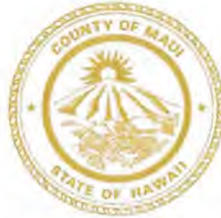


MICHAEL P. VICTORINO
Mayor

JEFFREY T. PEARSON, P.E.
Director

HELENE KAU
Deputy Director



DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

April 8, 2019

Ms. Michele M. Yoshimura *Mmj*
Budget Director, County of Maui
200 South High Street
Wailuku, Hawaii 96793

Honorable Michael P. Victorino
Mayor, County of Maui
200 South High Street
Wailuku, Hawaii 96793

For Transmittal to:

Honorable Keani Rawlins-Fernandez
Chair, Economic Development & Budget Committee
Maui County Council
200 South High Street
Wailuku, Hawaii 96793

Dear Chair Rawlins-Fernandez:

SUBJECT: **FISCAL YEAR ("FY") 2020 BUDGET** (WS-2) (EDB-1)

In response to your letter dated April 2, 2019, we respond as follows:

1. Please transmit a prioritized list of the Department's proposed FY 2020 capital improvement projects.

Answer:

Please find the attached Table 1 in response to letter dated April 2, 2019 requesting a prioritized list of the Department's FY 2020 capital improvement projects, whether it is an ongoing project or new proposal (Column Titled, Ongoing or New), project justification and description (Column Titled, Project Description and Justification), estimated total cost (Column Titled, Total Project Funding), spending to date on the project (Column Titled, Encumbered as of 4/5/19), and estimated completion date (Column Titled, Estimated Completion Date).

"By Water All Things Find Life"



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OFFICE OF THE
COUNTY COUNCIL

RECEIVED

APPROVED FOR TRANSMITTAL

Michael P Victorino 4/10/19

Mayor Date

2. Describe the Department's criteria for prioritizing the projects.

Answer:

The Department's criteria for prioritizing the projects are based on the following:

High Priority

- Projects that address existing infrastructure that has failed unexpectedly where other existing infrastructure is currently operating above normal parameters until replacement is completed.
- Projects that meet legal, compliance, or regulatory mandates that require immediate implementation.
- Projects that address health and safety issues considered significant infrastructure improvements that require immediate implementation.
- Development of new sources to provide additional water to meet legal, compliance, or regulatory mandates that require immediate implementation.

Medium Priority

- Projects that meet legal, compliance, or regulatory mandates that require implementation within 3 years.
- Projects that address health and safety issues considered significant infrastructure improvements that require implementation within 3 years.
- Projects that address aging infrastructure critical to the day-to-day operations of providing reliable water delivery to existing customers that is within 3 years of its estimated life expectancy.
- Development of new sources to provide additional water for long-term future needs that require implementation within 3 years.

Low Priority

- Projects that meet legal, compliance, or regulatory mandates that require implementation beyond 3 years.
- Projects that address health and safety issues considered significant infrastructure improvements that require implementation beyond 3 years.
- Projects that address aging infrastructure critical to the day-to-day operations of providing reliable water delivery to existing customers that is beyond 3 years of its estimated life expectancy.
- Development of new sources to provide additional water for long-term future needs that require implementation beyond 3 years.

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Honorable Keani Rawlins-Fernandez
Chair, Economic Development & Budget Committee
Maui County Council
April 8, 2019
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3. Describe how the Department plans for long-term future needs such as addressing sea level rise, climate change, and increased demand by identifying potential capital improvement projects.

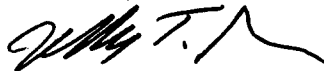
Answer:

The Department of Water Supply is working to identify capital improvement projects to address long-term future needs related to sea level rise and climate change. The 2017 Hawaii Sea Level Rise Vulnerability and Adaptation Report has been reviewed by the Department of Water Supply. The County Department of Environmental Management has initiated a study to address the impact to their infrastructure. DWS will evaluate this study once completed to help our department better understand the impact sea level rise will have on our infrastructure.

The Department of Water Supply plans to look at developing additional groundwater sources (wells) to address the long-term future needs for increased demand. Groundwater sources provides a more reliable long-term source due to recent issues related to the long-term availability to surface water. The Department's has taken immediate action in our FY 2020 CIP Budget with the inclusion of a project to develop groundwater sources in the Launiupoko Aquifer that will benefit existing and future West Maui Water System customers. The groundwater sources will replace the reduction of surface water source flow from Kahana Stream, to the Lahaina Water Treatment Plant, mandated by the Commission on Water Resource Management, in November 2018, with the adoption of the Kahana Stream Instream Flow Standards. Also, the State Department of Land and Natural Resources is proposing to develop a well at DWS's Kealaloa Tank site that will provide additional water source for the Upcountry area. DWS may have an opportunity to cost share with the State on the development of this well.

In advance, thank you for your attention to this matter. If you have any further questions, please contact me.

Sincerely,



JEFFREY T. PEARSON, P.E.
Director

JP:HK:lk
Attachment

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TABLE 1 – PRIORITIZATION OF FY2020 CIP PROJECTS

Priority	Project Funding Name	Project Funding Name	District	Project Description And Justification	Ongoing or New	FY2020 Funding	Encumbered as of 4/5/19	Phase	Estimated Completion Date of Phase
High	West Maui Reliable Capacity	West Maui Source Development	West Maui	This project involves the development of West Maui Well #2 (aka Kahana Well), a new ground water well, to provide additional water source for West Maui, which includes installation of the well's pump and motor, motor control center (MCC)/Electrical, Supervisory Control and Data Acquisition (SCADA) equipment, a control tank, and appurtenances.	Ongoing	\$3,750,000	\$2,603,659	Construction	Mid 2021
High	West Maui Reliable Capacity	Launiupoko Well Development	West Maui	This project involves the development of two (2) new ground water wells in the Launiupoko Aquifer to replace existing surface water flows from Kanaha Stream to the Lahaina WTP. DWS is required to replace the surface water source with ground water sources in compliance with the recent Kanaha Stream Instream Flow Standards adopted by CWRM	New	\$1,900,000	\$0	Land Design (Exploratory Drilling) Construction (Exploratory Drilling)	End 2021
High	Countywide Upgrades And Replacements	Mahinahina WTP – UV System Addition	West Maui	This project involves the installation of a UV Disinfection System (secondary treatment system) at the Mahinahina Water Treatment Plant to address an existing deficiency identified by the State Department of Health that needs to be met by 2020.	New	\$150,000	\$0	Design	Mid 2020
High	Upcountry Reliable Capacity	Pookela Well B	Makawao-Pukalani-Kula	This project involves the development of Pookela Well B, a new ground water well, which includes the installation of the well's pump and motor, replacement of the existing MCC/Electrical (for Pookela A that will be shared with Pookela Well B, SCADA equipment, and appurtenances. Pookela Well B will provide a back-up source to the existing Pookela Well a thus providing increased system reliability for the Upcountry Water System.	Ongoing	\$500,000	\$3,034,999	Construction	Early 2021
High	Countywide Facility Improvements	Sanitary Survey Deficiencies	Countywide	The State Department of Health-Safe Drinking Water Branch (DOH-SDWB) performs annual inspection of DWS facilities. The funding is to address any substantial deficiencies determined by DOH that require immediate action.	New	\$500,000	\$0	Construction	End 2021

Medium 1	Countywide Upgrades And Replacements	Kualapuu Well – Pump and Motor Replacement	Molokai	This project involves the replacement of the existing pump and motor for Kualapuu Well that was installed in 2009. The motor failed in Dec 2018 and replaced with a spare motor. The pump is equipment is nearing its estimated service life of 10 years.	New	\$750,000	\$0	Construction	Early 2019
Medium 2	Countywide Facility Improvements	Piiholo WTP Sludge Lagoon Booster Pumps – Pumps, Motors, and Motor Control Center Replacement	Makawao-Pukalani-Kula	This project involves the replacement of the existing pumps, motors, and motor control center (MCC)/Electrical for the Piiholo WTP Sludge Lagoon’s Booster Pumps (2) installed in 1994. This equipment has reached its estimated service life.	New	\$200,000	\$0	Design	Early 2020
Medium 3	Countywide Facility Improvements	Lower Kula Transmission Line Tree Clearing	Makawao-Pukalani-Kula	This project involves the clearing of trees adjacent to the transmission line providing raw water to the Piiholo Water Treatment Plant (WTP) 50- million storage reservoir. This provides a higher level of assurance that delivery of raw water to the WTP reservoir will not be impacted by fallen trees that have in the past damaged the transmission line resulting in restricted or no water flow into the WTP reservoir. Reduction of raw water has a direct impact on the production of potable water for the Upcountry Water System. FY020 is Phase 3 of this project.	Ongoing	\$1,000,000	\$725,999	Construction	Mid 2020
Medium 4	Countywide Facility Improvements	Kamole WTP Clearwell – Structural Repairs	Makawao-Pukalani-Kula	This project involves structural repairs to the interior and exterior of the existing 3-million gallon clearwell at the Kamole Water Treatment Plant. Addressing this structural repair improves reliability for the Upcountry Water System.	Ongoing	\$100,000	\$24,994	Construction	Early 2020
Medium 5	Countywide Facility Improvements	Wells, Booster Pumps, Tank, Water Treatment Plant - Unforeseen	Countywide	This funding is being requested to address emergency failures or improvements of existing infrastructure and facilities.	New	\$500,000	\$0	Design/Construction	End 2021
Medium 6	Countywide Upgrades And Replacements	Kanaha Well - Motor Control Center Replacement	West Maui	This project involves the replacement of the existing motor control center (MCC)/Electrical for Kanaha Well #1 and Well #2 installed in the 70's and is in need of repair. The equipment is well beyond its estimated service life of 10 years.	New	\$200,000	\$200,000	Design	End 2020
Medium 7	Countywide Upgrades And Replacements	Waipuka Wells - Motor Control Center Replacement	West Maui	This project involves replacement of the existing well motor control center (MCCC) at Waipuka Wells #1 and #2 installed in early 1960's. The equipment is well beyond its estimated service life of 10 years.	Ongoing	\$400,000	\$0	Design	End 2020

Medium 8	Central Maui Reliable Capacity	Waiehu Heights Well #1 – Replacement	Wailuku-Kahului	This project involves the development of a new groundwater well and includes installation of well pump and motor, motor control center (MCC)/Electrical, SCADA equipment, and appurtenances to replace the existing Waiehu Heights Well #1 that was taken out of service in Sept 2012 due to high chloride levels. The new well will provide a back-up to the existing Waiehu Heights Well #2.	Ongoing	\$200,000	\$157,050	Design (Well Development) Note: "Well Development" includes installation of the well's pump and motor, MCC, electrical, SCADA equipment, and appurtenances.	End 2020
Medium 9	Countywide Upgrades And Replacements	Kaupakalua Well – Pump and Motor Replacement	Haiku	This project involves the replacement of the existing pump and motor for Kaupakalua Well that was installed in 2008. The equipment is beyond its estimated service life of 10 years.	New	\$750,000	\$0	Construction	End 2020
Medium 10	Countywide Upgrades And Replacements	Kaupakalua Well & Booster Pump #1 and #2 - Motor Control Center Replacement	Haiku	This project involves the replacement of the existing well motor control center (MCC)/Electrical for Kaupakalua Well and Booster Pumps installed in 2000. This equipment has reached its estimated service life.	New	\$350,000	\$0	Design	End 2020
Medium 11	Countywide Upgrades And Replacements	North Waihee Well #1 - Pump and Motor Replacement	Wailuku-Kahului	This project involves the replacement of the existing pump and motor for North Waihee Well #1 installed in 2012. The equipment is showing abnormal wear thus replacement is being scheduled in advance of its 10 year estimated service life.	New	\$500,000	\$0	Construction	End 2020
Medium 12	Countywide Upgrades And Replacements	North Waihee Booster Pumps #1, #2, and #3 – Pump and Motor Replacement	Wailuku-Kahului	This project involves the replacement of the existing pump and motor for North Waihee Booster Pumps #1, #2, and #3. #1 and #2 was installed in the late 90's and #3 was installed in 2001.	New	\$400,000	\$0	Construction	End 2020
Medium 13	Countywide Upgrades And Replacements	Kepaniwai Well – Pump and Motor Replacement	Wailuku-Kahului	This project involves the replacement of the existing pump and motor for Kepaniwai Well that was installed in 2012. The equipment is showing significant signs of wear thus replacement is being scheduled in advance of its 10 year estimated service life.	New	\$500,000	\$0	Construction	End 2020
Medium 14	Countywide Upgrades And Replacements	Wailea Tank #2 (aka Diamond Resorts Tank) Booster Pumps #1 and #2 – Pump and Motor Replacement	Kihei-Makena	This project involves replacement of the existing pump and motor for Booster Pumps #1 and #2 at the Wailea Tank #2 (aka Diamond Resorts Tank) installed in 2007. The equipment is beyond its service life of 10 years.	New	\$600,000	\$0	Construction	End 2020

Medium 15	Countywide Water Systems Modifications		Countywide	The Countywide Water System Modification supports all CIP projects, including prior fiscal year, ensuing fiscal year, and emergency projects to efficiently provide clean and safe drinking water to customers. An effective CIP program demands an ability to respond to unanticipated planning, design, and construction issues in a timely manner.	New	\$350,000	\$0	Design/Construction	End 2021
Medium 16	Countywide Upgrades And Replacements	Mahinahina WTP 100,000 Gallon Backwash Tank Replacement	West Maui	This project includes replacement of the existing 100,000 gallon backwash tank at the Mahinahina Water Treatment Plant was installed in 1994. The tank is beyond its service life and is also showing significant signs of corrosion.	New	\$80,000	\$0	Design	Mid 2020
Medium 17	Countywide Facility Improvements	Lahaina WTP - 1 MG Clearwell Tank Refurbishment	Lahaina	This project involves refurbishment of the interior and exterior of the existing 1-million gallon finish water tank installed in mid 1990's. The existing interior lining is separating from the concrete tank walls and the exterior requires repainting.	New	\$500,000	\$0	Construction	Early 2020
Medium 18	Countywide Facility Improvements	Wailea Tank #2 (aka Diamond Resorts Tank - Roof Refurbishment	Kihei-Makena	This project involves refurbishment an existing 3-million gallon concrete tank roof constructed in 1984. The tank roof is showing signs of corrosion.	New	\$300,000	\$0	Construction	Mid 2020
Medium 19	Countywide Facility Improvements	Olinda WTP Septic System & Leach Field	Makawao-Pukalani-Kula	This project involves the construction of a septic system and leach field for the Olinda WTP. The original septic system is inoperable and staff is using portable toilets that requires weekly cleaning.	New	\$20,000	\$0	Design	Early 2020
Medium 20	Central Maui Reliable Capacity	Waiehu Heights Well #1 – Replacement	Wailuku-Kahului	This project involves the development of a new groundwater well and includes installation of well pump and motor, motor control center (MCC)/Electrical, SCADA equipment, and appurtenances to replace the existing Waiehu Heights Well #1 that was taken out of service in Sept 2012 due to high chloride levels. The new well will provide a back-up to the existing Waiehu Heights Well #2.	Ongoing	\$2,800,000	\$157,050	Construction (Well Development) Note: "Well Development" includes installation of the well's pump and motor, MCC, electrical, SCADA equipment, and appurtenances.	End 2021
Medium 21	Countywide Facility Improvements	Olinda WTP Septic System & Leach Field	Makawao-Pukalani-Kula	This project involves the construction of a septic system and leach field for the Olinda WTP. The original septic system is inoperable and staff is using portable toilets that requires weekly cleaning.	New	\$200,000	\$0	Construction	Mid 2020
Medium 22	Countywide Upgrades And Replacements	Kanaha Well - Motor Control Center Replacement	West Maui	This project involves the replacement of the existing motor control center (MCC)/Electrical for Kanaha Well #1 and Well #2 installed in the 70's and is in need of repair. The equipment is well beyond its estimated service life of 10 years.	New	\$1,000,000	\$1,000,000	Construction	End 2021