B. Scope of Services

Table 2 outlines the services our multidisciplinary team can provide to support the Noyo Harbor planning effort. The Dudek team can support most service areas listed in the Scope of Services section of the RFQ. The only exceptions are items No. 8, Economic Analyses, and No. 20, Traditional Ecological Knowledge.

Table 2. Dudek Services

D	Dudy Trans Constitution and Contract			
Requested Service	Dudek Team Capabilities and Qualifications	Relevance to Grant and Contract		
1. Surveying and mapping, including lidar, CAD and/or GIS	 In-house team of experienced licensed land surveyors based in California Surveying specialties include topo design surveys, boundary and ALTA surveys, bathymetric surveys, easement plotting/design (legal description/plat maps), terrestrial lidar scanning, AutoCAD drafting and Civil 3D Surfaces Mapping services specializing in UAV aerial imagery, lidar, multispectral collection, site planimetric feature drafting Web-based mapping solutions including the Esri suite of online tools and software 	 Community mapping for public events and workshops Mapping to support plan development Evaluation of existing Noyo Harbor conditions, including topography and bathymetry Creation of "digital twin" of Noyo Harbor environment utilizing hybrid approach of terrestrial lidar and UAV lidar/imagery Ability to view all survey data within the web-Based Esri software, enabling a wide variety of interested parties to view data without any software download requirements 		
2. Civil and hydrological engineering	 Team of experienced civil engineers, hydrologists, and geomorphologists in California Experience in hydrologic assessment and modeling, channel and storm drain hydraulic modeling incorporating tidal influences, stormwater management and infrastructure design, site development and design, water/wastewater infrastructure assessment/rehabilitation/design 	 Experience identifying opportunities and limitations for proposed developments and infrastructure needs via expertise in storm-, potable-, recycled-, and wastewater Experience incorporating tidal influences into storm drain and surface water modeling 		
3. Habitat restoration design, permitting, construction, and monitoring for integrated habitats and multiple benefits	 Team of environmental landscape architects, botanists, biologists, environmental planners, permitting specialists, and restoration construction specialists Ability to synthesize a broad array of data; design projects that take advantage of natural processes and balance environmental, equity, and economic considerations; and monitor projects to evaluate success 	 Experience collecting baseline technical information to understand opportunities and constraints and translate understanding to climate ready projects Expertise coordinating with resource agencies and processing permits for multi-benefit, restoration projects 		

Table 2. Dudek Services

Requested Service	Dudek Team Capabilities and Qualifications	Relevance to Grant and Contract
4. Natural and nature- based shoreline protection design	 Siting, designing, and implementing nature-based adaptation projects Thoughtful design and monitoring plans to support permitting 	 Experience with design, implementation, and monitoring within regulatory environment Prioritization of phased strategies and emphasis of concept design and alternative development approaches that integrate a functional landscape approach
5. Water quality assessment	 Team of engineers, hydrologists, biologists, and wetland scientists Expertise preparing application packages and required documentation to obtain state and/or federal permits, including Section 404 and 401 Permits Expertise in developing/implementing long-term water quality monitoring programs evaluating seasonal fluctuations in pollutant concentrations and suitability of water quality conditions for providing habitat for aquatic species at various life stages 	 Evaluation of existing and potential water quality conditions for proposed Noyo Harbor projects following the state's Surface Water Ambient Monitoring Program protocol (e.g., aquaculture, pathogens [per FDA] and TMDLs levels [per RWQCB]) Possible development and implementation of a bivalve bioaccumulation study Coordination of laboratory analyses with any number of labs certified through California's Environmental Laboratory Accreditation Program (ELAP) that either Dudek or the City have established agreements with Design of water quality monitoring programs
6. Structural analyses	 Team of licensed professional civil engineers with structural engineering experience, specifically in harbors and other waterfront structures Key project experience includes design of bulkheads, levees, dock systems, piers, revetments, piles and other foundations, and all related steel, concrete, and wood structural members and components 	 Assessment of structural integrity of the harbor's shoreline structures Determination of feasible structural solutions for enhancing coastal resilience Interpretation of coastal hazards and sea level rise impacts to structures

Table 2. Dudek Services

Requested Service	Dudek Team Capabilities and Qualifications	Relevance to Grant and Contract
7. Pre-project feasibility analyses	 Team of uniquely experienced planners and regulatory permit experts with specific aquaculture and other blue economy experience Have worked closely with UCSB Brenn School and NOAA NCCOS on spatial modelling for diving locations suitable for aquaculture within specific regions (Ventura and San Diego) Have developed/conducted numerous feasibility studies for aquatic species/wetland features incorporating Dudek's diverse range of expertise to identify major constraints including, but not limited to, hazards assessments, cultural surveys, biological surveys, hydrology and water quality studies, wildfire studies, and evaluation of anticipated climate change impacts 	 Determination of aquaculture feasibility by working with engineering conditions assessments of existing infrastructure, economists, and studies underway by the City, California Sea Grant, and the Noyo Center for Marine Science Performance of water quality analyses to evaluate suitability of proposed aquaculture (i.e., oysters, kelp, sunflower sea stars, etc.) Assessment of suitable characteristics for potential species in water and opportunities for facilities on land, as well as Floating Upweller System (FLUPSY) similar to that piloted in San Diego Bay.
9. Hazardous or toxic substance investigations	 Credentialed environmental engineers, geologists, hydrologists, and permitting specialists Experience with ESAs, site investigations, remediation activities, regulatory permitting and compliance, and regulatory closure for numerous sites 	 Thorough environmental site assessments identifying historical, existing, and potential sources of pollutants that could impact proposed Noyo Harbor projects and/or require significant remediation Remediation programs (soil, soil vapor, groundwater, and water) to address issues associated with hazardous or toxic substances
10. Watershed, intertidal, and subtidal assessments	 Watershed specialists, including hydrologists, geomorphologists, water and forest resiliency planners, and GIS analysts who conduct various levels of watershed assessments supporting management of supply, water quality, habitat, and flooding Team of marine biologists that conduct marine habitat assessments, including underwater dive assessments on hardand soft-bottom habitats within the nearshore throughout California 	 Characterization of existing and model-projected watershed, intertidal, and subtidal conditions supporting and/or inhibiting possible Noyo Harbor projects Collection of baseline information on existing marine conditions to support blue economy initiatives while protecting and enhancing marine habitats
11. Archaeological studies	 Team of archaeologists, architectural historians, historians, ethnographers, and paleontologists 	 Collection of appropriate existing- conditions information for Noyo Harbor to support planning process

Table 2. Dudek Services

Requested Service	 Dudek Team Capabilities and Qualifications Experienced in identification, significance assessment, mitigation, and preservation 	Relevance to Grant and Contract
12. Climate change issues such as species migrations, seasonal coastal and fluvial flooding, and sea-level rise	 Diverse team of climate change specialists familiar with hazards such as ocean acidification, increased fluvial flooding, and sea level rise Experienced in helping communities adapt through community engagement and visioning, which drive policy changes and project implementation 	 Ability to synthesize site-specific climate hazard analysis Ability to identify infrastructure and community needs and recommend adaptation pathways for resilient harbor
13. Botanical studies	 Team of botanists with wide-ranging botanical expertise and deep ecological restoration knowledge Ability to identify, describe, classify, and assess vegetation communities and habitat types, environmental conditions, and the potential for special-status species to occur in identified habitats 	 Collection of appropriate existing-conditions information for Noyo Harbor to support planning process.
14. Agricultural Studies (Aquaculture Studies)*	 See scope items No. 5 and No. 7 above Team of marine biologists and water quality specialists with experience in evaluating suitability of habitat for aquaculture and developing long-term water quality monitoring studies characterizing suitability of habitat for aquatic flora and fauna 	 See scope items No. 5 and No. 7 above Performance of anticipated studies for oysters, kelp, and/or star fish, which will require an understanding of the best-available science (e.g., FDA's assessment of human health hazards with shellfish) for conducting water quality and bioaccumulation analyses Incorporation of input from interested parties and outside entities invested in this region
15. Soil and marine sediment analyses	 Team of environmental engineers and geologists with experience in developing soil sampling programs for identifying and quantifying impacted substrate 	 Identification of impacted soils for both projects on land and in the harbor to support feasibility assessments and/or determine level of remediation. Coordination of laboratory analyses to be with any number of labs certified through California's Environmental Laboratory Accreditation Program (ELAP) that either Dudek or the City have established agreements with
16. Site and land use planning	 Team of urban designers, coastal planners, and regulatory experts including ex-agency staff (e.g., USACE, CCC, PoSD, et al.) 	 Native Spanish speakers to assist with community outreach and engagement

Table 2. Dudek Services

Requested Service	Dudek Team Capabilities and Qualifications	Relevance to Grant and Contract
	 Practical, implementation-focused plans that offer a platform for real change 	 Former California Coastal Commission staff who can provide guidance on updates to the City's LCPA
17. Sea-level rise and coastal erosion modeling	 Team of engineers, coastal scientists, and GIS specialists Model animations and graphics to communicate coastal hazard pathways and impacts 	 Two-dimensional tidal and fluvial modeling to identify pathways of inundation, depth, and duration Ability to inform and prioritize adaptation projects
18. Environmental monitoring	 Team of engineers, hydrologists, biologists, and wetland scientists that provide comprehensive environmental monitoring and compliance services Expertise in developing/implementing long-term water quality monitoring programs, as described under scope item No. 5 above 	 Support of project feasibility assessment, implementation, and operations, as necessary
19. Graphic design for educational materials	 Team of graphic designers and visual storytellers Powerful products that communicate complex information through graphics, audio/visual, and printed materials (see Appendix B) 	 Design of materials that promote community engagement Production of a high-quality plan that translates technical subjects simply and effectively
21. Local working waterfront skills	 Expertise in projects and locations with working waterfronts and assessment of current and proposed uses of waterfront space 	 Data gathering and assessment of historical and current use of waterfront space at Noyo Harbor
22. Harbor District and Special District Analysis	 Team of environmental specialists and coastal planners with experience in visionary plan development and Master Plan amendments In-depth understanding of the complex issues and rigorous environmental requirements involved in port and harbor projects 	 Evaluation of City's and partnering and/or adjacent agencies' authority and geographical limits, as well as opportunities for revisions thereto and additional agency approvals needed for such Evaluation of the leasing authorities, policies, and regulations that may affect aquaculture leasing, specifically for in-water activities

Table 2. Dudek Services

23. Other related environmental services, such as appraisals for restoration purposes Team of environmental specialists that provide comprehensive environmental services throughout California at numerous harbor, bay, and	 Ability to help the City discern information gaps, documentation needs, permitting, and comprehensive considerations for plan success through our deep bench
USACE permits (s10 R&HA and 404 CWA) RWQCB CWA permits, and habitat	of multiprogram-literate professionals Ability to gather appropriate existing- conditions information for Noyo Harbor to support planning process If plan implementation requires restoration, ability to review and assess site suitability for restoration

Note:

^{*} Per the RFQ Response to Written Questions, the intent is that this item relates to aquaculture studies, not agricultural studies.

Budget and Schedule of Charges

Figure 2 lists Dudek's proposed lead personnel and their rates. **Figure 3** details Dudek's 2024 schedule of charges, which includes all personnel rates, travel costs, and other fees. **Figure 4** details GHD's schedule of charges.

Name and Role	Hourly Rate
Project Manager, Ann Sansevero, AICP	\$300
Coastal Planning Lead, Sarah Richmond, PG	\$210
Coastal Engineering Lead, Patrick Miskel, PE	\$260
Biological Resources Lead, Mike Henry, PhD	\$300
Aquaculture Lead, Matthew Valerio	\$300
Climate Change Lead, Rose Newberry, AICP, WEDG	\$210
Land Use Planning Lead, Carolyn Groves, AICP	\$185
Hydrology and Water Quality Lead, Jonathan Martin	\$265
Civil and Hydrological Engineering Lead, Josh Cato, PE, CFM	\$250
Structural Engineering Lead, Satish Chilka, PE (GHD)	\$320
Nature-Based Shoreline Design Lead, Brian Leslie (GHD)	\$290
Sea Level Rise Modeling Lead, Brett Vivyan, PE, QSD/P (GHD)	\$270
Mapping and Surveying Lead, Dustin Gaessner	\$220
Permitting Lead, Laurie Monarres	\$285
Hazardous Materials Lead, Glenna McMahon, PE	\$310
Environmental Planning Lead, Catherine Wade, PhD	\$210
Archaeological and Built Environment Studies Lead, Ryan Brady, RPA	\$210
Habitat Restoration Lead, Mike Sweesy, RLA, CERP	\$330
Community Engagement Lead, Jane Gray	\$285
Graphic Design Lead, Raoul Rañoa	\$175

Figure 3. Dudek Schedule of Charges

DUDEK 2024 Standard Schedule of Charges

Engineering Services		Hydrogeology/HazWaste Services	
Project Director	\$335.00/hr	Project Director	\$335.00/hr
Principal Engineer III		Principal Hydrogeologist/Engineer III	
Principal Engineer II		Principal Hydrogeologist/Engineer II	
Principal Engineer I		Principal Hydrogeologist/Engineer I	
Program Manager		Senior Hydrogeologist V/Engineer V	
Senior Project Manager		Senior Hydrogeologist IV/Engineer IV	
Project Manager		Senior Hydrogeologist III/Engineer III	
Senior Engineer III		Senior Hydrogeologist II/Engineer II	
Senior Engineer II		Senior Hydrogeologist I/Engineer I	
Senior Engineer I		Project Hydrogeologist V/Engineer V	
Project Engineer IV/Technician IV		Project Hydrogeologist IV/Engineer IV	
Project Engineer III/Technician III		Project Hydrogeologist III/Engineer III	
Project Engineer II/Technician II		Project Hydrogeologist II/Engineer II	
Project Engineer I/Technician I		Project Hydrogeologist I/Engineer I	
3D Production Manager		Hydrogeologist/Engineering Assistant	
Senior Designer II		HazMat Field Technician	\$125.00/h
Senior Designer I	\$195.00/hr		
Designer	\$185.00/hr	District Management & Operations	
Assistant Designer	\$180.00/hr	District General Manager	
CADD Operator III		District Engineer	
CADD Operator II		Operations Manager	\$165.00/hr
CADD Operator I		District Secretary/Accountant	\$140.00/hi
CADD Drafter		Collections System Manager	
CADD Technician		Grade V Operator	
Project Coordinator		Grade IV Operator	
Engineering Assistant		Grade III Operator	
Eligilieelilig Assistalit		Grade II Operator	
Environmental Services		Grade I Operator	
Senior Project Director	\$330.00/br	Operator in Training	
Project Director			
		Collection Maintenance Worker	\$75.00/111
Senior Specialist V		Creative Services	
Senior Specialist IV		Creative Services IV	\$165.00/br
Senior Specialist III		Creative Services III	
Senior Specialist II			
Senior Specialist I		Creative Services II	
Specialist V	\$195.00/hr	Creative Services I	\$120.00/hr
Specialist IV	\$185.00/hr	Publications Services	
Specialist III	\$175.00/hr		#40F 00 /b
Specialist II	\$165.00/hr	Technical Editor IV	
Specialist I		Technical Editor III	
Analyst V		Technical Editor II	
Analyst IV		Technical Editor I	
Analyst III		Publications Specialist IV	
Analyst II		Publications Specialist III	
Analyst I		Publications Specialist II	\$105.00/hr
		Publications Specialist I	\$95.00/hr
Technician III		Clerical Administration	\$90.00/hr
Technician II			, ,
Technician I	\$70.00/hr	Expert Witness - Court appearances, depositions, and inte	rrogatories as expert witness
Mapping and Surveying Services		will be billed at 2.00 times normal rates.	
Application Developer II	\$220.00 /b=	Emergency and Holidays - Minimum charge of two hours w	ill be billed at 1.75 times the
		normal rate. Material and Outside Services - Subcontractors, rental or	f enecial equipment enecial
Application Developer I		reproductions and blueprinting, outside data processing a	
GIS Analyst V		are charged at 1.15 times the direct cost.	
GIS Analyst IV		Travel Expenses – Mileage at current IRS allowable rates. P	er diem where overnight stay
GIS Analyst III		is involved is charged at cost	
GIS Analyst II	\$135.00/hr	Invoices, Late Charges – All fees will be billed to Client m payable upon receipt. Invoices are delinquent if not paid v	
GIS Analyst I		of the invoice. Client agrees to pay a monthly late charge e	gual to 1% per month of the
UAS Pilot		outstanding balance until paid in full.	
Survey Lead		Annual Increases - Unless identified otherwise, these standard	
Survey Manager		the CPI-U for the nearest urban area per the Department of Lab is being completed) or by 3% annually, whichever is higher.	or Statistics to where the work
Survey Crew Chief		is being completed) or by 5% annually, whichever is higher.	
Survey Rod Person		The rates listed above assume prevailing wage rates does	not apply. If this assumption
Survey Mapping Technician		is incorrect Dudek reserves the right to adjust its rates account	ordingly.
Construction Management Services			
Principal/Manager			
Senior Construction Manager	\$185.00/hr		
Senior Project Manager			
Construction Manager			
Project Manager			
Resident Engineer			
	\$170.00/hr		

DUDEK EFFECTIVE JANUARY 1, 2024

Scope of Work for Facilities Conditions Assessment

Task 1 - Project Initiation

Task 1.1 - Data Collection and Review

Available information provided by the Noyo Harbor District will be reviewed, including existing privately owned vs Noyo Harbor District owned facility locations, facility uses, property lines, available inspection reports, construction documents, etc. This information will be referenced in the following tasks. Data gaps will be noted, and all data will be tabulated and provided within the summary report

Deliverable: Tabulated known information and data gaps attached to summary report.

Task 1.2 - Field Work Preparation

In advance of field work, figures will be developed and hard copies made for reference in the field. Field note worksheets will also be developed and hard copies made. Coordination with Noyo Harbor District, private facility owners (as necessary), and rental boat operator [OPTIONAL TASK] will be performed.

Deliverable: None.

Task 1.3 - Kick-Off Meeting

In advance of field work, a Kick-Off Meeting will be performed with GHD, Dudek, City of Fort Bragg and Noyo Harbor District. This meeting will outline the intended scope of work and planned logistics for the field work. This meeting will be hosted by GHD as an online teams meeting.

Deliverable: Meeting presentation and minutes.

Task 2 - Facilities Condition Reconnaissance Field Work

Task 2.1 - Field Work

Two (2) GHD engineers will be on site for three (3) days, including one (1) day for travel and topside structure review and two (2) days for visual review from a boat. Engineers will review the existing conditions visually observable from accessible areas. Observations will include:

- Parcel Number
- Date, time, and tide level while at the facility
- Facility type
- Facility purpose
- Structural type (as applicable)



- Structural conditions (as applicable)
- Materials used
- Shoreline system (revetment, native slope, etc.)
- Erosion Susceptibility
- Presence of vegetation (eel grass, etc.)

General damage levels associated with likely remaining life of the overall facility will be identified, as discussed in the Green / Yellow / Red ratings above. Field notes and photographs will be taken at each site to document observed conditions.

Both engineers will be traveling by car from the San Francisco Bay Area and lodging and meals is to be provided as a reimbursable expense.

Deliverable: Field notes provided as attachment to the summary report.

Task 2.2 - Boat Rental [OPTIONAL]

At this time, it is unclear if the City or Noyo Harbor District can provide a small three-person johnboat (with or without a driver) for the above water inspection; therefore, GHD has assumed that a boat will need to be rented at a cost of \$2,500 per day. This cost is considered optional and will be removed if the City or Noyo Harbor District can provide a boat.

Deliverable: None

Task 3 - Findings Reporting

A summary report will be provided which describes general condition for each facility examined as well as Green/Yellow/Red rating. Each facility current use and ownership as well as any structural information will be tabulated. Tabulated data will be provided both in the electronic document as well as made available in electronic .xls format. Graphics of the determined ratings will be provided.

Deliverable: Draft and Final Summary Report.

Task 4 - Project Management and Quality Review

Task 4.1 - Project Management

The GHD project manager will be Brett Vivyan, PE. Mr. Vivyan will serve as the point of contact and budget/scope controller. Brett will perform planning, execution, monitoring, quality control, and reporting of the project. Mr. Vivyan will maintain ongoing communication throughout the project and will prepare a progress email for transmittal with the monthly invoice to track the status of budget expenditures, project status, upcoming work activities, decisions and actions taken, and key work activities completed during that billing period.



Deliverables: Schedule with defined tasks, invoices, and weekly updates.

Task 4.2 - Quality Assurance / Quality Control

Rod Iwashita, PE, will serve as the quality manager for the project and will review all deliverable documents. Mr. Iwashita has performed and managed many marine structure inspections throughout California and beyond. Mr. Patrick Miskel, PE of Dudek will oversee the task for Dudek to ensure that the report is appropriate to support the BEVRI plan.

Optional Add-on Scope

While not included in the scope provided above or fee provided below, the following additional tasks may be performed as part of this project or subsequent project(s) at the request of the City with additional scope and budget:

- At the discretion of the City and Noyo Harbor District, a workshop meeting to discuss findings and provide recommendations for future development can be performed. GHD has significant experience in the development of ports along the west coast for conventional (bulk, cargo, liquids, etc.) as well as for new developments in offshore wind and alternative fuels. GHD subject matter experts could provide valuable input to the Noyo Harbor District on likely alternative uses for the existing sites given the known conditions.
- Comprehensive above and/or underwater inspections can be performed by GHD on specific facilities as
 desired by the City and Noyo Harbor District.
- Inspection of nonstructural components such as mechanical, electrical, piping, or corrosion protection systems can be performed by GHD on specific facilities as desired by the City and Noyo Harbor District.
- Conceptual through final design structural design can be performed for future developments.

Optional add-on scope may be performed, as authorized by the City, based on a time and materials not to exceed basis using the rates set out in Attachment A.

Assumptions and Exceptions

As part of this project, the following assumptions and exceptions are made:

- No new geotechnical work will be performed
- No destructive inspection will be performed.
- Examination of mechanical, electrical, and piping systems are excluded from this facilities condition reconnaissance.
- No structural analysis will be performed and no structural capacity ratings will be provided.
- The City of Fort Bragg, Dudek and Noyo Harbor District will perform a single round of review and provide a single set of compiled comments for incorporation by GHD into the draft documents to make them final.



5

Schedule

The project schedule will be dependent on the date of Notice to Proceed (NTP) from the City of Fort Bragg and Noyo Harbor District as well as tide conditions. The facility condition reconnaissance is expected to take approximately one (1) week, with schedule of the reconnaissance to be determined within three (3) weeks of NTP. Draft summary report is to be issued four (4) weeks following completion of the inspections. Final summary report will be issued one (1) week following receipt of the compiled Noyo Harbor District review comments.

Fee

This project is proposed for a total fee of \$38,925 with the optional boat rental, as summarized in Table 1. Total fee excluding the optional boat rental is \$33,425. Additional scope beyond this proposed amount may be performed on a time and materials basis per the standard GHD rates. No additional work beyond this proposed scope will be performed without written approval from the City.

Table 1. Cost Estimate

Tasks	Cost Estimate
Task 1 - Project Initiation	\$4,530
Task 2 – Facilities Condition Reconnaissance Field Work (including boat rental)	\$18,610
Task 3 – Reporting	\$8,745
Task 4 - Project Management	\$7,040
Scope Cost Estimate Total	\$38,925

We greatly appreciate the opportunity to help the City of Fort Bragg, and Noyo Harbor District better understand the conditions of marine facilities within the Noyo Harbor District's jurisdiction. If you have any questions or comments please feel free to contact me directly at 831.226.9373 or asansevero@dudek.com.

Sincerely,

Ann Sansevero, AICP

Principal/Senior Project Manager

