TETRA TECH

June 30, 2025

Attn: Ms. Laura Acasio, Administrator
Office of Sustainability Climate Change, Equity and Resilience
County of Hawaii
25 Aupuni Street, Suite 1301
Hilo, Hawaii 96720
oscer@hawaiicounty.gov

RE: Letter of Interest to Provide Professional Consultant Services to the County of Hawaii during Fiscal Year 2025-2026

Dear Ms. Acasio:

Tetra Tech, Inc. (Tetra Tech) is pleased to submit this letter of interest and statement of qualifications to provide professional consultant services to the County of Hawaii during fiscal year 2025-2026. This letter should be considered our formal expression of interest of this solicitation. Tetra Tech is excited about the potential to support County of Hawaii by providing professional consultant services in the category of ECOLOGY.

Please find enclosed our Statement of Qualifications and DPW Form 120.

The following table lists the names and phone numbers of clients who may be contacted, including two companies for whom services were rendered during the past year.

Client	Contact	Phone
Auwahi Wind Energy, LLC/Invenergy	Julia Hoeh	708-523-1946
Terraform Power LLC	Scott Rotman	646-992-2549
Hawaiian Electric Company, Inc.	Rouen Liu	808-543-7245
AES Hawaii	Priya Kumar	808-282-8807
Innergex	Julia Mancinelli	604-633-9990

Please use the following e-mail address for notification of future projects to be posted on the State Procurement website: Alicia.Oller@tetratech.com or Tiffany.Agostini@tetratech.com. If you have any questions, please do not hesitate to contact me at (808) 441-6655 or Alicia.Oller@tetratech.com or Tiffany Agostini at 808.441.6652 or Tiffany.Agostini@tetratech.com.

Sincerely,

Alicia E. Oller

Alicia Oller

Vice President, Environmental and Energy Program

Tetra Tech, Inc.
737 Bishop Street, Suite 2340 | Honolulu, Hawaii 96813
Tel 808.441.6600 www.tetratech.com

Statement of Qualifications

June

2025

STATEMENT OF QUALIFICATIONS

Procurement of Professional Services

COUNTY OF HAWAII

FY26 ANNUAL NOTICE TO PROVIDERS OF PROFESSIONAL SERVICES

TETRA TECH

Tetra Tech, Inc.

737 Bishop St., Suite 2000 | Pacific Guardian Center, Mauka Tower Honolulu, HI 96813-3201

www.tetratech.com

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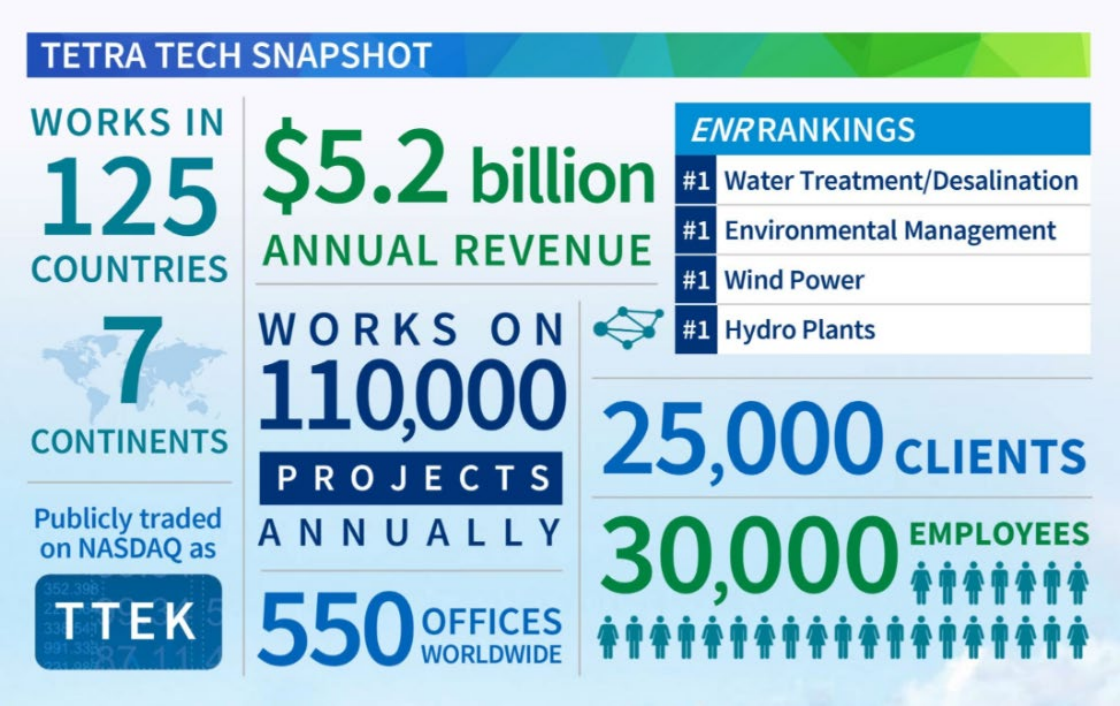
1. Experience and Professional Qualifications Overview

Tetra Tech is a leading, global provider of consulting and engineering services. We are differentiated by *Leading with Science*® to provide innovative technical solutions to our clients. We support global commercial and government clients focused on water, environment, sustainable infrastructure, renewable energy, and international development. With more than 30,000 employees worldwide, Tetra Tech provides clear solutions to complex problems.

Tetra Tech has offices and operational infrastructure throughout the United States, Canada, and abroad. With 30,000 employees in more than 550 offices in more than 125 countries on seven continents, Tetra Tech's technical knowledge and hands-on site work is broad and deep. Our staff is supported by a uniform administrative and management system that project teams can access immediately to ensure work is completed effectively.

Tetra Tech has expanded its geographic presence significantly in recent years through strategic acquisitions and internal growth, especially in the United Kingdom, Canada, and Australia. We also have considerable operations in Asia, Europe, and the Middle East.

Tetra Tech was founded as a civil engineering firm by four technical specialists and has based itself in Pasadena, California since 1966. Its select group of technical experts provided engineering services for waterways, harbors, and coastal areas. In December 1991, Tetra Tech became a publicly traded enterprise. Since its initial public offering, the company has grown substantially, expanding its markets, services, and clientele through internal growth and strategic acquisitions. Today, Tetra Tech is a global leader in providing engineering and technical services. The company is acknowledged for its cutting-edge expertise in sophisticated environmental analysis, modeling, and design and for delivering this expertise effectively across an entire project life cycle.



Our Hawaii operations are based in our Honolulu office, which has operated continuously since 1990, providing natural resources management planning, environmental impact assessments, community involvement, regulatory compliance, permitting, emergency management and community resilience management, environmental engineering, and other environmental services. With over 59 years of experience nationally, and more than 35 years in the Hawaiian Islands, we have compiled an extensive portfolio of project experience assisting key decision makers with complex project and programmatic needs related to environmental conservation and engineering.

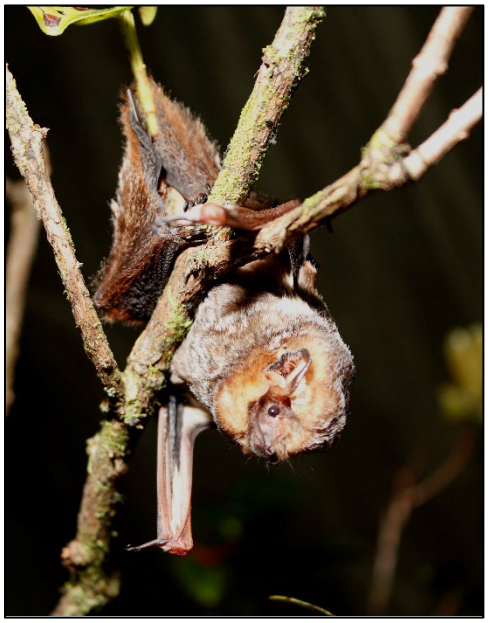
Tetra Tech offers the full suite of consulting services, and has performed environmental, civil, and planning support work for local, state and federal agencies, as well as the private sector in Hawaii. We have provided full environmental and construction support to developers such as AES, Terraform Power, Lend Lease and DR Horton; and environmental assessments and environmental impact statements for clients such as Sempra Renewables/American Electric Power, Hawaiki Submarine Cable LP, and DE Shaw Renewables. Tetra Tech has also supported the U.S. Environmental Protection Agency (EPA), the Hawaii Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office, the Hawaii Department of Land and Natural Resources (DLNR), and Hawaii Department of Business, Economic Development and Tourism (DBEDT) in enhancing their programs.

Tetra Tech has significant experience in the following: National Environmental Policy Act (NEPA) and Hawaii Environmental Policy Act (HEPA) compliance; terrestrial and aquatic wildlife and botanical surveys; state and federally listed species surveys; natural resource assessment and management services; Habitat Conservation Plans (HCPs); Endangered Species Act (ESA) compliance; Environmental Investigation and Restoration; invasive species surveys, control, and prevention planning; environmental construction support and quality control; county permitting; and other resources assessments.

Tetra Tech staff are dedicated to providing clients with the level of excellence required in today's regulatory environment and have earned a reputation in natural resource planning and evaluations that is unequaled by our competitors. We pride ourselves in our ability to provide complete services that integrate surveying, planning, environmental permitting, engineering, Geographic Information Systems (GIS), and construction services due to our global pool of extensive resources.

1.1 Biological Surveys, Assessments, and Monitoring

While Tetra Tech staff have the ability to synthesize existing technical studies to prepare EAs and EISs, our multidisciplinary team often conducts the baseline studies and research to support these documents. Our biologists and ecologists specialize in providing scientifically based and legally defensible natural resource surveys to support each project from initial planning through construction and operation. Tetra Tech's diverse staff have extensive experience developing and conducting a broad range of on-the-ground biological surveys and assessments and desktop analyses in a wide variety of habitat types to fully characterize natural resources and environmental conditions. These surveys provide the foundation for developing cost-effective and environmentally sound approaches for each aspect of a project, including planning, permitting, mitigation, implementation, and construction/post-construction monitoring. We are adept at conducting species surveys that utilize various state and federal protocols, and that enable information to be collected in a systematic manner.



Staff routinely execute fixed radius bird point counts, breeding bird surveys, vegetation community mapping, invasive plant inventories, and threatened and endangered plant and wildlife surveys. With regards to threatened and endangered species, our staff have wide-ranging experience from deploying acoustic detectors and analyzing data for the endangered Hawaiian hoary bat, to conducting avian surveys for the endangered Hawaiian hawk and Hawaiian petrel, and monitoring reproduction of various listed plant species. Tetra Tech has conducted numerous bat telemetry studies and possesses a federal and state permit to capture and handle endangered Hawaiian hoary bats.

In addition to land-based work, our team has the capability to design and implement in-water marine surveys to determine the status and condition of marine ecosystems including coral reef resources and marine listed or sensitive species. Tetra Tech employs state-of-the-art methodology to map marine habitats. Our marine surveys provide accurate data for status reports, impact assessments, and short-, mid- and long-term monitoring programs to inform recovery, resilience and adaptive management, and assist our clients to make informed decisions about managing resources and mitigating human impacts.

Tetra Tech assists federal, state, and county government agencies to develop management, mitigation, and restoration plans for marine and coastal ecosystems around the world using cutting edge marine spatial planning tools and management practices.

Virtually all of the necessary resources are in-house including scientific divers certified by the American Association of Underwater Scientists and commercial divers certified by the Association of Diving Contractors International. All equipment, divers, vessels, and remotely operated underwater vehicles are available.

Our team uses GPS technology for accurate, cost-effective field data collection, with the capability to create custom electronic field data collection forms to download directly to databases to facilitate greater accuracy and efficiency. Tetra Tech develops cost-effective sampling programs using field-tested protocols to ensure data quality and capitalize on state-of-the-practice technologies to reduce costs and meet project objectives. We assure that surveys and monitoring programs meet regulatory requirements, but do not include extraneous or duplicative data collection or unproductive survey effort.

Our staff have direct experience with and an understanding of the requirements of the ESA, Magnuson-Stevens Act, NEPA, HEPA, Hawaii Revised Statutes (HRS) 195-D, Fish and Wildlife Coordination Act, Clean Water Act (CWA), Coastal Zone Management Act (CZMA), Marine Mammal Protection Act, and related laws. We routinely use this broad experience to effectively assess project effects on federal and state threatened or endangered species and to prepare Section 7 Biological Assessments/ Biological Evaluations, Essential Fish Habitat (EFH) Assessments, HCPs, and other similar regulatory documents.

1.2 Environmental Impact Statements and Environmental Assessments

Tetra Tech brings extensive environmental planning expertise nationwide, having completed more than 500 NEPA EAs, EISs, and state equivalent documents. We have also conducted supporting technical studies for major projects in resource management, energy (including wind, solar, hydropower, electric transmission, and oil and gas), water resources, infrastructure, and other sectors. We have successfully prepared NEPA documents for various federal agencies such the U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service, Department of Energy, Department of Agriculture, and all U.S. Defense departments–Navy, Army and Army Corps, Marine Corps, Air Force, and National Guard at installations nationally. Tetra Tech staff are also knowledgeable about the unique requirements for documents prepared pursuant to HEPA in order to comply with Chapter 343 of the HRS and in accordance with Hawaii Administrative Rules (HAR) § 11-200.

Our team's strong multidisciplinary capabilities have facilitated the preparation of technically accurate and legally defensible analyses that evaluate the potential impacts of proposed projects located throughout the U.S. on biological resources, visual resources, sound, cultural and archaeological resources, socioeconomics, and other resources. We understand that objective, thorough, and scientifically-based resource assessments are a critical component of environmental assessments and permitting. Tetra Tech's NEPA/HEPA analyses and supporting materials are designed to meet the technical

and procedural requirements of NEPA, HEPA, and associated permitting authorities and to clearly and objectively provide project information to stakeholders and the public.

Tetra Tech's EA/EIS experience includes several visible or politically sensitive projects in the Pacific region. Tetra Tech prepared the NEPA EIS and HEPA EIS for the Na Pua Makani Wind Project on Oahu's north shore. The separate NEPA and HEPA EISs address potential impacts to various resources, including eight federal or state listed species. To support the NEPA/HEPA processes, eleven technical studies were prepared which incorporated several significant project design changes, and the Tetra Tech team facilitated and/or participated in 10 public meetings and Board approval hearings as well as numerous additional community association and agency meetings. Tetra Tech also assisted the USFWS in drafting portions of the NEPA documentation for the Papahanaumokuakea Marine National Monument Management Plan. This project included preparing detailed scoping reports summarizing the comments received during three scoping periods and developing a series of issue statements based on the input received during the scoping. Tetra Tech also completed a HEPA EA for the Hawaiki Submarine Cable System, an approximately 9,313-mile-long submarine fiber optic telecommunications cable consisting of a trunk route extending from Oregon to Australia, with a branch connecting to Kapolei, Hawaii. In support of this document and other state and federal permitting requirements, Tetra Tech conducted biological and other resource studies such as a marine habitat characterization in the nearshore environment and a terrestrial flora and fauna survey. Additional Hawaii project experience related to EAs and EISs are listed in Table 1 below.

1.3 Federal, State, and County Environmental Permitting Support

Tetra Tech has a nearly 20-year track record for leading federal, state, and county environmental permitting in Hawaii. Tetra Tech is one of the few consulting firms to successfully permit an operational wind farm and manage the federal, state, and local permitting process from project inception through construction and operation.

Tetra Tech is currently leading the permitting process for various project types in Hawaii, including solar, wind, energy storage, electric power, and fiber optic cable. Our permitting experience ranges from Nationwide Permit authorization from the Honolulu District, U.S. Army

Engineers (USACE) to Conservation District Use Permits from DLNR and CWA Section 401 Water Quality Certifications from the Hawaii DOH.

1.4 Habitat Conservation Plans for Incidental Take License and Incidental Take Permit

Tetra Tech has developed several multi-species HCPs and HCP amendments and managed the overall state and federal incidental take permitting process (ITL/ITP) for threatened and endangered species. These complex documents require complex analysis in identifying minimization measures, estimating potential impacts, and developing appropriate mitigation for each Covered Species. Tetra Tech also manages the HCP compliance for several wind farm facilities on Oahu and Maui to ensure the permittee meets the conditions of the state and federal ITL/ITP.

1.5 Invasive Species Services

The Hawaiian Islands are particularly susceptible to invasive species for a variety of reasons, including high habitat diversity, favorable climate, high resource availability, and small native populations. Our biologists and ecologists are experienced in invasive species surveys, prevention, and control and management. We understand that identifying appropriate strategies to prevent the introduction and spread of invasive species is the least expensive and most effective solution. Early detection of newly introduced invasive species, along with rapid response, is crucial to successful and cost-effective eradication or containment. Because our staff are knowledgeable with local flora and fauna, we are able to identify invasive species early and create a plan for landowners and managers to take appropriate action.

Tetra Tech has first-hand experience developing and implementing predator control programs that target introduced rats, cats, mongoose, and pigs using a variety of traps. For example, at the Auwahi Wind Farm on Maui, Tetra Tech developed and set-up the predator control program for a Hawaiian petrel colony on Haleakala as part of the HCP mitigation program. At the Kawailoa Wind Farm on the north shore of Oahu, our biologists conduct year-round predator control as part of our post-construction mortality monitoring program. In addition to our on-the-ground experience, we have drafted several NEPA documents that assess the potential effects of non-native species or predator control in proposed mitigation areas.

1.6 Ecosystem Restoration Services

In partnership with our clients, Tetra Tech brings together experts in science, engineering, and permitting to ensure that the biological and physical components of restoration projects are addressed to achieve all

project goals. We develop cost-effective restoration solutions, regardless of the challenging goals or complexity of the project.

As a company on the forefront of stream restoration, Tetra Tech's aquatic restoration specialists cover a broad spectrum of disciplines necessary for well-planned and implemented project. Our biologists also have experience developing restoration plans, providing site-specific species list suitable for out-planting and reintroduction, and outlining management prescriptions to enhance project success.

1.7 GIS, Geospatial Technologies, and Mapping

Tetra Tech provides accurate mapping and data measurement via remotely sensed technologies. Our ASPRS-certified photogrammetrists, remote sensing professionals and GIS analysts bring more than a century of collective industry experience utilizing state-of-the-art mapping software, airborne sensors (including UAS) and camera systems and a robust IT infrastructure. Our Hawaii team has a dedicated GIS specialist that is supported by an extensive network of Tetra Tech professionals specializing in a wide range of GIS applications, data management and visualization, programming, software development and all aspects of environmental consulting.

1.8 Environmental Site Investigations and Contaminated Media Management

Tetra Tech assists landowners, site managers, and project developers with identifying and evaluating the potential for environmental contamination, and extent, through a broad variety of site investigations, including site history review and subsurface soil and/or groundwater contamination investigations. Tetra Tech is experienced in conducting Phase I and Phase II (due diligence) environmental site assessments for properties ranging from small gas stations with one underground storage tank to renewable energy sites to some of the largest Superfund sites in the country.

We adhere to the latest American Society of Testing and Materials (ASTM) standards and the "All Appropriate Inquiry" U.S. EPA rule to satisfy the requirements for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). We also work with the client to create document templates that meet the client's needs for legibility, accuracy, and comparability, all in order to increase the efficiency and success of decision making. Phase I and II ESAs are typically conducted during large-scale real estate transfers, requiring quick turnaround and reliable conclusions. In all, Tetra Tech has completed thousands of Phase I and Phase II assessments, including soil and groundwater sampling investigations for lending institutions, law firms, insurance companies, real estate developers, construction firms, and other clients. Our experience goes beyond performing simple and quick property assessments, and includes complex site characterization, as well as remediation. Where required as part of the due diligence process, Tetra Tech also has extensive experience performing hazardous materials surveys for lead-based paint (LBP) and asbestos containing materials (ACM).

In Hawaii alone, we have performed hundreds of Phase I and Phase II investigations (soil and groundwater investigations), as well as soil import/export investigations for Hawaiian Dredging Construction Company, Lend Lease, DR Horton, Campbell Company, Verizon Wireless, and a broad range of construction firms and developers. Tetra Tech has experience with all elements of the investigation and remediation process, as required by the DOH HEER Office, including: Sampling and Analysis Plan (SAP; including Data Quality Objectives [DQOs]); Site Investigation (SI); Remedial Investigation (RI); Remedial Alternatives Analysis (RAA); Response Action Memorandum (RAM); Community/Public Outreach (via Public Meetings and Fact Sheets); Removal Action Report [RAR]); Environmental Hazard Evaluation (EHE); Environmental Hazard Management Plan (EHMP); and Construction Environmental Hazard Management Plan (C-EHMP).

One of our hallmark environmental site investigations was performed for DR Horton and University of Hawaii in advance of the redevelopment of agricultural lands for the Hoopili master planned community and West Oahu Campus. This investigation, which was comprised of several phases over 3 years, included extensive soil sampling across a 2,132-acre site to assess for the presence of agricultural chemicals. The final outcome was a No Further Action determination by the Hawaii DOH, such that the development could proceed.

As an example of our programmatic environmental support capabilities, Tetra Tech has been providing environmental support program services to Hickam Communities LLC (HC) at Joint Base Pearl Harbor-Hickam, Oahu, Hawaii continuously since 2006 to facilitate the characterization, removal, and long-term management of pesticide-impacted soils.

During HC's redevelopment activities, Tetra Tech provided the following services: characterizing residual pesticides in soil using multi-increment sampling; creating field sampling plans, health and safety plans, and an RI report; performing a risk assessment; implementing soil management including import and export material characterization and soil disposal profiling; and construction air monitoring.

Tetra Tech has also been overseeing pesticide-impacted soil management and excavation; long-term soil management planning and implementation including creating a Land Use Controls Implementation Document (LUCID); leading technical discussions and providing input to government and regulatory agencies; and conducting Phase I and Phase II ESAs. Additionally, Tetra Tech has performed LBP and ACM surveys as part of a long-term renovation and redevelopment project for over 800 community housing structures at Hickam Air Force Base.

With the extensive redevelopment taking place in the Honolulu urban core, Tetra Tech has significant experience supporting developers during site construction activities, specifically related to characterization and management of contaminated soil prior to, and during the redevelopment process. Many of these sites require a C-EHMP and working closely with the DOH HEER Office to ensure worker safety and proper assessment, handling and disposal of contaminated soil under the supervision of a Qualified Environmental Professional (QEP). Our longstanding relationship with the DOH HEER Office, under a series of technical support contracts for nearly 20 years, provides Tetra Tech with an intimate understanding of State guidance regarding assessment and management of contaminated sites, especially as related to the unexpected conditions that arise during site redevelopment. Tetra Tech has the expertise to handle the "unknowns" which arise during large construction projects, including: removal of underground storage tanks (USTs) and performing associated

closure assessments; assessment and remedial actions associated with unexpected/unknown soil contamination encountered during excavation; management of contaminated dewatering fluids; assessment of potential subslab vapor concerns; in-situ vertical characterization of subsurface soil to plan for management prior to, and during construction; and, sampling of large stockpiles for on-site or off-site re-use, and/or landfill disposal.

In 2023/2024, Tetra Tech supported the DOH Clean Air Branch (CAB) following the Maui wildfires in development of community air monitoring and sampling plans for the impacted areas of Lahaina and Kula. The plans were developed in consultation with CAB and Maui County. Monitoring was performed for the duration of cleanup efforts, with services including air monitoring, sample collection, and weekly reporting. In addition, Tetra Tech provided extensive debris monitoring support, post-debris removal soil sampling, and designed a new landfill cell for the Maui fire debris.

1.9 Climate Change Mitigation and Adaptation

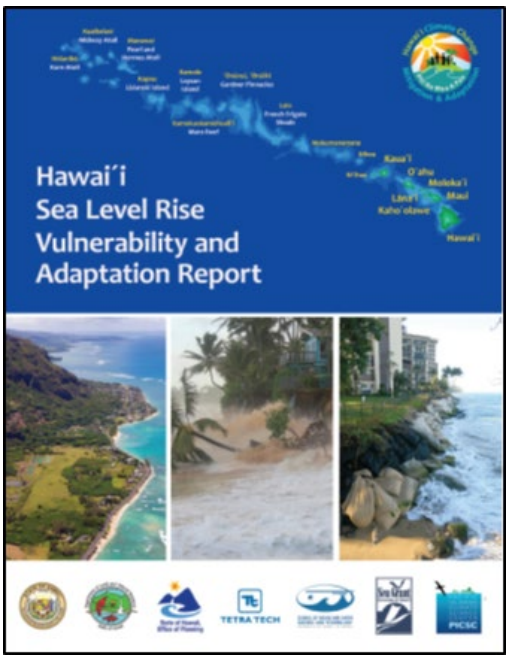
Tetra Tech realizes the importance of building resilience to the impacts of climate change, which requires technical assessments, awareness of potential impacts, and creative solutions. We have been at the leading edge of climate change analysis; our experts have developed first-generation climate change models, including the Global Carbon Cycling Model, and supported flagship climate change pilot projects for several U.S. agencies, multilateral institutions, and national and state governments. Our projects range from conducting scientific and policy assessments to performing the full suite of greenhouse gas emissions and climate risk modeling services to develop and implement effective adaptation and mitigation solutions.

In 2024, Tetra Tech received the Environmental Business Journal (EBJ) Project Merit Award for our work with the City of Dayton, Ohio, to address proposed regulations for per- and polyfluoroalkyl substances (PFAS) in the City's water supply. In addition to the PFAS Project Merit Award, Tetra Tech received four additional awards for excellent performance, innovation, and industry leadership in climate change, environment, and sustainable infrastructure.

1.10 Sea Level Rise Vulnerability Assessment

The impact of sea level rise resulting from climate change presents an imminent threat to the economy, sustainability, security, and way of life in Hawaii, with the potential to cause loss of roads, utilities, and structures across the state. In 2014 the Hawaii State Legislature passed the Hawai'i Climate Adaptation Initiative, mandating the first statewide sea level rise vulnerability assessment to provide a basis for recommendations on reducing exposure and increasing adaptability.

The Hawaii DLNR contracted Tetra Tech to prepare the Hawaii Sea Level Rise Vulnerability and Adaptation Report, which DLNR submitted to the State Legislature in December 2017. For this report, Tetra Tech conducted a statewide sea level rise vulnerability assessment that included Hawaii, Maui, Molokai, Lanai, Oahu, Kauai, and the Northwestern Hawaiian Islands and developed recommendations to reduce exposure and increase the capacity of the state to adapt to sea level rise. Tetra Tech collaborated with multiple entities—including the DLNR, Office of Conservation and Coastal Lands, University of Hawaii, state and county governments, and the Hawaii Climate Mitigation and Adaptation Commission—to produce the Report.



In addition, Tetra Tech was contracted by the Hawaii Sea Grant College Program to develop guidance for integrating sea level rise in county and community plans. Working with county planners, the guidance will help counties together with their communities and partners address sea level rise through their existing planning processes. Case studies were used to improve understanding of opportunities and challenges to increase resilience to coastal hazards and sea level rise through planning and post-disaster reconstruction.

In Spring of 2020, Tetra Tech was contracted by the Maui County Department of Parks and Recreation to perform a Maui County Beach Parks Vulnerability Assessment. This project includes a detailed analysis of the vulnerability of Maui County's beach parks and developing recommendations to address short and long-term impacts of coastal hazards, climate change, and other environmental threats.

In 2021, Tetra Tech was contracted by the County of Hawaii to develop the technical foundation to revise the County's shoreline setback rules to more effectively reduce risk to coastal hazards and climate change. Tetra Tech is developing a coastal hazards typology island-wide to support the analysis of policy-induced vulnerabilities and identification data gaps. In addition, a pilot study of using shoreline certification reports to determine shoreline changes rates has been completed. Tetra Tech will integrate the results of new data collection provided by UH-Hilo Spatial Data Analysis and Visualization Lab in defining shoreline typologies for the island that can be used to develop shoreline setback rules by typology.

In 2021, Tetra Tech was subcontracted by Focused Planning Solutions to prepare the County of Hawaii Climate Adaptation Plan. The first phase of this project, to develop a project work plan, was completed in November 2021. The second phase of the project will be to prepare the Climate Adaptation Plan. Key activities conducted to develop the Work Plan include identification of climate threats; identification of County assets and systems at risk (parks & beaches, critical infrastructure, socio-economic, fiscal, etc.); and identification of criteria that can be used to prioritize assets for adaptation projects.

In 2023, Tetra Tech was contracted by the City and County of Honolulu Department of Planning and Permitting to develop the Waikiki Area Adaptation Plan. The focus of this plan is to recommend near-term (30 years) design guidelines and regulatory changes to the Waikiki Special Design District.

The Waikiki Area Adaptation Plan result in area-wide design recommendations that will maintain Waikiki's "sense of place." The proposed guidelines and recommendations will reinforce Waikiki as a resort destination, pedestrian priority place, and livable urban neighborhood. The Plan area generally aligns with the Waikiki Special Design District, while includes consideration of adjacent parcels and areas that are relevant for adaptation planning purposes.

1.11 Energy Engineering, Management, and Planning

Over the past 25 years, Tetra Tech has become an industry leader in energy engineering, energy resilience, energy management, resource conservation, energy and water auditing, commissioning, sustainability services, and climate change services. We have established technical teams with expertise in a wide range of relevant skills. These teams have proven track records of successfully applying business solutions to help our customers improve energy and water resilience to critical facilities and functions, optimize their use of energy and water resources, develop meaningful energy management plans, and achieve substantial cost savings in as practical and cost-effective a manner as possible.

Tetra Tech has been providing onsite energy management services to government clients since 1999 through resilience feasibility studies, Installation Energy and Water Plans (IEWPs), Resource Efficiency Manager (REM) programs, energy audits, and retro-commissioning projects. We have provided energy management and resilience services to the Army National Guard (ARNG), Army, Army Reserves, Air National Guard (ANG), Air Force, Navy, Marine Corps, Coast Guard, and other government agencies in Hawai'i and across the United States. Through these programs, Tetra Tech provides engineering services to assess and develop energy projects.

Tetra Tech has a specially-trained energy resilience team that has completed 17 energy and water resilience master plans for multiple state clients for National Guard facilities in Michigan, Idaho, Montana, South Dakota, North Carolina, Colorado, and West Virginia. Tetra Tech has generated solutions to improve energy and water resilience to meet specific client planning factors. Solutions include evaluating distributed generation assets such as diesel generators, natural gas turbines, combined heat and power (CHP) sources, photovoltaic (PV) arrays, and energy storage systems, and investigating alternate water sources and water storage. These statewide efforts also often include American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Level II energy and water audits to ensure that systems are efficient and demand is reduced when planning for resilience.

1.12 Microgrid Feasibility Studies

Tetra Tech provides full life-cycle microgrid services including technical advisory, feasibilities studies, grant application support, detailed engineering, procurement, commissioning and performance monitoring. We have a long history supporting climate adaptation and energy resiliency at critical national defense and transportation sites including airports and seaports.

Tetra Tech has scoped, developed conceptual designs, and supported the development and implementation of microgrid projects for multiple governmental clients. We help our government clients build energy resilience at facilities by looking at the support infrastructure for mission critical facilities including communications, police and fire, hospitals, airfields, and command and control buildings.

Microgrid designs may involve PV, battery storage, combined heat and power, and traditional generators, meeting the resilience, renewable energy, and energy conservation goals of the clients.

Tetra Tech works with our clients first to identify the critical operations that need to be resilient. From there, we help them identify stakeholders involved and the infrastructure that supports those operations. We identify the critical loads that must have a backup power distribution system to satisfy all of the emergency load requirements. Tetra Tech understands that emergency loads are not the same as steady state loads and work closely with clients to factor in operational changes into microgrid capacity. Our clients know what services are most critical to a municipality and we identify alternatives to ensure appropriate backup power. We also know that it is not just electricity that needs to be backed up – water and wastewater services are also vital to mission critical facilities to truly be functional for any duration of power outage. Tetra Tech understands how to position the point of common coupling to serve the immediate requirements and also allow expansion of the microgrid to meet future needs.

1.13 Other Services

In addition to the services mentioned above, our multidisciplinary team regularly assists with other related support services such as strategy development, agency consultation, stakeholder engagement, and public meeting support. Our staff have positive working relationships with numerous county, state, and federal agencies. Other highlighted services we can provide include:

- Wetland and Waters of the U.S. determinations and delineations
- Wetland functional assessments
- Noise analysis (underwater and terrestrial)
- GIS desktop screening analysis
- Critical Issues Analyses (CIA)
- Compensatory mitigation plans
- Construction environmental training
- Fish and aquatic macroinvertebrate surveys
- Instream Flow Studies
- Riparian habitat surveys
- Water quality sampling and monitoring
- Landfill Design, Permitting, and Management
- As-needed general technical and programmatic support, including embedded staffing and temporary staff subcontracting (professional and administrative positions)

2. Project Experience

Table 1 lists select completed or active Tetra Tech projects that showcase our capabilities related to the selected scope of service categories. Additional information on each of these projects, as well as additional project examples, is available upon request.

Table 1. Select Hawaii Project Experience

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
AES Clean Energy	Waiawa Phase 2 Solar Plus Storage Project	Tetra Tech is providing strategic planning and permitting support for the Waiawa Phase 2 Solar Plus Storage Project on the island of Oahu. The Project consists of an approximately 30-megawatt (MW) ground-mounted solar photovoltaic (PV) and battery energy storage system (BESS) and related interconnection and ancillary facilities. Tetra Tech is responsible for conducting or overseeing a wide range of due diligence studies and associated agency consultation, including biological resource surveys for vegetation and wildlife (including federal and state listed species), delineation of Waters of the U.S. (including wetlands), visual simulations, a glare analysis, an archaeological investigation, a cultural impact assessment, and a Phase I Environmental Site Assessment. In addition, Tetra Tech also provided support for the permitting process, including Land Use Commission approval and a Conditional Use Permit (minor).	2020 to present
AES Clean Energy	Mountain View Solar Plus Storage Project	Tetra Tech is providing strategic planning and permitting support for the Mountain View Solar Plus Storage Project on the island of Oahu. The Project consists of an approximately 7-MW ground-mounted solar PV and BESS and related interconnection and ancillary facilities. Tetra Tech is responsible for conducting or overseeing a wide range of due diligence studies and associated agency consultation, including biological resource surveys for vegetation and wildlife (including federal and state listed species), delineation of Waters of the U.S. (including wetlands), visual simulations, a glare analysis, a noise assessment, archaeological investigation, cultural impact assessment, and a Phase I Environmental Site Assessment. In addition, Tetra Tech also evaluated the regulatory requirements and developed a strategy permitting approach as needed to achieve the aggressive implementation schedule for the Project. Tetra Tech was responsible for preparing and submitting application for the necessary zoning approvals, including a Conditional Use Permit (minor) and zoning waiver.	2020 to present
Hawaiian Electric Company, Inc.	Strategic Planning and Permitting Services	Through this on-call services contract, Tetra Tech provides strategic planning and permitting services for Hawaiian Electric projects. Tetra Tech works closely with Hawaiian Electric staff to provide planning and permitting support on a wide range of projects, including those related to substation, power plant, transmission and distribution line, and communication facilities. Specific tasks include analysis of anticipated permitting requirements and potential environmental impacts, development of strategic permitting plans, preparation of environmental reports and permit application packages, and agency and stakeholder engagement. Regulatory compliance efforts relate to a variety of federal, state and county permits, including Clean Water Act Section 404 permitting, Section 401 Water Quality Certification, Conservation District Use Permits, Special Management Area (SMA) Use Permits, and Conditional Use Permits. Tetra Tech staff have also developed and presented training programs for Hawaiian Electric staff specific to environmental and land use permit requirements.	2018 to present
Bright Canyon Energy	Kupono Solar Project	The Kupono Solar Project is a 42 MW solar photovoltaic, and 168 MW-hour energy storage system located on the West Loch of Joint Base Pearl Harbor Hickam (JBPHH). Tetra Tech has provided ongoing planning and permitting support for the project through the initial competitive bidding process with Hawaiian Electric Company as well as the subsequent project development process. Tetra Tech also conducted key technical due diligence studies, including a biological resources survey and delineation of Waters of the U.S., as well as provided community outreach support.	2020 to present

Client(s)	Project Name	Description	Period of Performance
Kaimana Environmental Solutions, LLC	Hale Makua Project (Subcontractor)	Tetra Tech was contracted by Kaimana Environmental Solutions LLC to conduct a biological survey to support an Environmental Assessment for the proposed expansion of the existing Hale Makua Rehabilitation Facility in Kahului, Maui involving construction of a new rehabilitation facility and associated infrastructure. Tetra Tech conducted and reported results from a biological survey to characterize existing plant and animal habitat within the Project area and determine whether federally or state-listed plant and/or animal species were present or had the potential to occur and could be impacted by construction or operation of the Project, including providing recommendations to avoid and minimize impacts to federally and state-listed species.	2021
Hawaiian Electric Company, Inc.	Ko‘olaupoko Resilience Initiative	Ko‘olaupoko, a region stretching from Waimanalo to Kualoa, is one of the most vulnerable communities on Oahu from a critical infrastructure perspective. In particular, this windward area is vulnerable to prolonged disruptions of electricity, communications, transportation, and other life-sustaining necessities in the face of a major hurricane. To identify vulnerabilities and prioritize actions to improve community resilience, Hawaiian Electric Company convened a series of meetings with community and government leaders, critical infrastructure owners, and emergency management and response agencies. The Koolaupoko Community Resilience Initiative, which was modeled after the Community Resilience Building Workshop Guide developed by The Nature Conservancy and National Oceanic and Atmospheric Administration (NOAA) Office for Coastal Management, sought to raise awareness of the risks and with community input, explore ways to strengthen the resilience of the Ko‘olaupoko community through short-and long-term actions. Tetra Tech provided support for the planning team, assisted with strategy development and meeting execution, documented the key results and provided a summary report for the stakeholders.	2019 to 2021
Hawaiian Electric Company, Inc.	Missile Defense Agency Homeland Defense Radar Project	The Missile Defense Agency (MDA) Homeland Defense Radar Project is one component of MDA’s worldwide missile defense system and is intended to improve homeland missile defense for Hawaii and the broader Pacific region. It involves construction and operation of a radar system to identify, track, and classify long-range ballistic missile threats in mid-course flight; an in-flight interceptor communication system that would connect with defense control and interceptor facilities; and associated support facilities and infrastructure. Based on a preliminary siting process conducted by MDA, potential locations considered for the project include Kuaokala Ridge and Kahuku Training Area on Oahu, and the Pacific Missile Range Facility (PMRF; located near Kekaha on the west side of Kauai) and dismissed the Kuaokala Ridge site from further consideration. Tetra Tech provided independent review and assessment of the permitting requirements and advised Hawaiian Electric Company on the permitting process for the required substation and associated electrical infrastructure. In addition to evaluating the State and local regulatory requirements, Tetra Tech staff participated in a multi-day design charette and interfaced with the MDA team regarding the regulatory compliance strategy. Additional tasks included review and input of the due diligence and technical resource documents, including those related to biological and archaeological surveys, cultural assessments, and community outreach.	2018 to 2021

Client(s)	Project Name	Description	Period of Performance
AES Distributed Energy	Kuihelani Solar Plus Storage Project	Tetra Tech is providing strategic planning and permitting support for the Kuihelani Solar Plus Storage Project on the island of Maui. The Project consists of an approximately 60-MW ground-mounted solar PV and BESS and related interconnection and ancillary facilities. Tetra Tech is responsible for conducting or overseeing a wide range of due diligence studies and associated agency consultation, including biological resource surveys for vegetation and wildlife (including federal and state listed species), delineation of Waters of the U.S. (including wetlands), visual simulations, glare analysis, archaeological investigation, cultural impact assessment, and a Phase I Environmental Site Assessment. In addition, Tetra Tech also evaluated the regulatory requirements and developed a strategy permitting approach as needed to achieve the aggressive implementation schedule for the Project. Tetra Tech was responsible for preparing and submitting application for the necessary land use approvals, including a County Special Use Permit. Through the permitting process, Tetra Tech helped to develop and execute detailed plans to address sensitive biological and archaeological resources, as well as Important Agricultural Lands (IALs), and is assisting with permit compliance.	2018 to present
AES Distributed Energy	Waikoloa Solar Plus Storage Project	Tetra Tech is providing strategic planning and permitting assistance to AES Distributed Energy for a 30-megawatt storage project in the Waikoloa District of Hawaii. Tetra Tech is responsible for conducting or overseeing a wide range of due diligence studies and associated agency consultation, including biological resource surveys for vegetation and wildlife (including federal and state listed species), delineation of Waters of the U.S., visual simulations, glare analysis, an archaeological investigation, a cultural assessment, and a Phase I Environmental Site Assessment. In addition, Tetra Tech evaluated the potential permitting requirements and developed a strategic permitting approach. Consistent with this approach, Tetra Tech provided support to AES Distributed Energy with obtaining the necessary federal, state, and local permits, as well as compliance with the applicable permit conditions.	2018 to present

Client(s)	Project Name	Description	Period of Performance
AES Distributed Energy	West Oahu Solar Plus Storage Project	Tetra Tech is providing strategic planning and permitting support for the West Oahu Solar Plus Storage Project located on the island of Oahu. The Project consists of an approximately 12- MW ground-mounted solar PV and BESS and related interconnection and ancillary facilities. Tetra Tech is responsible for conducting or overseeing a wide range of due diligence studies and associated agency consultation, including biological resource surveys for vegetation and wildlife (including federal and state listed species), delineation of Waters of the U.S., visual simulations, glare analysis, an archaeological investigation, a cultural impact assessment, and a Phase I Environmental Site Assessment. In addition, Tetra Tech conducted a permitting assessment, including identification of all permitting requirements, compilation of a detailed Project schedule, and development of a strategic permitting approach. Tetra Tech prepared an HRS Chapter 343-compliant environmental assessment and assisted with obtaining approval of a State Special Use Permit from the Honolulu Planning Commission and Land Use Commission. Tetra Tech also prepared and obtained a Conditional Use Permit (minor) and zoning waiver from the Department of Planning and Permitting and assisted with compliance with the applicable permit conditions.	2019 to present
Confidential Client	Confidential Project #1	Tetra Tech evaluated a shuttle program to deliver liquefied natural gas (LNG) to meet current and near-term demand on Oahu, Hawaii. The shuttle program was envisioned to involve bulk transport of LNG to an offshore area on Oahu where the LNG would be transferred to a floating storage unit (FSU). Tetra Tech conducted a high-level permitting assessment to identify the potential permits and approvals that may be required for implementation to inform the program planning and development process.	2018
Confidential Client	Confidential Project #2	Tetra Tech conducted a CIA for a proposed solar farm on Maui The CIA included analysis of biological resource data including vegetation, wildlife, habitat, wetlands and water resources, and protected areas; archaeological and cultural resources; land use resources including soils and geology and permit requirements (federal, state and local permits); other potential issues such as transportation/traffic impacts, noise/visual impacts, or socioeconomic impacts; and assessment of potential inference with military training routes and airport and weather radar systems. Biologists conducted a site visit to assess potential presence of threatened or endangered Species and/or jurisdictional waters; the results of which were incorporated into the CIA findings.	2017 to 2018
Confidential Client	Confidential Project #3	Tetra Tech conducted a CIA for a proposed solar farm on Oahu. The CIA included analysis of biological resource data including vegetation, wildlife, habitat, wetlands and water resources, and protected areas; archaeological and cultural resources; land use resources including soils and geology and permit requirements (federal, state and local permits); other potential issues such as transportation/traffic impacts, noise/visual impacts, or socioeconomic impacts; and assessment of potential inference with military training routes and airport and weather radar systems. Biologists conducted a site visit to assess potential presence of threatened or endangered species and/or jurisdictional waters; the results of which were incorporated into the CIA findings.	2017 to 2018

Client(s)	Project Name	Description	Period of Performance
Confidential Client	Confidential Project #4	Tetra Tech conducted a CIA for a proposed solar farm and battery energy storage system on Maui. The CIA included analysis of biological resource data including vegetation, wildlife, habitat, wetlands and water resources, and protected areas; archaeological and cultural resources; land use resources including soils and geology and permit requirements (federal, state and local permits); other potential issues such as transportation/traffic impacts, noise/visual impacts, or socioeconomic impacts; and assessment of potential inference with military training routes and airport and weather radar systems.	2017 to 2018
Innergex Renewables USA, LLC	Paeahu Solar Project	Tetra Tech conducted a CIA for the proposed solar farm and battery energy storage system in east Maui. The CIA included an analysis of biological resource data; archaeological and cultural resources; land use resources including soil classification and permit requirements including the development of federal, state and local permit matrices; other potential issues such as transportation/traffic impacts, noise/visual impacts, or socioeconomic impacts; and assessment of potential inference with military training routes and airport and weather radar systems. Tetra Tech also conducted biological surveys, wetlands and waters of the U.S. delineation survey, a visual impact assessment, and a glint/glare analysis. Tetra Tech conducted additional technical resource studies and will be preparing federal, state, and local permit applications, as applicable, for project development.	2017 to present
Innergex Renewables USA, LLC	Kuawehi Solar Project	Tetra Tech conducted a CIA for a proposed solar farm and battery energy storage system on Hawaii Island. The CIA included an analysis of biological resource data; archaeological and cultural resources; land use resources including soil classification and permit requirements including the development of federal, state and local permit matrices; other potential issues such as transportation/traffic impacts, noise/visual impacts, or socioeconomic impacts; and assessment of potential inference with military training routes and airport and weather radar systems. Tetra Tech also conducted other studies including biological surveys, wetlands and waters of the U.S. delineation survey, a visual impact assessment, and a glint/glare analysis. Tetra Tech will be conducting additional technical resource studies and preparing federal, state, and local permit applications, as applicable, for project development.	2017 to present
Confidential Client	Confidential Project #5	Tetra Tech is supported the development of a proposed confidential wind project. Services include biological surveys (including bat acoustic monitoring, avian point count surveys, and general biological surveys), cultural resource surveys, public outreach strategy, critical issues analysis, agency consultation, and permit strategies.	2017 to present

Client(s)	Project Name	Description	Period of Performance
Na Pua Makani Power Partners, LLC	Na Pua Makani Wind Project	Na Pua Makani Wind project is located near Kahuku, Oahu. Tetra Tech led the environmental permitting and planning for the project which included a NEPA EIS, HEPA EIS, a joint federal and state HCP for ITP and an ITL, and county discretionary permits. To support the HCP development and NEPA process, Tetra Tech conducted desktop and field-based analyses for biological resources, visual impacts, shadow flicker, air quality impacts, and noise impacts, and oversaw the preparation of technical studies focused on traffic and transportation, drainage, archaeological and cultural resources. The analysis in the EIS focused on the impacts associated with construction and operation of the wind project as well as impacts from the issuance of an ITP and approval of an HCP, including the impacts of implementing avoidance and minimization measures and mitigation on the protected species covered under the HCP. Tetra Tech led agency coordination and negotiation efforts in support of the development of the HCP, completion of the NEPA and HEPA environmental review processes, and acquisition of local permits and approvals. Tetra Tech supported Na Pua Makani Power Partners with environmental compliance during construction and has continued this support into the operational phase of the project which began in 2019. Tetra Tech continues to support in the project's operational compliance with the HCP.	2013 to present
Hawaiki Submarine Cable LP Tyco Electronics Subsea Communications LLC	Hawaiki Submarine Cable	The Hawaiki Submarine Cable Project is a submarine fiber optic telecommunications cable system extending from Australia to the U.S. Mainland and making landfall at several locations including Kapolei on Oahu. Tetra Tech completed a HEPA EA to assess the potential environmental impacts of the project in both the terrestrial and marine environments. Tetra Tech prepared and processed a Pre-Construction Notification to obtain a Nationwide Permit 12 authorization from the Honolulu District, USACE, and prepared an EFH Assessment for NOAA. Tetra Tech also led permit acquisition of various state and county permits including a Conservation District Use Permit, Submerged Lands Lease, Section 401 Water Quality Certification, Special Management Area Use Permit, Shoreline Setback Variance, and Noise Variance. Tetra Tech previously conducted a permit feasibility study and risk assessment for the cable system which included a permit tracking matrix.	2015 to 2017
Kawailoa Wind, LLC (D.E. Shaw Renewable Investments)	Kawailoa Wind Farm	Tetra Tech supports Kawailoa Wind Power LLC in managing the overall HCP compliance and implementation of the post-construction mortality monitoring at the operational Kawailoa Wind Farm. As part of our ongoing responsibilities in performing compliance activities, Tetra Tech conducts carcasses searches and bias correction trials, primarily using trained dogs accompanied by their handlers. Tetra Tech prepares compliance reports, such as quarterly and annual HCP reports and Migratory Bird Treaty Act reporting requirements and leads agency coordination and meetings. Furthermore, Tetra Tech developed the HCP amendment and Chapter 343 Supplemental EIS (SEIS) for the Project.	2015 to present

Client(s)	Project Name	Description	Period of Performance
Auwahi Wind Energy, LLC (Sempra Renewables / AEP)	Auwahi Wind Farm	Auwahi Wind Farm Project has a generating capacity of approximately 21 MW, augmented with an energy storage system. Tetra Tech conducted various biological surveys and led the environmental permitting for the 21-megawatt (MW) Auwahi Wind Farm. Tetra Tech prepared an EIS compliant with Chapter 343 of the HRS and HAR § 11-200 to evaluate the potential impacts to sensitive environmental resources associated with construction and operation of the wind farm. Desktop and field-based analyses were conducted for potential biological, cultural, visual, air, and sound resources that could be affected by the project. To address potential incidental impacts to four listed species, Tetra Tech worked with the USFWS and the Hawaii DLNR/Division of Forestry and Wildlife (DOFAW) to develop a joint HCP to obtain an ITP and an ITL issued by these agencies, respectively. A NEPA-compliant EA for the USFWS was also prepared to evaluate potential impacts associated with issuance of the ITP, approval of the HCP, and implementation of proposed mitigation activities. Tetra Tech developed the HCP amendment and Chapter 343 SEIS for the Project. Tetra Tech continues to support the project by providing ongoing environmental compliance support.	2009 to present
Brookfield Renewable Partners (Terraform Power)	Kaheawa Wind Project I and II	Tetra Tech is managing the overall HCP implementation and take permit compliance at the operational facilities, each with their own HCP. Ongoing responsibilities include implementation of post-construction monitoring for take of Covered Species, onsite vegetation management and predator control, and acoustic bat monitoring, Tetra Tech conducts regular canine carcasses searches and bias correction trials, prepares compliance reports per the projects' HCPs, and leads agency coordination. Furthermore, Tetra Tech supports HCP-required mitigation implementation for each of the covered species.	2019 to present
Brookfield Renewable Partners (Terraform Power)	Kahuku Wind Project	Tetra Tech is managing the overall HCP implementation and take permit compliance at the operational facility. Ongoing responsibilities include implementation of post-construction monitoring for take of Covered Species, onsite vegetation management and predator control, and acoustic bat monitoring, Tetra Tech conducts regular canine carcasses searches and bias correction trials, prepares compliance reports per the projects HCP, and leads agency coordination. Furthermore, Tetra Tech supports HCP-required mitigation implementation for the Hawaiian hoary bat.	2019 to present
Verizon Wireless (VZW)	Environmental Programmatic Support and Mobi PCS Acquisition	Tetra Tech provides comprehensive environmental program support to VZW in Hawaii. This includes environmental planning and impact analysis (NEPA, HEPA, and National Historic Preservation Act, Section 106, and ESA), including compliance with the Federal Communications Commission Nationwide Programmatic Agreement. The Project includes conducting surveys for the endangered Hawaiian hawk at several sites. Tetra Tech also provides environmental due diligence (Phase I ESAs), site investigation, site cleanup, hazardous materials surveys, abatement management (asbestos and lead-based paint), and construction health and safety support for the VZW telecom portfolio. Tetra Tech has supported work at over 75 VZW sites to date.	2015 to present
Confidential Client	Confidential Project #6	Tetra Tech prepared a City and County of Honolulu Conditional Use Permit and Waiver application as well as a Joint Development Agreement Application for a solar project located in Waianae, Oahu. Tetra Tech also managed the archaeological inventory survey and consultation process with State Historic Preservation District, the biological studies, and the delineation of wetlands and waters. Tetra Tech also provided support with acquiring building permits for project related transmission and substation infrastructure.	2013 to 2016

Client(s)	Project Name	Description	Period of Performance
Hawaiian Electric Company (HECO)	Mt. Kaala Overhead Distribution Line Relocation Project	Hawaiian Electric Company owns and operates the Mikilua #4 12kV electrical line, which is located on Mt. Kaala and provides service to the Federal Aviation Administration (FAA) tracking station. Approximately 1.8 miles of the existing line near the top of Mt. Kaala is being relocated to address safety and maintenance/access issues due to hazardous terrain and the presence of endangered species and native vegetation. Tetra Tech is providing planning and permitting services for the project including extensive biological surveys and other due diligence studies, preparation of an environmental assessment in compliance with HEPA, compliance with endangered species regulations (Endangered Species Act and HRS Chapter 195D), and agency consultation. Tetra Tech is also responsible for obtaining the necessary approvals including a Conservation District Use Permit, Natural Area Reserve System (NARS) Use Permit, Forest Reserve Use Permit, and HCP.	2017 to present
Castle & Cooke	Lanai Met Tower and Wind Farm	Tetra Tech addressed a number of environmental and permitting issues associated with the installation and operation of six meteorological (met) towers, the initial design of a 200 to 400-MW wind farm, and the initial siting studies for the proposed submarine cable between Lanai and Oahu. Tetra Tech conducted a variety of services including a feasibility analysis, biological and cultural resource studies; identified federal, state, and local permits required for the wind farm and cable project; obtained permits and completed studies for installation of six meteorological towers; prepared a joint USFWS and DOFAW approved HCP and USFWS NEPA EA for the met tower project addressing four threatened or endangered wildlife species; conducted post construction monitoring for listed species at met towers; and provided environmental permitting support services for the proposed wind farm project.	2007 to 2014
Site Constructors	Lalamilo Wind Project	The Lalamilo Wind Project repowered a decommissioned wind farm located near South Kohala on the island of Hawaii. Tetra Tech conducted a general biological survey of the project site, coordinated ESA consultation with USFWS and DLNR, and prepared and submitted the HEPA Environmental Assessment. Tetra Tech also provided community outreach support and visual simulations of the proposed wind farm.	2013 to 2014
Confidential Clients	CIA for several proposed commercial wind, solar, hydro-pumped storage, and other energy projects in Hawaii	Tetra Tech has completed a number of CIAs for renewable energy developers in Hawaii for commercial solar, wind, hydro-pumped storage and other energy projects. CIAs evaluate readily available data from public sources and typically include: analysis of biological resource data including vegetation, wildlife, habitat, wetlands, and protected areas; analysis of land use resources and permit requirements including the development of federal, state and local permit matrices; identification of potential issues with surrounding communities, including transportation/traffic impacts, noise/visual impacts, or socioeconomic impacts; and assessment of potential inference with military training routes and airport and weather radar systems.	Various
Pacific Ocean Producers, Inc.	Warehouse Passive Methane Venting System Design and Field Quality Control, Honolulu, HI	Tetra Tech provided engineering support for the build-out of a structure with an existing passive methane venting system where renovation activities would result in penetrations of existing system and new building additions not covered by the existing system; Oversaw a team of engineers that designed a passive venting methane system for the building expansion; Directed the preparation of the work plan, design drawings, technical details and construction specification for retrofit system and submitted to HDOH for review; Conducted field quality control inspections during the two phases of system installation; Provided routine status updates to HDOH during the project. Our cost-effective design saved Pacific Ocean Producers approximately nine months and $80,000 compared to approach proposed by another consulting firm.	2011 to 2012

Client(s)	Project Name	Description	Period of Performance
Merriman's Kapalua Restaurant	Merriman Parking Variance	Tetra Tech prepared a County of Maui Variance Application requesting a variance from parking requirements for Merriman's Kapalua Restaurant located in Kapalua on the Island of Maui. Tetra Tech has also provided support with an outreach strategy and a risk assessment and presented the variance request before the Board of Variances and Appeals.	2016 to 2017
D.R. Horton and University of Hawaii	Hoopili and University of Hawaii West Oahu Campus Environmental Investigation for Redevelopment of Agricultural Lands, Oahu, HI	Tetra Tech conducted environmental soil Investigations, including extensive multi-increment sampling (MIS) across a 2,132-acre site, to assess the property for presence of heavy metals (primarily to assess arsenic), organochlorine pesticides, and dioxin/furans. The project included several phases of investigation over a period of approximately 3 years, and use of field bioassay test kits for a detailed dioxin study. The final outcome was a finding of No Further Action by the HDOH, such that residential and university construction could proceed.	2007 to 2012
Island Palm Communities LLC	Environmental Support Program at Army Installations, Oahu	Tetra Tech has been providing Environmental Support Services to Island Palm Communities LLC (formerly Army Hawaii Family Housing LLC) at over 23 neighborhood redevelopment sites located on various Army installations on the Island of Oahu, Hawaii. Installations include Aliamanu Military Reservation, Tripler Army Medical Center, Fort Shafter Military Reservation, Helemano Military Reservation, Schofield Barracks Military Reservation and Wheeler Army Airfield. Under a Master Services Agreement with Island Palm Communities that began in 2005, Tetra Tech has been awarded over 190 Task Orders with a cumulative contracted value of approximately $6.3 million. Tetra Tech's Environmental Support Services primarily involve site investigations, oversight, and remediation of soil impacted with pesticides that were previously applied at the Army installations. Examples of these services are: Soil characterization using a MIS approach; Import and export material characterization and soil disposal profiling; Stockpile management; Development of sampling and analysis plans, work plans, health and safety plans, soil management plans, summary reports, site closure reports, and programmatic documents; Risk and remedial assessments; Pesticide impacted soil management/excavation oversight; Provide hazard communication/awareness training for site workers; Long-term soil management planning and implementation including land use controls documentation; Technical discussions and input with government and regulatory agencies; Comprehensive underground storage tank (UST) removal services; Environmental Condition of Property, Record of Environmental Consideration, and Finding of Suitability to Transfer reports pursuant to Army and Residential Community Initiative's regulations and policies; unexploded ordnance (UXO) surveys and clearance; Phase I and Phase II Environmental Site Assessments; Indoor air quality assessments; and, Hazardous materials surveys.	2005 to present

Client(s)	Project Name	Description	Period of Performance
Hickam Communities LLC	Environmental Support Program at Joint Base Pearl Harbor-Hickam	Tetra Tech is contracted by Hickam Communities LLC to facilitate the characterization, cleanup, and management of pesticide-impacted soil at housing units across JBPHH, Oahu, Hawaii. In addition, Tetra Tech performs indoor air sampling and hazardous materials surveys within Hickam's historic neighborhoods. During HC's redevelopment activities, Tetra Tech has provided the following services: characterizing residual pesticides in soil using MIS; creating field sampling plans (FSPs), health and safety plans (HASPs), and results reports; implementing soil management including import and export material characterization and soil disposal profiling and completing reports; and air monitoring. Tetra Tech has also been overseeing pesticide-impacted soil management/excavation; long-term soil management planning and implementation including creating a LUCID; leading technical discussions and providing input to government and regulatory agencies; collecting asbestos and air samples and conducting Phase I and Phase II Environmental Site Assessments.	2006 to present
U.S. Army Residential Communities Initiative	Environmental Condition of Property (ECP) Reports, Various Locations, HI	Tetra Tech performed several ECP reports for multiple locations on military properties in Hawaii in support of property transfers.	2008 to 2010
Army Hawaii Family Housing	Environmental Closure Report (ECR) for Porter Neighborhood, Oahu, HI	Tetra Tech prepared an ECR that summarized site assessment and remediation related to pesticide-impacted soil excavation in the Porter residential neighborhood at Schofield Barracks.	2009 to 2011
Target Corporation	Hilo Target and Safeway Stores Site Investigation and Remedial Action, Hilo, HI	The scope of this project included: devising a sampling plan to address potential soil contamination at the site; conducting a Site Investigation, hazardous materials survey, soil and sediment sampling, using both multi-increment and discrete sampling strategies; implemented remedial action; and providing oversight of all on-site demolition and redevelopment. Perform annual EHMP inspections.	2011 to present

Client(s)	Project Name	Description	Period of Performance
Target Corporation	Brownfields Redevelopment Support at a Mixed-use Commercial Property with Former Gas Station, Automobile Repair Facility, and Suspected Dry Cleaning Operations, Kailua, HI	The scope of this project included: completing pre-transaction Site Inspection and Phase I ESA; completing site investigation, including soil, groundwater, and soil gas sampling; collecting over 1,500 bulk samples for asbestos analysis as part of the regulated hazardous material surveys at the three on-site structures; preparing the project deliverables and submitted them to Hawaii DOH for review; directing the 10-week long removal action, which resulted in approximately 305 tons of ACM, 6 tons of hazardous materials, and 800 pounds of hazardous waste being removed and properly disposed of at off-site facilities; coordinating field activities and directed multiple subcontractor crews; and providing oversight of the 7-week long demolition phase including conducting real-time air monitoring and air sampling.	2011 to 2013
Target Corporation	Target Pfresh Renovation Asbestos Survey Support Multiple Sites in Hawaii	Tetra Tech provided asbestos survey support for three existing Hawaii Target stores that were renovated to include the expanded "Pfresh" grocery concept. The scope also included: performing ACM surveys at three Hawaii Target stores on multiple islands prior to Pfresh renovation activities; coordinating with store managers to schedule surveys during off-peak hours to minimize business disruption; procuring a laboratory that could meet the high sample volume and quick turn-around-time for sample results; collecting over 250 bulk samples for asbestos analysis; completing field activities for the surveys within 1 week to meet Target's accelerated schedule; and preparing all project deliverables.	2010 to 2013
Pahio Development, Inc.	Lihue Sugar Mill Kauai, HI	Tetra Tech conducted Environmental Investigations of 11-acre property to evaluate future land redevelopment options; Performed Phase I ESAs, and Phase II soil and groundwater contamination investigations, including MIS, to assess potential for environmental impact based on historical use of the property for sugar mill operations since 1850.	2008 to 2010
Kamehameha Schools	Peer Review and Oversight Services for the School Street Aloha Petroleum Facility, Honolulu, HI	Tetra Tech provided expert review and advisory capacity for EPA and the Hawaii Department of Health (DOH), who were providing oversight of Aloha Petroleum related to ongoing groundwater remediation activities at the property owned by Kamehameha Schools and leased to Aloha Petroleum. Tetra Tech's role was to ensure that Aloha Petroleum met all responsibilities of the clean-up order.	2010 to 2012
The Trust for Public Land, Hawaiian Islands Program	Phase I ESAs Oahu, Maui, Big Island, HI	Tetra Tech prepared Phase I ESAs (Due Diligence in accordance with AAI requirements) to assist in acquisition of culturally and environmentally sensitive preservation properties throughout Hawaii.	2007 to present

Client(s)	Project Name	Description	Period of Performance
Estate of James Campbell and Tetra Tech, Inc.	Kahuku Sugar Mill Voluntary Response Program, Oahu, HI	Tetra Tech conducted Environmental Investigations, Human Health and Ecological Risk Assessments and Remedial Design/ Remedial Action and performed 2 years of post-closure groundwater and soil gas monitoring.	1997 to present
Estate of James Campbell (James Campbell LLC, Aina Nui Corporation, Kapolei Properties, LLC)	Phase I ESA, Phase II Subsurface Investigations, and Peer Review/ Oversight for Various Properties, Campbell Industrial Park and Proximity, Oahu, HI	Tetra Tech performed Phase I (ESAs; Due Diligence in accordance with ASTM E1527-13 All Appropriate Inquiry [AAI]) and Phase II Subsurface Soil and Groundwater Investigations for various properties to facilitate real property transactions. Other scope items included: reviewing Phase I and Phase II Reports prepared by others for Campbell properties and providing professional opinion and recommendations; providing soil import/export characterization and monitoring services; and preparing Property Condition Assessment (PCA) reports.	2003 to present
National Disaster Preparedness Training Center (NDPTC) at the University of Hawaii	Coastal Community Resilience Training	Tetra Tech developed a high quality 1-day, DHS-certified awareness-level training. Conducted nationwide pilot testing of the course for certification by the Department of Homeland Security. Collaborated with federal, state and county agencies, and community stakeholders (FEMA, NOAA PSC, UH, DLNR, and the Waikiki Business Improvement Association) to develop the training course. Purpose of the course is to enhance awareness of natural hazards and best practices to enhance community resilience for state and local government agency staff that routinely interface with the community, private sector, and other stakeholder groups.	2009 to 2010
Hawaiian Dredging Construction Co., Inc.	Construction Environmental Support Hawaii Public Housing Authority Redevelopment Project 1002 North School Street, Honolulu, HI	Tetra Tech is providing construction environmental support for a 2-acre Hawaii Public Housing Authority (HPHA) Redevelopment Project. Project work includes development of a site-specific CEHMP to ensure that all activities are performed in accordance with environmental conditions previously identified at the site and under the purview of the Hawaii DOH HEER Office. Activities included characterization of shallow soil across more than 20 Decision Units (DUs) at the site, via a Geoprobe drilling rig using the MIS technique. The soil analytical data was then used for soil management during the extensive excavation required for site redevelopment. Tetra Tech also performed hazardous materials surveys, to evaluate the potential presence of LBP and ACM in buildings slated for demolition. A soil vapor study was also performed in a building formerly used for vehicle maintenance, to characterize the potential presence of volatile organic compounds (VOCs) prior to subsurface investigation activities planned following building demolition. Over the course of the project three previously unknown underground storage tanks were discovered and successfully removed. This project involves significant coordination between Hawaiian Dredging, HPHA, and the HEER Office due to the iterative nature of the site construction activities.	2024 - ongoing

Client(s)	Project Name	Description	Period of Performance
Stanford Carr Development LLC.	Construction Environmental Support Hale Moiliili Redevelopment Project, Honolulu, Hawaii	Under the oversight of the Hawaii Department of Health (HDOH) and in concurrence with the site-specific construction environmental hazard management plan (C-EHMP), Tetra Tech performed soil management efforts at the site. Tasks included plan preparation, project execution, and stakeholder coordination. Tetra Tech's sampling scope included the collection of in-situ and stockpile MI soil samples via direct-push drilling and manual sample collection. Continuous dust monitoring was performed during initial site activities. Installation and sampling of groundwater monitoring well is planned following initial building foundation work. The Tetra Tech team coordinated with the development and construction teams to facilitate expedited soil removal, achieving cleanup goals within the required timeframe, successfully remediating a site that was previously presumed to require long-term management.	2024 - ongoing

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
Agribusiness Development Corporation (ADC)	Environmental Site Assessment – Poamoho Fire Site	Tetra Tech is performed site characterization services at the former illegal dump site in Poamoho, near Whitmore Village. The focus of the site assessment was characterization of shallow soil conditions in the 15 acres formerly used as an illegal dump, primarily for stolen car staging and associated "chop-shop" operations. In addition, there was other random trash and debris scattered across the Site, including boats, liquefied petroleum gas tanks, etc. A portion of the Site burned in summer 2021, with cars in place, creating the possibility for releases of oil and/or hazardous materials associated with incineration/melting of a variety of car parts. In addition, prior to the fire, the staging of abandoned vehicles alone represents a threat of impact as a result of leaks, and potential in-situ draining of automotive fluids, including oil, transmission fluid, brake fluid, and engine coolant. The site characterization included more than 800 borings in 20 decision units. The site characterization activities resulted in the DOH issuing No Further Action, with no restrictions for the site, allowing for the resumption of agricultural use of the entire 15 acres. In addition, Tetra Tech subcontracted removal of residual solid waste across the site, which resulted in a final DOH inspection, confirming there was less than 1 cubic yard of solid waste remaining across the entire 15 acres.	2021 to 2024
County of Kauai	Environmental Assessment and Permitting Services	Tetra Tech is supporting Kauai County with environmental permitting and technical analysis for the Kekaha Landfill Phase II Vertical Expansion. The Tetra Tech team is providing design and environmental assessment services, including a comparative analysis of two options for excavating and redeveloping the closed unlined Phase I disposal area to extend the landfill's operational life.	2022 to present
DLNR, Engineering Division	196D HRS Action Plan	Tetra Tech conducted a comprehensive evaluation of HRS 196D that identified the benefits, challenges, and limitations of implementing the HRS 196D Consolidated Permit Application and Review Procedures for geothermal and cable system development. As part of the evaluation, Tetra Tech met with stakeholders and DLNR to better understand the challenges and opportunities of HRS 196D and its implementation. A summary report with findings of the evaluation and interviews was provided to DLNR and included an evaluation of possible actions for repealing, amending, or preserving HRS 196D.	2015
DLNR, Engineering Division	Hawaii Sea Level Rise Vulnerability and Adaptation Report, Statewide, Hawaii (Job No. J40AS99A)	Tetra Tech provided technical and administrative support to the DLNR and the Interagency Climate Adaptation Committee to prepare the Sea Level Rise Vulnerability and Adaptation Report mandated by the Hawaii Climate Adaptation Initiative Act (Act 83, 2014). Tetra Tech's scope includes organizing and facilitation of ICAC meetings, conducting a state-wide sea level rise vulnerability assessment and socioeconomic impact analysis, assisting in public education and outreach, and preparing the Report for submission to the State Legislature by December 2017.	2015 to 2018

Client(s)	Project Name	Description	Period of Performance
DLNR, Engineering Division	Ha'ena State Park and Napali Coast State Wilderness Park - Park Improvements	Tetra Tech provided technical support services to DLNR in support of Na Pali Park improvements. The scope of services included: preparing a HEPA EA and Site Plan Approval for the Office of Conservation and Coastal Lands; performing a hydrology and hydraulics study, topographic survey, and geotechnical investigation; supporting public meetings and associated stakeholder outreach; preparing a Design Development Report and bid specifications for a pedestrian bridge crossing Hanakapiai Beach; preparing a Special Management Area Major Permit for the County of Kauai.	2014 to 2021
DLNR, Engineering Division	Haena State Park and Napali Coast State Wilderness Park Field Investigation and Concept Report for Proposed Park Improvements	Tetra Tech assessed the conditions of various existing park improvements and developed a concept plan to implement capital improvements at Haena State Park and Napali Coast State Wilderness Park. Recommendations on materials, placement, installation, and operation of desired/proposed improvements were provided. The necessary professional services needed to develop bid documents for the capital improvements implementation were established.	2013
DLNR, Engineering Division	Kaizen Process Improvement Training	Tetra Tech coordinated Kaizen Process Improvement services related to filling staff vacancies within the DLNR. The purpose of the event was to enhance the ability of the Department to fill staff vacancies in a more timely way in an effort to meet the overall Department's requirements and demands.	2017
DLNR, Engineering Division	Kaizen Process Improvement Training	Tetra Tech coordinated Kaizen Process Improvement services related to the Bureau of Conveyances Land Court Certification Process	2018
DLNR, Division of Boating and Ocean Recreation (DOBOR)	Waianae Baseline Environmental Study	Tetra Tech prepared a study mandated by the State Legislature to characterize resource use conflicts between fishermen and dolphin watching tours along the Waianae coast. Compiled and reviewed extensive literature for the study area. Conducted participatory mapping with stakeholder groups to identify spatial and temporal aspects of resource use. Provided regular updates to the Waianae Neighborhood Board on project status. Developed a range of alternatives to address resource use conflicts. Analyzed environmental and socioeconomic impacts of alternatives as well as management and enforcement capacity required for each alternative.	2007 to 2008
DLNR, Engineering Division and Federal Emergency Management Agency (FEMA)	Environmental Review of 24 Sites with Potential Rockfall Hazards, Federal Emergency Management Agency, Lanikai, HI (Team Subcontractor)	Tetra Tech prepared a series of compliance documents for FEMA's Hazard Mitigation Grant Program in response to a proposed rockfall mitigation project in Kailua, HI. Staff prepared an Executive Order compliance document for EO 11990-Protection of Wetlands, EO 11988-Floodplain Management, EO 12898-Environmental Justice, EO 13045-Protection of Children from Environmental Health Risks and Safety, EO 13089- Coral Reef Protection, and EO 13112-Invasive Species. The Project included a USFWS Requirements Report for protected species and critical habitat, a Cultural Resources Technical Report and a State Historic Preservation Office Requirements Report, as well as an EA for the action. Tetra Tech worked closely FEMA Region 9, DLNR (Engineering), State Civil Defense, and the rockfall engineer proposed to execute the project.	2012 to 2013

Client(s)	Project Name	Description	Period of Performance
DBEDT, Office of Planning and Sustainable Development	Developing a Scoping Study for a Regional Shoreline Strategy Specific to the State of Hawai‘i	The focus of this contract is developing a scoping study to define criteria to inform future shoreline management strategies by assessing and identifying Hawai‘i-specific characteristics to inform a regional planning approach. The contract was recently awarded in Spring 2022, and work is only recently underway.	2022 - ongoing
DBEDT, Strategic Industries Division	Professional Services for Community Planning	Tetra Tech updated the DBEDT Energy Office's Renewable Energy Permitting Wizard, revised and developed permit briefs, updated the Guides to Renewable Energy Facility Permits in the State of Hawaii and assisted DBEDT Energy Office with identifying strategic operational goals and potential updates to HRS Chapter 201N.	2014
DBEDT, Office of Planning, Hawaii State Coastal Zone Management (CZM) Program	Hawaii Watershed Guidance	Tetra Tech prepared the Hawaii Watershed Guidance to provide direction to agencies and community groups on the watershed planning process and coastal nonpoint source pollution measures. Tetra Tech developed a profile of Hawaii's Coastal Nonpoint Pollution Control Program, and incorporated Hawaii's management measures and practices designed to control runoff from six main sources into the Guide. A needs assessment was conducted through interviews with individuals from selected watershed planning organizations to identify obstacles and challenges in watershed planning, and to define areas that may require more focused attention in the Handbook. Tetra Tech prepared draft and final versions of the guidance for review by the Hawaii Coastal Zone Management Program, Department of Health, and other stakeholders and prepared an outreach strategy to disseminate the Guidance throughout Hawaii.	2009 to 2010
DBEDT, Office of Planning, Hawaii State CZM Program	Waianae Ecological Characterization	Tetra Tech compiled and reviewed information and data on coastal and marine resources in the area and Federal, State and County laws, regulations, and policies related to watershed and coastal resource management. Scope included conducting interviews with community members; organizing partners group meeting to solicit data and information for the development of the WEC; preparing all sections of the WEC; and developing recommendations for a moku management framework for improved implementation of ahupuaa management initiatives.	2003 to 2004
DBEDT, Office of Planning, Hawaii State CZM Program	Hawaii Ocean Resource Management Plan Update	Tetra Tech compiled and reviewed information and data. Scope included: meeting with state and county agencies to identify management priorities and lead agencies; developing innovative framework to reflect management goals and strategic actions; preparing draft and final versions of the Hawaii Ocean Resources Management Plan incorporating comments from multiple agencies and organizations; preparing public comment summary.	2005 to 2006
DBEDT, Office of Planning, Hawaii State CZM Program	Development of a Moku Management Framework for the State of Hawaii	Tetra Tech conducted literature review on traditional management systems and practices; characterized existing legal and institutional frameworks for natural resource management; and developed a framework for moku management that integrates traditional and contemporary principles and best practices in managing watersheds and coastal resources.	2007

Client(s)	Project Name	Description	Period of Performance
DBEDT, Office of Planning, Hawaii State CZM Program	Hawaii Community Stewardship Project- Community Based Resource Management (CRBM)	Tetra Tech reviewed numerous DOH, CZM DLNR, and other relevant documents in the development of guiding principles for an integrated planning framework for place-based, culture-based, and community-based approaches to natural and cultural resources management. Developed and conducted island-wide survey of community stewardship organizations focused on understanding successes, obstacles and needs of these groups to develop means for the state to enhance these efforts. Conducted a meeting of 37 community groups and 13 federal, state and county program managers and staff to provide feedback and improve collaboration in natural and cultural resource management. Incorporated public input from the survey and meeting into a Community Stewardship Directory and Integrated Planning Framework Report.	2007 to 2008
Hawaii Air National Guard	Hazardous Waste Management and Inspections, Big Island, Maui, Oahu, HI	Tetra Tech developed a Hazardous Waste Management Plan (HWMP) for the Hawaii Air National Guard (HIANG). The plan covered the primary operations located at JBPHH as well as at four geographically separated units (GSUs) located throughout the Hawaiian Islands. The draft plan included streamlined management actions for all HIANG units, including the operations as a tenant on JBPHH to the U.S. Navy, and independent operations of the GSUs.	2007 to 2009
City/County of Honolulu Office of Climate Change, Sustainability and Resiliency	Participation in the Community Rating System	Tetra Tech was selected by the City/County of Honolulu through a competitive procurement process to develop the City/County's initial application to FEMA's Community Rating System (CRS) program. With over 38,000 flood insurance policies in force, the City/County of Honolulu has long aspired to get into the CRS program but needed technical assistance to do so. With nationally recognized subject-matter expertise in the CRS program, Tetra Tech was able to help the City/County navigate the tedious CRS application and prerequisite process and helped the County secure a Class 8 rating, saving flood insurance policy holders $1.2 million per year in annual premium beginning on April 1, 2022. This included the development of a Repetitive Loss Area Analysis (RLAA) that helped the City/County to meet its repetitive loss prerequisites for participation as well as training for key staff on the implementation and maintenance of its CRS program.	2020 to 2021
City and County of Honolulu, Department of Emergency Management (CCH DEM)	Hawaii Regional Catastrophic Planning Grant) RCPG FY09 Public Disaster Awareness Campaign Project	Tetra Tech led a team of social scientists, emergency managers, market researchers, media producers (television, radio, print, and Internet), and communications specialists to improve public disaster preparedness and resilience in Hawaii. Conducted initial research to establish a baseline preparedness level. Outreach included more than 30,000 calls to local telephone numbers and meetings with non-governmental organizations to better understand disaster preparedness in several hard-to-reach and under-served populations. Developed a simple preparedness strategy to reach key demographics, including TV, radio, newspaper, social media and environmental advertisement channels. Developed a disaster preparedness planning website – GetReadyHI.org. Ran a month-long, statewide campaign and conducted post-campaign research to determine which campaign messaging vehicles were most effective. Developed a refined template campaign plan for future use.	2011 to 2012
CCH DEM	State-wide County-Specific Hurricane Planning	Tetra Tech developed four (4) County-specific Hurricane Planning Frameworks, with each set including: (1) Logistics Concept of Operations and (2) a Logistics Annex. The county-specific scope included: Forming County-Specific Collaborative Hurricane Planning Teams; Performing a Gap Analysis; Crosswalking State and Local Plans; Framework Development, and Logistics Planning. Significant Stakeholder outreach was required, including county-specific team planning meetings, as well as Work Group meetings, comprised of the following focus areas: Mass Care and Shelter; Ports and Fuel Resiliency; Tourist/Tourism Protection; Lifesaving and Sustaining Measures; Power Infrastructure Protection; Debris Clearance; and Water Authorities.	2012 to 2013

Client(s)	Project Name	Description	Period of Performance
CCH DEM	Hawaii RCPT Population Redistribution Analysis Report	Under contract with the City and County of Honolulu's DEM, on behalf of the Hawaii Regional Catastrophic Planning Team (RCPT), and inclusive of the Counties of Maui, Kauai, and Hawaii, Tetra Tech identified capacities of each county to support evacuees from neighboring islands in the event of a major disaster. In addition, Tetra Tech is engaging emergency management agencies from four identified CONUS locations, including San Diego, Los Angeles, San Francisco, and Seattle, to determine the ability of these regions to support large populations of displaced evacuees.	2014 to 2015
CCH DEM	Hawaii RCPT Regional Resource Database	Under contract with the City and County of Honolulu's DEM, on behalf of the Hawaii RCPT, and inclusive of the Counties of Maui, Kauai, and Hawaii, Tetra Tech developed a web-based resource database integrating FEMA resource typing as well as customized regional resource typing. The project included development and associated training modules.	2014 to 2015
CCH DEM	Hawaii RCPT Strategic Plan and Grant Closeout Deliverables	Under contract with the City and County of Honolulu's DEM, on behalf of the Hawaii RCPT, and inclusive of the Counties of Maui, Kauai, and Hawaii, Tetra Tech developed a regional Strategic Plan and other deliverables related to closeout of the Regional Catastrophic Grant Program (RCGP). Deliverables included a regional training and exercise plan, a grant linkage plan, and a sustainment plan.	2014 to 2015
CCH DEM	Oahu Coastal Communities Evacuation Planning Project, Honolulu, Hawaii	The Oahu Coastal Communities Evacuation Project is a critical preparedness effort for the residents and visitors of Oahu, to establish tsunami evacuation routes, signage and designated Safe Sites correlated with updated tsunami modeling. Tetra Tech was contracted to complete Phase 2, which was comprised of tsunami evacuation routing and Safe Site identification for the southern coast of Oahu. To assist the city in promoting vertical evacuation, Phase 2 included the design and development of an engineering evaluation tool to serve as the basis for a future Tsunami-Safe Vertical Evacuation Program.	2017 to 2019
CCH Dept. of Planning & Permitting (DPP)	Waikiki Area Adaptation Plan	Tetra Tech was contracted by the City and County of Honolulu Department of Planning and Permitting to develop the Waikiki Area Adaptation Plan. The focus of this plan is to recommend near-term (30 years) design guidelines and regulatory changes to the Waikiki Special Design District. The Waikiki Area Adaptation Plan result in area-wide design recommendations that will maintain Waikiki's "sense of place." The proposed guidelines and recommendations will reinforce Waikiki as a resort destination, pedestrian priority place, and livable urban neighborhood. The Plan area generally aligns with the Waikiki Special Design District, while includes consideration of adjacent parcels and areas that are relevant for adaptation planning purposes.	2023-2026
CCH DPP	Oahu Flood Hazard Analysis	Under contract with the CCH DPP, Tetra Tech is developing a Hazus-compliant building inventory in Oahu for flood-prone areas, which includes filling in data gaps, creating flood depth grids for modeling, running a Hazus Level 2 analysis, and developing a report describing the potential for physical damage, economic loss, and social disruption, along with mitigation measures to reduce flood risk.	2023 to present
City and County of Honolulu, Local Emergency Planning Committee (LEPC)	Waipahu Hazard Analysis	Tetra Tech provided information on storage and use of hazardous chemicals in the Waipahu area and to evaluate the potential off-site consequences for a chemical release or fire. Updated the City and County of Honolulu Emergency Operations Plan and shared findings with emergency first responders for the Waipahu area. Collaborated with stakeholders and project team to develop technical approach. Administered survey to businesses to identify those that store/use hazardous substances. Maintained a CAMEO database of chemical inventory quantities for each business. Identified worst-case and alternative-case release scenarios for each hazardous substance. Conducted toxic threat zone modeling.	2008

Client(s)	Project Name	Description	Period of Performance
Kauai Emergency Management Agency	Kauai County Multi-Hazard Mitigation and Resilience Plan	Tetra Tech is preparing a comprehensive update to the Kauai County Multi-Hazard Mitigation Plan. The focus of this project is a comprehensive risk assessment of twelve natural hazards of concern. Hazus-MH will be utilized to assess the dam failure, tropical cyclone, earthquake and flood hazards. Tetra Tech's level II, user-defined protocol will be applied to the earthquake and flood analyses. The plan will be facilitated through a multi-member Steering Committee made up of planning partners and other stakeholders from within the planning area. Due to COVID-19, this plan will include a virtual multi-media public involvement strategy.	2020 to 2021
Hawaii County Department of Planning	Kilauea Eruption Community Relief, Relocation, and Recovery Planning	Tetra Tech assisted the County of Hawaii with a multiphase project to support recovery activities in the wake of the 2018 Kilauea Eruption. The outcome of this planning engagement was an Action Framework for Recovery and Resilience (Action Framework) that provided the County with a blueprint for a variety of strategies and projects to facilitate meaningful recovery to the County residents and businesses that were displaced or impacted. The Action Framework considered and incorporated outcomes from planning studies for use to inform future decisions on prioritizing expected federal and state grants available for long-term recovery as well as County general funds being used to support recovery efforts. This includes more than $400M in state and federal recovery funding including the Stafford Act, the Hazard mitigation Grant Program, and the Community Development Block Grant (CDBG) Programs. In addition, Tetra Tech provided Strategic Communications support to the County.	2019 to 2020
Hawaii County Department of Planning	Volcanic Risk Assessment and Mitigation Action Plan	Tetra Tech performed a volcanic risk assessment and identified mitigation strategies for the County of Hawaii. This included all hazards associated with four volcanoes, including lava, ash and gas emissions (Vog). Outcomes from the risk assessment were designed to inform and update of the County's Multi-Hazard Mitigation Plan with the resulting mitigation strategies also being incorporated into concurrent recovery planning efforts subsequent to the 2018 Kilauea Eruption event.	2019 to 2020
Hawaii County Department of Planning	Update Multi-Hazard Mitigation Plan	Tetra Tech conducted the HMP update using a planning process that met both Disaster Mitigation Act (DMA) of 2000 requirements and CRS Activity 510 Comprehensive Floodplain Management Plan requirements. Tetra Tech performed the following tasks as part of the 2020 update: (1) completed an extensive repackaging of the County plan to increase readability, usability and integration opportunities with County plans and programs that could support/enhance hazard mitigation actions identified by the plan; (2) organized a stakeholder working group that oversaw the plan development processes and facilitated nine steering committee meetings; (3) Updated goals, objectives and mitigation initiatives to more readily align with existing County and State goals, programs and priorities; (4) Conducted an enhanced risk assessment using HAZUS-MH and GIS analysis as applicable for 12 hazards of concern, including an update of the general building stock as well as the development of a critical facilities database; (5) Developed and employed a public participation strategy that included a public survey, several public meetings, and a public comment period; and, (6) Updated hazard profiles with best available data, the results of the risk assessment and a description of hazard events that have impacted the County since the development of the previous plan. The plan identified and prioritized over 35 actions based upon the County's core capabilities and capacity to implement the actions.	2019 to 2020

Client(s)	Project Name	Description	Period of Performance
Hawaii County Department of Planning	Analysis to Establish Research-based Shoreline and Riparian Setbacks for Hawaii	Tetra Tech, in response to a Scope of Work provided by the County of Hawaii, is developing coastal and riparian management tools. The focus of this project is to provide the technical foundation based on the best available information for revisions in regulatory and non-regulatory tools, in particular, shoreline setbacks and riparian buffers, to more effectively reduce risk to coastal hazards. This will be followed by adapting the Plan Integration for Resilience Scorecard (PIRS) as a decision-support tool for this project and for future efforts that the County may undertake.	2021 to present
Maui County Department of Parks and Recreation	Maui County Beach Parks Vulnerability Assessment	Tetra Tech is conducting a detailed analysis of the vulnerability of Maui County's beach parks and develop recommendations to address short and long-term impacts of coastal hazards, climate change, and other environmental threats. Specific goals of the Project are to: (1) Identify county-owned or managed beach parks that are vulnerable to sea level rise, climate change, tsunami inundation, flooding, and other environmental threats; (2) Determine the extent of this vulnerability through mapping and other analysis; (3) Assess the impacts of these threats on structures, infrastructure, vegetation, cultural and archeological sites, and other assets; and (4) Recommend policies, actions, and other ideas to address the short and long-term impacts.	2020 to present
Maui County Department of Environmental Management, Solid Waste Division	Site Investigation of the Molokai Integrated Solid Waste Landfill Metals Facility	Tetra Tech performed site soil investigation to characterize and delineate the extent and magnitude of contamination associated with historical metals processing operations at the Molokai Metals Facility (MMF), related to the current MMF staging area and the former baler operational area; required by the Hawaii DOH, Solid and Hazardous Waste Branch (SHWB) as part of the permitting for construction of a new concrete pad.	2012
Maui County Civil Defense Agency (MCDA)	Maui County Hazard Mitigation Plan	Tetra Tech completed a comprehensive update to the Maui County Hazard Mitigation Plan. This was a multi-hazard planning effort covering all of the islands within the County. As with all Tetra tech plans, the cornerstone of this project was a comprehensive risk assessment of twelve natural hazards of concern. Hazus-MH was utilized to assess the dam failure, tropical cyclone, earthquake and flood hazards. Tetra Tech's level II, user-defined protocol was applied to the earthquake and flood analyses. This plan was facilitated through a 16-member Steering Committee made up of planning partners and other stakeholders from within the planning area. This committee identified a multi-media public involvement strategy that was deployed by the Tetra Tech planning team during the course of the project. The plan identified and prioritized over 60 actions to be implemented by the Maui County over the 5-year performance period of the plan. The plan was sent to the State of Hawaii Emergency Management Agency and FEMA Region IX for review and was immediately approved with minimal comment.	2014 to 2015
Hawaii Department of Health (DOH), Hazard Evaluation and Emergency Response (HEER) Office	Non-Emergency Environmental Services for the State of Hawaii Department of Health, Hazard Evaluation and Emergency Response Office	Tetra Tech provides technical support services to the HEER Office. More than 200 Task Orders have been completed to date. Tasks performed under this contract include: various programmatic studies; pilot studies related to innovative field investigation methods; policy development support, technical assistance; community and stakeholder outreach; comprehensive evaluation of DOH programs; collaboration with HEER Office project managers to develop guidance and methods for the Technical Guidance Manual; and, extensive temporary staffing support, including embedded and subcontracted professional and administrative positions.	2005 to present (4th 5-year contract)

Client(s)	Project Name	Description	Period of Performance
Hawaii Department of Health (DOH), HEER Office	Statewide Chemical-Biological-Radiological Emergency Response Tabletop Exercise	Tetra Tech collaborated with stakeholders to develop exercise objectives and list of participating agencies. Created exercise materials, including the Situation Manual, the Facilitator/Evaluator Handbook, and the Exercise Evaluation Guides. Coordinated all exercise logistics, including securing venues across four islands, catering, and equipment needs. Facilitated discussion-based tabletop exercise. Evaluated exercise results to identify strengths and areas of further improvement. Prepared an After-Action Report/Improvement Plan.	2007 to 2009
DOH HEER Office	HMEP Grant Support: Maui County HazMat Annex Development	Tetra Tech reviewed and revised the Maui County Hazardous Materials (HazMat) Annex in order to support Local Emergency Planning Committee (LEPC) requirements under the federal Emergency Planning and Community Right to Know Acts (EPCRA) and similar provisions at the State level. Tetra Tech reviewed the completed gap analysis of the Maui County EOP and identified which required elements were currently being met by the HazMat Annex. Tetra Tech worked with Kauai County to identify appropriate stakeholders, including representatives from Civil Defense, the Fire Department, the Police Department, and the LEPC. Tetra Tech developed a HazMat Annex Outline that met LEPC requirements and was consistent with County HazMat operations as well as the larger County EOP. Tetra Tech worked with the stakeholders to develop a Draft HazMat Annex consistent with the previously approved Annex Outline.	2015
DOH HEER Office	Kauai County HazMat Annex Development	Similar process as Maui. Tetra Tech reviewed and revised the Kauai County HazMat Annex in order to support LEPC requirements under the federal EPCRA and similar provisions at the State level.	2016
DOH HEER Office	Hawaii County HazMat Annex Development	Similar process as Maui. Tetra Tech reviewed and revised the Kauai County HazMat Annex in order to support LEPC requirements under the federal EPCRA and similar provisions at the State level.	2017
DOH HEER Office	City & County of Honolulu HazMat Annex Development	Similar process as Maui. Tetra Tech reviewed and revised the Kauai County HazMat Annex in order to support LEPC requirements under the federal EPCRA and similar provisions at the State level.	2019
DOH Bioterrorism Preparedness and Response Branch	Public Health Preparedness Program, Baseline Assessment	Tetra Tech examined the Bioterrorism Preparedness and Response Branch strengths, weaknesses, and opportunities for improvement relative to the entire DOH disaster preparedness enterprise. Provided two sets of recommendations: the second set using PHEP metrics to evaluate program capability and opportunities for improvement; and one set using metrics derived from national program standards (the EMAP Standard, the NFPA 1600 Standard, the NRF, and best practices) contained in numerous guidance document (CDC Public Health Emergency Response Guide and the FEMA Comprehensive Preparedness Guide).	2011 to 2012
DOH Solid and Hazardous Waste Branch (SHWB) and EPA	RCRA Enforcement and Policy Assistance	Tetra Tech provided program-wide technical support to DOH SHWB UST Division. Provided expert support reviewing remedial alternatives and cleanup action at high priority DOH sites. Designed informational brochures, handouts, and poster for National Brownfields Conference. Geocoded 1,500 former sites and developed Google Earth-based geodatabase for easy desktop review and analysis. Helped rectify significant data quality concerns at the Tripler Army Medical Center UST Site. Prepared QAPrP for UST Division.	2007 to 2010

Client(s)	Project Name	Description	Period of Performance
DOH Clean Air Branch (CAB)	Ambient Community Air Monitoring in Response to Wildfire Cleanup Action, Kula, Maui	Tetra Tech developed (in conjunction with the DOH CAB) a community air monitoring and sampling plan for the Kula fire area. The plan was developed in consultation with the DOH Health and Maui County. Monitoring continued for the duration of cleanup efforts in the Kula area (approximately 8 months). The specific monitoring locations were determined upon consultation with EPA/CAB/Maui County. Tetra Tech conducted continuous air monitoring activities utilizing an E-BAM Mass Monitor, with daily calibration and system checks. The system monitored three (3) locations for PM2.5 and PM10 to allow for comparison to the National Ambient Air Quality Standards (NAAQS) and agreed upon regulatory standards for the State of Hawaii.	2023 to 2024
DOH Clean Air Branch (CAB)	Ambient Community Air Monitoring in Response to Wildfire Cleanup Action, Lahaina, Maui	Tetra Tech developed (in conjunction with the DOH CAB) a community air monitoring and sampling plan for the Kula fire area. The plan was developed in consultation with the DOH Health and Maui County. Monitoring continued for the duration of cleanup efforts in the Kula area (approximately 8 months). The specific monitoring locations were determined upon consultation with EPA/CAB/Maui County. Tetra Tech conducted continuous air monitoring activities utilizing an E-BAM Mass Monitor, with daily calibration and system checks. The system monitored four (4) locations for PM2.5 and PM10 to allow for comparison to the National Ambient Air Quality Standards (NAAQS) and agreed upon regulatory standards for the State of Hawaii.	2023 to 2024
Hawaii Community Development Authority (HCDA)	Soil Stockpile Characterization - Kalaeloa Heritage and Legacy Foundation Park	Tetra Tech was contracted by HCDA to provide stockpile characterization services at the Kalaeloa Heritage and Legacy Foundation Park (KHLFP) site, in Kapolei, HI. Approximately 6,000 cubic yards of soil, including construction and demolition (C&D) debris, was imported by the tenant (Kalaeloa Heritage and Legacy Foundation) to the site, which is owned by HCDA, without HCDA's approval. HCDA received a notice of violation (NOV) from the City and County of Honolulu, Department of Planning and Permitting (DPP) for unauthorized stockpiling; therefore, characterization was required to determine proper management of the material due to the presence of C&D debris, and the unknown origin of the material. Activities required included: clearing and grubbing of the stockpile; a drone survey of the stockpile to more accurately quantify the volume of material, and to establish a sampling grid; and sampling of three separate sub-piles using the MIS method, with 70 test pits advanced by an excavator for sample collection. The sample plan required approval by the HEER Office; the HDOH Indoor and Radiological Health Branch (IRHB); and HDOH SHWB.	2018 to 2020
Hawaii Emergency Management Agency (HIEMA)	State of Hawaii Hazard Mitigation Plan	Tetra Tech completed a comprehensive update to the State Hazard Mitigation Plan. This was a multi-hazard planning effort covering all of the islands within the state and included representatives from all of the counties as well as subject matter experts and the State Hazard Mitigation Forum. As with all Tetra Tech plans, the cornerstone of this project was a comprehensive risk assessment of hazards of concern. Although given a shortened project timeframe, and despite a number of real-world disasters, Tetra Tech integrated stakeholder input while ensuring the project remained on track and was completed on time, thus ensuring the state remained eligible for reimbursement and future mitigation funding.	2017 to 2018
Hawaii Emergency Management Agency (HIEMA)	State of Hawaii Emergency Operations Plan (EOP) Annex Update	Tetra Tech conducted stakeholder outreach and planning activities in support of rewrites to four major annexes to the State Emergency Operations Plan (EOP). These Annexes included Search and Rescue, Hazardous Materials & Oil, Mass Casualty and Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE). Tetra Tech worked closely with stakeholders from state and local agencies as well as non-profits and the military to identify and outline points of interface and objectives for managing a response. Key Stakeholders included the State Department of Health, the National Guard and local fire and police agencies from the various counties.	2018 to 2020

Client(s)	Project Name	Description	Period of Performance
University of Hawaii Institute for Astronomy and Pan-STARRS	Environmental Support Services Mauna Kea, Big Island, HI Haleakala, Maui, HI	Tetra Tech provided environmental support services at remote telescopes located at the summit of Mauna Kea and Haleakala that were renovated as part of the Pan-STARRS project. Tasks for this project included: completing a Phase I ESA at the Mauna Kea facility; completing a Site Investigation, including soil sampling underneath the concrete slab to assess potential impacts from historical released petroleum products at both facilities; providing technical support and consulting services related to regulated hazardous material surveys for ACM and LBP prior to renovation and demolition activities at both facilities; collecting over 350 bulk asbestos samples and 80 paint chip samples during the surveys; and ensuring field activities complied with special management zone and nature preserve protocols applicable to both facilities.	2010 to 2012

Client(s)	Project Name	Description	Period of Performance
Federal Agencies (in Hawaii)			
National Oceanic & Atmospheric Administration (NOAA), Office of National Marine Sanctuaries Kihei, Hawaii	Technical Support to the Papahanaumokuakea Marine National Monument	Tetra Tech provided a range of technical support to the Monument Program on developing the Monument Management Plan, Evaluation Strategy, and environmental planning documents. Compiled and organized vast amounts of information and data on Monument resource status and federal and state policies and laws for various planning documents related to the Monument. Conducted interviews and meetings with federal and state entities to prepare planning and environmental assessment documents for the Monument. Prepared scoping report summarizing comments and issues on the interim draft Monument Management Plan. Conducted 3-day workshop for Co-Trustee agencies and partners to review Monument Management Plan strategies and activities. Compiled draft Monument Management Plan for review by the planning team. Prepared the Monument Natural Resources Science Plan working with scientists and managers. Prepared the evaluation strategy to monitor implementation of the Monument Management Plan for all Co-Trustee agencies. Prepared State of the Monument modules for various monument resources.	2004 to 2009
U.S. Fish and Wildlife Service (USFWS)	Management Planning Services for the Papahanaumokuakea Marine National Monument	Tetra Tech assisted the USFWS in drafting portions of the Papahanaumokuakea Marine National Monument Management Plan (MMP) and required NEPA documentation. Tetra Tech prepared detailed scoping reports, facilitated a 3-day workshop to achieve consensus on the preferred management alternative, and worked closely with the USFWS to identify specific management actions to be addressed. Tetra Tech compiled all components of the MMP and NEPA EA for review by the USFWS Planning Team.	2004 to 2009
Naval Facilities Engineering Command (NAVFAC) Pacific	Invasive Plant Control Plans, and Implementation, Joint Base Pearl Harbor-Hickam (JBPHH) and Pacific Missile Range Facility (PMRF)	Tetra Tech assisted with control of invasive plant species at JBPHH and the PMRF on the islands of Oahu and Kauai, respectively. The scope includes: 1) Preparation of an Invasive Plants Control Plan for JBPHH; 2) Implementation of the approved plan (short-term invasive plant control actions) at JBPHH; 3) Preparation of an Invasive Plant Control Plan for the PMRF; and 4) Implementation of the approved plan (short-term invasive plant control actions) at PMRF. Both phases involved conducting detailed surveys to assess current conditions and providing the best approach for invasive plant control measures.	2014 to 2017
National Oceanic & Atmospheric Administration (NOAA), Office of National Marine Sanctuaries, Kihei, Hawaii	National Sanctuary of American Samoa NEPA Support	Tetra Tech prepared an EIS for the expansion of the Fagatele Bay Sanctuary from one isolated unit to six units across the archipelago. In developing the description of the Affected Environment, an extensive literature search of over 700 sources was conducted as well as interviews with dozens of stakeholders and government agencies to obtain critical information unavailable from published sources. Tetra Tech developed and analyzed six project alternatives, reviewed federal and territorial regulations for consistency with the proposed action, and assisted NOAA with public hearings.	2010 to 2012

Client(s)	Project Name	Description	Period of Performance
NOAA, Pacific Services Center, Honolulu	Hawaii Marine Debris Action Plan and At-Sea Detection Strategy	Tetra Tech prepared the Hawaii Marine Debris Action Plan based on inputs from six stakeholder workshops planned and conducted by Tetra Tech to define marine debris issues and identify strategies to address these issues. A background paper with contributions from experts throughout the country on at-sea detection of derelict fishing gear was also designed, compiled, and edited by Tetra Tech. After convening of a workshop of experts, an at-sea detection strategy was developed and led to improved detection and removal of derelict fishing gear at sea.	2007 to 2011
NOAA, Pacific Islands Regional Office, Honolulu	Federal Fisheries Ecosystem Plan Regulatory Analysis and Reorganization	Tetra Tech conducted regulatory review on all Western Pacific Fisheries, addressing inconsistencies in regulations and summarizing gaps in protection. Tetra Tech completed the following tasks: proposed and executed new structure in fishery regulations to be more consistent with ecosystem-based management; provided a new structure for non-regulatory sections of ecosystem-based management plans to function as a "living document," facilitating a stream-lined plan updating system for all regulatory amendments; provided general NEPA support for fishery actions.	2006 to 2010
U.S. Coast Guard	Location Analysis Report, Marine Mammal Acoustic and Visual Monitoring Special Studies, Various Locations, HI	Tetra Tech prepared a location analysis report, using GIS overlays, and developed an impact method to identify least impact alternative water training areas (WTAs) in Hawaii waters.	2010 to 2012
NOAA, Pacific Services Center, Honolulu	Coastal Community Resilience Assessment, Hilo, Hawaii	Tetra Tech worked with the County of Hawaii to increase awareness of coastal hazards in the Kau community and to integrated resilience practices into the Kau Community Development Plan. Building on the methodology developed under the U.S. Indian Ocean Tsunami Warning System Program by Tetra Tech, NOAA, and other partner organizations, Tetra Tech reviewed and assessed the resilience status of existing community development plans and met with community and Hawaii County stakeholders to identify opportunities to enhance community resilience through the community development planning process.	2009 to 2010
NOAA / Office of National Marine Sanctuaries Silver Spring, MD	Development of a Management Plan and National Environmental Policy Act Environmental Impact Statement for the Designation of the Proposed Pacific Remote Islands National Marine Sanctuary	Tetra Tech is preparing an Environmental Impact Statement (EIS) for the proposed designation of the Pacific Remote Islands as a National Marine Sanctuary. The focus areas of the work include the physical environment, biological environment, cultural and historic resources, and human uses, socioeconomic resources, and environmental justice. To meet the requirements of the National Marine Sanctuaries Act, Tetra Tech is also preparing the management that includes action plans, goals, objectives, and activities. As part of its project support, Tetra Tech is also preparing a cost-benefit analysis and analysis of the Regulatory Flexibility Act requirements and analyses focused on economic and socioeconomic considerations. To date, Tetra Tech's public involvement support has included reviewing scoping comments provided by individuals, organizations, and government agencies in response to the published Notice of Intent and preparing a scoping summary to document those comments and the scoping process. Tetra Tech supported and attended a workshop in American Samoa to discuss issues associated with commercial fishing. The EIS and Management Plan is being developed in coordination with the US Fish and Wildlife Service, US Navy, and US Air Force as cooperating agencies and with the National Marine Fisheries Service.	2023 to present

Client(s)	Project Name	Description	Period of Performance
USACE Honolulu District, Fort Shafter, HI (Sub to Kennedy/Jenks Consultants)	Hawaii Water Systems Technical Study North Shore/Wahiawa Irrigation Study	Tetra Tech, working as a subconsultant to Kennedy/Jenks Consultants, identified environmental concerns and permitting requirements for four project alternatives for the North Shore/Wahiawa Irrigation Study. Tetra Tech also prepared cost estimates for development and construction of each alternative.	2015 to 2016
USACE, Honolulu District Fort Shafter, HI	Environmental Impact Statement Military Training Activities at Makua Military Reservation, Hawaii, and Various Environmental Studies	Tetra Tech designed and carried out a wide range of associated scientific studies and prepared an EIS to address the potential impacts of military live-fire training at the Makua Military Reservation on Oahu. Work performed under this project included preparing NEPA documents, conducting special scientific field studies, providing public involvement support to the highly controversial practice of live-fire military exercises at the reservation, and supporting environmental planning at the Makua Military Reservation. Relevant project elements include analysis of airspace use, marine noise modeling, air sampling, sediment sampling, profiling contaminants in marine resources and performing risk assessments. Tetra Tech conducted field investigations to collect data on noise, air quality, contaminants, and marine environment and organized and administered public involvement to meet the high level of public interest required for a controversial project.	2002 to 2009
United States Army Engineering and Support Center, Huntsville, AL	Kipapa Ammunition Storage Tunnels Munitions Response Site Remedial Investigation Mililani, Oahu, Hawaii	Tetra Tech performed a RI/Feasibility Study (FS) for areas associated with the Kipapa Ammunition Storage Tunnels Munitions Response Site (MRS). The primary objective of this project was to accurately characterize the interior tunnels and exterior areas of the MRS; determine the presence, type, density, and distribution of chemical agent (CA), munitions constituents (MC), and hazardous and toxic waste (HTW); and assess their potential risks/hazards to human health, safety, and the environment. The RI/FS investigation included 80 storage tunnels, six former loading/unloading areas, and two areas of potential concern for the presence of CA, Agent Breakdown Products (ABPs), and/or HTW. Field activities included: surface clearance, vegetation removal, air monitoring for CA, tunnel inspection, field sampling, and closure of the tunnels.	2014 to 2016
USACE, Honolulu District Fort Shafter, HI	Five Commercial Harbors Dredging Project – Oahu, Maui, Kauai, Big Island, Hawaii	Tetra Tech provided the full suite of both state and federal environmental compliance requirements related to the maintenance dredging of the federally-managed areas of Hawaii's five commercial harbors as well as one small boat harbor. Tetra Tech developed and executed a sampling and analysis plan to conduct sediment sampling and provide sediment analysis reports for EPA-approval of ocean disposal of dredge material. Tetra Tech prepared a Biological Assessment for 12 ESA species, an EFH Analysis, NEPA compliance documentation, and permit acquisition related to the maintenance dredging of the federally-managed areas of Hawaii's five commercial harbors and one small boat harbor. Tetra Tech also performed vessel-based sediment sampling and performed informal and formal consultations with resource agencies.	2014 to 2019

Client(s)	Project Name	Description	Period of Performance
NAVFAC, Pacific Division	Pacific Marine Resource Assessment Update Hawaii, Southern California, Marianas Islands, and Japan/Okinawa Training and Testing Areas	Tetra Tech prepared marine-related sections of the EIS for Navy training and testing activities. Scope included: preparing the Marine Resource Assessment Update for ocean and coastal areas of the Pacific Ocean to support regional ocean planning and conduct Navy training and testing programs; identifying and reviewing scientific literature and global and local datasets to update marine resource assessments in the Pacific; preparing species profiles and ecoregional descriptions for the Hawaii and other ecoregions in the Pacific study area; and incorporating data into text and maps to allow the Navy to implement marine spatial planning, including detailed habitat assessments, ecosystem descriptions and density data for sensitive species.	2010 to 2012
NAVFAC, Pacific Division	Comprehensive Long-Term Environmental Action Navy (CLEAN) II, Navy and Marine Corps Sites Throughout NAVFAC Pacific Region (Team Subcontractor)	Tetra Tech conducted a full range of environmental services at 17 installations throughout the PACDIV footprint, including Hawaii, Japan, and Guam under CERCLA, and the Navy's IR and BRAC programs. Prepared SIs, EE/CAs, AMs, FOSTs, FOSLs, proposed plans, and RODs for 13 active and 4 closing installations. Performed the characterization and delineation of hazardous contaminants at 14 Naval installations on Oahu. Negotiated with regulators and stakeholders to facilitate site closure and transfer of over 2,000 acres of land at former NAS Barbers Point.	2003 to 2008
U.S. Postal Service	Sand Island Vehicle Maintenance Facilities Groundwater Investigation and Monitoring, Honolulu, HI	Tetra Tech conducted groundwater investigation and remediation system operation and maintenance (O&M); Performed monthly O&M site visits to inspect/adjust free product skimmers and gauge groundwater/free product thicknesses; Prepared quarterly summary reports.	2009 to present
NAVFAC, Pacific Division	Defense Program Review Initiative Hawaii Phase 2 Environmental and Transportation/Traffic Studies (Team Subcontractor)	Tetra Tech is providing support to an internal Navy pre-planning project to further analyze proposed sites to accommodate relocation of military forces and families to the island of O‘ahu. Tetra Tech biologists conducted terrestrial biological studies and surveys of species and habitats at five installations to support future Endangered Species Act Section 7 consultation with the USFWS and NEPA compliance activities, and to fulfill necessary requirements to comply with the federal Endangered Species Act, the federal Migratory Bird Treaty Act (MBTA), and with State of Hawai‘i (SOH) law (Hawai‘i Revised statutes Chapter 195D) that protects federally endangered and threatened and state-listed endangered and threatened species. Tetra Tech conducted surveys for three groups of federally and state-listed species: the Hawaiian hoary bat, ESA-listed plants, and ESA/SOH/MBTA-listed birds. Results from biological studies are being analyzed and summarized for inclusion in a comprehensive report to NAFVAC to support future decision-making, NEPA, and related environmental and facility planning requirements.	2021 to present

Client(s)	Project Name	Description	Period of Performance
National Park Service	Haleakala National Park Avian Malaria Suppression Efforts	Federally endangered birds in Haleakala National Park have rapidly declined in the last 20 years, with some reaching perilously low numbers. Past and recent work has confirmed that the primary threat to native Hawaiian birds is non-native avian malaria, transmitted by a non-native vector, the Culex mosquito. Recent advances allow for the possibility to use a sterile insect technique, Wolbachia incompatibility, to suppress mosquitoes and their associated diseases. Based on this approach, the National Park Service (NPS) and State of Hawaii are proposing to use of the Wolbachia technique at a landscape level to suppress non-native mosquito reproduction or population size and thus avian malaria transmission to native forest birds on East Maui. In addition to the NPS and State of Hawaii, the Nature Conservancy and U.S. Fish and Wildlife Service are key project stakeholders. Tetra Tech assisted with project planning and early outreach, including a highly successful 3-day virtual Microsoft Teams workshop with more than 30 participants, and preparation of an environmental assessment (EA) in compliance with both the NEPA and the HEPA (HRS Chapter 343). Specific tasks include pre-NEPA environmental planning services, scoping meetings and materials, preparation of an EA for public review, EA review meetings and materials, analysis of and response to EA comments, preparation of a decision document, and compilation of the decision file for the project.	2020 to present

3. Key Personnel

We have an experienced team who can attest to many years of successful projects in Hawaii. Our extensive local experience in Hawaii, coupled with our company-wide resources and subject matter experts, ensures that our team is prepared to successfully meet the State of Hawaii's project needs. Key staff members with Hawaii experience are listed below in Table 2 in alphabetical order.

Table 2. Key Hawaii Staff

Staff	Role	Highest Degree	Years of Experience
Agostini, Tiffany	Senior Biologist / Project Manager	MS	18
Andrews, Jeremy, PE	Civil Engineer	BS	23
Brainerd, Jennifer	Program Manager	BA	30
Brasher, Anne	Senior Water Quality and Aquatic Scientist	PhD	37
Brimacombe, Karen	Botanist / Ecologist	MS	24
Brodersen, Jason PG	Program Manager / Geologist	BS	37
Burkett, Jason PE	Civil / Structural Engineer	MS	19
Campbell, Mike EIT	Mechanical Engineer	BS	14
Carter, Jacob PE	Mechanical Engineer	BS	8
Courtney, Kitty	Senior Marine Environmental Scientist	PhD	37
Damon, Madeline	Wildlife Biologist / Statistician	MS	4
Del'Homme, Stephen PE	Engineering Director	MBA	42
Dick, Kristina GISP	GIS Specialist	MS	17
Donoho, Mike AICP	Senior Environmental Planner	MURP	25
Dutton, Jacob	Biologist	BS	17
Engler, Spencer	Biologist	BS	12
Friesen, Jared PE	Senior Electrical Engineer	BS	24
Fussel, Jason PE	Civil Engineer / Project Manager	BS	22
Geelhoed, Theresa	Biologist	BS	13
Havens, John CEM	Certified Energy Manager	BS	43
Herdt, Brennan PE/CEM	Mechanical Engineer / Certified Energy Manager	BS	16
Highley, Paul PE	Electrical Engineer	BS	31
Hurley, Susan	Senior Biologist / Project Manager / Operations Manager	MS	25
James, Chris	Hydrologist / Aquatic Habitat Restoration Specialist	MS	20
Jensen, Eric CHMM	Operations Manager / Senior Program Manager	BS	36
Kettley, Lisa	Senior Project Manager / Environmental Scientist	MS	27
Kulonis, Ken PE	Energy Engineer	BS	46
Lundquist, Christopher PE	Utility Infrastructure Engineer	BS	18
McClain, Leslie	Senior Environmental and Urban Planner	BA	19
Morrissette, Neil EIT	Electrical Engineer	BS	7
Nagai, Stephanie	Project Manager	MURP	12
Oller, Alicia	Vice President / Environmental & Energy Programs	MS	36
Parry, Yvonne	Program Manager / Environmental Chemist	MS	22
Peters, Joel GISP	Senior GIS Specialist	BA	29
Rahmig, Troy	Senior Biologist/ESA Permitting Specialist	MS	21
Recker, Ben PE	Civil Engineer	MS	24
Reesor, Meg	GIS Scientist	BS	6
Reynolds, Lara	Biologist	MS	17
Schwab, Nate	Senior Bat Biologist	PhD	22

Tanino, Jamie	Biologist / Rare Snail Specialist	BS	19
Taylor, Jenny	Senior Biologist / Project Manager	BS	18
Taylor, Phil	Field Biologist	MS	20
Todd, Chris	Wildlife Biologist	PhD	20
Vandenheuvel, Kathy PE	Environmental Engineer	BS	27
Webster, Kristin CEM/EIT	Certified Energy Manager, Chemical Engineer	BS	24
Yost, Kayla	Environmental Planner	MS	14
Young, Rich	Wildlife Biologist	BS	29

Brief biographies of key staff members are provided below.

Tiffany Agostini is a Senior Biologist, Project Manager, and Wetland Specialist. Tiffany has experience in environmental consulting and natural resource management throughout the Hawaiian Islands. Tiffany has wide-ranging technical and consulting skills from field work relating to plant ecology and identification; Waters of the U.S. determinations and delineations for the Clean Water Act; stream biology and water quality surveys; threatened and endangered species studies; impact assessments and resource condition assessments; environmental compliance and planning; extensive literature reviews and report preparation; data analysis; and client liaison and project management. She is experienced in the preparation and implementation of Hawaii's various regulatory requirements including Section 7 BAs, USACE permits, Water Quality Certifications (WQC), state and federal HCPs, and HEPA EAs/EISs. Tiffany received a MS in Botany from the University of Hawaii at Manoa in 2011. She also possesses strong working relationships with regulatory agencies to facilitate permitting processes.

Jeremy Andrews, P.E. is a Professional Civil Engineer with experience in water resource engineering projects in the Pacific Northwest and Colorado. His responsibilities include surface water planning, urban stormwater, natural drainage system; with a particular emphasis on riverine, estuary and marine shoreline restoration. Jeremy has been involved with numerous habitat restoration projects from the conceptual level to construction. He has performed engineering activities that include hydrologic and hydraulic modeling, in-stream structure habitat design, construction plan-set creation, updates, project specifications, and final construction bid packages, as well as construction observation and field direction of in-stream habitat structures. Jeremy is a past member of the Seattle Public Utilities Citizen Advisory Committee for Creeks, Drainage and Wastewater.

Jennifer Brainerd has over three decades of consulting experience and is a founding member of Tetra Tech's Energy Team formed in 1999, which focuses on energy and water efficiency, conservation, and resilience for government and other customers. As Tetra Tech's Program Manager, Energy Services, her experience includes quality control; program management; project management; document editing; contract administration; public participation and community relations; fact sheet, newsletter, and article development; meeting facilitation; legislative and policy development and analysis; and recruiting. She is currently leading multiple teams to provide support for energy services contracts for multiple government agencies to support energy conservation and efficiency efforts; energy resilience; analysis of renewable energy systems, microgrids, and energy storage systems; energy audits; energy program support; and analysis of electrical and mechanical systems and infrastructure.

Anne Brasher, PhD has focused on research projects with direct resource management implications. Her expertise covers a range of topics including transport, bioaccumulation, and remediation of contaminants; riparian and instream habitat restoration; invasive species impacts and control; and the design of monitoring and assessment programs. While Dr. Brasher specializes in aquatic ecology (including marine, freshwater and estuarine systems), her projects are typically interdisciplinary with hydrology, geology, riparian ecology, and chemistry often involved. Her professional career has covered a wide geographic range; with an emphasis on tropical ecosystems (including Hawaii, Guam, and American Samoa), while working for federal, state, and local agencies, as well as private organizations and community groups. Prior to joining Tetra Tech, Ms. Brasher served as a research scientist with the US Geological Survey in Utah and Hawaii and managed with National Water Quality Assessment (NAWQA) program in Hawaii for several years.

Karen Brimacombe is a botanist and ecologist with experience performing research in the fields of conservation, botany, ecology, and field biology. Karen is proficient in the design and implementation of botanical and ecological field studies and surveys and has experience in a broad range of ecosystems including in wetland, forest, riparian, desert, grassland, and shrub-steppe habitat across the western U.S., including Hawaii and Alaska. She has a strong technical background in Hawaiian flora and ecology, and she received an MS in Botany with an Ecology, Evolution, and Conservation Biology Specialization, from the University of Hawaii in 2003. Karen has also previously worked on several wind and other energy projects in Hawaii. Karen has excellent technical writing and editing skills and has authored numerous technical reports and environmental impact and assessment documents in support of local, state and federal permitting and project permitting including NEPA and HEPA.

Jason Brodersen is a program manager with a wide range of experience in project and program management and technical oversight for complex environmental investigation and cleanup projects, due diligence, guaranteed fixed price remediation, and Phase I and II environmental assessment projects. Jason has worked in the environmental field as a program manager, technical and regulatory specialist, and geologist for 36 years. He has been directly responsible for project execution and negotiations, client and regulatory agency interface, technical strategies, and project communications for over 100 projects with an approximate value of $50 million. Jason been responsible for coordinating and overseeing the application of hazardous waste investigations, regulatory policy development, water resource projects, innovative cleanup technologies, property transfer, conducting compliance inspections, site prioritization, risk assessment, and engineering oversight. He is also a Tetra Tech Quality Assurance Manager.

Jason Burkett is a structural engineer who is experienced with many structural systems including: composite steel, prestressed/precast concrete, concrete framing, steel framing, masonry, timber, tilt-up concrete panels, light-gauge steel, and aluminum. He has completed projects for water treatment facilities, federal government, Department of Defense (DoD), municipal, industrial, commercial, residential, health care, education, aviation, marine construction, performing arts, roofing components, hurricane shelters, high-velocity hurricane zones, renovations, additions, and investigations. Mr. Burkett is a proficient user of RISA Software, Mathcad, SBEDS, PCA Wall, ENERCALC, Retain Pro, NCMA Masonry, Revit Structure, AutoCAD, Hilti Profis, and RS Means Costworks.

Mike Campbell is a mechanical engineer with experience in the energy and engineering field. He has worked on energy and water conservation and resilience efforts as part of the installation energy and water plan process required by Army in seven different states for the ARNG and has supported the AF with temporary REM services in Japan. He has worked on microgrid projects in NY and CA and has identified potential hydroelectric generation opportunities as part of his work on a project in NY state intended to provide resilience to an Army installation there where the long term goal of the Army is to decarbonize.

Jacob Carter is a licensed mechanical engineer specializing in energy engineering, energy resilience, energy auditing, HVAC engineering, and photovoltaic design. He provides energy resilience assessments, energy auditing, and energy cost management services to various government clients. Mr. Carter has 7 years' technical expertise in building auditing; reviewing and producing designs of mechanical and control systems; developing energy and water conservation opportunities and analyzing energy data. He has recently been involved in supporting energy resilience efforts for the Army in NY and energy conservation efforts for the Coast Guard in FL and TX.

Catherine Courtney, PhD, is a senior marine environmental scientist with Tetra Tech, Inc. She has over 36 years of experience as a program manager, project manager, and technical lead for large and small projects on marine and coastal management, climate change adaptation, and coastal community resilience in the U.S. and internationally. Catherine has served as senior advisor on international projects funded by USAID, such as the Coastal Resource Management Project, the US Indian Ocean Tsunami Warning System Program, and the US Coral Triangle Initiative. In Hawai‘i, she prepared the Hawai‘i Ocean Resources Management Plan, Hawai‘i Watershed Guidance, and the Hawai‘i State Sea Level Rise Vulnerability Assessment Adaptation Report and two supporting guidance documents on addressing sea level rise and disaster recovery and reconstruction into state, county, and community planning in Hawaii. She is currently working with the County of Maui Department of Parks and Recreation to assess the sea level rise vulnerability of all county beach parks and identify adaptation strategies. Catherine also worked with UH Sea Grant to design a dune restoration project for a beach park on Maui.

Madeline Damon is a wildlife biologist specializing in statistics and data analytics. She has experience providing statistical insight and authoring code related to wind energy bat and bird fatality estimation, minimization effectiveness, and strategic post-construction monitoring. Madeline has also interacted with state and federal agency staff on topics involving statistics and the most current and defensible scientific methods.

Stephen D. Del'Homme has experience in preparing a wide range of corrective actions including permit, operation and construction documents and bid evaluations. This includes the design of remediation systems for both government and private-sector projects under MMRP, CERCLA, RCRA & TSCA, TRRP remediation and O&G sites, hazardous, radiological and non-hazardous landfills, design of freshwater and inter-tidal wetlands, sediment remediation (dredging and beneficial use), design of Hazardous Waste Treatment Storage and Disposal facilities, design and permitting of water and wastewater treatment systems, integrated contingency plans, mitigation plans, NPDES permits and pollution prevention plans, design of irrigation, drainage and flood control facilities and site utility designs. Experience includes managing multi-disciplinary teams to carry projects from remedial investigation to conceptual design and through construction. Other experience includes guaranteed fixed-price remediation, regulatory

negotiation and public relations, expert witness, management of consulting firms and engineering departments. He is also a registered FAA drone pilot and provides photographic and video documentation of projects for the DOD, EPA and private clients.

Kristina Dick, GISP is a geographer with experience in Geographic Information Systems. Her areas of expertise include cartography, spatial analysis, remote sensing, GPS data collection, and natural resources data management. More recent corporate experience is related to avian survey spatial and relational database management and related desktop GIS analysis related to wind energy projects. Kristina specific skills include, but are not limited to GIS analysis, remote sensing, geodatabase design and management, SQL database design, field data collection using GPS, cartography, and website design.

Mike Donoho, **AICP** is an environmental planner and natural resources specialist with extensive experience directing and implementing complex conservation initiatives involving multiple endangered species, private landowners, state and federal resource agencies, and stakeholders in Hawaii. Prior to joining Tetra Tech, Mike served as a planner for Townscape, Inc., the US National Park Service, and Hawaii Department of Natural Resources. He served as the Senior Vice President for Natural Resources for Pulama Lanai and successfully negotiation a Comprehensive Conservation Agreement with the US Fish and Wildlife Service and Hawaii Department of Land and Natural Resources to protect endangered plant and animal species on Lanai in lieu of designating Critical Habitat on the island. Mike has owned two planning firms (Kukui Planning Company, LLC and Zen Planning Hawaii).

Jacob Dutton is a biologist with experience in field surveys, wildlife monitoring, and reporting. Jacob has expertise with avian point count surveys, nest searching, bat acoustic surveys, and threatened and endangered species surveys. He is currently responsible for managing on-site operational compliance of the Kawailoa Wind Facility Habitat Conservation Plan on Oahu's north shore, which involves implementing a post-construction mortality monitoring program, conducting carcass persistence trials and predator control, conducting waterbird surveys, and facilitating nearby mitigation activities at the nearby Ukoa Pond. Jacob also has expertise in water quality sampling and analysis, fisheries biology, dog handling for invasive species detection, and Lepidoptera surveys. He possesses the OSHA 40-hour Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) certification.

Spencer Engler is a biologist with experience in field surveys, wildlife monitoring and reporting, and predator control. Spencer has expertise managing on-site operational compliance of the Kaheawa Wind Facility Habitat Conservation Plan which involves implementing a post-construction mortality monitoring program (using K9 searching), conducting carcass persistence trials and predator control, and facilitating nearby mitigation activities at the Makamakaole Seabird restoration site on Maui.

Jared Friesen is a professional electrical engineer with over two decades of electrical consulting experience. He has designed and managed multi-million-dollar electrical construction projects across multiple industry sectors, with a focus on clients having aggressive power, reliability, and sustainability goals. Holding NABCEP certification as a PV Installation Professional, he provides expertise in solar design, procurement, and implementation of solar generation projects. His experience with utility rate analysis and design of solar, battery-energy storage, traditional back-up generation, building-level power distribution, campus-level medium-voltage distribution, power sub-metering, and automated controls all

contribute to his ability to implement microgrid solutions that offer clients access to clean, reliable, and resilient energy resources

Jason Fussel is a civil engineer with a broad knowledge of civil engineering and has more than two decades of experience. He is a licensed PE in Hawaii and California and a licensed Land Surveyor in California. His experience includes work on both public and private sector jobs of varying size and construction material types including the design of sewer transmission systems, water distribution systems, street and storm drain improvements and grading activities varying from mass grading to final precise grading plans. Jason has extensive and relevant experience in the stormwater, Best Management Practice (BMP) and Low Impact Development (LID) arena, which includes successful implementation of sustainable design practices for a vast array of improvement projects. Additionally, he is a LEED® Accredited Professional, Envision™ Sustainability Professional and is serving as the Project Engineer for the DLNR Na Pali Coast State Wilderness Park Improvements Project in Kauai.

Theresa Geelhoed is a biologist with experience in field surveys, wildlife monitoring, research and reporting. Theresa has expertise with avian point count surveys, nest searching, and presence/absence surveys. She specializes in Pacific species of birds and marine macrofauna and has worked in governmental, non-governmental, logging, and infrastructure fields. Ms. Geelhoed's work experience involves planning environmental projects, managing field crews, creating schedules, purchasing, inputting high-quality data, conducting data analyses, writing and editing technical reports and working with people of all educational backgrounds.

John Havens Jr. is a Certified Energy Manager (CEM), former LEED Green Associate, project manager, and program manager with over four decades of experience in the energy and water conservation field. His background as a former HVAC technician who specialized in direct digital control systems gives him a unique perspective when performing analysis of critical building energy systems. Mr. Havens has been providing energy consulting since 1995, with over 12 years as the Energy Manager for the Washington Army National Guard (ARNG) and another 5 plus years as the National Guard Bureau (NGB) Energy and Water Conservation Program Manager for the 54 states and territories. Prior to becoming a Senior Project Manager, he served as a Resource Efficiency Manager for the US Coast Guard, covering Coast Guard sites in Hawaii and other western states, and for the Army Reserve’s 88th Readiness Division which is responsible for a 19-state region from Ohio to Washington state. Most recently, he has managed 16 energy and water resilience assessments for multiple states to identify threats and mitigation solutions and create implementation plans for state ARNGs as well as working on microgrid and resilience projects for the Army and state agencies in CA. He has also managed contracts to conduct ASHRAE Leve II energy audits and EISA-compliant energy audits for 4 million square feet of facilities for the ARNG intended to leverage energy reduction as a means to meet state and federal decarbonization goals and cost savings.

Brennan Herdt is a licensed mechanical engineer and CEM who has supported energy management and resilience at USCG sites in Hawaii, California, Oregon, Washington, and Guam. He has 13 years of expertise in energy resilience, energy audits, retrocommissioning, and energy project development. He routinely assesses energy infrastructure and facility systems to reduce energy consumption and improve energy resilience. He is working on multiple projects in CA to decarbonize sites in order to meet recent legislation in that state for multiple state agencies, the Army, and the City of San Diego.

Paul Highley is an electrical engineer with experience in the electrical engineering industry. He is a licensed PE in all US States except Alaska. Paul has a wide range of experience in a variety of project delivery methods from traditional design-bid-build to progressive design-build with roles ranging from overall project management of a multi-discipline team to specialty engineering for a specific system. Paul has completed projects which include campus wide medium voltage distribution systems, mission critical, health care, commercial, industrial, advanced science, education and distributed energy. Paul has deep experience in the construction industry, which enhances the overall engineering design and ensures the constructability and budgets for projects. Paul has worked with utilities across the United States on multiple large scale projects in relation to mission critical and distributed energy projects where coordination is crucial to the project outcome

Susan Hurley is a senior wildlife biologist, project manager, and operations manager for the Portland/Honolulu office. She has a technical background in general ecology, avian ecology and behavior, bat ecology and acoustics, statistics, NEPA, and threatened and endangered species. Susan has been involved in all aspects of projects, including field survey performance and coordination, siting, agency coordination, impact analysis, and mitigation planning.

Chris James has experience focusing on aquatic habitat restoration and fish passage projects at various locations throughout the United States. He manages and serves as technical lead/lead author for habitat restoration and fish passage projects, bringing holistic approaches at the watershed-scale to improve fisheries resources through fish passage, floodplain connectivity, riparian enhancement, streambank stability, large woody debris and rock additions, while protecting existing infrastructure. Chris has on-the-ground expertise with data collection techniques for fisheries, hydrologic, geomorphic, and riparian data necessary for assessments, habitat suitability modeling, sediment and hydraulic modeling, and fish passage designs. He has managed the logistics and planning for assessing, designing, permitting, and implementing these project types from concept through construction and post-construction monitoring.

Eric Jensen, CHMM, is the Honolulu Office Operations Manager, a senior program Manager, and a Master Level Certified Hazardous Materials Manager (CHMM). He oversees senior technical review and oversight on environmental projects in the Honolulu office. Eric has diverse program management experience in the environmental consulting industry, including managing large scale contracts for state agencies, municipalities and commercial clients. His experience includes work on projects requiring innovative approaches to solving unique environmental issues. Eric possesses significant experience related to environmental characterization activities, including: Due Diligence portfolios for commercial, telecommunications, and financial lending institution clients; hydrogeological investigations/ characterization of soil and groundwater contamination for commercial, private, and public sector clients; all activities related to UST removal, replacement, and contamination abatement; investigations related to "Brownfields" redevelopment activities; and, Federal projects (EPA, US Navy, US Air Force).

Lisa Kettley is an environmental scientist and project manager with over two decades of experience in environmental permitting and planning, regulatory compliance, and biological resource issues. She has played a key role in a wide variety of complex, high-profile projects including those related to renewable energy facilities, electrical transmission and power generation systems, ecosystem restoration and watershed planning. Lisa’s breadth of expertise includes scoping and preparation of environmental review

documents in accordance with both the NEPA and Hawaii environmental review regulations (HRS Chapter 343), coordination and consultation with resource agencies and project stakeholders, and compliance with a variety of federal, state, and local regulations. Other specific skills include strategic planning, impact avoidance and minimization, and mitigation development.

Ken Kulonis has more than four decades of experience designing mechanical and plumbing portions of construction projects in the commercial, residential, federal, institutional and industrial market segments. His expertise ranges from the design of various types of HVAC and plumbing systems for facilities from pharmaceutical cleanrooms to aircraft hangars, shopping malls, and multi-family residential buildings. Mr. Kulonis' expertise includes energy analysis, LEED analysis, forensic engineering, construction administration, and project management.

Christopher P. Lundquist has progressive experience with a variety of power generation projects including combined cycle/simple cycle natural gas, bio-fuel, wind, solar, and supercritical coal power plants. Extensive experience in design, construction, commissioning, and operation of power plants. Successful completion of industry recognized lump sum, turnkey, and energy performance contract (EPC) projects.

Leslie McClain is a senior environmental planner as well as an experienced project manager. She has experience in regulatory compliance and permitting in Hawaii and Oregon and under state and federal regulations including the state HEPA and the federal NEPA processes. For the past 9 years, Leslie's career has focused on state and county regulatory compliance related to development of commercial wind and solar projects in Hawaii including preparation of HEPA EISs and EAs, Conservation District Use Permits, HCPs and ITLs, and Maui/Hawaii/Honolulu County land use permit applications. Leslie also has a background in community planning, development code writing, and master planning. She has also worked closely with cultural consultants in Hawaii on conducting Archaeological Inventory Surveys and State Historic Preservation Division (SHPD) consultation.

Neil Morrissette is an electrical engineer with experience conducting energy audits and resilience assessments. He has developed energy resilience plans for South Dakota ARNG, West Virginia ARNG, Montana ARNG, and North Carolina ARNG, including conducting site assessments, identifying threats and hazards, establishing resilience baselines, generating electrical resilience solutions, prioritizing solutions, and developing reports. He has also provided substation design services to an electric utility. Responsibilities included assisting lead engineers in schematic and wiring design of substations ranging from 34.5 kV up to 500kV. In addition, Mr. Morrissette assisted with estimating of future projects, feasibility studies including lightning protection and voltage drop calculations, and coordinating with construction teams and field engineers for post-construction drawing revisions to ensure drawing accuracy for the client. He has recently been supporting resilience efforts for the Army in NY and CA working on microgrid projects intended to replace fossil fuel used for heating, hot water, and automobiles and replace with renewables where possible to further decarbonization efforts.

Stephanie Nagai is an interdisciplinary practitioner and project manager for offshore and terrestrial renewable energy projects in Hawaii and the western United States. Stephanie has experience in environmental planning, resource inventory and assessment, and mitigation planning, and has successfully managed or contributed toward the preparation of federal and state documents (e.g., EA/EISs

and HCPs) while working closely with county and state agencies in Hawaii as well as federal agencies like the USFS, USFWS, BIA, and the BLM.

Alicia Oller, Vice President, Environmental & Energy Services, is a senior project manager with over three decades of experience. Alicia leads Tetra Tech's energy and environmental services in the Pacific Rim and is responsible for overall business development and client services and manages a variety of complex permitting projects. Her focus is on building and supervising multidisciplinary teams, and strategic planning, in addition to project management, agency coordination, technical oversight, and study design. She has managed and provided technical expertise for the siting, development, construction, and operation of energy projects in Hawaii for the past 16 years including wind and solar energy, undersea cable, and energy storage projects. Alicia has a strong technical background in environmental impacts assessment; integrated environmental management; threatened and endangered species; environmental planning and permitting including HEPA and NEPA; ESA Section 7 and 10 Endangered Species Act consultation and compliance, habitat assessment and management; mitigation design and monitoring; mitigation bank development and implementation, and sustainable development practices. Her expertise includes a wide array of land management and development projects for private and public clients. Alicia uses her understanding of both the technical information and policy to bridge differences between regulatory agencies and clients to meet project goals.

Yvonne Parry is a senior project manager and environmental chemist with over two decades of expertise managing environmental projects in Hawaii. Yvonne oversees site assessments and develops remediation strategies with a focus on contaminated redevelopment sites. Yvonne is very adept at navigating complex regulatory processes, managing stakeholder relationships and implementing sustainable solutions to minimize costs and environmental impact while supporting project goals. She has an extensive background working collaboratively with the Hawaii Department of Health, ensuring strict compliance with state and federal regulations. Yvonne is a trusted leader with a deep understanding of Hawaii's unique environmental challenges and regulatory landscape.

Joel Peters, GISP has been supporting Tetra Tech offices with GIS development and support. Typical work product includes site maps, facility layouts, soil and ground water sampling plans, and spatial data analysis using geographic information. Acquisition of environmental data in the field, including wetland, and sampling locations, has also been accomplished utilizing the Trimble Geo series handheld GPS devices, and mobile device data collection programs such as iFormBuilder and Collector for ArcGIS. He has developed maps, geographic databases, electronic data deliverables, web mapping applications and metadata for federal, state, private, and non-profit clients. Joel has experience with ESRI ArcGIS Desktop software, Spatial Analyst, 3D Analyst, ArcGIS Pro, and Trimble GPS Analyst, and Autodesk Map. He has been an integral part of a team developing web-based mapping applications for a variety of federal, state, and private clients.

Troy Rahmig, endangered species program manager, has over two decades of experience supporting clients on endangered species permitting issues. Troy is a biologist with a specialty in avian ecology but has spent his career working on long-term conservation planning and permitting of endangered species of all types. Troy provides permitting support under Section 7 and Section 10 of the Endangered Species Act for a variety of infrastructure projects, including residential planning, transportation projects, and energy

projects, including oil and gas, wind, and solar. Troy is currently leading permitting efforts for wind, solar, and battery storage projects across the U.S., including complex impact assessments and mitigation strategies. For each of these projects Troy helps clients strategize for how best to engage with the public and regulatory agencies to achieve practical and durable permitting assurances.

Ben Recker is a civil engineer with over two decades of experience in environmental management, specializing in water quality compliance, pollution prevention, recycling, and solid waste management. His water quality expertise encompasses several areas including industrial and municipal stormwater compliance, stormwater BMP evaluation and selection, Stormwater Pollution Prevention Plan (SWPPP) development, and industrial pre-treatment program compliance. His pollution prevention, recycling, and solid waste expertise include compliance assessments, process improvement identification, and economic evaluation of alternatives. Ben also has 3 years of experience as an environmental management instructor for the United States Air Force. He was the primary water quality and pollution prevention instructor for Air Force engineering and environmental professionals. Ben has served in a project management role for both water quality and solid waste/recycling projects.

Meg Reesor has experience working in a GIS environment and 3 years of experience conducting field work. Her technical experience in GIS has helped her excel in a variety of disciplines such as environmental restoration, integrative pest management, and volunteer coordination. Over the past 3 years working on the GIS team for an invasive species response team in Hawaii, she streamlined informed decision making by connecting field data with actionable insights, detailed reports, and custom dashboards. She is proficient in geospatial data management, analysis, and cartography and specializes in creating maps and setting up field data collection tools in the Esri environment.

Lara Reynolds has experience in terrestrial plant ecology and natural resource management in Hawaii. Her expertise includes island biology and conservation, botanical surveys and plant identification, endangered species habitat assessments and restoration, and invasive species management. She is trained in wetland identification and delineation, and her experience also comprises conducting field surveys for listed wildlife species. Lara's work supports environmental compliance and planning projects. Ms. Reynolds has served in technical roles with the State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife as a District Botanist and Resource Protection Forester, and internationally as a technical advisor (ecology) with the New Zealand Department of Conservation.

Nathan Schwab is a wildlife biologist with over two decades of experience researching bats, including 12 years conducting studies in the renewable energy sector (wind, solar, hydro). He is currently the Program Lead for Tetra Tech's Bat Program. Nathan specializes in bat-related issues and has designed and implemented acoustic monitoring and telemetry studies in 15 states. He is an expert in the design and implementation of bat field studies and acoustic data analysis. Nathan holds scientific collecting permits related to bat research and has helped design, coordinate, and implement several large-scale bat monitoring projects across entire states, regions, and the nation. He has experience consulting with the USFWS on northern long-eared bat issues and is currently investigating occupancy of this species at Air Force installations across the nation. He also serves on the Board of the Western Bat Working Group and on the Technical Advisory Committee for a wind energy project in Montana.

Jamie Tanino is a biologist and rare snail specialist. Jamie previously worked as a watershed resource specialist for the Board of Water Supply. She also assists with the Hawaiian Land Snail Species Diversity Survey which includes snail surveys, live sample and leaf litter collection, and data collection of species diversity, population size and habitat. Jamie has conducted snail work at various conservation and natural areas throughout Hawaii including at Mt. Ka'ala. While working at OANRP, she assisted with rare snail management for *Achatinella mustelina* which included monitoring, collecting, and translocating snails, we well as maintaining and restoring snail enclosures and snail habitat. In 2018, Jamie assisted with the Capture-Mark-Recapture surveys for the Mikilua #4 OH Relocation project as a Tetra Tech subcontractor.

Jenny Taylor has experience as biologist in field research and analysis, project management, and study design and document development. Her technical background is in general ecology. Jenny has extensive experience supporting renewable energy projects with areas of expertise including post-construction fatality monitoring at both wind and solar facilities (study design, study lead, data review and fatality modelling with the Huso Estimator, EoA and GenEst), permit compliance monitoring study design, Bird and Bat Conservation Strategy (BBCS) development and preparation, and the development of Eagle Conservation Plans (ECPs). In addition, she regularly manages, designs, conducts, analyzes, and reports on pre-construction risk assessment studies. Jenny has worked with state and federal wildlife agencies toward obtaining wildlife permits. She has extensive experience with training operation and maintenance staff on wildlife issues at operational energy facilities and has 10 years of experience with data management systems and data quality assurance/quality control (QA/QC).

Philip Taylor is an assistant biologist with experience in field surveys, wildlife monitoring, and biological studies throughout the Hawaiian Islands. Philip's expertise includes surveying, banding, and managing native Hawaiian birds, particularly the endangered Oahu Elepaio. He has also managed small mammal predator control programs and assisted in developing and implementing Hawaiian hoary bat management programs. Philip has experience monitoring endangered tree snail populations and out-planting endangered plants. In addition to supporting Tetra Tech, he also works for the Oahu Army Natural Resources Program as an avian conservation specialist. Philip previously worked on the Palila Restoration Project on Hawaii Island and the Maui Forest Bird Recovery Project on the Island of Maui.

Chris Todd, PhD addresses ecological impacts associated with renewable energy (e.g., wind power, solar power, geothermal) and develop strategies to address potential endangered species issues including preparing habitat conservation plans, biological assessments, and mitigation plans. As a specialist in bat biology, Chris has led ecological investigations aimed at assessing biodiversity of bat species across the Hawaii, Oceania, and South Asia. He has helped prepare Habitat Conservation Plans, and conduct consultation with resource agencies. Chris has conducted original research and synthesis on ecology and distribution of endangered bats in Hawaii and the Pacific and on minimizing risks to bats and birds from emerging threats including wind turbines, and acted as an agency expert on bats, and distribution of endangered bats and on minimizing risks to bats and birds from emerging threats including wind turbines. His experience in Papua New Guinea includes educating local clan leaders in proper techniques and methodologies of capture, identification, and collection of biological and morphological data of bats and on ecological importance of bats, their local ecosystem services and the importance of their conservation. Chris also helped to establish conservation management areas within each of the clan districts and creating sustainable forestry practices.

Kathy Vandenheuvel has been an engineer and project manager with Tetra Tech for over two decades. She has managed and conducted all phases of environmental projects, including agency and subcontractor negotiations; work plan preparation; client contact; monitoring well installation, development, sampling, and monitoring; remediation design and implementation; operation and maintenance of remediation systems; and report preparation. She has managed and conducted projects focusing on various environmental media: soil, soil gas, sediments, groundwater, and surface water. Typical facilities have included proposed school sites, commercial gas station sites, military installations, munitions/ordnance, landfills, and various other facilities. Ms. Vandenheuvel has participated in and managed site investigations, remedial investigations, preliminary endangerment assessments, feasibility studies, corrective action plans, and remedial designs, in accordance with State of California and federal regulations (RCRA and CERCLA). She is experienced in contract management, project implementation, and program management. Since 2017, Ms. Vandenheuvel has been the Operations Manager for Tetra Tech's San Diego office and its satellite offices in Ventura and Irvine. Since 2020, Ms. Vandenheuvel has been the Navy Market Sector Lead and Program Manager for the Tetra Tech EMI Division.

Kristin Webster is a Certified Energy Manager with over two decades of experience in energy efficiency, renewable energy sector and industrial manufacturing. She has experience performing feasibility studies for alternative power generation including photovoltaic (PV), fuel cell, advanced energy storage, and combined heat and power (CHP) technologies. She has conducted energy audits, data collection, interval data analysis, and detailed analysis of energy efficiency measures. Ms. Webster has extensive experience identifying energy conservation projects, developing scopes of work, and performing lifecycle cost analysis for energy projects. Current experience includes energy resilience assessments at multiple state ARNG facilities, ANG facilities, and Army installations. She is also working on microgrids for multiple Army installations and decarbonization efforts for the City of San Diego.

Kayla Yost is an environmental planner with experience in the architectural/engineering and environmental sectors. Her experience spans the Asia-Pacific Region including Hawaii, Marshall Islands, Federated States of Micronesia, Guam, Palau, and American Samoa. Kayla has managed the planning and permitting for a variety of infrastructure projects including water distribution and treatment, wastewater collection and treatment, solid waste management, medical facilities, education facilities, and airport improvement projects.

Rich Young is a wildlife biologist with over two decades of experience involving scientific research and natural resources management. Rich has designed and supervised a variety of studies involving wildlife population inventories and sensitive and rare wildlife assessments for renewable energy projects throughout the United States, including the islands of Maui and Oahu. In support of the Auwahi Wind Project, Rich supervised the monitoring of a Hawaiian petrel colony located on the Kahikinui Forest Reserve and helped to develop a predator control program. Rich formally worked for the U.S. Fish and Wildlife in support of restoration activities at Laysan Island.

4. Past Performance

Past performance is the best indicator of future success. The overall perspective of Tetra Tech’s performance is reflected by the firm’s success and growth in a very competitive marketplace and its effectiveness in reducing costs. The business community has recognized this superior performance and routinely cites Tetra Tech as the top firm in publications such as Environmental News-Record, Fortune and Forbes.

Our clients have recognized our performance through commendations, awards, and most importantly, work. Our current suite of government contracts has a combined value of over $14B.

Tetra Tech has supported many government agencies continuously for more than 58 years.
Tetra Tech's past performance record on contracts for federal and state agencies provides us with the experience to make efficient use of all resources to maintain the quality of work, control cost, and provide timely performance to meet schedules.

Our performance leads to future work, making our satisfied customers our greatest asset in winning new work. This is evident in our repeat business from clients requesting our environmental services.

The four most critical elements for the successful performance on environmental related contracts are cost control, quality of work, professional staff, and timeliness of performance. Each of these elements is discussed below.

What clients say regarding Tetra Tech's performance:

- “The study was thoroughly documented and meticulously detailed. It was an enormous help to our planning and was very well received by our regulator … Tetra Tech has been very responsive to our timelines, and to our need to discuss issues as they emerged.” - Jay Silberman, Environmental Protection Specialist, Civil Engineering Unit – Honolulu, US Coast Guard
- “The USFWS Pacific Islands Office in Hawaii handles permitting and compliance for eight complex wind energy HCPs… Tetra Tech’s team has been an integral part of this intensive effort. They are knowledgeable of the applicable regulations and science, and the documents we receive from them are well written. Their staff is always responsive, keeping timelines as succinct as possible, and working collaboratively toward solution in the face of opposition.” – USFWS Biologist
- “Fantastic job, and as always, thanks again for your continued outstanding support of our project!!!” - Brenda Zehr, Environmental Programs Manager, Army Hawaii Family Housing

4.1 Cost Control

Cost control is an important component of our continued success with clients, and we have consistently estimated and performed our tasks within our budgets. This is done by using a Work Breakdown Structure system to define, organize, and identify work activities to accomplish the required contractual deliverables.

Tetra Tech uses a weekly cost reporting system to monitor "pipeline" and incurred costs. In addition, our project managers use project management software to supplement cost and budget tracking, reporting, and control. Our company has implemented innovative and efficient management procedures that have allowed us to minimize overhead costs and pass savings on to clients.

Tetra Tech's cost control program includes the following key features:

- Constant communication with project management and the project team regarding initial level of effort and budget constraints, in addition to budget expended versus project progress;
- Timely corrective action, such as redirecting work effort or reassigning staff, when costs begin to exceed progress on specific elements of work;
- Staffing of projects based on the best match of experience and project requirements, resulting in a minimal learning curve;
- Assignment and delegation of work to the lowest professional level qualified for that work, practicable to minimize labor expenses.

4.2 Quality of Work

Tetra Tech has a comprehensive Corporate QA/QC Plan that guides the preparation of all our projects and ensures that all are completed with consistent quality and in accordance with appropriate regulatory requirements, codes, standards, and criteria. The plan stresses continuous improvement: success stories and lessons learned on past projects are communicated and shared with our staff, so that future projects can benefit. Under our QA/QC procedures, all technical evaluations are planned, controlled, and documented in sufficient detail regarding purpose, method, assumptions, and units so that a technically qualified person may review, understand, and verify the analyses. Technical work is verified by peer review, alternative calculations, qualification testing, or senior review before final release. Documents are prepared following style guides that are modified to meet our customers' specific requirements. What makes Tetra Tech and our staff qualified to manage the types of projects anticipated lies in the formal training and supervision each receives and the time-tested corporate processes, procedures, and tools that allow them to be efficient managers. Tetra Tech's Quality Management Plan is attached, which fully documents our QA/QC process.

4.3 Compliance with Performance Schedules

Tetra Tech is well known for complying with time-sensitive project schedules and responding to clients work requests efficiently, accurately, and with the highest level of quality. Some of these projects, such as the Auwahi Wind Farm and Makua Military Reservation EIS, had extremely demanding schedules. During surge periods additional staff was mobilized from multiple offices. In spite of demanding deadlines, Tetra Tech works with our clients to develop aggressive but achievable timelines in order to deliver high quality on-schedule documents.

Adherence to schedules is of utmost importance to Tetra Tech. Our Program Managers, Project Managers, and staff understand funding limitations, and that the easiest way to stress a project budget is to let the schedule slip. Furthermore, we understand the importance of supporting the regulatory and grant funding milestones of our clients. The project management team works with our client points of contact to develop and maintain a project plan using Microsoft Project and detailing project milestones.

4.4 Professional Staff

Tetra Tech’s staff combines a knowledge and familiarity of state, federal, and local regulations and personnel, with sound scientific expertise to develop complete permit applications and effective solutions to environmental concerns. Tetra Tech’s staff consists of a multidisciplinary group of environmental specialists who possess credibility, knowledge, and abilities that come with advanced degrees and work experience; our staff includes natural resource specialists, ecologists, geologists, environmental planners, environmental engineers, GIS analysts, and archaeologists, among others.

DPW Form 120

STATE OF HAWAII DPW FORM 120

QUESTIONNAIRE FOR ARCHITECTS, ENGINEERS AND OTHER PROFESSIONAL SERVICES

QUESTIONNAIRE FOR: (LIST DISCIPLINE)	OTHER QUESTIONNAIRES SUBMITTED: (LIST DISCIPLINES)	DATE
GS-020 Community Planning GS-800 Engineering		5/15/2025

FIRM NAME	ESTABLISHED YEAR	ESTABLISHED STATE	TYPE OF ORGANIZATION (Underline)
Tetra Tech	1966	DE	INDIVIDUAL PARTNERSHIP CORPORATION JOINT VENTURE OTHER

BUSINESS ADDRESS, TELEPHONE & FAX NO. OF HAWAII OFFICE	AGE OF FIRM	FEDERAL ID NO.	YEARS ESTABLISHED IN HAWAII
737 Bishop St., Suite 2000, Honolulu, Hawaii 96813 Phone: 808.441.4784 / Fax: 808.536-3953	59 years	95-4148514	35

PRINCIPALS OF FIRM: (NAMES)	ASSOCIATE MEMBERS OF FIRM: (NAMES)
Eric Jensen, CHMM / Alicia Oller	

PRESENT BRANCH OFFICE(s): (ADDRESS, TELEPHONE & FAX NO.)	PERSON IN CHARGE: (NAMES)
	Eric M. Jensen, CHMM, Operations Manager Alicia Oller, Vice President, Energy Programs

NUMBER OF PERSONNEL IN YOUR PRESENT ORGANIZATION

LOCATED AT	PRINCIPALS & KEY PERSONNEL			OTHER PERSONNEL											TOTAL
	Architect	Engineer	Others	Architect	Engineers				Draftsmen	Spec. Writer	Estimator	Inspector	Surveyor	Balance	
					Mech.	Electri	Civil	Others							
Global Offices	679	4,883	1,218	679	788	706	2,399	989	0	61	240	234	2,767	12,296	27,939
Honolulu Office	0	3	16	0	0	0	0	4	0	0	0	0	0	0	23
TOTAL	679	4,886	1,234	679	788	706	2,399	993	0	61	240	234	2,767	12,296	27,962

TECHNICAL PERSONNEL:	NUMBER OF PERSONNEL WITH HAWAII LICENSES	1	NUMBER OF PERSONNEL WITHOUT HAWAII LICENSES	22

PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES WITHIN YOUR FIRM

NAME	RESIDENT OF	NAME	RESIDENT OF
Eric M. Jensen, CHMM	Hawaii	Alicia Oller	Oregon
TITLE Operations Manager		**TITLE** Vice President, Energy Programs	

YEARS OF EXPERIENCE	AS PRINCIPAL IN THIS FIRM	AS PRINCIPAL IN OTHER FIRMS	OTHER THAN PRINCIPAL
36	15		21

YEARS OF EXPERIENCE	AS PRINCIPAL IN THIS FIRM	AS PRINCIPAL IN OTHER FIRMS	OTHER THAN PRINCIPAL
36	15		21

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

B.S. Geology, Ohio University, 1987

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

M.S. Ecology, University of Tennessee, 1990
B.A. Biology, Maryville College, 1987

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

SAME, HAEP, IHMM, AHMP

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Women of Renewable Industries and Sustainable Energy,
National Association of Environmental Professionals (NAEP)

REGISTRATION (TYPE, YEAR, STATE)

Certified Hazardous Materials Manager (CHMM) Master Level, Current, Certification #12655
Hawaii Certified Lead-Based Paint Inspector and Risk Assessor #PB-0972

REGISTRATION (TYPE, YEAR, STATE)

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME	STATUS (Underline)
Lisa Kettley	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Project Manager, Environmental Scientist	27

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
6	17	4

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

M.S. Biological Sciences, Stanford University, 2000
B.S. Environmental Studies, University of Oregon, 1996

REGISTRATION (TYPE, YEAR, STATE)

NAME	STATUS (Underline)
Catherine Courtney	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Marine Environmental Scientist	37

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
35	2	

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

Ph.D. Oceanography, University of Hawaii, 1985
M.A. Biology, San Jose State University, 1981
B.A. Biology, University of California, Santa Cruz, 1976

REGISTRATION (TYPE, YEAR, STATE)

American Association of Underwater Scientists

NAME	STATUS (Underline)
Jason Burkett	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Civil /Structural Engineer	19

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
13	6	

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

M.S. Civil Engineering (Structures and Foundations), University of Central Florida, 2005
B.S. Civil Engineering (Structures Emphasis), University of Central Florida, 2003

REGISTRATION (TYPE, YEAR, STATE)

Professional Engineer (PE): AZ, CO, FL, GA, HI, ID, IL, KS, KY, MO, NM, OK, TX
Structural Engineer (SE): IL; NCEES Model Law Structural Engineer; NCEES, Record No. 47938

NAME	STATUS (Underline)
Tiffany Agostini	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Senior Biologist/Project Manager	18

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
7	10	1

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

M.S. Botany, University of Hawaii at Manoa, 2011
B.A. Urban Studies and Planning/Environmental Science, University of California-San Diego, 2005

REGISTRATION (TYPE, YEAR, STATE)

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME	STATUS (Underline)
Anne Brasher	**Part-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Senior Aquatic Biologist	37

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
6	12	19

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

B.A. Anthropology and Psychology, Pitzer College, 1984
M.S., Aquatic Ecology (eco-toxicology), University of California at Davis, 1989 Ph.D., Ecology, University of California at Davis, 1997

REGISTRATION (TYPE, YEAR, STATE)

NAME	STATUS (Underline)
Michael Donoho	**Part-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Senior Planner/Natural Resources Specialist	25

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
5	4	16

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

M.S. Urban and Regional Planning (MURP), UH Manoa, 2001
B.A. Anthropology; Environmental Science, UH Manoa, 1991

REGISTRATION (TYPE, YEAR, STATE)

AICP (025660)

NAME	STATUS (Underline)
Yvonne Katrin Parry	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Environmental Chemist	22

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
17	2	3

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

M.S. Applied Chemistry, Fresenius European University of Applied Sciences, 2002; B.A. Chemistry, Fresenius European University of Applied Sciences, 1999

REGISTRATION (TYPE, YEAR, STATE)

40-hour OSHA Environmental Health and Safety for Hazardous Waste Site Operations; 8-hour Hazardous Waste Operations Management and Supervisor Training

NAME	STATUS (Underline)
Douglas Lantz	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Hydraulic Engineer/Principal Project Manager	36

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
27	9	

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)

PhD, Watershed Management, University of Arizona, 1998 MS, Watershed Management, University of Arizona, 1989 BS, Watershed Management, University of Arizona, 1986

REGISTRATION (TYPE, YEAR, STATE)

Professional Engineer, Civil (PE)
AZ License No. 28850 (1995) Expires 3/31/22
CA License No. 63048 (2002) Expires 6/30/20
OR License No. 60864PE (1999) Expires 12/31/20 WA License No. 34547 (1997) Expires 8/8/20 Also licensed in MD, ID, OK, and NM
Professional Hydrologist: License No. 98-H-1479 (1998) Expires 12/31/21

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME	STATUS (Underline)	NAME	STATUS (Underline)
Jason Broderson	Full-Time	Joel Peters	Full-Time
TITLE OR POSITION	**YEARS OF EXPERIENCE**	**TITLE OR POSITION**	**YEARS OF EXPERIENCE**
Program Manager	37	GIS Specialist/Cartographer	29
WITH THIS FIRM / **WITH LAST FIRM**	**WITH OTHER FIRMS**	**WITH THIS FIRM** / **WITH LAST FIRM**	**WITH OTHER FIRMS**
35 / 1	1	29 /	
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)		**EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)**	
B. S. Geophysics, University of California, Santa Barbara, 1987		Certificate in Geographic Information Systems, The Pennsylvania State University, 2003 B.A., Geography, University of North Texas, Denton, TX, 1995	
REGISTRATION (TYPE, YEAR, STATE)		**REGISTRATION (TYPE, YEAR, STATE)**	
State of California, Professional Geologist (P.G.), No. 6262, 1994; State of California, Qualified Stormwater Pollution Prevention Plan Developer (QSD), No. 358, 2011		Certified GIS Professional (GISP)00037616, The GIS Certification Institute, 2004	

NAME	STATUS (Underline)	NAME	STATUS (Underline)
Jason Fussel	Full-Time	Susan Pankenier	Full-Time
TITLE OR POSITION	**YEARS OF EXPERIENCE**	**TITLE OR POSITION**	**YEARS OF EXPERIENCE**
Vice President / Civil Engineer	22	Client Manager/Operations Director	24
WITH THIS FIRM / **WITH LAST FIRM**	**WITH OTHER FIRMS**	**WITH THIS FIRM** / **WITH LAST FIRM**	**WITH OTHER FIRMS**
22 /		17 / 7	
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)		**EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)**	
B.S. Civil Engineering, California Polytechnic State University, San Luis Obispo, 2003		B.A. Environmental Analysis and Design, University of California, Irvine, 2001	
REGISTRATION (TYPE, YEAR, STATE)		**REGISTRATION (TYPE, YEAR, STATE)**	
Registered Civil Engineer, 2007, CA; Licensed Land Surveyor, 2013, CA; Registered Civil Engineer, 2013, HI		Air and Waste Management Association (AWMA)	

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME		STATUS (Underline)
Lara Reynolds		**Full-Time**
TITLE OR POSITION		**YEARS OF EXPERIENCE**
Biologist		17
WITH THIS FIRM	**WITH LAST FIRM**	**WITH OTHER FIRMS**
4	3	10

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
M.S. Botany, University of Hawaii, 2011
B.A. Botany, Highest Honors, University of Hawaii, 2007

REGISTRATION (TYPE, YEAR, STATE)

NAME		STATUS (Underline)
Kayla Yost		**Full-Time**
TITLE OR POSITION		**YEARS OF EXPERIENCE**
Environmental Planner		14
WITH THIS FIRM	**WITH LAST FIRM**	**WITH OTHER FIRMS**
4	5	3

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
M.S. Environmental Technology, Imperial College London, 2010
B.S. Public Health, The George Washington University, 2009

REGISTRATION (TYPE, YEAR, STATE)

NAME		STATUS (Underline)
Christopher Todd		**Full-Time**
TITLE OR POSITION		**YEARS OF EXPERIENCE**
Wildlife Biologist		20
WITH THIS FIRM	**WITH LAST FIRM**	**WITH THIS FIRM**
6	1	2

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
PhD Island Ecology and Conservation, Hawkesbury Institute for the Environment, Western Sydney University, 2020
M.S. Tropical Conservation Biology and Environmental Science, University of Hawai´i at Hilo, 2012
B.S. Natural Resource Management, Rutgers, The State University of New Jersey, 2003

REGISTRATION (TYPE, YEAR, STATE)

NAME		STATUS (Underline)
Meg Reesor		**Full time**
TITLE OR POSITION		**YEARS OF EXPERIENCE**
GIS Scientist		6
WITH LAST FIRM	**WITH THIS FIRM**	**WITH OTHER FIRMS**
2	2	2

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
B.S. Environmental Geography, (Minors in GIS and Environmental Sustainability), Michigan State University, 2017

REGISTRATION (TYPE, YEAR, STATE)

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME	STATUS (Underline)	NAME	STATUS (Underline)
Jared Friesen	**Full-Time**	Brennan Herdt	**Full-Time**
TITLE OR POSITION	**YEARS OF EXPERIENCE**	**TITLE OR POSITION**	**YEARS OF EXPERIENCE**
Senior Electrical Engineer/Renewables	24	Energy Engineer (Mechanical)	16
WITH THIS FIRM / **WITH LAST FIRM** / **WITH OTHER FIRMS**		**WITH THIS FIRM** / **WITH LAST FIRM** / **WITH OTHER FIRMS**	
15 / 3 / 6		11 / 2 / **3**	
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)		**EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)**	
BS, Electrical Engineering, University of Nebraska - Lincoln, 2001		B.S. Mechanical Engineering, University of California, Davis, Davis, California, 2008	
REGISTRATION (TYPE, YEAR, STATE)		**REGISTRATION (TYPE, YEAR, STATE)**	
Professional Engineer (PE): NE, DC, ME, IN, KY, VA; North American Board of Certified Energy Practitioners (NABCEP) PV Installation Professional (PVIP); FAA Part 107 Commercial Unmanned Aircraft Pilot; LEED Accredited Professional		Professional Engineer (PE): CA, **HI (pending)**	

NAME	STATUS (Underline)	NAME	STATUS (Underline)
Kenneth Kulonis	**Full-Time**	Jacob Carter	**Full-Time**
TITLE OR POSITION	**YEARS OF EXPERIENCE**	**TITLE OR POSITION**	**YEARS OF EXPERIENCE**
Energy Engineer (Mechanical)	48	Mechanical Engineer, Energy	8
WITH THIS FIRM / **WITH LAST FIRM** / **WITH OTHER FIRMS**		**WITH THIS FIRM** / **WITH LAST FIRM** / **WITH OTHER FIRMS**	
12 / 10 / 26		5 / 3 / 0	
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)		**EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)**	
B.S. Environmental Engineering, California Polytechnic State University, 1977 Professional Engineering (PE): HI (7310), CA, WA, AK		B.S., Mechanical Engineering, Univ. of Arkansas, Fayetteville, AR 2017	
REGISTRATION (TYPE, YEAR, STATE)		**REGISTRATION (TYPE, YEAR, STATE)**	
Professional Engineer (PE): HI, CA, WA, AK		Professional Engineer (PE): AR	

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME	STATUS (Underline)
Neil Morrissette	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Energy Engineer / Electrical Engineer	7

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
5	3	0

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
B.S., Electrical Engineering, Univ. of Nebraska-Lincoln, Lincoln, NE 2017

REGISTRATION (TYPE, YEAR, STATE)
Engineer in Training

NAME	STATUS (Underline)
John Havens, Jr.	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Senior Energy Project Manager	43

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
7	2	34

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
Sustainable Design Certification, Portland State University

REGISTRATION (TYPE, YEAR, STATE)
Certified Energy Manager (CEM)

NAME	STATUS (Underline)
Kristin Webster	**Part-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Energy Consultant, Renewables	24

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
9	1	14

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
B.S. Chemical Engineering, Minor Environmental Sciences, Colorado School of Mines, 1995

REGISTRATION (TYPE, YEAR, STATE)
Certified Energy Manager (CEM); Renewable Energy Professional (REP); Engineer in Training (EIT)

NAME	STATUS (Underline)
Jim Perkins	**Part-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Senior Energy Technical Advisor	26

WITH THIS FIRM	WITH LAST FIRM	WITH THIS FIRM
14	3	10

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
B.A. International Economics, University of California, Los Angeles, 1999

REGISTRATION (TYPE, YEAR, STATE)
Certified Energy Manager (CEM)

Certified Organizational Resilience Specialist in Emergency Management: Continuity of Governmental Operations (CORS in EM)

Certified Building Commissioning Professional (CBCP)

USGBC Leadership in Energy and Environmental Design Accredited Professional (LEED AP)

Civil Engineering Corps Officers School (CECOS) Facilities Management Course

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME	STATUS (Underline)
Jamie Tanino	**Part-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Biologist / Rare Snail Specialist	19

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
4	2	13

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
B.S. Natural Resource and Environmental Management, University of Hawaii Manoa, 2005

REGISTRATION (TYPE, YEAR, STATE)

NAME	STATUS (Underline)
Spencer Engler	**Part-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Biologist	14

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
6	4	4

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
B.S. Natural Resources Management (Emphasis Wildlife Management)
Grand Valley State University, Michigan, 2012.

REGISTRATION (TYPE, YEAR, STATE)

NAME	STATUS (Underline)
Stephanie Nagai	**Full-time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Project Manager	12

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
2	6	4

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
M.A. Urban and Regional Planning, University of Hawaii at Manoa, 2016
B.S. Natural Resources and Environmental Management, University of Hawaii at Manoa, 2013

REGISTRATION (TYPE, YEAR, STATE)

NAME	STATUS (Underline)
Stephen Del'Homme, P.E.	**Full-Time**

TITLE OR POSITION	YEARS OF EXPERIENCE
Engineering Director/Senior Engineer	42

WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
24	5	18

EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)
M.B.A. Regis University, 2002
B.S. Civil Engineering, University of Houston, 1982

REGISTRATION (TYPE, YEAR, STATE)
Professional Engineer (PE) in AL (23826) 2005, AR (66777) 2018, DC (PE922401)
2020, FL (90192) 2020, GA (PE041240) 2016, **HI (14891)** 2012, IN (PE10809258) 2008,
KS (PE21396) 2010, LA (PE0027477) 2009, MS (10820) 1990, MO (PE2010038800)
2010, NV (10769) 1994, NJ (24GE04023800) 1997, NM (24972) 2018, OH (PE75095) 2010, OK (23054) 2011, TX (60882) 1986, UTAH (175280-2202) 1991, WY (5770) 1989

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME	STATUS (Underline)	NAME	STATUS (Underline)
Kathy Vandenheuvel	**Full-Time**	Christopher P. Lundquist	**Full-Time**
TITLE OR POSITION	**YEARS OF EXPERIENCE**	**TITLE OR POSITION**	**YEARS OF EXPERIENCE**
Environmental Engineer / Program Manager	27	Utility Infrastructure Engineer	20
WITH THIS FIRM / **WITH LAST FIRM**	**WITH OTHER FIRMS**	**WITH THIS FIRM** / **WITH LAST FIRM**	**WITH OTHER FIRMS**
25 / 1	**1**	11 / 4	5
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)		**EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)**	
B.S., Agricultural and Biological Engineering with a focus in Environmental Systems Engineering, Cornell University, 1996		BS, Mechanical Engineering, University of Colorado, 2006	
REGISTRATION (TYPE, YEAR, STATE)		**REGISTRATION (TYPE, YEAR, STATE)**	
Professional Engineer (PE): **HI (17208)** and CA		Professional Engineer (PE): CA, CO, CT, GA, **HI (16220)** , MA, NY	

OUTSIDE ASSOCIATES AND CONSULTANTS USUALLY EMPLOYED

DISCIPLINE	NAME OF FIRM OR INDIVIDUAL
Hazardous Waste Removal and Management	Pacific Commercial Services 808.545.4599
Drilling Services	GeoTek Hawaii, Inc. 808.223.9810
Cultural Consulting	Aukahi (Lani Ma'a Lapilio) 808.540.5741
Cultural Resources	Pacific Legacy, Inc. 808.263.4800
Community Outreach	Anthology/ FINN Partners 808.544.3000
Community Outreach	The Accord Group 808.384.2468
Certified Industrial Hygienist	TRC Environmental Corporation Bart Ashley, CIH 808.728.4111
Geophysical / Utility Location Services	Hawaii Geophysical Services, LLC 808.845.3900
Geotechnical Services	Kokua Geotech LLC (Tim (Xiaobin) Lin) 808.214.9339
Expert Petroleum Forensics Services	NewFields Companies, LLC (Eric Litman) 781.424.5731
Environmental Field Equipment	Geotech Environmental Equipment, Inc. 800.833.7958

DISCIPLINE	NAME OF FIRM OR INDIVIDUAL
Environmental Field Equipment	ONSITE Environmental Services 949.771.4136
Environmental and Human Health Risk Assessment	Gibb & O'Leary Epidemiology Consulting (Herman Gibb) 703.888.6059
Land Surveying	Park Engineering 808.593.1676
Land Surveying	RM Towill 808.842.1133
Laboratory Analytical Services (soil and groundwater)	Torrent Laboratory, Inc. 408.263.5258
Laboratory Analytical Services (soil and groundwater)	Advanced Analytical Laboratory 808.836.2252
Laboratory Analytical Services (asbestos, lead)	Hawaii Analytical Laboratory 808.735.0042
Laboratory Analytical Services (asbestos, lead)	EMSL Analytical, Inc. 800.220.3675
Laboratory Analytical Services (soil, air)	Eurofins Environmental Testing of North California 800.985.5955
Laboratory Analytical Services (soil, PFAS, PFOS Expertise)	SGS-AXYS Analytical Services, LTD. 888.373.0881

ERRORS AND OMISSIONS INSURANCE

DOES YOUR FIRM HAVE ERRORS & OMISSION (E&O) INSURANCE? (Underline)			AMOUNT OF COVERAGE PER CLAIM	AMOUNT OF DEDUCTIBLE
YES	NO	PROJECT INSURANCE	$1,000,000	$250,000 Retention Claim

Submit proof of insurance or insurability from your insurance carrier with this form.

SUMMARY OF YOUR FIRM'S COMPLETED AND PRESENT PROJECTS DURING THE LAST TEN YEARS

AS A PRIME A/E CONSULTANT

TOTAL NUMBER OF COMPLETED PROJECTS	>1,000
TOTAL ESTIMATED CONSTRUCTION COST OF COMPLETED PROJECTS	>$20B
TOTAL NUMBER OF PRESENT PROJECTS	>1,000
TOTAL ESTIMATED CONSTRUCTION COST OF PRESENT PROJECTS	>$100M

AS AN ASSOCIATE WITH OTHER A/E CONSULTANTS

TOTAL NUMBER OF COMPLETED PROJECTS	>1,000
TOTAL ESTIMATED CONSTRUCTION COST OF COMPLETED PROJECTS (ONLY THE PORTION OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)	>$100M
TOTAL NUMBER OF PRESENT PROJECTS	>1,000
TOTAL ESTIMATED CONSTRUCTION COST OF PRESENT PROJECTS (ONLY THE PORTION OF WORK FOR WHICH YOUR FIRM IS RESPONSIBLE)	>$100M

CLASS OF WORK AND PROJECT TYPE SPECIALIZATION

TYPE OF PROJECT	TOTAL NO. OF COMPLETED PROJECTS	TOTAL ESTIMATED CONSTRUCTION COST	TOTAL ESTIMATED PROJECT SIZE (G.S.F.)
Environmental Support Services	250	**$37M**	N/A
Coastal Natural Resource Management	40	**$6M**	N/A
Emergency-Disaster Planning and Management	2	**$1.7M**	N/A
Environmental Impact Statements	6	**$10.5M**	N/A
Environmental Assessments	20	**$2M**	N/A

Categorize your firm's class for work during the last ten years by project type. Examples of project types include Educational, Commercial, Industrial, Residential, Health Care, Correctional and Judicial Facilities. Work may also be categorized as planning, civil sitework, renovation/alteration, architectural barrier removal, fire alarm system, etc.

PRESENT/COMPLETED PROJECTS IN WHICH YOUR FIRM IS/WAS DESIGNATED THE PRIME CONSULTANT (BY TYPE)

(LIST A MAXIMUM OF 10 PROJECTS FOR EACH DISCIPLINE/TYPE OF WORK BEING APPLIED FOR. LIST PROJECTS THAT REFLECT YOUR ABILITY TO PROVIDE QUALITY WORK FOR YOUR REQUESTED PROJECTS.)

TYPE: Environmental / Planning

Year	Name and Location of the Project	Name of Lead Designer	Name, Address, Phone & Fax No. of the Owner	Estimated Const. Cost ($)	Duration for Design (Months)	% Completed	
						Design	Constr.
2024-present	Oahu Flood Hazard Analysis	Catherine Courtney	City and County of Honolulu, Department of Planning and Permitting, 660 S. King Street, Honolulu, HI 96813 - Rodman Low 808.768.8060	$109,797	9 months	100%	
2024-present	Construction Environmental Support Hawaii Public Housing Authority Redevelopment Project	Yvonne Parry	Hawaiian Dredging Construction Co., Inc., 605 Kapiolani Blvd, Honolulu, HI 96813 - Wes Asao 808.479.3199	$430,000	12 months	75%	
2024-present	Lanakila Homes IV, Environmental Support Services, Hilo, Hawaii	Yvonne Parry	HCDC Hawaii Development LLC, 330 W Victoria Street, Gardena, CA 90248 - Moe Mohana	$16,000	12 months	10%	
2024-present	Straub Parking Garage, Environmental Support Services, Honolulu, Hawaii	Yvonne Parry	Hawaii Pacific Health, 55 Merchant St, 27th Floor, Honolulu, HI 96813 - Francis Jus	$30,000	12 months	30%	

2024-present	Piers 24 & 25 Improv OS & Sampling, Environmental Support Services, Honolulu Harbor, Hawaii	Yvonne Parry	Pacific Shipyards International, LLC, 705 N. Nimitz Hwy, Honolulu, HI 96817 - Michael Buelsing	$30,000	12 months	50%	
2024-present	Hale Moiliili Redevelopment, Environmental Support Services, Honolulu, Hawaii	Yvonne Parry	Stanford Carr Development, LLC, 1100 Alakea St, 27th floor, Honolulu, HI 96813 - Kaloa Robinson	$137,000	18 months	80%	
2023-present	Building Back Better: Pre-Disaster Recovery Planning in Kaua'i, Hawai'i	Catherine Courtney	University of Hawaii Sea Grant College Program, County of Kaua'i Planning Department, 4444 Rice St., Suite A473, Līhu'e, HI 96766 - Ruby Pap 808.956.3010	$98,236	22 months	70%	
2023-present	Waikiki Area Adaptation Plan	Catherine Courtney	City and County of Honolulu, Department of Planning and Permitting, 660 S. King Street, Honolulu, HI 96813 - Noelle Cole 808.768.8055	$399,557	30 months	50%	
2022-2024	Environmental Site Assessment – Poamoho Fire Site	Eric Jensen	Agribusiness Development Corporation (ADC), 235 S. Beretania St., Room 205, Honolulu, HI 96813 - Ken Nakamoto 808.586.0087	$235,122	36 months	100%	
2022-2023	Developing a Scoping Study for a Regional Shoreline Strategy Specific to the State of Hawai'i	Catherine Courtney	DBEDT, Office of Planning and Sustainable Development, 235 South Beretania Street, 6th Floor, Honolulu, HI 96813 - Yusraa Tadj 808.587.2846	$200,000	12 months	100%	
2021-present	Analysis to Establish Research-based Shoreline and Riparian Setbacks for Hawaii	Catherine Courtney	County of Hawai'i, Department of Planning, 101 Pauahi Street, Suite 3, Hilo, HI 96720 - Kevin Sullivan 808.961.8135	$371,621	42 months	75%	
2020-2022	Programmatic Agreements for Management of Archaeological and Natural Resources	Eric Jensen	USCG FD&CC DET SEATTLE - Maria Colville 206.220.7426	$380,000	24 months	100%	
2020-2021	Natural Resources Inventory, Coast Guard Air Station Barbers Point, HI	Eric Jensen	USCG FD&CC DET SEATTLE - Maria Colville 206.220.7426	$13,050	12 months	100%	
2020-2021	City & County of Honolulu Participation in the Community Rating System	Catherine Courtney	City & County of Honolulu, Office of Climate Change, Sustainability and Resiliency - Mathew Gonser 808.768.2276	$110,000	12 months	100%	

2019-2021	Volcanic Risk Assessment and Mitigation Action Plan	Catherine Courtney	County of Hawaii, Department of Planning, 25 Aupuni St., Hilo, HI 96720 - April J. Surprenant 808.961.8131	$300,000	24 months	100%	
2019-2021	Kilauea Eruption Community Relief, Relocation, and Recovery Planning	Catherine Courtney	County of Hawaii, Department of Planning, 25 Aupuni St., Hilo, HI 96720 - April J. Surprenant 808.961.8131	$1,891,489	24 months	100%	
2019-2021	Developing Economic Incentives for Green Infrastructure Development	Catherine Courtney	Malama Maunalua, 7192 Kalanianaole Hwy., Suite A143A, Honolulu, HI 96825 - Doug Harper 808.395.5050	$46,000	18 months	100%	
2018-2020	Soil Stockpile Characterization, Kalaeloa Heritage and Legacy Foundation Park	Eric Jensen	Hawaii Community Development Authority, 547 Queen St., Honolulu, HI 96813 - Neal Imada 808.392.1401	$100,000	24 months	100%	
2015-2018	Hawaii Sea Level Rise Vulnerability and Adaptation Report, Statewide, Hawaii (Job No. J40AS99A)	Catherine Courtney	Hawaii Department of Land and Natural Resources (DLNR), Honolulu, HI - Brandon J. Kim 808.587.0248	$352,775	36 months	100%	
2015-2016	Invasive Plant Control Plans and Implementation, JBPHH & PMRF	Yvonne Parry	NAVFAC Pacific, Environmental Contracts Branch, 258 Makalapa Dr., Ste. 100, JBPHH, HI 96860-3134 - April Teekell 808.471.1166	$498,295	12 months	100%	
2014-2021	Na Pali Coast State Wilderness Park Improvements, Kauai, HI (Job No. F80C661B)	Eric Jensen	Hawaii Department of Land and Natural Resources (DLNR), Honolulu, HI - Roger H. Masuoka 808.587.0276	$240,896	72 months	100%	
2014-2019	State of Hawaii, Commercial Harbors Dredging Project, Honolulu District	Yvonne Parry	US Army Corps of Engineers, Fort Shafter, HI - John Hosaka 808.835.4026	$1.8 million	60 months	100%	
2014-2015	Warehouse Passive Methane Venting System Design and Field Quality Control	Steve Delhomme	Pacific Ocean Producers, Inc., Honolulu, HI - Jim Cook 808.537.2905	$35,000	11 months	100%	
2014	Professional Services for Community Planning	Alicia Oller	DBEDT, Strategic Industries Division, 250 S. Hotel St., 5th Floor, Room 501, Honolulu, HI 96813	Confidential	6 months	100%	
2013-present	Na Pua Makani Wind Farm Kahuku, Hawaii	Alicia Oller / Leslie McClain	AES Distributed Energy, 282 Century Place, Suite 2000, Louisville, CO 80027	Confidential	ongoing	ongoing	
2013-2014	Lalamilo Wind Farm Big Island, Hawaii		Lalamilo Wind Company - Richard Horn 530.342.8545	Confidential	12 months	100%	

2013	Ha'ena State Park and Na Pali Coast State Wilderness Park Field Investigation and Concept Report	Eric Jensen	Hawaii Department of Land and Natural Resources (DLNR) - Roger H. Masuoka 808.587.0276	$30,365	4 months	100%	
2011	Target Pfresh Renovation Asbestos Survey Support	Jeff Mitchell	Target Corp., Pre Construction Environmental, Minneapolis, MN - Dan Barrett 612.730.6534	$15,000	2 months	100%	
2011	Environmental Assessment for the Kalakaua Phase 3 Housing Development, Schofield Barracks	Yvonne Parry	Island Palm Communities, LLC, Schofield Barracks, HI - Mike Barstis 808.687.8322	$92,000	7 months	100%	
2010-2013	RCRA Enforcement and Policy Assistance	Eric Jensen	U.S. EPA and Hawaii Department of Health (DOH), Solid and Hazardous Waste Branch (SHWB) - Josh Nagashima 808.586.4226	$390,608	38 months	100%	
2010-2012	Brownfields Redevelopment Support at a Mixed-use Commercial Property	Eric Jensen	Target Corp., Pre Construction Environmental, Minneapolis, MN - Dan Barrett 612.730.6534	$200,000	24 months	100%	
2010-2011	Hilo Target Safeway Site Investigation and Removal Action	Eric Jensen	Target Corp., Pre Construction Environmental, Minneapolis, MN - Dan Barrett 612.730.6534	$300,000	13 months	100%	
2010	Hawaii Watershed Guidance	Catherine Courtney	DBEDT, Office of Planning, Hawaii State Coastal Zone Management (CZM) Program - Kenneth Roberts 808.587.2803	$40,000	7 months	100%	
2009-present	Auwahi Wind Farm Maui, Hawaii	Alicia Oller	Auwahi Wind Energy, LLC - Marie VanZandt 619.228.7340	Confidential	ongoing	ongoing	
2009-2012	Bamboo Commerce Center Groundwater Investigation and Monitoring	Yvonne Parry	Fowler Property Acquisitions, San Francisco, CA 94104 - Hannah Green 415.925.3100 ext 320	$100,000	30 months	100%	
2009	Stormwater Management Plan and NPDES Permit Support, UC Santa Barbara	Tim Tringali	University of California, Santa Barbara Environmental Health and Safety - Ali Aghayan 805.893.7534	$34,000	8 months	100%	
2008-2013	Technical Support to the Papahanaumokuakea Marine National Monument	Catherine Courtney	NOAA National Marine Sanctuary Program - Aulani Wilhelm 808.397.2660	$970,000	60 months	100%	
2008	Hawaii Community Stewardship Project-Community Based Resource Management (CRBM)	Catherine Courtney	DBEDT, Office of Planning, Hawaii State Coastal Zone Management (CZM) Program - Mary Lou Kobayashi 808.587.2846	$104,312	9 months	100%	

2007-present	Environmental Support Services for Military Housing Redevelopment, Joint Base Pearl Harbor Hickam	Yvonne Parry	Hickam Communities LLC, Honolulu, HI 96818 - Jim Switzer 254.289.7163	$4.2 million	84 months	85%	
2007-2016	Sand Island Vehicle Maintenance Facilities Groundwater Investigation and Monitoring	Yvonne Parry	US Postal Service, Honolulu, HI 96819 - Gerard Koontz 808.832.3265	$250,000	108 months	100%	
2007-2014	Lanai Met Tower Wind Farm Project Lanai, Hawaii	Alicia Oller	Castle & Cooke - Doug McClaflin 808.559.3924	Confidential	84 months	100%	
2007	Development of a Moku Management Framework for the State of Hawaii	Catherine Courtney	DBEDT, Office of Planning, Hawaii State Coastal Zone Management (CZM) Program - Eileen Harada 808.586.9312	$130,000	6 months	100%	
2006-2007	Hawaii Ocean Resource Management Plan Update	Catherine Courtney	DBEDT, Office of Planning, Hawaii State Coastal Zone Management (CZM) Program - Mary Lou Kobayashi 808.587-2846	$120,000	12 months	100%	
2005-present	Non-Emergency Environmental Services for the State of Hawaii Department of Health	Eric Jensen	Hawaii Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office, Honolulu, HI - Harold Lao 808.586.4253	$14M	240 months	ongoing	
2005-present	Brownfields Redevelopment Projects, Various Military Installations, Oahu, Hawaii	Yvonne Parry	Island Palm Communities, LLC, Schofield Barracks, HI - Mike Barstis 808.687.8322	$4.6 million	168 months	ongoing	
2004-2005	Waianae Ecological Characterization	Catherine Courtney	DBEDT, Office of Planning, Hawaii State Coastal Zone Management (CZM) Program - Douglas Tom 808.587.2875	$100,000	12 months	100%	
2002-2009	Environmental Impact Statement Military Training Activities at Makua Military Reservation	John Bock	US Army Corps of Engineers, Honolulu District, Fort Shafter, HI - Uyen Tran 808.438.0512	$3.7 million	86 months	100%	

PRESENT/COMPLETED PROJECTS THAT YOUR FIRM IS/WAS ASSOCIATED WITH OTHERS (BY TYPE)

(LIST A MAXIMUM OF 10 PROJECTS FOR EACH DISCIPLINE/TYPE OF WORK BEING APPLIED FOR. LIST PROJECTS THAT REFLECT YOUR ABILITY TO PROVIDE QUALITY WORK FOR YOUR REQUESTED PROJECTS.)

TYPE: Environmental / Planning

YEAR	NAME AND LOCATION OF THE PROJECT	NAME, ADDRESS, PHONE & FAX NO. OF THE OWNER	ESTIMATED CONSTRUCTION COST		DURATION FOR DESIGN (MONTHS)	PRIME FIRM ASSOCIATED WITH	% COMPLETED	
			ENTIRE PROJECT	YOUR FIRM'S WORK			DESIGN	CONST.
2007-2009	Environmental Assessments for USAG-HI, Various Locations, Hawaii	US Army Corps of Engineers Honolulu Engineer District, Fort Shafter, Hawaii	$1 million	$380,000	24 months	Myounghee Noh and Associates	100%	
2009	Programmatic EA for Haleakala High Altitude Observatories and NPDES Support	University of Hawaii Institute for Astronomy	$380,000	$45,000	9 months	KC Environmental, Inc.	100%	
2017-2022	Marine and Terrestrial Biological Surveys, EOD, and Reporting, EIS/Overseas EIS for the Commonwealth of the Northern Mariana Islands Joint Military Training Project	Naval Facilities Engineering Command Pacific (NAVFAC PAC), Makalapa, HI	$128M	$3M	60 months	Cardno-AECOM JV	100%	
2024-2025	Environmental Impact Statement for Pacific Missile Range Facility (PMRF) Succeeding Leases and Easements	Naval Facilities Engineering Command Pacific (NAVFAC PAC), Makalapa, HI	$128M	$176,000	19 months	Stantec-AECOM JV	100%	

Explain firm's individual project assignment, project management structure, project execution (work flow and responsibilities) and quality control process. In the event the spaces provided on this form are not sufficient for entries, or if you wish to furnish additional information, it may be inserted here or on separate sheets, with appropriate references.

Tetra Tech, Inc. (Tetra Tech) is a leading provider of management consulting and technical services, design and engineering, and program and construction management services worldwide. including environmental planning and permitting, engineering, community planning natural and cultural resource management, post-disaster economic recovery management, risk assessment, and emergency management and community resilience. The company was founded in 1966 and became a publicly traded company (NASDAQ-TTEK) in 1991. Tetra Tech is incorporated in the State of Delaware, and its Federal Employer Identification Number (FEIN) is 95-4148514. The firm has annual revenues of nearly $5.2 billion and employs 30,000 personnel in 550 offices worldwide.

Tetra Tech has maintained a continuous office presence in Hawaii since 1990 and has compiled an extensive portfolio of local project experience assisting key decision makers with complex project and programmatic needs.

Tetra Tech's past performance record on contracts for federal and state agencies provides us with the experience to make efficient use of all resources to maintain the quality of work, control cost, and provide timely performance to meet schedules. Tetra Tech is proud of our record of repeat business from loyal clients who appreciate our work ethic, productive collaboration, and high-quality deliverables.

Our complete current active project list is too extensive to provide, as Tetra Tech is currently working on hundreds of diverse projects across the United States and internationally. Similarly, we have provided a sampling of key personnel illustrating our capability and capacity to accomplish any project scope. Our planning team is supported by an extremely 'deep bench' of professionals across the country who can provide appropriate support to the Hawaii office. Tetra Tech staffs each project based upon the specific scope and requirements and has the personnel to accomplish nearly any objectives our clients identify.

As of this date April 15, 2024, the foregoing is a true statement of facts.

NAME OF FIRM OR INDIVIDUAL SUBMITTING QUESTIONNAIRE	NAME OF FIRM OR INDIVIDUAL SUBMITTING QUESTIONNAIRE	NAME OF FIRM OR INDIVIDUAL SUBMITTING QUESTIONNAIRE
Tetra Tech, Inc.	Tetra Tech, Inc.	Tetra Tech, Inc.

NOTE: It is to a firm's advantage to maintain its experience record on a current basis. This may be accomplished by periodically forwarding current data to DBEDT.

DPW FORM 120 SUPPLEMENT 1

PRINCIPALS ONLY - ADDITIONAL INFORMATION

NAME	TITLE AND POSITION	YEARS WITH FIRM
Eric M. Jensen, CHMM	Operations Manager	15

MAJOR RESPONSIBILITIES WITH THIS FIRM

Honolulu Office Operations Manager in charge of senior technical review and oversight of environmental projects in the Honolulu office. Mr. Jensen manages and coordinates fiscal, personnel, client management, business development, and operational aspects of the local profit center.

PRIOR EMPLOYMENT

(START WITH LATEST EMPLOYMENT PRIOR TO JOINING THIS FIRM AND PROVIDE SIMILAR INFORMATION FOR EACH SEPARATE EMPLOYMENT OR MAJOR CHANGES IN DUTIES WITH THE SAME EMPLOYER.)

FIRM:	DATE FROM:	DATE TO:	FIRM:	DATE FROM:	DATE TO:
EBI Consulting	2003	2010	Earth Tech, Inc.	1995	2004
ADDRESS: Burlington, Massachusetts			**ADDRESS:** Hawaii, Massachusetts, Virginia		
JOB TITLE: Program Manager			**JOB TITLE:** Senior Project Manager/Geologist		
SUPERVISOR'S NAME AND TITLE: William Gibbons, Remediation Section Director			**SUPERVISOR'S NAME AND TITLE:** Bruce Tsutsui, Program Director (Hawaii); Barbara Lemos, Program Director (Virginia and Massachusetts)		
MAJOR DUTIES: Client Manager and Senior Technical Reviewer of Environmental Investigation and Due Diligence projects for Commercial and Municipal projects throughout the Northeast Region (Massachusetts, Maine, New Hampshire, Rhode Island, Connecticut).			**MAJOR DUTIES:** Project Manager and Senior Scientist for large environmental projects, including commercial, Municipal, State, and Federal clients in all Hawaii, Massachusetts, and Virginia.		

PRINCIPALS ONLY - ADDITIONAL INFORMATION

NAME	TITLE AND POSITION	YEARS WITH FIRM
Alicia Oller	Vice President, Environmental and Energy Programs	18
MAJOR RESPONSIBILITIES WITH THIS FIRM		
Business development, management, project and client management		

PRIOR EMPLOYMENT

(START WITH LATEST EMPLOYMENT PRIOR TO JOINING THIS FIRM AND PROVIDE SIMILAR INFORMATION FOR EACH SEPARATE EMPLOYMENT OR MAJOR CHANGES IN DUTIES WITH THE SAME EMPLOYER.)

FIRM:	DATE FROM:	DATE TO:	FIRM:	DATE FROM:	DATE TO:
Audubon Environmental	2000	2007	Hartman & Associates (acquired by Tetra Tech)	1997	2000
ADDRESS:			**ADDRESS:**		
Orlando, Florida and Vancouver, Washington			Orlando, Florida		
JOB TITLE:			**JOB TITLE:**		
Director of Technical Services			Associate/Project Manager		
SUPERVISOR'S NAME AND TITLE:			**SUPERVISOR'S NAME AND TITLE:**		
Bud Smart, President			William Musser, Vice President		
MAJOR DUTIES:			**MAJOR DUTIES:**		
Led sustainability certification program, project management, technical and client services			Project management, technical and client services, staff management		