FISCAL YEAR 2023–2024

Stantec

County of Hawai'i

Statement of Qualifications for Professional Services

Housing and Community Development
June 30, 2023

Stantec Consulting Services Inc.
1001 Bishop Street Suite 1501
Honolulu, Hawaii 96813

P.O. Box 191
Hilo, Hawaii 96721

June 30, 2023

Attention

Ms. Susan Kunz
Housing and Community Development, County of Hawai'i
1990 Kinoʻole Street, Suite 102, Hilo, Hawai'i 96720
Phone: (808) 961-8379
ohcd@hawaiicounty.gov

Categories of Service:

- **OH.4)** Community Planning (Environmental Assessment)
- **OH.5)** Community Planning (Community Engagement, Strategic Planning)

Dear Ms. Susan Kunz,

At Stantec, designing with community in mind isn't just our motto, it's our passion; it's why we work here. We are eager to partner with the Housing and Community Department to provide professional services to support your agency's mandate to lead planning and land use and administration of subdivision and zoning codes for the County of Hawai'i. Stantec is tracking the Department's updates to the General Plan's Comprehensive Review and update, as well as the updates of Community Development Plans.

Stantec provides a wide range of design, engineering, scientific, and management services that begin at the intersection of community creativity and client relationships. We have provided architecture and engineering services for award-winning facilities. We have received certification to the ISO9001:2015 Environmental Management System standard. We commit to doing what is right by demonstrating social, economic, and environmental responsibility.

Stantec's staff are experienced in preparing environmental documents, completing environmental investigations, and well versed in code development and application for a wide range of projects and planning needs. We know what to look for. We know what's required, and we excel at finding ways to match those requirements with project goals.

We are Local, Innovative, and Available

We believe that creating a team that engages the right people is key to project success. Our team offers local expertise including myself on Maui, Dr. Michele LeFebvre, Victor Rasgado PLS and Dr. Ben Barna in Hilo, and relevant support staff and subject matter experts in Honolulu, California, Nevada, and Alaska — plus over 26,000 professionals in the global Stantec network. This gives us the flexibility to respond to any project challenge in a timely and efficient manner; to tackle even your most unique challenges.

Stantec recognizes the value of local consultants and specialized experience that can enhance project implementation and we maintain relationships and have completed project across Hawai'i Island with several knowledgeable and experienced consultants based in Hawai'i County.

Stantec has prepared on environmental documents compliant with Hawaii Revised Statues (HRS) 343 such as the Volcano Arts and Sciences Environmental Assessment (EA), Matsuyama

Commercial Center on NELHA Land EA, Kaloko Affordable Housing Project EA (final in progress), and has coordinated baseline biological and archaeological surveys for HELCO's Saddle Road cross-island transmission line rebuild project. Stantec has also completed environmental investigations and provided environmental monitoring services across the State. With local experience backed by nationwide experience with National Environmental Policy Act (NEPA) requirements and a wide range of environmental studies, you can be assured that Stantec has the expertise and capacity for all your needs.

The Planning Department can depend on the Stantec team for local, innovative, and reliable technical solutions and advice, delivered in a well-managed and efficient manner. The following submittal will provide you the information required to select Stantec to provide professional services for Fiscal Year 2024. Please contact me if you have any questions.

Sincerely,

Sheryl Campagna
Principal
Environmental Services
Ha'iku, Maui, HI
(808) 727-0910 | sheryl.campagna@stantec.com

OVERVIEW

FIRM PROFILE

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve-because they're our communities too. This allows us to assess what's needed and connect our expertise, to appreciate nuances and envision what's never been considered, to bring together diverse perspectives so we can collaborate toward a shared success.

We're designers, landscape architects, engineers, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.

CORPORATE INFORMATION

With over **69 years** of experience, Stantec unites more than 26,000 employees, in 400 locations, on 6 continents. Operating as Stantec Consulting Services Inc., our corporate headquarters is located at:

410 17th Street Suite 1400
Denver CO 80202-4427
(303) 295-1717
askstantec@stantec.com

Our Hawai'i offices are located at:

Stantec Consulting Services Inc.
1001 Bishop Street, Suite 1501
Honolulu, HI 96813
808-762-7202

Stantec GS Inc.
737 Bishop Street, Suite 3050
Honolulu, HI 96813
808-528-1445

While all staff located in the State of Hawai'i are assigned to the Honolulu office, several staff members live on the neighboring islands including the Big Island.

KEY QUALIFICATIONS

We are positioned to support the County of Hawai'i (County) for a full array of services. Our proposed project leadership team, in addition to their extensive subject experience, is familiar with the County and Hawai'i Islands allowing your projects to run smoothly and efficiently.

Contact information for Sheryl Campagna is provided below. The organizational chart in lists additional staff that can support the project. Full resumes are provided listing staff education, years of experience, and project experience.

Environmental Services
Sheryl Campagna
Principal/Senior Environmental Planner
Ha'iku, Maui, HI
808-727-0910
sheryl.campagna@stantec.com

REFERENCES/EXPERIENCE PROVIDING SIMILAR SERVICES

As a well-established local firm, Stantec has the resources and abilities to provide personalized service while keeping the work on schedule and within budget. Our team of engineers, environmental scientist, surveyors, and designers excel in enhancing safety while rehabilitating infrastructure for public facilities that preserves recreational assets and the natural environment.

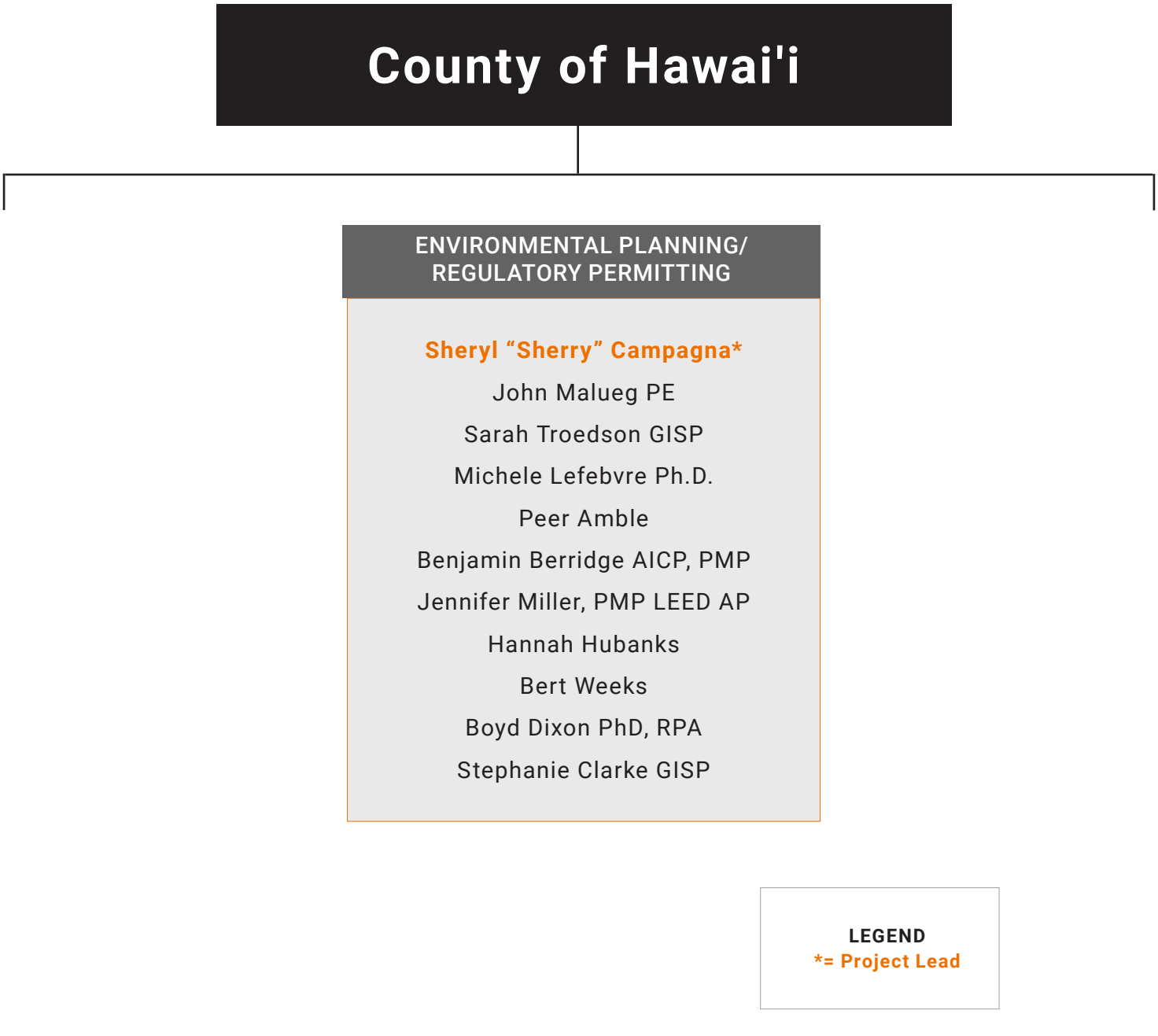
References below can attest to our ability to provide dedicated resources, depth of staff, and knowledge of the Hawai'i islands and their communities.

References

AGENCY/FIRM NAME	REFERENCE NAME/TITLE	CONTACT PHONE NUMBER/EMAIL	YEAR SERVICES PROVIDED	PROJECT NAME/LOCATION	CATEGORY
Geometrician Associates	Ron Terry Principal	808-969-7090 rterry@Hawaii.rr.com	2017-present	Various Environmental Statewide Assessments, HI	Environmental Services
Hawaii Green Growth	Celeste Connors, Executive Director	808-800-7500 celeste@hawaiigreengrowth.org	2021-present	Aloha Challenge https://alohachallenge.hawaii.gov/	Environmental Services, Climate Adaptation
Hawaii Island Community Development	Jeremy McComber, President	808-319-2428 jeremy.hicdc@gmail.com	2018-present	Kaloko Affordable Housing Project	Environmental Services, HEPA
Maui Department of Water Supply, Water Resources Division	Robert DeRobles, Project Manager	808-463-3113 Robert.derobles@co.maui.hi.us	2020-present	Maui AWIA Compliance Project, Waikki, Maui County, HI	Environmental Services
County of Maui Office of Innovation and Sustainability	Aaron Drake, Project Manager	808-270-5539 Aaron.d.drake@co.maui.hi.us	2020-present	WCCZ Maui Climate Change, Sustainability, and Resilience: Whole Systems Solutions	Environmental Services

Environmental Planning/ Regulatory Permitting

Organizational Chart



County of Hawai'i

ARCHITECT-ENGINEER QUALAIFICATIONS

PART I - SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION (City and State)

County of Hawai'i

2. PUBLIC NOTICE DATE	3. SERVICE CATEGORY
June 16, 2023	Environmental Planning and Regulatory Permitting

B. CONTRACT ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE

Sheryl Campagna, Principal/Senior Environmental Planner

5. NAME OF FIRM

Stantec Consulting Services Inc.

6. TELEPHONE NUMBER	7. FAX NUMBER	8. E-MAIL ADDRESS
808-727-0910	N/A	sheryl.campagna@stantec.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors)

	(check)			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	J-V PARTNER	SUBCON-TRACTOR			
a.	x			Stantec Consulting Services Inc. ☒ CHECK IF BRANCH OFFICE	1001 Bishop Street Suite 1501 Honolulu, HI 96813-6461	Environmental Planning and Regulatory Permitting
b.	x			Stantec GS Inc. ☒ CHECK IF BRANCH OFFICE	737 Bishop Street Suite 3050 Honolulu, HI 96813-6461	Environmental Planning and Regulatory Permitting
c.	x			Stantec Consulting Services Inc. ☒ CHECK IF BRANCH OFFICE	290 Conejo Ridge Avenue Thousand Oaks CA 91361-4972	Environmental Planning and Regulatory Permitting
d.	x			Stantec Consulting Services Inc. ☒ CHECK IF BRANCH OFFICE	200 East Carrillo Street Suite 101 Santa Barbara CA 93101-2137	Environmental Planning and Regulatory Permitting
e.	x			Stantec Consulting Services Inc. ☒ CHECK IF BRANCH OFFICE	Carolina One West Fourth Street Suite 820 Winston-Salem NC 27101-3818	Environmental Planning and Regulatory Permitting

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Sheryl "Sherry" Campagna	Stakeholder Outreach/Environmental Compliance/HEPA/NEPA Lead	27	1

15. FIRM NAME AND LOCATION (City and State)

Stantec Consulting Services Inc. (Honolulu, HI)

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
BS, Biology	N/A

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Memberships: Hawai'i Association of Environmental Professionals (HAEP), Women in Renewable Energy (WiRE)

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City, Island, and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Lahaina Watershed Flood Management Project and NEPA/HEPA Environmental Impact Statement or Environmental Assessment (Lahaina, Maui, HI)	Ongoing	2026

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: The Lahaina Watershed Flood Management Project requires the development of a Natural Resource Conservation Service (NRCS), National Environmental Policy Act (NEPA), and Hawai'i Environmental Policy Act (HEPA) compliant Supplemental Plan Environmental Document (ED) to evaluate watershed protection and management measures within the Lahaina Watershed. The proposed project is intended to mitigate for flooding and reduce the impacts of sedimentation in the nearshore marine environment. Sherry manages the Stantec team and subconsultants through the development of an environmental document for this watershed and flood protection project in Lahaina on the island of Maui. She also guides and supports the communications component of this project as public outreach, stakeholder engagement, and agency coordination are vital to the project's implementation. • **Size:** 5,250 acres • **Cost:** $1.4M • **Role:** Project Manager

b.

(1) TITLE AND LOCATION *(City, Island, and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
HUD, HTF, HOME-ARP Funded "Hale O Pi'ikea" Affordable Housing Project; a Part 58 Environmental Assessment (EA) Under NEPA and HEPA (Kihei, Maui, HI)	Ongoing	2024

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Hale O Pi'ikea Affordable Housing Project is a 220-unit, three-phase development planned at the intersection of Pi'ikea Avenue and Liloa Drive in Kihei, Maui, Hawai'i. This project includes a Part 58 EA and supporting technical studies. The Part 58 EA would be prepared in accordance with NEPA and the U.S. Department of Housing and Urban Development (HUD) environmental regulations. The Project intends to serve individuals and families earning between 30% and 60% Area Median Income (AMI) and help address the critical need for additional affordable housing on Maui. The project is also one component of the larger Kihei Downtown Development, promoting mixed-use sustainable development in Kihei which aims to foster a closely-knit, live/work community environment. • **Size:** 12.59 acres • **Cost:** $80K • **Role:** Environmental and Community Engagement Manager

c.

(1) TITLE AND LOCATION *(City, Island, and State)*

Hawai'i Youth Correctional Facility (HYCF) Campus Redevelopment Plan (Kailua, O'ahu, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2018	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☐ Check if project performed with current firm

Scope: The Hawai'i Youth Correctional Facility (HYCF) plans to transition from a traditional punitive institution to a center (to be named the Kawailoa Youth and Family Wellness Center) that will focus on a comprehensive rehabilitation model involving wards, young adults, and families with community and government support. Eleven programs and their associated facilities were proposed for the facility which includes more than 20 buildings (including a Department of Education school) and covers over 400 forest and pasture acres owned by the State of Hawai'i. Public and private partnerships were proposed to support the 11 programs designed to support and transition former wards back into the community. Cultural, historic, zoning, remediation, and utilities issues were identified as part of the redevelopment plan. As the environmental project manager, Sherry led the environmental, historic, permitting, and cultural components of this project. She supported the development of priorities for future development of the facility which includes historic buildings and cultural sites. Sherry was responsible for agency coordination, stakeholder engagement, and public outreach. She also led a series of stakeholder and public charettes and authored the redevelopment planning report.• **Size:** 400 acres • **Cost:** Unknown • **Role:** Environmental Project Manager and Communications Manager

d.

(1) TITLE AND LOCATION *(City, Island, and State)*

Pōhakuloa Training Area (PTA) Master Plan, Environmental Assessment (EA), and Environmental Condition of Property (ECOP) (Pōhakuloa Training Area, Hawai'i Island, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If* applicable*)*
2017	N/A

(3) BRIEF DESCRIPTION*(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☐ Check if project performed with current firm

Scope: This project included a Master Plan, EA, and Community Relations Plan (CRP) for the first master plan completed for this significant Army installation. The master plan projects and permits included utilities, transportation (air, road, harbor), cantonment facilities, and military training areas. Issues managed in the CRP included land lease, depleted uranium, endemic species, cultural sites, water wells, anti-Thirty Meter Telescope protests adjacent to the site, hunting, drones, UXOs, wildfires, invasive species, FAA waivers, live fire training, water rights, and flooding**• Size:** 133,000 acres • **Cost:** Unknown • **Role:** Project Manager

e.

(1) TITLE AND LOCATION *(City and State)*

Guam Military Build Up EIS Public Involvement Plan (PIP) (Guam and the Commonwealth of the Northern Marianas Islands)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If* applicable*)*
2010	N/A

(3) BRIEF DESCRIPTION*(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☐ Check if project performed with current firm

Scope: The "Guam Military Build Up" Environmental Impact Statement (EIS) was the largest EIS written in the history of the National Environmental Policy Act (NEPA) Ms. Campagna managed the many iterations of community planning for the rebasing of approximately 8,000 Marines and their dependents from Okinawa to Guam. Planned land uses included utilities, infrastructure, housing, recreation sites, temporary workforce housing, military training areas, and energy projects. As the Public Involvement Plan (PIP) Manager for NEPA EIS, Sherry built relationships with local leaders in Guam and the Commonwealth of the Northern Marianas Islands (CNMI). She planned all public involvement strategies, response actions and subsequent activities. Sherry also implemented changes to traditional federal NEPA public meetings that reflected local and Chamorro culture thereby earning acceptance by the project's opposition and cultivating mutual respect. She led the team's response to over 10,000 public comments and improved local access to project information and understanding of the potential impacts and mitigations. • **Size:** ~180 miles^2 • **Cost:** $2M • **Role:** Program Manager

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY
(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
John Malueg, PE	Vice President, Sustainability and Resiliency Planning	37	22

15. FIRM NAME AND LOCATION (City and State)

Stantec Consulting Services Inc. (Winston-Salem, NC)

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
BS, Water Biology BS, Civil and Environmental Engineering	Professional Engineer (Civil) #15642, KY

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Memberships: Water Environment Federation; Member, American Public Works Association; American Society of Civil Engineers

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ala Wai Watershed Resilience Master Plan Support (Honolulu, HI)	Ongoing	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: In 2018, Congress passed an emergency appropriations bill which included a $350 million allocation in support of mitigating flooding in the Ala Wai Watershed. Stantec, in partnership with the Rockefeller Foundation's 100 Resilient Cities, was selected to assist the local sponsor, the City/County of Honolulu, negotiate the development of the partnering agreement with the USACE. Key project elements include planning and design of series of high head dams, low flow diversion channel through local golf course, and integration of proposed new canal floodwall and levee with community open space and complete streets visions. • **Size:** N/A • **Cost:** N/A • **Role:** Technical Advisor

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
HUD National Disaster Resilience Completion (NDRC) Phase 2 (Multiple Jurisdictions, Nationwide)	2016	2016

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: John served as lead and technical advisor for the development of seven NDRC Phase 2 grant applications. Individual value of federal grant funding solicited ranged from $200,000 to $865,000,000. Clients included states, counties, and districts. Hazards address ranged from sea-level rise, tornadoes, hurricanes, riverine flooding, heat and subsidence. Resilient solutions offered focused on maximizing the triple bottom line addressing social, economic, and environmental values. The value of grants awarded to our clients approached $250 million. • **Size:** N/A • **Cost:** $2.1M • **Role:** Program Manager/Technical Advisor

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
"Strategic Financial Pathways", "Living with Water" Blue-Green Corridor Design (New Orleans, LA)	Ongoing	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: In partnership with the City of New Orleans and Rockefeller Foundation (100RC), John completed analyses and facilitated workshops that evaluated the right mix of green and grey infrastructure and financial mechanisms to pay and maintain improvements. Analysis considered level of service, implementation period and included evaluation of a blend of millage, stormwater user fees, fee-in-lieu-of, tourism taxes, and external grant funding to pay for selected plan. The project has now evolved into detailed design of blue-green infrastructure. • **Size:** N/A • **Cost:** $6.5M • **Role:** Resilience Technical SME

d.

(1) TITLE AND LOCATION *(City and State)*

"London 2100" Water Strategic Plan (London, United Kingdom)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	N/A

(3) BRIEF DESCRIPTION*(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: John and the Stantec team helped Thames Water District facilitate the design of a community-based (year – 2100) vision for water. London's water infrastructure, which is approaching 200-years old, is being revisited to identify strategies for meeting increased demand because of projected four-fold population growth. The vision includes separating storm and sanitary systems, harvesting rain-water, gray water industrial reuse supported by innovative, and sustainable funding strategies. • **Size:** N/A • **Cost:** $1.7M • **Role:** Resilience Global SME

e.

(1) TITLE AND LOCATION *(City and State)*

Tottenville Beach Recovery and Restoration
(Staten Island, NY)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: This HUD sponsored Rebuild by Design project strives to stabilize shoreline, reduce coastal flood risk, and protect the local economy. John and the Stantec team's resilient solution currently under design includes integrated living shorelines, elevated walking trails, green infrastructure, ecosystem restoration and matrix of natural and reinforced sand dunes. **Scope:** Resiliency planning, Living shorelines/wetlands/shoreline protection, Civil engineering/stormwater management and modeling, Coastal berms/landscaping, Elevated roads and pathways, Community outreach, Multi-federal agency coordination, HUD grant administration, and Flood risk reduction • **Size:** Staten Island • **Cost:** N/A • **Role:** Technical Advisor

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY
(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Sarah Troedson, GISP	Senior GIS Analyst	25	4

15. FIRM NAME AND LOCATION (City and State)

Stantec Consulting Services Inc. (Thousand Oaks, CA)

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Master of Geographic Information Systems BS, Geology	Certified Geographic Information Systems Professional (GISP) #58500

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Memberships: North American Cartographic Information Society, Urban and Regional Information Systems Association (URISA), Women in GIS

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Hawai'i Green Growth Ala Wai Watershed Collaboration (Honolulu, HI)	2020	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: This project was conducted to support the development of a Holistic Ala Wai Watershed Management Plan for Growth in partnership with UH Sea Grant and the Waikiki Beach Special Improvement District Association. The plan addresses six priority issues for the watershed: stormwater flood risk; ecological restoration and protection; storm surge and sea level rise; hurricane, climate, and disaster resilience; improvements of recreation spaces; uplift and restore cultural sites and practices. • **Size:** N/A • **Cost:** $9K • **Role:** Senior GIS Analyst

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Maui and Molokai Dam Safety Inspections Phase I (Maui and Molokai Islands, HI)	2013	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☐ Check if project performed with current firm

Scope: Responsible for gathering current and historic seismic data to create maps of seismic activity within 100km of multiple dams on the islands of Maui and Molokai, as well as producing geologic maps and location maps for field staff and for reports. • **Size:** N/A • **Cost:** $50K • **Role:** Senior GIS Analyst

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Lahaina Watershed Flood Management Project (Lahaina, HI)	Ongoing	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: The Lahaina Watershed Flood Management Project requires the development of a Natural Resource Conservation Service (NRCS), NEPA, and HEPA compliant Supplemental Plan Environmental Document (ED) to evaluate watershed protection and management measures within the Lahaina Watershed. The proposed project is intended to mitigate for flooding and reduce the impacts of sedimentation in the nearshore marine environment. • **Size:** 5,250 acres • **Cost: $**1.4M • **Role:** Senior GIS Analyst

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If* applicable*)*
Maui Asset Inventory and Characterization (Wailuku, HI)	2020	N/A

(3) BRIEF DESCRIPTION*(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Review and catalog physical and virtual assets for Maui DWS via spreadsheets, geodatabases, client interviews, and other data sources. Normalize and reconcile regional naming conventions to allow for assessments of critical infrastructure. Prepare initial inventory for client review and internal categorizing to feed into future safety and emergency preparedness plans. • **Size:** County-wide • **Cost:** N/A • **Role:** Senior GIS Analyst

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If* applicable*)*
Sampling and Analysis Plan, Hono'uli'uli National Historic Site (Waipahu, HI)	Ongoing	N/A

(3) BRIEF DESCRIPTION*(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Implement Sampling and Analysis plan for the Hono'uli'uli National Monument, creating sample locations across eight decision units, setting up field maps (paper and digital) and enabling field data collection of sample locations in real time. Additional support for field safety by identifying prior obstructions and pits and providing live locations in Field Maps. • **Size:** 123 acres • **Cost:** Confidential • **Role:** Senior GIS Analyst

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Michele Lefebvre, Ph.D.	Project Manager, Environmental Scientist	19	12

15. FIRM NAME AND LOCATION (City and State)

Stantec GS Inc. (Honolulu, HI)

Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan.

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Ph.D., Biology BA, Biology	N/A

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Certifications and Training: Adjunct lecturer at University of Hawai'i, Hilo – Environmental Impact Assessment ENSC 441, Spring 2019; NEPA and 24 CFR Part 58 Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities, Hilo, HI; Vegetation of the Hawai'ian Islands (audited course ENSC-457); NEPA Cumulative Effects Analysis & Documentation, San Francisco, CA

Memberships: National Association of Environmental Professionals; American Exploration and Mining Association

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Kaloko Affordable Housing Project HRS 343 and HUD NEPA, Environmental Assessments (Kaloko, HI)	2018	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Michele is coordinating with the applicant (Hawai'i Island Community Development Corporation) and a local sub-consultant (Geometrician Associates LLC) to prepare the EAs. She helped to collect the traffic data and coordinated the preparation and completion of the Traffic Impact Assessment Report (TIAR) for the project with a Stantec traffic engineer. Michele also coordinated the water impact assessments with two local hydrologist sub-consultants and the assessment of cultural impacts with a local cultural resource firm. **Scope:** Environmental Assessments • **Size:** Hawai'i Island • **Cost:** $146K • **Role:** Project Manager

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Puna Geothermal Venture HEPA EIS, Pahoa, HI	2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Michele was responsible for preparing a HEPA EIS for the upgrade of equipment at Ormat Technologies operating geothermal power plant near the Kilauea Volcano on Hawai'i Island. The upgrade of equipment would reduce the footprint, emissions, and noise compared to current operations. The need for the EIS has been identified by the Public Utilities Commission. Coordinating baseline surveys, coordinating with the approving agency (Planning Department), organizing public outreach, and preparing the impact analysis for the EIS. Public concerns about the project include air quality, water quality, geologic hazards, and noise. • **Size:** N/A • **Cost:** $462K • **Role:** Project Manager/Biologist

c.

(1) TITLE AND LOCATION *(City and State)*

Matsuyama Commercial Center on NELHA Land HRS 343, Environmental Assessment (Kailua-Kona, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2018	2023

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Scope: Michele coordinated with the applicant (Mats4 LLC) and the approving agency (Natural Energy Laboratory of Hawai'i Authority) to prepare the EA. Her responsibilities included working with the agency to identify issues, conduct public comments analysis, and write the Draft and Final EA. Michele helped to collect the traffic data and coordinated the preparation and completion of the TIAR for the project with a Stantec traffic engineer. Michele also coordinated the biological survey with a local sub-consultant and the assessment of cultural impacts with a local cultural resource firm. • **Size:** Hawai'i Island • **Cost:** $44K • **Role:** Project Manager

d.

(1) TITLE AND LOCATION *(City and State)*

Fenway Development Project HEPA EA (South Kona, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Scope: Michele prepared a HEPA EA for this multi-unit two-phase housing development in South Kona. Coordinating the update to the biological survey and conducting a traffic impact analysis for the project. Stantec will coordinate with the applicant and approving agency (Planning Department) through EA approval. • **Size:** N/A • **Cost:** $111K • **Role:** Project Manager/Biologist

e.

(1) TITLE AND LOCATION *(City and State)*

HELCO Saddle Road Transmission Line Re-build Project – Baseline Surveys and Stakeholder Outreach (Hawai'i, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2019	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Scope: Michele coordinated with stakeholders (private land owners, local agencies, and Pōhakuloa Training Area) to obtain permission for local subconsultants to conduct a biological survey and archaeological inventory for this cross-island transmission line. For this survey, Stantec also assisted HELCO with identifying alternative line alignments for the inventory to ensure baseline data would be available for the project's future NEPA and/or HRS 343 analysis. • **Size:** Hawai'i Island • **Cost:** $269K • **Role:** Project Manager

County of Hawai'i

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Peer Amble	Environmental Planner	33	23

15. FIRM NAME AND LOCATION (City and State)

Stantec GS Inc. (Santa Barbara, CA)

Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan.

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE
BA, Physical Geography	N/A

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Memberships: Louisiana Archaeological Society, Society for American Archaeology, Society for Hawaiian Archaeology, Society for Historical Archaeology

Awards: Northern Marianas Humanities Council Lifetime Achievement Award, 2019, Saipan

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
NAVFAC Pacific, EIS for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility at JBPHH (Oahu, HI)	2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Worked closely with Project Manager to "plan the work" by instituting streamlining and process improvements into the DOPAA development (i.e., clarity, presentation and simplification of details necessary for the impact analysis), development of impact analysis framework and EIS "mock up" for the 16 resource areas, and integration of ongoing/previous NEPA documents. Provided direct guidance to SMEs and resource authors to establish analytical approach, particularly for critical issues such as schedule development and management including design integration, parallel timelines for agency consultations, and public involvement. • **Size:** N/A • **Cost:** $7.2M • **Role:** Senior NEPA Planner

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
NAVFAC Pacific, EA for the Home Basing of the MQ-9 Unmanned Aerial Vehicle Squadron and KC-130J Marine Aerial Refueler Transport Squadron at Marine Corps Base HI (Kaneohe Bay, Oahu, HI)	2022	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Led team's analysis and agency consultation support for controversial and high-profile project, which concluded with a Finding of No Significant Impact (FONSI) within one-year schedule. Provided guidance and support for consultation with the State of Hawai'i Office of Planning and Sustainable Development, Planning Division who concurred with the Marine Corps' determination that the action would not result in any reasonably foreseeable direct or indirect effects to uses or resources within the Hawai'i Coastal Zone. Integrated NHPA Section 106 consultation input from Marine Corps, Navy, and consulting parties into analysis, including development and modification of robust alternatives. Skillfully adapted to heightened public interest by implementing a full-team effort to address/integrate public comments and deliver the EA on schedule. • **Size:** N/A • **Cost:** $878K • **Role:** Project Manager/Senior NEPA Planner

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
NAVFAC Pacific, EA for RM14-1420 Repair Lima Wharf and RM14-1423 Repair Mike and November Wharves at Naval Base Guam (Apra Harbor, Guam)	2020	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Provided senior NEPA planning support and oversight for resource analyses. In project initiation phases, conveyed issues of agency and stakeholder concern and considerations for analysis of marine resources, other natural resources, and human resources. This included the development of the integrated master project schedule, DOPAA development (with particular emphasis on the alternatives) and determining the appropriate level of analysis for resource areas, and efficiencies of integration of prior NEPA analysis, consultations, and environmental compliance actions. Provided senior analysis for coastal consistency documentation. • **Size:** N/A • **Cost:** $290K • **Role:** Senior NEPA Planner

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
NAVFAC Southwest, EIS for Revitalization of NAVWAR Facilities at Naval Base Point Loma Old Town Campus (San Diego, CA)		N/A

		Ongoing	
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm **Scope:** Participated in development of five alternatives foundational for this unique action supporting the Navy's cyber warfare mission. Coordinated with NAVFAC and SMEs to ensure development of a reasonable range of alternatives that met the purpose and need. Coordinated with Navy to incorporate input from state and local agencies into a strategy of integrated analysis for specific components. Supported management of subcontractors and development/ integration of the Visual Impact Assessment and worked with other resource analysts to resolve issues and strengthen the assessment of existing conditions and potential impacts, primarily for visual resources, air quality, and transportation. • **Size:** N/A • **Cost:** $6.3M • **Role:** Senior NEPA Planner		
e.	(1) TITLE AND LOCATION *(City and State)* NAVFAC Pacific, Draft EIS/Overseas EIS for the Commonwealth of the Northern Mariana Islands Joint Military Training (CJMT), (Island-wide, Commonwealth of the Northern Mariana Islands)	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2016	CONSTRUCTION *(If applicable)* N/A
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm **Scope:** Led a team of JV staff to research and prepare the Draft EIS/OEIS and all supporting studies and surveys. Supported Marine Corps Forces Pacific (Executive Agent) in interactions with six federal supporting agencies and multiple stakeholder organizations in the CNMI. Coordinated consultations with federal agencies, including ESA Section 7 (USFWS and NMFS), Clean Water Act (CWA) Section 404 including Least Environmentally Damaging Practicable Alternative (LEDPA) analysis, and Magnuson-Stevens Fishery Conservation Management Act Essential Fish Habitat (EFH) assessment. Oversaw the safe and successful execution of extensive field studies, involving large field teams conducting work in remote locations for marine biology and cultural resources in previously unstudied areas of the Western Pacific. Implemented innovative technology solutions (e.g., collaborative SharePoint file management systems and use of Web-based GIS tools) for 120 JV, Navy, and Marine Corps project team members. Developed project budgeting and tracking system to manage costs for 200+ subtasks and 15 contract actions over five years. Managed complex schedule, integrating numerous moving parts and milestone-dependent elements. • **Size:** N/A • **Cost:** $26.2M • **Role:** Project Manager/Senior NEPA Planner		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Benjamin Berridge, AICP, PMP	Environmental Planner	13	8

15. FIRM NAME AND LOCATION (City and State)

Stantec GS Inc. (Honolulu, HI)

Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan.

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE
BA, Environmental Studies	Project Management Professional, Project Management Institute Certified Planner #384544, American Planning Association, American Institute of Certified Planners

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Memberships: American Planning Association, Hawai'i Chapter, Association of Environmental and Health Sciences Foundation

Additional Training/Certifications: Project Management Professional (PMP) Boot Camp, Batelle Memorial Institute/Coastal Marine Spatial Planning Advanced Training Certificate

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
City and County of Honolulu NPDES MS4 Monitoring (Honolulu, HI)	Ongoing	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Managed all Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination system (NPDES) permit required monitoring and reporting for the City and County of Honolulu, Storm Water Branch. Managed collection of storm water samples at 75 industrial facilities throughout the island of Oahu. Duties included investigating, planning and installation of remote water quality and atmospheric monitoring stations to collect first-flush storm water samples according to 40 CFR 136 and EPA guidelines. Provided QA/QC oversight of telemetered monitoring stations incorporating data logged by automated sampling equipment, water quality sensors, as well as area-velocity sensors and pressure transducers providing continual flow records and site conditions. Also, tracked/archived weather, coordinated 24/7 on-call teams for grab/composite sample collection, maintained rainfall-runoff curves and monitored automated sampling equipment. • **Size:** N/A • **Cost:** $462K (2022) • **Role:** Project Manager/Environmental Planner

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Environmental Monitoring Services for Geothermal Energy Conversion Plant, Puna Geothermal Venture (Pāhoa, HI)	Ongoing	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Providing environmental monitoring services to Puna Geothermal Venture, in Pāhoa, Hawai'i. Services include meteorology, noise, air quality, and groundwater monitoring as required by Geothermal Resource, Underground Injection Control, and Noncovered Source Permits from the State of Hawai'i Department of Health (DOH). Manages data collection (EDAS), conducts QA/QC process for daily air quality reports, and authors semi-annual hydrological monitoring reports and monthly noise, meteorological, and air quality monitoring reports. Field activities include semi-annual groundwater sampling and calibration of meteorological monitoring equipment. • **Size:** N/A • **Cost:** $2.4M • **Role:** Program Manager/Environmental Planner

c.

(1) TITLE AND LOCATION *(City and State)*
Engineering and Environmental Planning Studies for Alternative Energy at PMRF (Kekaha, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2021	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Provided oversight and management of engineering and environmental planning studies to support current and future resiliency and energy requirements for Pacific Missile Firing Range (PMRF) in Kekaha, Kauai, Hawai'i. As part of a PMRF energy resiliency roadmap, the project team completed assessments to determine the viability and sustainability of alternative energy solutions, to include a cost benefit analysis of waste to energy (WTE) and other alternative energy technologies. In addition, the team consulted with cooperating government agencies, State, County, local utilities including Kauai Island Utility Cooperative (KIUC) and local industry for the island of Kauai. The project team analyzed the impacts on cultural and natural resources and recommended mitigation measures to minimize potential impacts. Environmental planning data collected was used for future National Environmental Protection Act (NEPA) documents for PMRF. • **Size:** N/A • **Cost:** $511K • **Role:** Program Manager/Environmental Planner

d.

(1) TITLE AND LOCATION *(City and State)*
Environmental Impact Statement for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility at JBPHH (Oahu, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Provided management and oversight of the development of a large, multifaceted, and high-profile Environmental Impact Statement (EIS) evaluating improvements, repairs, and/or new construction in support of Joint Base Pearl Harbor Hickam (JBPHH) submarine dry dock and dry dock production facility infrastructure, which is part of the US Navy's Shipyard Infrastructure Optimization Program (SIOP). Coordinated evaluation of four alternatives and a no action alternative in detail, ESA Section 7 consultation including Biological Assessment, Essential Fish Habitat Assessment, NHPA section 106 consultation, and USACE CWA Section 404 permitting and compensatory mitigation planning as well as State of Hawai'i Department of Health (HDOH) CWA Section 401 water quality certification support. • **Size:** N/A • **Cost:** $5.5M • **Role:** Project Director/Environmental Planner

e.

(1) TITLE AND LOCATION *(City and State)*
Biological and Benthic Habitat Survey in Support of SIOP and INRMP for JBPHH (Oahu, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Provided oversight and management of various biological and benthic studies to document benthic habitats, coral density and cover, biofouling communities, fish species, and protected species in support of Navy Shipyard Infrastructure Optimization Program (SIOP) as well as a revision of the Joint Base Pearl Harbor Hickam (JBPHH) Integrated Natural Resources Management Plan (INRMP). Project team supported Navy consultations with various agencies and provided data supporting recommendations for which corals found within the multiple construction footprints can potentially be successfully relocated. Project team developed a GIS web application that showcases all study findings during the entire project duration in an easily navigable interactive platform. • **Size:** N/A • **Cost:** $1.3M • **Role:** Project Director/Environmental Planner

County of Hawai'i

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Jennifer Miller, PMP, LEED AP	Environmental Planner	20	5

15. FIRM NAME AND LOCATION (City and State)

Stantec GS Inc. (Honolulu, HI)

Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan.

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE
MA, Planning and Development BA, Political Science	Project Management Professional – Project Management Institute, LEED Accredited Professional - USGBC

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

N/A

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: City and County of Honolulu NPDES MS4 Monitoring (Honolulu, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Assisted Project Manager. Assisted Project Manager, responsible for Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination system (NPDES) permit required monitoring and reporting for the City and County of Honolulu, Storm Water Branch. Managed collection of storm water samples at 75 industrial facilities throughout the island of Oahu. Duties included investigating, planning and installation of remote water quality and atmospheric monitoring stations to collect first-flush storm water samples according to 40 CFR 136 and EPA guidelines. Designed and provided QA/QC oversight of telemetered monitoring stations incorporating data logged by automated sampling equipment, water quality sensors, as well as area-velocity sensors and pressure transducers providing continual flow records and site conditions. Also, tracked/archived weather, coordinated 24/7 on-call teams for grab/composite sample collection, maintained rainfall-runoff curves and monitored automated sampling equipment. • **Size:** N/A • **Cost:** $462K (2022) • **Role:** Deputy Project Manager/Environmental Planner

b.

(1) TITLE AND LOCATION *(City and State)*: NAVFAC Pacific, Alternative Energy Planning Studies and Resiliency Roadmap, Pacific Missile Range Facility (Kauai, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2021; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Worked as part of the JV team coordinating staff resources, maintaining schedule and budget, reviewing deliverables, and addressing key challenges with the project. Specifically, worked with NAVFAC, the project team, and resource analysts in the development of deliverables for this pioneering study with multiple stand-alone technical deliverables that did not have templates, pre-defined formats, or prior examples. Was responsible for management of terrestrial natural resource and cultural resource field work, including planning, logistics, and scheduling that was complicated by rigid COVID-19 restrictions and protocols. Supported NAVFAC upward leadership reporting to address high visibility project with congressional interest. • **Size:** N/A • **Cost:** $2.2M • **Role:** Senior NEPA Planner/Deputy Project Manager

c.

(1) TITLE AND LOCATION *(City and State)*: NAVFAC Pacific, EIS for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility at JBPHH (Oahu, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2023; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Key member of leadership team for this large, multifaceted, and high-profile SIOP EIS. Integrated resource staffing and coordinated analysis for 43 key JV team resource analysts. Established and monitored budget and adherence of internal deadlines to meet aggressive two-year NEPA timeline in conjunction with Navy mission need date. Served as the senior reviewer for the land use section, which addressed consistency with the CZMA, Explosive Safety Quantity Distance (ESQD) arcs, Installation Restoration Sites, and the JBPHH Installation Development Plan. Led day-to-day coordination and was senior reviewer for mission-critical CWA and Rivers and Harbor Act permitting documents that were needed to maintain construction schedule. • **Size:** N/A • **Cost:** $7.2M • **Role:** Senior NEPA Planner/Deputy Project Manager

d.

(1) TITLE AND LOCATION *(City and State)*: NAVFAC Pacific, EA for the Home Basing of the MQ-9 Unmanned Aerial Vehicle Squadron and KC-130J Marine Aerial Refueler

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: ; CONSTRUCTION *(If applicable)*: N/A

	Transport Squadron at Marine Corps Base HI, (Kaneohe Bay, Oahu, HI)	2022	
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm **Scope:** Supported Project Manager to plan and execute tasks with multidisciplinary team of 21 analysts, SMEs, and support personnel. Spearheaded front-end project planning, resource analyst coordination, and project management planning to organize and keep this high-priority project on schedule. Acted as the local representative in internal and external meetings including resource specific development meetings, and for public participation planning and implementation. • **Size:** N/A • **Cost:** $878K • **Role:** Senior NEPA Planner/Deputy Project Manager		
e.	(1) TITLE AND LOCATION *(City and State)* NAVFAC Pacific, Biological and Benthic Habitat Survey in Support of SIOP and INRMP for Pearl Harbor (Oahu, HI)	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2023	CONSTRUCTION *(If* applicable*)* N/A
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm **Scope:** Led project team and managed all project aspects including health and safety planning, adherence to scope, budget and schedule monitoring and reporting. The bulk of the effort involved oversight of subcontractors conducting intensive field work during the height of the COVID-19 pandemic. Addressed scheduling, logistical, and administrative requirements to safely conduct the project and adhere to protocols. Provided senior review of all deliverables and ensured that the subcontractor work product met the requirements. Was responsive to periodic quick-turn taskers throughout the project to support NAVFAC on interim status, data, and findings to support related NAVFAC planning and engineering needs. • **Size:** N/A • **Cost:** $2.1M • **Role:** Project Manager/Environmental Planner		

County of Hawai'i

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY
(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Hannah Hubanks	Environmental Scientist	12	1.5

15. FIRM NAME AND LOCATION (City and State)

Stantec GS Inc. (Honolulu, HI)
Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan.

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
MS, Natural Resources and Environmental Management BS, Zoology	N/A

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Certifications and Training: NRCS Technical Service Provider (TSP)
Continuing Education: 2022 National Military Fish and Wildlife Association-Natural Resources Annual Training Workshop (34 continuing education credits)

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
City and County of Honolulu NPDES MS4 Monitoring (Honolulu, HI)	Ongoing	N/A

(3) BRIEF DESCRIPTION*(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Supported Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination system (NPDES) permit required monitoring and reporting for the City and County of Honolulu, Storm Water Branch. The project continually implements storm water sampling procedures pursuant to the NPDES permit requirements and manages data for all associated industrial facilities. Duties include maintenance of remote water quality and atmospheric monitoring stations to collect first-flush storm water samples according to 40 CFR 136 and EPA guidelines. Provided support to telemetered monitoring stations involving data logging by automated sampling equipment and tracked/archived weather data. **Size:** N/A • **Cost:** $462K (2022) • **Role:** Environmental Scientist

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Environmental Monitoring Services for Geothermal Energy Conversion Plant, Puna Geothermal Venture (Pāhoa, HI)	Ongoing	N/A

(3) BRIEF DESCRIPTION*(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Provided oversight and management of environmental services for the geothermal power plant, Puna Geothermal Venture, located in Pahoa on Hawai'i Island. Tasks included meteorological, air quality and groundwater monitoring services required by permit from the Hawai'i Department of Health (HDOH). Responsibilities included management of environmental data collection and QA/QC processes for daily air quality reports, semi-annual hydrological monitoring reports, and monthly noise and meteorological and air quality monitoring reports as required by HDOH. Field activities included semi-annual groundwater sampling. **Size:** N/A • **Cost:** $2.4M • **Role:** Deputy Project Manager/Environmental Scientist

c.

(1) TITLE AND LOCATION *(City and State)*: Hawai'i Soil Health Index Study (Statewide, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2019 | CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Researched and analyzed Hawai'i soil samples for the development of a Hawai'i Soil Health Index. Results used in conjunction with available SSURGO data are intended to improve the assessment of soils in the state and provide tools to document degradation or improvement. Coordinated, collected, and processed soils from locations across the state and generated an approach to evaluate soil health across a variety of land uses and soil types. Worked closely with the University of Hawai'i and COMET-Farm (Carbon Management and Emissions Tool) developers to integrate findings into a tool utilized by the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) to monitor soil health in Hawai'i. • **Size:** N/A • **Cost:** $500K • **Role:** Project Manager/Lead Researcher/Senior Environmental Scientist

d.

(1) TITLE AND LOCATION *(City and State)*: Water Quality Monitoring and BMP Inspections for Agribusiness Development Corporation (Mana Plains, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Supporting project management and execution of water quality and sediment monitoring and best management practices (BMP) inspections for the Agribusiness Development Corporation (ADC) owned lands on the Mana Plains near Kekaha, Kauai. The water quality and sediment monitoring were in response to litigation brought against the state for violations of the Clean Water Act. Sample sites were selected throughout the watershed to help assess the complete dynamics of the systems; many were in remote locations. The project team presented quarterly monitoring and inspection reports to the state and the public. Toxicity analysis was conducted on local species of interest as part of this project. The project team also provided recommendations for improvements in the watershed to improve water quality. • **Size:** N/A • **Cost:** $1.8M • **Role:** Deputy Project Manager/Senior Environmental Scientist

e.

(1) TITLE AND LOCATION *(City and State)*: Waimanalo Watershed Restoration Project, O'ahu Resource Conservation and Development Council (O'ahu, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2021 | CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Coordinated and monitored Best Management Practices (BMPs) for a Hawai'i State Department of Health (DOH) Clean Water Branch (CWB) grant-funded project. Managed site visits, coordination of native plant restoration, photo monitoring, contracts and produced quarterly progress reports with participating farms in this watershed-wide effort to reduce erosion and nutrient and sediment pollution following United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) standards. Served on the City and County of Honolulu Storm Water Utility Stakeholder Advisory Group. **Size:** N/A • **Cost:** $375K • **Role:** Project Manager/Conservation Specialist/Senior Environmental Scientist

County of Hawai'i

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY
(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Bert Weeks	Marine Biologist	7	2

15. FIRM NAME AND LOCATION (City and State)

Stantec GS Inc. (Honolulu, HI)
Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan.

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Master of Advanced Studies/Marine Biodiversity and Conservation BS, Biology	N/A

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Memberships: National Association of Environmental Professionals
Certifications and Training: AAUS Science Diver

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Stormwater Monitoring and MS4 NPDES Permit Related Services for the City and County of Honolulu 2022 (Honolulu, HI)	2022	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Providing support to CY22 stormwater monitoring services for National Pollutant Discharge Elimination System (NPDES). Project is to monitor and maintain nine (9) rain gauges across the island of Oahu in support of stormwater runoff sampling from City-operated industrial facilities. The key project goal is support of NPDES permit compliance for these facilities. Implements stormwater sampling during qualifying storm events and submission of water samples to laboratory facilities for further analyses in support of NPDES permit compliance. Drafts Storm Event Summary Reports and water sample compositing and field water quality grab parameter analysis after each storm event. Assists in completion of twice weekly weather tracking and archiving of forecasts, annual compilation of a sample location photo log, and an annual report summarizing findings. • **Size:** N/A • **Cost:** $462K • **Role:** Environmental Scientist/Biologist

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Environmental Impact Statement for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility at JBPHH (Oahu, HI)	2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Providing support for an EIS evaluating improvements, repairs, and/or new construction in support of JBPHH submarine dry dock and dry dock facility infrastructure with four alternatives and a no action alternative. Project has an aggressive time line for completion (two years). Ongoing work includes completion of the State of Hawai'i DOH Water Quality Certification, Compensatory Mitigation Plan, and the USACE individual permit. The proposed project's construction-related actions include dredging, fill, pile driving, installation of new temporary and permanent in-water structures, demolition of existing landside structures, and construction of new temporary and permanent landside facilities. The EIS evaluated impacts to five alternatives with various support facility options and 16 resources areas including dredging and filling within a Superfund remedial action area and demolishing existing historic structures. There are three cooperating agencies including USACE, USEPA, and NMFS. • **Size:** 176,800 SF Dry Dock and Waterfront Production Facility; 2,800-acre area • **Cost:** $7.1M • **Role:** Marine Biologist/Environmental Scientist

c.

(1) TITLE AND LOCATION *(City and State)*

Coral Monitoring Surveys and Coral Maintenance in Support of RM14-1420 Repair Lima Wharf and RM14-1423 Repair Mike and November Wharves Naval Base Guam (Apra Harbor, Guam)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Scope: Surveyed and maintained assessments of transplanted coral for a Navy mitigation project in Guam. • **Size:** N/A • **Cost:** $1.6M • **Role:** Environmental Scientist/Biologist

d.

(1) TITLE AND LOCATION *(City and State)*

Integrated Natural Resources Management Plan (INRMP) Update, JHPHH (Oahu, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2022	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Scope: Providing support for this significant update and overhaul to the JBPHH INRMP from 2011. The INRMP is a revision consisting of the comprehensive integrated plan for the conservation and management of natural resources to comply with natural resources stewardship requirements while optimizing mission activities. • **Size:** N/A • **Cost:** $614K • **Role:** NEPA Specialist/Biologist

e.

(1) TITLE AND LOCATION *(City and State)*

State of Hawai'i Department of Land and Natural Resources Division of Aquatic Resources (Honolulu, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2021	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☐ Check if project performed with current firm

Scope: Created framework for coral restoration permitting for the State of Hawai'i. Created the coral restoration statewide strategy for the State of Hawai'i. Coordinated the inter-agency West Maui Funding and Agency Support Team (FAST). Organized the US Coral Reef Task Force meeting for 2021. Implemented the State of Hawai'i Holomua 30x30 initiative. • **Size:** N/A • **Cost:** N/A • **Role:** National Coral Management Fellow /Biologist

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Boyd Dixon, PhD, RPA	Archaeologist	54	14

15. FIRM NAME AND LOCATION (City and State)

Stantec GS Inc. (Honolulu, HI)
Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan.

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
PhD, Anthropology MA, Anthropology BA, Anthropology	Registered Professional Archaeologist, Founding Member #4772

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Memberships: Louisiana Archaeological Society, Society for American Archaeology, Society for Hawaiian Archaeology, Society for Historical Archaeology
Awards: Northern Marianas Humanities Council Lifetime Achievement Award, 2019, Saipan

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
NAVFAC Pacific, Alternative Energy Planning Studies and Resiliency Roadmap, Pacific Missile Range Facility (Kauai, HI)	2021	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Performed quality control review on three technical reports for different alternatives. Survey areas included over 2,134 acres on the Mānā Plain along Kauai's western shore. Provided guidance for crafting an impact analysis for pre-planning cultural resources evaluation. Documents supported Archaeological Inventory Surveys within the potential project sites for the proposed North Grid Connection and Undergrounding Project, and Solar PV and Battery Storage projects identified in the PMRF Roadmap. • **Size:** N/A • **Cost:** $2.1M • **Role:** Archaeologist/Principal Investigator

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Archaeological Subsurface Survey at South Finegayan, Naval Base Guam	2018	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Directed archaeological data recovery and prepared subsequent report for Latte site 66-08-0141. Led team for excavations which included backhoe trenching for geoarchaeological studies. Participated in shovel test pits for excavation archaeological sites within the potential direct impact areas for subsurface deposits. Conducted test units of Ground Penetrating Radar anomalies previously detected were captured. • **Size:** N/A • **Cost:** $265K • **Role:** Archaeologist/Principal Investigator

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Archaeological Data Recovery (Andersen Air Force Base, Guam)	2017	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Directed archaeological data recovery investigations at 14 prehistoric sites and the NW Field WWII air base and post war camp. Manually excavated using 0.5 by 0.5 meter (1.6 by 1.6 foot) and 1 by 1 meter (3.3 by 3.3 foot) excavation units. Manual excavations revealed the remains of prehistoric oven cooking features and activity areas, plus WWII and post war artifacts and archival documents. Prepared subsequent report to provide mitigation actions for adverse effects to known cultural resources, which are within the direct impact area for a portion of the range complex located within AAFB. • **Size:** 14 sites • **Cost:** $896K • **Role:** Archaeologist/Principal Investigator

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED

	NAVFAC Pacific, Draft EIS/Overseas EIS for the Commonwealth of the Northern Mariana Islands Joint Military Training (CJMT), (Island-wide, Commonwealth of the Northern Mariana Islands)	PROFESSIONAL SERVICES 2016	CONSTRUCTION *(If applicable)* N/A
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm **Scope:** Conducted archaeological surveys on Pagan and Tinian in the CNMI. Provided extensive support for public meetings and Section 106 consultation. Assembled/directed team conducting cultural resources surveys and identification/evaluation of traditional cultural properties in Pagan and Tinian. His extensive knowledge of the local area and local issues was instrumental in successful regulatory coordination efforts. • **Size:** N/A • **Cost:** $26.2M • **Role:** Archaeologist/Principal Investigator		
e.	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Archaeological Surveys and Cultural Resources Studies in Support of the Live-Fire Training Range Complex Supplemental EIS (Guam)	PROFESSIONAL SERVICES 2016	CONSTRUCTION *(If* applicable*)* N/A
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm **Scope:** Conducted high intensity survey for proposed direct impact alternatives in support of the Supplemental EIS. The cultural resources survey occurred in areas throughout Guam including private lands. Guided and participated in complex archaeological surveys of over 5,395 acres in which a large number and variety of cultural resources were affected. Participated in shovel test pits for excavation archaeological sites within the potential direct impact areas for subsurface deposits. Recorded and prepared detailed maps, site descriptions, and photo-documented all archaeological resources identified within the potential direct in-fill survey areas and collected sufficient data to evaluate these sites for listing in the NRHP, as per 36 CFR Part 60. • **Size:** 5,395 acres • **Cost:** $2M • **Role:** Archaeologist/Principal Investigator		

County of Hawai'i

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS SERVICE CATEGORY

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN SERVICE CATEGORY	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Stephanie Clarke, GISP	GIS Specialist	8	7

15. FIRM NAME AND LOCATION (City and State)

Stantec GS Inc. (Solana Beach, CA)

Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan.

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE
BA, Biology and Environmental Studies	Geographic Information Systems Professional #161322

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Training/Certifications: 2021 Geography Directed Study: LIDAR, Unmanned Aircraft Systems, ArcGIS**,** Creating/Sharing GIS Content ArcGIS, Displaying Raster Data ArcGIS, Field GIS Colleting/Editing Data ArcPad 10, Going Places with Spatial Analysis, Performing Line Sight Analysis, Performing Viewshed Analysis ArcGIS Pro, Python ArcGIS Pro, Geodatabase Domains/Subtypes ArcGIS

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: City and County of Honolulu NPDES MS4 Monitoring (Honolulu, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Scope: Responsible for the development of supporting graphics. • **Size:** N/A • **Cost:** $462K (2022) • **Role:** Lead GIS Analyst

b.

(1) TITLE AND LOCATION *(City and State)*: Environmental Impact Statement for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility at JBPHH (Oahu, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2023; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Scope: Responsible for data collection and data analysis. Compiled marine biological data from multiple JV projects and created a comprehensive dataset. Identified and analyzed sensitive species. • **Size:** N/A • **Cost:** $2.4M • **Role:** Lead GIS Analyst

c.

(1) TITLE AND LOCATION *(City and State)*: Environmental Assessment for the Home Basing of the MQ-9A Unmanned Air System and KC-130J Aerial Transport Refueling Aircraft at MCAS Kaneohe Bay Marine Corps Base HI (Oahu, HI)

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2022; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Scope: responsible for analysis and creation of National Environmental Policy Act (NEPA) quality figures. Assisted in development of alternatives incorporating sensitive resources including biological resources, cultural resources, and water resources. Calculated acreages for project impacts and new impervious surfaces. Managed data within Controlled Unclassified Information (CUI) environment for security purposes. Assembled final GIS data deliverable in the GEOFidelis 4.0.5 format. • **Size:** N/A • **Cost:** $551K • **Role:** Lead GIS Analyst

d.

(1) TITLE AND LOCATION *(City and State)*
Regional Data Book Web Tool Support, Maintenance and Update (Kamehameha Schools, HI)

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Updating previous contract (2017) to replace the data within the Stantec GS-developed web tool with the latest information. Delegated tasks to team members, led weekly meetings with the client, and tracked budget and hours billed. As a Data Analyst, contributed to researching over 50 different data points related to socioeconomic, education, landownership, Native Hawaiian demographic, and client-specific data across the State of Hawai'i. Responsible for data formatting, JSON configuration file creation, and JSON testing before delivering the files to the client. As the GIS Lead, researched or created datasets related to socioeconomic, education, landownership, etc. data points, published the data to ArcGIS Online, developed JSON configuration files integrating the ArcGIS Online maps for use within the web tool. In addition, created several ArcGIS Online Web Apps, Operation Dashboards, and Story Maps related to Legislative Districts, COVID-19 (coronavirus), and Cultural Resources. • **Size:** N/A • **Cost:** $462K • **Role:** Deputy Project Manager/GIS Specialist

e.

(1) TITLE AND LOCATION *(City and State)*
Biological and Benthic Habitat Survey in Support of SIOP and INRMP for Pearl Harbor, HI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Scope: Responsible for data, management, analysis, and creation of figures for marine resources survey. Coordinated regularly with field teams, project management, and clients to keep the multiple reports on a timely schedule. Converted field data into GIS feature classes and attached field photos in a related table. Maintained and organized hundreds of collected data points for 14 study areas. Constantly managed and updated an ArcGIS Online Web Map viewer for Navy clients to view biological data as points, polygons, and photos as it was collected and processed throughout the multi-year period. • **Size:** N/A • **Cost:** $2.1M • **Role:** Lead GIS Analyst

County of Hawai'i

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **1**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Hawai'i Green Growth (HGG) Ala Wai Watershed Collaboration (AWWC) (Honolulu, HI)	2020	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
HGG	Julius Lorenz-Fisher	(808) 351-5947

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

The Stantec team oversaw two related projects for GIS support to the Ala Wai Watershed Collaborative.

KEY RELEVANCE

Scope:
- GIS
- Data Analytics

Size: Ala Wai Watershed
Cost: $9K
Key Personnel:
- Sarah Troedson, Senior GIS Analyst

The AWWC convenes a network partner to advance a shared vision of prosperity and resilience for the Ala Wai watershed. Building on decades of watershed management and community efforts and inspired by the Polynesian Voyaging Society's Mālama Honua message in 2015, this network has grown to over 60 stakeholders from government, civil society, business, and academia who have converged as the AWWC to solve the challenges of this watershed together. HGG coordinates the AWWC.

Our GIS support included analytics and preparation of report and graphics to define water shed boundaries and overlay state and local political districts as well as land uses by type and ownership. Stantec determined the specific borders of the Ala Wai Watershed District using existing databases and information sources.

1. Ala Wai Watershed District Analysis: Conduct an analysis to determine what proportion (% of area and properties) is owned by private/state/city/federal landowners, and what proportion (% of area and properties) is zoned in each of the different City Land Use Zones.
2. Analysis of Political Districts as they Overlap with the Ala Wai Watershed District:
    a. What proportion (% of area and properties) of the political district would be within the Ala Wai Watershed District?
    b. What proportion (% of area and properties) of the Ala Wai Watershed District falls within each political district?
    c. For the area that is both within the boundaries of each political district and the Ala Wai Watershed District, what proportion (% of area and properties) is owned by private/state/city/federal landowners, and what proportion (% of area and properties) is zoned in each of the different City Land Use Zones? Key subcategories of landowners such as UH and DOE within the state and BWS and DPR within the City should be broken out separately as appropriate.
3. Prepared communications materials and assist HGG and the AWWC in joint briefings, meetings, and presentations, as needed.

Stantec also prepared a story map to document community group projects throughout the watershed at present and in recent years. This provided visual documentation of the community groups efforts over the past three years and provided quantitative information for HGG to document the effectiveness of the program: miles of streams cleaned, planted with native species, and invasive species removed, as well as number of volunteers involved.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Stantec Consulting Services Inc.	Honolulu, HI	Prime Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *(Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **2**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Kaloko Affordable Housing Project HRS 343 and HUD NEPA, Environmental Assessments (Kaloko, HI)	2018	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Hawai'i Island Community Development Corporation	Jeremy McComber	(808) 319-2428

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

Stantec is coordinating with the applicant (Hawai'i Island Community Development Corporation) and the approving agency (Office of Housing and Community Development) to write the Environmental Assessments (EAs).

KEY RELEVANCE

Scope:
- Environmental Assessments

Size: Hawai'i Island
Cost: $145K
Key Personnel:
- Michele Lefebvre, Project Manager

The first EA has been prepared in accordance with Chapter 343 of the Hawai'i Revised Statutes (HRS) and following approval of this EA, a federal EA will be prepared that will be compliant with the Department of Housing and Urban Development (HUD's) NEPA requirements. This will include working with the agency to identify issues, conducting early consultation before preparing the Draft EA, preparing the Draft EA, responding to public comments, and preparing the Final EA.

The project would construct approximately 111 two- and three-bedroom units. A centrally located community center would provide onsite property management space, a kitchen, private meeting rooms, communal gathering space, mailboxes, and laundry facilities. The site would be landscaped, with common gathering, circulation and play areas, and would be graded and constructed to meet the applicable accessibility and adaptability requirements. The project proposes to tie in with the County of Hawai'i's Kealakehe's Wastewater Treatment Plant. However, depending on timing of the agreement with the County on the sewer tie-in, a portion of the parcel may also be used for a self-contained wastewater treatment plant for wastewater generated onsite. If required, the project would use the on-site wastewater treatment plant until completion of a proposed sewer line, and the project's wastewater treatment could transition to tying in to the County of Hawai'i's Kealakehe's Treatment Plant.

Stantec collected the traffic data and coordinated the preparation and completion of the Traffic Impact Assessment Report for the project. Stantec coordinated the biological survey with a local biological subconsultant and the assessment of cultural impacts from the project with a local cultural resource firm.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Stantec Consulting Services Inc.	Honolulu, HI	Prime Consultant

County of Hawai'i

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **3**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
City and County of Honolulu NPDES MS4 Monitoring (Honolulu, HI)	Ongoing	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City and County of Honolulu Prime: Kennedy Jenks Consultants	Jon Honda	(808) 488-0477

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

For over 15 years, Stantec GS has provided stormwater monitoring and reporting services for the City and County of Honolulu.

Scope:
- NPDES MS4 permit storm water monitoring and reporting

Size: N/A
Cost $462K (2022)
Key Personnel:
- Peer Amble, Project Director
- Ben Berridge, Project Manager
- Ben Weeks, Biologist
- Hannah Hubanks, QA/QC Director
- Jennifer Miller, Deputy Project Manager

Stantec has performed stormwater samples at 75 industrial facilities throughout the island of Oahu in compliance with the City and County of Honolulu's Municipal Separate Stormwater Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) permit. The effort has included investigation, planning, and installation of remote water quality and atmospheric monitoring stations to collect first-flush stormwater samples according to 40 CFR 136 and EPA guidelines.

Stantec designed telemetered monitoring stations that incorporate data logged by automated sampling equipment and water quality sensors, area-velocity sensors, and pressure transducers, providing records of flow and site conditions and tracking/archiving weather. Stantec provides quality assurance and quality control (QA/QC) oversight, coordinates 24/7 on-call teams for grab/composite sample collection, maintains rainfall-runoff curves, monitors automated sampling equipment, and prepares monthly status reports.

The NPDES permit required first flush samples from the permitted facilities. Stantec faced challenges monitoring a large number of City facilities with capturing the "first flush" of significant storm events. This required staff to monitor a large number of facilities across the island during fairly short storm event periods. In order to overcome the challenges Stantec faced state of the art telemetered monitoring stations were equipped with discrete alarming systems based on site and atmospheric conditions. The alarms and the quick moving sampling teams were able to effectively monitor several facilities during large events. In addition, a priority based weight risk scoring system was established with State of Hawai'i Department of Health (HDOH) to determine the facilities that have the potential to have the highest impact to water quality and prioritize these facilities. The strategies allowed for a cost effective solution to the challenges the NPDES permit requirements presented.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Stantec GS Inc. (formerly Cardno GS, Inc.)	Honolulu, HI; Santa Barbara, CA	Subcontractor

County of Hawai'i

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **4**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Environmental Monitoring Services for Geothermal Energy Conversion Plant, Puna Geothermal Venture (Pāhoa, Hawai'i Island, HI)	Ongoing	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Ormat Technologies, Inc. for Puna Geothermal Venture (PGV)	Ron Quesada	808-965-2848

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

Scope:
- Environmental monitoring
- Compliance monitoring
- Community outreach

Size: N/A
Cost: $2.4M (total)
Key Personnel:
- Michele Lefebvre, Project Manager/Biologist
- Benjamin Berridge, Program Manager/Environmental Planner
- Hannah Hubanks, Environmental Scientist

For over a decade, Stantec GS has provided environmental monitoring services to include compliance monitoring and community outreach to Puna Geothermal Venture, in Pāhoa, Hawai'i. Compliance monitoring services include meteorology, noise, air quality, and groundwater monitoring as required by Geothermal Resource, Underground Injection Control, and Noncovered Source Permits from the State of Hawai'i Department of Health (DOH). Stantec GS manages data collection (EDAS), conducts QA/QC process for daily air quality reports, and authors semi-annual hydrological monitoring reports and monthly noise, meteorological, and air quality monitoring reports. Field activities include semi-annual groundwater sampling and calibration of meteorological monitoring equipment.

The goal of PGV's environmental monitoring program is to demonstrate PGV is in compliance with permits and is also a responsible corporate partner in the community. PGV's needs go beyond what is typically associated with compliance monitoring. Services provided through go beyond 24/7 operation and maintenance support services to include providing customized services to improve the air monitoring network, such as developing the databases that link to the monitoring stations meteorological and H2S equipment as well as the air monitoring alarm system. The Stantec GS alarm system, which was developed to alert plant operators of any fugitive H2S release, has been proven to be a valuable and reliable system that affords PGV the ability to take immediate action to mitigate potential health hazards should a release occur. Community awareness and public outreach are of prime importance to PGV, and, as such, PGV relies on Stantec GS to provide knowledgeable support based on its well-rounded understanding of PGV's operations and the community in which it operates. In addition to environmental monitoring services, Stantec GS provides community engagement support, including supporting PGV at community outreach meetings.

Stantec GS recognized the need to maintain continuous communications of the data to the website. Each station was assigned a static IP address and taken off of the unreliable dial-up connection. AT&T wireless communication systems were also used as a backup at each station.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Stantec GS Inc. (formerly Cardno GS, Inc.)	Honolulu, HI; Santa Barbara, CA	Subcontractor

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **5**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Alternative Energy Planning Studies and Resiliency Roadmap, Pacific Missile Range Facility (Kauai, HI)	2021	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NAVFAC Pacific	Erith M. Evans	(808) 474-9778

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

Under a Joint Venture, Stantec GS developed a suite of engineering reports, special planning studies, and pre-NEPA environmental assessments in support of current and future resiliency requirements at PMRF Barking Sands in Kauai, Hawai'i. The studies centered around development of the PMRF Installation Energy Roadmap, a comprehensive energy planning effort that addressed current and potential future mission needs, planned PMRF infrastructure projects, and efforts necessary to enhance mission assurance through energy resiliency, operational efficiency, leveraging innovative technology, improved partnerships and strengthening infrastructure.

SCOPE OF WORK

The Installation Energy Roadmap is a structured and effective approach to selecting, prioritizing, sequencing, and implementing energy projects and programs that will result in stronger long-term installation energy and resiliency posture. The Energy Roadmap laid out the viability and sustainability of various alternative energy and energy resiliency solutions. The plan ensures available and reliable utilities, including on-site electricity generation, for the installation's critical missions and defines energy requirements to maintain mission capabilities during outage events.

The team determined the mission energy requirements, assessed resiliency gaps, and developed engineering scenarios to address the gaps. Top priority projects included combined solar photovoltaic and battery energy storage systems, and power and communication line connection/undergrounding projects at various sites on the installation. These projects were selected for further technical and financial analysis, including the creation of a cost benefit analysis tool.

To support the Energy Roadmap and PMRF's current and future resilience requirements, the team prepared numerous planning/infrastructure studies. These studies included: a Waste to Energy Facility Assessment, Resiliency Requirements Assessment, Waste Stream Analysis, Site Alternatives Assessment, Traffic Study, Soundscape Study, Glare Study, Life Cycle Cost Study, development of Alternative Energy Cost Benefit Tool, and a PMRF Installation Energy Program Summary. Two other related studies were developed and are summarized below.

Scope:

- Coastal Consistency Determinations under CZMA
- ESA Section 7 Consultations, Biological Surveys, and Biological Assessments
- Noise analysis (in-air and underwater)
- Natural Resources Surveys
- Wetland delineation and mitigation plans (wetland, near shore)
- NHPA Consultation/Cultural Resource Surveys (Architectural/Archaeological)
- Storm Water Management Studies
- Public Involvement Strategies/Planning/Implementation
- Total Ownership Cost (TOC)/Life cycle cost analysis
- Geospatial analysis/map generation
- Alternative energy feasibility studies
- Sediment characterization studies
- Hydrology/Erosion studies
- Utility capability assessments/ feasibility studies (electric, gas, sewer, water)
- Traffic Studies/Transportation analysis/Roadway designs

ize N/A

Cost: $2.1M

Key Personnel:

- Peer Amble, Project Director
- Jennifer Miller, Project manager
- Boyd Dixon, Archaeologist

The team prepared a Sea Level Rise Vulnerability Study, which assessed the vulnerability of PMRF to permanent inundation and temporary flooding from sea level rise and storm surges using selected projections for the years 2035 and 2065 and customized GIS data modeling.

- Developed site-specific sea level rise mapping using two different time horizons, vulnerability and risk assessment, and the development of high-level adaptation strategies to address the vulnerabilities/resilience gaps.
- Identified key vulnerabilities to critical structures and facilities.

- Developed potential concept-level adaptation strategies to be translated into projects to address resiliency requirements.
- Organized and ran two stakeholder meetings with adjacent landowners, municipalities, and state agencies to share information about the project and to learn about other similar efforts with the aim of future collaboration.
- Developed a funding matrix for sources applicable to the Navy, local municipalities, and other entities to seek funding for off-base strategies that would protect the base from future sea level rise impacts.

The team conducted pre-NEPA environmental studies for the priority projects, including in areas with federally protected threatened and endangered species and high cultural sensitivity. The project also addressed the level of permitting and NEPA compliance required to complete the implementation of the priority projects. Our team also prepared a consistency determination for all three alternative energy projects as part of the pre-NEPA analyses.

Additonally, the team prepared stakeholder materials, organized, and facilitated several workshops with local county and State agencies and other key entities (University of Hawai'i, Sea Grant Program, Kauai County Utilities Commission). These workshops were focused on information gathering, energy resiliency brainstorming, and briefings of PMRF energy strategies into the future. The outcome and success of these workshops was continued stakeholder trust, transparency, and involvement going forward.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Cardno GS – AECOM Pacific JV (predecessor JV to Stantec GS-AECOM Pacific JV)	Honolulu, HI; Solana Beach, Santa Barbara, CA; Charlottesville, VA	Prime Contractor

County of Hawai'i

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **6**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Environmental Impact Statement for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility at JBPHH (Oahu, HI)	2023	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NAVFAC Pacific	Andrea Von Burg Hall	(808) 472-1425

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

As a prime partner in a JV, the Stantec GS team prepared an EIS and supporting documentation for the Navy's proposed graving dry dock and waterfront production facility at JBPHH. The proposed project would replace an existing dry dock with one of sufficient size to meet current and future requirements of fast-attack submarines. The modern waterfront production facility would reduce lost operational days by increasing collaboration and efficiency among the work force. Ongoing work includes completion of the State of Hawai'i DOH Water Quality Certification, Compensatory Mitigation Plan, and the USACE individual permit.

SCOPE OF WORK

The proposed project's construction-related actions would include dredging, fill, pile driving, installation of new temporary and permanent in-water structures, demolition of existing landside structures, and construction of new temporary and permanent landside facilities. The EIS evaluated impacts to five alternatives with various support facility options and 16 resources areas including dredging and filling within a Superfund remedial action area and demolishing existing historic structures. There were three cooperating agencies including USACE, USEPA, and NMFS.

Consultation and Permitting. Major complexities included an extremely aggressive schedule, incongruency in NEPA and project design stage, stringent permitting requirements, and application of a Compensatory Mitigation Plan. The JV supported highly complex permitting and mitigation planning activities under unusually fast-paced delivery schedules. The permitting documentation was developed to meet requirements under Section 404 and Section 10, as well as Section 401 of the Clean Water Act. Accompanying mitigation planning documentation developed by the JV includes a precedent setting Compensatory Mitigation Plan with analyses and mitigation measures to minimize impacts from dredging and filling to wetlands and open water habitat within Pearl Harbor.

Scope:

- Coastal Consistency Determinations under CZMA
- ESA Section 7 Consultations, Biological Surveys, and Biological Assessments
- Noise analysis (in-air and underwater)
- Natural Resources Surveys
- Wetland delineation and mitigation plans (wetland, near shore)
- NHPA Consultation/Cultural Resource Surveys (Architectural/Archaeological)
- Storm Water Management Studies
- Public Involvement Strategies/Planning/Implementation
- Total Ownership Cost (TOC)/Life cycle cost analysis
- Geospatial analysis/map generation
- Alternative energy feasibility studies
- Sediment characterization studies
- Hydrology/Erosion studies
- Utility capability assessments/ feasibility studies (electric, gas, sewer, water)
- Traffic Studies/Transportation analysis/Roadway designs

Size: 176,800 SF Dry Dock and Waterfront Production Facility; 2,800-acre area

Cost: $7.1M

Key Personnel:

- Peer Amble, Project Director
- Jennifer Miller, Project manager
- Boyd Dixon, Archaeologist

The team supported the Navy in solidifying a Programmatic Agreement with the Hawai'i SHPO and the ACHP to ensure mission planning for facilities and operations are implemented in a manner that minimizes harm to Pearl Harbor National Historic Landmark. The JV also supported consultations under ESA and Magnuson-Stevens Fishery Conservation and Management Act through development of endangered species act and Essential Fish Habitat Assessment and associated documentation.

These consultation documents included analyses and mitigation measures to minimize impacts to biological and benthic species within Pearl Harbor.

Public Involvement Strategies. With the onset of the COVID pandemic and inability to conduct in-person meetings, the JV used a 360-degree Virtual Stakeholder Engagement platform to foster and facilitate public engagement during the scoping and Draft EIS public comment periods. This technology allowed the public to visit the virtual space and to provide comments throughout the duration of these public engagement periods.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Cardno GS – AECOM Pacific JV (predecessor JV to Stantec GS-AECOM Pacific JV)	Honolulu, HI; Orange, San Diego, Santa Barbara, Solana Beach, CA; Charlottesville, Hampton, VA; Portland, OR	Prime Contractor
b.	Stantec Consulting Services Inc. (Parent firm)	Pasadena, CA	Permitting Support

County of Hawai'i

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **7**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Environmental Assessment for the Home Basing of the MQ-9 Marine Unmanned Aerial Vehicle Squadron and KC-130J Marine Aerial Refueler Transport Squadron, MCB Hawai'i (Kaneohe Bay, Oahu, HI)	2022	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NAVFAC Pacific	John Bigay	(808) 472-1196

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

This project evaluated the Marine Corps' basing of MQ-9 and KC-130 aircraft squadrons including analysis of 21 aircraft; 3,000 MQ-9 and 5,280 KC-130J operations; 676 additional personnel plus dependents at MCB Hawai'i Kaneohe Bay; and supporting infrastructure construction on four acres. The need for the proposed action is to extend the capability, versatility, and range of the Hawai'i-based Marine Corps and other forces in support of United States – Indonesia Society USINDOPACOM.

SCOPE OF WORK

The Stantec GS team evaluated seven resource areas: noise, air quality, water resources, cultural resources, biological resources, public health and safety, and transportation. The JV coordinated a successful "heavy-lifting up-front" strategy to confirm a reasonable range of alternatives based on well-defined criteria driven by a strong purpose and need. NEPA streamlining processes were applied by using a thorough rationale to dismiss certain resources from detailed analysis, narrowing the analysis to only relevant resource areas. This process bolstered regulatory analysis, legal sufficiency, and Quality Control at each stage of the project.

Scope:

- Air Conformity analyses/modeling under CAA
- Coastal Consistency Determinations under CZMA
- ESA Section 7 Consultations, Biological Surveys, and Biological Assessments
- Noise impact studies/modeling in-air
- Natural Resources Surveys
- NHPA Consultation/Cultural Resource Surveys (Architectural/Archaeological)
- Public Involvement Strategies/Planning/Implementation
- Safety analyses (Accident Potential Zones, Clear Zones)
- Geospatial analysis/map generation
- Air/Water quality requirements
- Traffic analysis

Size: Two aircraft types/squadrons; 21 aircraft; 8,280 aircraft operations/year; 676 personnel plus families; 4 acres construction

Cost: $878K

Key Personnel:

- Peer Amble, Project Director
- Jennifer Miller, Project Manager
- Boyd Dixon, Archaeologist
- Stephanie Clarke, GIS Specialist

National Historic Preservation Act. Several of the facilities in the APE were historic, including historic landmarks and districts eligible for listing in the National Register of Historic Places, as well as archaeological districts. Consultations involved the State Historic Preservation Division (SHPD), Native Hawaiian Organizations, interested parties, and the public regarding a determination of adverse effects to historic properties resulting from the proposed action. SHPD concurred with the Marine Corps determination that the project would result in adverse effects to the NAS Kaneohe Historic Aviation District.

ESA Section 7/Biological Assessment/Resource Surveys. ESA Section 7 consultation was required with the USFWS regarding impacts to Hawaiian waterbirds, Hawaiian seabirds, and green sea turtles via a Biological Assessment. The Marine Corps determined the proposed action "may affect but is not likely to adversely affect ESA-listed species or has no effect on ESA-listed species." The USFWS concurred with the Biological Assessment and commented that it was a well-prepared consultation document. MCB Hawai'i is currently using this Biological Assessment as the example consultation document for other projects involving federally threatened or endangered species.

Coastal Consistency Determination. The proposed action falls under the Marine Corps' CZMA de minimis activities list. The JV provided guidance and support for their consultation with the State of Hawai'i Office of Planning and Sustainable Development, Planning Division who concurred with the Marine Corps' determination that the action would not result in any reasonably foreseeable direct or indirect effects to uses or resources within the Hawai'i Coastal Zone.

Traffic Analysis. A traffic analysis was conducted to assess effects resulting from construction, operation, and the cumulative effects of construction and additional personnel.
Air Quality Analyses. Led by air quality specialist Fang Yang, the JV modeled criteria pollutant emissions and GHG emissions from proposed construction activities and annual flight operations and engine maintenance.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Cardno GS – AECOM Pacific JV (predecessor JV to Stantec GS-AECOM Pacific JV)	Honolulu, HI; Santa Barbara, Solana Beach, CA; Seattle, WA; Hampton, Charlottesville, VA	Prime Contractor

County of Hawai'i

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **8**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Environmental Assessment (EA) for RM14-1420 Repair Lima Wharf and RM14-1423 Repair Mike and November Wharves at Naval Base Guam (NBG) (Apra Harbor, Guam)	2020	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NAVFAC Pacific	Andrea Von Burg Hall Ian Bordenave	(808) 472-1425 (808) 472-1429

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

Lima, Mike, and November wharves at NBG were no longer functional for ship repairs, berthing of submarines or surface combatant, cargo, and Roll-on/Roll-off ships, or to support heavy weather mooring requirements.

The US Navy required a Finding of No Significant Impact (FONSI) on an EA with complete consultation support in order to award a fiscal year 21 construction project to restore full operational capability of the wharves.

Under a separate, directly related concurrent task order (Amendment 06, TO F0158), Stantec GS' AAUS certified divers performed marine benthic biological surveys to determine the presence and extent of corals, sea grass, and other marine biota in the project area to support the EA analysis.

SCOPE OF WORK
The proposed action included construction of sheet pile ship berthing bulkheads and fendering, dredging pavements, and utilities (i.e., electrical substations/ shore power, potable water, wastewater, stormwater, fire protection, telecommunications), and a Bilge/Oily Wastewater Treatment System. The analysis focused on seven resource areas: marine biology (including underwater acoustics), water quality, cultural resources, land use, infrastructure, hazardous materials and wastes, and air quality.

Scope:
- Air Conformity analyses/modeling under CAA
- Coastal Consistency Determinations with CZMA
- Essential Fish Habitat Assessments
- ESA Section 7 Consultation
- Noise impact analysis (underwater)
- Toxic and hazardous waste analysis
- Public Involvement Strategy/Implementation
- CWA permitting
- Geospatial analysis/map generation
- Air/Water requirements
- Dredge/fill sediment volume estimates

Size: N/A
Cost: $291K
Key Personnel:
- Peer Amble, Project Director
- Ben Berridge, Hawai'i Office Manager

In accordance with the 2019 Assistant Secretary of the Navy Energy, Installations and Environment (ASN EI&E) Environmental Planning Timelines memorandum, our the Stantec GS team worked closely with NAVFAC Pacific to gain efficiencies and streamline processes, compress document preparation timelines, and prepare a focused and concise EA.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Cardno GS – AECOM Pacific JV (predecessor JV to Stantec GS-AECOM Pacific JV)	Honolulu, HI; Santa Barbara, CA; Charlottesville, VA	Prime Contractor

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY *Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **9**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
100 Resilient Cities (100RC) Technical Support to Honolulu Assessment of Ala Wai Flood Mitigation Project (Honolulu, HI)	2018	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City and County of Honolulu Office of Climate Change Sustainability & Resiliency	Matthew Gonser	(808) 748-2262

The City and County of Honolulu (CCH), State of Hawai'i, and the U.S. Army Corps of Engineers (USACE) Honolulu District are currently reviewing design features and negotiating terms of the partnership agreement with the State, County, and City of Honolulu for the construction of the Ala Wai Watershed Flood Mitigation Project.

The primary objective of the proposed project is to reduce flood risk in Manoa, Palolo, Waikiki, and parts of Makiki and Moilili neighborhoods. The estimated population at risk included approximately 65,000 residents and an additional 200,000 transient daily visitors. An estimated 3,000 structures are at flood risk to a one percent (a 100-year event) probable storm event, with potential damages exceeding $1B. The project features include:

- Six debris/detention basins in upper reaches of Maikiki, and Palolo streams
- One in-stream debris catchment structure
- Three multi-purpose detention basin
- Flood Control Elements along the Ala Wai Canal
- Flood warning system (non-structural)
- Fish and wildlife mitigation (non-structural)

KEY RELEVANCE

Scope: Climate change, resiliency, and sustainability, flood mitigation, environmental, hydraulics, landscape architecture, flood control
Size: N/A
Cost: $100M+ (construction)
Key Personnel:
- John Malueg, Technical SME

Through the auspices of the 100RC, The CCH retained Stantec on a pro-bono basis to review the proposed USACE FS study level designs and provide general support services to the City with respect to develop conceptual alternative designs/adjustments to existing designs for potential inclusion in the USACE's Ala Wai Canal Food Risk Mitigation project. General support included assisting the City identify opportunities for place-making. Increased community use and acceptance, enhancing the local economy, achieving improvements in the environment while achieving (or expanding) the project's flood mitigation focus. More specific scope tasks included assisting the City identify opportunities to quantify (monetize) the flood risk mitigation, social, economic and environmental benefits achieved by proposed new or modified key project elements, particularly in terms of USACE recognition of in-kind local contribution to the Project. Analysis provided included consideration of impacts to overall project costs, feasibility, permitablity, constructability and schedule. Our team worked closely with the CCG Department of Design and Construction to focus on features of greater interest to the community and produced multiple alternatives for design and location of canal areas and walls and levees, inclusion of park areas, incorporation of ongoing complete streets planning, CCH goals for multi-modal transport. Concepts were also provided for greening and increased safety for middle and upper watershed Project features. We also provided alternative conceptual designs to increase normal and higher frequency flood flows diversion of the Manoa-Palolo Stream through the Ala Wai Golf course to provided water treatment of stream water before its return to the canal at point further east of current junction that will provide water quality benefits to the canal itself.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Stantec Consulting Services Inc.	Honolulu, HI	Prime Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE FIRM'S QUALIFICATIONS FOR THIS SERVICE CATEGORY
Present no more than 10 projects, with emphasis on previous City projects. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
10

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Lahaina Watershed Flood Protection Project (Lahaina, HI)	Ongoing	N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
County of Maui Department of Public Works	Ty Takeno	(808) 270-7745

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS SERVICE CATEGORY *(Include scope, size, and cost)*

The Lahaina Watershed Flood Protection Project, previously known as the Lahaina Watershed Flood Control Project, has been over forty years in the making. A portion of the project (30%) has been constructed, and funding is now in place to conduct the engineering and environmental planning needed to complete the remaining planned works. To continue, the project must complete a supplemental watershed plan – the Supplemental Plan Environmental Document (ED). The Supplemental ED is due to significant watershed changes (largely due to the construction of the Lahaina Bypass) since the project's Environmental Impact Statement (EIS), which was completed in 2003.

KEY RELEVANCE

Scope:
- Flood preparedness
- NEPA/HEPA environmental review

Size: 5,250 acres
Cost: $1.4M
Key Personnel:
- Sherry Campagna, Project Manager
- Sarah Troedson, Senior GIS Analyst
- Hannah Hubanks, Environmental Scientist
- Boyd Dixon, Archaeologist

Our team is completing the Lahaina Watershed Flood Protection Project Supplemental Plan Environmental Document. This project involves the development of a Natural Resource Conservation Service (NRCS), National Environmental Policy Act (NEPA), and Hawai'i Environmental Policy Act (HEPA) compliant Supplemental Plan Environmental Document (ED) to evaluate watershed protection measures within the Lahaina Watershed. The proposed project is intended to mitigate for flooding and reduce the impacts of sedimentation.

25. FIRMS INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Stantec Consulting Services Inc.	Honolulu, HI	Prime Consultant

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL (From Section E, Block 12)	27. ROLE IN EXAMPLE PROJECT	28. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Sheryl Campagna	Senior Environmental Planner/ Community Engagement Lead	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
John Malueg	Sustainability and Resiliency Planning	☒	☐	☐	☐	☐	☐	☐	☐	☒	☐
Sarah Troedson	Senior GIS Analyst	☒	☐	☐	☐	☐	☐	☐	☐	☐	☒
Michele Lefebvre	Environmental Scientist	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐
Peer Amble	Environmental Planner	☐	☐	☐	☐	☐	☒	☒	☒	☐	☐
Benjamin Berridge	Environmental Planner	☐	☐	☒	☒	☒	☒	☐	☐	☐	☐
Jennifer Miller	Environmental Planner	☐	☐	☒	☐	☒	☒	☒	☐	☐	☐
Hannah Hubanks	Environmental Scientist	☐	☐	☒	☒	☐	☐	☐	☐	☐	☒
Bert Weeks	Biologist	☐	☐	☒	☐	☒	☐	☐	☐	☐	☐
Boyd Dixon	Archaeologist	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒
Stephanie Clarke	GIS Specialist	☐	☐	☒	☐	☐	☒	☒	☐	☐	☐

29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Hawai'i Green Growth Ala Wai Watershed Collaboration	6	EIS for Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility Dry Dock and Waterfront Production Facility at JBPHH
2	Kaloko Affordable Housing Project HRS 343 and HUD NEPA, EAs	7	EA for the Home Basing of the MQ-9 Marine Unmanned Aerial Vehicle Squadron and KC-130J Marine Aerial Refueler Transport Squadron, MCB Hawai'i
3	City and County of Honolulu NPDES MS4 Monitoring	8	EA for RM14-1420 Repair Lima Wharf and RM14-1423 Repair Mike and November Wharves
4	Environmental Monitoring Services for Geothermal Energy Conversion Plant, Puna Geothermal Venture	9	100 Resilient Cities Technical Support to Honolulu Assessment of Ala Wai Flood Mitigation Project
5	Alternative Energy Planning Studies and Resiliency Roadmap, Pacific Missile Range Facility	10	Lahaina Watershed Flood Management Project

The Stantec Advantage

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always **design with community in mind.**

We care about the communities we serve—because they're our communities too. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe. From urban to suburban, we lay the foundation for the creation of the communities of today and of the future. Our goal is to enhance the welfare of people and their communities by creating convenient, equitable, healthful, efficient, and attractive environments for present and future generations.

The Stantec community unites more than 26,000 employees working in over 400 locations • We collaborate across disciplines and industries to bring buildings, energy and resource, and infrastructure systems to life. Our work—professional consulting in planning, engineering, architecture, landscape architecture, surveying, environmental sciences, project management, and project economics—begins at the intersection of community, creativity, and client relationships. With thousands of employees on six continents, Stantec offers a global team of program managers, business consultants, engineers, geologists, operators, scientists, technologists, and regulatory experts who provide solutions to the world’s most challenging projects.

One Stantec team • Stantec Consulting Services Inc. and Stantec GS Inc. staff collaborate as one united Stantec team. Stantec GS Inc. is owned and operated by Stantec Consulting Services Inc. through an internal affiliated operations plan. Cardno GS, Inc., now known as Stantec GS Inc., was acquired by Stantec on December 6, 2021. Since 1989, Stantec GS Inc. has provided environmental, A-E, and other asset management services for our clients in Hawai'i. Stantec GS Inc. is an operating division of Stantec Inc. and has historically focused on meeting the needs of our municipal, state, federal agency, and commercial clients.

Global resources with island attitude • We have a 51-person strong Honolulu operations team with our principal office located in American Savings Bank Tower of Bishop Park, as well as 20 additional staff in the Stantec GS Inc. Honolulu office. Stantec has been working in Hawai'i supporting our community on projects, including working with the Environmental Services Department (ENV) on the Phase 2 Expansion for Sand Island Wastewater Treatment Plant; working with the Office of Climate Change, Sustainability, and Resiliency together with Department of Design and Construction (DDC) on integrating greener and community friendly alternatives into the proposed Ala Wai Flood Mitigation project; construction management for the HART Honolulu Rail Transit Project; harbors master planning for HDOT as a subconsultant; environmental impact assessments for government and commercial clients; mapping for the County of Hawai'i; and risk and resiliency planning for County of Maui. From environmental assessments on Hawai'i island to remedial investigations in the Northwest Islands (Wake) we have staff in multiple disciplines working throughout Hawai'i. We believe that creating a team that engages the right people is key to project success. Our team offers local expertise through our local staff on Oahu, Maui, and Hawai'i Island, along with relevant support staff and subject matter experts in Western United states—plus all the 26,000+ professionals in our global Stantec network. This gives us the flexibility to respond to any project challenge in a timely and efficient manner to keep your projects on track. We have the diverse experience necessary to tackle even your most unique challenges.

We have approached this submittal in a way that we believe provides the City and County of Honolulu with information on the depth and breadth of our capabilities, as well as information on specific projects and staff. We understand that in doing this, Section G of this form may not demonstrate the overlap, we would usually present in a direct RFQ. Staff relatively new to Stantec bring a wealth of technical experience and in several cases experience in Hawai'i with other firms. Another important feature of Stantec is our proven track record of integrating multiple disciplines into projects; it’s all a part of designing with communities in mind and ensuring projects achieve all potential benefits.

Stantec is a national leader in all aspects of community and environmental planning • We integrate this expertise with all of our service areas presented below.

Community Development
- Master Planning
- Urban Design
- Landscape Architecture
- Design Visualization
- Stakeholder Consultation
- Brownfield Redevelopment
- Civil Engineering
- Master Servicing Plans
- Watershed Studies
- Stormwater Management
- Earthworks Analysis/ Lot Grading Design

Environmental Services
- Brownfields Assessment and Remediation
- Site Investigation and Remediation
- Risk Assessment
- Assessments, Permitting, and Compliance
- Ecosystem Restoration
- Groundwater Resources Management
- Archaeology and Heritage Resources

Survey/Geomatics
- Boundary and Cadastral Surveys
- Topographic Mapping
- Construction Stakeout
- Geodetic and Control Surveys
- As-Built Surveys
- 3D Laser Scanning

Geotechnical Engineering
- Subsurface Explorations
- Foundation and Retaining Systems
- Geotechnical Lab Testing
- Materials Investigations
- Seepage Analysis/ Dewatering Studies
- Slope Stability Analysis
- Settlement Analyses

Water
- Municipal and Industrial Water and Wastewater Treatment
- Water Supply, Storage Facilities and Distribution Systems
- Water and Wastewater
- Pumping Stations
- Linear Infrastructure Design
- Wastewater Reclamation and Reuse
- Wet Weather Flow Management

Transportation Planning and Traffic Engineering
- Transportation Master
- Planning/Modeling
- Travel Forecasting
- Traffic Impact Assessments
- Access Management
- Traffic Calming Solutions
- Safety Assessments

Environmental Planning

Our team is diverse-not only do we help the communities we live and work in create big picture plans, but we also provide the supporting services to fulfill environmental review requirements and get those plans implemented. We routinely prepare environmental documents and guide our clients through regulatory processes from local to federal agencies to achieve permit issuance and project implementation. We do this for both public and private clients on everything from small residential projects to large-scale utility projects and all types in between and in all types of land and regulatory environments. Our team of scientists and issue-area experts can cover all of the environmental impact issue areas from air quality and biology to historic preservation and geology. We have experience performing environmental impact assessments and documents pursuant to Chapter 343 of the Hawai'i Revised Statutes (HRS) and the National Environmental Policy Act for a variety of projects throughout the Islands.

Our team has the experience and qualifications to assist in tailoring an outreach process which engages stakeholders and desired constituencies. Engagement efforts are tailored to the goals of each client and to address differences between communities and institutions.

Stantec takes a proactive approach to the public involvement process specifically to encourage the participation of everyone with a potential interest in a project. Our public involvement team is highly skilled in the planning and facilitation of public meetings, and has successfully facilitated meetings for environmental justice communities, diverse groups of stakeholders, and the general public. Utilizing our extensive media capabilities, we have also coordinated with clients to create comprehensive packages of public involvement materials including meeting advertisements and signage, newsletters, websites, videos, 3-D visualization tools, and other educational materials.

Stantec has led hundreds of public involvement and community visioning projects that have generated community consensus. Throughout our public involvement process, innovative communication tools and techniques, such as a computer simulation and 3-D visualization, are employed as a means of building consensus. As needed, Stantec tailors outreach materials, such as newsletters, interactive web pages, public displays, briefing books, and video materials to the circumstances of each project, providing important information regarding the project process and goals to affected communities, stakeholders, and the public. The result is a more engaged and involved stakeholder base that will build public acceptance for your projects.

Environmental planning involves many disciplines and Stantec is proud to offer our expertise in these areas:

Cultural Resources

- Archaeological surveys
- Cultural resources overview studies and management plans
- National Register assessment and nomination programs and historic building studies

Environmental Impact Assessment

- Air and noise studies
- Comprehensive data gathering
- Documentation through environmental impact statements and supporting studies
- Community involvement plans
- Geospatial and Geoinformation systems and Remote Sensing Data capabilities to include fixed wing, rotary, and UAS services

Natural Resources

- Biological/ecological studies, including endangered species habitat analysis
- Wetlands delineation and mitigation

Planning Documentation

- Climate change studies
- Economic feasibility studies
- Environmental baseline surveys and site selection
- Master planning for phased construction
- National Environmental Policy Act (NEPA)

Public Involvement

- Strategic communications, consultation, and Public Involvement Plans
- Virtual public meeting hosting, facilitation, logistics, and technical implementation
- Online engagement materials and tools, and marketing/event surveys
- Risk communication and public meeting training/workshops
- Public meeting/hearing/workshop planning and facilitation
- Fact sheets, brochures, external and internal newsletters, copy writing, posters, presentations, and illustrations
- Press releases, media advisories, crisis communications, media relations, and media monitoring
- Public meeting materials, briefings, and Frequently Asked Questions
- Exhibit booths, site tours, materials, and events planning
- Websites, speech and script development, videos, podcasts, social media

Stantec Quality Management

We are committed to improving project execution, product quality, and reducing quality related costs. We have a formal quality management system in use across the organization that is registered to the ISO9001:2015 Quality Management standard. ISO 9001:2015 is an internationally recognized standard for quality management and has been adopted by Stantec to reduce risk and consequences of design errors, improve productivity and efficiency, promote the quality and reliability of our services, improve the financial performance, increase client confidence, and support regulatory compliance. We hold not one, but three ISO certifications, Quality, Environment, and Information Technology—together they form our Integrated Management System. The Stantec Project Management Framework in the table below, identifies the key tasks—requirements of our ISO 9001 Quality Management System—that will help you and your project team manage risks and quality on a typical project.

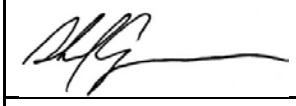
Stantec Project Management Framework

Point	Description
0	Prepare a proposal that includes a **preliminary Project Plan** including scope, project budget, resources, deliverables, and schedule. Conduct and document an independent review of the final proposal. Conduct and document a hazard assessment and apply applicable controls if a field or site visit is required during the proposal phase.
1	Obtain **written instructions** to proceed and execute an **approved contract**. Obtain written subconsultant agreements (if applicable).
2	Prepare a **Project Plan** to an appropriate level of detail. Conduct and document an **independent review**.
3	Establish hard copy and electronic **project record directories** and file project records accordingly.
4	Complete a Health, Safety & Environment **risk management assessment** and documentation for all projects involving field work.
5	Monitor the **PM Dashboard** on a regular basis. Follow best practices for managing project **financials**, including time charges, work in progress (WIP), accounts receivable (AR), and estimates to complete (etc.).
6	Obtain the client's written approval on **scope of service changes** in a timely manner.
7	Conduct and document a **quality review** of all final deliverables prior to issue.
8	Conduct and document an **independent review** of all final* deliverables prior to issue.
9	Close off the project **financials** and close out the **project files**.

Stantec trades on the TSX and the NYSE under the symbol STN. Visit us at **stantec.com** or find us on social media.

On the following pages, we have included SF330 Part II forms for Stantec Consulting Services Inc. and Stantec GS Inc. Honolulu offices and additional offices listed that would work for the County of Hawai'i. Additional Part II forms can be provided upon request.

I. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts.

31. SIGNATURE	32. DATE
	June 30, 2023

33. NAME AND TITLE
Sheryl Campagna, Senior Environmental Planner

PROFESSIONAL SERVICE PROVIDER QUALIFICATIONS	1. SERVICE CATEGORY OF INTEREST 3. Community Planning, GS-0020: C. Environmental Planning

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME	3. YEAR ESTABLISHED	4. UNIQUE ENTITY IDENTIFIER
Stantec Consulting Services Inc.	2016	YV48PGRUGZN1

2b. STREET	5. OWNERSHIP
1001 Bishop Street Suite 1501	a. TYPE
2c. CITY: Honolulu / 2d. STATE: HI / 2e. ZIP CODE: 96813-3429	**Corporation**
	b. SMALL BUSINESS STATUS
	N/A
6a. POINT OF CONTACT NAME AND TITLE	7. NAME OF FIRM *(If block 2a is a branch office)*
Brian P. Norris - Senior Vice President, Transportation	
6b. TELEPHONE NUMBER: (702) 885-9977 / 6c. EMAIL ADDRESS: brian.norris@stantec.com	**Stantec Inc.**

8a. FORMER FIRM NAME(S) *(If any)*	8b. YEAR ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) Firm	c. No. of Employees (2) Branch
02	Administrative	5274	5
05	Archaeologist	507	1
06	Architect	1082	8
07	Biologist	322	2
08	CAD Technician	986	1
12	Civil Engineer	3112	8
14	Computer Programmer	855	0
15	Construction Inspector	312	0
16	Construction Manager	324	4
21	Electrical Engineer	908	3
23	Environmental Engineer	541	0
24	Environmental Scientist	1538	4
27	Foundation/Geotechnical Engineer	852	0
37	Interior Designer	220	2
38	Land Surveyor	353	3
42	Mechanical Engineer	917	1
47	Planner, Urban/Regional	703	1
48	Project Manager	1082	5
57	Structural Engineer	929	1
58	Technician/Analyst	1574	2
	Other Employees	2110	0
	Total	**24501**	**51**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(See Below)*
A06	Airports; Terminals and Hangars; Freight Handling	10
C10	Commercial Building (low rise); Shopping Centers	10
C15	Construction Management	9
C16	Construction Surveying	6
C18	Cost Est, Cost Eng and Analy; Para Costing; Frcst	6
E09	EIS, Assessments of Statements	10
E10	Environmental and Natural Resource Mapping	7
E11	Environmental Planning	10
G04	GIS Services; Devel, Analysis , and Data Collection	6
G05	Geospatial Data Conv: Scan, Digitizing, Comp	3
H01	Harbors; Jetties; Piers, Ship Terminal Facilities	8
H09	Hospital & Medical Facilities	10
I05	Interior Design; Space Planning	8
L02	Land Surveying	8
M05	Military Design Standards	8
R03	Railroad; Rapid Transit	10
R11	Rivers; Canals; Waterways; Flood Control	8
S10	Surveying; Platting; Mapping; Flood Plain Studies	8
S11	Sustainable Design	6
W02	Water Resources; Hydrology; Ground Water	10
W03	Water Supply; Treatment , and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(insert revenue index number shown at right)

a. Federal Work	10
b. Non-Federal Work	10
c. Total Work	**10**

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE: **May 22, 2023**

c. NAME AND TITLE: **Sarah A. McIlroy - Vice President, US Pacific**

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(if any)*

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME	3. YEAR ESTABLISHED	4. UNIQUE ENTITY IDENTIFIER
Stantec GS Inc. – Honolulu, HI Branch Office	2022	P4FGL9JCNRM9

2b. STREET	5. OWNERSHIP
737 Bishop Street Suite 3050	a. TYPE Corporation

2c. CITY	2d. STATE	2e. ZIP CODE	b. SMALL BUSINESS STATUS
Honolulu	HI	96813	N/A

6a. POINT OF CONTACT NAME AND TITLE	7. NAME OF FIRM *(If block 2a. is a branch office)*
Benjamin Berridge, Office Manager	

6b. TELEPHONE NUMBER	6c. EMAIL ADDRESS	
808.528.1445	benjamin.berridge@stantecgs.com	Stantec GS Inc.

8a. FORMER FIRM NAME(S) (If any)	8b. YR ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER
Cardno GS, Inc.	2014	P4FGL9JCNRM9
TEC Inc., Cardno TEC, Inc.	1989	61-160-3457

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
01	Acoustical Engineer	2	
05	Archeologist	10	1
06	Architect	8	
07	Biologist	14	4
10	Chemical Engineer	3	
11	Chemist	2	
12	Civil Engineer	13	1
18	Cost Engineer/Estimator	3	
19	Ecologist	3	1
20	Economist	3	1
21	Electrical Engineer	2	
23	Environmental Engineer	9	
24	Environmental Scientist	29	4
29	GIS Specialist	8	1
30	Geologist	2	
42	Mechanical Engineer	8	
47	Planner: Urban/Regional	35	2
58	Technician/Analyst	79	3
	Information Mgmt. Specialist	13	
	Regulatory Specialist	15	2
	Other Employees	35	
	Total	**296**	**20**
48	Project Manager (subset of other disciplines)	[91]	[6]

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C14	Conservation and Resource	3
C15	Construction Management	1
E01	Ecological & Archeological	1
E07	Energy Conservation; New Energy	1
E09	Environmental Impact Studies, Assessments or Statements	5
E10	Environmental and Natural Resource Mapping	2
E11	Environmental Planning	4
G04	Geographic Information System Services: Development, Analysis, and	1
H01	Harbors; Jetties; Piers, Ship Terminal	3
P06	Planning (Site, Installation, and	1
S10	Surveying; Platting; Mapping; Flood Plain Studies	2
S11	Sustainable Design	2
W02	Water Resources; Hydrology; Ground Wtr	3

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	5
b. Non-Federal Work	3
c. Total Work	6

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. **Less than $100,000**
2. **$100,00 to less than $250,000**
3. **$250,000 to less than $500,000**
4. **$500,000 to less than $1 million**
5. **$1 million to less than $2 million**
6. **$2 million to less than $5 million**
7. **$5 million to less than $10 million**
8. **$10 million to less than $25 million**
9. **$25 million to less than $50 million**
10. **$50 million or greater**

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE	b. DATE
Willi Halpern	March 21, 2023

c. NAME AND TITLE
William Halperin, President

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*:

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME	3. YEAR ESTABLISHED	4. UNIQUE ENTITY IDENTIFIER
Stantec Consulting Services Inc.	2009	WKXJLJ6QXMN8

2b. STREET	5. OWNERSHIP
290 Conejo Ridge Avenue	a. TYPE: Corporation

2c. CITY	2d. STATE	2e. ZIP CODE
Thousand Oaks	CA	91361-4972

b. SMALL BUSINESS STATUS: N/A

6a. POINT OF CONTACT NAME AND TITLE	7. NAME OF FIRM *(If block 2a is a branch office)*
Michael Weber - Senior Principal	Stantec Inc.

6b. TELEPHONE NUMBER	6c. EMAIL ADDRESS
(805) 719-9329	Michael.Weber@stantec.com

8a. FORMER FIRM NAME(S) *(If any)*	8b. YEAR ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER
Stantec Consulting Services Inc. (Camarillo, CA)	2014	12-642-2935

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) Firm	c. No. of Employees (2) Branch
02	Administrative	5272	6
05	Archaeologist	507	1
06	Architect	1082	0
07	Biologist	322	5
08	CAD Technician	986	0
12	Civil Engineer	3111	3
13	Communications Engineer	44	1
14	Computer Programmer	855	0
21	Electrical Engineer	908	0
23	Environmental Engineer	536	1
24	Environmental Scientist	1537	7
29	GIS Specialist	237	2
30	Geologist	243	4
34	Hydrologist	188	2
38	Land Surveyor	353	4
42	Mechanical Engineer	914	0
47	Planner, Urban/Regional	703	2
48	Project Manager	1081	0
57	Structural Engineer	929	0
58	Technician/Analyst	1573	3
	Other Employees	3103	0
	Total	**24484**	**41**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(See Below)*
A06	Airports; Terminals and Hangars; Freight Handling	10
C10	Commercial Building (low rise); Shopping Centers	10
E12	Environmental Remediation	10
E13	Environmental Testing and Analysis	8
H01	Harbors; Jetties; Piers, Ship Terminal Facilities	8
H02	Hazardous Materials Handling and Storage	5
H07	Highways; Streets; Airfield Paving; Parking Lots	10
H09	Hospital & Medical Facilities	10
I01	Industrial Building; Manufacturing Plants	10
L03	Landscape Architecture	8
P02	Petroleum and Fuel (Storage and Distribution)	9
R04	Recreation Facilities (Parks, Marinas, Etc.)	8
S01	Safety Eng, Accident Studies, OSHA Studies	5
S05	Soils & Geologic Studies; Foundations	8
S13	Storm Water Handling & Facilities	9
W02	Water Resources; Hydrology; Ground Water	10
W03	Water Supply; Treatment , and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(insert revenue index number shown at right)

a. Federal Work	10
b. Non-Federal Work	10
c. Total Work	**10**

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: Sarah McIlroy

b. DATE: June 14, 2023

c. NAME AND TITLE: **Sarah A. McIlroy - Vice President, US Pacific**

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*:

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: **Stantec Consulting Services Inc.**	3. YEAR ESTABLISHED: 2014
	4. UNIQUE ENTITY IDENTIFIER: FNEGRHN33PH5
2b. STREET: 200 East Carrillo Street Suite 101	**5. OWNERSHIP**
	a. TYPE: **Corporation**
2c. CITY: Santa Barbara / 2d. STATE: CA / 2e. ZIP CODE: 93101-2137	b. SMALL BUSINESS STATUS: **N/A**
6a. POINT OF CONTACT NAME AND TITLE: Brianna M. Daniels - Senior Principal	7. NAME OF FIRM *(If block 2a is a branch office)*: **Stantec Inc.**
6b. TELEPHONE NUMBER: (805) 925-2345 x 111 / 6c. EMAIL ADDRESS: Brianna.Daniels@stantec.com	

8a. FORMER FIRM NAME(S) *(If any)*	8b. YEAR ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) Firm	c. No. of Employees (2) Branch
02	Administrative	5272	3
05	Archaeologist	507	1
06	Architect	1082	0
07	Biologist	322	0
08	CAD Technician	986	0
10	Chemical Engineer	292	0
12	Civil Engineer	3111	10
14	Computer Programmer	855	1
15	Construction Inspector	312	0
16	Construction Manager	324	0
21	Electrical Engineer	908	0
23	Environmental Engineer	536	1
24	Environmental Scientist	1537	1
27	Foundation/Geotechnical Engineer	849	0
38	Land Surveyor	353	8
42	Mechanical Engineer	914	0
47	Planner, Urban/Regional	703	1
48	Project Manager	1081	1
57	Structural Engineer	929	0
58	Technician/Analyst	1573	0
	Other Employees	2038	0
	Total	**24484**	**27**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(See Below)*
A06	Airports; Terminals and Hangars; Freight Handling	10
A11	Auditoriums & Theaters	5
C10	Commercial Building (low rise); Shopping Centers	10
C15	Construction Management	9
C16	Construction Surveying	6
E02	Educational Facilities; Classrooms	10
F02	Field Houses; Gyms; Stadiums	6
G01	Garages, Vehicle Maint. Facilities, Parking Decks	8
H07	Highways; Streets; Airfield Paving; Parking Lots	10
H09	Hospital & Medical Facilities	10
H10	Hotels; Motels	8
H11	Housing (Residential, Multi-Family, Apts, Condos)	10
L02	Land Surveying	8
R04	Recreation Facilities (Parks, Marinas, Etc.)	8
R11	Rivers; Canals; Waterways; Flood Control	8
S04	Sewage Collection, Treatment, and Disposal	10
S10	Surveying; Platting; Mapping; Flood Plain Studies	8
S13	Storm Water Handling & Facilities	9
T03	Traffic & Transportation Engineering	10
T04	Topographic Surveying and Mapping	6
W02	Water Resources; Hydrology; Ground Water	10
W03	Water Supply; Treatment , and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(insert revenue index number shown at right)

a. Federal Work	10
b. Non-Federal Work	10
c. Total Work	**10**

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: Sarah McIlroy

b. DATE: **June 14, 2023**

c. NAME AND TITLE: **Sarah A. McIlroy - Vice President, US Pacific**

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME	3. YEAR ESTABLISHED	4. UNIQUE ENTITY IDENTIFIER
Stantec Consulting Services Inc.	2004	DDVXV3MZF446

2b. STREET	5. OWNERSHIP
One West Fourth Street Suite 820	a. TYPE **Corporation**
2c. CITY: Winston-Salem; 2d. STATE: NC; 2e. ZIP CODE: 27101-3818	b. SMALL BUSINESS STATUS **N/A**
6a. POINT OF CONTACT NAME AND TITLE: Linda Pass - Senior Associate	7. NAME OF FIRM *(If block 2a is a branch office)* **Stantec Inc.**
6b. TELEPHONE NUMBER: (336) 276-1617 x1617; 6c. EMAIL ADDRESS: Linda.Pass@stantec.com	

8a. FORMER FIRM NAME(S) *(If any)*	8b. YEAR ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) Firm	c. No. of Employees (2) Branch
02	Administrative	5272	1
05	Archaeologist	507	0
06	Architect	1082	1
07	Biologist	322	0
08	CAD Technician	986	2
12	Civil Engineer	3111	5
14	Computer Programmer	855	0
15	Construction Inspector	312	0
16	Construction Manager	324	0
21	Electrical Engineer	908	0
23	Environmental Engineer	536	0
24	Environmental Scientist	1537	0
27	Foundation/Geotechnical Engineer	849	0
30	Geologist	243	1
38	Land Surveyor	353	1
42	Mechanical Engineer	914	0
47	Planner, Urban/Regional	703	0
48	Project Manager	1081	5
57	Structural Engineer	929	1
58	Technician/Analyst	1573	0
	Other Employees	2087	0
	Total	**24484**	**17**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(See Below)*
C15	Construction Management	9
C16	Construction Surveying	6
I03	Industrial Waste Treatment	7
L02	Land Surveying	8
R04	Recreation Facilities (Parks, Marinas, Etc.)	8
S04	Sewage Collection, Treatment, and Disposal	10
S10	Surveying; Platting; Mapping; Flood Plain Studies	8
S13	Storm Water Handling & Facilities	9
T03	Traffic & Transportation Engineering	10
W02	Water Resources; Hydrology; Ground Water	10
W03	Water Supply; Treatment , and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(insert revenue index number shown at right)

a. Federal Work	10
b. Non-Federal Work	10
c. Total Work	**10**

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE: **June 14, 2023**

c. NAME AND TITLE: **Amy Campbell - Senior Principal, Regional Leader US South**

Appendix A
Other Services

PROFESSIONAL SERVICES

Stantec is a global company serving a wide variety of clients and providing a multitude of services. We have the resources and capabilities to handle projects of all sizes and scope. Following is a list of sample services, not considered to be a comprehensive list of services Stantec provides. Promotional material included in this section highlights some of the capabilities we can offer the County.

- Acoustical Engineering
- Airport Airside Infrastructure
- Biological Services
- Brownfield Redevelopment
- Buildings Engineering
- Civil Engineering
- Construction Management
- Electrical Engineering
- Environmental Services
- Geotechnical Engineering
- Geomatics
- Grant Writing and Funding Assistance
- Information and Communications Technology
- Industrial Wastewater Treatment
- Infrastructure Asset Management
- Landscape Architecture
- Land Surveying
- Lighting Design
- Mechanical Engineering
- Port and Marine Terminals
- Power Engineering
- Project Management
- Project Permitting
- Public Involvement
- Structural Engineering
- Transportation/Transit Design
- Utility Financial Planning
- Water, Wastewater, and Stormwater Engineering
- Waterpower and Dams

Stantec

Coastal and Marine Services

Coastal engineering to help communities manage risk and improve resiliency

We have proven experience in providing our clients with coastal engineering, environmental, and permitting services for coastal infrastructure and ecological restoration projects. The ability to innovate and design within permitted projects areas, while also being sure to attain timely regulatory approvals, is an essential piece to the completion of projects, and one in which we have demonstrated significant ability through a wide range of projects.

Our team provides complete services to clients, including project and program management, field studies, site evaluations, technical and policy reviews, regulatory assessments, development of proposals and plans, design, permitting, monitoring, compliance audits, expert witness testimony, and technical training. Staff specialty groups work with Stantec's regional offices close to the project to provide a thorough and coordinated approach. Throughout our history, Stantec's staff has supported private, local, and federal clients with coastal, multidisciplinary planning, environmental engineering, and construction support services for all types of public programs and projects.

Coastal Engineering services include:

- Beach Nourishment Design
- Dune Restoration
- Coastal Structures
- Local and Statewide Beach Management Plans
- Post-storm Damage Assessments and Recovery
- Inlet Management Planning and Sediment Budget Development
- Coastal Engineering Analysis
- Sand Sourcing (Offshore and Upland)
- Program Management Support - Program Planning, Contracting, Budgeting, and Cost Control
- Environmental Analysis, Mitigation, and Permitting
- Coastal Economic Evaluations and Funding Program development
- Coastal Development and Vulnerability Analysis
- Construction Administration, Bidding, Inspection and Permit Compliance Monitoring of Beach Nourishment and Marine Dredging Projects
- Dredge Design and Disposal Options
- Environmental Impact Assessments and ERP/JCP Permitting
- Sediment Transport, Sediment Budget Analysis, Accretion Modeling
- Inlet Improvement and Sand Bypassing
- Restoration and Management Plans for Coastal Lagoons and Beaches
- Shoreline Erosion Assessment and Management
- Numerical Modeling of Wave Diffraction, Refraction and Shoaling
- Circulation and Water Quality Modeling
- Coastal Hazard Mapping and Flood Management Studies

Permanent Canal Closures and Pumps (PCCP) →
New Orleans, LA

24,300
cubic feet/second
Total pumping capacity of 24,300 cfs reducing risk for New Orleans communities

Our designs rise with the tide

The concept of Sea Level Rise has advanced far beyond an academic concept. Regardless of the perceived causal relationship between atmospheric and/or cyclic changes in ocean elevations, current documented evidence exists that this phenomenon is a significant risk to the people, infrastructure, economies, and critical habitats in coastal zones worldwide.

There are many ways to identify potentially impacted communities in the United States, however, based upon population analysis and statistics from FEMA, it is reasonable to estimate that between 35% and 40% of the US population live within communities likely to be impacted by changes in Sea Level and coastal processes. Sea level Rise not only results in the obvious encroachment on community infrastructure, it also exacerbates the impacts of storm events and changes the elevation and quality of groundwater (drinking water). It also significantly impacts agriculture, power & fuel supplies, fisheries, and critical coastal habitats.

Stantec engineers, scientists, and planners are actively working with communities worldwide to anticipate the current and future impacts of changing sea levels. We live and work in the communities and environments impacted by Sea Level Rise. This is personal for us, and our ability to develop actionable and proactive strategies to prepare for, and sustain critical resources and infrastructure is demonstrated in the solutions we deliver every day to our coastal community partners.

Sea Level Rise services include:

- Projected Sea Level Inundation Mapping
- Future Storm Surge Inundation Modeling
- Vulnerability and Resiliency Assessment
- Criticality Assessment and Prioritization
- Risk and Uncertainty-based Engineering Design
- Infrastructure and Facility Adaptation and Mitigation Planning and Engineering
- Cost Benefit Alternatives Analysis
- Ecosystem Response Modeling

↓ Prime Hook Marsh Restoration and Shoreline Resiliency
Milton, DE

Protecting our coastal ecology

Coastal ecosystems are found throughout the world where oceans and inland waters meet the land surface. The type of waters and terrestrial environments that occur in a coastal ecosystem vary extensively from marine to fresh or even mixed brackish environments. Although coastal ecosystems as a whole exhibit some shared characteristics, each has its own unique physical and biological elements.

They are places with some of the highest species diversity on the planet, and where our human populations and communities drape across an extensive mosaic of environments. Our coastal communities and infrastructure are influenced by, and result in influences on, our coastlines. Our Scientists and Engineers consistently demonstrate an actionable understanding of how natural systems and infrastructure interact. This expertise and experience is the foundation of Stantec's ability to assess and develop harmonious, sustainable and resilient solutions to integrated challenges in coastal zones.

State and Federal Regulatory protection of coastal systems such as the Clean Water Act, the Coastal Zone Conservation Act, the Marine Mammal Protection Act, and the Endangered Species Act are all leveraged to assist in providing guidance for appropriate interactions between natural and built environments. Stantec engages closely and corroboratively with our regulatory agency project partners to develop compliant and appropriate approaches, which meet the expectations of our clients while maintaining the integrity of critical coastal ecology.

Coastal Ecology services include:

- Ecosystem Restoration
- Coastal Restoration
- Stream Restoration
- Wetland Habitat and Marine Assessments
- Environmental Assessments
- Regulatory Permitting and Compliance
- Clean Water Act Section 404/401 and State Permitting
- Cultural Resources
- National Resource Damage Assessments (NRDA)
- Endangered Species Surveys

Designing plans that restore natural processes requires experience. Success in a coastal environment requires knowledge and training in marine habitats, an understanding of biological, physical, and chemical processes, and the application of relevant regulations.

Perico Preserve
Bradenton, FL

Marine science solutions to sustain oceanic environments

Our oceans consist of 97% of the world's water, covering over three quarters of the planet. With an estimated half of the world population living within coastal zones, many of these communities rely on the $500+ Billion dollar economy that's attributed to ocean-based business. The biological, physical and economic influence of the world's oceans cannot be overstated. To be effective as a provider of coastal solutions, it is critical that we also deliver expertise in the Marine Sciences. Whether as required for permitting, or from a final deliverable perspective, a proven understanding of the relationship between coastal processes and Marine Sciences is a necessity.

Marine scientific-consulting is a complex and interdisciplinary offering that Stantec has invested many years of effort in perfecting. It requires expertise in many technical and regulatory areas. As our practice has evolved, we have developed into of the most capable interdisciplinary teams working in the industry. We don't only rely on our in–house expertise and resources, we have also developed an enviable stable of regional, academic, and specialty relationships with clients, regulatory agencies, and professional partners that allow us to assemble the most capable and experienced experts to tackle any challenges a project might present.

We understand that throughout the world, each marine environment is different. Our marine specialists have explored and developed solutions from the deeper oceans to near-shore environments. Defining and developing a better understanding of marine habitats from the Gulf and Caribbean to the Arctic oceans is something at which we excel. We have repeatedly proven our ability to clearly understand the needs and challenges of coastal communities, commercial entities, and government agency clients. We strive each day to deliver results that meet and exceed their expectations.

Marine Science services include:

- Consultation and Engagement
- Regulatory Permitting
- Environmental Assessments
- Ecology Risk Assessment
- Resource Assessment and Baseline Data Collection
- Habitat Planning, Restoration, and Enhancement
- Site Monitoring
- Research and Development

Port operations and economics, transformed

At Stantec we understand that the successful realization of projects for Ports and Marine Terminals requires a multi-disciplinary approach. With more than 60 years of experience across North America in design and engineering, our teams combine specialized, worldwide knowledge experience and expertise with local project delivery.

As a proven total-solutions partner, Stantec provides a wide range of professional and multi-disciplinary consulting services in the field of Ports and Marine Terminals. Our core strength lies in the integration of the key skills required for master planning, feasibility studies, engineering design, specialized geotechnical, project management, environmental services and construction supervision for ports and marine projects.

From enhancing port profitability to integrating port activities with innovative information systems, we are focused on economical, bottom-line solutions.

With a global presence, Stantec serves a wide spectrum of public and private clients, including government agencies, marine transportation entities, owners, operators, and tenants of Port and Marine Terminals. Because our client's success is our success, we always do what is right for their projects and their company.

Port and Marine Terminals services include:

- Port Master Planning
- Project Management
- Planning and Feasibility Studies
- Multidisciplinary Architecture and Engineering
- Marine Structures Engineering
- Site Services and Utilities
- Power Supply, Distribution and Lighting
- Civil Infrastructure (Roads/Bridges/Rail)
- Geotechnical Engineering
- Hydraulic Engineering
- Environmental Engineering Permitting
- Contaminated Sites/Site Restoration
- Design for Envision (Sustainability)
- Infrastructure Resiliency Design
- Geomatics and Bathymetry
- Ocean and Coastal Engineering
- Port Security and Threat Assessment

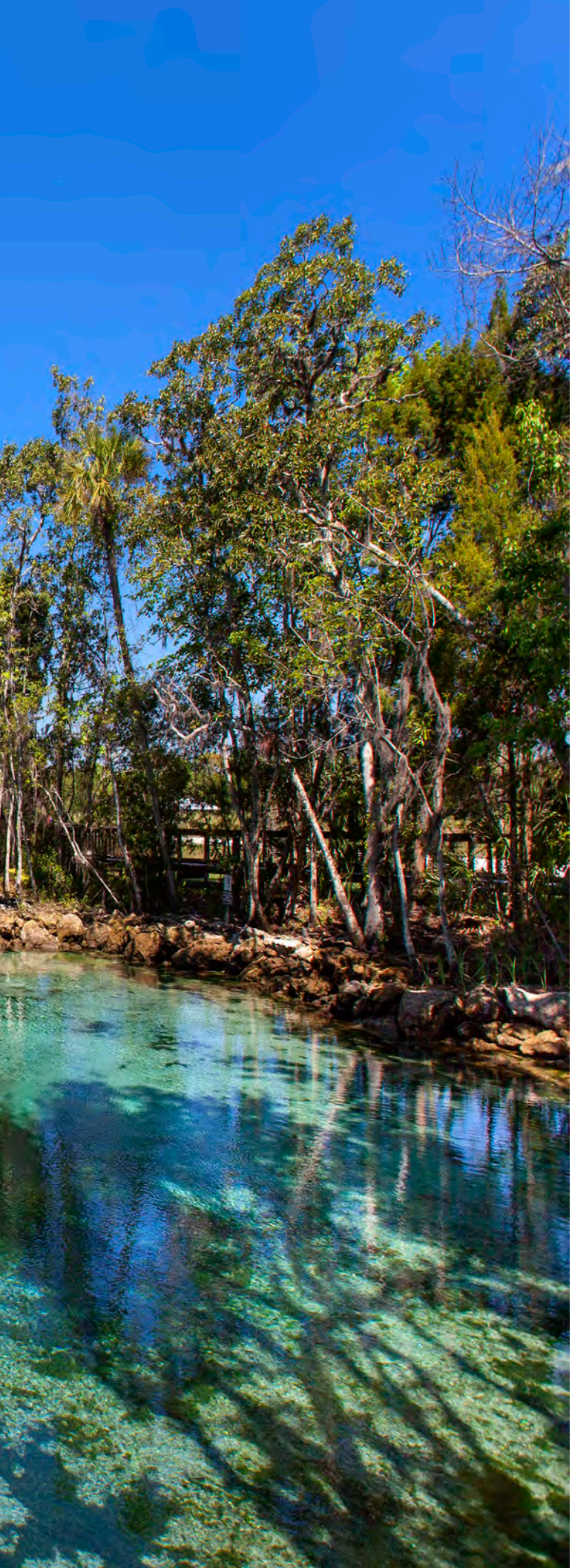
Dredging and shoreline solutions

Beaches and other critical coastal infrastructure are an essential economic driver and recreational resource. Our experienced design and permitting professionals have delivered successful coastal inlet and port dredging, beach nourishment, and environmental permitting projects throughout the Gulf region.

We are sensitive to the reality that these types of recovery and protection projects can result in temporary disturbances to coastal communities, industry, and tourism. We engage the public and other potentially impacted entities early in the project life cycle. Our ability to clarify and diffuse any misconceptions or concerns about the activities associated with dredging, the placement of beach fill material or other coastal construction activities has proven invaluable to our clients. Stantec's approach is a differentiator resulting in cost efficiencies and the timely completion of construction. Awareness that any potential short term disruption will ultimately result in improved recreational, economically beneficial and resilient coastline builds strong community support for our clients and the ultimate success of their projects.

Dredging and Shoreline services include:

- Beach Nourishment Design
- Sand Sourcing (Offshore and Upland)
- Dredge Design and Disposal Options
- Environmental Impact Assessments and State/Federal Permitting
- Sediment Transport, Sediment Budget Analysis, Accretion Modeling
- Inlet Improvement and Sand Bypassing
- Coastal Levees and Revetments
- Restoration and Management Plans for Coastal Lagoons and Beaches
- Shoreline Erosion Assessment and Management
- Numerical Modeling of Wave Diffraction, Refraction and Shoaling
- Circulation and Water Quality Modeling
- Coastal Hazard Mapping and Flood Management Studies



Preserving our coastal water resources

Coastal science, engineering design and permitting, and ecology are disciplines we truly understand, and as a result, we are able to develop designs that are self-sustaining and work with natural processes. We are leaders in the field of coastal restoration, constantly setting the bar for continued technical innovations and ecological sensitivity. Our coastal restoration professionals are passionate about their careers and include engineers, soil scientists, regulatory experts, aquatic toxicologists, botanists, and hydrologists. Our multi-disciplinary team will consistently deliver a complete understanding of interdependencies and ultimate performance metrics, blended with a clear understanding of your needs, throughout the project lifecycle.

Coastal Water Resources services include:

- Ecosystem Restoration
- Coastal Restoration
- Stream Restoration
- Wetland Restoration
- Environmental Assessments
- Regulatory Permitting and Compliance
- Clean Water Act Section 404/401 and State Permitting
- Cultural Resources
- Wetland Assessments
- Endangered Species Surveys

← Three Sisters Spring Shoreline Restoration
Crystal River, FL

Steve Mathies, PhD
New Orleans, LA 70112
504 654 1727
steve.mathies@stantec.com

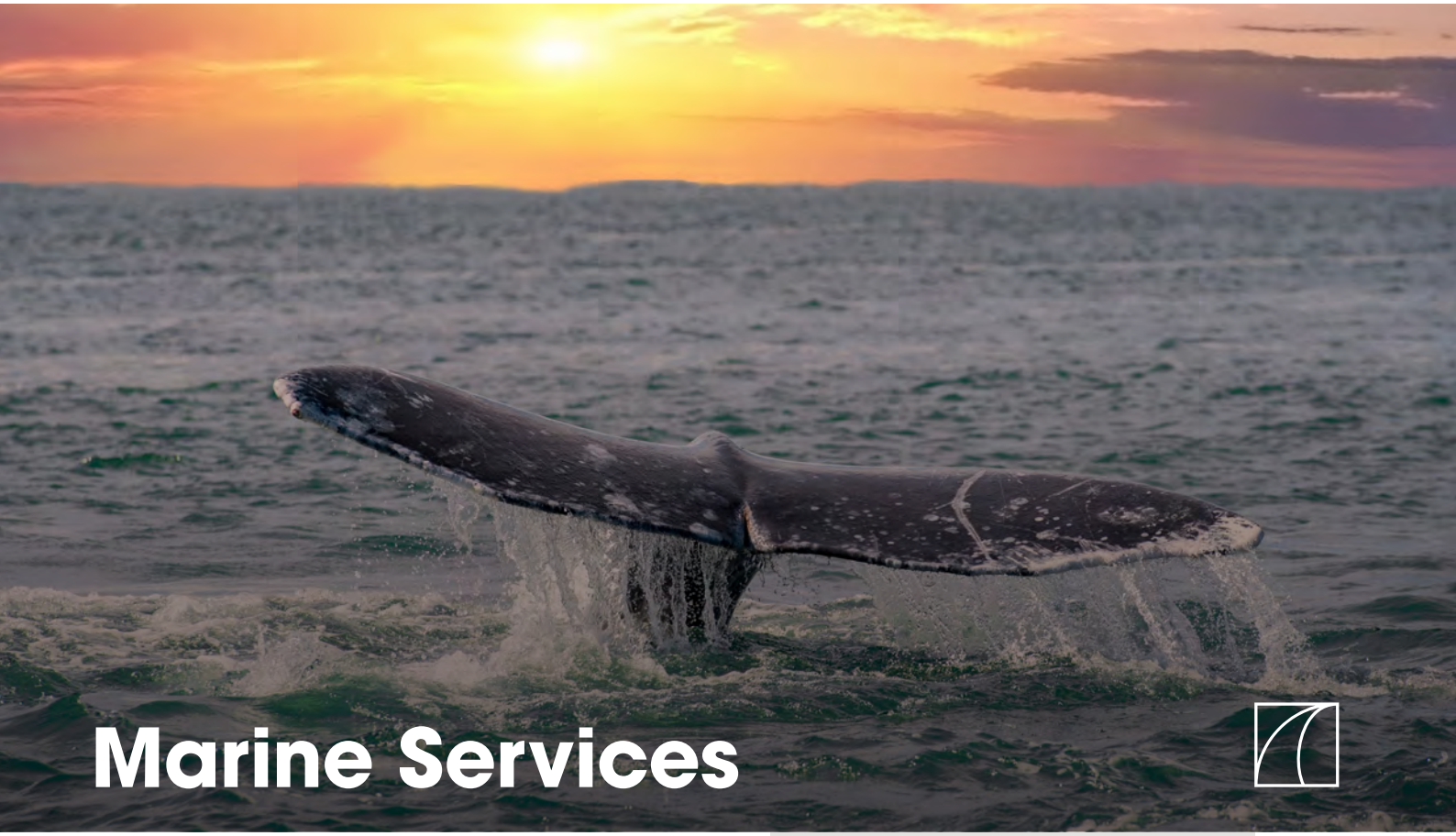
Matthew Starr, P.G.
Naples, FL 34108
239 649 4040
matthew.starr@stantec.com

Jeff Tabar, P.E., D.CE
Laurel, MD 34108
204 542 3120
jeff.tabar@stantec.com

Design with community in mind

Stantec

ENVIRONMENTAL SERVICES



Marine Services

Marine Science

With decades of experience in Pacific, Atlantic, Gulf of Mexico, and Arctic Ocean basins, and other locations around the world, Stantec offers a wealth of technical knowledge in marine sciences and a strong understanding of national, regional, and local regulations.

Whether working on large-scale offshore energy development programs or small coastal construction projects, our reputation is based on our ability to develop regulatory strategies, appropriately engage stakeholders and residents, accurately document field conditions, assess project impacts, provide scientifically defensible data, and develop efficient and innovative solutions to project challenges.

Stantec has close to 50 years of marine experience and a dynamic team of marine professionals from technicians to internationally-recognized scientists to assist in your projects from start to finish.

We believe in building relationships with our clients based on trust, respect, and integrity. It is our goal to create long-term partnerships that encourage clear and open communication between all team members.

Our Team

The Stantec Marine Sciences Team provides practical advice for the marine-resource sector based on a thorough understanding of regulatory requirements, societal expectations, and sound science. We work as an integrated, multi-disciplinary group that understands the demands and requirements for practical approaches, efficiency, quality, and defensibility. As required, we work closely with our engineering and design professionals in ports and terminals, energy and resources, transportation and infrastructure. Our collective expertise provides our clients with sound advice and effective results.

Our Services

REGULATORY PERMITTING

- Environmental assessment and approvals
- Permitting, including fish habitat, marine mammals, protected species, discharges, and dredging

ENVIRONMENTAL ASSESSMENT

- Issue identification and scoping
- Environmental screenings
- Biological opinions
- Environmental impact statements
- Industrial approvals and permitting
- Environmental management plans

ECOLOGICAL RISK ASSESSMENTS

- Ecological and human health risk assessments
- Ecotoxicity

DECOMMISSIONING AND HABITAT RESTORATION AND ENHANCEMENT

- Marine habitat restoration and reclamation
- Marine habitat offsetting including estuaries, shorelines, and offshore
- Marine spatial planning
- Site decommissioning, including offshore platforms
- Emergency response planning and remediation, including spills

MONITORING

- Study design and statistical analysis
- Construction and environmental effects monitoring
- Habitat effectiveness
- Water quality
- Underwater acoustics and safety radii for marine mammals
- Marine monitors training and management

BASELINE ASSESSMENTS AND MODELING

- Biodiversity
- Physical and chemical oceanography
- Intake and outflow hydraulics
- Coastal processes and geomorphology
- Coastal wetland delineations
- Benthic ecology and contaminants
- Water quality
- Fish habitat characterizations including coral reefs, eelgrass, and submerged aquatic vegetation
- Shorebirds and seabirds
- Marine mammals and hydroacoustics
- Vessel strike analyses
- Modeling for sediment transport, thermal plume, ocean dynamics, bio-energetics, air quality, greenhouse gas emissions, and acoustics
- Remote sensing

RESEARCH AND DEVELOPMENT

- Remotely-operated vehicle and remote sensing technology
- Genomics and environmental DNA (eDNA)

We're active members of the communities we serve. That's why at Stantec, we always design with community in mind.

We collaborate across disciplines and industries to bring buildings, energy and resource, environmental, and infrastructure projects to life. Our work—engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics, from initial project concept and planning through design, construction, and commissioning—begins at the intersection of community, creativity, and client relationships.

Our local strength, knowledge, and relationships, coupled with our world-class expertise, have allowed us to go anywhere to meet our clients' needs in more creative and personalized ways. With a long-term commitment to the people and places we serve, Stantec has the unique ability to connect to projects on a personal level and advance the quality of life in communities across the globe.

Stantec trades on the TSX and the NYSE under the symbol STN. Visit us at stantec.com or find us on social media.

CONNECT WITH US

Design with community in mind

ECOSYSTEM RESTORATION SERVICES

Stantec

CREATING RESILIENT ENVIRONMENTS

BUILDING RESILIENCY THROUGH ECOSYSTEM RESTORATION

In 2020, the United States' five-year average disaster costs exceeded $100 billion. With more frequent and extreme weather events on the rise—such as catastrophic droughts, wildfires, floods, tornadoes, and hurricanes—our communities face increased risk to their economies, infrastructure, and natural environments. To address these increasing risks, our communities need holistic and cost-effective solutions. One proven effective solution to mitigating these risks are those that weave in new and optimize existing natural systems and processes to advance community resilience.

Stantec brings expertise in nature-based solutions that integrate sustainable planning, design, environmental management, and engineering practices that focus on advancing a community's social, economic, and environmental resilience. We have a team of passionate ecologists, biologists, engineers, hydrologists, geomorphologists, landscape architects, and other specialists across North America who focus on understanding how changes to natural processes impact our ecosystems. Relying on our vast experience and broad technical knowledge, Stantec has developed tools and methods to mitigate risk and adapt to a changing climate by planning, designing, and implementing resilient ecosystems.

Whether the need is coastal, river/stream, or wetland resto help your community develop a business case for selectin climate risks and advancing resilience.

COASTAL RESILIENCY

Each year, hurricanes, storm surges, increased wave action, and sea level rise cause damage to properties, infrastructure, and natural resources. These damages put a financial strain on coastal communities' economies, infrastructure, and natural environments.

Coastal habitats can help reduce this risk in vulnerable areas. Wetlands, living shorelines, dunes, and beaches act as natural defenses to storm surges and other impacts by serving as coastal buffers. These habitats provide ecosystem services that improve water quality, reduce erosion of public and private lands, create recreational space, and help boost local and regional economies.

Stantec's coastal resilience portfolio includes living shorelines, tidal marsh, and dune restoration, which incorporate the beneficial use of dredge material, landscape-level green infrastructure, or other nature-based solutions that provide community and ecosystem benefits by cost-effectively restoring, enhancing, or creating coastal habitat.

Planning and working in the coastal environment requires specialized knowledge and experience in maritime habitats, and an understanding of the underlying biological, physical, and chemical processes at play as well as the applicable environmental

oration, Stantec's ecosystem specialists can g the right pathway to cost-effectively mitigating

regulations. Recognizing diurnal tidal patterns, and the unique environment that process creates, is critical in developing designs that restore natural processes and engineering effective waterfront structures. Assessing the vulnerability, adaptability, and resilience of the proposed design elements in an increasingly dynamic marine environment is also key.

COASTAL RESTORATION

We are leaders in the field of coastal restoration planning, design, and implementation that is self-sustaining, work with natural processes, and are driven by technical innovation and ecological integrity. Our multidisciplinary team of coastal restoration professionals include engineers, soil scientists, regulatory experts, aquatic toxicologists, botanists, and hydrologists. Stantec consistently delivers a complete understanding of the interdependencies of an ecosystem, performance metrics, and our client's project needs that maximize secondary resilience benefits across social, economic, and environmental metrics.

STREAM AND RIVER RESILIENCY

Worldwide, river flooding affects an average of 21 million people each year. According to the World Resources Group, that number could increase to 54 million in 2030 due to climate change and socio-economic development. By the end of this century, it is estimated that the current 100-year flood may occur every 10 years and the 500-year flood may occur as often as every 100 years. Projected increases in storm frequency and volatility will likely result in 100-year flood elevation designations rising faster than sea levels, adding considerable new risks through both flooding and extensive erosion and property loss.

STREAM AND RIVER RESTORATION

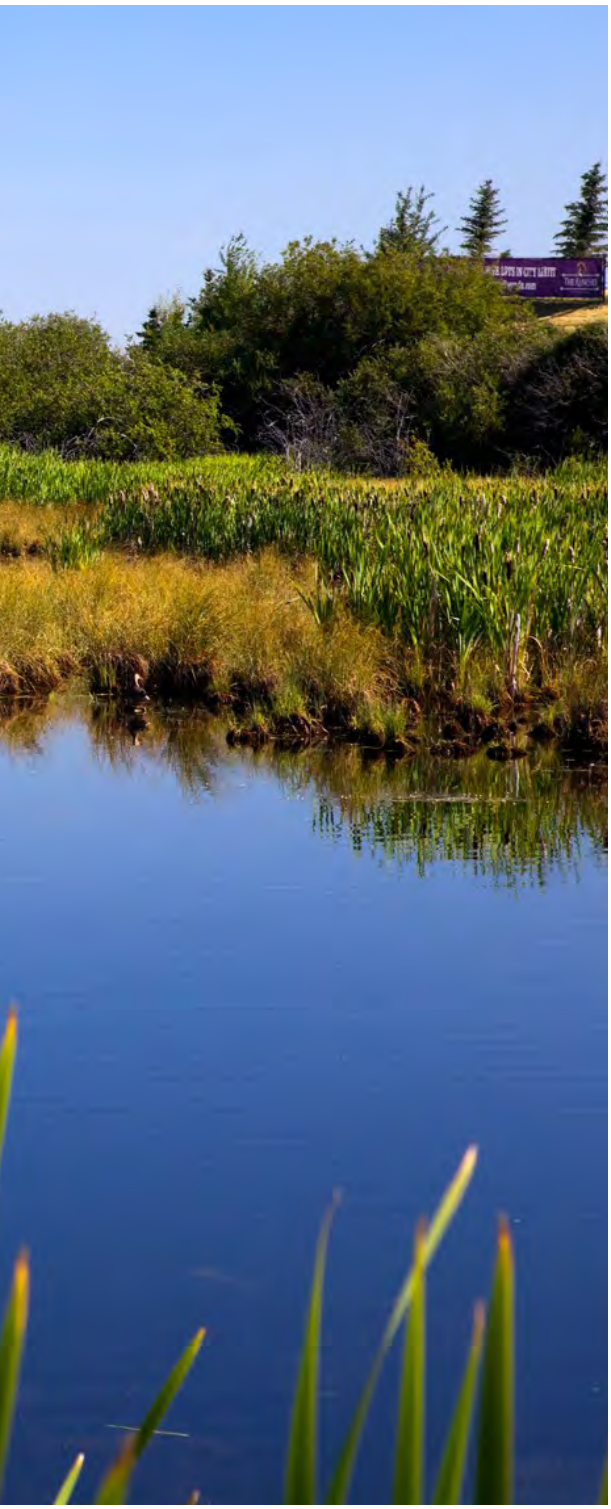
Stantec understands the nexus between healthy rivers and thriving communities. Our team specializes in designing functional, stable, vibrant, and resilient river corridors by understanding the processes driving the entire riverscape.

We respect the vital ecological and societal value of rivers. Our work integrates river science, fluvial processes, aquatic and riparian ecology, geomorphology, biological function, and engineering design. We identify and integrate these considerations into efficient and sustainable projects that are resilient to a changing climate. The breadth of our ecological design and implementation experience is complemented by our work with a variety of regulatory agencies and a keen understanding of common social, economic, and environmental concerns associated with our river systems.

River restoration projects seldom involve a single issue. We seek to understand how process throughout the watershed as well as climate change are affecting river response at our project site. Relying on our expertise in engineering, geomorphology, biology, and hydrology, we identify and apply appropriate restoration techniques to create resilient, functioning streams and rivers distinguished by natural processes and constructed to be durable as climate-influenced boundary conditions change. This approach creates a robust, self-sustaining ecological environment requiring little to no maintenance. Our commitment to understanding the complexity of riverine ecosystems has allowed our team of stream restoration professionals to address long-term challenges offered by the riverscape and maximize resilient benefits.

Each design and implementation solution is tailored to its environment, but they all rely on an understanding of riverscape processes. Our site assessments, along with a clear understanding of the client's goals and objectives, inform the degree of complexity required for the appropriate design approach. Stantec is proficient at a wide array of channel design techniques, soil bioengineering methods, stabilization methods, and habitat enhancement structures, all of which we have successfully and cost-effectively implemented on hundreds of projects across North America.
Stream and river resiliency


1000+
miles of streams and rivers
restored across North America



WETLAND RESILIENCY

Wetlands play a key role in providing carbon sequestration, floodwater protection, water quality improvement, wildlife habitat, as well as recreational and open space benefits.

Resilience is central to the wetland work that we do at Stantec. The threats of climate change and human development continue to put our remaining tidal and freshwater wetlands at risk. The importance of maintaining the integrity of our wetland landscapes cannot be stressed enough and are not just about these habitats themselves, as wetlands are integral to resilience whether on the coast or inland. Wetlands often surround some of our most vulnerable communities and have the potential to protect these areas from storm-surge flooding. Natural features have been proven to protect infrastructure at a fraction of the cost of replacement and at Stantec, we are committed to exploring these alternatives when applicable. Simultaneously, wetlands are often sanctuary to many sensitive and threatened flora and fauna, and protection and restoration of these critical ecosystems are essential to supporting their existence.

In addition to completing wetland delineations and assessments, we provide restoration services when these important natural resources are damaged or impaired by natural or human activities. Following a thorough understanding of the site's physical constraints, hydrologic inputs and local drainage area, and potential sensitive resources, our multidisciplinary teams work to design and implement a holistic landscape approach that is self-sustaining following implementation and initial monitoring. When a project has unavoidable impacts to a wetland, Stantec can also provide compensatory wetland mitigation services. Working with our clients and regulatory agencies, we not only help identify suitable mitigation sites and design solutions that meet required hydrologic, vegetative, and soils performance standards, but we do so in a cost-effective manner.

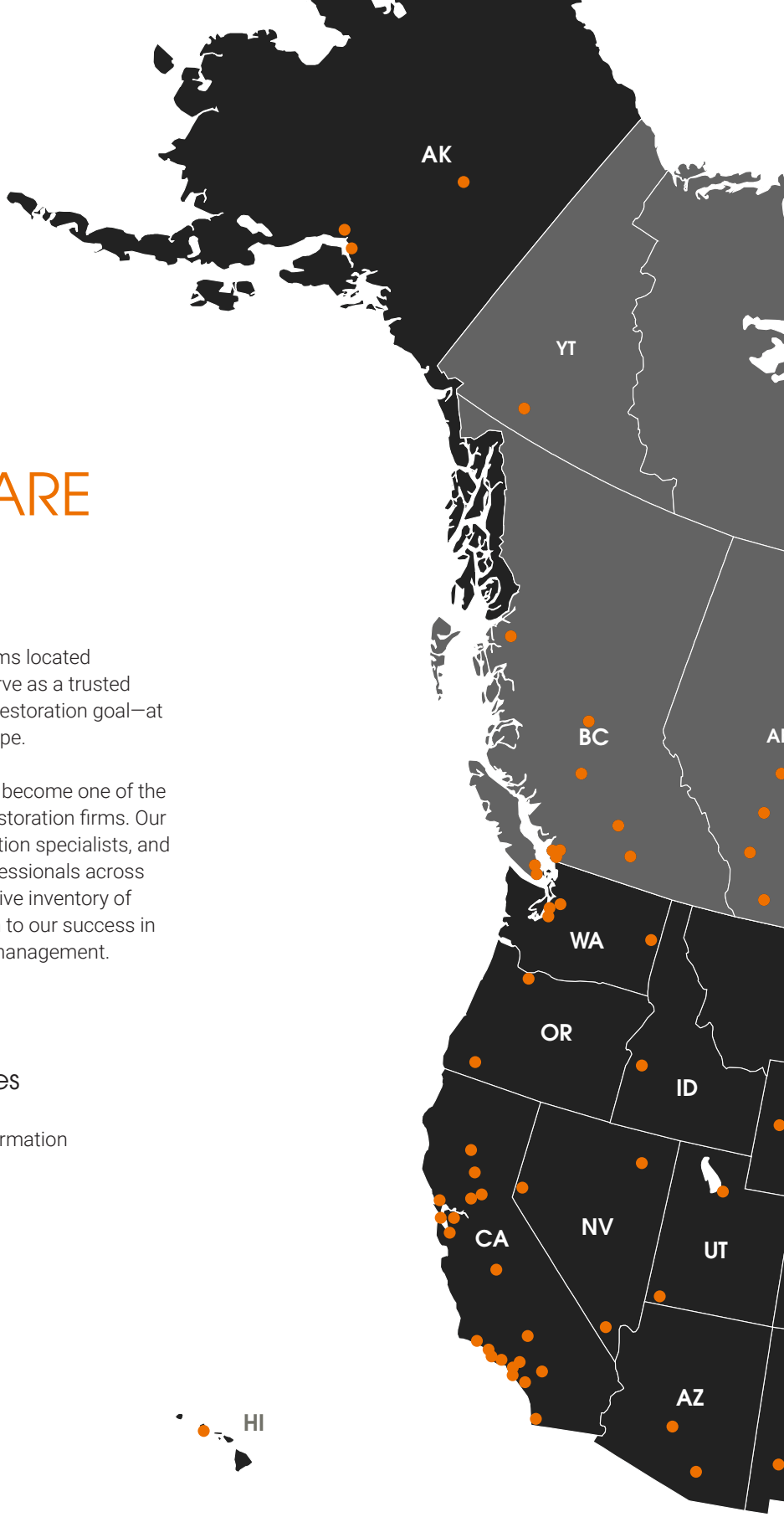
WE ARE WHERE YOU ARE

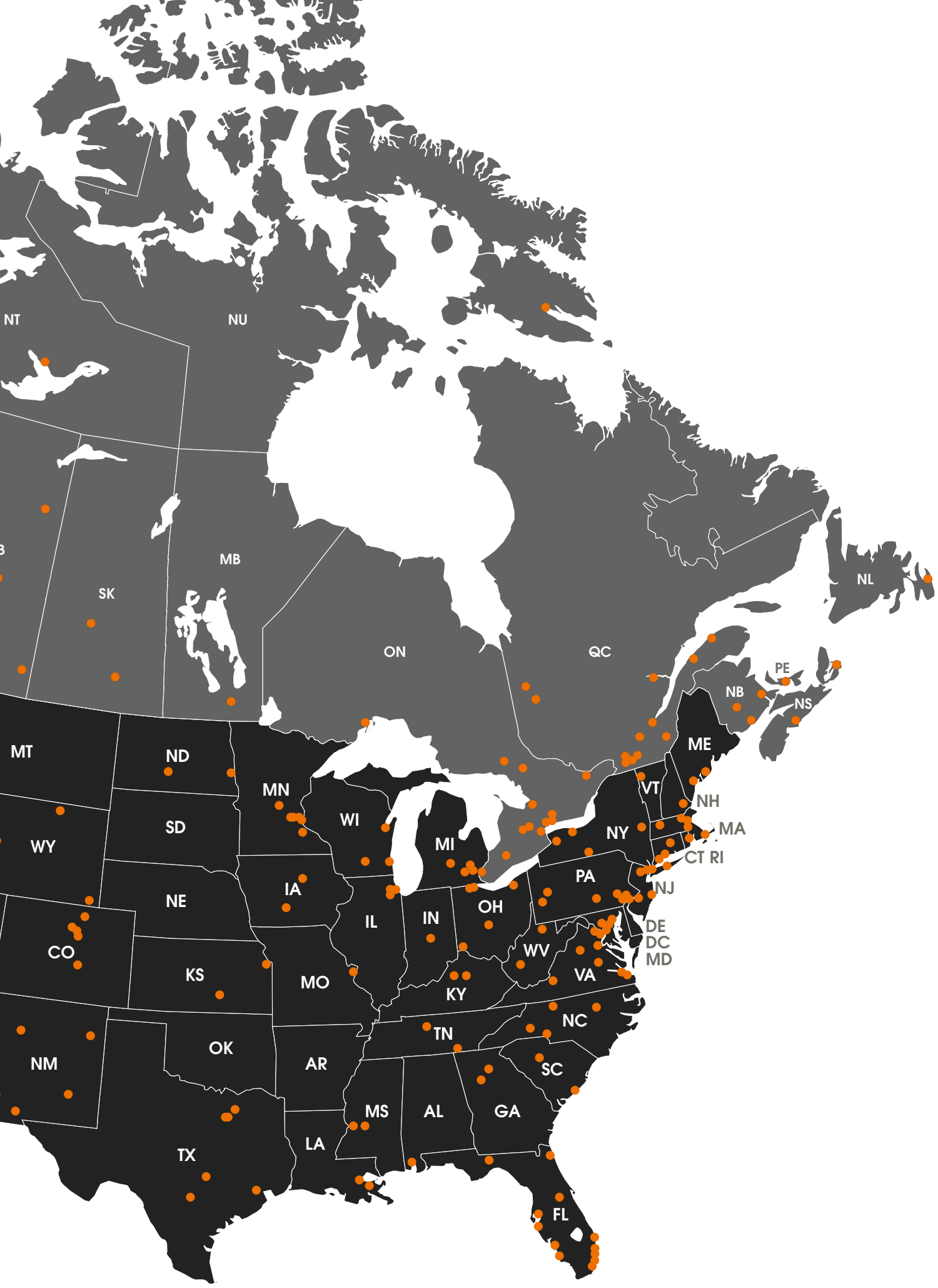
At Stantec, we have multi-disciplinary teams located throughout the world who are ready to serve as a trusted technical advisor in helping achieve your restoration goal—at nearly any scale or location in the landscape.

For nearly 30 years, Stantec has grown to become one of the foremost full-service global ecosystem restoration firms. Our large in-house team of ecologists, restoration specialists, and technicians, including more than 400 professionals across the globe, our focus on safety, and extensive inventory of equipment, have served as the foundation to our success in effective, resilient ecological design and management.

- Stantec offices
- Stantec project examples

Click green dots on the map for more information on specific projects

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TOTTENVILLE SHORELINE PROTECTION
Staten Island, New York

Protecting a community from wave action and erosion through enhanced ecosystems and shoreline access.

The south shore of Staten Island has sustained decades of coastal erosion. Its condition, made worse by Superstorm Sandy, has left this community more vulnerable to the next coastal storm.

As part of its New York Rising Community Reconstruction Plans, the State of New York set up the Tottenville Shoreline Protection Project, a storm recovery and resilience initiative. The assignment called for the design and construction of a stone-core, sand-capped dune system to reduce wave impact and coastal erosion along the shore. This system would serve as a naturalized barrier to the looming threat of flooding. Our team signed on to help. As the project progressed, we determined that the dune solution would not work for the whole shoreline.

We're working with the Rebuild by Design team to create an on-shore and off-shore integrated system. Using a layered approach comprised of a series of measures—wetland enhancement, eco-revetments, hardened dune systems, shoreline plantings, maritime forest restoration, and earthen berms—we will address the impacts of coastal flooding and shoreline erosion while restoring and enhancing ecosystems and improving waterfront access. The design has been honored with a special recognition award by the New York City Public Design Commission.

The project is one component of a layered system. It complements, and works in tandem with, the Rebuild by Design Living Breakwaters Project. Together they aim to provide increased risk mitigation for the upland, while also enhancing habitat and social resilience, through access, education and stewardship. The project area for the Shoreline Protection Project is entirely on City property, primarily owned by NYC Department of Parks & Recreation in Conference House Park.

The intent of the TSPP design is to reduce wave action and coastal erosion along the shoreline in Tottenville while also enhancing ecosystems and shoreline access and use. These goals will be achieved using a layered approach consisting of a series of measures - including wetland enhancement, eco-revetments, hybrid dune-revetments, shoreline plantings, maritime forest restorations, raised pathways, and earthen berms. This layered approach allows the design to be tailored to the various reaches of the shoreline and respond to specific opportunities and constraints. One key programmatic goal of the project is to create an interconnected and seamless waterfront pathway along the shoreline of Conference House Park, allowing visitors to traverse the shoreline safely.

To maximize possible ADA-accessible pathways connecting to and along the waterfront, the design team has worked to increase access in general along the site.

ADA access is proposed at all street end connecting to the ADA pathway stretching the entire length of the project. One ADA access ramp to the beach is provided at Page Ave as well as the design now provides pedestrian stair access to the beach in five locations. There are now nine ADA access points as opposed to the current condition of one.

The TSPP has five major design types with varying types of transitions where the design types meet. The major design types are planted earthen berm, wetland eco-revetment, hybrid dune / revetment, Surf Ave. Eco-revetment, and the raised edge. The intent with the transitions between the systems are to seamlessly blend the structural systems together while using that opportunity to provide pedestrian access up and over the system in key locations.

BOHN FARMS WETLAND MITIGATION
Winnebago County, Wisconsin

Achieving resilience through agency collaboration, Stantec is helping the Wisconsin Department of Natural Resources incorporate climate adaptation into wetland restoration design and implementation.

Leveraging our strong relationship with the Wisconsin Department of Natural Resources (WDNR), Stantec was hired to help design and restore one of the first wetland mitigation projects completed in Wisconsin through the Wisconsin Wetland Conservation Trust (WWCT) In-Lieu Fee (ILF) Program.

Working collaboratively with the WDNR, the US Forest Service (USFS), Northern Institute for Applied Climate Science (NIACS), and the Wisconsin Initiative on Climate Change Impacts (WICCI), Stantec hosted a two-day climate adaptation workshop focused on the Bohn Farms wetland mitigation site. The project itself is an 85-acre wetland mitigation site in Winnebago County, Wisconsin. The 10-year implementation will involve the restoration of 35 acres of hydric soil back into functioning high-quality wetlands, as well as incorporating a diverse ecosystem with upland forests and prairies focused on pollinators and increased fauna habitat. Using the Adaptation Workbook, a climate-change tool for land managers, our ecologists took a deep dive into site-specific restoration goals, assessed climate vulnerabilities, and adapted our restoration plan to face the challenges of a changing climate.

As an outcome of the workshop, the team determined that key challenges for this site are expected to include more frequent heavy rainfalls and floods, longer, hotter growing seasons, higher rates of evaporation and water loss, and more intense pressure from invasive species. Stantec developed a site-specific climate adaptation approach to respond to anticipated challenges, with the goal of sustaining wetland functions over the long term. Our approach at Bohn Farms is shared in a project profile on the NIACS website: https://forestadaptation.org/adapt/demonstration-projects/stantec-consulting-wdnr-wi-wetland-conservation-trust-bohn-farms

KATY PRAIRIE STREAM MITIGATION
Harris County, Texas

Stantec provided more than 15 miles of stream mitigation for a roadway impact in less than 3 months, helping our client secure federal funding.

What began as a five-phase umbrella mitigation bank eventually became one of the largest Permittee Responsible Mitigation (PRM) projects in the United States at the time of completion. The first phase consisted of a three-mile channel and flood plain reconnection project that shifted energy dissipation processes for flood flows outside of the channel to a vibrant, complex, rough, and wide floodplain. The remaining 4 phases were combined into an additional 15 miles of restoration to satisfy PRM requirements for construction of the Grand Parkway around Houston.

Crediting demands required swift assessment and design, so Stantec utilized multiple teams to quickly complete stream surveys using GPS to supplement biological and ecological data. Field surveys identified strategic locations for the channel to take advantage of the immediate shade provided by a few remaining trees. The surveys also captured the location of several wetlands that were expanded and/or enhanced.

Dozens of oxbow features as well as hundreds of pieces of wood were added the system. Design documents were created using Stantec's in-house three-dimensional (3D) design package. Designs had to be complete on a fast track basis to secure permits in accordance with funding requirements. Stantec completed the design of the 80,000-foot PRM portion of the project in under three months using multiple sets of teams working side-by-side. The magnitude of this project shows Stantec's ability to quickly complete large, complex stream restoration while addressing the concerns of multiple project stakeholders.

Following construction, the project was put to the test by Hurricane Harvey. The hurricane resulted in substantial flooding at the site comparable to a 500-year event. The stream held up extremely well, with only minimal erosion where vegetation was not fully re-established. This project is a testament to how designing with a focus on natural processes can create resilient ecosystems.

ELBOW RIVER FLOOD MITIGATION

Southern Alberta

After Canada's 2nd most costly natural disaster in history, Stantec helped with future flood mitigation efforts.

The Elbow River is a tributary of the Bow River in Southern Alberta, Canada. Originating in the Rocky Mountains, the river flows 120 kilometers (km) before its confluence with the Bow River near the city of Calgary, covering a watershed of 1,230 km2. Flowing through downtown Calgary, the combined rivers have been responsible for substantial flooding impacts to the City. An event in June 2013 displaced 100,000 people and caused approximately $5 billion in damage.

As part of the response to this historic flood, Stantec was contracted by Alberta Transportation to perform Environmental Impact Assessment (EIA), preliminary engineering, final design, construction supervision, and contract administration for a flood mitigation program, the Springbank Off-Stream Storage Project (SR1). SR1 is intended to provide sufficient storage and flood attenuation for an event equal to the 2013 flood. Excess flows will be diverted from Elbow River through a proposed diversion channel to a 790-hectare offline temporary storage reservoir, to be released at a controlled rate back into the river through an adjacent tributary once the flood peak has passed the City.

To characterize existing conditions, assess departure from stable channel morphology, and assist in structure location and risk assessment, Stantec performed a full geomorphic analysis of 9 km of the Elbow River adjacent to the proposed structure locations in Spring 2015. Aerial photos from 1927 to 2013 were analyzed photogrammetrically to historic planform and migration trends in the river. These trends were then supplemented by Level IV assessments in the same reach following Watershed Assessment of River Stability and Sediment Supply (WARSSS) methods developed by Dave Rosgen and adopted by the United States Environmental Protection Agency (USEPA). Physical characteristics of the river, including profile, cross section, bed particle distribution, and riparian corridor composition and condition were recorded. A Bank Assessment for Non-point source Consequences of Sediment (BANCS) field assessment was conducted through the study reach; bank profiles were measured, and bank pins were installed to calibrate erosion rate predictions.

The data collected allowed Stantec to understand the dynamics of the project reach, estimate bank retreat rates, assess the potential for future channel migration, and identify areas of concern for lateral instability. Specifically, areas of high estimated erosion, potential avulsion locations, and potential for lateral meander migration were identified. These analyses are being used to locate critical structures, including the temporary reservoir embankment and entrance gates, assess potential future risk to these features, and estimate service life of the project.

FILSINGER PARK, SCHNEIDER CREEK NATURALIZATION
Kitchener, Ontario

Stantec worked closely with the City of Kitchener to naturalize this urban creek while addressing concerns of adjacent homeowners.

Within Kitchener's Filsinger Park, Schneider Creek was contained within a concrete lined channel that was installed in the 1980's as part of a flood control project. Kitchener's Stormwater Utility decided to naturalize the creek using natural channel design and hoped to use this project to lay the groundwork for more than 20 similar projects throughout the City.

Challenges during the design phase included a narrow steep valley, the need to minimize the amount of material to be hauled off the site, the need to maintain/enhance a trail adjacent to the Creek, a large number of underground and overhead utilities, numerous stormwater outfalls, winter construction and a number of road crossings where the elevation of the Creek could not be adjusted.

The Filsinger Park Stream Naturalization project was completed in 2015 and involved the removal of more than 2 km of concrete channel and the construction of a new natural channel that provides water quality, storm resiliency, and habitat benefits. Modeled on a natural stable channel further upstream, the restored stream channel uses local natural materials to create stability and needed habitat.

Most importantly, the project was a public relations success. The Utility has received public and political support to move forward with subsequent projects. Stantec represented the City in negotiations with DFO to establish the first municipal fish habitat bank in Canada. The Utility can now sell credits from the project to recover costs and fund additional stream restoration projects. The project received the 2015 Diamond Award for Design and Construction from the Grand River Chapter of the CEO.

BEAUFORT REGIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT

Northwest Canada

Helping build resilient communities in Northwestern Canada through a detailed assessment tool and adaptive management framework that informs decision making regarding human activities and natural drivers of change and their impacts on the socio-economic fabric.

In 2019, Kavik-Stantec was hired by the Inuvialuit Regional Corporation (IRC) and the Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) to conduct the scenario-based Beaufort Region Strategic Environmental Assessment (BRSEA). The assessment supports decision-making on possible future resource development and management, environmental conservation programs, subsistence activities, and other complementary commercial pursuits. It will inform the five-year review of the moratorium on oil and gas activities in Canada's Arctic offshore waters, announced in the United States–Canada Joint Arctic Leaders' Statement in December 2016. The assessment considers trade-offs between industrial development, natural and anthropogenic changes in the state of the ecosystem, and socio-economic impacts on local communities. As such, this work integrates development scenarios, impact assessments, climate change, and integrated adaptive management options to help communities in the Inuvialuit Settlement Region in Northwest Canada maintain their way of life while also being able to receive some benefits from such developments.

During this effort, the Kavik-Stantec team also examined theory and practice of ecological thresholds and their use in resource and land use management and monitoring. We developed an integrated adaptive management framework through which cumulative effect thresholds can integrate applicable local knowledge, traditional knowledge, and western science, and thus help create and support a socio-ecological system that is more resilient to the environmental, social, and economic changes this region will increasingly experience over the next few decades.

DELTA PLAN ECOSYSTEM AMENDMENT
Sacramento, California

Stantec is helping develop the Proposed Delta Plan Ecosystem Amendment, an effort that will maximize the quality and sustainability of ecosystem restoration projects while recognizing the effects of climate change on the Delta landscape.

In the decades-long effort to coordinate the overlapping agencies and authorities responsible for managing the Sacramento-San Joaquin Delta (Delta), in 2009 the Legislature established the Delta Stewardship Council (Council) to create a comprehensive, long-term, legally enforceable plan to guide the management of the Delta. The Council was given regulatory authority to oversee implementation of this plan through coordination and oversight of state and local agencies proposing to fund, carry out, and approve certain actions that take place within the Delta and Suisun Marsh. First adopted in 2013, the Council's Delta Plan includes policies and recommendations to address current and expected challenges related to the goals, Delta as a place, reducing flood risk, and improving water quality. Key goals outlined in the plan include providing a reliable water supply for California and protecting, restoring, and enhancing the Delta's unique and evolving ecosystem.

Since 2016 the Council has engaged Stantec to provide technical, management, and administrative services for amendments to the plan. Recently, Stantec has been working diligently alongside Council staff to update the policies and recommendations in Delta Plan Chapter 4: Protect, Restore, and Enhance the Delta Ecosystem. Additionally, Stantec is leading the associated California Environmental Quality Act (CEQA)-compliance.

This amendment currently considers past and future effects of climate change and sea level rise, incorporates lessons learned about adaptive management of the Delta ecosystem, identifies best practices for restoration projects, and addresses institutional changes to improve implementation so that species can begin to benefit from these projects as soon as possible. This effort will help maximize the quality and sustainability of ecosystem restoration projects while recognizing the effects of climate change on the Delta landscape.

PRIME HOOK NATIONAL WILDLIFE REFUGE MARSH RESTORATION AND SHORELINE RESILIENCY
Milton, Delaware

When disaster struck and critical habitat was destroyed, the United States Fish and Wildlife Service called on our firm to help find a resilient solution.

On the Delaware Bay, Prime Hook National Wildlife Refuge provides critical stopover sites for migratory birds and habitat for many species of fish and wildlife. The Refuge wetlands have been hit hard over the past decade. Most recently, it underwent significant changes due to Hurricane Sandy. As a result, the United States Fish and Wildlife Service (USFWS) tasked Stantec to complete a coastal engineering analysis. We evaluated the physical impact of Hurricane Sandy and recommended an estimate of sand volume needed to build a beach barrier system that would shelter the freshwater habitat from future storm events. We determined the sand volume by conducting a topographic and hydrographic survey of the Refuge including the marsh area, barrier beach, and breached dunes.

In addition, Stantec developed a hydrodynamic and salinity model of the Refuge and adjacent bay region using Delft3D. The Delft3D model was chosen for its ability to readily include morphology, salinity, and constituent transport within the hydrodynamic modeling framework. Using this model, we could find the best marsh configuration. The results were used in conjunction with the coastal engineering analysis to recommend a preferred alternative for modifying and managing the Refuge under the new environmental regime post-Sandy. The resulting project includes placing approximately 1.1 million cubic yards of sand from an offshore borrow area along the shoreline and reconstructing a 40-foot-wide dune, 150-foot beach berm, and back-bay marsh platform.

Through our work in the Refuge, we have helped establish systems to give the critical habitat strength to endure, adapt, and thrive in the face of future storms.

MID-BRETON MISSISSIPPI RIVER DIVERSION
Baton Rouge, Louisiana

Re-establishing a deltaic sediment deposition process to support wetland development and create a resilient Breton Sound.

The altered supply and distribution of freshwater, lack of broad distribution of sediments, marsh subsidence, and human development have resulted in the rapid loss of wetlands and marshes in the Mississippi River Deltaic Plain over the past century. Coastal land loss in the Mississippi Delta threatens Louisiana's economy, commerce, infrastructure, and culture. The Breton Sound hydrologic basin is one of six sub-delta lobes that make up the Mississippi Deltaic Plain. Between 1932 and 2016, approximately 105,267 acres of wetlands and marsh were lost within Breton Sound.

Stantec was contracted by the Coastal Protection and Restoration Authority (CPRA) to design an engineered river diversion from the Mississippi River that will reduce land loss and support wetland development in the Breton Sound through the delivery of sediment, freshwater, and nutrients. The planned sediment diversion will divert 35,000 cubic feet per second (cfs) of sediment-laden water from the Mississippi River near River Mile 68 to the Mid-Breton Sound Basin to re-establish the deltaic sediment deposition process.

Stantec performed a detailed geomorphic assessment of 7 km of the Mississippi River along the proposed diversion structure reach to help inform the location and design features of the sediment diversion. At the study

reach, a meander bend curves from the southwest to the southeast, with point bar deposition occurring along the left descending bank of the bend. Stantec used US Army Corps of Engineers (USACE) hydrographic surveys of the Mississippi River from 1949 to 2013 to measure historical bathymetric change and develop an understanding of the past, present, and possible future river channel morphologic configurations. Bathymetric maps were created from hydrographic survey years 1949, 1973, 1992, and 2013. These bathymetric surfaces were subtracted to determine the change in riverbed elevation.

Additional in-river monitoring was performed in the spring of 2018 and the data were reviewed to provide information on current site conditions and an overview of sediment and bathymetry changes over a range of river discharges. The in-river monitoring data was collected over the course of three events in Spring 2018. The respective flow rates in the Mississippi River for the three events were approximately 1,000,000 cfs, 700,000 cfs, and 450,000 cfs; each occurring on the declining phase of the hydrograph. A Sequoia Scientific Laser In-situ Scattering and Transmissometer (LISST) instrument was attached to the CTD and operated simultaneously. The LISST provided volume concentrations of various suspended particle classes over the suspended size range of the instrument. The field data is being used in the geomorphology analysis to determine an appropriate location for the sediment diversion channel intake.

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Design with community in mind

Stantec

Climate Risk, Resilience and Adaptation Planning

With your reading experience in mind, we have built interactive material into this document.

Watch for buttons and underlined hyperlinks throughout to lead you to more information.

Introduction

A changing climate will result in more extreme weather events such as heat waves, floods and storms, as well as more gradual shifts impacting our lifestyles and health. How we design and build today will determine how well we can maintain and improve our quality of life moving forward. Our philosophy is to ensure our clients are well informed and well prepared for a future of climate uncertainty. Our tailored approach to climate change risk assessment sets us apart and is based on the premise that climate risk and vulnerability are project specific. Stantec has developed a framework that is consistent with the ISO 31000:2018 (Risk Management) and under the umbrella of the ISO 14090:2019 Adaptation to Climate Change standard which includes several complementary standards to provide guidance on the use of screening assessments and impacts which allows for both qualitative and quantitative analysis.

Stantec has a core team of climatologists, engineers, and environmental scientists that collaborate with our subject matter experts to help our clients and our professionals understand and adapt to a changing climate. Whether it's hospitals, roadways, buildings, water supply systems or large-scale infrastructure projects, through rigorous data analysis and process, our team can help you consider the impacts of climate change and craft a plan on how to best adapt to the challenges it may bring.

Resilience:
The impact of natural systems on our built environment.

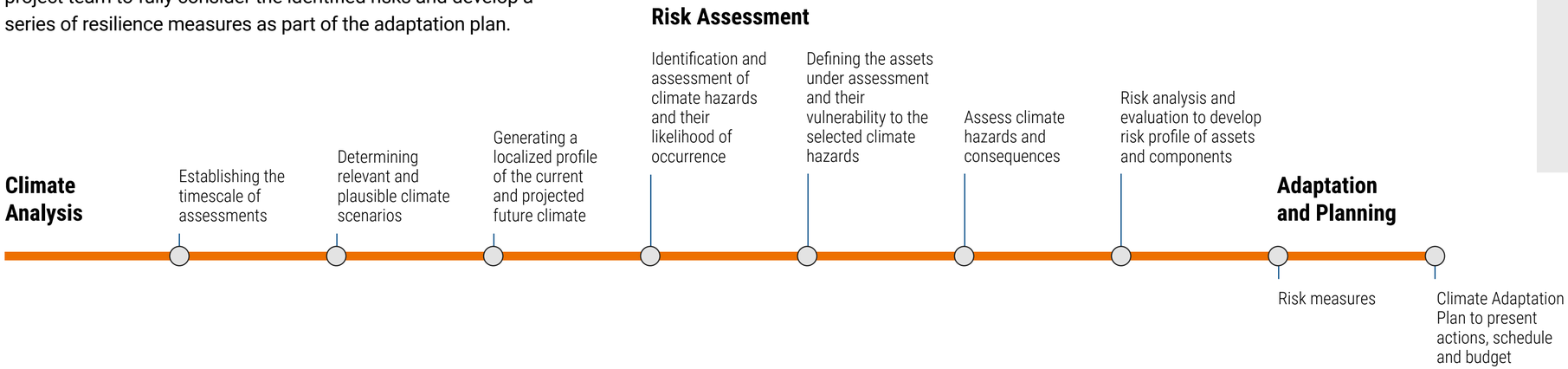
Mitigation:
Technologies, processes, or practices that seek to reduce greenhouse gas emissions and enhance carbon sinks, to slow the rate of climate change.

Sustainability:
The impact of our built environment on natural systems (and their associated resources).

Adaptation:
The process of adjustment to the actual or expected climate, and its effects on our way of life and approach to planning, design and construction.

Our Services

The highly participative approach engages our client with Stantec's project team and any stakeholders that may be included in the project. This approach enable the broader project team to fully consider the identified risks and develop a series of resilience measures as part of the adaptation plan.



CLIMATE RISK ASSESSMENTS

Our climate risk assessment approach is collaborative as we translate the future climate risk to our clients through a systematic approach. Stantec has developed an risk assessment approach based on ISO standards that are scaleable to any project, but we also use other industry tools such as the PIEVC Protocol, First Nations Infrastructure Resilience Toolkit, or the Climate Lens.

RESILIENCE AND ADAPTATION PLAN

Once the climate change risk assessment is complete, the next step is to focus on the elements at highest risk and identify how to reduce the risk of future climate change. Our team of adaptation professionals is complemented by our subject matter experts to identify resilient solutions. Solutions can range in complexity and cost, from enhancing operations and maintenance activities to developing a resilient design or modification to adapt to the changing climate.

Climate impacts our

1. Property
2. Lifestyle
3. Personal Health
4. Resources
5. Economy

Our team supported and contributed to over

$197M

in projects in 2020

Our Team

NORMAN SHIPPEE

B.Sc., M.Sc., Ph.D.
Climate Scientist,
National Technical Leader Climate Risk and Resilience

DYLAN HEMMINGS

M. Sc., P.Geo (Limited)
Vice President,
Climate Services Program Leader

NICOLE FLANAGAN

BA, M.A.Sc., P.Eng.
Senior Atmospheric Engineer,
ESG, Greenhouse Gas and Sustainability Expert

SHANE O'HANLON

M.Sc., B.Eng.
Senior Climate Risk and Resilience Consultant

DANIEL HEGG

B.Sc., M.Sc., LEED, CEM, ENV-SP Verifier
Greenhouse Gas Expert,
Carbon Strategies, Adaptation, and ESG

LESLEY CABOTT

RPP, MCIP, MA, ICD D
Principal,
Senior Planner and Adaptation Expert

BRIAN BYLHOUWER

MRM, ENV SP
Climate Change and Resilience Scientist

FRÉDÉRIC GAUTHIER

B.Sc.
Risk, Resilience and Emergency Management Expert

CITY OF CAMBRIDGE CLIMATE ADAPTATION PLAN

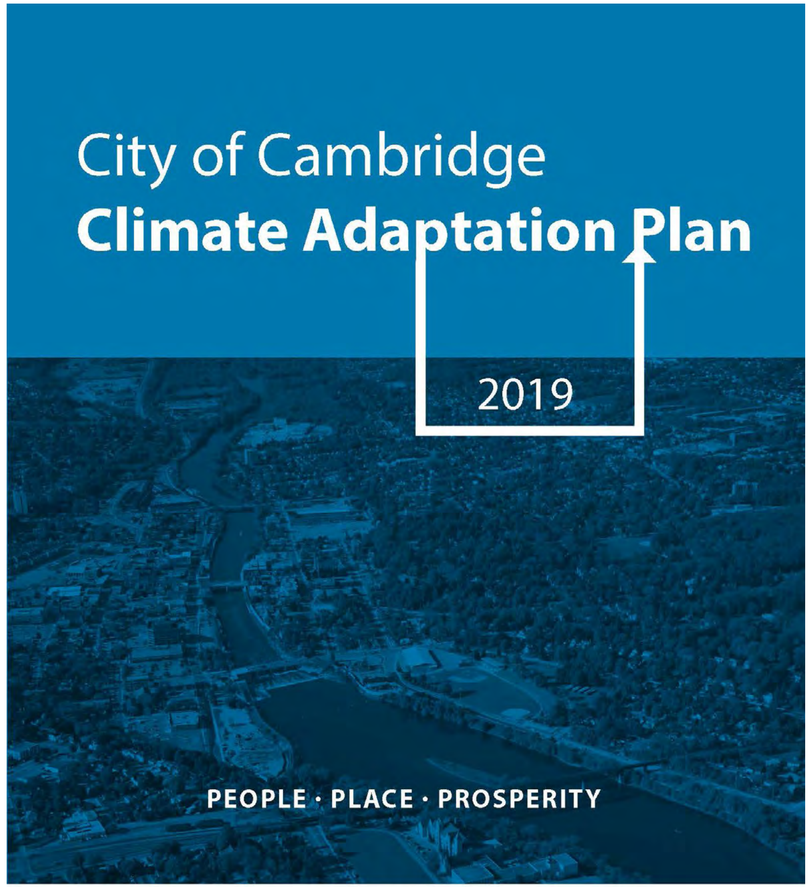
Cambridge, Ontario

Cambridge is known for its surrounding rivers – Grand and Speed Rivers – which help drive its economic prosperity. Throughout Cambridge's history, they have learned to adapt to river flooding and other related emergencies. However, as our world faces the growing issue of climate change, Cambridge is expecting to face more intense and destructive spring flooding alongside longer and more intense summer heatwaves. As such, the City of Cambridge is taking the necessary steps to prepare itself for and adapt to the impacts of climate change with the development of their Cambridge Climate Adaptation Plan.

Stantec was instrumental in both helping the City of Cambridge access federal adaptation planning funding and undertaking the essential work to create their climate adaptation plan. This work was carried out over a year long process of engagement with City staff and departments, research, climate data retrieval and future projections, and workshops to aid in the development of risk profiles for each City department. This resulted in the creation of a comprehensive list of action items that the City is tasked with implementing, a framework to organize their actions, and a set of guiding principles to support their advancement.

Based on the detailed assessment, the City has chosen five adaptation themes to focus effort and attention on:

- Neighborhood Flooding: Flooding in the City of Cambridge is typically caused by the flow of water over impermeable surfaces such as asphalt, brick, and concrete, and not from river flooding. Properly maintaining green spaces, natural vegetation, stormwater management ponds, and stormwater sewer systems, can reduce the risk of flooding.
- Infrastructure Resiliency: Minimizing the disruptions to service delivery resulting from changing conditions; from water and sewage to trails and roads.
- Built Environment: Heatwaves, snowstorms, and heavy rainfall can damage properties, and disrupt the delivery of and access to City services. Thus, planning and considering future climate conditions in the design of new buildings and for retrofits of existing buildings is crucial.
- Community Resiliency: Maintain readiness for extreme weather/adverse events, and be prepared to respond in a rapid, coordinated, and efficient manner.
- Natural Environment: Improve the quality and expand the number of parks, green and natural spaces, and natural assets within the City. The City of Cambridge will begin implementation short-term actions, and will initiate planning and budgeting analysis for longer term plans



MONTSERRAT PORT DEVELOPMENT CLIMATE RISK AND VULNERABILITY ASSESSMENT

Montserrat, British Overseas Territory

Following a series damaging events, such as the passage of hurricane Hugo and eruptions of the Soufrière Hills volcano, the Island's only deep-water port at Plymouth was relocated to the existing Little Bay port. To accommodate growth and re-development of the island's tourism and commercial trade industries, the government of Montserrat has identified the need for a new deep-water port at the Little Bay port site. A Climate Risk and Vulnerability Assessment was developed using a risk assessment methodology that aligns with the PIEVC Protocol to identify coastal infrastructure components that are especially vulnerable to climate- and weather-related impacts and to evaluate risks to these infrastructure elements in the current and future projected climates. An additional goal of this assessment is to develop modified design criteria for the port with consideration to climate change.

The climate risk assessment was completed using a risk assessment methodology that aligns with the International Organization for Standardization (ISO) 31000:2018 Risk Management Standard, ISO 14090:2019 Adaptation to Climate Change, and the PIEVC Protocol.

PRINCE EDWARD ISLAND WIND FARMS CLIMATE RESILIENCE ASSESSMENT

Charlottetown, Prince Edward Island

Prince Edward Island (PEI) is a champion of sustainable energy use, and one of the global leaders of wind energy development. Therefore, it is no surprise that 98% of the power generated on PEI is derived from wind generation facilities. To continue to reduce the Island's dependency on fossil fuels, PEI Energy Corporation (PEI EC) was tasked to construct two additional wind facilities within the Province.

With wind farms being a key infrastructure development on PEI, it is important that these structures are designed with resiliency in mind, and built to withstand the changes in climate and the test of time. Therefore, Stantec was engaged to provide a Climate Resilience Assessment in accordance with Infrastructure Canada requirements and Canada's Climate Lens General Guidance for the Wind Turbine Generators (WTG), site access, and power infrastructure to connect to the Province's electrical power grid. The assessment served to inform PEI EC on future climate related risks that should be considered at the detailed design and construction stages of the wind project.

The following climate parameters selected for this assessment include extreme cold; freezing rain; snowstorms; extreme wind; lighting; and wild fires. We identified parameters that could pose a significant hazard to the project infrastructure, and recommended some of the following mitigation measures to improve resilience:

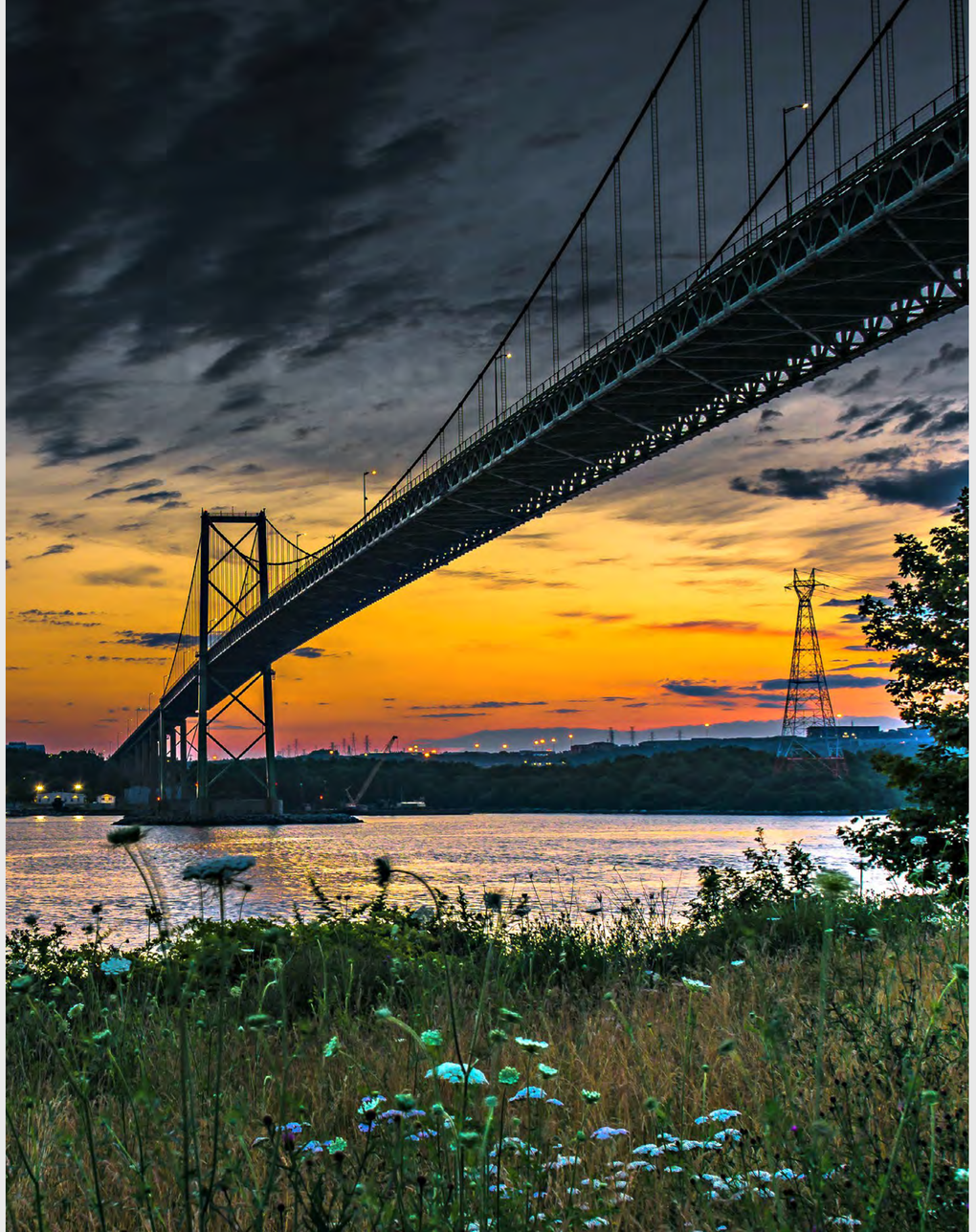
- Monitor status of affected assets during freezing rain and deploy repair crews right away
- Maintain a Vegetation Control Program wherein vegetation near transmission and distribution lines are trimmed approximately every 5 years
- Build-in lighting protection system to prevent damage to the WTG and power grid from lighting strikes

CLIMATE CHANGE RESILIENCY ASSESSMENT - HOUSING NOVA SCOTIA

Multiple sites, Nova Scotia

Housing Nova Scotia (HNS) has planned energy efficiency updates to 88 properties managed through five regional housing authorities across Nova Scotia. The properties include a mix of single detached dwellings and multi-unit buildings. The energy efficiency updates include the replacement of attic insulation, roof-top photovoltaic panel installations, and complete exterior and attic renovations. To gain funding for the planned updated, HNS retained Stantec to provide a Climate Resilience Assessment to determine how future climate impacts will affect the operational lifespan of the renovations. The assessment included the most recent climate projection data and historical climate data for the province. We identified the several climate variables that could pose hazards to the 88 properties, including extreme temperatures, heavy rainfall and snow, lighting events, wind event, and temperature swings. By examining each climate variable through an associated risk rating, we found that high wind events, temperature swings, and sea level rise were main risks to the project. We then provided key recommendations to help HNS mitigate these risks, which include:

- Consider the incorporation of a design criteria specific to known future climate risks into the Project's procurement to ensure the Project constructor takes future climate variables into account;
- Consider reviewing climate risk assumptions and then implement the necessary measures at the time of retrofits or replacements, at the end-of-service life of equipment, components, or assets;
- Consider the capacity to meet future climate conditions (higher peak loads due to higher external temperatures) when designing HVAC systems;
- Consider the need for energy-efficiency and the goal of reduced GHG emissions;
- Incorporate sea level rise projections into the detail design phase to ensure that critical infrastructure in low areas where sea level rise may inundate into coastal lands;
- Consider establishing clear communications on facility opening and operation in adverse weather conditions; and,
- Consider developing operations and maintenance policies around monitoring for and addressing adverse weather conditions (i.e. clearing snow, freezing rain,ponded water).



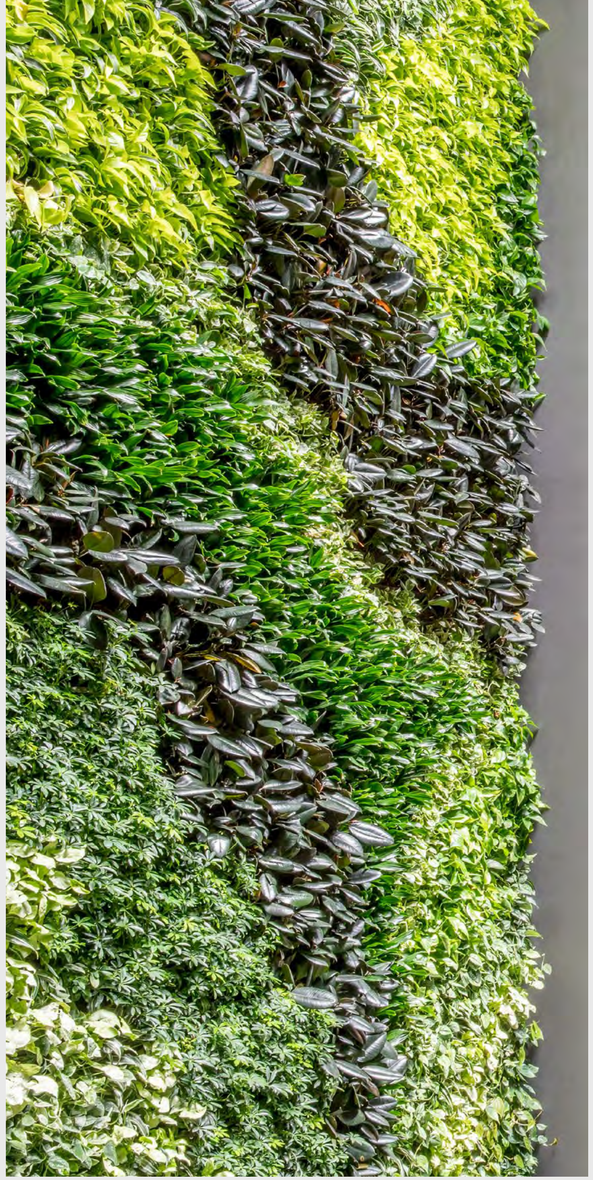
DISTRIBUTION SYSTEM CLIMATE VULNERABILITY RISK ASSESSMENT AND CLIMATE CHANGE ADAPTATION FOR HYDRO OTTAWA

Ottawa, Ontario

The National Capital Region has experienced damaging and costly weather patterns in recent years. Hydro Ottawa retained Stantec to complete a climate risk assessment and adaptation plan on its electrical distribution system to identify key vulnerabilities within the system and to recommend strategies to help mitigate future damages or loss of service. Stantec worked closely with the client to assess climate-related risks on Hydro Ottawa distribution and supporting infrastructure. Risk mitigation and adaptation recommendations were based on the results of the climate change resilience assessment and information gathered at an adaptation workshop with key Hydro Ottawa representatives.

This climate risk assessment covered a broad range of infrastructure components for a large municipality, and incorporated the findings of the risk assessment into an adaptation plan to help the utility prioritize risk and assess adaptive capacity. Risk prioritization and adaptation planning was developed through a climate risk workshop and an adaptation workshop which brought together key Hydro Ottawa stakeholders to discuss the potential risks and feasible risk mitigation strategies.

Hydro Ottawa recognizes that the potential impacts of climate change are a significant source of risk for their electrical distribution infrastructure. The results of our assessment were incorporated not only into their adaptation plan but were incorporated into the larger risk management framework for Hydro Ottawa to more comprehensively assess financial risks faced by the utility.



CLIMATE CHANGE RESILIENCE ASSESSMENT FOR THE TOWN OF STRATFORD

Stratford, Prince Edward Island

Stantec completed two climate change resilience assessments for the Town of Stratford in PEI as part of their ICIP funding application. The projects included a wetland restoration and a new large hockey arena. The work involved developing climate projection data, developing a list of infrastructure assets in consultation with experts with each project, and calculating a risk matrix to identify higher-risk components early on in the design stage. Mitigation measures were also proposed for higher-risk scenarios/components.

The projects followed the Climate Lens Assessment General Guidance for Climate Change Resilience Assessment, which is also consistent with ISO 31000 and ISO 14090 standards. Those standards involve delineating infrastructure assets, developing climate projections for various climate parameters that related to the infrastructure components, developing a consequence severity rating related to performance, operations and maintenance, and loss of service or financial return, calculating risk, and proposing mitigation for high-risk scenarios.

Client engagement consisted of in-person kick-off meetings followed by in-person meetings with key stakeholders to review the infrastructure components, consequence severity ratings, and climate event likelihoods.

DEMPSTER FIBRE LINK CLIMATE CHANGE RESILIENCE ASSESSMENT

Dawson City, Yukon & Inuvik, Northwest Territories

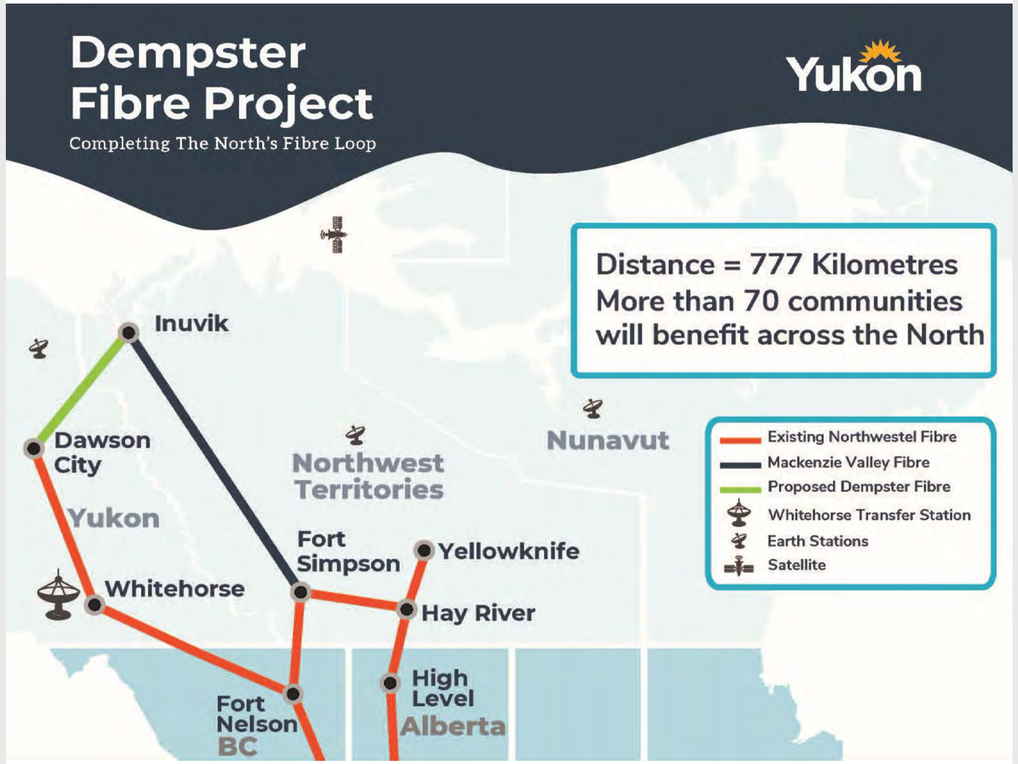
The Government of Yukon, in partnership with NorthwesTel, is developing the Dempster Fibre Project, a 777 kilometer fibre optic line, which will follow the Dempster Highway from Dawson City, Yukon to Inuvik, Northwest Territories. Its development seeks to connect over 70 communities in the North with improved internet quality and redundancy. The proposed highway route is characterized by rapid changes in environmental conditions, from sporadic permafrost in the subarctic region in the south, to continuous permafrost towards the northeast.

Stantec was retained to provide a Climate Lens Assessment using Infrastructure Canada's Climate Lens General Guidance v1.1. The objective is to identify the climate risks to the project at a broad systems-level using a future climate scenario, and to assess the possible climate related impacts that could affect the project over its construction and operational life.

This assessment identified ten climate parameters that could pose hazards to the project's systems. The results showed that extreme high intensity rainfall, sustained rainfall, extreme high temperatures, dry spells and increased mean seasonal temperatures posed the greatest risk to the fibre optic line.

Some of the key recommendations that were put forth from this assessment include:

- Implement a robust terrain monitoring and maintenance program. Conduct periodic surrounding surface surveys.
- Remote sensing techniques such as LiDAR, SAR, or Optical methods, can be repeated every 2 - 5 years to identify those areas where surface features such as topography, vegetation, surface water flow, pond developments, or thermograms activities have changed.
- Conduct inspections after severe weather to ensure the integrity of soils and surrounding systems (e.g. highways, culverts, rivers and creeks).
- Consider the use of innovative technology such as fibre optic distributed temperature sensing that can be utilized to monitor ground temperatures along the linear infrastructure and proactively identify changes and vulnerable areas.
- Consider planning for more frequent inspections, and monitoring, of the performance of the infrastructure and that there are enough additional resources for maintenance and rehabilitation when settlement of soils occurs.



Stantec

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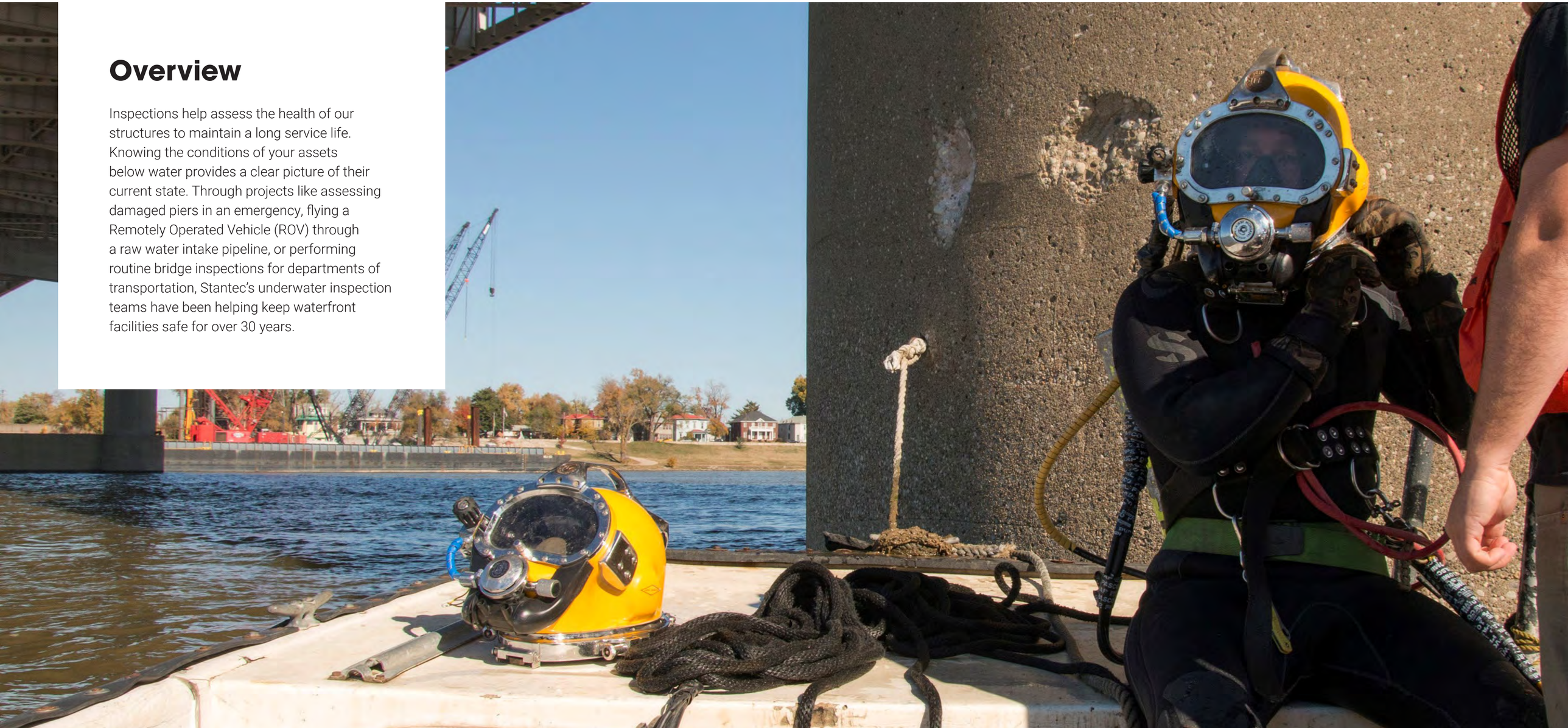
Stantec

A deep dive into structural health

UNDERWATER INSPECTIONS

Overview

Inspections help assess the health of our structures to maintain a long service life. Knowing the conditions of your assets below water provides a clear picture of their current state. Through projects like assessing damaged piers in an emergency, flying a Remotely Operated Vehicle (ROV) through a raw water intake pipeline, or performing routine bridge inspections for departments of transportation, Stantec's underwater inspection teams have been helping keep waterfront facilities safe for over 30 years.



Team Credentials

Our inspection and investigation teams are led by ADCI certified, commercially trained engineer divers. Working alongside them are highly trained commercial diver inspectors skilled in advanced inspection techniques and diving practices. Our teams have all the equipment needed to safety and efficiently perform Level I and II inspections. Our teams can also provide complete destructive and non-destructive testing (NDT) services required to perform Level III inspections. To allow our clients to “see” below the water’s surface, we implement underwater imaging technology, including 2D and 3D acoustic scanning, to provide overall views of the structure.

OUR UNDERWATER INSPECTION TEAMS HAVE PERFORMED THOUSANDS OF INSPECTIONS LED BY ENGINEER DIVERS.

ALL OF OUR UNDERWATER INSPECTORS AND DIVE SUPERVISORS ARE ADCI CERTIFIED

Equipment

Our dive teams face a wide variety of conditions and working environments. Having the right equipment is paramount to safely conducting a detailed underwater inspection.

To support our dive teams, we maintain a large fleet of boats, surface supplied air (SSA) and commercial SCUBA diving gear fitted with communications equipment, underwater cameras and video systems, “clear water” boxes, acoustic imaging and hydrographic sonars, non-destructive testing (NDT) equipment, and specialized safety and first aid equipment.

We conduct all diving operations in compliance with OSHA/USCG regulations and ADCI Consensus standards, using only formally trained commercially certified divers and approved commercial diving equipment.

Suite of services

We help you manage your infrastructure more efficiently – and cost-effectively – by using databases, interactive computer software, and GIS to record, archive, analyze, and report inspection and assessment data. Stantec has experience applying these technologies to our projects and has developed software programs to facilitate electronic reporting of underwater inspection and data.

OUR PROFESSIONAL ENGINEER DIVERS HAVE LOGGED OVER 5,000 WORKING DIVES TO DEPTHS OF OVER 180’

INSPECTIONS AND INVESTIGATIONS:

- Topside Inspections
- Hydrographic Surveying
- Ultrasonic Thickness Testing
- Level I, II and III Underwater Inspections
- Excavations
- Timber Coring
- Destructive and Non-Destructive Testing
- Topographic Surveying
- Underwater Photography and Video
- Laboratory Testing
- ROV Inspections
- Soil Borings and Rock Coring
- Acoustic Imaging
- Cathodic Protection Testing
- Concrete Coring
- GPS Surveying

CONDITION ASSESSMENT REPORTS:

- Structural and Scour Condition Documentation
- Condition Ratings
- Cost Estimates
- Prioritized Maintenance and Repair Recommendations
- Estimates of Remaining Service Life
- CADD Drawings and Sketches

MARQUIS PROJECT

KENTUCKY TRANSPORTATION CABINET STATEWIDE UNDERWATER BRIDGE INSPECTIONS

The Kentucky Transportation Cabinet (KYTC) launched their bridge substructure inspection program in 1989. We have been a continuous trusted partner, providing underwater inspections and related services for over 30 years.

Through KYTC's program, we have performed multiple inspections on each of nearly 250 bridges currently requiring underwater inspections. We have compiled and reviewed construction drawings and previous inspections reports; performed stream bed cross sections for scour analysis; performed detailed Level I, II and III underwater inspections following FHWA bridge inspection standards; and condensed inspection notes into a state-established rating system. We also provided remedial actions as required and entered inspection data into KYTC's on-line Bridge Management Software system.

Our dive personnel have encountered a variety of water conditions and river sizes that required specialized equipment and techniques. Visibility is frequently nonexistent, so a professional engineer diver carries out zero-visibility inspections. For completely submerged culverts that are blocked at one end, we use confined space and zero-visibility dive techniques.

Other challenges included inspecting bridges in 180 feet of water with hollow piers that required interior and exterior inspection. Divers performed decompression diving and utilized surface decompression with pure oxygen in an on-site recompression chamber to reach that depth.

MARQUIS PROJECT

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY (SFRTA) RAILROAD BRIDGE ENGINEERING SUPPORT SERVICES FOR CONTRACTOR TRANSDEV RAIL

The SFRTA runs a 26-train passenger rail service that extends between Miami and West Palm Beach, Florida. The doubled tracked rail lines are also used by Amtrak and freight trains. To ensure the safety of rail systems across the country, the SFRTA developed a 10-year inspection program in accordance with Federal Railroad Administration requirements.

We are providing the bridge inspection and capacity ratings on SFRTA's rail bridges. We are also providing engineering assistance on all bridges that the passenger and freight trains traverse as well as a review of overhead bridges the rail line goes under. The program also includes two moveable bascule rail bridges.

For all underwater bridge elements, we conduct biennial underwater inspections using surface-supplied air diving equipment with built-in communications systems. All our underwater inspections are conducted by an OSHA-compliant team of formally trained commercial divers. The dive team is led by a registered professional engineer-diver, who is responsible for the structural as well as scour evaluations of the bridges. The two moveable bascule rail bridges also receive monthly inspections of the electrical/mechanical components.

We also complete bridge inspection reports with recommendations for repairs if required and an annual overall summary. We are currently in year six of the 10-year program to keep the corridor in a steady state of service.

MARQUIS PROJECT

TENNESSEE DEPARTMENT OF TRANSPORTATION
UNDERWATER BRIDGE SUBSTRUCTURE INSPECTIONS

Over the past 21 years, we have performed underwater bridge inspections for the Tennessee Department of Transportation (TDOT). To date, approximately 600 underwater bridge inspections have been completed for TDOT.

We have performed Level I and II underwater bridge inspections for most of the bridges in central and eastern Tennessee since 1996. These inspections are conducted in water conditions consisting of heavy current, deep water, heavy debris, and zero visibility.

Providing all equipment and personnel to complete the underwater inspections, we mobilize three-man dive teams equipped with surface-supplied air (SSA) and Commercial SCUBA diving equipment, diving platforms, sonar and sounding equipment (including underwater acoustic imaging capability), and other specialized equipment. Each of the three-man dive teams include FHWA certified underwater substructure inspectors, engineer divers, and certified commercial divers. Dive personnel perform the underwater inspections from our dive boats, bridge decks or the banks of the water bodies using SSA, Commercial SCUBA and wading techniques as water conditions require.

We also perform decompression diving techniques on four bridges located in water deeper than 100 feet. The inspections require additional equipment and personnel including a decompression chamber, and floating barge platforms. The diver's findings are relayed via either hard-wire radio communications or wireless voice communications to top-side personnel who record the findings and verify previously noted conditions. Soundings of the stream bottoms are performed using graduated sounding rods and sonar equipment to determine whether scouring has occurred compared to previous inspections.

For bridges with substructure units situated in water depths exceeding 33 feet, TDOT requires acoustic imaging sonar images of those elements be obtained. Upon completion of the inspections, field notes and sketches are verified against previously noted conditions, and separate underwater bridge inspection reports are produced for each bridge, incorporating multiple quality control and quality assurance checks.

MARQUIS PROJECT

NEW MEXICO DOT INAUGURAL UNDERWATER INSPECTIONS

To ensure the safety of their in-service bridges, the New Mexico Department of Transportation (NMDOT) bridge inspection program includes a list of structures requiring underwater inspection. Stantec provided the inaugural round of underwater bridge inspections for NMDOT in the winter of 2019, followed by a second round of inspections in the winter of 2020.

Our team conducted Level I & II underwater bridge inspections on fourteen bridges in NMDOT Districts 2 and 5. The inspections included structural and scour evaluations of concrete bridge piers and abutments as well as timber bridge piers and abutments, using element-level inspection methods.

Led by a registered engineer diver, our commercial diver inspectors were faced with a variety of water conditions, including heavy currents, ice-covered waterways, limited underwater visibility, and heavy debris accumulations at the bridge piers. To overcome these challenges, our team employed surface-supplied air diving equipment, maximizing safety through the use of ‘hard hat’ divine helmets, redundant air supplies and hard-wired cmmunications systems, allowing them to safely conduct the inspections. Our findings were provided in a report that included recommendations for maintenance and repairs.

MARQUIS PROJECT

CITY OF NORTH PORT MYAKKAHATCHEE CREEK WATER TREATMENT PLANT RENEWAL AND REPLACEMENT PROGRAM

The City of North Port, Florida has a 4.4 mgd Myakkahatchee Creek surface water treatment plant (WTP). This facility operates in concert with the City's new reverse osmosis WTP to stabilize and blend finished water prior to pumping out into the distribution system. As an integral part of the City's infrastructure, the WTP needs to be in good working condition to function properly.

To provide the City with a detailed understanding of the plant's current conditions, we performed underwater inspections of the three raw water intake pipelines and associated wet wells and intake water pumps. The inspections of the pipeline exterior components were conducted using conventional commercial diving methods, while a Remotely Operated Vehicle (ROV) was used to inspect the inside of the 24" diameter pipelines and the confined spaces within the pumphouse wet well structures. We also provided high-definition video of the inspections.

MARQUIS PROJECT

DE CORDOVA BEND DAM AND STERLING C. ROBERTSON DAM ANNUAL MAINTENANCE INSPECTIONS

Our inspection teams performed the 2018 and 2019 annual maintenance inspection at De Cordova Bend Dam (Lake Granbury) and Sterling C. Robertson Dam (Lake Limestone). In June 2020, we also conducted underwater commercial diving inspections of the Robertson Dam Spillway basin, including the end sill, baffle blocks and cleanouts.

For both dams and appurtenant facilities, our team reviewed operation, maintenance, and inspection records, reviewed the dam operation and maintenance plan and other relevant reports and drawings, and performed visual inspections for the embankments, dam monitoring instrumentation, spillway structure including Tainter gates and stilling basin, low flow outlet facilities, and other mechanical equipment. Inspections were performed in accordance with the Texas Administrative Code. Underwater inspections were conducted using surface-supplied air diving equipment, in conformation with OSHA ommercial diving regulations.

We prepared an inspection report including recommendations for maintenance actions to be addressed within 1-year and 5-year timeframes. We also prepared and followed comprehensive and site-specific health and safety plans.

Through the performance of multiple inspections at Sterling C. Robertson and De Cordova Bend Dams, our lead inspectors have become very familiar with the history, operations, and conditions of these facilities and will be very well-suited to perform the 5-year engineering inspections at these facilities as a natural extension of previous inspection work.

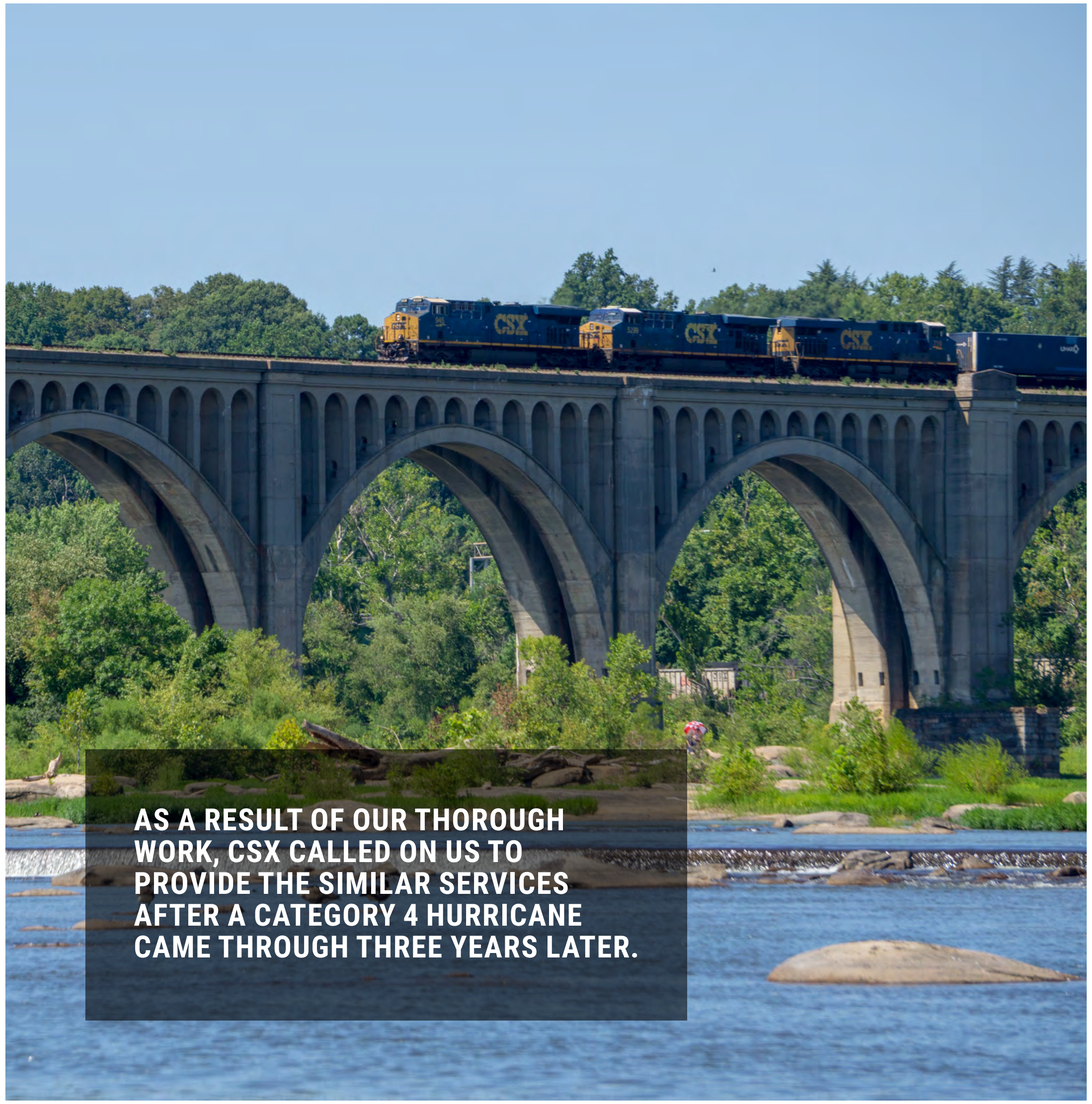
MARQUIS PROJECT

OLENTANGY RIVER FRESHWATER MUSSEL SURVEYS

Columbia Gas of Ohio plans to install a new 20” steel welded, natural gas pipeline below the Olentangy River in one of two locations upstream of Doddridge Dam. The Ohio Department of Natural Resources (Ohio DNR) completed a review of the proposed project and requested a survey of freshwater mussels in the vicinity of the pipeline.

Our team performed a freshwater mussel survey in the Olentangy River to rule out any federal or state endangered species and make way for the installation of a natural gas pipeline. Due to the water depth, low visibility, and the close proximity of dams, our team of commercial and scientific divers searched for mussels in the substrates along transects in the stream channel. Timed searches and fixed area substrate excavations were conducted in suitable habitats along the channel margins.

No federal or state endangered, threatened, or proposed endangered/ threatened mussels were found during the surveys. A total of 133 live freshwater mussels, comprised of 12 species were found to occur within the project area. Due to the presumed absence of federal and state endangered and threatened species within the project area, an agency determination of may affect but not likely to adversely affect was anticipated.



AS A RESULT OF OUR THOROUGH WORK, CSX CALLED ON US TO PROVIDE THE SIMILAR SERVICES AFTER A CATEGORY 4 HURRICANE CAME THROUGH THREE YEARS LATER.

CSX TRANSPORTATION BRIDGE POST EVENT EMERGENCY UNDERWATER INSPECTIONS

After a category 5 hurricane wreaked havoc on the states of Louisiana, Mississippi, and Alabama, CSX needed to understand the condition of their transportation assets—including their bridges.

CSX called upon us to perform emergency substructure inspections for sixteen bridges. Inspecting the bridges post-hurricane came with lots of challenges. Many of the bridges had no vehicular or boat ramp access within 10 miles, so we had to provide transportation to and from each bridge for both our inspectors and STV inspectors. Underwater conditions at the bridges included deep water and heavy currents providing a difficult environment to work in.

We mobilized two field crews of engineer and commercial divers within 48 hours of involvement in the project. The teams inspected bridge substructural and fender system components both above and below the water surface—including 37 piers and 92 pile bents. Our team performed Level I and II underwater inspections of bridge substructures and elements, looking for evidence of physical distress, damage, or deterioration as well as scour of foundations or other relative conditions. Our team also conducted emergency work to clear channel obstructions and provided daily field reports and recommendations for reopening bridges. We successfully finished all sixteen bridge inspections over the 150 mile railway in less than three weeks.

Design with community in mind

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. This allows us to assess what's needed and connect our expertise, to appreciate nuances and envision what's never been considered, to bring together diverse perspectives so we can collaborate toward a shared success. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.

Stantec trades on the TSX and the NYSE under the symbol STN. Visit us at stantec.com or find us on social media.

CONNECT WITH US

STANTEC.COM

Commons Park Right of Way Improvements
Minneapolis, Minnesota

Overview of Service Capabilities

COMMUNITY DEVELOPMENT
2023

Services

CIVIL ENGINEERING
Infrastructure is the backbone of a community. Resilience minded, our designs take into account physical site conditions, public expectations, fiscal requirements, and environmental constraints.

PLANNING & URBAN PLANNING
Planning creates the roadmap to a designed and implemented vision. Whether the vision improves a site, district, campus, or community-wide ambition, we help create places that are authentic, green, connected, and equitable.

GEOSPATIAL SERVICES
Technology is more affordably supporting data-driven decision making. From measuring efficient use of finite resources to infrastructure investments, we are on the leading edge of collection, storage, display, and analysis of geospatial data.

CONSTRUCTION ADMINISTRATION
Our safety-focused construction services group has the proper experience and training to provide the quality control services needed so that projects are constructed in accordance with the plans/specifications, schedule, and planned budget.

LANDSCAPE ARCHITECTURE
We create inspired landscapes and streetscapes that enrich the daily experience. Our designs innovate to reflect context, user needs, and the environment responsibly.

STORMWATER MANAGEMENT
Wet weather infrastructure is critical to mitigating erosion and flooding. We help optimize existing systems, design new solutions, and inform where investments will be most protective of your assets.

PUBLIC ENGAGEMENT
Creating consensus is critical to planning and designing places with authenticity. Our tools and approach invites equitable participation and addresses benefits and concerns of a community or stakeholder group.

FUNDING ASSISTANCE
We demystify the funding process and help you develop funding-eligible projects. Our funding specialists help in three areas: research and strategy, application preparation, and grant administration.

PROJECT TYPES

- Feasibility studies
- Funding support
- Real estate advisory
- Zoning and policy advisory
- Land surveying, mapping, and GIS
- Land use and master planning
- Comprehensive planning
- Land and brownfield development
- Utility infrastructure
- Stormwater and green infrastructure
- Streetscape and complete streets
- Public realm and urban design
- Waterfronts
- Parks and open space
- Sports and recreational facilities
- Sustainability and resilience
- Design visualization

East Riverfront Development
Wausau, Wisconsin

The Stantec community unites more than 26,000 employees working in over 400 locations across six continents. We collaborate across disciplines and industries to bring buildings, energy and resource, and infrastructure projects to life.

Our work—professional consulting in planning, engineering, architecture, interior design, surveying, landscape architecture, environmental sciences, project management, and project economics—begins at the intersection of community, creativity, and client relationships.

Since 1954, our local strength, knowledge, and relationships, coupled with our world-class expertise, have allowed us to go anywhere to meet our clients' needs in more creative and personalized ways. With a long-term commitment to the people and places we serve, Stantec has the unique ability to connect to projects on a personal level and advance the quality of life in communities across the globe.

Questions or Inquiries

CONTACT INFORMATION

Contact Name
Email with active hyperlink
(XXX) XXX-XXXX

Stantec

Design with community in mind

Biological Nutrient Removal

HELPING YOU COST-EFFECTIVELY MEET REGULATORY REQUIREMENTS.

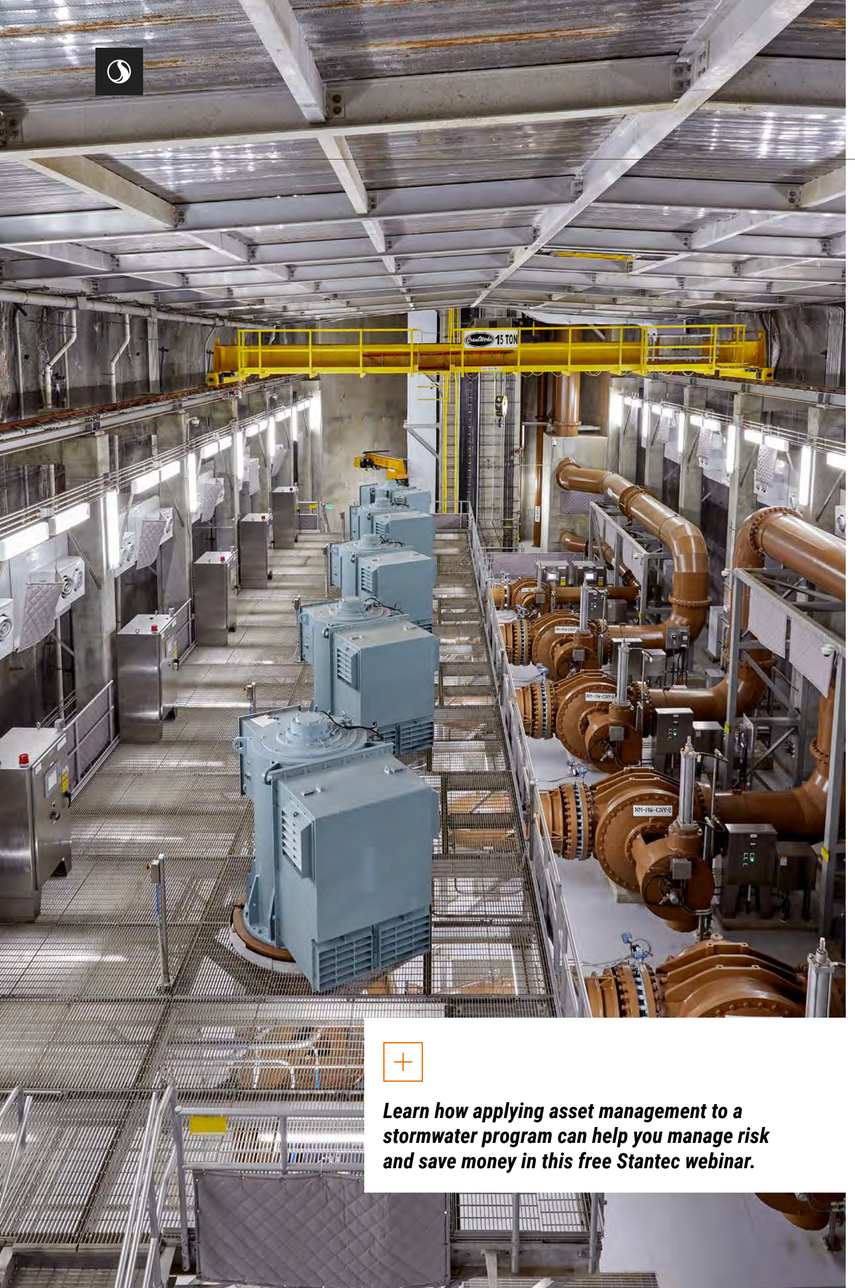
Stantec provides expertise in Biological Nutrient Removal (BNR) to clients around the world and has designed well over 100 such facilities. Our process engineers were instrumental in the development of much of the science and associated technologies for BNR, including swing zones, primary sludge fermentation, and nutrient recovery. With reference projects covering a range of effluent nitrogen (2 mg/L to 10 mg/L) and phosphorus limits (<0.1 mg/L to 1 mg/L), you can count on us to delivery the most appropriate, cost-effective solution the first time, every time.

OUR EXPERTISE

- Biologically Aerated Filters
- Four- and Five-Stage Bardenpho
- Integrated Fixed-film Activated Sludge
- Membrane Bioreactor
- Modified Johannesburg
- Modified Ludzack-Ettinger
- Moving Bed Bioreactor
- Sequencing Batch Reactors
- Step Feed
- University of Cape Town

Read more about continuing advances in wastewater-to-energy technology in this Stantec blog

PROJECT EXPERIENCE	DETAILS
Nogales International Wastewater Treatment Facility, Arizona *Winner of three significant industry awards for excellence*	• Design-build 14.74 MGD facility • Completed for less than $5 per gallon
Robert W. Hite Treatment Facility, Colorado *Largest biological nutrient removal upgrade project in Colorado*	• 106 MGD secondary treatment complex • Side stream anaerobic reactor
Little Patuxent Wastewater Treatment Facility, Howard County, Maryland *Stringent effluent requirements with total P of 0.2 and total N of 3 mg/L*	• Retrofit to BNR and expansion to 29 MGD • Ice cream waste optimizes treatment
J.D. Phillips Wastewater Reclamation Facility, Colorado *Includes a tertiary filter plant for reuse, turbidity of less than 2 NTU*	• 20 MGD facility • Dairy waste optimizes treatment
Grand Bend Area Wastewater Treatment Facility, Ontario *North America's first ISI Envision®-verified wastewater treatment facility*	• BNR with advanced tertiary filtration • Saved client over $10M
Bonnybrook Wastewater Treatment Plant Expansion Program, Alberta *Largest cold-weather BNR plant in the world*	• 140 MGD total capacity, 36 MGD upgrade • Thermal hydrolysis for increased biogas



Wet Weather Flow and Urban Stormwater

SMARTER PROJECTS FLOW FROM GREAT IDEAS

Redesigning the urban environment to better handle wet weather is more sustainable, less expensive, and easier to manage. That's why we focus on first understanding what a community's existing system can handle, how it can be optimized, what users can afford, and where money is best spent. And with larger storms and more urbanization comes increased flows that bring with them significant flooding and pollution concerns that must be proactively addressed. This is where our experience managing and delivering some of the world's largest stormwater management programs and projects lets us find the best solution for each situation.

Learn how applying asset management to a stormwater program can help you manage risk and save money in this free Stantec webinar.

OUR EXPERTISE

- Capacity, Management, Operations, and Maintenance
- Combined Sewer Overflows
- Detention & Retention Basins & Tanks
- Green Infrastructure & Low Impact Development
- Infiltration & Inflow Reduction
- Sewer Inspection and/or Evaluation Surveys
- Separate Sewer Overflows
- Stormwater Management and MS4 Services
- Urban Flooding Risk Reduction
- Wet Weather Flow Treatment

PROJECT EXPERIENCE	DETAILS
Clean Water Atlanta Program, Georgia *One of the largest wet weather control programs in the US*	• Program manager of the $3.9B program • Helped save the City more than $650M
Easterly Tunnel Dewatering Pump Station, Ohio *One of the largest CSO pump station projects in the US*	• 160 MGD, 240 feet below ground • Helped save the client more than $50M
Windsor Riverfront Retention Treatment Basin and Tunnel Sewer, Ontario *A world's first solution to help clean the Detroit River*	• 180 MGD of treatment • 85% smaller than a conventional facility
New Orleans Blue and Green Corridors Project, Louisiana *Reducing flood risk, slowing land subsidence, and encouraging revitalization*	• 8 miles of linear green infrastructure • Bioswales, wetlands, and floodable parks
Ottawa Combined Sewage Storage Tunnel, Ontario *Virtually eliminating combined sewage overflow during a typical year*	• 6.2 kilometers of 3 meter diameter tunnels • 43,000 M^3 of storage
St. Petersburg Stormwater Fee Study, Florida *Using data to design fair and sustainable stormwater fees*	• Tier-based structure using impervious areas • On-the-fly changes and real-time GIS feedback

Pineda, Cristina

From: Campagna, Sheryl <Sheryl.Campagna@stantec.com>
Sent: Wednesday, August 9, 2023 7:19 AM
To: Pineda, Cristina
Subject: RE: Stantec Annual SOQ - County of Hawaii, Housing and Community Development (HRS 103D-304)

Aloha, Christina

Below, please find the information you requested from Stantec

1) Average number of employees over the past 5 years within all of Stantec: 22118
2) Average number of employees over the past 5 years located within the State of Hawaii: 67

Apologies for the missing data and thank you for reaching out.

All the best,
Sherry

Sherry Campagna ('Alamea)
Principal, Environmental Services
Ha'iku, Maui

email: sheryl.campagna@stantec.com
808.727.0910

Stantec Consulting
1001 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Pride@Stantec.com

From: Pineda, Cristina <Cristina.Pineda@hawaiicounty.gov>
Sent: Monday, August 7, 2023 11:21 AM
To: Campagna, Sheryl <Sheryl.Campagna@stantec.com>
Subject: RE: Stantec Annual SOQ - County of Hawaii, Housing and Community Development (HRS 103D-304)

Aloha Sheryl,

We have received your submittal for Professional Services but need more information. In reviewing your submittal, I wasn't able to find the average number of employees over the past 5 years, which is one of requirements. Please provide this information at your earliest convenience. As an international company, it may be more helpful to provide a breakdown of average number of staff located within the State. If I inadvertently overlooked it, please advise.

Thank you,

Cristina

From: OHCD <OHCD@hawaiicounty.gov>
Sent: Monday, July 3, 2023 11:09 AM

To: OHCD Professional Services <ohcdprofserv@hawaiicounty.gov>
Subject: FW: Stantec Annual SOQ - County of Hawaii, Housing and Community Development (HRS 103D-304)

From: Campagna, Sheryl <Sheryl.Campagna@stantec.com>
Sent: Friday, June 30, 2023 3:27 PM
To: OHCD <OHCD@hawaiicounty.gov>
Cc: Corsetti, Cara <Cara.Corsetti@stantec.com>; Powell, Janet <Janet.Powell@stantec.com>
Subject: Stantec Annual SOQ - County of Hawaii, Housing and Community Development (HRS 103D-304)

Dear Ms Kunzo,

Stantec's Statement of Qualifications is attached for the fiscal year 2023-2024. We are submitting on the following categories of service, referenced in our cover letter:

OH.4) Community Planning (Environmental Assessment)
OH.5) Community Planning (Community Engagement, Strategic Planning)

Stantec has Environmental Planning, Surveying, Community Engagement, and Archaeology staff located on Hawai'i Island. We have additional Planning and Community Engagement staff on Maui and our main Hawai'i office in Honolulu that provides a full suite of environmental, engineering, and architecture services. For a complete look at the services that Stantec is able to provide to the County of Hawai'i, please visit Markets (stantec.com)

For an idea article on community planning in a post-Covid world, please follow this link for an small introduction on how the planners of Stantec see community in terms of transformative change and social equity: Planning for life in cities after the pandemic (stantec.com)

Please let me know if you have any questions about our submittal or the services that we provide.
Thank you for the opportunity to submit our qualifications to the County of Hawai'i,

Sherry

Sherry Campagna ('Alamea)
Principal, Environmental Services
Ha'iku, Maui

email: sheryl.campagna@stantec.com
808.727.0910

Stantec Consulting
1001 Bishop Street, Suite 1501
Honolulu, Hawaii 96813

Pride@Stantec.com