

Experience Summary

Emily Dong joined Brown and Caldwell in January 2016 with 6 years of engineering experience with the City and County of Honolulu, Department of Design and Construction, Wastewater Division. She has been involved with projects relating to the evaluation and management of the planning, design and construction of force main replacements, and pump station and wastewater treatment facility modifications requiring development and preparation of condition assessment reports, engineering studies, permitting, operation and maintenance manuals, and cost estimates. Her experience also includes developing scope of work, working closely with operations, performing field investigations, flow determination, storm characterization, and public relations.

Assignment

Manager

Education

M.S., Civil Engineering,
Environmental Engineering
Program, University of Hawaii,
Honolulu, Hawaii,

B.S., Civil Engineering,
Environmental Engineering
Program, University of
Washington, Seattle,
Washington,

Registration

Professional Civil Engineer
Hawaii, 2014

Experience

11 years

Joined Firm

January 2016

Relevant Expertise

- Project development
- Contract administration and procurement
- Wastewater system planning
- Wastewater pump station and force main evaluation
- Condition assessments
- Hydraulic analysis
- Public relations

Wastewater

Wastewater Process Control in Support of Operations, City and County of Honolulu, Honolulu, Hawaii

Manager. City and County of Honolulu (CCH) Division of Wastewater Treatment and Disposal (WTD) contracted Brown and Caldwell (BC) to support the delivery of wastewater process control related work orders for all CCH treatment and collection maintenance facilities. The process control work orders range from identification and analysis of wastewater treatment issues to planning and design work relating to process control optimization and providing third party technical reviews for design and construction documents. BC is working alongside CCH to actively address identified system deficiencies or required improvements and establish best practices to be leveraged across the facilities. This contract has required BC to provide both urgent and ongoing technical support to facilitate resolution of WTD's most pressing wastewater process items. *Prof Services End: Ongoing*

Ala Moana Wastewater Pump Station Upgrade, City and County of Honolulu, Honolulu, Hawaii

Sr. Staff Engineer. BC is responsible for preparation of a design alternatives report for the pump station rehabilitation. Assessed the condition of existing mechanical, electrical, and structural components and evaluated design and construction alternatives, assessed system hydraulics, identified permit requirements, and provided cost estimates. Duties include preparing schedules, coordination of staff and preparation of the Basis of Design. *Project#146416; SID 52926; PM: Cameron Foucht; Prof Services End: Ongoing; Construction: Ongoing (2021)*

Construction Management & Engineering Services for the Design Build of WWPS Electrical and SCADA Improvements, City and County of Honolulu, Honolulu, Hawaii

Staff Engineer. Assist with the coordination and project oversight for the City of Honolulu's wastewater pumping electrical and control systems upgrade. The project provides construction period services to represent the City in the delivery of a Design Build contract that the City entered into with a general contractor to upgrade electrical and SCADA systems for 19 pump stations in the City and County of Honolulu conveyance system. *Project#148054; SID 58045; PM: Kelly Kimball; Prof Services: Ongoing; Construction End: Ongoing*

Waianae Wastewater Facilities Plan, City and County of Honolulu, Waianae, Hawaii

Staff Engineer. Assist with developing a wastewater facilities plan and report for the Waianae basin, which includes the WWTP, collection system and pump stations, sampling and future development. Tasks include a collection system

evaluation of the gravity mains, force mains, pump stations and a wastewater and the evaluation of the unsewered areas within the basin to be followed with the development of future projects and prioritization.

Project#141299, SID 34233; PM: Dustin Yamamoto; Prof Services End: Ongoing; Construction End: N/A

Pearl City Wastewater Pump Station, Force Main and Sewer System Alternatives, City and County of Honolulu, Honolulu, Hawaii

Sr. Staff Engineer/Lead Project Engineer. Lead project engineer for the upgrade of a 45-million-gallon per day (mgd) wastewater pump station located within the flood zone. The main tasks include flood protection and/or water hazard prevention for the equipment and electrical units. The project is currently in the design alternatives phase. *Project # 146417; SID 52846; PM: Cameron Foucht; Prof Services: Ongoing; Construction End: Ongoing (2022)*

Kaneohe-Kailua Regional Wastewater Treatment Plant, Facilities Plan, Tunnel Influent Pump Station (TIPS), Headworks Design, and Services During Construction, Kailua, Hawaii

Staff Engineer. Assist with the coordination and project management for the new tunnel influent facilities at Kaneohe Pretreatment Facility for Kailua RWWTP. Tasks include reviewing contract documents for bid and construction services. *Project 148259; SID 66356; PM: Garrett Leong; Prof Services End: Ongoing; Construction End: Ongoing*

Noise and Odor Abatement Systems, Phase I, II, III, IV (ROSE), Kailua Regional WWTP and Collection System Odor Control Improvements

Staff Engineer. Phase I. Preparation of the Operations and Maintenance manual for the of foul air collection and odor treatment improvements at the Kailua RWWTP including installation of new fans and ductwork, DAFT overflow pipe reroute to direct high sulfide wastewater to the existing biotowers, and chemical addition facilities at the Kailua RWWTP, Ahuimanu PTF, Kaneohe PTF, and Kailua Road Wastewater Pump Station.

Project# 134521; SID 6201; PM: Garrett Leong; Prof Services End: Ongoing; Construction End: Ongoing (2017)

Staff Engineer. Phase II. Preparation of the Operations and Maintenance manual for the new odor monitoring system, dewatering building enclosure and odor improvements (ventilation, odor containment, and odor treatment), DAFT improvements, primary sludge line reroute, and extensive SCADA improvements at the Kailua RWWTP. *Project#134521; SID 6201; PM: Garrett Leong; Prof Services End: Ongoing; Construction End: Ongoing (2017)*

Tributary Wastewater Pump Stations, Whitmore Village Wastewater Pretreatment Facility and Makakilo City Wastewater Pump Station Improvements, City and County of Honolulu, Honolulu, Hawaii

- **Staff Engineer.** Project includes performing a detailed condition assessment of eight wastewater facilities using City and County of Honolulu standard asset assessment procedures. BC's field condition assessment team employed visual observation and non-destructive testing techniques to evaluate asset conditions at each facility. Responsible for preparation of a detailed condition assessment report for each facility, which includes developing recommendations for rehabilitation for each asset, prioritizing assets within each facility using EPA-approved techniques to determine rehabilitation order, and developing cost estimates. Detailed design documents are anticipated in future phases. Duties include developing schedule and preparation of the Basis of Design reports including fuel consumption, HVAC and flow analysis. *Project# 149555; SID 59026; PM: Milo Smith; Prof Services End: Ongoing; Construction End: Ongoing (2021)*
- **Project Manager for the City and County of Honolulu, Honolulu, Hawaii – CCH**
Performed a detailed condition assessment of eight wastewater facilities using City and County of Honolulu standard asset assessment procedures. Responsible for contract administration, procurement, review, and coordination of City departments regarding each wastewater pump station's condition assessment. Developed scope of work from recommendations for rehabilitation for each asset, prioritizing assets within each facility and developed separate cost estimates. Developed basis-of-design reports and detailed design documents are anticipated in future phases. *City and County of Honolulu*

Waipio Wastewater Pump Station Engineering Planning, Design Services, and Upgrade, City and County of Honolulu, Waipio, Hawaii

- **Waipio Wastewater Pump Station Engineering Planning and Design Services**
Staff Engineer. Responsible for the evaluation of the Waipio Wastewater Pump Station to primarily correct hydraulic deficiencies, and also recommend mechanical, electrical, and structural improvements. Developed a design alternatives report prepared to document the pump station assessment, alternatives evaluation, and recommendations. Design documents including specifications and drawings are ongoing. Duties include coordination of staff and permitting. *Project: #147994; SID 53113; PM: Milo Smith; Prof Services End: Ongoing; Construction End: Forthcoming (2020)*
- **Project Manager for the City and County of Honolulu, Honolulu, Hawaii – CCH**
Responsible for contract administration, procurement, review, and coordination of City departments regarding a design alternatives report and supplemental design report for pump station rehabilitation. Effort includes assessing condition of existing mechanical, structural, and electrical equipment, evaluating construction alternatives, analyzing system hydraulics, and providing cost estimates. Detailed design for the recommended upgrades is currently ongoing. The design includes a new generator and generator building, HVAC upgrades, civil/site improvements, a wet well condition assessment, a transient analysis to evaluate existing surge mitigation measures, and other miscellaneous upgrades. *City and County of Honolulu*

Windward Wastewater Facilities Condition Assessment, City and County of Honolulu, Oahu, Hawaii – CCH

Project Manager for the City and County of Honolulu. Project includes a detailed condition assessment of six wastewater facilities using City and County of Honolulu standard asset assessment procedures. Responsible for contract administration, procurement, review, and coordination of City departments regarding each wastewater pump station's condition assessment. Developed scope of work from recommendations for rehabilitation for each asset, prioritizing assets within each facility and developed separate cost estimates. Development of basis-of-design reports and detailed design documents are anticipated in future phases. *City and County of Honolulu*

Water

Capital Projects Division Program Management, City and County of Honolulu, Board of Water Supply, Honolulu, Hawaii

Staff Engineer. Providing program management services to assist the City & County of Honolulu Board of Water Supply Capital Projects Division over a five-year period. The goal is to optimize business performance, expedite Capital Improvement Program execution, and implement future CIP projects identified from the City's Water Master Plan. Duties include assisting in the development of a Basis of Design for the Capital Improvement Program. The project includes the replacement and upgrade of an activated carbon filter water treatment facility including the chemical addition. *Project# 144595; SID 41245; PM: Chris Cleveland; Prof Services End: Ongoing; Construction End: N/A*

Memberships

1. Hawaii Water Environment Association / Water Environment Federation, President - 2015
2. American Society of Civil Engineers, Social Chair

Publications

R. Babcock, Jr. and, E. Dong; Development of a Wastewater Operator Training Program for the State of Hawaii, 2016.