the amount of the OPEB plan's fiduciary net position. The requirements of this Statement are effective for fiscal years beginning after June 15, 2017. Management has not yet determined the effect this Statement will have on the Department's financial statements, but anticipate that it will materially impact the Department's financial statements.

The GASB issued Statement No. 82, *Pension Issues an amendment of GASB Statements No. 67, No. 68, and No. 73*. This Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The requirements of this Statement are effective for reporting periods beginning after June 15, 2016, except for the requirements of this Statement for the selection of assumptions in a circumstance in which an employer's pension liability is measured as of a date other than the employer's most recent fiscal year-end. In that circumstance, the requirements for the selection of assumptions are effective for that employer in the first reporting period in which the measurement date of the pension liability is on or after June 15, 2017. Management has adopted the applicable requirements of the new standard as presented in the Department's financial statements.

The GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. This Statement addresses accounting and financial reporting for certain asset retirement obligations ("AROs"). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this Statement. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. Management has not yet determined the effect this Statement will have on the Department's financial statements.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

**NOTE 1 - ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(Continued)**

The GASB issued Statement No. 85, *Omnibus 2017*. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits [OPEB]). The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. Management has not yet determined the effect this Statement will have on the Department's financial statements.

The GASB issued Statement No. 87, *Leases*. This Statement requires the recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. Management has not yet determined the effect this Statement will have on the Department's financial statements.

NOTE 2 - CASH AND INVESTMENTS

The Department's cash and investments are maintained with the County's Treasury in a cash and investment pool available for use by all of the County's funds. At June 30, 2017 and 2016, the amounts reported on the statements of net position as equity in pooled cash and investments held in County Treasury represents the Department's relative position in the County's cash and investment pool and amounted to \$72,509,171 and \$62,175,920, respectively.

County's Investment Policy

State statutes authorize the County to invest in obligations of the U.S. Treasury and U.S. agency securities, obligations of the State of Hawaii and the County, bank repurchase agreements, and commercial paper. It is the County's policy to invest in accordance with the Hawaii Revised Statutes (HRS).

Specific requirements under the HRS are as follows:

- With the exception of U.S. Treasury securities, no more than 50% of the County's investment portfolio will be invested in a single type of security or financial institution.
- Investment maturities are not to exceed five years.
- Investments are required to be rated Aaa by Moody's and AAA by Standard and Poor's.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 2 - CASH AND INVESTMENTS (Continued)

For purpose of the disclosures required by GASB, all time certificates of deposits regardless of maturity are considered deposits and all repurchase agreements and money market investments are considered investments.

Investment Risk - The investments are subject to certain types of risk, including interest rate risk, credit quality risk, concentration of credit risk, custodial credit risk, and foreign currency risk.

Interest Rate Risk - Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The County has a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Credit Risk - Credit risk is the risk that an issuer or counterparty to an investment will not fulfill its obligation. The County's investment policy limits investments in state and U.S. Treasury securities, time certificates of deposits, U.S. government or agency obligations, repurchase agreements, commercial paper, bankers' acceptances, and money market funds.

Concentration of Credit Risk - Concentration of credit risk is the risk of loss attributable to the magnitude of the County's investments in a single issuer or investment. The County diversifies its investments to minimize such risk.

Custodial Credit Risk - Custodial credit risk is the risk that in the event of failure of the counterparty to an investment, the County would not be able to recover the value of investment or collateral securities that are in the possession of an outside party. All of the County's investments are either insured or held by an agent in the name of the County, including the investment collateral underlying the repurchase agreements.

Custodial credit risk for bank depository accounts is the risk that in the event of a bank failure, the County's deposits may not be returned. It is the County's policy to place its bank deposits with State of Hawaii high credit quality financial institutions that are able to meet the collateral requirements for the County's deposits. As of June 30, 2017 and 2016, all of the County's time certificates of deposits and cash deposits were insured and collateralized.

Foreign Currency Risk - The risk that changes in exchange rates will adversely affect the fair value of an investment. As of June 30, 2017 and 2016, the investments in the County's investment pool were not subject to foreign currency risk.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 2 - CASH AND INVESTMENTS (Continued)

Pooled Cash and Investments Held in County Treasury

Information relating to individual bank balances, insurance, and collateral of cash deposits is determined on a county-wide basis and not for individual departments and funds. Information regarding the carrying amount and corresponding bank balances of the County's cash and investment pool and collateralization of those balances is included in the County's comprehensive annual financial report.

The Department's share of the County's cash and investment pool, as summarized in the tables below was approximately 21.0% and 18.7% at June 30, 2017 and 2016, respectively.

As of June 30, 2017, the County's cash and investments were as follows:

Type of Investment	% Yield	Maturity				Premiums (Discounts)	Fair Value
		Under 30 Days	31 - 180 Days	181 - 365 Days	1 - 5 Years		
Federal National Mortgage Association Coupon Notes	1.21 - 2.00	\$ --	\$ --	\$ --	\$ 47,955,000	\$ 20,632	\$ 47,975,632
Federal Home Loan Bank Bank Notes	0.86 - 2.21	--	--	12,000,000	47,500,000	17,764	59,517,764
Federal Farm Credit Bank Notes	0.94	--	4,000,000	--	--	621	4,000,621
Federal Agricultural Mortgage Corporation Notes	0.64 - 0.88	5,000,000	--	14,000,000	--	30	19,000,030
Federal Home Loan Mortgage Corporation Notes	0.90 - 2.40	--	--	--	35,630,000	(17,832)	35,612,168
U.S. Treasury Strips	1.38 - 1.94	--	--	--	5,000,000	(224,237)	4,775,763
U.S. Treasury Notes	0.97 - 1.78	--	2,800,000	--	2,000,000	(10,141)	4,789,859
State and County obligations	0.76 - 2.23	--	--	--	25,855,000	138,256	25,993,256
Commercial Paper	1.32	--	<u>6,000,000</u>	--	--	<u>(7,260)</u>	<u>5,992,740</u>
Total investments		\$ <u>5,000,000</u>	\$ <u>12,800,000</u>	\$ <u>26,000,000</u>	\$ <u>163,940,000</u>	\$ <u>(82,167)</u>	207,657,833
Type of Deposits							
Various certificates of deposit	0.10 - 2.30	\$ <u>2,500,000</u>	\$ <u>3,997,000</u>	\$ <u>6,350,000</u>	\$ <u>73,159,241</u>		<u>86,006,241</u>
							Total investments and certificates of deposit
							293,664,074
							Cash on hand and deposits
							<u>50,928,105</u>
							Total equity in pooled cash and investments
							\$ <u>344,592,179</u>

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 2 - CASH AND INVESTMENTS (Continued)

As of June 30, 2016, the County's cash and investments were as follows:

Type of Investment	% Yield	Maturity				Premiums (Discounts)	Fair Value
		Under 30 Days	31 - 180 Days	181 - 365 Days	1 - 5 Years		
Federal National Mortgage Association Coupon Notes	0.67 - 1.73	\$ 2,000,000	\$ 1,000,000	\$ 11,500,000	\$ 27,500,000	\$ 307,314	\$ 42,307,314
Federal Home Loan Bank Bank Notes	0.76 - 2.00	--	--	3,500,000	50,225,000	(970)	53,724,030
Federal Farm Credit Bank Notes	0.75 - 0.94	--	--	750,000	4,000,000	3,036	4,753,036
Federal Agricultural Mortgage Corporation Notes	0.64 - 0.88	--	100,000	--	19,000,000	599	19,100,599
Federal Home Loan Mortgage Corporation Notes	0.90 - 1.91	--	--	3,000,000	21,500,000	3,858	24,503,858
U.S. Treasury Strips	1.399	--	--	--	3,000,000	(84,989)	2,915,011
U.S. Treasury Notes	0.97 - 1.19	--	--	825,000	2,800,000	(23,837)	3,601,163
State and County obligations	0.76 - 2.04	--	--	--	21,400,000	90,941	21,490,941
Total investments		\$ <u>2,000,000</u>	\$ <u>1,100,000</u>	\$ <u>19,575,000</u>	\$ <u>149,425,000</u>	\$ <u>295,952</u>	172,395,952
Type of Deposits							
Various certificates of deposit	0.10 - 2.30	\$ --	\$ --	\$ --	\$ 89,429,686		89,429,686
							Total investments and certificates of deposit
							261,825,638
							Cash on hand and deposits
							69,889,618
							Total equity in pooled cash and investments
							\$ <u>331,715,256</u>

Unrestricted equity in pooled cash and investments held in County Treasury at June 30, 2017 and 2016 include funds for the following purposes:

	<u>2017</u>	<u>2016</u>
Board-designated		
Capital improvements	\$ 8,409,188	\$ 14,073,479
Debt service	<u>1,690,267</u>	<u>1,655,883</u>
Total board-designated	10,099,455	15,729,362
Undesignated	<u>42,416,273</u>	<u>28,433,036</u>
Total	\$ <u>52,515,728</u>	\$ <u>44,162,398</u>

At June 30, 2017 and 2016, construction contract payables, including retentions, to be paid with board-designated funds were approximately \$600,000 and \$800,000, respectively. Construction contract commitments as of June 30, 2017 and 2016, to be paid with board-designated funds, aggregated approximately \$4.6 million and \$5.9 million, respectively. There are no amounts included in the construction contract commitment amounts for 2017 for maintenance of compliance-order projects and no amounts included for management's estimates needed in anticipation of future regulations for compliance.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 2 - CASH AND INVESTMENTS (Continued)

Restricted equity in pooled cash and investments held in County Treasury consisted of the following at June 30, 2017 and 2016:

	2017	2016
Water system development fee	\$ 10,016,697	\$ 8,657,633
State funds	6,440,718	5,000,000
Bond funds	2,305,252	2,650,134
Customer deposits	764,423	609,286
Special assessment fund for storage	273,829	273,829
Source development fund assessments	192,524	205,525
Federal funds	--	605,529
Construction fund	--	11,586
Total	\$ <u>19,993,443</u>	\$ <u>18,013,522</u>

At June 30, 2017 and 2016, construction voucher and contract payables, including retentions, to be paid with restricted assets were approximately \$2.6 million and \$2.3 million, respectively. Construction contract commitments as of June 30, 2017 and 2016, to be paid with restricted assets, aggregated approximately \$28.0 million and \$14.2 million, respectively.

NOTE 3 - FAIR VALUE MEASUREMENTS

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1) and the lowest priority to unobservable inputs (level 3). The three levels of the fair value hierarchy are described as follows:

Level 1 - Inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that a government can access at the measurement date. An active market is a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2 - Inputs other than quoted prices included within level 1 that are observable for an asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, a level 2 input must be observable for most of the full term of the asset or liability. Level 2 inputs include:

- Quoted prices for similar assets or liabilities in active markets,
- Quoted prices for identical or similar assets or liabilities in markets that are not active,

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 3 - FAIR VALUE MEASUREMENTS (Continued)

- Inputs other than quoted prices that are observable for the asset or liability,
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 - Inputs are unobservable for an asset or liability.

Following is a description of the valuation techniques used by the Department to measure fair value:

U.S. Treasury obligations: Valued using quoted prices in active markets for identical assets.

U.S. Government agency obligations, State and County obligations, and commercial paper: Valued using quoted prices for identical or similar assets in markets that are not active.

The following table sets forth by level, within the fair value hierarchy, assets measured at fair value on a recurring basis as of June 30, 2017 and 2016:

	Assets at Fair Value at June 30, 2017			
	Total	Level 1	Level 2	Level 3
U. S. Treasury obligations	\$ 9,565,622	\$ 9,565,622	\$ --	\$ --
U. S. Government agencies	166,106,215	--	166,106,215	--
State and County obligations	25,993,256	--	25,993,256	--
Commercial Paper	<u>5,992,740</u>	<u>--</u>	<u>5,992,740</u>	<u>--</u>
	<u>\$ 207,657,833</u>	<u>\$ 9,565,622</u>	<u>\$ 198,092,211</u>	<u>\$ --</u>

	Assets at Fair Value at June 30, 2016			
	Total	Level 1	Level 2	Level 3
U. S. Treasury obligations	\$ 6,516,174	\$ 6,516,174	\$ --	\$ --
U. S. Government agencies	144,388,837	--	144,388,837	--
State and County obligations	<u>21,490,941</u>	<u>--</u>	<u>21,490,941</u>	<u>--</u>
	<u>\$ 172,395,952</u>	<u>\$ 6,516,174</u>	<u>\$ 165,879,778</u>	<u>\$ --</u>

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 4 - RESTRICTED NET POSITION

At June 30, 2017 and 2016, restricted net position consisted of the following:

	<u>2017</u>	<u>2016</u>
Water system development fee	\$ 10,016,697	\$ 8,657,633
Special assessment fund for storage	273,829	273,829
Source development fund assessments	192,525	205,525
Other restricted funds	<u>6,440,718</u>	<u>5,688,383</u>
Total	\$ <u>16,923,769</u>	\$ <u>14,825,370</u>

NOTE 5 - CAPITAL CONTRIBUTIONS

Capital contributions during the fiscal years ended June 30, 2017 and 2016, were as follows:

	<u>2017</u>	<u>2016</u>
Dedication of infrastructure assets	\$ 3,910,735	\$ 3,468,828
Source development fund assessments	2,582,826	1,350,067
Other	<u>4,872,660</u>	<u>1,646,246</u>
Total	\$ <u>11,366,221</u>	\$ <u>6,465,141</u>

NOTE 6 - CAPITAL ASSETS

Capital assets activity during the fiscal year ended June 30, 2017, was as follows:

	<u>Balance July 1, 2016</u>	<u>Additions</u>	<u>Reductions/ Retirements</u>	<u>Balance June 30, 2017</u>
Non-depreciable assets				
Land	\$ 7,347,248	\$ 557,811	\$ --	\$ 7,905,059
Construction in progress	<u>40,902,841</u>	<u>17,376,011</u>	<u>(23,424,470)</u>	<u>34,854,382</u>
	<u>48,250,089</u>	<u>17,933,822</u>	<u>(23,424,470)</u>	<u>42,759,441</u>
Depreciable assets				
Buildings and systems	143,618,677	16,968,030	--	160,586,707
Machinery and equipment	402,411,980	10,907,609	(18,109)	413,301,480
Other	<u>11,242,909</u>	<u>187,783</u>	<u>--</u>	<u>11,430,692</u>
	<u>557,273,566</u>	<u>28,063,422</u>	<u>(18,109)</u>	<u>585,318,879</u>
Accumulated depreciation				
Buildings and systems	68,444,677	3,510,578	--	71,955,255
Machinery and equipment	200,740,734	10,669,893	(18,109)	211,392,518
Other	<u>4,347,507</u>	<u>225,772</u>	<u>--</u>	<u>4,573,279</u>
	<u>273,532,918</u>	<u>14,406,243</u>	<u>(18,109)</u>	<u>287,921,052</u>
Total Capital Assets	\$ <u>331,990,737</u>	\$ <u>31,591,001</u>	\$ <u>(23,424,470)</u>	\$ <u>340,157,268</u>

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 6 - CAPITAL ASSETS (Continued)

Capital assets activity during the fiscal year ended June 30, 2016, was as follows:

	Balance July 1, 2015	Additions	Reductions/ Retirements	Balance June 30, 2016
Non-depreciable assets				
Land	\$ 6,931,003	\$ 416,245	\$ --	\$ 7,347,248
Construction in progress	<u>45,327,370</u>	<u>18,977,928</u>	<u>(23,402,457)</u>	<u>40,902,841</u>
	<u>52,258,373</u>	<u>19,394,173</u>	<u>(23,402,457)</u>	<u>48,250,089</u>
Depreciable assets				
Buildings and systems	133,685,739	9,932,938	--	143,618,677
Machinery and equipment	386,659,609	16,381,217	(628,846)	402,411,980
Other	<u>10,929,090</u>	<u>313,819</u>	<u>--</u>	<u>11,242,909</u>
	<u>531,274,438</u>	<u>26,627,974</u>	<u>(628,846)</u>	<u>557,273,566</u>
Accumulated depreciation				
Buildings and systems	64,129,554	4,315,123	--	68,444,677
Machinery and equipment	189,541,575	11,822,743	(623,584)	200,740,734
Other	<u>4,230,721</u>	<u>116,786</u>	<u>--</u>	<u>4,347,507</u>
	<u>257,901,850</u>	<u>16,254,652</u>	<u>(623,584)</u>	<u>273,532,918</u>
Total Capital Assets	\$ <u>325,630,961</u>	\$ <u>29,767,495</u>	\$ <u>(23,407,719)</u>	\$ <u>331,990,737</u>

NOTE 7 - LONG-TERM LIABILITIES

A summary of changes in long-term liabilities of the Department of Water Supply for the fiscal year ended June 30, 2017, are as follows:

	Balance July 1, 2016	Additions	Reductions	Balance June 30, 2017	Due Within One Year
Bonds payable	\$ 27,285,458	\$ --	\$ 2,754,482	\$ 24,530,976	\$ 2,447,357
Notes payable	22,259,559	8,218,402	1,309,536	29,168,425	1,318,665
Accrued vacation payable	2,044,089	969,524	832,707	2,180,906	888,443
Net pension liability	26,679,011	14,666,410	2,211,062	39,134,359	--
Claims and judgments	<u>1,239,213</u>	<u>951,870</u>	<u>514,365</u>	<u>1,676,718</u>	<u>1,676,718</u>
Total	\$ <u>79,507,330</u>	\$ <u>24,806,206</u>	\$ <u>7,622,152</u>	\$ <u>96,691,384</u>	\$ <u>6,331,183</u>

A summary of changes in long-term liabilities of the Department of Water Supply for the fiscal year ended June 30, 2016, are as follows:

	Balance July 1, 2015	Additions	Reductions	Balance June 30, 2016	Due Within One Year
Bonds payable	\$ 29,945,670	\$ 6,255,413	\$ 8,915,625	\$ 27,285,458	\$ 2,352,483
Notes payable	20,468,900	2,992,447	1,201,788	22,259,559	1,301,828
Accrued vacation payable	2,009,060	838,796	803,767	2,044,089	817,781
Net pension liability	24,207,754	4,677,687	2,206,430	26,679,011	--
Claims and judgments	<u>1,444,995</u>	<u>314,863</u>	<u>520,645</u>	<u>1,239,213</u>	<u>1,239,213</u>
Total	\$ <u>78,076,379</u>	\$ <u>15,079,206</u>	\$ <u>13,648,255</u>	\$ <u>79,507,330</u>	\$ <u>5,711,305</u>

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 8 - BONDS PAYABLE

At June 30, 2017 and 2016, bonds payable consisted of the following:

	<u>2017</u>	<u>2016</u>
General Obligation Refunding Bonds, 2008 Series A, due in annual installments through 2028, interest payable semi-annually at 3.5%. These bonds were partially refunded by 2015 Series D bonds.	\$ 273,458	\$ 537,113
General Obligation Refunding Bonds, 2010 Series B, due in annual installments through 2021, interest payable semi-annually from 4.0% to 5.0%.	1,635,722	2,003,610
General Obligation Refunding Bonds, 2012 Series B, due in annual installments through 2032, interest payable semi-annually from 2.1% to 5.0%.	3,420,727	3,582,283
General Obligation Refunding Bonds, 2012 Series C, due in annual installments through 2023, interest payable semi-annually from 4.0% to 5.0%.	5,795,000	6,605,000
General Obligation Refunding Bonds, 2014 Series C, due in annual installments through 2034, interest payable semi-annually from 3.0% to 5.0%.	6,080,000	6,315,000
General Obligation Refunding Bonds, 2015 Series B, due in annual installments through 2020, interest payable semi-annually at 5.0%.	1,645,365	2,159,124
General Obligation Refunding Bonds, 2015 Series D, due in annual installments through 2027, interest payable semi-annually from 3.0% to 5.0%.	<u>3,269,112</u>	<u>3,269,112</u>
	22,119,384	24,471,242
Less current portion	<u>(2,447,357)</u>	<u>(2,352,483)</u>
	19,672,027	22,118,759
Unamortized premium	<u>2,411,592</u>	<u>2,814,216</u>
Noncurrent portion	\$ <u>22,083,619</u>	\$ <u>24,932,975</u>

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 8 - BONDS PAYABLE (Continued)

Future bond principal and interest payments are as follows:

<u>Fiscal Year Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2018	\$ 2,447,357	\$ 929,787	\$ 3,377,144
2019	2,578,898	807,512	3,386,410
2020	2,705,708	681,528	3,387,236
2021	2,232,697	564,404	2,797,101
2022	1,889,184	456,711	2,345,895
2023 - 2027	5,967,462	1,228,995	7,196,457
2028 - 2032	3,383,078	466,653	3,849,731
2033 - 2034	<u>915,000</u>	<u>44,850</u>	<u>989,850</u>
Total	\$ <u>22,119,384</u>	\$ <u>5,180,440</u>	\$ <u>27,299,824</u>

In September 2015, the County issued \$60,155,000 in general obligation bonds which consisted of \$15,185,000 of 2015 Series A, \$14,520,000 of 2015 Series B bonds, \$6,965,000 in 2015 Series C bonds and \$23,485,000 in 2015 Series D bonds. The proceeds of the issuance were used to prepay the County's outstanding loan from the United States Department of Agriculture, refund all of the outstanding Series 2005 bonds and to defease and advance refund the County's Series 2008 bonds. Consequently, the Series 2005 bonds and the Series 2008 bonds were considered defeased and were removed from the County's and Departments' financial statements in 2016. This refunding was undertaken to reduce total debt service payments by approximately \$6,027,000 and resulted in an economic gain of approximately \$5,304,000. At June 30, 2017 and 2016, the County's and Departments' defeased bonds totaled \$25,590,000 and \$44,795,000, respectively.

NOTE 9 - NOTES PAYABLE

At June 30, 2017 and 2016, notes payable consisted of the following:

	<u>2017</u>	<u>2016</u>
Notes payable to State of Hawaii, Department of Health		
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.37%, and loan fee rate of 3.25%, maturing in 2029.	\$ 1,119,576	\$ 1,210,648
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.00%, and loan fee rate of 3.25%, maturing in 2031.	<u>484,191</u>	<u>518,776</u>
Balance forward	\$ 1,603,767	\$ 1,729,424

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 9 - NOTES PAYABLE (Continued)

	2017	2016
Notes payable to State of Hawaii, Department of Health (Continued)		
Balance carried forward	\$ 1,603,767	\$ 1,729,424
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.35%, and loan fee rate of 3.25%, maturing in 2032.	2,597,282	2,771,600
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.00%, and loan fee rate of 3.25%, maturing in 2032.	847,145	905,569
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2032.	187,944	199,510
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.50%, and loan fee rate of 1.00%, maturing in 2033.	1,745,402	1,846,775
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2033.	706,401	746,910
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.00%, and loan fee rate of 1.00%, maturing in 2033.	<u>6,599,623</u>	<u>7,012,100</u>
Balance forward	\$ 14,287,564	\$ 15,211,888

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 9 - NOTES PAYABLE (Continued)

	<u>2017</u>	<u>2016</u>
Notes payable to State of Hawaii, Department of Health (Continued)		
Balance carried forward	\$ 14,287,564	\$ 15,211,888
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.50%, and loan fee rate of 1.00%, maturing in 2034.	3,671,885	3,884,885
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2034.	1,774,529	1,742,051
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2035.	636,961	641,313
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2035.	694,199	637,205
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2034.	134,743	142,217
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2038.	<u>179,179</u>	<u>--</u>
Balance forward	\$ 21,379,060	\$ 22,259,559

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 9 - NOTES PAYABLE (Continued)

	2017	2016
Notes payable to State of Hawaii, Department of Health (Continued)		
Balance carried forward	\$ 21,379,060	\$ 22,259,559
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.50%, and loan fee rate of 1.00%, maturing in 2038.	2,081,786	--
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2038.	1,078,530	--
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 1.00%, and loan fee rate of 1.00%, maturing in 2038.	485,388	--
Note payable to State Revolving Loan Fund for a capital improvement project, payable in semi-annual installments of principal, interest at a rate of 0.00%, and loan fee rate of 1.00%, maturing in 2039.	<u>4,143,661</u>	--
	29,168,425	22,259,559
Less current maturities	<u>(1,318,665)</u>	<u>(1,301,828)</u>
	<u>\$ 27,849,760</u>	<u>\$ 20,957,731</u>

As of June 30, 2017, future principal and interest payments for notes payables are as follows:

<u>Fiscal Year Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2018	\$ 1,318,665	\$ 500,184	\$ 1,818,849
2019	1,408,727	482,157	1,890,884
2020	1,597,058	453,835	2,050,893
2021	1,702,522	422,942	2,125,464
2022	1,711,829	391,640	2,103,469
2023 - 2027	8,703,298	1,481,466	10,184,764
2028 - 2032	8,509,212	683,882	9,193,094
2033 - 2037	3,530,404	148,967	3,679,371
Thereafter	<u>686,710</u>	<u>8,723</u>	<u>695,433</u>
Total	<u>\$ 29,168,425</u>	<u>\$ 4,573,796</u>	<u>\$ 33,742,221</u>

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS

Pensions

Pension Plan Description - Generally, all full-time employees of the State and counties are required to be members of the Employee Retirement System (ERS), a cost-sharing multiple-employer defined benefit pension plan that administers the State's pension benefits program. Benefits, eligibility, and contribution requirements are governed by HRS Chapter 88 and can be amended through legislation. The ERS issues a publicly available financial report that can be obtained at ERS website: <http://ers.ehawaii.gov/>.

Benefits Provided - The ERS Pension Trust is comprised of three pension classes for membership purposes and considered to be a single plan for accounting purposes since all assets of the ERS may legally be used to pay the benefits of any of the ERS members or beneficiaries. The ERS provides retirement, disability and death benefits with three membership classes known as the noncontributory, contributory and hybrid retirement classes. The three classes provide a monthly retirement allowance equal to the benefit multiplier (generally 1.25% or 2%) multiplied by the average final compensation multiplied by years of credited service. Average final compensation for members hired prior to July 1, 2012 is an average of the highest salaries during any three years of credited service, excluding any salary paid in lieu of vacation for members hired January 1, 1971 or later and the average of the highest salaries during any five years of credited service including any salary paid in lieu of vacation for members hired prior to January 1, 1971. For members hired after June 30, 2012, average final compensation is an average of the highest salaries during any five years of credited service excluding any salary paid in lieu of vacation.

Each retiree's original retirement allowance is increased on each July 1 beginning the calendar year after retirement. Retirees first hired as members prior to July 1, 2012 receive a 2.5% increase each year of their original retirement allowance without a ceiling. Retirees first hired as members after June 30, 2012 receive a 1.5% increase each year of their original retirement allowance without a ceiling. The annual increase is not compounded.

The following summarizes the provisions relevant to the largest employee groups of the respective membership class.

Retirement benefits for certain groups, such as police officers, firefighters, some investigators, sewer workers, judges, and elected officials, vary from general employees.

Noncontributory Class

Retirement Benefits - General employees' retirement benefits are determined as 1.25% of average final compensation multiplied by the years of credited service. Employees with ten years of credited service are eligible to retire at age 62. Employees with 30 years of credited service are eligible to retire at age 55.

Disability Benefits - Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 35% of their average final compensation. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined in the same manner as retirement benefits but are payable immediately, without an actuarial reduction, and at a minimum of 12.5% of average final compensation.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

Death Benefits - For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a monthly benefit of 30% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. Additional benefits are payable to surviving dependent children up to age 18. If there is no spouse/reciprocal beneficiary or dependent children, no benefit is payable.

Ordinary death benefits are available to employees who were active at time of death with at least ten years of credited service. The surviving spouse/reciprocal beneficiary (until remarriage/reentry into a new reciprocal beneficiary relationship) and dependent children (up to age 18) receive a benefit equal to a percentage of the member's accrued maximum allowance unreduced for age or, if the member was eligible for retirement at the time of death, the surviving spouse/reciprocal beneficiary receives 100% joint and survivor lifetime pension and the dependent children receive a percentage of the member's accrued maximum allowance unreduced for age.

Contributory Class for Employees Hired prior to July 1, 2012

Retirement Benefits - General employees' retirement benefits are determined as 2% of average final compensation multiplied by the years of credited service. General employees with 5 years of credited service are eligible to retire at age 55.

Police officers and firefighters' retirement benefits are determined using the benefit multiplier of 2.5% for qualified service, up to a maximum of 80% of average final compensation. Police officers and firefighters with five years of credited service are eligible to retire at age 55. Police officers and firefighters with 25 years of credited service are eligible to retire at any age, provided the last five years is service credited in these occupations.

Death Benefits - For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a lump sum payment of the member's contributions and accrued interest plus a monthly benefit of 50% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. If there is no surviving spouse/reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents are eligible for the monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit is payable to the designated beneficiary.

Ordinary death benefits are available to employees who were active at time of death with at least one year of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least ten years of service and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

Contributory Class for Employees Hired After June 30, 2012

Retirement Benefits - General employees' retirement benefits are determined as 1.75% of average final compensation multiplied by the years of credited service. General employees with ten years of credited service are eligible to retire at age 60. Judges and elected officers' retirement benefits are determined as 3.0% of average final compensation multiplied by the years of credited service up to a maximum of 75%. Judges and elected officers with ten years of credited service are eligible to retire at age 60.

Police officers and firefighters' retirement benefits are determined using the benefit multiplier of 2.25% for qualified service, up to a maximum of 80% of average final compensation. Police officers and firefighters with ten years of credited service are eligible to retire at age 60. Police officers and firefighters with 25 years of credited service are eligible to retire at age 55, provided the last five years is service credited in these occupations.

Disability and Death Benefits - Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 50% of their average final compensation plus refund of contributions and accrued interest. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are 3.0% of average final compensation for each year of service for judges and elected officers and 1.75% of average final compensation for each year of service for police officers and firefighters and are payable immediately, without an actuarial reduction, at a minimum of 30% of average final compensation.

Death benefits for contributory members hired after June 30, 2012 are generally the same as those for contributory members hired June 30, 2012 and prior.

Hybrid Class for Employees Hired Prior to July 1, 2012

Retirement Benefits - General employees' retirement benefits are determined as 2% of average final compensation multiplied by the years of credited service. General employees with five years of credited service are eligible to retire at age 62. General employees with 30 years of credited service are eligible to retire at age 55.

Disability Benefits - Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 35% of their average final compensation plus refund of their contributions and accrued interest. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined in the same manner as retirement benefits but are payable immediately, without an actuarial reduction, and at a minimum of 25% of average final compensation.

Death Benefits - For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a lump sum payment of the member's contributions and accrued interest plus a monthly benefit of 50% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. If there is no surviving spouse/reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents are eligible for the monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit is payable to the designated beneficiary.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

Ordinary death benefits are available to employees who were active at time of death with at least five years of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest plus a percentage multiplied by 150%, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least ten years of service and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Hybrid Class for Employees Hired After June 30, 2012

Retirement Benefits - General employees' retirement benefits are determined as 1.75% of average final compensation multiplied by the years of credited service. General employees with ten years of credited service are eligible to retire at age 65. Employees with 30 years of credited service are eligible to retire at age 60. Sewer workers, water safety officers, and emergency medical technicians may retire with 25 years of credited service at age 55.

Disability and Death Benefits - Provisions for disability and death benefits generally remain the same except for ordinary death benefits. Ordinary death benefits are available to employees who were active at time of death with at least ten years of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least ten years of service and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Plan Membership

At June 30, 2016 and 2015, ERS membership consisted of:

	<u>2016</u>	<u>2015</u>
Inactive employees or their beneficiaries currently receiving benefits	45,506	44,283
Inactive employees entitled to but not yet receiving benefits	22,295	21,253
Active employees	<u>67,377</u>	<u>67,310</u>
Total	<u>135,178</u>	<u>132,846</u>

Contributions - Contributions are governed by HRS Chapter 88 and may be amended through legislation. The employer rate is set by statute based on the recommendations of the ERS actuary resulting from an experience study conducted every five years. Since July 1, 2005, the employer contribution rate is a fixed percentage of compensation, including the normal cost plus amounts required to pay for the unfunded actuarial accrued liabilities. The contribution rates for fiscal years ended June 30, 2017 and 2016 were 25.00% for police officers and firefighters, and 17.00% for all other employees. For fiscal years ended June 30, 2017 and 2016, contributions to the pension plan from the Department were \$2,085,968 and \$2,023,843, respectively.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

On May 18, 2017, the Governor signed into law Act 17 SLH 2017. Per Act 17, future employer contributions from the State and counties are expected to increase pursuant to a phased-in contribution rate increase over four years beginning July 1, 2017. The rate for police officers and firefighters increases to 28.00% on July 1, 2017; 31.00% on July 1, 2018; 36.00% on July 1, 2019; and 41.00% on July 1, 2020 and the rate for all other employees increases to 18.00% on July 1, 2017; 19.00% on July 1, 2018; 22.00% on July 1, 2019; and 24.00% on July 1, 2020.

The employer is required to make all contributions for noncontributory members. Contributory members hired prior to July 1, 2012 are required to contribute 7.8% of their salary, except for police officers and firefighters who are required to contribute 12.2% of their salary. Contributory members hired after June 30, 2012 are required to contribute 9.8% of their salary, except for police officers and firefighters who are required to contribute 14.2% of their salary. Hybrid members hired prior to July 1, 2012 are required to contribute 6.0% of their salary. Hybrid members hired after June 30, 2012 are required to contribute 8.0% of their salary.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions - At June 30, 2017 and 2016, the Department reported a liability of \$39,134,359 and \$26,679,011, respectively, for its proportionate share of the net pension liability of the County. The net pension liability was measured as of June 30, 2016 and 2015, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of those dates. The Department's proportion of the net pension liability was based on a proportion of the Department's contributions to the pension plan relative to projected contributions of the County. At June 30, 2016 and 2015, the Department's proportion of the County's proportion was 6.6063% and 6.9954% which was a decrease of 0.3891% from its proportion measured at June 30, 2015 and a decrease of 0.1720% from its proportion measured as of June 30, 2014.

There were significant changes in actuarial assumptions effective June 30, 2016 based on the Five-Year Experience Study report dated July 5, 2016 that resulted in a significant increase in the measurement of the total pension liability. Primary drivers for the increase include a decrease in the investment return assumption and discount rate from 7.65% as of June 30, 2015 to 7.00% as of June 30, 2016; and a decrease in the mortality assumptions for longer life expectancy and an explicit assumption for continued future mortality improvement (generational approach).

There were no other changes between the measurement date, June 30, 2016, and the reporting date, June 30, 2017, that are expected to have a significant effect on the proportionate share of the net pension liability.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

For the fiscal years ended June 30, 2017 and 2016, the Department recognized pension expense of \$5,155,964 and \$3,079,830, respectively. At June 30, 2017 and 2016, the Department reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>June 30, 2017</u>		<u>June 30, 2016 (as restated)</u>	
	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between expected and actual experience	\$ 773,969	\$ (578,453)	\$ 249,155	\$ (752,676)
Net difference between projected and actual earnings on pension plan investments	2,370,016	--	--	(892,574)
Changes in proportion and difference between Department contributions and proportionate share of contributions	456,878	(711,417)	583,007	(361,368)
Changes of assumptions	7,283,499	--	634,899	--
Department contributions subsequent to the measurement date	<u>2,085,968</u>	<u>--</u>	<u>2,023,843</u>	<u>--</u>
	<u>\$ 12,970,330</u>	<u>\$ (1,289,870)</u>	<u>\$ 3,490,904</u>	<u>\$ (2,006,618)</u>

The \$2,085,968 reported as deferred outflows of resources related to pensions resulting from contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the fiscal year ended June 30, 2018. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

<u>Fiscal Year Ending June 30,</u>	<u>Amount</u>
2018	\$ 1,847,167
2019	1,847,167
2020	2,563,994
2021	2,224,192
2022	<u>1,111,972</u>
Total	\$ <u>9,594,492</u>

Actuarial Assumptions - The total pension liability in the June 30, 2016 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

	<u>2016</u>	<u>2015</u>
Inflation rate	2.50%	3.00%
Payroll growth rate	3.50%	3.50%
Investment rate of return, including inflation	7.00%	7.65%
Salary increases, including inflation		
Police and fire employees	5.00% to 7.00%	5.00% to 19.00%
General employees	3.50% to 6.50%	4.00% to 8.00%
Teachers	3.75% to 5.75%	4.50% to 8.50%

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

Post-retirement mortality rates are based on the 2016 Public Retirees of Hawaii mortality table with adjustments based on generational projections of the BB projection table for 2016 and full generational projections in future years. Pre-retirement mortality rates are based on multiples of RP-2014 mortality table based on the occupation of the member.

The actuarial assumptions used in the June 30, 2016 and 2015 valuation were based on the most recent experience studies dated July 5, 2016 and December 20, 2010, respectively. Between experience studies, the Board of Trustees of the Employees' Retirement System of the State of Hawaii elected to lower the investment return assumption effective with the June 30, 2015 valuation.

The long-term expected rate of return on pension plan investments was determined using a "top down approach" of the Bespoke Client Constrained Simulation-based Optimization Model (a statistical technique known as "re-sampling with replacement" that directly keys in on specific plan-level risk factors as stipulated by the ERS Board) in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

Asset Class	2016		2015	
	Target Allocation	Long-Term Expected Geometric Rate of Return	Target Allocation	Long-Term Expected Arithmetic Rate of Return
Broad growth	63.00%	8.35%	--	--
Crisis risk offset	20.00%	5.50%	--	--
Real return	10.00%	6.15%	5.00% *	6.70%
Principal protection	7.00%	2.20%	--	--
Domestic equity	--	--	30.00%	8.50%
International equity	--	--	26.00%	9.00%
Total fixed-income	--	--	20.00%	3.10%
Real estate	--	--	7.00% *	9.20%
Private equity	--	--	7.00% *	11.90%
Covered calls	--	--	5.00%	7.70%
	<u>100.00%</u>		<u>100.00%</u>	

* The real estate, private equity, and real return targets will be the percentage actually invested up to 7%, 7%, and 5%, respectively of the total fund. Changes in the real estate, private equity, and real return targets will be offset by an equal percentage change in the large cap domestic equity target.

Discount Rate - The discount rate used to measure the net pension liability at June 30, 2017 and 2016 was 7.00% and 7.65%, respectively. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that contributions from the County will be made at statutorily required rates, actuarially determined. Based on those assumptions, the pension plan's

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Department's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate - The following presents the Department's proportionate share of the net pension liability calculated using the discount rate, as well as what the Department's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate:

	June 30, 2017		
	1% Decrease (6.00%)	Discount Rate (7.00%)	1% Increase (8.00%)
Department's proportionate share of the net pension liability	\$ <u>30,202,710</u>	\$ <u>39,134,359</u>	\$ <u>17,455,160</u>
	June 30, 2016		
	1% Decrease (6.65%)	Discount Rate (7.65%)	1% Increase (8.65%)
Department's proportionate share of the net pension liability	\$ <u>30,958,227</u>	\$ <u>26,679,011</u>	\$ <u>17,891,799</u>

Pension Plan Fiduciary Net Position - There were no significant changes after the report measurement date. Detailed information about the pension plan's fiduciary net position is available in the separately issued ERS financial report. ERS complete financial statements are available at <http://www.ers.hawaii.gov>.

The County of Maui's comprehensive annual financial report contains further disclosures related to the County's proportionate share of the net pension liability and employer pension contributions.

Post-Retirement Health Care and Life Insurance Benefits

In addition to providing pension benefits, the County, pursuant to HRS Chapter 87A, is a participating employer in an agent multiple-employer defined benefit plan providing certain health care and life insurance benefits to all qualified employees and retirees. The Employer-Union Health Benefits Trust Fund (EUTF) was established on July 1, 2003 to provide single delivery system of health benefits for state and county workers, retirees and their dependents.

For employees hired before July 1, 1996, the County pays the entire base monthly contribution for employees retiring with ten years or more of credited service, and 50% of the base monthly contribution for employees retiring with fewer than ten years of credited service. A retiree can elect a family plan to cover dependents.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

For employees hired after June 30, 1996 but before July 1, 2001, and who retire with less than ten years of service, the County makes no contributions. For those retiring with at least ten years but fewer than 15 years of service, the County pays 50% of the base monthly contribution. For employees retiring with at least 15 years but fewer than 25 years of service, the County pays 75% of the base monthly contribution. For those employees retiring with at least 25 years of service, the County pays 100% of the monthly contribution. A retiree can elect a family plan to cover dependents.

For employees hired after June 30, 2001, and who retire with fewer than ten years of service, the County makes no contributions. For those retiring with at least ten years but fewer than 15 years of service, the County pays 50% of the base monthly contribution. For those retiring with at least 15 years but fewer than 25 years of service, the County pays 75% of the base monthly contribution. For employees retiring with at least 25 years of service, the County pays 100% of the base monthly contribution. Retirees can elect family coverage, but must pay the difference.

For active employees, the employee's contributions are based upon negotiated collective bargaining agreements. Employer contributions for employees not covered by collective bargaining agreements and for retirees are prescribed by the HRS.

Measurement of the actuarial valuation and the annual required contribution (ARC) are made for the County as a whole and are not separately computed for the individual County departments and agencies such as the Department. The County allocates the ARC to the various departments and agencies based upon a systematic methodology. The Department's contributions paid to the County for the fiscal years ended June 30, 2017 and 2016 was \$1,210,084 and \$1,741,584, respectively, which equaled the Department's allocated ARC for postemployment health care and life insurance benefits.

On July 3, 2013, the Governor signed into law Act 268, Session Laws of Hawaii 2013. Act 268 requires the EUTF to establish and administer separate trust accounts for each public employer for the purpose of receiving irrevocable employer contributions to prefund post-employment health and other benefit costs for retirees and their beneficiaries. It establishes the Hawaii EUTF Trust Fund Task Force to examine further steps to address the unfunded liability and requires all public employers to make annual required public employer contributions effective fiscal year 2014. Commencing fiscal year 2019, the annual public employer contribution shall be equal to the annual required contribution, as determined by an actuary retained by the EUTF board. In any fiscal year, should an employer's contribution be less than the annual required public employer contribution, the difference shall be transferred to the appropriate trust account from a portion of all general excise tax revenues, for the State, or transient accommodations tax revenues, for the counties.

The EUTF issues an annual financial report that is available to the public. That report may be obtained from the following address:

Hawaii Employer-Union Health Benefits Trust Fund
P.O. Box 2121
Honolulu, Hawaii 96805-2121

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 10 - EMPLOYEE BENEFIT PLANS (Continued)

Deferred Compensation Plan

The County participates in a deferred compensation plan established by the State of Hawaii in accordance with Internal Revenue Code Section 457. The plan is available to all the County employees, and permits employees to defer a portion of their salary until future years. The deferred compensation is not available to employees until termination, retirement, death, or unforeseeable emergency.

All plan assets are held in a trust fund to protect them from claims of general creditors and from diversion to any uses other than paying benefits to participants and beneficiaries. The County has no responsibility for loss due to the investment or failure of investment of funds and assets in the plans, but does have the duty of due care that would be required of an ordinary prudent investor.

NOTE 11 - SICK LEAVE

Accrued sick leave aggregated to approximately \$5.4 million and \$5.3 million as of June 30, 2017 and 2016. Sick leave can accumulate at the rate of one and three-quarters working days for each month of service without limit, but can be taken only in the event of illness and is not convertible to pay upon termination of employment. However, a County employee who is vested in the retirement system and retires or leaves government service in good standing with 60 days or more of unused sick leave is entitled to additional service credit in the ERS.

NOTE 12 - RISK MANAGEMENT

The Department participates in the County's insurance program, which is self-insured for worker's compensation, vehicle, and general liabilities. The County has excess insurance for vehicle and general liability losses over \$500,000. The liability for claims and judgments was estimated based on a combination of case-by-case review and the application of historical experience. Because of the inherent uncertainties in estimating future projected liabilities of claims and judgments, it is at least reasonably possible that the estimates used may change within the near term.

NOTE 13 - ADOPTION OF NEW ACCOUNTING PRINCIPLE

The Department has adopted certain requirements of GASB Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68, and No. 73* (GASBS 82), which are effective for reporting periods beginning after June 15, 2016. The adoption of GASBS 82 resulted in the reclassification of payments made by the Department to satisfy employee (plan member) contribution requirements that were previously deferred in the period for which the contributions were assessed and recorded as expenses in the subsequent fiscal year. These changes have been applied retroactively by restating the financial statements of the Department as of June 30, 2016.

**Department of Water Supply
County of Maui
NOTES TO FINANCIAL STATEMENTS
June 30, 2017 and 2016**

NOTE 13 - ADOPTION OF NEW ACCOUNTING PRINCIPLE (Continued)

For the fiscal year ended June 30, 2016, the effect of the change reduced beginning net position by \$628,784 and decreased the change in net position for the fiscal year ended June 30, 2016 by \$193,821. As of June 30, 2016, deferred outflows of resources related to pensions and net position both decreased by \$822,605.

SUPPLEMENTARY INFORMATION

**Department of Water Supply
County of Maui
SCHEDULE I - SCHEDULE OF CAPITAL ASSETS
June 30, 2017**

Description	Balance	Additions		Balance	Accumulated			Accumulated
	June 30, 2016	and Transfers	Retirements	June 30, 2017	Depreciation	Additions	Retirements	Depreciation
					June 30, 2016			June 30, 2017
Land	\$ 7,347,248	\$ 557,811	\$ --	\$ 7,905,059	\$ --	\$ --	\$ --	\$ --
Source of Supply Structures	1,843,362	--	--	1,843,362	384,335	37,853	--	422,188
Collecting and Impounding Reservoirs	4,251,684	--	--	4,251,684	3,553,899	53,716	--	3,607,615
Wells & Springs	16,963,077	3,868,333	--	20,831,410	3,553,684	379,543	--	3,933,227
Power & Pumping Structures	8,928,834	8,935,267	--	17,864,101	1,580,954	250,123	--	1,831,077
Purification Buildings	34,417,534	--	--	34,417,534	29,588,494	757,788	--	30,346,282
Distribution Reservoirs	73,877,484	4,164,431	--	78,041,915	27,239,709	1,975,853	--	29,215,562
Office Building	1,672,930	--	--	1,672,930	1,134,645	32,702	--	1,167,347
Field Operation Building	1,072,693	--	--	1,072,693	830,436	18,978	--	849,414
Utility Plant - Unclassified	591,079	--	--	591,079	578,521	4,021	--	582,542
Electric Pumping Equipment	29,374,136	2,999,152	--	32,373,288	22,246,145	1,244,815	--	23,490,960
Other Power Pumping Equipment	2,201,573	507,200	--	2,708,773	1,762,929	249,074	--	2,012,003
Purification System - Chlorinators	3,136,099	--	--	3,136,099	2,170,928	267,678	--	2,438,606
Purification System - Filter Plants	54,918,359	--	--	54,918,359	41,613,740	1,277,064	--	42,890,804
Transmission & Distribution Mains	289,025,746	7,179,845	--	296,205,591	118,256,809	6,508,819	--	124,765,628
Service Laterals	3,977,396	84,095	--	4,061,491	2,227,315	138,506	--	2,365,821
Meters	8,771,825	53,183	--	8,825,008	4,689,124	393,609	--	5,082,733
Office Furniture & Equipment	54,155	--	--	54,155	27,617	2,911	--	30,528
Stores Equipment	237,625	--	--	237,625	99,426	5,276	--	104,702
Shop Equipment	72,674	--	--	72,674	62,220	1,746	--	63,966
Laboratory Equipment	487,807	5,529	--	493,336	288,814	20,718	--	309,532
Work Equipment	2,456,759	13,724	--	2,470,483	1,363,414	109,441	--	1,472,855
Communication Equipment	1,688,747	--	--	1,688,747	1,061,689	85,760	--	1,147,449
Meter Boxes	291,058	--	--	291,058	290,531	431	--	290,962
Hydrants	10,635,011	184,950	--	10,819,961	3,954,382	211,149	--	4,165,531
Standpipes	<u>243,444</u>	<u>2,834</u>	<u>--</u>	<u>246,278</u>	<u>203,862</u>	<u>4,691</u>	<u>--</u>	<u>208,553</u>
	558,538,339	28,556,354	--	587,094,693	268,763,622	14,032,265	--	282,795,887
Office Machines	746,383	25,233	(18,109)	753,507	659,536	29,409	(18,109)	670,836
Transportation Equipment	<u>5,336,092</u>	<u>39,646</u>	<u>--</u>	<u>5,375,738</u>	<u>4,109,760</u>	<u>344,569</u>	<u>--</u>	<u>4,454,329</u>
Total Capital Assets (1)	\$ <u>564,620,814</u>	\$ <u>28,621,233</u>	\$ <u>(18,109)</u>	\$ <u>593,223,938</u>	\$ <u>273,532,918</u>	\$ <u>14,406,243</u>	\$ <u>(18,109)</u>	\$ <u>287,921,052</u>
Revenue Fund		\$ 477,058						
Construction in Aid		4,019,035						
Construction in Aid - Direct		1,154,796						
Capital Replacement Fund		8,660,771						
State Revolving Fund		10,192,455						
Water System Development Fund		<u>4,117,118</u>						
		\$ <u>28,621,233</u>						

(1) Excludes construction in progress.

**Department of Water Supply
County of Maui
SCHEDULE II - SCHEDULE OF LONG-TERM DEBT - GENERAL OBLIGATION BONDS
June 30, 2017**

County of Maui General Obligation Bonds	Fiscal Year	Coupon Interest Rate	Bond Dated	Maturing Serially From	Call Dates	Authorized and Issued	Outstanding June 30, 2017	Payable Within One Year
G.O. Refunding Bonds, 2008 Series A (a)	2018	3.500	7/1/2008	7/1/2017	Noncallable	\$ 273,458	\$ 273,458	\$ 273,458
Total 2008 Series A Issue						<u>273,458</u>	<u>273,458</u>	<u>273,458</u>
G.O. Refunding Bonds, 2010 Series B (b)	2018	5.000	12/1/2010	6/1/2018	Noncallable	\$ 382,667	\$ 382,667	\$ 382,667
	2019	4.000	12/1/2010	6/1/2019	Noncallable	401,441	401,441	--
	2020	4.000	12/1/2010	6/1/2020	Noncallable	417,419	417,419	--
	2021	4.000	12/1/2010	6/1/2021	6/1/2020	<u>434,195</u>	<u>434,195</u>	--
Total 2010 Series B Issue						<u>1,635,722</u>	<u>1,635,722</u>	<u>382,667</u>
G.O. Refunding Bonds, 2012 Series B (c)	2018	5.000	11/1/2012	6/1/2018	Noncallable	\$ 169,295	\$ 169,295	\$ 169,295
	2019	5.000	11/1/2012	6/1/2019	Noncallable	178,002	178,002	--
	2020	5.000	11/1/2012	6/1/2020	Noncallable	186,708	186,708	--
	2021	5.000	11/1/2012	6/1/2021	Noncallable	196,382	196,382	--
	2022	5.000	11/1/2012	6/1/2022	Noncallable	206,056	206,056	--
	2023	4.000	11/1/2012	6/1/2023	Noncallable	216,214	216,214	--
	2024	2.125	11/1/2012	6/1/2024	6/1/2023	224,921	224,921	--
	2025	3.000	11/1/2012	6/1/2025	6/1/2023	229,758	229,758	--
	2026	3.000	11/1/2012	6/1/2026	6/1/2023	236,529	236,529	--
	2027	3.000	11/1/2012	6/1/2027	6/1/2023	243,785	243,785	--
	2028	3.000	11/1/2012	6/1/2028	6/1/2023	251,040	251,040	--
	2029	3.000	11/1/2012	6/1/2029	6/1/2023	258,779	258,779	--
	2030	3.000	11/1/2012	6/1/2030	6/1/2023	266,519	266,519	--
	2031	3.000	11/1/2012	6/1/2031	6/1/2023	274,258	274,258	--
	2032	3.000	11/1/2012	6/1/2032	6/1/2023	<u>282,481</u>	<u>282,481</u>	--
Total 2012 Series B Issue						<u>\$ 3,420,727</u>	<u>\$ 3,420,727</u>	<u>\$ 169,295</u>

**Department of Water Supply
County of Maui
SCHEDULE II - SCHEDULE OF LONG-TERM DEBT - GENERAL OBLIGATION BONDS (Continued)
June 30, 2017**

County of Maui General Obligation Bonds	Fiscal Year	Coupon Interest Rate	Bond Dated	Maturing Serially From	Call Dates	Authorized and Issued	Outstanding June 30, 2017	Payable Within One Year
G.O. Refunding Bonds, 2012 Series C (d)								
	2018	5.000	11/1/2012	6/1/2018	Noncallable	\$ 850,000	\$ 850,000	\$ 850,000
	2019	5.000	11/1/2012	6/1/2019	Noncallable	895,000	895,000	--
	2020	5.000	11/1/2012	6/1/2020	Noncallable	940,000	940,000	--
	2021	5.000	11/1/2012	6/1/2021	Noncallable	985,000	985,000	--
	2022	5.000	11/1/2012	6/1/2022	Noncallable	1,035,000	1,035,000	--
	2023	4.000	11/1/2012	6/1/2023	Noncallable	<u>1,090,000</u>	<u>1,090,000</u>	--
Total 2012 Series C Issue						<u>5,795,000</u>	<u>5,795,000</u>	<u>850,000</u>
G.O. Refunding Bonds, 2014 Series C (e)								
	2018	5.000	12/1/2014	6/1/2018	Noncallable	\$ 250,000	\$ 250,000	\$ 250,000
	2019	5.000	12/1/2014	6/1/2019	Noncallable	260,000	260,000	--
	2020	5.000	12/1/2014	6/1/2020	Noncallable	275,000	275,000	--
	2021	5.000	12/1/2014	6/1/2021	Noncallable	290,000	290,000	--
	2022	5.000	12/1/2014	6/1/2022	Noncallable	305,000	305,000	--
	2023	5.000	12/1/2014	6/1/2023	Noncallable	320,000	320,000	--
	2024	5.000	12/1/2014	6/1/2024	Noncallable	335,000	335,000	--
	2025	3.000	12/1/2014	6/1/2025	6/1/2024	350,000	350,000	--
	2026	3.000	12/1/2014	6/1/2026	6/1/2024	360,000	360,000	--
	2027	4.000	12/1/2014	6/1/2027	6/1/2024	370,000	370,000	--
	2028	3.000	12/1/2014	6/1/2028	6/1/2024	385,000	385,000	--
	2029	3.000	12/1/2014	6/1/2029	6/1/2024	400,000	400,000	--
	2030	3.000	12/1/2014	6/1/2030	6/1/2024	410,000	410,000	--
	2031	3.125	12/1/2014	6/1/2031	6/1/2024	420,000	420,000	--
	2032	3.250	12/1/2014	6/1/2032	6/1/2024	435,000	435,000	--
	2033	3.250	12/1/2014	6/1/2033	6/1/2024	450,000	450,000	--
	2034	3.250	12/1/2014	6/1/2034	6/1/2024	<u>465,000</u>	<u>465,000</u>	--
Total 2014 Series C Issue						<u>\$ 6,080,000</u>	<u>\$ 6,080,000</u>	<u>\$ 250,000</u>

**Department of Water Supply
County of Maui
SCHEDULE II - SCHEDULE OF LONG-TERM DEBT - GENERAL OBLIGATION BONDS (Continued)
June 30, 2017**

County of Maui General Obligation Bonds	Fiscal Year	Coupon Interest Rate	Bond Dated	Maturing Serially From	Call Dates	Authorized and Issued	Outstanding June 30, 2017	Payable Within One Year
G.O. Refunding Bonds, 2015 Series B (f)								
	2018	5.000	3/1/2016	9/1/2018	Noncallable	\$ 521,937	\$ 521,937	\$ 521,937
	2019	5.000	3/1/2016	9/1/2019	Noncallable	547,960	547,960	--
	2020	5.000	3/1/2016	9/1/2020	Noncallable	<u>575,468</u>	<u>575,468</u>	<u>--</u>
Total 2015 Series B Issue						<u>1,645,365</u>	<u>1,645,365</u>	<u>521,937</u>
G.O. Refunding Bonds, 2015 Series D (g)								
	2019	5.000	3/1/2016	9/1/2019	Noncallable	\$ 296,496	\$ 296,496	\$ --
	2020	5.000	3/1/2016	9/1/2020	Noncallable	311,112	311,112	--
	2021	5.000	3/1/2016	9/1/2021	Noncallable	327,120	327,120	--
	2022	5.000	3/1/2016	9/1/2022	Noncallable	343,128	343,128	--
	2023	5.000	3/1/2016	9/1/2023	Noncallable	360,528	360,528	--
	2024	5.000	3/1/2016	9/1/2024	Noncallable	378,624	378,624	--
	2025	5.000	3/1/2016	9/1/2025	Noncallable	397,416	397,416	--
	2026	3.000	3/1/2016	9/1/2026	9/1/2025	416,904	416,904	--
	2027	3.000	3/1/2016	9/1/2027	9/1/2025	<u>437,784</u>	<u>437,784</u>	<u>--</u>
Total 2015 Series D Issue						<u>3,269,112</u>	<u>3,269,112</u>	<u>--</u>
Total General Obligation Bonds						\$ <u>22,119,384</u>	\$ <u>22,119,384</u>	\$ <u>2,447,357</u>

**Department of Water Supply
County of Maui
SCHEDULE II - SCHEDULE OF LONG-TERM DEBT -
GENERAL OBLIGATION BONDS (Continued)
June 30, 2017**

NOTES:

- (a) The General Obligation Refunding Bonds, 2008, Series A, maturing on or before July 1, 2017 are issued without the right or option of the County of Maui to redeem the same prior to their respective maturity dates.
- (b) The General Obligation Refunding Bonds, 2010, Series B, maturing on or before June 1, 2020 are issued without the right or option of the County of Maui to redeem the same prior to their respective maturity dates. The County of Maui reserves the right and option to redeem the Bonds maturing on June 1, 2021, prior to their stated maturity, on or after June 1, 2020, in whole or in part at any time, in order of maturity selected by the County of Maui and by lot within a maturity, at 100% of the principal amount.
- (c) The General Obligation Refunding Bonds, 2012, Series B, maturing on or before June 1, 2023 are issued without the right or option of the County of Maui to redeem the same prior to their respective maturity dates. The County of Maui reserves the right and option to redeem the Bonds maturing on June 1, 2024 to June 1, 2032, prior to their stated maturity, on or after June 1, 2023, in whole or in part at any time, in order of maturity selected by the County of Maui and by lot within a maturity, at 100% of the principal amount.
- (d) The General Obligation Refunding Bonds, 2012, Series C, maturing before June 1, 2023 are issued without the right or option of the County of Maui to redeem the same prior to their respective maturity dates.
- (e) The General Obligation Refunding Bonds, 2014, Series C, maturing on or before June 1, 2024 are issued without the right or option of the County of Maui to redeem the same prior to their respective maturity dates. The County of Maui reserves the right and option to redeem the Bonds maturing on June 1, 2025 to June 1, 2034, prior to their stated maturity, on or after June 1, 2024, in whole or in part at any time, in order of maturity selected by the County of Maui and by lot within a maturity, at 100% of the principal amount.
- (f) The General Obligation Refunding Bonds, 2015, Series B, maturing before September 1, 2025 are issued without the right or option of the County of Maui to redeem the same prior to their respective maturity dates.
- (g) The General Obligation Refunding Bonds, 2015, Series D, maturing on or before September 1, 2025 are issued without the right or option of the County of Maui to redeem the same prior to their respective maturity dates. The County of Maui reserves the right and option to redeem the Bonds maturing on September 1, 2026 to September 1, 2027, prior to their stated maturity, on or after September 1, 2025, in whole or in part at any time, in order of maturity selected by the County of Maui and by lot within a maturity, at 100% of the principal amount.

SCHEDULES AND STATISTICS

FISCAL YEAR 2017
Water Service Charges
Effective July 01,2016

Schedule A

Single Family Dwellings, Single-Family
and Accessory Dwellings with 5/8" Meters

	<u>Monthly</u>
0 - 5,000 Gallons	\$ 2.00
5,001 - 15,000 Gallons	3.80
15,001 - 35,000 Gallons	5.70
Over 35,000 Gallons	6.35

All Other General Water Consumers

0 - 5,000 Gallons	\$ 2.00
5,001 - 15,000 Gallons	3.80
Over 15,000 Gallons	5.70

Agricultural Rates

0 - 5,000 Gallons	\$ 2.00
5,001 - 15,000 Gallons	3.80
Over 15,000 Gallons	1.10

Non-Potable Agriculture Rates

All Usage	\$ 1.00
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Schedule B

<u>Size of Meter</u>	<u>Per Meter/ Per Month</u>
5/8 inch	\$ 19.25
3/4 inch	31.00
1 inch	46.00
1 1/2 inch	88.00
2 inch	137.00
3 inch	242.00
4 inch	420.00
6 inch	770.00
8 inch	1,215.00

FISCAL YEAR 2017
System Expansion Rates
Effective July 01,2015

Water System Development Fee Schedule

<u>Size of Meter</u>		<u>Meter Fee*</u>
5/8 inch	\$	6,030
3/4 inch		18,884
1 inch		33,356
1 1/2 inch		71,948
2 inch		125,012
3 inch		279,380
4 inch		496,460
6 inch		1,113,932
8 inch		1,977,428
10 inch		3,089,360
12 inch		4,447,436

* Plus Installation Charges

NUMBER OF SERVICES BY METER SIZE
FISCAL YEAR ENDED JUNE 30, 2017

DISTRICT	5/8"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	TOTAL
REGULAR SERVICE METERS										
Wailuku	17,364	1,673	586	434	421	58	34	6	1	20,577
Makawao	8,925	341	186	78	33	11	2	1	0	9,577
Lahaina	2,672	275	140	128	122	28	10	2	0	3,377
Hana	456	45	9	6	4	0	0	0	0	520
Molokai	1,553	45	33	15	17	2	0	1	0	1,666
Subtotal	30,970	2,379	954	661	597	99	46	10	1	35,717
AGRICULTURAL SERVICE METERS										
Wailuku	25	14	10	3	1	2	1	0	0	56
Makawao	301	54	69	85	33	0	0	0	0	542
Lahaina	4	3	5	0	1	0	1	0	0	14
Hana	27	0	2	0	0	0	0	0	0	29
Molokai	4	1	2	0	0	0	0	0	0	7
Subtotal	361	72	88	88	35	2	2	0	0	648
TOTAL	31,331	2,451	1,042	749	632	101	48	10	1	36,365

**OUTSIDE WATER DELIVERIES
YTD FY2017**

Prepared:
5/7/2018 13:47

PURCHASE FROM	1,000 Gallons	\$ YTD Amt	Cost Per 1,000 Gallons
East Maui Irrigation	2,140,671	\$ 128,440	0.060
Wailuku Water Co.	166,574	\$ 85,986	0.516
Maui Land & Pine	689,065	\$ 187,535	0.272
Hawaiian Home Lands (Billed Bi-Monthly)	8,151	\$ 51,966	6.375
TOTAL	3,004,461	\$ 453,928	0.151

DISTRICT	1,000 Gallons	\$ Amount	Cost Per 1,000 Gallons
Wailuku	166,574	\$ 85,986	0.516
Kula	190,244	\$ 11,415	0.060
Makawao	1,936,864	\$ 116,212	0.060
Lahaina	689,065	\$ 187,535	0.272
Hana	13,563	\$ 814	0.060
Molokai	8,151	\$ 51,966	6.375
TOTAL	3,004,461	\$ 453,928	0.151

OTHER WATER

Wailuku - Wlku. Water Co.	203,504
Wailuku - Hi. Land & Farming	0

Dept. of Water Supply, County of Maui
Consumption By District
General & Agricultural in Thousands of Gallons
Fiscal Year To Date through June 30, 2017

GENERAL	Total	Wailuku	Makawao	Kula	Lahaina	Molokai	Hana
July	973,546.8	652,665.5	79,204.3	48,736.9	172,651.1	20,280.0	9.0
August	884,249.3	589,455.0	66,848.0	41,919.0	153,083.1	22,983.2	9,961.0
September	989,011.2	667,806.0	78,986.0	39,004.1	179,235.0	19,896.1	4,084.0
October	884,815.0	603,746.0	67,343.0	46,541.0	143,630.0	19,669.0	3,886.0
November	949,692.0	643,210.0	71,927.0	55,221.0	153,503.0	21,086.0	4,745.0
December	809,292.0	530,698.0	66,081.0	34,398.0	156,890.0	17,583.0	3,642.0
Subtotal	5,490,606.3	3,687,580.5	430,389.3	265,820.0	958,992.2	121,497.3	26,327.0
January	824,945.0	575,716.0	67,656.0	42,644.0	133,109.0	1,780.0	4,040.0
February	798,135.0	531,903.0	66,105.0	37,648.0	138,478.0	20,566.0	3,435.0
March	743,316.0	483,403.0	58,912.0	33,083.0	126,746.0	36,186.0	4,986.0
April	942,615.0	637,620.0	75,808.0	47,431.0	158,085.0	19,665.0	4,006.0
May	798,696.0	528,345.0	64,363.0	35,576.0	140,646.0	25,418.0	4,348.0
June	962,138.0	646,709.0	77,092.0	46,134.0	168,281.0	18,971.0	4,951.0
Subtotal	5,069,845.0	3,403,696.0	409,936.0	242,516.0	865,345.0	122,586.0	25,766.0
Total General	10,560,451.3	7,091,276.5	840,325.3	508,336.0	1,824,337.2	244,083.3	52,093.0
AGRICULTURAL							
July	93,676.1	23,020.1	4,827.0	63,627.0	1,739.0	463.0	-
August	108,360.0	29,752.0	3,466.0	71,154.0	1,530.0	448.0	2,010.0
September	84,278.0	19,599.0	3,621.0	57,932.0	2,054.0	295.0	777.0
October	92,693.0	13,649.0	3,074.0	73,478.0	1,505.0	369.0	618.0
November	124,942.0	27,665.0	3,462.0	90,931.0	2,066.0	355.0	463.0
December	66,775.0	21,170.0	3,070.0	39,353.0	2,093.0	240.0	849.0
Subtotal	570,724.1	134,855.1	21,520.0	396,475.0	10,987.0	2,170.0	4,717.0
January	80,953.0	21,280.0	3,301.0	54,297.0	1,310.0	(67.0)	832.0
February	78,139.0	23,045.0	3,111.0	49,752.0	1,347.0	239.0	645.0
March	62,573.0	13,003.0	3,448.0	44,131.0	1,000.0	526.0	465.0
April	99,566.0	23,394.0	4,132.0	69,955.0	1,312.0	337.0	436.0
May	68,648.0	14,920.0	3,279.0	48,111.0	1,554.0	343.0	441.0
June	102,824.0	27,497.0	4,365.0	67,991.0	1,755.0	419.0	797.0
Subtotal	492,703.0	123,139.0	21,636.0	334,237.0	8,278.0	1,797.0	3,616.0
Total Agricultural	1,063,427.1	257,994.1	43,156.0	730,712.0	19,265.0	3,967.0	8,333.0
Grand Total	11,623,878.4	7,349,270.6	883,481.3	1,239,048.0	1,843,602.2	248,050.3	60,426.0

COMPARISON OF WATER SALES TO GENERAL & AGRICULTURAL CONSUMERS
BY DISTRICT & SYSTEMS
TWELVE MONTHS ENDED JUNE 30, 2017 OVER 2016

BY DISTRICT	Services			Consumption (1,000 Gallons)			Revenues		
	2016	2017	Increase (Decrease)	2016	2017	Increase (Decrease)	2,016	2017	Increase (Decrease)
Wailuku District									
Wailuku	6,284	6,289	5	1,255,068	1,273,053	17,985	6,878,436	7,423,503	545,067
Waihee	193	195	2	20,827	21,760	933	111,501	126,397	14,896
Waikapu	969	969	0	118,628	121,427	2,799	596,868	648,105	51,237
Wailuku Heights	496	496	0	72,760	66,633	(6,127)	374,985	372,065	(2,920)
Kahului	5,250	5,304	54	1,452,703	1,439,259	(13,444)	7,740,413	8,112,642	372,229
Puunene	11	11	0	25,774	22,723	(3,051)	44,652	40,271	(4,381)
Kihei	5,997	6,008	11	3,954,590	3,893,460	(61,130)	20,597,866	21,131,102	533,236
Maalaea	45	45	0	64,469	87,870	23,401	368,009	519,920	151,910
Makena	202	203	1	256,061	216,684	(39,377)	1,399,720	1,251,862	(147,857)
Paia-Kuau	905	908	3	148,495	144,229	(4,266)	773,504	804,422	30,918
Spreckelsville	204	205	1	63,604	62,173	(1,431)	342,056	350,846	8,790
Subtotal	20,556	20,633	77	7,432,979	7,349,271	(83,708)	39,228,012	40,781,135	1,553,123
Makawao District									
Kokomo-Kaupakalua	1,143	1,145	2	149,046	141,670	(7,376)	757,505	779,437	21,932
Kuiaha	301	302	1	46,905	44,291	(2,614)	218,934	222,680	3,747
Haiku-Pauwela	843	849	6	108,841	107,794	(1,047)	551,642	578,738	27,096
Makawao	1,996	2,015	19	285,340	262,318	(23,022)	1,454,416	1,458,132	3,716
Pukalani	2,072	2,074	2	294,414	293,194	(1,220)	1,486,849	1,600,571	113,722
Haliimaile	199	199	0	34,936	34,214	(722)	167,895	183,257	15,362
Upper Kula	2,308	2,309	1	428,790	442,231	13,441	1,842,316	2,026,044	183,728
Lower Kula	1,105	1,105	0	598,188	605,642	7,454	1,681,466	1,793,789	112,322
Ulupalakua-Kanaio	82	82	0	48,707	46,673	(2,034)	116,721	124,230	7,509
Kula Ag Park	39	39	0	144,957	144,379	(578)	146,151	185,008	38,857
Subtotal	10,088	10,119	31	2,140,124	2,122,406	(17,718)	8,423,895	8,951,888	527,992
Lahaina District									
Lahaina	2,099	2,127	28	815,259	796,532	(18,727)	4,316,284	4,489,718	173,434
Honokowai	449	449	0	503,955	506,836	2,881	2,756,697	2,932,357	175,660
Alaeloa	799	802	3	566,289	539,009	(27,280)	3,056,666	3,077,206	20,540
Honokohau	13	13	0	1,114	1,225	111	6,561	7,585	1,024
Subtotal	3,360	3,391	31	1,886,617	1,843,602	(43,015)	10,136,208	10,506,865	370,657
Molokai District									
Kawela-Kaunakakai	1,167	1,162	(5)	194,902	189,189	(5,713)	1,047,552	1,088,950	41,398
Ualapue/Kamalo	379	392	13	58,036	51,003	(7,033)	317,673	305,243	(12,430)
Kalae	113	113	0	8,568	7,858	(710)	51,271	50,671	(600)
Ualapue/Kamalo	0	6	6	0	1,006	1,006	0	4,164	4,164
Subtotal	1,659	1,673	14	261,506	249,056	(12,450)	1,416,496	1,449,028	32,532
Hana District									
Hana	402	403	1	49,598	48,017	(1,581)	259,064	275,237	16,174
Nahiku	39	39	0	3,439	3,331	(108)	19,791	21,012	1,221
Keanae	86	86	0	9,387	7,348	(2,039)	57,866	49,867	(8,000)
Kaupo	21	21	0	1,844	1,679	(165)	5,967	6,526	558
Subtotal	548	549	1	64,268	60,375	(3,893)	342,688	352,641	9,953
Total ALL DISTRICTS	36,211	36,365	154	11,785,494	11,624,710	(160,784)	59,547,300	62,041,558	2,494,258

FIVE-YEAR SUMMARY

FIVE - YEAR SUMMARY

	2016-17	2015-16	2014-15	2013-14	2012-13
Customer and Sales					
Number of Customers	36,365	36,211	36,104	36,040	35,866
Water Sales (M Gals.)	11,624,710	11,785,494	11,684,317	11,851,829	13,252,653
Income and Expenses					
Revenue from Sale of Water *	62,814,311	59,917,910	59,015,627	54,271,046	53,715,617
Total Operating Revenues	63,633,235	60,867,664	59,286,522	55,244,613	54,438,890
Operating Expense	61,818,557	42,493,570	63,767,954	39,079,385	37,917,227
Depreciation	14,406,243	15,248,728	14,431,573	15,383,921	14,586,660
Net Income or (Loss)	1,814,678	1,483,566	4,481,432	781,307	1,935,003
Utility Plant					
Net Plant Add. During Year	34,854,383	40,902,839	45,327,372	49,734,238	37,460,019
Total Plant Investment	628,078,322	564,620,815	583,532,811	563,126,434	541,577,998
Reserve for Depreciation	287,921,052	272,526,994	257,901,850	243,492,384	228,236,922
Current Positions					
Revenue Funds	42,416,273	28,433,036	30,631,574	24,214,527	23,579,898
Total Current Assets **	62,372,099	56,513,213	57,810,001	51,635,803	48,409,817
Total Current Liabilities	14,035,294	10,979,990	16,297,595	12,443,173	11,179,105
Net Current Assets	48,336,805	45,533,223	41,512,406	39,192,630	37,230,712
Current Ratio	4.4 to 1	3.2 to 1	3.5 to 1	4.2 to 1	4.3 to 1
Capitalization					
Municipal Equity & Surplus	166,100,997	159,033,530	152,205,067	147,140,173	147,140,173
Non-Current Liabilities	90,360,201	73,796,025	71,792,211	53,654,214	48,106,455
Contri. in Aid of Constr.	188,225,271	182,747,402	183,005,539	184,196,454	184,196,454

* Includes Fire Protection

** Current Assets were reclassified in 1995 to include the Capital Reserve Fund.

*** Information gathered via FY2017 Balance Sheet and FY2017 Auditor's Report

By Water All Things Find Life

www.mauewater.org

Civ. No. 19-1-0019-01 (JPC)

Joint Exhibit _____

Plaintiff's Exhibit _____

Defendant's Exhibit M-1

FOR IDENTIFICATION _____

RECEIVED IN EVIDENCE _____

CLERK: _____