

## WATER PLAN 2020

### A Progress Report

from

### County of Kaua'i Department of Water

In 2011, the County of Kauai Department of Water (KDOW) is nine years into its Water Plan 2020, with over \$100 million spent to improve the county's water system and to safeguard our drinking water for now and for future generations. This work represents an average of \$8 to \$10 million per year in escalating and improving the assets of KDOW.

The Department continues to move aggressively on its plan to bring the island's water systems up to standard, as well as to meet the needs for growth, all under the guidance of Water Plan 2020.

We present below a list of the projects we have been working on. This report is current as of the most recent fiscal completed, 2009 – 2010, and provides a snapshot of many of the projects in planning or underway.

These projects fall into three categories:

Capital Improvements Projects (CIP) to correct current deficiencies in our system and meet future needs

Capital Rehabilitation Program (CRP) covers in-kind replacements or repair of deteriorating or aging equipment without changing their capacity

Capital Replacement Program (CRPL) covers repair or replacement of existing deteriorated infrastructure while also increasing capacity.

The chart and the five lists below include the work the department has done in recent years, or has underway or in planning now.

#### **Design/Construction Totals for CIP, CRP and CRPL Projects**

	DESIGN	CONSTRUCTION	TOTAL
CIP	\$2,469,919.80	\$13,950,000.00	\$16,419,919.80
CRP	\$2,157,354.10	\$ 466,200.00	\$ 2,623,554.10
CRPL	\$2,526,701.40	\$15,797,436.00	\$18,324,137.40
<b>TOTAL</b>	<b>\$7,153,975.30</b>	<b>\$30,213,636.00</b>	<b>\$37,367,611.30</b>

**If there are any questions or concerns related to current and/or future Water Plan 2020 projects, please contact Dustin Moises, Department of Water Project Manager at**

**(808) 245-5408 for information.**

**CONSTRUCTION PROJECTS RECEIVING FINAL INSPECTION APPROVAL DURING THE FISCAL YEAR JULY 1, 2009 – JUNE 30, 2010 Total Certified Amount = \$ 21,072,425.00**

**1. Job No. 02-14, WK-08**

**Kapaa Homesteads 0.5 Million Gallon Storage Tank**

**(Contractor: Kauai Builders Ltd)**

Kapa'a Water System

Project Cost: **\$3,060,000.00 (CIP)**

***Scope of Work: (Section A)***

The project consisted of constructing a 0.5 million gallon reservoir tank with overflow spillway elevation of approximately 530' MSL. The reservoir's site preparation includes grading, erosion and dust control measures, RCP drain culvert with CRM head walls, DIP waterlines, combination back pressure and solenoid shut off valve, Venturi tube, pressure and water level transmitters, a 0.5 million gallon reinforced concrete reservoir, reinforced concrete slab, asphalt roadway, fencing, grassing and electrical work.

**Job No. 03-03, WK-15**

**Hardening of Generator Shelter for Makaleha Tank and Pump Station**

**(Contractor: Kauai Builders Ltd)**

Kapa'a Water System

Project Cost: **Same contract with Job 02-14, WK-08 (CRP)**

***Scope of work: (Section B)***

The project consisted of furnishing and installing materials for the installation of hardened shelter structure, electrical conduits and hardware, and other equipment necessary to safely house emergency generators at the Department of Water's well station at Makaleha. Also, furnishing and installing materials for the installation of asphalt concrete driveways, asphalt concrete storage areas, concrete swales, waterline and electrical facilities, chain link fences and security gates.

**2. Job No. 02-18, WK-32 (Phase 1)Waterline along Kaehulua Road & (Waterline D-1Job No. 04-02, WK-14 (Phase 1)Waterline along Apopo Road (Waterline B)**

**(Contractor: Earthworks Pacific, Inc.)**

Kapa'a Water System

Project Cost: **\$1,565,660.00 (CRPL)**

***Scope of Work:***

The project consists of the furnishing and installing of approximately 4,520 linear feet of 8-inch, 240 linear feet of 6-inch and 32 linear feet of 4-inch of Ductile Iron pipe waterlines and more or less 20 linear feet of 2 ½ -inch of Copper pipe waterlines along Kaehulua and Apopo Road. Further, furnishing and installing materials for the installation of connections to the existing water mains, installation of new valves, fire hydrants, service laterals with meter boxes and other water accessories.

**3. Job No. 03-01, KW-03**

**Installation of 8-inch Waterline for Elepaio Road**

**(Contractor: Cushnie Construction Company, Inc.)**

Kekaha Water System

Project Cost: **\$400,000.00 (CRPL)**

***Scope of Work:***

Furnishing and installing materials for the installation of approximately 986 linear feet of 8-inch and 66 linear feet of 6-inch Ductile Iron Pipe waterlines along Elepaio Road which began near the intersection of Elepaio and Aukuu Roads up to the intersection of Elepaio Road and Kaumualii Highway. Also furnishing and installing materials for the installation of connections to the existing water mains, installation of new valves, fire hydrants, service laterals with meter boxes and other water accessories and restoration and repaving work.

**4. Job No. 04-04, PLH-09  
Pipeline Replacement for Lihu'e town**

**(Contractor: Cushnie Construction Company, Inc.)**

Lihu'e Water System

Project Cost: **\$2,050,000.00 (CRPL)**

***Scope of Work:***

Furnishing and installing materials for the installation of approximately 2,500 linear feet of 8-inch ductile iron, 2,000 linear feet of 6-inch ductile iron, and 700 linear feet of 4-inch ductile iron waterline along Kalena Drive, Kress Street, Halenani Street, Hoala Street, Malama Street, Ewalu Street, Umi Street, and Pala Street. Also, furnishing and installing materials for the installation of various valves, fire hydrants, service laterals, waterline connections and other waterline accessories. *It should also be noted that this project was funded by the American Recovery and Reinvestment Act (ARRA).*

**5. Job No. 05-04, KW-27  
Kamualii Highway 12-inch main Replacement**

**(Contractor: Earthworks Pacific, Inc.)**

Kekaha –& Waimea Water System

Project Cost: **\$4,500,000.00 (CRPL)**

***Scope of Work:***

Furnishing and installing all materials for the installation of approximately 10,200 linear feet of 12-inch, 120 linear feet of 8-inch, 520 linear feet of 6-inch and 101 linear feet of 4-inch ductile

iron pipes and appurtenances including connections to existing waterlines, removal and disposal of existing Asbestos Cement, PVC and Ductile Iron waterlines within the State and County Right-of-Way, new valves, new fire hydrants, installation of service laterals, air relieve valves and permanent cleanouts along with meter boxes, salvaging fire hydrants, valves and valve boxes and restoration and repaving works. Pipeline was installed along Kaumualii Highway from Elepaio Road in Kekaha, to Huakai Road in Waimea.

**6. Job No. 05-07, K-07, LO-13 (Phase 1)  
Waha, Wawae and Niho Main Replacement**

**(Contractor: Koga Engineering and Construction, Inc.)**

Kalaheo Water System

Project Cost: **\$1,920,000.00 (CRPL)**

***Scope of Work:***

Furnishing and installation of materials for Waterline Main Replacement of approximately 2,064 linear feet of 8-inch Ductile Iron and about 4,070 linear feet of 6-inch Ductile Iron along Waha, Wawae and Niho Roads. Also providing and setting up materials for the installation of various sized valves, fire hydrants, service laterals, waterline connections, other waterline accessories and restoration and repaving works.

**7. Job No. A-11  
Pump, Controls, Pumphouse & Pipeline for Anahola Well #3**

**(Contractor: Tomco Corporation, Inc.)**

Anahola Water System

Project Cost: **\$1,087,000.00 (CIP)**

***Scope of Work:***

Furnishing and installing a deep well pump, piping and controls, control building, pipeline connections, electrical work and all other work necessary to provide a complete operational system at the Anahola Well site.

**8. Job No. WK-42 (Phase I)  
1.0 MG Million Gallon Stable Tank and Control Valves**

**(Contractor: Kauai Builders Ltd)**

Kapa'a Water System

Project Cost: **\$3,836,000.00 (CIP)**

***Scope of Work:***

Furnish the required labor, tools, materials and equipment to install a 1.0 million gallon reinforced concrete tank with an overflow elevation of 214' MSL, tank control valve station, tank 12" influent and 16" effluent piping, tank drain and overflow pipelines, access road, asphaltic concrete pavement, fencing, concrete work, and other work necessary to provide a complete operational system at the Stable Tank Site.

**9. Job No. WK-42 (Phase II)  
Offsite Waterline along Ka'apuni Road for Stable tank**

**(Contractor: Earthworks Pacific, Inc.)**

Kapa'a Water System

Project Cost: **\$1,980,000.00 (CIP)**

***Scope of Work:***

Furnishing and installing materials for 615 linear feet of 16-inch Ductile Iron pipe, 2,565 linear feet of 12-inch Ductile Iron pipe, 45 linear feet of 8-inch Ductile Iron pipe, 76 linear feet 6-inch Ductile Iron pipe and 18 linear feet 4-inch Ductile Iron pipe water main including all appurtenances along Ka'apuni Road. Further, 6-inch pressure reducing valve, installation of Emergency Pumping Connection, fire hydrants, connection of new service laterals, other waterlines and accessories, restoration and repaving works and other necessary works.

**10. Moalepe Stream and Hanalei River Emergency Waterline (Support to DOW Operations)  
(Contractor: Goodfellow Bros., Inc.)**

Kapa'a and Hanalei Water Systems<sup>3</sup>

Project Cost: **\$673,675.00**

***Scope of Work:***

The project consisted of working with land owners while designing and installing a new permanent fusible C-900 PVC waterline under the stream and river as emergency work after the November 2009 flood that affected various parts of Kauai. The waterlines were installed with horizontal directional drilling with C-900 pipe sleeves for future maintenance.

**CONSTRUCTION PROJECTS IN PROGRESS DURING THE FISCAL YEAR JULY 1, 2009 – JUNE 30, 2010 Total Certified Amount = \$9,814,976.00**

**1. Job No. 02-03, KW-14  
12-inch Waterline along Kaumualii Highway and Waimea Canyon Drive**

**(Contractor: Koga Engineering and Construction, Inc.)**

Waimea Water System

Project Cost: **\$2,100,000.00 (CRPL)**

***Scope of Work:***

Furnishing and installing materials for the installation of approximately 4,107 linear feet of 12-inch, 197 linear feet of 8-inch, 460 linear feet of 6-inch and 95 linear feet of 4-inch water pipes and appurtenances including connections to existing waterlines, removal and disposal of existing Asbestos-Cement, PVC and Ductile Iron waterlines within the State Right-of-Way, new valves, new fire hydrants, reconnection of existing service laterals, installation of air valves and permanent clean-outs with meter boxes, salvaging fire hydrants, valves and valve boxes and restoration and repaving works all accordance with the plans and specifications.

**2. Job No. 04-06, KW-05**

**Kekaha Well "B" Renovations**

**(Contractor: Goodfellow Bros. Inc.)**

Kekaha Water System

Project Cost: **\$466,200.00 (CRP)**

***Scope of Work:***

Furnishing and installing a hydropneumatic system inclusive of a 1,000 gallon hydropneumatic (bladder-type) tank, two (2) booster pumps (20 gpm @ 140' TDH), control panel, concrete equipment pad and appurtenant equipment and piping; replacement of the existing deep well pump assembly, modifications to the existing well pump discharge pipe line, including removal and replacement of selected portions of existing discharge pipe sections and appurtenant equipment and piping; installation and modifications to the existing chlorination system including appurtenant equipment and piping; modifications to the existing pump building for the booster pump room including installation of an interior divider wall, installation of exterior doorway and concrete landing pad, modifications to the existing concrete floor; additional modifications to the existing building including but not limited to relocation of existing compressor, appurtenant piping and control box, repairs to existing control building roofing, doors, footing, and windows, miscellaneous modifications to interior building lighting , relocation of equipment, and appurtenances; installation or appurtenant yard piping; installation of 12' gate valve on the existing line between the well pump and the reservoir including removal and proper disposal of sections of existing asbestos cement and ductile iron pipe and fittings, installation of valve box and cover, concrete slab around valve box and replacement ductile iron pipe and appurtenant fittings; modifications to existing motor control system and SCADA system; equipment start up and testing; repair of eroded areas exterior to the building including furnishing and installation of erosion control mats, filling of low spots, geotextile fabric, anchors, concrete curbs and low wall, clearing and grubbing, and appurtenant materials, replacement of gravel; and modifying existing perimeter fencing and gates to add barbed wire; replacement repair and replacement of AC pavement; removal and disposal of existing desk unit and

provision of a replacement desk; and a temporary erosion control. All facilities and equipment specified and modifications shall be installed, in-place complete and ready for operation.

3. **Job No. 05-01 KW-16**  
**Waimea Main Replacement**  
(Contractor: Goodfellow Bros. Inc)  
Waimea Water System  
Project Cost: \$3,261,776.00 (CRPL)

***Scope of Work:***

Furnishing and installing of materials for 540 linear feet of 12-inch water main, 5,475 linear feet of 6-inch water main, 295 linear feet of 4-inch water main and 22 linear feet of 3-inch water main including installation of fire hydrants, connection of new service laterals, other waterlines and accessories, and all other necessary works. Majority of new waterline smaller than 12" in diameter were installed using C-900 PVC to accommodate the geologic conditions encountered in the area.

4. **Job No. 05-03, KW-25**  
**Kapilimao 0.5 Million Gallon Storage Tank**  
(Contractor: Kauai Builders Ltd)  
Kekaha Water System  
Project Cost: \$3,987,000.00 (CIP)

***Scope of Work:(Section A)***

Furnishing and paying for all labor, tools, equipment and materials necessary for the construction of a 0.5 million gallon reinforced concrete storage tank facility with overflow elevation of 196' MSL, including but not limited to clearing, grading, pavement, perimeter chain link fencing and security system, connecting pipelines, drainage system, electrical and control systems, and all appurtenances in place complete, in accordance with the plans and specifications, ready for operations at the Kapilimao storage tank site, Kekaha, Kauai, Hawaii.

- Job No. 03-03, KW-24**  
**Hardening of Generator Shelter for Kapilimao Valley Well**  
(Contractor: Kauai Builders Ltd)  
Kekaha Water System  
Project Cost: *Same contract with Job No. 05-03, KW-25 (CRP)*

***Scope of Work: (Section B)***

Furnishing and installing materials for the installation of hardened shelter structure, electrical conduits and hardware and other equipment necessary to safety house emergency generators at the Department of Water's well station at Kekaha. Also, furnishing and installing materials for the installation of asphalt concrete driveways, electrical facilities, chain link fences and security gates.

**DESIGN PROJECTS COMPLETED DURING THE FISCAL YEAR (JULY 1, 2009 – JUNE 30, 2010) Total Certified Amount = \$2,015,821.40**

1. **Job No. 02-02, LO-04**  
**Piawai 677' 0.5 Million Gallon Storage Tank and Connecting Pipeline**  
(Consultant: Fukunaga & Associates, Inc.)  
Lawai-Omao Water System

Project Cost: **\$239,400.00 (CIP)**

***Scope of Work:***

Furnish the required labor, tools, materials and equipment to install a 0.5 million gallon reinforced tank with overflow elevation of 677' MSL, 16" influent and effluent piping, tank drain and overflow pipelines, asphaltic concrete pavement, fencing, concrete work, electrical work and all other work necessary to provide a complete operational system at the existing Piwai tank Site as shown on the project construction drawings. The 0.5 million gallon tank shall be constructed adjacent to the existing Piwai tank 0.1 million gallon tank, and work will expand the existing tank site.

**2. Job No. 02-03, KW-14**

**12-inch Waterline along Kaumualii Highway and Waimea Canyon Drive**

**(Consultant: Paren, Inc.)**

Waimea Water System Improvements

Project Cost: **\$134,720.00 (CRPL)**

***Scope of Work:***

Furnishing and installing materials for the installation of approximately 4,107 linear feet of 12-inch, 197 linear feet of 8-inch, 460 linear feet of 6-inch and 95 linear feet of 4-inch water pipes and appurtenances including connections to existing waterlines, removal and disposal of existing Asbestos-Cement, PVC and Ductile Iron waterlines within the State Right-of-Way, new valves, new fire hydrants, reconnection of existing service laterals, installation of air valves and permanent clean-outs with meter boxes, salvaging fire hydrants, valves and valve boxes and restoration and repaving works all accordance with the plans and specifications.

**3. Job No. 02-18, WK-32 (Phase II)**

**Kapaa Homesteads Pipeline Replacement**

**(Consultant: Fukunaga & Associates, Inc.)**

Kapa'a Water System

Project Cost: **\$437,408.40 (CRPL)**

***Scope of Work:***

Furnishing and installing of approximately 120 linear feet of 12-inch, 30 linear feet of 8-inch, 11,650 of 6-inch, and 570 linear feet of 4-inch waterlines in the Kapaa Homesteads, together with copper pipes, valves, valve boxes, fire hydrants, connections, copper service laterals, and other waterline accessories.

**4. Job No. 03-02, Phase 2, HW-02, HW-03**

**Wainiha Booster Pump Stations and Haena Steel Tank Renovations**

**(Consultant: Brown and Caldwell)**

Wainiha Water System

Project Cost: **\$399,610.00 (CRP)**



***Scope of Work:***

Furnishing and paying for all labor, tools, equipment and materials necessary for the renovation of two Department of Water facilities: (1) Wainiha Booster Pump Station, and (2) Haena Steel Tank. The scope of work at the Wainiha Booster Pump Station includes but is not limited to: construction of a new Wainiha Booster Pump Station; chain link fencing; pavement; site clearing; grubbing and grading; construction of an access road from the Wainiha Booster Pump to the Haena Steel Tank and cement rubble masonry (CRM) retaining wall; relocation of electrical and control system and all appurtenances in place complete, all in accordance with the plans and specifications, ready for operation, at the Wainiha Booster Pump facility. The scope of work at the Haena Steel Tank facility include but is not limited to; site clearing, grubbing and grading; removal of numerous trees, construction of a perimeter road and concrete swale around the tank, reinforced concrete wall; relocation of the RTU enclosure and all appurtenances in place complete, all in accordance with the plans and specifications, ready for operation at the Haena Steel Tank facility.

5. **Job No. 04-02, WK-14 (Phase II)**  
**Pipeline Replacement for Vivian Heights and Kanaele Road**  
**(Consultant: Fukunaga & Associates, Inc.)**  
Kapa'a Water System  
Project Cost: **\$364,063.00 (CRP)**

***Scope of Work:***

Furnishing and installing approximately 7470 linear feet of 8-inch, 3780 linear feet of 6-inch, and 50 linear feet of 4-inch waterlines in Vivian Heights area and Kanaele Road, together with copper pipes, valves, fire hydrants, connections, copper service laterals, meter boxes and other waterline accessories.

6. **Job No. 05-01 KW-16**  
**Waimea Main Replacement**  
**(Consultant: Hawaii Pacific Engineers)**  
Waimea Water System  
Project Cost: **\$440,620.00 (CRPL)**

***Scope of Work:***

Furnishing and installing materials for 540 linear feet of 12-inch water main, 5,475 linear feet of 6-inch water main, 295 linear feet of 4-inch water main and 22 linear feet of 3-inch water main including installation of fire hydrants, connection of new service laterals, other waterlines and accessories, and all other necessary works in the Waimea Town and Waimea Valley area.

7. **Kiowea Road Pipeline Replacement (Support to DOW Operations)**  
**(Consultant: In-House)**  
Kekaha Water System

***Scope of Work:***

Design approximately 500 linear feet of new waterline along Kiowea Road and provide surveying assistance during installation of waterline by DOW Operations staff.

**DESIGN PROJECTS IN PROGRESS DURING THE FISCAL YEAR JULY 1, 2009 – JUNE 30, 2010 Total Certified Amount = \$5,138,153.90**

1. **Job No. PLH-39A, Lihue Baseyard Improvements, Phase I (Master Plan)**

**(Consultant: Architects Hawaii, Inc.)**  
**Project Cost: \$279,719.00 (CRP)**

***Scope of Work:***

Evaluate and provide a master plan for the Department of Water's office and operations space requirements for the next 20 – 30 years, including the feasibility to replace the Department's office building with a multi-story structure. The recommendations will be complete with cost evaluations of the various options to provide the Department's core functions and support the table of organization. The report will also address all improvements or modifications required to upgrade the Department's office and baseyard facilities. Upon receiving the Board's approval of the Consultant's recommendation, the preparation and publication of an environmental assessment for the required improvements will proceed. All necessary construction drawings of the required modifications will be developed for construction.

2. **Job 06-01, KW-28 Amfac Shaft 11 Renovations**  
**(Consultant: Brown and Caldwell, Inc./In-House)**  
Kekaha Water System  
Project Cost: **\$736,268.00 (CIP)**

***Scope of Work:***

Evaluate and provide a plan to rehabilitate the existing Amfact Shaft 11 in Kekaha. Project includes researching available records with DLNR, Gay and Robinson and other stake holders. Includes preparation of documents to remove existing pump and shed. Installation of test pump and water quality testing to be done by DOW before design of permanent pump facilities begin.

3. **Job 02-06, , WKK-15 (East) Kilauea 1.0 MG Tank**  
**(Consultant: Kodani & Associates)**  
Kilauea Water System  
Project Cost: **\$91,499.80 (CIP)**

***Scope of Work:***

Project includes locating a 1.0 Million Gallon Kilauea Tank with a spillway elevation of approximately 466.0 MSL. Prepare and obtain right-of-entry permit, drawings, maps and other pertinent information for the Board's use in acquiring the right-of-entry permit. Provide the technical information required for the project's feasibility study to construct the tank at the site. To make that determination, a land survey, soils testing and evaluation are required. If the feasibility report concludes that the site is acceptable, an environmental assessment will be prepared and subsequent tank design will commence.

4. **Job 05-02, H-8, Drill and Test Hanalei Well #2**  
**(Consultant: Kodani & Associates)**  
Hanalei Water System  
Project Cost: **\$425,000.00 (CIP)**

***Scope of Work:***

Project includes performing hydro geologic field surveys to locate a well site for Hanalei Well. The Consultant to provide a well site selection report together with all pertinent hydro-geologic information, alternatives and recommendations for review and approval by the Board. Prepare and obtain right-of-entry permit drawings, maps and other pertinent information for the Board's use in acquiring the right-of-entry permit. Topographic survey of the required project area, approximately one and a half (1½) acres, including the access road centerline. Soil testing and evaluation of the project site. Prepare a feasibility report for the proposed project at the site.

The Consultant shall prepare detailed construction plans and specifications of the project under the direction of the DOW, including the responsibility for verifying available topographic and hydro-geologic maps for locating a well site, preparation and completion of hydraulic designs, environmental assessment reports, well drilling permits, use permits, Conservation District Use Applications, estimate of quantities and costs, bid proposal, consultation during the well drilling, preliminary Engineering Report, attend public and community meetings and shall furnish all personnel, materials, transportation and equipment needed in connection therewith.

**5. Job 05-02, HW-12 Drill and Test Wainiha Well #4**

**(Consultant: Kodani & Associates)**

Wainiha Water System

Project Cost: *Same contract with Job No. 05-02, H-8 (CIP)*

***Scope of Work:***

Project includes performing hydro geologic field surveys to locate a well site for Hanalei Well. The Consultant to provide a well site selection report together with all pertinent hydro-geologic information, alternatives and recommendations for review and approval by the Board. Prepare and obtain right-of-entry permit drawings, maps and other pertinent information for the Board's use in acquiring the right-of-entry permit. Topographic survey of the required project area, approximately one and a half (1½) acres, including the access road centerline. Soil testing and evaluation of the project site. Prepare a feasibility report for the proposed project at the site.

The Consultant shall prepare detailed construction plans and specifications of the project under the direction of the DOW, including the responsibility for verifying available topographic and hydro geologic maps for locating a well site, preparation and completion of hydraulic designs, environmental assessment reports, well drilling permits, use permits, Conservation District Use Applications, estimate of quantities and costs, bid proposal, consultation during the well drilling, preliminary Engineering Report, attend public and community meetings and shall furnish all personnel, materials, transportation and equipment needed in connection therewith.

**6. Job 02-14, WK-08, Kapahi (Ornellas) Tank**

**(Consultant: Belt Collins)**

Kapa'a Water System

Project Cost: **\$681,128.00 (CIP)** *same contract with Kapaa Homesteads Tank & Makaleha Generator*

***Scope of Work:***

Project includes design development analysis, environmental services and permitting, pertinent subdivision maps, detailed construction plans and specifications, construction and bidding services for the Kapahi IMG tank and improvements. Consultant is providing geotechnical work

as new tank design will require piles. Upon review of the geotechnical information, design will commence for the new 1 MG tank.

**7. Job WK-39 Kapaa Homesteads Well #4**

**(Consultant: Hawaii Pacific Engineers)**

Kapa'a Water System

Project Cost: **\$387,424.00 (CIP)**

***Scope of Work:***

Project includes the Consultant to perform preliminary hydro-geologic field surveys for up to three potential well sites for Kapa'a Homesteads Well No. 4. Confirm with DOW staff that the locations are suitable for incorporation into the existing distribution system. Document findings and conclusions and recommend a preferred alternative in a memorandum to DOW Project Manager. DOW to confirm the preferred location of the new well site and potential connection alignment to the existing DOW Water System.

Provide a Well Site Selection Report and Schedule for the preferred alternative identified in Phase 1 together with all pertinent hydro-geologic information, alternatives and recommendations for review and approval by the Board.

Under the direction of DOW, consultant to design and prepare final construction plans and specifications for exploratory drilling, testing, and construction of Kapa'a Homesteads Well No. 4, resulting in a complete well. Including all required environmental services (EA, CDUA, etc) and other required permitting (NPDES, well construction, etc). Provide all required engineering services during bid and construction of exploratory well to provide a turn-key functioning well upon completion of project.

**8. Job No. 02-11, M-02, Moloaa 0.1 MG Tank**

**(Consultant – Esaki Surveying and Mapping, Inc.)**

Moloa'a Water System

Project Cost: **\$125,200.00 (CIP)**

***Scope of Work:***

Project includes topographic survey, preliminary site design, EA, and design of a 0.1MG tank, potentially 2 wells, connecting pipeline and appurtenances including SCADA improvements, new control building and perimeter/access road.

**9. Job No. 02-17, H-01, 02, 03, Maka Ridge Renovations**

**(Consultant – Wagner Engineering)**

Hanalei Water System

Project Cost: **\$151,100.00 (CRP)**

***Scope of Work:***

Project includes preparation of detailed construction plans and specifications to improve the access road and replace pertinent culverts/bridges; replace existing 8” with a new 12” pipeline and appurtenances from Kuhio Hwy to the Maka Ridge well site, including well site to existing Maka Ridge tank site; also includes well site improvements; rehabilitation of the existing tank and needed tank site improvements; provide interconnect with Princeville Utilities water system. Consultant is to obtain all required permits. Consultant is also to provide all necessary services during bidding and construction as needed.

10. **Job No. 02-24, WK-02, Akulikuli Tunnel Revisions**

**(Consultant – In-House)**

Kapa’a Water System

Fund Type: **CRP**

***Scope of Work:***

Project consists of researching existing tunnel construction and assessing any improvements required to bring the source back into service. The source is currently being tested before final recommendations are made for facility improvements.

11. **Job No. 02-15, WK-28, Wailua Houselots Main Replacement.**

**(Consultant – RM Towill)**

Wailua Water System

Project Cost: **\$348,672.00 (CRPL)**

***Scope of Work:***

Project includes construction plans and specifications for the waterline replacements along Wailana Road, Kula Road, Pua Road, Kamokila Road, Lanakila Road, Oo Road, Eggerking Road, Makani Road, Hookipa Road and Haleilio Road together with valves, fire hydrants, service laterals, connections and other waterline accessories, and all necessary permits including NPDES permit NOI submittal. Consultant is also to provide all necessary services during bidding and construction as needed.

12. **Job No. 05-05 , PLH-30, Nawiliwili, Niumalu, and Kupolo Pipeline Replacements.**  
**(Consultant - Belt Collins)**

Lihu’e Water System

Project Cost: **\$331,580.00 (CRPL)**

***Scope of Work:***

Project includes design and preparation of final construction plans and specifications for various pipelines in the Nāwiliwili road, Niumalu road. Kupolo road, Mokoi Street and Kapena Street areas, together with valves, fire hydrants, service laterals, connections and other waterline accessories. Including NPDES permit NOI submittal. Consultant to provide all necessary services during bidding and construction.

**13. Job NO. K-01 (North) Kalaheo Water System Improvements**

**(Consultant - Belt Collins)**

Kalaheo Water System

Project Cost: **\$23,400.00 (CIP)**

***Scope of Work:***

Project includes locating a 0.5 MG Tank with a spillway elevation of approximately 1111' MSL and improvements to the 1222' Clearwell storage system. Provide the technical information required for the project's feasibility study to construct the tank at the site. To make that determination, a land survey, soils testing and evaluation is required. If the feasibility report concludes that the site is acceptable, an environmental assessment will be prepared and subsequent tank design will commence.

The work also includes the preparation and processing of all applicable permits required to proceed with the construction including the conservation district use permits (CDUA), National Pollutant Elimination Discharge System permits, all required permits from the County of Kauai, Planning Department (Use, Variance, Zoning, etc.).

**14. Job No. HE-11, 6" Main from Lele Road to Salt Pond**

**(Consultant:TBD)**

Hanapepe Water System

Project Type: **(CRPL)**

***Scope of Work:***

Design and prepare final construction plans and specifications for a new 6" pipeline along Lele and Lolokai Roads, together with valves, fire hydrants, service laterals, connections and other waterline accessories. Consultant to provide all necessary services during bidding and construction.

**15. Job No. 02-19, Waipouli Main Replacement (Kuhio Highway)**

**(Consultant: Kodani & Associates)**

Kapa'a Water System

Project Cost: **\$292,300.00 (CRPL) Same contract as County Roads Phase**

***Scope of Work:***

Design and prepare final construction plans and specifications for a new 12" pipeline along Kuhio Highway (Keaka Road to Ohia Street), together with valves, fire hydrants, service laterals, connections and other waterline accessories. Consultant to provide all necessary services during bidding and construction.

**16. Kokolau Tunnel**

**(Consultant:SSFM International/In-House)**

Puhi Water System

***Scope of Work:***

Tunnel source has been deemed to be under the influence of surface water. SSFM is currently working on a scope to isolate and drain the “left” leg to its natural course. Upon further evaluation of the system, including rehabilitation of the existing 16” concrete pipeline from the tunnel source to Puhi Road, recommendations will be made with regards to final improvements required to bring the source back into service.

**17. Job No. 04-03, WK-30, Waipouli Hauiki Road Main Replacement**

**(Consultant: Paren, Inc.)**

Wailua – Kapaa Water System

Project Cost: **\$249,300.00 (CRPL)**

***Scope of Work:***

Design and prepare final construction plans and specifications for various pipelines along Waipouli and Olohena Roads, together with valves, fire hydrants, service laterals, connections and other waterline accessories. Consultant to provide all necessary services during bidding and construction.

**17. Job No. 02-08, HE-08**

**Rehabilitate Eleele Twin 0.4 MG Steel Tanks**

**(Consultant: Hawaii Pacific Engineers)**

Eleele Water System

Project Cost: **\$307,002.10 (CRP)**

***Scope of work:***

Furnishing and installing materials, equipment and labor for the rehabilitation including cathodic protection of the existing Eleele Twin 0.4 MG Steel Tanks along Kaumualii Highway in Eleele, Kauai, Hawaii; building painting, roof painting and replace door for the existing booster pump building; site improvements including new PVC-coated chain-link fencing, gate, asphalt pavement, retaining wall and landscaping; replace existing 12-inch gate valves; relocate reservoir overflow/washout line to connect to the existing 24-inch irrigation culvert; install 12-inch check valve on tank influent lines and other waterline accessories; and access driveway improvements.

**18. Job No. 02-16, WK-36**

**Pipeline Replacement Along Wailua, Ohana, Anolani and Kuamoo Roads and Lehia Lane**

**(Consultant: Esaki Surveying and Mapping, Inc.)**

Wailua Water System

Project Cost: **\$65,101.00 (CRPL)**

***Scope of Work:***

Furnishing and installing approximately 2,250 linear feet of 6-inch waterline along Wailua, Ohana, Anolani, Kuamoo Roads and Lehia Lane. Together with valves, fire hydrants, service laterals, connections and other waterline accessories.

**19. Job No. 02-19, WK-12**  
**Waipouli Main Replacement (County Roads)**

**(Consultant: Kodani and Associates, Inc.)**

Wailua-Kapa'a Water System

Project Cost: **\$292,300.00 (CRPL) Same contract as Kuhio Highway Phase**

***Scope of Work:***

Furnishing and installing materials for the installation of approximately 210 linear feet of 12-inch, 6,875 linear feet of 8-inch and 1,000 linear feet of 6-inch ductile iron water mains and appurtenances. Further, furnishing and installing materials for the installation of connections to existing water mains, installation of new water valves, installation of new fire hydrants, installation of new service laterals with meter boxes, installation of new air relief valves and clean outs with meter boxes, installation of new miscellaneous waterline accessories, cutting and plugging and removal of existing waterlines and service laterals, salvaging of existing fire hydrants, standpipes, valves and valve boxes, and restoration and repaving works. All work shall be in place complete and in accordance with the plans and specifications.

**20. Job No. 04-06, KW-20**  
**Waimea Well "A" Renovations**

**(Consultant: Kennedy Jenks formerly Engineering Solutions, Inc.)**

Waimea Water System

Project Cost: **\$417,000.00 (CRP) Same contract with Waimea "B" Renovations**

***Scope of Work:***

Furnishing and installing a replacement submersible turbine pump in an existing well replacement of an existing gaseous chlorine disinfection system with a sodium hypochlorite disinfection system, including appurtenant controls, piping and equipment; construction of an extension to the existing control building, including specified hardware and finishes; installation of appurtenant yard piping; furnishing and installation of a motor control center (MCC); modifications to the existing SCADA system; temporary erosion control; equipment start-up and testing; repairs to the existing building roofing, doors and windows; and modifying existing perimeter fencing and gates to add barbed wire, and all other work necessary to provide a complete operational system at the Waimea Well "A" site.

**21. Job No. 05-06, PLH-25**  
**Eiwa, Umi, Akahi, Elua and Hardy Streets,**  
**Alohi Place, Uiki Place and Lalei Place**  
**8-inch Main Replacement**

**(Consultant: BOW Engineering, Inc.)**

Lihue Water System

Project Cost: **\$227,000.00 (CRPL)**

***Scope of Work:***



Furnishing and installing of approximately 5,920 linear feet of 8-inch and 950 linear feet of 6-inch waterlines in the Lihue area along Eiwa, Umi, Akahi, Elua and Hardy Streets, Alohi Place, Uiki Place and Lalei place, as shown in the constructions plans together with copper pipes, valves, valve boxes, fire hydrants, connections, copper service laterals and other waterline accessories.

**GOALS FOR SPECIAL PROJECTS DIVISION FISCAL YEAR (JULY 1, 2010 - JUNE 30, 2011)**

1. Complete construction of the following projects.

**Job No. 02-03, KW-14**

**12-inch Waterline along Kaunualii Highway and Waimea Canyon Drive**

Waimea Water System

**Job No. 04-06, KW-05**

**Kekaha Well "B" Renovations**

Kekaha Water System

**Job No. 05-01 KW-16**

**Waimea Main Replacement**

Waimea Water System

**Job No. 05-03, KW-25**

**Kapilimao 0.5 Million Gallon Storage Tank**

Kekaha Water System

**Job No. 03-03, KW-24**

**Hardening of Generator Shelter Kapilimao Valley Well**

Kekaha Water System

2. Complete design of the following projects.

**Job No. 02-08, HE-08**

**Rehabilitate Eleele Twin 0.4 MG Steel Tanks**

Eleele Water System

**Job No. 02-16, WK-36**

**Pipeline Replacement Along Wailua, Ohana, Anolani and Kuamoo Roads and Lehia Lane**

Wailua Water System

**Job No. 02-19, WK-12**

**Waipouli Main Replacement (County Roads)**

Wailua-Kapa'a Water System

**Job No. 04-06, KW-20**

**Waimea Well "A" Renovations**

Waimea Water System

**Job No. 05-06, PLH-25**  
**Eiwa, Umi, Akahi, Elua and Hardy Streets,**  
**Alohi Place, Uiki Place and Lalei Place**  
**8-inch Main Replacement**  
Lihue Water System

**Job No. 05-05 , PLH-30, Nawiliwili, Niumalu, and Kupolo Pipeline Replacements.**  
Lihue Water System

**Job No. 02-15, WK-28, Wailua Houselots Main Replacement.**  
Wailua Water System

**Job No. 02-17, H-01, 02, 03, Maka Ridge Renovations**  
Hanalei Water System

**Job No. PLH-39A, Lihue Baseyard Improvements, Phase I (Master Plan)**

**Job No. 02-19, Waipouli Main Replacement – Kuhio Highway**  
Kapaa Water System

3. Begin construction of the following projects.

**Job No. 02-02, LO-04**  
**Piwai 677' 0.5 Million gallon Storage Tank and Connecting Pipeline**  
Lawai-Omao Water System

**Job No. 02-18, WK-32 (Phase II)**  
**Kapaa Homesteads Pipeline Replacement**

Kapa'a Water System

**Job No. 03-02, Phase 2, HW-02, HW-03**  
**Wainiha Booster Pump Stations and Haena Steel Tank and Renovations**  
Wainiha Water System

**Job No. 04-02, WK-14 (Phase II)**  
**Pipeline Replacement foe Vivian Heights and Kanaele Road**  
Kapa'a Water System

**Job No. 02-08, HE-08**  
**Rehabilitate Elelele Twin 0.4 MG Steel Tanks**

Eleele Water System

**Job No. 02-16, WK-36**

**Pipeline Replacement Along Wailua, Ohana, Anolani and Kuamoo Roads and Lehia Lane**

Wailua Water System

**Job No. 02-19, WK-12**

**Waipouli Main Replacement (County Roads)**

Wailua-Kapa'a Water System

**Job No. 04-06, KW-20**

**Waimea Well "A" Renovations**

Waimea Water System

**Job No. 05-06, PLH-25**

**Eiwa, Umi, Akahi, Elua and Hardy Streets, Alohi Place, Uiki Place and Lalei Place**

**8-inch Main Replacement**

Lihue Water System

**Job No. 05-05 , PLH-30, Nawiliwili, Niumalu, and Kupolo Pipeline Replacements.**

Lihue Water System

**Job No. 02-15, WK-28, Wailua Houselots Main Replacement.**

Wailua Water System

**Job No. 02-17, H-01, 02, 03, Maka Ridge Renovations**

Hanalei Water System