



June 30
2024

STATEMENT OF QUALIFICATIONS

Procurement of Professional Services

COUNTY OF HAWAII

Housing and Community Development

FY25 ANNUAL NOTICE OF PROFESSIONAL SERVICES



Tetra Tech, Inc.

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



June 28, 2024

Submitted via email only: ohcdprofserv@hawaiiicounty.gov

Ms. Susan Kunz, Administrator
Housing and Community Development
County of Hawaii
1990 Kino'ole Street
Hilo, Hawaii 96720

RE: Letter of Interest to Provide Professional Services for Fiscal Year 2024 - 2025

Ms. Kunz:

Tetra Tech, Inc. is pleased to submit this letter of interest to provide professional consultant services for the County of Hawai'i during the fiscal year 2024 - 2025.

Tetra Tech, with a Honolulu, Hawaii presence for more than 34 years, has the appropriate experience necessary to complete the tasks involved with the Professional Services category listed below:

OH.2) Community Planning (Environmental Assessment)

Please find enclosed DPW Form 120 for your review and consideration. Additionally, we have included a Statement of Qualifications document which describes our company background, scope of services, our recent project history, and representative clients.

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

Client	Contact	Phone
Hawaii Department of Land and Natural Resources (DLNR) Engineering Division	Brandon Kim	808.587.0248
State of Hawaii Emergency Management Agency (HIEMA)	David Kennard ¹	808.241.1794
Hawaii Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office	Harold Lao	808.586.4253
DBEDT, Strategic Industries Division, Hawaii State Energy Office	Cameron Black	808.587.9009
Auwahi Wind Energy, LLC / Sempra U.S. Gas	Marie VanZandt	619.228.7340

¹Currently with Kauai Emergency Management Agency

Please use the following e-mail addresses for notification of future projects to be posted on the State Procurement website: eric.jensen@tetrattech.com and alicia.oller@tetrattech.com. If you have any questions, please do not hesitate to contact me at (808) 441-4784.

Sincerely,

Eric M. Jensen, CHMM
Operations Manager

- Attachments: Statement of Qualifications; DPW Form 120; Copy of State of HI, Professional Engineer License

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

QUESTIONNAIRE FOR ARCHITECTS, ENGINEERS AND OTHER PROFESSIONAL SERVICES

QUESTIONNAIRE FOR: (LIST DISCIPLINE) OH.2) Community Planning (Environmental Assessment)	OTHER QUESTIONNAIRES SUBMITTED: (LIST DISCIPLINES)	DATE 06/30/2024
FIRM NAME Tetra Tech, Inc.	ESTABLISHED YEAR STATE 1966 DE	TYPE OF ORGANIZATION (Underline) INDIVIDUAL PARTNERSHIP <u>CORPORATION</u> JOINT VENTURE OTHER
BUSINESS ADDRESS, TELEPHONE & FAX NO. OF HAWAII OFFICE 737 Bishop St., Suite 2000, Honolulu, Hawaii 96813 Phone: 808.441.4784 / Fax: 808.536-3953	AGE OF FIRM 58 years	FEDERAL ID NO. 95-4148514
PRINCIPALS OF FIRM: (NAMES) Eric Jensen, CHMM / Alicia Oller	ASSOCIATE MEMBERS OF FIRM: (NAMES) Not applicable	
PRESENT BRANCH OFFICE(s): (ADDRESS, TELEPHONE & FAX NO.)	PERSON IN CHARGE: (NAMES) Eric M. Jensen, CHMM, Operations Manager Alicia Oller, Vice President, Environmental and Energy Programs	

NUMBER OF PERSONNEL IN YOUR PRESENT ORGANIZATION

LOCATED AT	PRINCIPALS & KEY PERSONNEL			OTHER PERSONNEL											TOTAL
	Architect	Engineer	Scientists	Architect	Engineers				Draftsmen	Spec. Writer	Estimator	Inspector	Technician	Balance	
					Mech.	Electric	Civil	Others							
Tetra Tech Offices (World-wide)	679	4886	1,234	679	788	706	2399	993	0	61	240	234	2767	12,296	27,962
Honolulu Office		3	16					4							23
TOTAL	679			679	788	706	2399		0	61	240	234	2767		
TECHNICAL PERSONNEL:				NUMBER OF PERSONNEL WITH HAWAII LICENSES Honolulu Office					1	NUMBER OF PERSONNEL WITHOUT HAWAII LICENSES Honolulu Office					22

PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES WITHIN YOUR FIRM

NAME Eric M. Jensen, CHMM		RESIDENT OF Hawaii		NAME Alicia Oller		RESIDENT OF Oregon	
TITLE Operations Manager				TITLE Vice President, Environmental and Energy Programs			
YEARS OF EXPERIENCE 35	AS PRINCIPAL IN THIS FIRM 14	AS PRINCIPAL IN OTHER FIRMS 0	OTHER THAN PRINCIPAL 21	YEARS OF EXPERIENCE 35	AS PRINCIPAL IN THIS FIRM 8	AS PRINCIPAL IN OTHER FIRMS 0	OTHER THAN PRINCIPAL 27
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), The Wildlife Society			
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 Lisa Kettley			STATUS (Underline) <u>Full-Time</u>			NAME Catherine Courtney			STATUS (Underline) <u>Full-Time</u>		
TITLE OR POSITION Project Manager, Environmental Scientist			YEARS OF EXPERIENCE 26			TITLE OR POSITION Marine Environmental Scientist			YEARS OF EXPERIENCE 36		
WITH THIS FIRM 5		WITH LAST FIRM 17		WITH OTHER FIRMS 4		WITH THIS FIRM 34		WITH LAST FIRM 2		WITH OTHER FIRMS	
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) M.S. Biological Sciences, Stanford University, 2000 B.S. Environmental Studies, University of Oregon, 1996						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)						REGISTRATION (TYPE, YEAR, STATE) American Association of Underwater Scientists					
NAME Jason Burkett			STATUS (Underline) <u>Full-Time</u>			NAME Tiffany Agostini			STATUS (Underline) <u>Full-Time</u>		
TITLE OR POSITION Civil /Structural Engineer			YEARS OF EXPERIENCE 18			TITLE OR POSITION Senior Biologist/Project Manager			YEARS OF EXPERIENCE 17		
WITH THIS FIRM 12		WITH LAST FIRM 6		WITH OTHER FIRMS		WITH THIS FIRM 6		WITH LAST FIRM 10		WITH OTHER FIRMS 1	
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						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) 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						REGISTRATION (TYPE, YEAR, STATE)					

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME		STATUS (Underline)	NAME		STATUS (Underline)
Anne Brasher		<u>Part-Time</u>	Michael Donoho		<u>Part-Time</u>
TITLE OR POSITION		YEARS OF EXPERIENCE	TITLE OR POSITION		YEARS OF EXPERIENCE
Senior Aquatic Biologist		36	Senior Planner/Natural Resources Specialist		24
WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS	WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
5	12	19	4	4	16
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)			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			M.S. Urban and Regional Planning (MURP), UH Manoa, 2001 B.A. Anthropology; Environmental Science, UH Manoa, 1991		
REGISTRATION (TYPE, YEAR, STATE)			REGISTRATION (TYPE, YEAR, STATE)		
			AICP (025660)		
NAME		STATUS (Underline)	NAME		STATUS (Underline)
Yvonne Katrin Parry		<u>Full-Time</u>	Douglas Lantz		<u>Full-Time</u>
TITLE OR POSITION		YEARS OF EXPERIENCE	TITLE OR POSITION		YEARS OF EXPERIENCE
Environmental Chemist		21	Hydraulic Engineer/Principal Project Manager		35
WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS	WITH THIS FIRM	WITH LAST FIRM	WITH OTHER FIRMS
16	2	3	26	9	
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)			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			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)			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			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 Jason Broderson		STATUS (Underline) <u>Full-Time</u>	NAME Joel Peters		STATUS (Underline) <u>Full-Time</u>
TITLE OR POSITION Program Manager		YEARS OF EXPERIENCE 36	TITLE OR POSITION GIS Specialist/Cartographer		YEARS OF EXPERIENCE 28
WITH THIS FIRM 34	WITH LAST FIRM 1	WITH OTHER FIRMS 1	WITH THIS FIRM 28	WITH LAST FIRM	WITH OTHER FIRMS
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) B. S. Geophysics, University of California, Santa Barbara, 1987			EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) Certificate in Geographic Information Systems, The Pennsylvania State University, 2003 B.A., Geography, University of North Texas, Denton, TX, 1995		
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			REGISTRATION (TYPE, YEAR, STATE) Certified GIS Professional (GISP) #00037616, The GIS Certification Institute, 2004		
NAME Jason Fussel		STATUS (Underline) <u>Full-Time</u>	NAME Susan Pankenier		STATUS (Underline) <u>Full-Time</u>
TITLE OR POSITION Vice President / Civil Engineer		YEARS OF EXPERIENCE 21	TITLE OR POSITION Client Manager/Operations Director		YEARS OF EXPERIENCE 23
WITH THIS FIRM 21	WITH LAST FIRM	WITH OTHER FIRMS	WITH THIS FIRM 16	WITH LAST FIRM 7	WITH OTHER FIRMS
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) B.S. Civil Engineering, California Polytechnic State University, San Luis Obispo, 2003			EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) B.A. Environmental Analysis and Design, University of California, Irvine, 2001		
REGISTRATION (TYPE, YEAR, STATE) Registered Civil Engineer, 2007, CA; Licensed Land Surveyor, 2013, CA; Registered Civil Engineer, 2013, HI			REGISTRATION (TYPE, YEAR, STATE) Air and Waste Management Association (AWMA)		

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME Lara Reynolds		STATUS (Underline) <u>Full-Time</u>	NAME Kayla Yost		STATUS (Underline) <u>Full-Time</u>
TITLE OR POSITION Biologist		YEARS OF EXPERIENCE 16	TITLE OR POSITION Environmental Planner		YEARS OF EXPERIENCE 11
WITH THIS FIRM 3	WITH LAST FIRM 3	WITH OTHER FIRMS 10	WITH THIS FIRM 3	WITH LAST FIRM 5	WITH OTHER FIRMS 3
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) M.S. Botany, University of Hawaii, 2011 B.A. Botany, Highest Honors, University of Hawaii, 2007			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)			REGISTRATION (TYPE, YEAR, STATE)		
NAME Christopher Todd		STATUS (Underline) <u>Full-Time</u>	NAME Michelle Reynolds		STATUS (Underline) <u>Part-Time</u>
TITLE OR POSITION Wildlife Biologist		YEARS OF EXPERIENCE 19	TITLE OR POSITION Senior Wildlife Ecologist		YEARS OF EXPERIENCE 29
WITH THIS FIRM 5	WITH LAST FIRM 1	WITH OTHER FIRMS 13	WITH THIS FIRM 4	WITH LAST FIRM 25	WITH OTHER FIRMS
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			EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) PhD Biology, Virginia Polytechnic Institute and State University, 2004 M.S. Ecology, Old Dominion University B.S. Biology, Virginia Polytechnic Institute and State University		
REGISTRATION (TYPE, YEAR, STATE)			REGISTRATION (TYPE, YEAR, STATE)		

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME Jamie Tanino		STATUS (Underline) <u>Part-Time</u>	NAME Spencer Engler		STATUS (Underline) <u>Part-Time</u>
TITLE OR POSITION Biologist / Rare Snail Specialist		YEARS OF EXPERIENCE 18	TITLE OR POSITION Biologist		YEARS OF EXPERIENCE 13
WITH THIS FIRM 3	WITH LAST FIRM 2	WITH OTHER FIRMS 13	WITH THIS FIRM 5	WITH LAST FIRM 4	WITH OTHER FIRMS 4
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) B.S. Natural Resource and Environmental Management, University of Hawaii Manoa, 2005			EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) B.S. Natural Resources Management (Emphasis Wildlife Management) Grand Valley State University, Michigan, 2012.		
REGISTRATION (TYPE, YEAR, STATE)			REGISTRATION (TYPE, YEAR, STATE)		
NAME Stephanie Nagai		STATUS (Underline) <u>Full-time</u>	NAME Meg Reesor		STATUS (Underline) <u>Full time</u>
TITLE OR POSITION Project Manager		YEARS OF EXPERIENCE 11	TITLE OR POSITION GIS Scientist		YEARS OF EXPERIENCE 5
WITH THIS FIRM 1	WITH LAST FIRM 6	WITH OTHER FIRMS 4	WITH THIS FIRM 1	WITH LAST FIRM 2	WITH OTHER FIRMS 2
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			EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) B.S. Environmental Geography, (Minors in GIS and Environmental Sustainability), Michigan State University, 2017		
REGISTRATION (TYPE, YEAR, STATE)			REGISTRATION (TYPE, YEAR, STATE)		

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
<u>YES</u>	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 (Nationally)**

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 (Nationally)

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 (Hawaii Office)

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, Industrial, Commercial 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	CONST.
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%	
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%	
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%	
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%	
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%	
2005-present	Non-Emergency Environmental Services for the State of Hawaii Department of Health, Hazard Evaluation and Emergency Response Office	Eric Jensen	Hawaii Department of Health (DOH) Hazard Evaluation and Emergency Response HEER) Office, Honolulu, HI Harold Lao 808.586.4253	\$12M	Currently in year 1 of 4th 5-year contract (at 168 months)	ongoing	
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%	
2013	Ha'ena State Park and Na Pali Coast State Wilderness Park Field Investigation and Concept Report for Proposed Park Improvements	Eric Jensen	Hawaii Department of Land and Natural Resources (DLNR) Roger H. Masuoka 808.587.0276	\$30,365	4 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%	

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	CONST.
2008-2013	Technical Support to the Papahānaumokuākea Marine National Monument	Catherine Courtney	NOAA National Marine Sanctuary Program Aulani Wilhelm 808.397.2660	\$970,000	60 months	100%	
2010-2012	Brownfields Redevelopment Support at a Mixed-use Commercial Property with Former Gas Station, Automobile Repair Facility, and Suspected Dry Cleaning Operations	Eric Jensen	Target Corp., Pre Construction Environmental Minneapolis, MN Dan Barrett 612.730.6534	\$200,000	24 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%	
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%	
2011-2013	Environmental Support Services	Eric Jensen	University of Hawaii Institute for Astronomy and Pan-STARRS, Honolulu, HI William Burgett 808.988.8965	\$40,000	24 months	100%	

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	CONST.
2007-present	Environmental Support Services for Military Housing Redevelopment, Joint Base Pearl Harbor Hickam, Hawaii	Yvonne Parry	Hickam Communities LLC Honolulu, HI 96818 Jim Switzer 254.289.7163	\$4.2 million	84 months	85%	
2002-2009	Environmental Impact Statement Military Training Activities at Makua Military Reservation, Hawaii, and Various Environmental Studies	John Bock	US Army Corps of Engineers, Honolulu District Fort Shafter, HI Uyen Tran 808.438.0512	\$3.7 million	86 months	100%	
2009	Stormwater Management Plan and NPDES Permit Support, University of California, Santa Barbara, California	Tim Tringali	University of California, Santa Barbara Environmental Health and Safety Santa Barbara, CA 93106 Ali Aghayan 805.893.7534	\$34,000	8 months	100%	
2011	Environmental Assessment for the Kalakaua Phase 3 Housing Development, Schofield Barracks, Hawaii	Yvonne Parry	Island Palm Communities, LLC Schofield Barracks, HI Mike Barstis 808.687.8322	\$92,000	7 months	100%	
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	ongoing (at 168 months)	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%	
2007-2016	Sand Island Vehicle Maintenance Facilities Groundwater Investigation and Monitoring	Yvonne Parry	US Postal Service Honolulu, HI 96819 Gerard Koontz, Manager 808. 832.3265	\$250,000	108 months	100%	

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
2013-2014	Lalamilo Wind Farm Big Island, Hawaii		Lalamilo Wind Company Richard Horn 530.342.8545	Confidential	12 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 (at 72 months)	ongoing
2009-present	Auwahi Wind Farm Maui, Hawaii	Alicia Oller	Auwahi Wind Energy, LLC Marie VanZandt 619.228.7340	Confidential	Ongoing	ongoing
2007-2014	Lanai Met Tower Wind Farm Project Lanai, Hawaii	Alicia Oller	Castle & Cooke Doug McClafin 808.559.3924	Confidential	84 months	100%
2014	Professional Services for Community Planning	Alicia Oller	DBEDT, Strategic Industries Division 250 S. Hotel St., 5th Floor, Room 501 Honolulu, Hawaii 96813	Confidential	6 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%
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, Joint Base Pearl Harbor-Hickam (JBPHH) & Pacific Missile Range Facility (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%

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
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%
2018-2020	Soil Stockpile Characterization, Kalaeloa Heritage and Legacy Foundation Park, Kalaeloa, Oahu, HI	Eric Jensen	Hawaii Community Development Authority 547 Queen St., Honolulu, HI 96813, Neal Imada 808.392.1401	\$100,000	24 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 Within the Maunaloa Bay Watershed, Oahu, HI	Catherine Courtney	Malama Maunaloa, 7192 Kalaniana'ole Hwy., Suite A143A, Honolulu, HI 96825. Doug Harper 808.395.5050	\$46,000	18 months	100%
2020-2021	Natural Resources Inventory, Coast Guard Air Station Barbers Point. HI	Eric Jensen	USCG FD&CC DET SEATTLE Maria Colville, Contract Specialist 206.220.7426	\$13,050	12 months	100%
2020-2022	Programmatic Agreements with Hawaii SHPD and Natural Resource Agencies for Management of Archaeological and Natural Resources as Air Station Barbers Point, HI	Eric Jensen	USCG FD&CC DET SEATTLE Maria Colville, Contract Specialist 206.220.7426	\$380,000	24 months	100%
2020-2021	City & County of Honolulu Participation in the Community Rating System, Oahu, HI	Catherine Courtney	City & County of Honolulu, Office of Climate Change, Sustainability and Resiliency 650 King St., 11th Floor, Honolulu, HI 96813 Mathew Gonser, Chief Resilience Officer, Executive Director 808.768.2276	\$110,000	12 months	100%
2022-present	Environmental Site Assessment – Poamoho Fire Site	Eric Jensen	Agribusiness Development Corporation (ADC) 235 S. Beretania St., Room 205, Honolulu, HI 96813 Mr. Ken Nakamoto 808.586.0087	\$235,122	36 months	ongoing, 50%
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%

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	
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 Ms. Ruby Pap 808.956.3010	\$98,236	22 months	40%	
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	30%	
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	25%	
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%	
2024-present	Construction Environmental Support Hawaii Public Housing Authority Redevelopment Project 1002 North School Street	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 Mr. 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 Mr. 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 Mr. Kaloa Robinson	\$ 5,000	6 months	70%	

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-present	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	\$128 M	\$3+ M	60 months	Cardno-AECOM JV	95%	

Explain firm’s individual project assignment, project management structure, project execution (workflow 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 billion and employs 28,000 personnel in 550 offices worldwide, with an average personnel count company-wide of more than 27,000 employees during each of the past 5 years.




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 June 30, 2024, the foregoing is a true statement of facts.

NAME OF FIRM OR INDIVIDUAL SUBMITTING QUESTIONNAIRE	TYPE NAME AND TITLE OF PERSON SIGNING	SIGNATURE
Tetra Tech, Inc.	Eric M. Jensen, CHMM Operations Manager	

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 DAGS.

PRINCIPALS ONLY - ADDITIONAL INFORMATION

NAME Eric M. Jensen, CHMM		TITLE AND POSITION Operations Manager		YEARS WITH FIRM 14	
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.					
<u>PRIOR EMPLOYMENT</u>					
(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: EBI Consulting		DATE FROM: 2003 TO: 2010		FIRM: Earth Tech, Inc.	
				DATE FROM: 1995 TO: 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 Alicia Oller	TITLE AND POSITION Vice President, Environmental and Energy Programs	YEARS WITH FIRM 17
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: Audubon Environmental	DATE FROM: 2000 TO: 2007	FIRM: Hartman & Associates (acquired by Tetra Tech)	DATE FROM: 1997 TO: 2000
ADDRESS: Orlando, Florida and Vancouver, Washington		ADDRESS: Orlando, Florida	
JOB TITLE: Director of Technical Services		JOB TITLE: Associate/Project Manager	
SUPERVISOR'S NAME AND TITLE: Bud Smart, President		SUPERVISOR'S NAME AND TITLE: William Musser, Vice President	
MAJOR DUTIES: Led sustainability certification program, project management, technical and client services		MAJOR DUTIES: Project management, technical and client services, staff management	

1. Experience and Professional Qualifications Overview

Tetra Tech, Inc. (Tetra Tech) is a full-service environmental science, planning, and engineering firm with more than 550 offices and approximately 28,000 employees worldwide. Our integrated team of professionals provides technical experience based on decades of work supporting a diverse base of government agency and private industry clients across the State of Hawai'i, continental U.S., and internationally. The company was founded in 1966, and became a publicly traded company (NASDAQ-TTEK) in 1991. Tetra Tech is a leading provider of environmental, permitting, engineering, and construction services for the development, construction, and operational phases of development projects. 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 58 years of experience nationally, and more than 34 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 Hawai'i. We have provided full environmental and construction support to developers such as 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 Hawai'i Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office, the Hawai'i Department of Land and Natural Resources (DLNR), and Hawai'i 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 Hawai'i 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/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 unequalled 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.



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 habitats 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 planning, 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 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 (AAUS) and commercial divers certified by the Association of Diving Contractors International (ADC) divers, vessels, remotely operated underwater vehicles, and other relevant equipment.



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, 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.

Environmental Impact Statements and Environmental Assessments

Tetra Tech has extensive NEPA and HEPA experience having completed over 500 NEPA EAs, EISs, and state equivalent documents as well as supporting technical studies for large-scale resource management, energy (wind, solar, hydropower, electric transmission, oil and gas), water resources, infrastructure, and other projects. We have successfully prepared NEPA documents for various federal agencies such as 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 Hawai'i Revised Statute (HRS) and in accordance with Hawai'i 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. Tetra Tech understands 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 a NEPA EIS and a HEPA EIS for the Na Pua Makani Wind Project on O'ahu'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 Papahānaumokuākea 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. More recently, Tetra Tech completed a HEPA EA for the Hawaiiki 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, Hawai'i. 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 Hawai'i project experience related to EAs and EISs are listed in Table 1 below.



Federal, State, and County Environmental Permitting Support

Tetra Tech has a nearly 16-year track record for leading federal, state, and county environmental permitting in Hawai'i. 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 Hawai'i, 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 Corps of Engineers (USACE) to Conservation District Use Permits from DLNR and CWA

Section 401 Water Quality Certifications from the Hawai'i DOH.

Habitat Conservation Plans (HCPs) for Incidental Take License and Incidental Take Permit (ITL/ITP)

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.

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 O'ahu, 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.

Ecosystem Restoration Services

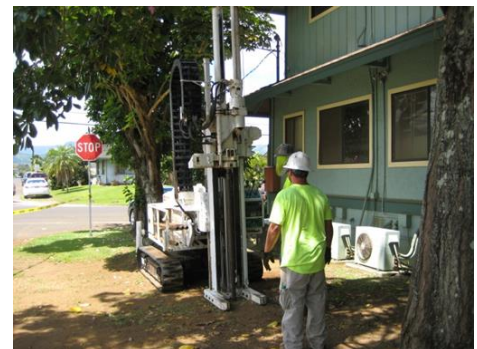
In partnership with our clients, Tetra Tech brings together experts in science, engineering, and permitting to ensure that the biological and physical components of restoration projects are addressed to achieve all project goals. We develop cost-effective restoration solutions, regardless of the challenging 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.

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 team 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.

Environmental Contamination and Site Investigations

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 (ESA) for properties ranging from small gas stations with one underground storage tank 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 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability. 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 Hawai'i alone, we have performed hundreds of Phase I and Phase II investigations (soil and groundwater investigations), as well as soil import/export investigations for 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 Department of Health (DOH) Hazard Evaluation and Emergency Response (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 (CEHMP).

One of our hallmark environmental site investigations was performed for DR Horton and University of Hawai'i in advance of the redevelopment of agricultural lands for the Ho'opili master planned community and West O'ahu 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 Hawai'i 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, O'ahu, Hawai'i continuously since 2006 to facilitate the characterization, cleanup, and soil management of pesticide-impacted soils. During HC's redevelopment activities, Tetra Tech has provided the following services: characterizing residual pesticides in soil using multi-increment sampling; creating field sampling plans, health and safety plans, and a RI report; 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/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.

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 2013 and again in 2019, the Climate Change Business Journal honored Tetra Tech with the Climate Risk Management and Adaptation award for providing integrated solutions to climate change.



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 Hawai'i 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 Hawai'i Department of Land and Natural Resources (DLNR), contracted Tetra Tech to prepare the Hawai'i 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 Hawai'i, 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 Hawai'i, state and county governments, and the Hawai'i Climate Mitigation and Adaptation Commission—to produce the Report.

In addition, Tetra Tech was contracted by the Hawai'i 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 Hawai'i 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 Hawai'i 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.

In 2023, Tetra Tech was contracted by the State of Hawaii, Office of Planning and Sustainable Development, Department of Business, Economic Development & Tourism (DBEDT) to perform a Regional Shoreline Management Scoping Study. Tetra Tech developed a recommended methodology for delineating shoreline regions and subregions. A comparative literature review was conducted to compare and contrast methodologies for delineating regions and subregions that could be appropriate for Hawai'i's complex shoreline. The review included the U.S. northeast, west, and northwest coasts, Australia, and Hawai'i. The methodology defines data sources and a process for defining shoreline regions and subregions. The methodology was applied to shorelines on O'ahu, Maui, and Kaua'i. Tetra Tech developed a 5-year roadmap with recommendations for implementing a regional shoreline management approach based on a review of the existing shoreline management framework in Hawai'i, implementation challenges and opportunities, and stakeholder input.

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
- Compensatory mitigation plans
- Fish and aquatic macroinvertebrate surveys
- Instream Flow Studies
- Riparian habitat surveys
- Water quality sampling and monitoring
- Noise analysis (underwater and terrestrial)
- GIS desktop screening analysis
- Critical Issues Analyses (CIA)
- Construction environmental training
- 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 Hawai'i 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 (Ongoing)
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-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, 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 (Ongoing)

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
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 (Ongoing)
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 (Ongoing)
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 O'ahu 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 Ko'olaupoko 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

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
Hawaiian Electric Company, Inc.	Missile Defense Agency Homeland Defense Radar Project	<p>The Missile Defense Agency (MDA) Homeland Defense Radar Project is one component of MDA’s worldwide missile defense system and is intended 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 to the due diligence and technical resource documents, including those related to biological and archaeological surveys, cultural assessments, and community outreach.</p>	2018 to 2021
AES Distributed Energy	Kuihelani Solar Plus Storage Project	<p>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-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, 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.</p>	Sept 2018 to present (Ongoing)
AES Distributed Energy	Waikoloa Solar Plus Storage Project	<p>Tetra Tech is providing strategic planning and permitting assistance to AES Distributed Energy for a 30-megawatt storage project in the Waikoloa District of Hawai’i. 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.</p>	Sept 2018 to present (Ongoing)

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
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.	Jan 2019 to present (Ongoing)
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 Critical Issues Analysis (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.	Nov. 2017 to Jan. 2018
Confidential Client	Confidential Project #3	Tetra Tech conducted a CIA for is 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.	Nov. 2017 to Jan. 2018

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
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.	Nov. 2017 to present (Ongoing)
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.	Nov. 2017 to present (Ongoing)
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.	Nov. 2017 to present (Ongoing)
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 (Ongoing)

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
Na Pua Makani Power Partners, LLC	Na Pua Makani Wind Project	Na Pua Makani Wind project is located near Kahuku, O’ahu. Tetra Tech led the environmental permitting and planning for the project which included a NEPA EIS, HEPA EIS, a joint federal and state Habitat Conservation Plan (HCP) for Incidental Take Permit (ITP) and an Incidental Take License (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.	2013 to present (Ongoing)
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 O’ahu. 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, U.S. Army Corps of Engineers (USACE), and prepared an Essential Fish Habitat (EFH) Assessment for the National Oceanic & Atmospheric Administration (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 (Ongoing)

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
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 Hawai'i Department of Land and Natural Resources (DLNR)/Division of Forestry and Wildlife (DOFAW) to develop a joint HCP to obtain an Incidental Take Permit (ITP) and an Incidental Take License (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 Supplemental EIS (SEIS) for the Project. Tetra Tech continues to support the project by providing ongoing environmental compliance support.	2009 to present (Ongoing)
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 (Ongoing)
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 (Ongoing)
Verizon Wireless (VZW)	Environmental Programmatic Support and Mobi PCS Acquisition	Tetra Tech provides comprehensive environmental program support to VZW in Hawai'i. 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 (Ongoing)

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
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, O’ahu. 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
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. Ka’ala and provides service to the Federal Aviation Administration (FAA) tracking station. Approximately 1.8 miles of the existing line near the top of Mt. Ka’ala 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 a Habitat Conservation Plan (HCP).	2017 to present (Ongoing)
Castle & Cooke	Lāna’i 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 Lāna’i and O’ahu. 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 Hawai’i. 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	Critical Issue Analyses (CIA) for several proposed commercial wind, solar, hydro-pumped storage, and other energy projects in Hawai’i	Tetra Tech has completed a number of CIAs for renewable energy developers in Hawai’i 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

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
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
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 will present the variance request before the Board of Variances and Appeals.	2016 to 2017
D.R. Horton and University of Hawai'i	Ho'opili and University of Hawai'i West O'ahu Campus Environmental Investigation for Redevelopment of Agricultural Lands, O'ahu, 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

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
Island Palm Communities LLC	Environmental Support Program at Army Installations, Oahu	<p>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.</p> <p>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.</p> <p>Examples of these services are: Soil characterization using a multi-incremental (MI) sampling 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.</p>	2005 to present (Ongoing)
Hickam Communities LLC	Environmental Support Program at Joint Base Pearl Harbor-Hickam	<p>Tetra Tech is contracted by Hickam Communities LLC to facilitate the characterization, cleanup, and management of pesticide-impacted soil at housing units across Joint Base Pearl Harbor-Hickam (JBPHH), Oahu, Hawaii. In addition, Tetra Tech performs indoor air sampling and hazardous materials surveys within Hickam's historic neighborhoods.</p> <p>During HC's redevelopment activities, Tetra Tech has provided the following services: characterizing residual pesticides in soil using MIS sampling; creating field sampling plans (FSPs), health and safety plans (HASP), 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 Land Use Controls Inventory Document (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 (ESAs).</p>	2006 to present (Ongoing)

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
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 Hawai'i in support of property transfers.	2008 to 2010
Army Hawai'i Family Housing	Environmental Closure Report (ECR) for Porter Neighborhood, O'ahu, 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 (Ongoing)
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 Hawai'i 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 Hawai'i	Tetra Tech provided asbestos survey support for three existing Hawai'i Target stores that were renovated to include the expanded "Pfresh" grocery concept. The scope also included: performing ACM surveys at three Hawai'i 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 Kaua'i, 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 multi-incremental sampling (MIS), to assess potential for environmental impact based on historical use of the property for sugar mill operations since 1850.	2008 to 2010

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
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 Hawai'i 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 O'ahu, 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 Hawai'i.	2007 to present (Ongoing)
Estate of James Campbell and Tetra Tech, Inc.	Kahuku Sugar Mill Voluntary Response Program, O'ahu, 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 2021
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, O'ahu, 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: review Phase I and Phase II Reports prepared by others for Campbell properties, and provide professional opinion and recommendations; provide soil import/export characterization and monitoring services; and prepare Property Condition Assessment (PCA) reports.	2003 to present (Ongoing)
National Disaster Preparedness Training Center (NDPTC) at the University of Hawai'i	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

Client(s)	Project Name	Description	Period of Performance
Private Sector Clients			
Hawaiian Dredging Construction Co., Inc. End Client: Hawaii Public Housing Authority (HPHA)	Construction Environmental Support Hawaii Public Housing Authority Redevelopment Project 1002 North School Street	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 Construction Environmental Hazard Management Plan (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 Department of Health (HDOH) Hazard Evaluation and Emergency Response (HEER) Office. Activities to date have included characterization of shallow soil across 20 Decision Units (DUs) at the site, via a Geoprobe drilling rig using the multi-increment sampling (MIS) technique. The soil analytical data will be used for soil management during the extensive excavation required for site redevelopment. Tetra Tech has also performed hazardous materials surveys, to evaluate the potential presence of lead based paint (LBP) and asbestos containing materials (ACM) in buildings slated for demolition. A soil vapor study has also been 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. This project involves significant coordination between Hawaiian Dredging, HPHA, and the HEER Office due to the iterative nature of the site construction activities.	Jan. 2024 to present (Ongoing)
HCosta End Client: HPHA	Lanakila Homes IV, Environmental Support Services, Hilo, Hawaii	Tetra Tech provided technical support and coordination with HDOH HEER Office during the notification process related to the proposed geotechnical survey at the site. Tetra Tech will also provide support to obtain a No Further Action with IC (intuitional controls) letter from HDOH for the Site. Perform Qualified Environmental Professional (QEP) oversight of geotechnical borings. Coordinate disposal of geotechnical soil samples.	Jan. 2024 to present (Ongoing)
Hawaii Pacific Health	Straub Parking Garage, Environmental Support Services, Honolulu, Hawaii	Prepare a Construction Environmental Hazard Management Plan (CEHMP), perform CEHMP support services including Qualified Environmental Professional (QEP) oversight of impacted soil removal related to building pile installation and foundation excavations; perform pre-demolition Hazardous Materials Surveys for ACM and LBP. Perform in-situ soil sampling to characterize existing fill material for proper on-and off-site management.	Jan. 2024 to present (Ongoing)
Pacific Shipyards	Piers 24 & 25 Improv OS & Sampling, Environmental Support Services, Honolulu Harbor, Hawaii	Perform Construction Environmental Hazard Management Plan (CEMP) support services including Qualified Environmental Professional (QEP) oversight of impacted soil removal related to new electrical vault and associated dewatering operations. Work performed in accordance with HDOH HEER Office guidance and coordination. Design vapor mitigation system for new paint booth and related soil management during paint booth installation.	Jan. 2024 to present (Ongoing)
Stanford Carr Development LLC	Hale Moiliili Redevelopment, Environmental Support Services, Honolulu, Hawaii	Preparation of a Construction Environmental Hazard Evaluation and Environmental Hazard Management Plan (EHE/EHMP) for the Hale Moiliili project in accordance with HDOH HEER Office guidance and coordination.	Jan. 2024 to present (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 currently performing site characterization services at the former illegal dump site in Poamoho, near Whitmore Village. The focus of the site assessment is characterization of shallow soil conditions in the area 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.	2021 to present (Ongoing)
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	Hawai‘i Sea Level Rise Vulnerability and Adaptation Report, Statewide, Hawai‘i (Job No. J40AS99A)	Tetra Tech is providing 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 Hawai‘i 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
DLNR, Engineering Division	Ha‘ena State Park and Nāpali Coast State Wilderness Park - Park Improvements	Tetra Tech provided technical support services to DLNR in support of Nā 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 Hanakāpī‘ai Beach; preparing a Special Management Area Major Permit for the County of Kaua‘i.	2014 to 2021
DLNR, Engineering Division	Ha‘ena State Park and Nāpali 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 Ha‘ena State Park and Nāpali 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

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
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 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)	Wai’anae 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 Wai’anae 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 Wai’anae 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
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 to present (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 Hawai’i and assisted DBEDT Energy Office with identifying strategic operational goals and potential updates to HRS Chapter 201N.	2014

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
DBEDT, Office of Planning, Hawai'i State Coastal Zone Management (CZM) Program	Hawai'i Watershed Guidance	Tetra Tech prepared the Hawai'i 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 Hawai'i's Coastal Nonpoint Pollution Control Program, and incorporated Hawai'i'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 Hawai'i Coastal Zone Management Program, Department of Health, and other stakeholders and prepared an outreach strategy to disseminate the Guidance throughout Hawai'i.	2009 to 2010
DBEDT, Office of Planning, Hawai'i State CZM Program	Wai'anae 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 ahupua'a management initiatives.	2003 to 2004
DBEDT, Office of Planning, Hawai'i State CZM Program	Hawai'i 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 Hawai'i Ocean Resources Management Plan incorporating comments from multiple agencies and organizations; preparing public comment summary.	2005 to 2006
DBEDT, Office of Planning, Hawai'i State CZM Program	Development of a Moku Management Framework for the State of Hawai'i	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
DBEDT, Office of Planning, Hawai'i State CZM Program	Hawai'i 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
Hawai'i Air National Guard	Hazardous Waste Management and Inspections, Big Island, Maui, O'ahu, HI	Tetra Tech developed a Hazardous Waste Management Plan (HWMP) for the Hawai'i Air National Guard (HIANG). The plan covered the primary operations located at Joint Base Pearl Harbor-Hickam (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

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
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)	Hawai’i Regional Catastrophic Planning Grant) RCPG FY09 Public Disaster Awareness Campaign Project	Tetra Tech lead 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 Hawai’i. 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 underserved 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
CCH DEM	Hawai’i RCPT Population Redistribution Analysis Report	Under contract with the City and County of Honolulu’s DEM, on behalf of the Hawai’i Regional Catastrophic Planning Team (RCPT), and inclusive of the Counties of Maui, Kaua’i, and Hawai’i, 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

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
CCH DEM	Hawai'i RCPT Regional Resource Database	Under contract with the City and County of Honolulu's DEM, on behalf of the Hawai'i Regional Catastrophic Planning Team (RCPT), and inclusive of the Counties of Maui, Kaua'i, and Hawai'i, 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	Hawai'i RCPT Strategic Plan and Grant Closeout Deliverables	Under contract with the City and County of Honolulu's DEM, on behalf of the Hawai'i Regional Catastrophic Planning Team (RCPT), and inclusive of the Counties of Maui, Kaua'i, and Hawai'i, 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 (Ongoing)

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
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
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

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
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
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 (Ongoing)
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 (Ongoing)
Maui County Department of Environmental Management, Solid Waste Division	Site Investigation of the Moloka'i 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 Moloka'i Metals Facility (MMF), related to the current MMF staging area and the former baler operational area; required by the Hawai'i Department of Health, Solid and Hazardous Waste Branch (HDOH SHWB) as part of the permitting for construction of a new concrete pad.	2012

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
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 Hawai'i Emergency Management Agency and FEMA Region IX for review, and was immediately approved with minimal comment.	2014 to 2015
Hawai'i Department of Health (DOH), Hazard Evaluation and Emergency Response (HEER) Office	Non-Emergency Environmental Services for the State of Hawai'i 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; [ongoing])
Hawai'i 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 Kaua'i 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

Client(s)	Project Name	Description	Period of Performance
State and County Agencies (Statewide)			
DOH HEER Office	Kaua'i County HazMat Annex Development	Similar process as Maui. Tetra Tech reviewed and revised the Kaua'i 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.	2016
DOH HEER Office	Hawaii County HazMat Annex Development	Similar process as Maui. Tetra Tech reviewed and revised the Kaua'i 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.	2017
DOH HEER Office	City & County of Honolulu HazMat Annex Development	Similar process as Maui. Tetra Tech reviewed and revised the Kaua'i 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.	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
State and County Agencies (Statewide)			
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 Multi-Increment Sampling (MIS) method, with 70 test pits advanced by an excavator for sample collection. The sample plan required approval by the Hazard Evaluation and Emergency Response (HEER) Office; the HDOH Indoor and Radiological Health Branch (IRHB); and, HDOH Solid and Hazardous Waste Branch (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
State and County Agencies (Statewide)			
University of Hawai'i Institute for Astronomy and Pan-STARRS	Environmental Support Services Mauna Kea, Big Island, HI Haleakalā, 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 Environmental Site Assessment (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 asbestos-containing material (ACM) and lead-based paint (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 Hawai'i)			
National Oceanic & Atmospheric Administration (NOAA), Office of National Marine Sanctuaries, Kihei, Hawai'i	Technical Support to the Papahānaumokuākea 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 Papahānaumokuākea Marine National Monument	Tetra Tech assisted the USFWS in drafting portions of the Papahānaumokuākea 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 Pacific Missile Range Facility (PMRF) on the islands of O'ahu and Kaua'i, 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, Hawai'i	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
Federal Agencies (in Hawai'i)			
NOAA, Pacific Services Center, Honolulu	Hawai'i Marine Debris Action Plan and At-Sea Detection Strategy	Tetra Tech prepared the Hawai'i 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 Geographical Information Systems (GIS) overlays, and developed an impact method to identify least impact alternative water training areas (WTAs) in Hawai'i waters.	2010 to 2012
NOAA, Pacific Services Center, Honolulu	Coastal Community Resilience Assessment, Hilo, Hawai'i	Tetra Tech worked with the County of Hawai'i to increase awareness of coastal hazards in the Ka'u community and to integrated resilience practices into the Ka'u 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 Hawai'i County stakeholders to identify opportunities to enhance community resilience through the community development planning process.	2009 to 2010
U.S. Army Corps of Engineers (USACE), Honolulu District, Fort Shafter, HI (Sub to Kennedy/Jenks Consultants)	Hawai'i 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

Client(s)	Project Name	Description	Period of Performance
Federal Agencies (in Hawai'i)			
USACE, Honolulu District Fort Shafter, HI	Environmental Impact Statement Military Training Activities at Mākua Military Reservation, Hawai'i, 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 Mākua Military Reservation on O'ahu. 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 Mākua 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, Hawai'i	Tetra Tech performed a Remedial Investigation (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 – O'ahu, Maui, Kaua'i, Big Island, Hawai'i	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 Hawai'i'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 Hawai'i'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
NAVFAC, Pacific Division	Pacific Marine Resource Assessment Update Hawai'i, 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 Hawai'i 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

Client(s)	Project Name	Description	Period of Performance
Federal Agencies (in Hawai'i)			
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 Hawai'i, 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 O'ahu. 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 United States Fish and Wildlife Service and National Environmental Policy Act (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
Federal Agencies (in Hawai'i)			
National Park Service	Haleakala National Park Avian Malaria Suppression Efforts	<p>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 National Environmental Policy Act (NEPA) and the Hawaii Environmental Policy Act (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.</p>	2020 to present

Client(s)	Project Name	Description	Period of Performance
Academic Clients			
University of Hawaii (UH) Sea Grant College Program	Disaster Recovery Preparedness	The Guidance for Disaster Recovery Preparedness in Hawaii was developed to help state and county planners: (a) improve governance structure for recovery functions, (b) identify pathways to pursue critical disaster recovery preparedness activities to support resilient recovery and reconstruction, (c) encourage integration of disaster recovery preparedness efforts among related plans and policies. This Guidance and can be found here: http://seagrant.soest.hawaii.edu/wp-content/uploads/2019/07/HI_Disaster_Recovery_Preparedness_Guidance_Final_26June2019.pdf	2017 to 2020
UH Sea Grant College Program	Sea Level Rise in Community Planning	The Guidance for Addressing Sea Level Rise in Community Planning in Hawaii was developed to assist counties together with their communities and partners address sea level rise through their existing planning processes and provides examples and resources to support the planning. This Guidance will be available in July 2020.	2017 to 2020
UH Sea Grant College Program	Baldwin Beach Dune Restoration Project	Tetra Tech, Inc. provided coastal engineering expertise and developed site-specific plans for dune restoration for Baldwin Beach Park. The University of Hawai'i Sea Grant Program (Hawai'i Sea Grant) was awarded a grant from the National and Fish and Wildlife Foundation Coastal Resilience Fund to develop site-specific plans for dune restoration at Kapuka'ulua (Baldwin Beach) from Lower Paia Park to Wawau Point. In the face of sea level rise, the long-term goal of the project is to implement dune restoration activities that have the complimentary benefits of ecosystem restoration and community resilience. Restoration strategies and detailed site plans are being developed by Tetra Tech for 5 specific dune restoration zones. As part of the project, Tetra Tech also assisted Hawai'i Sea Grant in developing and implementing an outreach plan and materials to support the project deliverables.	2020 to 2021
UH Sea Grant College Program County of Kaua'i Planning Department	Building Back Better: Pre-Disaster Recovery Planning in Kaua'i, Hawai'i	The project will result in a Pre-Disaster Recovery Framework (PDRF) for the County of Kaua'i (County) that builds on existing County planning efforts in collaboration with multiple County Departments, external organizational stakeholders, and community members in vulnerable and underserved communities. The PRRF will support a process for expediting recovery after a catastrophic natural disaster, such as a hurricane or a tsunami and outline a shared recovery organization and authority structure to triage decision-making for community recovery. This planning effort will explicitly include chronic climate change hazards like sea-level rise and social equity concerns as part of the decision making process for disaster recovery.	2023-ongoing

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. An asterisk * denotes a candidate degree in the table.

Staff	Role	Highest Degree	Years of Experience
Agostini, Tiffany	Senior Biologist / Project Manager	MS	17
Andrews, Jeremy, P.E.	Civil Engineer	BS	22
Brasher, Anne	Senior Water Quality and Aquatic Scientist	PhD	36
Brimacombe, Karen	Botanist / Ecologist	MS	23
Brodersen, Jason PG	Program Manager / Geologist	BS	36
Burkett, Jason PE	Civil / Structural Engineer	MS	18
Courtney, Kitty	Senior Marine Environmental Scientist	PhD	36
Del'Homme, Stephen PE	Engineering Director	MBA	41
Dick, Kristina GISP	GIS Specialist	MS	16
Donoho, Mike AICP	Senior Environmental Planner	MUPR	24
Dutton, Jacob	Biologist	BS	16
Engler, Spencer	Biologist	BS	11
Fussel, Jason PE	Civil Engineer / Project Manager	BS	21
Hurley, Susan	Senior Biologist / Project Manager / Operations Manager	MS	24
James, Chris	Hydrologist / Aquatic Habitat Restoration and Fish Passage Specialist	MS	19
Jensen, Eric CHMM	Operations Manager / Senior Program Manager	BS	35
Kettley, Lisa	Senior Project Manager / Environmental Scientist	MS	26
McClain, Leslie	Senior Environmental and Urban Planner	BA	18
Nagai, Stephanie	Project Manager	MA	11
Oller, Alicia	Vice President / Environmental & Energy Programs	MS	35
Parry, Yvonne	Program Manager / Environmental Chemist	MS	21
Peters, Joel GISP	Senior GIS Specialist	BA	28
Recker, Ben PE	Civil Engineer	MS	23
Reesor, Meg	GIS Scientist	BS	5
Reynolds, Lara	Biologist	MS	16
Reynolds, Michelle	Senior Wildlife Ecologist	PhD	29
Schwab, Nate	Senior Bat Biologist	PhD	21
Snetsinger, Tom	Senior Biologist	MS	34
Tanino, Jamie	Biologist / Rare Snail Specialist	BS	18
Taylor, Jenny	Senior Biologist / Project Manager	BS	17
Taylor, Phil	Field Biologist	MS	19
Todd, Chris	Wildlife Biologist	PhD*	19
Yost, Kayla	Environmental Planner	MS	11
Young, Rich	Wildlife Biologist	BS	28

Tiffany Agostini is a Senior Biologist, Project Manager, and Wetland Specialist. She has over 17 years of 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; wetland 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), EFH Assessments, state and federal HCPs, and HEPA EAs/EISs. Ms. Agostini received a MS in Botany from the University of Hawaii 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 more than 22 years' 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. He 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. He is a past member of the Seattle Public Utilities Citizen Advisory Committee for Creeks, Drainage and Wastewater.

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 more than 23 years of experience performing research in the fields of conservation, botany, ecology, and field biology. She 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. Ms. Brimacombe 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. She has also previously worked on several wind and other energy projects in Hawaii. Ms. Brimacombe 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, PG, 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. He has worked in the environmental field as a program manager, technical and regulatory specialist, and geologist for 36 years. Mr. Brodersen 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. Mr. Brodersen has 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, PE, 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.

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. She 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. She also worked with UH Sea Grant to design a dune restoration project for a beach park on Maui.

Kristina Dick, GISP is a Geographer with 16 years of 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. Her 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.

Stephen D. Del'Homme has over 39 40 years of 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.

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, Mr. Donoho has 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. He has owned two planning firms (Kukui Planning Company, LLC and Zen Planning Hawaii).

Jacob Dutton is a Biologist with more than 16 years of 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. He 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 more than 11 years of 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 Makamaka'ole Seabird restoration site on Maui.

Jason Fussel, PE, is a Civil Engineer with a broad knowledge of civil engineering and has more than 21 years 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. Mr. Fussel 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, Mr. Fussel is a LEED® Accredited Professional, Envision™ Sustainability Professional and is serving as the Project Engineer for the DLNR Nā Pali Coast State Wilderness Park Improvements Project in Kauai.

Susan Hurley is a Senior Wildlife Biologist, Project Manager, and Operations Manager for the Portland/Honolulu office who has been working in the scientific fields for 24 years. She has a technical background in general ecology, avian ecology and behavior, bat ecology and acoustics, statistics, NEPA, and threatened and endangered species. She 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 over 19 years of 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. He 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. Mr. Jensen has a history of 35 years of diverse program management experience in the environmental consulting industry, including managing large scale contracts for state agencies, municipalities and commercial clients. Mr. Jensen's experience includes work on projects requiring innovative approaches to solving unique environmental issues. Mr. Jensen 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 underground storage tank (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 more than 26 years 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. Her breadth of expertise includes scoping and preparation of environmental review documents in accordance with both the National Environmental Policy Act (NEPA) and

Hawaii environmental review regulations (Hawaii Revised Statutes [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.

Leslie McClain is a Senior Environmental Planner as well as an experienced Project Manager with 18 years of professional experience. She has experience in regulatory compliance and permitting in Hawai'i and Oregon and under state and federal regulations including the state HEPA and the federal NEPA processes. For the past 9 years, her career has focused on state and county regulatory compliance related to development of commercial wind and solar projects in Hawai'i including preparation of HEPA EISs and EAs, Conservation District Use Permits, HCPs and ITLs, and Maui/Hawaii/Honolulu County land use permit applications. Ms. McClain also has a background in community planning, development code writing, and master planning. She has also worked closely with cultural consultants in Hawai'i on conducting Archaeological Inventory Surveys and State Historic Preservation Division (SHPD) consultation.

Stephanie Nagai is an interdisciplinary practitioner and project manager for offshore and terrestrial renewable energy projects in Hawaii and the western United States. She 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 Hawai'i 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 35 years of experience. Ms. Oller 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 Hawai'i 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 Project Manager and Environmental Chemist with 21 years of experience. She focuses on project management, environmental investigations and soil remediation. As a manager, Ms. Parry has performed the following: scope review and development, contract review, proposal preparation, project set up, project implementation, oversight and training of field personnel, subcontractor coordination and contracting, client and state regulator coordination, data review, validation and interpretation, report preparation and project close out. Ms. Parry has prepared various environmental documents including sampling and analysis plans, work plans, soil investigation reports, soil management plans, Phase I and II reports, and standard operating procedures.

In the field, Ms. Parry's experience includes: soil, concrete, groundwater and waste sampling, installation of temporary wells, removal of underground storage tanks, confirmation sampling, oversight and documentation of remedial activities, oversight of subcontractors and remedial staff, training of field staff and performance of visual inspections. Incremental sampling techniques (incremental sampling methodology [ISM], MULTI INCREMENT® [MI]) were primarily used to collect soil and concrete samples. Ms. Parry's MI sampling experience includes the training of scientific and non-scientific field staff, delineation of Decision Units (DUs), selection of subsampling locations, collection of samples, sample handling and shipment, and laboratory coordination.

Joel Peters, GISP has been supporting Tetra Tech offices with geographic information systems (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. Mr. Peters 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. Using ArcGIS Server for web map publishing, ArcGIS for JavaScript for application development, and ArcGIS Desktop for data development and display, the applications developed offer for the client a content rich, easily accessible internet environment for geographic data display and query.

Ben Recker, PE, LEED AP is a Civil Engineer with 23 years 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 Best Management Practice (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. Mr. Recker 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. Mr. Recker has served in a project management role for both water quality and solid waste/recycling projects.

Meg Reesor has 5 years of experience working in a geographic information system (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 Hawai'i, 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 16 years of 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. Her 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.

Michelle Reynolds, PhD has more than 29 years of experience designing and conducting wildlife population studies in the Pacific Islands. She has provided integrated research products and technical assistance for State, Federal, and International agencies responsible for natural resource management and decision making. Projects have emphasized endangered species and their habitat use, movements, population status and abundance estimation, restoration and vulnerability. She has experience with the ESA, environmental assessments, recovery planning, and risk assessments relating to wildlife in the Hawaiian Islands. Her ecological expertise includes study design, statistical analysis, extinction risk, reintroduction of birds, monitoring rare species, and the use of ecological detection canines for pathogen and carcass detection. Her research projects have included wetland and invertebrate ecology, structured decision making and adaptive management, island biosecurity and invasive species. Dr. Reynolds has more than 40 peer reviewed papers published in scientific journals and has presented more than 50 invited scientific presentations on topics ranging from the impact of sea level rise on wildlife, to the use of detection dogs for avian botulism mitigation. She is considered a species expert for the Koloa, Laysan duck, Hawaii's seabirds, and endangered Hawaiian Forest birds of Hawaii, Maui, and Kauai.

Nathan Schwab is a Wildlife Biologist with more than 21 years 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. Mr. Schwab 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. Mr. Schwab holds scientific collecting permits related to bat research (including for endangered Hawaiian hoary bat) 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 a Technical Advisory Committee for a wind energy project in Montana.

Thomas Snetsinger is a Senior Biologist with over 34 years of experience as a project manager and wildlife biologist in wildlife research, management, and monitoring. Responsibilities have included field surveys, project administration and design, data management and analysis, preparation of reports and regulatory documents. He also has experience evaluating compliance with NEPA, various state environmental policy acts, state and federal environmental regulations, and the federal ESA; and acquiring associated permits. He has played a key role in preparing ESA Section 10 Habitat Conservation Plans in support of the acquisition of federal and state incidental take permits for threatened and endangered species. Mr. Snetsinger formerly worked at the U.S. Geological Survey in Hawai'i accumulating 8 years of forest bird research experience on the islands of Kaua'i, Maui, and Hawai'i.

Jamie Tanino is a Biologist and Rare Snail Specialist with over 18 years of experience. Ms. Tanino 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. Ms. Tanino 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, as well as maintaining and restoring snail enclosures and snail habitat. In 2018, Ms. Tanino assisted with the Capture-Mark-Recapture surveys for the Mikilua #4 OH Relocation project as a Tetra Tech subcontractor.

Jenny Taylor has more than 17 years of experience as biologist in field research and analysis, project management, and study design and document development. Her technical background is in general ecology. She 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. Ms. Taylor has worked with state and federal wildlife agencies toward obtaining wildlife permits. Ms. Taylor 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 QA/QC.

Philip Taylor is an Assistant Biologist with 19 years of experience in field surveys, wildlife monitoring, and biological studies throughout the Hawaiian Islands. His 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. He has experience monitoring endangered tree snail populations and out-planting endangered plants. In addition to supporting Tetra Tech, Mr. Taylor also works for the Oahu Army Natural Resources Program as an avian conservation specialist. Mr. Taylor 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, he 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, conduct consultation with resource agencies. He has conducted original research and synthesis on ecology and distribution of endangered bats in Hawai'i 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.

Kayla Yost is an Environmental Planner with over 11 years of 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. She 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 28 years of experience involving scientific research and natural resources management. During the past 13 years, 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 O’ahu. 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. An overall perspective of Tetra Tech’s performance is reflected by the firm’s success in growing 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.

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

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.

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.

Quality of Work

Tetra Tech has a comprehensive Corporate Quality Assurance/Quality Control (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.

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 Mākuā 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.

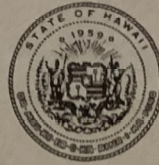
Adherence to schedules is of utmost importance to Tetra Tech. Our Program Managers, Project Managers, and staff understand funding limitations, and that the easiest way to stress a project budget is to let the schedule slip. Furthermore, we understand the importance of supporting the regulatory and grant 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.

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.

STATE OF HAWAII

DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS



BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS

hereby certifies that on the date hereof

JASON L FUSSEL

was duly licensed as a

PROFESSIONAL ENGINEER

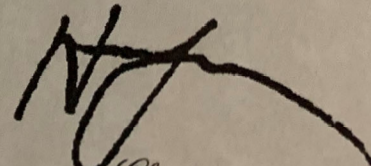
and is therefore authorized to practice this Profession

within the State of Hawaii

*In witness whereof, this License has been issued and the Seal of the Board
affixed hereto, this 2nd day of August, A.D. 2013 at Honolulu, Hawaii.*



No. 15600


Chairperson



TETRA TECH

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