



# Community Planning and Engineering, Inc.

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**Civil Engineering ■ Infrastructure Master Planning ■ Construction Management**

## Water and Wastewater Capabilities

**Water Systems ■ Wastewater Systems ■ Storm Drainage/Flood Control Systems**

### About Community Planning and Engineering

CP&E has been Hawaii's infrastructure and land development expert for over five decades. We offer a comprehensive spectrum of civil engineering design capabilities that are applied to venues ranging from entire districts to single facilities. We have designed new water and wastewater systems, hundreds of miles of sewer and water lines, and new roadways. We have found creative, cost-effective solutions to complicated regional infrastructure issues and managed the construction of thousands of acres of newly urbanized communities.

### Wastewater Projects



#### Waimanalo Wastewater Treatment Plant Upgrades, State of Hawaii DLNR

This project consisted of major improvements to the Waimanalo WWTP including a new anoxic-aerobic secondary treatment process, sludge thickening facilities, sand filters, and three additional injection wells for effluent disposal. The anoxic-aerobic system replaced an antiquated rapid bloc treatment system and restored the original flow capacity of the plant to allow development to continue in the Waimanalo area. CP&E prepared construction documents and provided services during construction and post construction. CP&E also coordinated operator training classes and prepared the O&M manual.



#### Niu Valley Wastewater Pump Station Force Main Replacement, C&C of Honolulu

CP&E, as a subcontractor to CH2MHill, was selected by the City to execute a design-build permanent replacement of the Niu Valley Wastewater Pump Station force main. CP&E designed the tie-ins to the existing sanitary sewer system at each end of the new replacement pipeline and determined the design and size of the new sanitary line. We also performed a pump analysis to determine the hydraulic effects of the new force main on existing pumps and prepared all necessary permits including NPDES permitting.



#### Force Main Condition Assessment and Upgrade Project, C&C of Honolulu

CP&E, as a subcontractor to HDR, assessed the condition of five critical wastewater force mains and provided recommendations for rehabilitation, maintenance, or replacement. Phase I of the project included reviewing existing data and developing a work plan to assess existing conditions of the Old Beachwalk Force Main, Kahala Force Main, Waimalu Force Main, Kaneohe-Kailua Force Main, and Old Hart Street Force Main. Phase II included working with City personnel to devise shutdown plans for the wastewater pump stations, overnight work to divert flow away from the force main, inspecting the pipe, collecting data to investigate rates of deterioration, and implementing a public outreach program. The final phase involved evaluating the data and identifying conditions requiring remedial action.



#### Force Main Systems Improvements at Kaneohe, Kailua and Halawa, C&C of Honolulu

CP&E has been contracted by the City and County of Honolulu to assess the condition of the Kailua Road, Kaneohe Bay #3 and Halawa force mains. All three force mains were installed in the late 1960's and are listed in the 2010 Consent Decree. This project consists of evaluating the physical condition of the force main by surface, external and internal inspection. A work plan will be prepared to outline the assessment methods. Field work will consist of exposing buried sections of the pipe and testing a cut-out section for strength and corrosion. Results will be summarized in a final report and submitted to EPA for approval.

For more information contact Mr. Derek Mukai, P.E., Principal Engineer  
**phone:** 808.864.3955 **email:** DMukai@cpe-hawaii.com

## Our Wastewater Engineers

CP&E's professional staff forms a seasoned, complementary team that embodies a rich combination of backgrounds, experiences, strengths, and technical expertise. They provide the requisite qualifications and experience to consistently deliver quality results on time and within budget.

### Derek K. Mukai, P.E., Principal Engineer



**Education:** B.S., Mechanical Engineering, University of Hawaii at Manoa

**Wastewater Project Experience:**

- Waimanalo WWTP Improvements
- Niu Valley WWPS Force Main
- Waianae WWTP Upgrade to Secondary
- Waianae WWTP Biotrickling Filter Odor Control System
- Kailua WWTP Modifications
- Kailua WWTP, Primary and Secondary Odor Control Study
- Kailua WWTP, DAFT Pump Replacement
- Makena Wastewater Reclamation System, Increment 1
- Heeia WWTP Expansion Part A & Part B
- Force Main Assessment and Upgrade for Beachwalk, Hart Street, Waimalu, Kaneohe-Kailua and Kahala
- Camp Humphreys (Korea) WWTP Upgrades
- Laie WWPS and Collection System
- Kaalaea WWPS
- Hokuli'a Low Pressure Sewer System
- Kukuiula Wastewater Treatment Plant
- Schofield WWTP, Repair/Replace Centrifuge Unit
- Schofield WWTP, Upgrade WWTP Disinfection System
- Sand Island STP, Interim Chemical Treatment Facility

### Keane 'Puna' Kaneakua, P.E., Civil Engineer

**Education:** B.S., Engineering, Harvey Mudd College

**Wastewater Project Experience:**

- Waimanalo Wastewater Treatment Plant Improvements
- Niu Valley Wastewater Pump Station Force Main Replacement
- Pearl City Wastewater Pump Station Capacity Study
- Force Main Assessment and Upgrade for Beachwalk, Hart Street, Waimalu, Kaneohe-Kailua and Kahala
- Force Main Systems Improvements at Kaneohe, Kailua and Halawa
- Coconut Island Pump Station and Force Main Replacement



### Mel Chung, P.E., Civil Engineer



**Education:** M.S., Civil Engineering, University of Hawaii at Manoa  
B.S., Global Environmental Science, University of Hawaii at Manoa

**Wastewater Project Experience:**

- Force Main Systems Improvements at Kaneohe, Kailua and Halawa
- Coconut Island Pump Station and Force Main Replacement

### Om S. Das, Civil Engineer

**Education:** M.S., Civil Engineering, University of Hawaii at Manoa

B.S., Chemical Engineering, Malaviya National Institute of Technology, Jaipur, India

**Wastewater Project Experience:**

- Force Main Systems Improvements at Kaneohe, Kailua, and Halawa
- Utilities Study, Area IV Installations Camp Walker, USAG Daegu, Korea
- Research Project – Design study of Wastewater Treatment Plant, Jaipur, India
- M.S. Research/Thesis (2009-2011) – Modeling and simulation of the dynamics of coagulants and flocculants in wastewater



### Hernan E. Co, Civil Engineer



**Education:** B.S., Civil Engineering, University of Hawaii at Manoa

**Wastewater Project Experience:**

- Sewer System Study at Camp Walker, USAG Daegu, Korea
- Force Main Systems Improvements at Kaneohe, Kailua and Halawa
- Coconut Island Pump Station and Force Main Replacement