

**JAY STONE, PE, BCEE, CFM, CPESC, CPSWQ, CESCPP, CWPPP,
ESCPC, LEED AP**
Civil Engineering Senior Manager

YEARS WITH B+K: 11
YEARS OF EXPERIENCE: 29

PROFESSIONAL REGISTRATION

» HI, Professional Engineer/Civil
[#9548 (exp.4/30/2024)]

EDUCATION

- » Bachelor of Science, Civil Engineering
- » Bachelor of Arts, English

PROFESSIONAL EXPERIENCE

Board Certified Environmental Engineer, Water
Supply & Wastewater
Certified Professional in Storm Water Quality Control
Certified Erosion & Sediment Control Plan Preparer
Certified Professional in Erosion and Sediment Control
Certified Floodplain Manager

LEED Accredited Professional
International Society of Automation
Water Environment Federation
Certified Water Pollution Plan Preparer
Hawaii Water Environment Association
American Water Works Association

Association of Floodplain Managers
American Society of Civil Engineers
American Academy of Environmental
Engineers & Scientists

Erosion & Sediment Control Plan Coordinator

PROJECT EXPERIENCE

» **Lono Kona Subdivision Sewer Improvements (Kailua-Kona, HI)**

ROLE: Civil Engineering Senior Manager

SCOPE: Included investigations along the selected sewer line corridor; field verification of the alignment; coordination with the area homeowners on house lot lateral location; preparing plans, specifications and opinions of construction costs; processing permits including a National Pollutant Discharge Elimination System permit for storm water discharges associated with construction activities; and providing bidding and construction services.

» **Aweoweo Street Drainage Outfall Improvement (Waialua, HI)**

ROLE: Senior Project Manager

SCOPE: Completed the design for installation of a duckbill check valve on an existing City-owned storm drain line at the Aweoweo Beach Park. Also included the design of an inspection manhole upstream of the drain line outlet and an evaluation of construction options.

» **Kapalama Container Terminal Wharf and Dredging Environmental Permits (Honolulu, HI)**

ROLE: Project Manager

SCOPE: Prepared all environmental permit applications for the New Kapalama Container Terminal (KCT) Wharf and Dredging project. The project permits and approvals processed include the Department of the Army (DA) individual permit, Section 401 WQC, and the NPDES General Permits for discharges of hydrotesting effluent and construction stormwater, State DOT Highways drainage system discharge permit, and CZM consistency. Conducted consultations with applicable State and federal agencies to address Section 7 of the Endangered Species Act (ESA), Section 106 of the National Historic Preservation Act (NHPA), and impacts to Essential Fish Habitat (EFH) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA).

» **Kahawainui Stream Dredging (Laie, HI)**

ROLE: Project Manager

SCOPE: Preparing construction plans and specifications for the maintenance dredging of Kahawainui Stream between the intersection with Laie Wai Stream to the mouth of the stream excluding the sand berm at the stream mouth. Processing permit applications with approvals including DA permit, 401 WQC, NPDES permit for construction stormwater discharges, stream channel alteration, HRS Ch. 6E with SHPD.

» **Environmental Support Facilities Honouliuli Wastewater Treatment Plan (Ewa Beach, HI)**

ROLE: Senior Project Manager/Civil Engineer

SCOPE: Working with the City to meet consent decree deadlines by developing a program for new support facilities at the Honouliuli WWTP site. The project focuses on centralization of department facilities to improve operation and workflow at both the Honouliuli and Sand Island WWTPs.

» **Kaaawa Fire Station Spill Prevention Control and Countermeasures (SPCC) Plan (Kaaawa, HI)**

ROLE: Senior Project Manager

SCOPE: Prepared Spill Prevention, Control, and Countermeasures Plans for the Honolulu Fire Department Kaaawa Fire Station Communication Facility Improvements and Tower Replacement project.

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PROJECT EXPERIENCE, CONT'D...

- » **General Hydraulic Engineering Services (Statewide, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Evaluating scour conditions at 96 bridges on Oahu. Conducting bridge inspections and preparing scour evaluation reports. Recommending solutions to ameliorate scour. Addressing permits for in-water geotechnical borings.
- » **Miscellaneous Permanent Best Management Practices (BMPs), Phase 2 (Kaneohe, HI)**
ROLE: Project Manager
SCOPE: Designed and is currently providing construction services for new permanent storm water best management practices (BMPs) at three sites in Kaneohe at or near the Halekou Interchange. Scope included civil and environmental engineering, landscape architecture, NPDES permit for construction stormwater discharges, HRS Chapter 6E approval with SHPD, HRS 195D approval with the State DLNR-DOFAW, and post-design services during bidding and construction.
- » **Special Project HI2206M Repair Drainage Ditch at B702, Camp Smith (Aiea, HI)**
ROLE: Senior Project Manager/Civil Engineer
SCOPE: Prepared the studies, basis of design reports, plans, specifications, and opinions of probable construction costs (OPCCs) to repair an eroded drainage ditch adjacent to Building 702. The erosion undermines the footings of the existing security fence. A concrete-lined ditch and retaining wall and gabions/renot mattresses was evaluated for the repair.
- » **Design of MS4 Improvements, Central Fire Station and Training Center and Kahaluu Fire Station (Honolulu & Kahaluu, HI)**
ROLE: Senior Project Manager/Civil Engineer
SCOPE: Prepared construction documents for storm water management improvements which included seepage wells, trench drainage system with filters for Central Fire Station. Design improvements for Kahaluu Fire Station included bio-retention/infiltration basins and a percolation chamber
- » **Kaneohe/Kailua Force Main No. 1 Rehabilitation (Kaneohe-Kailua, HI)**
ROLE: Civil Engineer
SCOPE: Prepared work plan and coordinated with City WWTP and WWPS personnel for the shut down of Kaneohe WWPTF and WWPS in the collection system so that corrosion subconsultant could enter the force main at low flow hours and assess the extent of corrosion in the force main.
- » **PVT Landfill Owner Advisory Services (Waianae, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Providing general, third-party assistance to PVT for their construction and demolition waste landfill facility and its operations in line with prevailing State of Hawaii, Department of Health (DOH) permit conditions, regulations and requirements.
- » **Aliamanu Wastewater Pump Stations Force Main to Gravity Sewer Conversion (Honolulu, HI)**
ROLE: Project Manager/Civil Engineer
SCOPE: Prepared alternative construction methods report, design analysis, plans, specifications, and opinions of probable costs for the replacement of 460 lineal feet (LF) of degraded force main with a gravity sewer. Design included rockfall protection (shotcrete and netting with soil anchors) because of the project's proximity to existing cut slopes.
- » **Ahukini Landfill Restoration Phase II, Lihue Airport (Lihue, HI)**
ROLE: Civil Engineer
SCOPE: Developing a plan to deal with shearwater bird habitat in the area; creating construction plans and specifications to stabilize a coastal slope containing landfill debris; and obtaining all necessary approvals and permits to allow such work.

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PROJECT EXPERIENCE, CONT'D...

- » **Ala Moana Regional Park Pedestrian Bridges, Canal Wall, and Pond Improvements (Honolulu, HI)**
ROLE: Civil Engineer
SCOPE: Processed the EIS, the Special Management Area permit, and all environmental permit applications (USACE permit, Section 401 WQC, CZM Consistency, and NPDES permit NOI-C) for repair of the failed canal wall sections, repair of the historic Bridle Bridge, demolition and replacement of the Piikoi Street and Queen Street bridges, and bank stabilization at the Japanese and Hawaiian Ponds within the park.
- » **Kaimuki Pump Station Redevelopment Plan (Honolulu, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Prepared a redevelopment plan to determine the long-term use of the site. Plan preparation activities included identification and evaluation of up to four alternatives for the phased abandonment of the existing artesian wells and installation of new wells, with associated pumping equipment, and piping.
- » **NPDES MS4 Retrofit Structural BMP Improvements Program (Honolulu, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Updated the City's action plan to meet permit requirements to retrofit 10% of the City's MS4 drainage structures. An inventory and priority ranking of potential retrofit sites using field inspection data and geographic information systems (GIS) data was completed. Incorporated planned projects from the City's other MS4 programs into the storm water retrofit planning process. Developing a georeferenced retrofit prioritization, tracking system, and report summarizing the results of the field reconnaissance and feasibility evaluations. The Retrofit Engineering Study and Prioritization Tracking System report will recommend BMPs at sites, including conceptual designs and preliminary opinions of probable costs. Prepared plans, specifications, and opinions of probable costs for the repair of over 70 catch basins in Kakaako, including replacement with tree filter boxes and planter boxes; a bioretention cell at the intersection of Kapiolani Boulevard and Sheridan Street; and four different types of permeable pavement and pavers in the existing bicycle lane on South Street.
- » **Halawa Wells GAC Treatment and Facility Modifications-Phase I (Aiea, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Completed a preliminary engineering report and construction documents for the installation of GAC treatment units, well pump and piping upgrades, reservoir tank repair, a new disinfection system, electrical instrumentation and control upgrades, expansion of the Control Building and the addition of new booster pumps at the Halawa 277 reservoir and well site.
- » **Keolu Hills Water System Improvements, Part II (Kailua, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Designing about 10,000 lineal feet of new ductile iron water mains 4- to 12-inches in diameter. The new water mains are located under Akahai Street, Akaiki Street, Akalani Loop, Akalani Place, Akalei Place, Akiu Place, Akumu Place, Akumu Street, Halula Place, Iana Street, and Keolu Drive in Kailua.
- » **Wilhelmina Rise Water System Improvements, Part V (Honolulu, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Prepared the design documents for the proposed installation of about 4,550 lineal feet of new water main ranging in sizes from 4 to 12 inches in diameter and the inactivation of an existing cross-county main. The existing water lines will be replaced with new PVC DR 14 (Class 200) water mains and ductile iron fittings
- » **Pacific Heights Water System Improvements, Part II (Honolulu, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Preparing the design documents for the proposed installation of about 8,500 lineal feet of new water main ranging in sizes from 2.5 to 12 inches in diameter and the inactivation of an existing cross-county main.
- » **Kihei Small Boat Harbor, Maintenance Dredging (Kihei, HI)**
ROLE: Project Manager
SCOPE: Prepared dredging plans and technical specifications, Department of Army Nationwide Permit application package, and 401 Water Quality Certification package for dredging of the Kihei Boat Launching Facility.

PROJECT EXPERIENCE, CONT'D...

- » **Moloaa Irrigation Cooperative Water System Improvements (Anahola, HI)**
ROLE: Project Manager
SCOPE: Plans, specifications, and opinion of probable costs were prepared for the selected recommendation and permit applications submitted as well as regulatory approvals obtained for the construction of the proposed improvements. The specifications included federal forms and requirements. The loan application for using the drinking water state revolving fund was also prepared.
- » **Wastewater Maintenance Projects, Statewide (Statewide)**
ROLE: Civil Engineer
SCOPE: Provided services as the prime consultant under an open-ended services contract, making inspections, addressing maintenance issues, conducting studies to identify deficiencies, recommending corrective measures, and designing repairs for DOT-A wastewater facilities, including wastewater master plans for Honolulu and Kahului Airports and design of sewage pump station replacements.
- » **Coconut Beach Resort, (Kapaa, HI)**
ROLE: Project Manager
SCOPE: Civil engineering improvements include designing layout, grading, drainage and utility improvements for the multi-storied buildings, on grade driveways and parking lots, building parking garage, landscape grounds, and swimming pool/amenity areas. The design includes storm water detention facilities to retain the 100-year 24-hour storm as required by the project's zoning approval.
- » **Schofield Barracks Erosion Control (Wahiawa, HI)**
ROLE: Project Manager
SCOPE: Provided erosion control specialist services for the renovation of several historic buildings at Quad B, Schofield Barracks, HI. The project scope included monthly inspections and inspections after storm events of storm water best management practices (BMPs), with inspection reports prepared documenting deficiencies in the maintenance, installation, or operation of BMPs and providing recommendations to rectify the deficiencies.
- » **Board of Water Supply Hoaeae Granular Activated Carbon (GAC) Treatment Facility, (Waipahu, HI)**
ROLE: Project Manager
SCOPE: Provided civil engineering design services for refurbishment and upgrade of the existing GAC system at the Hoaeae well site. The scope of the upgrades included selective demolition of existing improvements, and replacement of piping, valves, filters and instrumentation.
- » **Commander, U.S. Naval Forces Korea (CNFK) Pohang Tri-Service Hangar (TSH) Sanitary Survey (Pohang, Korea)**
ROLE: Project Manager
SCOPE: Assisted NAVFAC Pacific with the sanitary survey of the water system at Commander, U.S. Naval Forces Korea (CNFK) Tri-Service Hangar (TSH) Pohang, Korea. The scope of services included preparing the work plan and survey questionnaire for the NAVFAC Pacific inspectors and assisting the inspectors with briefings and preparing the draft and final sanitary survey reports.
- » **Sanitary Survey, Naval Support Facility (NSF) (Diego Garcia)**
ROLE: Project Manager
SCOPE: Assisted NAVFAC Pacific with the sanitary survey of the water systems at NSF Diego Garcia in the British Indian Ocean Territory. The field work was done over a three week-period, which included preparing the work plan, comparing country-specific regulations against other Navy regulations and the National Primary Drinking Water Regulations, and conducting inspections including distribution system evaluation and water treatment system filtration and disinfection assessments. Membrane filtration and direct pressure sand filtration water treatment plants were inspected. A survey questionnaire, draft and final sanitary survey reports including identification of water system deficiencies and recommendations for improvement were prepared, along with NSF Diego Garcia command briefings and presentations of findings.

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- » **Marine Corps Base (MCB) Camp Smedley D. Butler, Marine Corps Air Station (MCAS) Futenma and Combined Arms Training Center (CATC) Fuji Sanitary Survey (Okinawa, Japan)**
ROLE: Civil Engineering Senior Manager
SCOPE: Assisted NAVFAC Pacific with the sanitary survey of the water systems at MCB S.D. Butler, MCAS Futenma and CATC Fuji. Twelve different installations, including a conventional pressure sand filter water treatment plant, were inspected over a four-week period. The services included conducting the on-site sanitary survey of the water systems and preparing the work plan, survey questionnaires, inspection schedule, Command briefing presentations and draft and final sanitary survey reports.
- » **Commander, Fleet Activities, Sasebo Sanitary Survey (Sasebo, Japan)**
ROLE: Project Manager
SCOPE: Assisted NAVFAC Pacific with the sanitary survey of the water systems at CFA Sasebo. The services included conducting the on-site sanitary survey of the water systems and preparing the work plan, survey questionnaires, inspection schedule, Command briefing presentations and draft and final sanitary survey reports.
- » **Mapur Island Resort Community (Mapur, Indonesia)**
ROLE: Civil Engineer
SCOPE: Provided site design and project management services for a mixed-use resort community to be located on a 3000 Hectare portion of Pulau Mapur, a rocky, snake infested island offshore of Bintan, Indonesia, approximately 45 minutes by boat to Singapore. The project will contain over 1700 high end resort villas both over water and land, three hotels, an employee housing community, and a town center.
- » **Waialae Iki 180' Booster No. 1 Relocation (Honolulu, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Providing civil engineering services to relocate the booster pumping station at its Wailupe site to the Waialae Iki 180' reservoir site. The scope of services includes analyzing different design concepts and development of a site-specific compact design, without a building, due to reservoir site space constraints.
- » **Singapore Area Coordinator Sanitary Survey (Singapore)**
ROLE: Project Manager
SCOPE: Assisted NAVFAC Pacific with the sanitary survey of the water system at Singapore Area Coordinator. The project tasks included work plan preparation, survey questionnaire development, inspection schedule coordination, briefing presentations, on-site sanitary survey of the water systems, and draft and final sanitary survey report preparation
- » **Kuhio Highway (Hardy-Oxford) 16" Diam. Main (Lihue, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Designed about 1,680 lineal feet of a new ductile iron 16-inch diameter water main to replace an existing 16-inch diameter asbestos cement water main under Kuhio Highway and Poinciana Street. The scope included the abandonment of approximately 910 lineal feet of 2-inch diameter polyvinyl chloride and 6-inch diameter cast iron water lines under Kuhio Highway and transfer of the existing lateral services to the new 16-inch diameter water main or existing cast iron water mains in the project vicinity.
- » **BWS Mililani 994' Booster Pumping Station (Mililani, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Providing design services for a new booster pumping station at the Mililani 994' reservoir site. The pumping station includes an aboveground structure with rail crane, basement, piping, venturi flow meter, surge anticipator valve, isolation valves, instrumentation, SCADA, electrical power, mechanical ventilation, along with an interior site driveway.
- » **MCBH (Marine Corps Base Hawaii) Installation Appearance Plan (IAP), (Kaneohe, HI)**
ROLE: Civil Engineer
SCOPE: Prepared the MCBH IAP in accordance with the CNIC Navy IAG. The purpose of the MCBH IAP was to enhance the image, character and appearance of MCBH.

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PROJECT EXPERIENCE, CONT'D...

- » **MCBH (Marine Corps Base Hawaii) FY24 MCON P-951 Main Gate Entry Control Facility, (Kaneohe, HI)**
ROLE: Civil Engineer
SCOPE: Updating US NAVFAC HI MILCON Region FEC DD1391 for entry control facility improvements at the main gate of Kaneohe MCBH via expedited schedule. Process involves conducting a design charrette and CSRA workshop to update the DD1391 for subsequent design, implementation and construction.
- » **Kalaheo Water System Improvements - Waterlines, Yamada Well, Yamada and Clearwell Reservoirs & Yamada & 908" Booster Pumps and Environmental Assessment (Kalaheo, HI)**
ROLE: Civil Engineer
SCOPE: Completed preparation of EA plans, specifications, and opinions of probable costs for improvements to the 1,111-foot and 1,222-foot elevation Kalaheo Water System. Preparation of the final design documents for the installation of two storage reservoirs and the replacement of approximately 12,000 lineal feet of water mains ranging in size between 6" and 12" in diameter is ongoing.
- » **Kakaako Catch Basin Retrofits (Honolulu, HI)**
ROLE: Project Manager
SCOPE: Was contracted by AECOM Technical Services to design retrofits for over 40 dilapidated catch basins in or near Kakaako. Four levels of retrofits were implemented.
- » **Office of Hawaiian Affairs (OHA) Kukaniloko Green House and Nursery (Phase 1), (Wahiawa, HI)**
ROLE: Civil Engineer
SCOPE: Assisted OHA in planning and development of a greenhouse/nursery operation near the birthing stones site (Kukaniloko) in Wahiawa. The project is considered the first phase (23 acres) of many incremental improvements, infrastructure and facilities, to implement a long-range vision and master plan for a larger 511-acre landholding.
- » **MCBH (Marine Corps Base Hawaii) FY23 HI2105R Construct Airfield/Mokapu Rd Guard Houses (Kaneohe, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Prepared the plans, specifications, and opinions of probable costs (OPCs) and basis of design report to demolish two existing guard houses at MCBH Kaneohe Bay. Two new permanent guard houses with the gate arms will be constructed to replaced the existing guard houses.
- » **FY25 MCON P-878 Camp Smith Entry Control AT/FP Improvements (Aiea, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Providing a charrette and a study for the entry control facility at Camp Smith to meet AT/FP requirements and CSRA requirements. Prepare Installation PWD 1391.
- » **Kunia Exploratory Wells IV Environmental Assessment (Kunia, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Prepared an Environmental Assessment for the Honolulu BWS to develop up to four exploratory wells on an existing BWS-owned 1.9-acre Agricultural Restricted (AG-1) zoned parcel that houses an existing BWS reservoir. BWS proposed to undertake the drilling, casing, and testing of these wells.
- » **Alohilani NPDES Permit Processing (Honolulu, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Assisted in processing the NPDES general permit application for the Alohilani Resort Waikiki Beach Oceanarium. Services provided included reviewing the requirements of the current State General Permit Authorizing Discharges of Circulation Water from Decorative Ponds or Tanks, City storm drain connection application, City MS4 discharge license, assisting in completing the NPDES notice of intent (NOI) and City discharge/MS4 forms, compiling water quality test data, and packaging and processing the applications.

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PROJECT EXPERIENCE, CONT'D...

- » **Makaha Bridges Environmental Support (Makaha, HI)**
ROLE: Project Manager
SCOPE: Provided environmental support services during the construction of two new bridges in Makaha. Bridge 3 and 3A were replaced. Services included attendance at the preconstruction meeting and running the Water Pollution, Dust, and Erosion Control Meeting. Services also included reviewing the contractor's site-specific best management practices plan/stormwater pollution prevention plan (SSBMPP/SWPPP) and Site-Specific Dewatering BMPs Plan, weekly rain gauge data, contractor payment requests, weekly BMP inspection reports prepared by the contractor, and the contractor's biological report; site observations for general conformance to the SSBMPP/SWPPP; tracking permit compliance; and reviewing or submitting permit compliance documentation.
- » **Aloha Stadium Neighborhood Transit-Oriented-Development Plan (Honolulu, HI)**
ROLE: Civil Engineer
SCOPE: Provided infrastructure analyses for the Aloha Stadium area transit station, assessing planned capacities of water, wastewater, drainage systems, major (i.e. gas, electric, telephone, and cable television) utilities, and identifying schools, existing and planned for the station areas. The required infrastructure for each proposed alternative transit station site will then be evaluated and the site will be compared to each other based on construction requirements and development costs.
- » **State Department of Transportation Airports, Pavement Inspections, (Various Locations, HI)**
ROLE: Civil Engineering Senior Manager
SCOPE: Inspected airfield asphalt and concrete pavement in accordance with USACE PAVER manuals at SDOT airports. Inspection teams used a systemic approach to maximize efficiency and complete the inspections on time. In addition GPS cameras were used to capture geospatial data for all photographs. All airport safety regulations were followed.
- » **NSA Souda Bay Sanitary Survey, (Crete, Greece)**
ROLE: Project Manager
SCOPE: Assisted NAVFAC Atlantic with the sanitary survey of the water system at NSA Souda Bay in Crete, Greece. We prepared the work plan and assisted with the briefing presentations and the draft and final sanitary survey reports.
- » **Kamehameha Schools Kapalama Campus, Campus Action Plan (CAP), (Honolulu, HI)**
ROLE: Civil Engineer
SCOPE: Provided civil engineering, planning, and landscape architecture services in support of the preparation of a Campus Master Plan and Campus Action Plan for Kamehameha Schools' Kapalama Campus. The engineering scope included assessing the existing and future capacities of the water, sewage and drainage utilities at the campus. Multiple alternative scenarios were analyzed. The analysis identified site constraints, rough order of magnitude costs, phasing, permits, and sustainable design opportunities. The focus of the plan is to create linkages to the campus education program and a Hawaiian sense of place.
- » **Marriott Ko Olina Beach Club Pool Renovation (Ko Olina, HI)**
ROLE: Civil Engineer
SCOPE: Project consists of renovating the Lagoon Pool and sand bottom kids area. Scope will be to improve existing island, reduce the sand bottom area and create kids splash pad. Scope will also include expanding the pool deck into the existing grass area, adding two additional rows of palapa shade umbrellas, and providing a bypass path for guests around the renovated pool area deck.
- » **Turtle Bay Wastewater Treatment Plant (WWTP) & Injection Wells Evaluation (Kahuku, HI)**
ROLE: Project Manager
SCOPE: Provided an independent third-party review of proposed improvements at the existing Turtle Bay WWTP and a proposed assessment of the existing injection wells. The existing pressure sand filters at the WWTP were proposed to be replaced with cloth disk filters. In addition, an assessment of injection well #2 was proposed.

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PROJECT EXPERIENCE, CONT'D...

- » **Honouliuli WWTP Reuse Facility (Ewa Beach, HI) ***
ROLE: Civil Engineer
SCOPE: Prepared contract documents including construction plans, specifications, proposals, and cost estimates for a 6.5 million gallon per day (MGD) reuse facility at the Honouliuli WWTP on Oahu. The design was in compliance with the State of Hawaii reuse guidelines. Submitted and obtained approvals for permits from government agencies including City and County of Honolulu and State Department of Health.
- » **Honouliuli WWTP Secondary Treatment Optimization Study (Ewa Beach, HI) ***
ROLE: Project Manager
SCOPE: After construction of the secondary treatment expansion (13 MGD) was completed, performed a one-year optimization study of the secondary treatment system.
- » **Honouliuli WWTP Secondary Treatment Expansion (Ewa Beach, HI)***
ROLE: Civil Engineer
SCOPE: Prepared engineering design report for Honouliuli WWTP 13-MGD secondary treatment expansion. Analyzed primary effluent characteristics to develop loadings and diurnal variations. Wrote and developed a computerized WWTP material balance model to size unit processes. Analyzed multiple scenarios to determine optimum design parameters of unit processes. Design included provisions to expand the facility to 26 MGD. The O&M manual contained detailed procedures for all unit processes and unit operations, including basic information, troubleshooting, sampling, process control, and safety. All mechanical equipment was described with step-by-step operational instructions.
- » **Kailua Regional WWTP Influent Pump Station Odor Control (Kailua, HI)***
ROLE: Civil Engineer
SCOPE: Prepared contract documents including construction plans, specifications, proposals, and cost estimates for an odor control system to replace the existing odor control system at the influent pump station.
- » **Kailua Regional WWTP Start-up and Optimization Study (Kailua, HI)***
ROLE: Civil Engineer
SCOPE: After construction of the secondary treatment expansion was completed, performed a one-year optimization study of the entire Kailua Regional WWTP.
- » **Kailua Regional WWTP Secondary Treatment Expansion (Kailua, HI)***
ROLE: Civil Engineer
SCOPE: Prepared O&M manual for secondary treatment expansion of Kailua Regional WWTP. The secondary treatment expansion included a biotower pump station, two biotowers, solids contractors, solids reaerators, secondary clarifiers, odor control systems, and associated control buildings, pumps, blowers, and site improvements (roads, grading, etc.). The secondary treatment expansion replaced the existing secondary treatment facilities. The O&M manual contained detailed procedures for all unit processes and unit operations, including basic information, troubleshooting, sampling, process control, and safety. All mechanical equipment was described with step-by-step operational instructions.
- » **Wahiawa WWTP Reuse Facility (Wahiawa, HI) ***
ROLE: Civil Engineer
SCOPE: Prepared contract documents including construction plans, specifications, proposals, and cost estimates for a 6.5 million gallon per day reuse facility at the Wahiawa WWTP on Oahu.
- » **Apra Harbor WWTP Secondary Treatment Expansion (Piti, Guam) ***
ROLE: Civil Engineer
SCOPE: Prepared O&M manual for secondary treatment expansion of 4.3-MGD Apra Harbor WWTP in Guam. The secondary treatment expansion included a biotower pump station, a biotower, a solids contractor, a solids reaerator, a secondary clarifier, chlorine contact tank, sulfur dioxide system for dechlorination, and associated control buildings, pumps, blowers, and site improvements (roads, grading, etc.).

* Projects completed prior to B+K

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- » **Apra Harbor WWTP Primary Treatment, Secondary Treatment and Solids Handling Upgrade, (Piti, Guam) ***
ROLE: Principal Civil Engineer
SCOPE: Prepared engineering design report for 4.3-MGD Apra Harbor WWTP in Guam for the primary treatment, secondary treatment, and solids handling upgrades. Analyzed influent characteristics to develop loadings and diurnal variations. Wrote and developed a computerized WWTP material balance model to size unit processes. Analyzed multiple scenarios to determine optimum design parameters of unit processes. Prepared operation and maintenance (O&M) manual for upgrades to WWTP. The upgrades included a primary clarifier, a biotower, a solids contractor, a solids reaerator, a secondary clarifier, a gravity thickener, and site improvements (roads, grading, etc.). Trained operators in the operation, maintenance, and process control of all unit processes and unit operations at the facility, included influent pumping, primary treatment, secondary treatment, and solids handling.
- » **Pouhala Marsh Master Plan (Waipahu, HI) ***
ROLE: Project Manager
SCOPE: Prepared master plan for the restoration of wetland habitat for endangered endemic and indigenous water fowl species.
- » **Ala Wai Small Boat Harbor Water System and Floating Dock System Improvements 500 Row (Honolulu, HI) ***
ROLE: Project Manager
SCOPE: Designed new drinking water system, including fire hydrants, to existing slips and new floating dock system to replace dilapidated slips and increase number of slips available.
- » **Kahawainui Marsh Levee Operation and Maintenance Manual and Specifications (Kailua, HI) ***
ROLE: Project Manager
SCOPE: Prepared operation and maintenance manual for the levee, including the wall and walking path. Prepared specifications for various repairs to the levee so that DOFAW could solicit contractors to conduct the repairs.
- » **Ala Wai Canal Watershed Project (Honolulu, HI) ***
ROLE: Project Manager/Civil Engineer
SCOPE: Conducted hydrologic and hydraulic analyses using HEC-RAS, HEC-HMS, and Flo-2D for multiple storm events. Used LiDAR data to develop base map. Prepared conceptual plans for potential flood mitigation projects. Prepared low impact development and stream restoration conceptual designs throughout the watershed. Compiled comprehensive report of findings.
- » **Dam Break Analyses (Honolulu, HI) ***
ROLE: Project Manager
SCOPE: Conducted hydrologic and hydraulic analyses using HEC-RAS, HEC-HMS, and Flo-2D for multiple storm events. Used LiDAR data to develop base map. Compiled comprehensive report of findings.

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