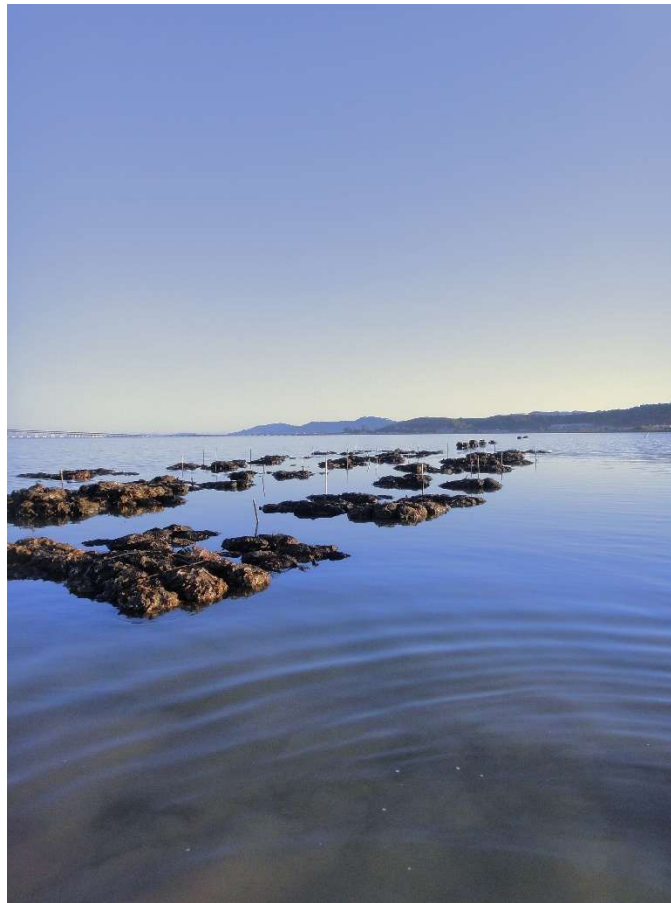


10/31/2025

REQUEST FOR PROPOSALS
PROFESSIONAL ENGINEERING AND ECOLOGICAL DESIGN SERVICES
FORTHE DESIGN OF LIVING SHORELINES AT THREE SITES ALONG THE MARIN
SHORE OF SAN FRANCISCO BAY
REGIONALLY ADVANCING LIVING SHORELINES PROJECT – MARIN SITES



MARIN AUDUBON SOCIETY in coordination with CA State Coastal Conservancy



REQUEST FOR PROPOSALS
REGIONALLY ADVANCING LIVING SHORELINES PROJECT – MARIN SITES

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1. INTRODUCTION

The Marin Audubon Society (MAS) together with the California State Coastal Conservancy (SCC) are seeking the services of a consultant firm or team to provide engineering and ecological design for three living shoreline projects along San Francisco Bay in Marin County. The designs will integrate a variety of nature-based adaptation approaches to Sea Level Rise (SLR) with locations at: Estuary & Ocean Science Center (EOS), Corte Madera Marsh Ecological Reserve and the San Rafael Living Shoreline Site Expansion. The services will conclude in the development to 60% design plans for the three sites.

These projects are part of a broader Regional Living Shoreline Project (RALS). The goal of the project is to plan and permit ten new nature-based adaptation projects in a collaborative, programmatic manner to increase efficiency, to serve as a model for other living shorelines projects, to build the body of practice for advancing design and construction of living shorelines, and to increase climate resilience and shoreline protection in San Francisco Bay.

The ten living shorelines sites will develop conceptual designs and carry them forward to 60%; to develop a basis of design report that is updated at each design benchmark; to provide an engineer's estimate of probable cost; and to work with MAS to quantify and describe impacts to jurisdictional features. The successful design teams will actively collaborate with two other regional RALS design teams: four East Bay sites led by Ducks Unlimited and three San Francisco projects led by the Golden Gate Bird Alliance.

2. REGIONALLY ADVANCING LIVING SHORELINES PROJECT

The goals of the RALS Project (Project) are to increase awareness about and participation in living shorelines project development, expand participation by local landowners and municipalities and others in developing living shorelines projects, increase the number and type of living shorelines in San Francisco Bay, and to build capacity to scale up living shoreline projects in ways that engage and benefit local communities by integrating nature-based shoreline enhancements. The current phase of the Project includes planning and permitting ten new living shoreline climate adaptation projects (living shoreline projects) in a collaborative, programmatic manner to increase efficiency and serve as a model for other living shorelines projects with intentional capacity-building and knowledge transfer integrated into all project aspects.

The Project includes four components, the fourth of which is the subject of this RFP: 1) monitor existing living shorelines pilot projects constructed between 2010-2024 to share best practices and inform design of future living shoreline projects, 2) develop Regional Design and Constructability Guidance for Living Shorelines in SF Bay, 3) prepare environmental compliance documentation and permit applications, and 4) prepare preliminary site designs for ten sites. The ten projects include three in Marin County, three on the San Francisco Peninsula, and four in the East Bay (the former being the subject of this RFP).

The RALS projects will improve shoreline habitat quality, increase resilience, increase local technical and community input, engagement, and awareness of living shoreline projects, and build capacity with local landowners and municipalities to develop new, innovative living shoreline projects.

3. PROJECT DESCRIPTION

Living shorelines projects will be designed to fit ecological, engineering, climate resilience, and landowner and community needs at three sites along the Marin County shoreline, as described below and depicted in Attachment A. Landowners and partners involved in these projects will also be included in the process. and include but are not limited to: MAS, State Coastal Conservancy (SCC), The Nature Conservancy (TNC), Estuary & Ocean Science Center (EOS), and California Department of Fish and Wildlife (CDFW). Other potential landowners will be identified by SCC prior to the start of design work.

Estuary & Ocean Science Center Living Shoreline

The campus has approximately one mile of shoreline on the central San Francisco Bay, a half mile of which is filled and armored, flanked on the north and south by natural pocket beaches and headlands. Development and analysis of conceptual design alternatives for nature-based restoration and climate adaptation of the armored shoreline was conducted by ESA in 2019-2020, and this information can be considered by the design consultant but does not constrain future design options. The study developed nature-based approaches to restore habitat, ecological function, natural erosion and sediment transport processes along the campus shore and improve adaptability to sea level rise. Opportunities, constraints and nature-based solutions were identified for the southern, central and northern sections of the site. This project is for design of the northern reaches of the site. The north reach “A” concept was for a Rocky Shoreline and Stabilized Field area. The concept was for a new ecologically enhanced rock revetment to stabilize the eroding shoreline, and the North Reach “B” concept is for a pocket gravel beach restoration and bay shoreline access. It would require removing an existing bulkhead, seawall and earthen fill.

Landowner: San Francisco State University (SFSU), potentially others that SCC and landowners will confirm prior to the start of design work.

Goal: Develop and incorporate living shorelines approaches for the north reach of the EOS Center to enhance subtidal, intertidal and supratidal habitats to increase shoreline resilience.

Expected Collaborators and Guiding Resources: SFSU, Smithsonian, Merkel & Associates pilot projects/monitoring in area, Regional Habitat Goals Recommendations (SF Bay Subtidal Habitat Goals, Baylands Goals Climate Update, Adaptation Atlas), San Francisco Estuary Institute

Corte Madera Ecological Preserve

A conceptual design for reducing wave erosion of the outer Muzzi Marsh shoreline at Corte Madera Ecological Reserve, owned by CDFG, was completed by Peter Baye, Roger Leventhal, Julie Beagle and Kathy Boyer in a Technical Memorandum for “New Life for Eroding Shorelines”, in September 2020. This information can be considered by the design consultant but does not constrain future design options. The conceptual design uses estuarine beach nourishment methods to reduce wave erosion of a salt marsh. Two federal and state-listed endangered wildlife species: the salt marsh harvest mouse (*Reithrodontomys raviventris raviventris*) and California Ridgway’s rail (*Rallus obsoletus obsoletus*) need to be considered in design. The study evaluated a way to reduce marsh scarp erosion and reduce marsh edge retreat rates by reducing direct exposure of the scarp to erosive wave energy. The proposed conceptual design itself is based in part on observed regional reference systems of marsh-fringing estuarine barrier beaches and their salt marsh platforms. The idea is to provide a local supply of coarse beach sediment (sand, fine gravel) for waves to rework, deposit, and retain persistent marsh-fringing estuarine beaches, where waves otherwise would directly attack salt marsh scarps.

Landowner: California Department of Fish and Wildlife, MAS, potentially other landowners that SCC and landowners will confirm prior to the start of design work.

Goal: Enhance subtidal, intertidal, and possibly and supratidal habitat to increase shoreline resilience.

Expected Collaborators and Guiding Resources: USACE shallow water sediment placement planning; SFEP Horizontal Levee planning for east entrance to Bay Bridge, San Francisco Estuary Institute technical assistance, Merkel & Associates pilot projects/monitoring in area, Regional Habitat Goals Recommendations (SF Bay Subtidal Habitat Goals, Baylands Goals Climate Update, Adaptation Atlas), New Life for Eroding Shorelines technical memoranda.

San Rafael Living Shoreline Site Expansion

The San Rafael Living Shorelines was installed in July-August 2012 in the north-central portion of San Francisco Bay. Information from this project can be considered by the design consultant but does not constrain future design options. This installation entailed placing Pacific oyster shell bag mounds and eelgrass plantings, alone or together, in plots deemed large enough (10 x 32 m) to measure both habitat provision and physical processes such as wave attenuation and sedimentation. This was the first living shorelines project in the shallow waters along a San Francisco Bay shoreline. It has a total footprint of about one acre, and piloted methods to inform scaling up to larger future projects along the bay’s shores. The experiment tested different settlement substrates for native oysters. Since then, a multi-institution and interdisciplinary team of scientists has worked collaboratively to design reefs and has monitored resulting changes in species and processes. Pilot-scale experimental approaches to establish native oysters and eelgrass have now occurred at multiple locations in San Francisco Bay.

Landowner: The Nature Conservancy, MAS, potentially other landowners that SCC and landowners will confirm prior to the start of design work.

Goal: Enhance subtidal, intertidal, and possibly and supratidal habitat to increase shoreline resilience.

Possible collaborators: Estuary & Ocean Science Center, San Francisco Estuary Institute, Merkel & Associates pilot projects/monitoring in area, Regional Habitat Goals Recommendations (SF Bay Subtidal Habitat Goals, Baylands Goals Climate Update, Adaptation Atlas).

4. EXISTING REGIONAL RECOMMENDATIONS AND SITE DATA

This Scope of Work is for three projects in Marin County. They will have the support of several additional data set to be provided by SCC and Ducks Unlimited. The Conservancy will provide the following reference documents and data for each site:

- **Baseline Site Data**
A digital elevation model (DEM) will be provided to the selected design team and will include site bathymetry (bottom depths and topography) and sidescan sonar data (substrate and habitat information) collected via boat, and orthorectified topographic data and aerial imagery collected by drone. Data collection efforts are currently underway July-October 2025 by Merkel & Associates, Inc., and Cinquinni and Passarino, Inc., directly contracted to the Conservancy.
- **Landowner Parcel Inventory** that SCC and landowners will confirm prior to the start of design work.
- **Wind Wave Data**
Wind wave modeling results will be provided, with wave heights, periods, and directions.
- **Regional Habitat Goals Recommendations** (SF Bay Subtidal Habitat Goals (SCC, 2010- 50-year conservation plan), Baylands Goals Climate Update (2015, climate update to original 2000 document), SFEI Adaptation Atlas (2018, focus on operational landscape units)
- **SF Bay Living Shoreline Design and Constructability Guidance (draft)**
Currently being developed by the Conservancy, SFEI, and many partners, the guidance is intended to be a high-level guidance document that will address the stages of living shoreline design, ecological and engineering considerations, best

practices, lessons learned, regulatory considerations, and include specific design considerations for ten living shoreline habitat approaches. This regional guidance is being prepared in parallel with the site design planning that is the focus of this RFP, and draft guidance documents will be provided for reference when they are available.

5. SCOPE OF WORK

The planning for design, materials, construction methods and equipment, and seasonal timing must take into account and accommodate compliance with all applicable laws and regulations. The selected design team is expected to work with MAS and SCC to avoid and minimize design impacts to jurisdictional habitats and species; to develop quantities, footprints, project descriptions, and other information upon request for SCC and DU to complete local, state, and federal permit applications and supporting documentation; and to complete California Environmental Quality Act and National Environmental Policy Act documentation; pathway to be determined.

The scope of work is outlined as a series of recommended tasks described below. The Consultant is encouraged to make modifications and recommendations based on their experience so that the services provided meet the design needs of this project. Assumptions pertaining to the level of effort or additional scope of work should be included in the proposal.

Task 1: Administration, Communication and Project Management.

This task includes technical and administrative services associated with project coordination and management, participation in meetings, project schedule, budget tracking, and communication, including web-ready content, photos and video, preparation of invoices, and other administrative matters. The design team shall assume the following meetings:

- (1) Site visit with the RALS – Marin Design Team, MAS, SCC, and landowners
- (15) Online monthly progress meetings throughout the project
- (3-4) ~Quarterly to bi-annual meetings with the other two regional design teams for SF and East Bay at major milestones of feasibility assessments, concept designs, and preliminary designs to share information and synergies, and avoid any major conflicts or discrepancies in design planning for the 10 RALS sites.

Task deliverables:

- Summary of meetings and calls in electronic format.

Task 2: Data Collection and Analysis

This task includes review of existing prior project/monitoring data, current site data, and regional goals information provided by the Conservancy and/or MAS and process that data as necessary for inclusion and consideration into the design work. If additional data

collection is necessary to support the design effort beyond that listed in Section 4 – Existing Data, the scope of data collection should be described in the proposal.

Task 3: Estuary & Ocean Science Center Living Shoreline

This task will be used to identify site opportunities and constraints, perform a feasibility assessment, and develop conceptual, 30%, and 60% designs. Designs will be developed with substantial input from MAS, SCC, landowners, related projects and expected collaborators, and other interested parties.

Task deliverables:

- Memorandum detailing existing conditions, opportunities, and constraints
- Memorandum detailing a feasibility assessment that includes engineering, ecological, and environmental compliance perspectives, and includes a ranking matrix with discussion to evaluate different options against design criteria that includes but is not limited to: physical and ecological conditions and opportunities, landowner processes and preferences, regulatory considerations, site access considerations, materials availability and sourcing, construction and equipment considerations, existing human uses, community input, and other factors.
- Draft and Final Basis of Design Memorandum and Maps, updated at concept and 30% design benchmark. The 30% level BOD Memorandum shall address temporary and permanent impacts, ecological and physical outcomes, material quantities and sourcing, construction and equipment approaches, and be accompanied by an Engineers Estimate of Probable Construction Cost.
- Draft and Final 60% Design Plans and Specifications

Task 4: Corte Madera Ecological Preserve

This task will be used to identify site opportunities and constraints, perform a feasibility assessment, and develop conceptual, 30%, and 60% designs. Designs will be developed with substantial input from MAS, SCC, landowners, related projects and expected collaborators, and other interested parties.

Task deliverables:

- Memorandum detailing existing conditions, opportunities, and constraints
- Memorandum detailing a feasibility assessment that includes engineering, ecological, and environmental compliance perspectives, and includes a ranking matrix with discussion to evaluate different options against design criteria that includes but is not limited to: physical and ecological conditions and opportunities, landowner processes and preferences, regulatory considerations, site access considerations, materials availability and sourcing, construction and equipment considerations, existing human uses, community input, and other factors.
- Draft and Final Basis of Design Memorandum and Maps, updated at concept and 30% design benchmarks. The 30% level BOD Memorandum shall address temporary and permanent impacts, ecological and physical outcomes, material

quantities and sourcing, construction and equipment approaches, and be accompanied by an Engineers Estimate of Probable Construction Cost.

- Draft and 60% Design Plans and Specifications

Task 5: San Rafael Living Shoreline Site Expansion

This task will be used to identify site opportunities and constraints, perform a feasibility assessment, and develop conceptual, 30%, and 60% designs. Designs will be developed with substantial input from MAS, SCC, landowners, related projects and expected collaborators, and other interested parties.

Task deliverables:

- Memorandum detailing existing conditions, opportunities, and constraints
- Memorandum detailing a feasibility assessment that includes engineering, ecological, and environmental compliance perspectives, and includes a ranking matrix with discussion to evaluate different options against design criteria that includes but is not limited to: physical and ecological conditions and opportunities, landowner processes and preferences, regulatory considerations, site access considerations, materials availability and sourcing, construction and equipment considerations, existing human uses, community input, and other factors.
- Draft and Final Basis of Design Memorandum and Maps, updated at concept and 30% design benchmarks. The 30% level BOD Memorandum shall address temporary and permanent impacts, ecological and physical outcomes, material quantities and sourcing, construction and equipment approaches, and be accompanied by an Engineers Estimate of Probable Construction Cost.
- Draft and Final 60% Design Plans and Specifications

Identify a Range of Adaptation Measures and project options for each site. Create a screening matrix for each of the three Marin sites, based on criteria and project objectives agreed upon by MAS, SCC, and other landowners. While developing adaptation measures consider the approaches being developed by the other two teams in the RALS program. Include any additional data collection and model refinement needed as well as costs.

Construction and restoration implementation, and post-construction monitoring, are not part of this RFP, but will be undertaken through future grants or contracts arranged by each landowner or manager in coordination with the Conservancy.

MAS prefers to hire one entity that may include a team of subcontractors who can accomplish all tasks in the Scope section above. MAS reserves the right to select either one, or components of multiple, firms/teams depending on the qualifications that best match each of the tasks associated with the project detailed in the scope of work below. SCC, MAS, and landowners may or may not work with the same entity on a future phase that includes final design planning and construction implementation. It is the intent to work with the same design team and add funds for a second phase, based on successful work in 60% design phase planning.

6. REQUIREMENTS

This section outlines the requirements that must be met by the consultant to be considered for the proposed contract, the schedule for consultant selection, and information on the required form and content of the submittal.

A. General requirements

1. Copies of Licensures, Registrations and Certifications. The consultant must hold current, valid and appropriate licensure, registrations and certifications and must include with its submittal copies of the following:
 - a. For each engineer, licensure as a Professional Engineer by the State of California
 - b. Registration to Do Business in California through Secretary of State Certification of Status is required if your company is a Corporation, Limited Liability Company (LLC) or Limited Partnership (LP). Required documents may be obtained at <http://kepler.sos.ca.gov>. Include one copy with the proposal.
2. The consultant shall furnish all necessary labor, facilities, equipment, and materials to perform the work. The consultant shall be available to meet with the MAS and other key stakeholders on a regular basis and shall keep the MAS advised of work progress.
3. If the submittal is by a consultant team, the project manager should be an employee of the lead consultant firm.
4. The consultant must guarantee that the Project Manager will be made available to the project for the duration of the project (unless individual leaves the firm).
5. The consultant will be paid for its actual time and expenses up to the amount provided for each task in the final project budget. The consultant should anticipate that five percent (5%) will be withheld, until all work is completed to the satisfaction of the MAS.
6. All contract deliverables shall be submitted in reproducible form in electronic version.

B. Required knowledge, skills, and experience

Responses to this RFP should provide sufficient information to enable the MAS to determine the degree to which the firm/team possess the following knowledge, skills and experience.

1. Marine construction engineering design experience, including installation, and physical and biological habitat restoration design, in terrestrial, shoreline, intertidal, and shallow and deep subtidal zones.
2. Experience with benthic and estuarine ecological impact analysis, terrestrial and aquatic environmental regulation and permitting (Federal Clean Water Act Section 404, Federal and State Endangered Species Acts, NOAA Fisheries Section 7 consultation relative to the Endangered Species Act, Essential Fish Habitat

consultation relative to the Magnuson Stevens Fishery Conservation and Management Act and Fish and Wildlife Conservation Act., McAteer-Petris Act and the San Francisco Bay Conservation and Development Commission's San Francisco Bay Plan, California Department of Fish and Wildlife listed species and habitat considerations, San Francisco Bay Regional Water Quality Control Board policies, California State Lands Commission policies, State and Federal Historic Preservation Act(s), the National Environmental Policy Act and the California Environmental Quality Act, and other regional and local jurisdiction environmental laws, regulations, and policies).

3. Experience with San Francisco Bay shoreline, intertidal, and subtidal habitat biology, habitat distributions, and shoreline, intertidal, and subtidal project planning and design, including with both 1) installation and removal/demolition of structures, and 2) habitat restoration design and monitoring, in these habitat types.
4. Experience with historical and archeological analysis.
5. Managerial experience and strong communication skills by the proposed project manager.
6. Collaborative project design experience and integrating feedback from multiple stakeholders.
7. General knowledge of the San Francisco Bay ecosystem and existing plans and policies pertaining to shoreline, intertidal, and subtidal restoration and enhancement in the Bay Area.

C. Other requirements

In addition to the skills and experience requirements outlined above, the following requirements apply:

1. Relationship of Project Manager to Lead Consultant Firm: If the submittal is by a consultant team, the project manager should be an employee of the lead consultant firm.
2. Commitment of Overall Project Manager: The consultant/lead consultant firm must intend that the project manager will be made available to the project for the duration of the project. A minimum availability requirement may be defined as part of the contract negotiations.
3. Project Office: The Project Manager and the lead firm's office for the project should be located in the San Francisco Bay Area.
4. Contract Negotiations: The MAS will enter into contract negotiations with chosen firm/consultant teams following the submittal of the proposal, statement of qualification/statement of approach and interviews. The chosen Consulting Firm will provide its contract form for review by MAS and SCC and use it for the project contracting.

7. PROPOSALS

The Consultant's proposals shall be succinct and include no more than 10 pages, with an attachment on staff expertise and relevant experience that is no more than 10 pages. This RFP provides an overview of the project and offers suggestions as to the project requirements. Consultants are urged to recommend any additional tasks necessary to complete these requirements.

The proposed living shoreline design approach(es) for each of the three Marin sites should be clearly articulated and should have a strong focus on integration of ecological habitat methods and ecological protection into the engineering design. The proposing consultant team should have experience with innovation in shoreline adaptation designs, willingness to incorporate new methods that better integrate intertidal and subtidal habitats into shoreline protection, and willingness to collaborate across sectors and agencies and share non-proprietary living shoreline design information. Information to be included in the submittal should include approach, team organization, schedule, estimated workload allocation, qualifications and personnel, resumes, and certifications. Please do include a cover sheet that identifies the team, but do not include any graphics, cover letter, section dividers, or colored fonts.

Proposals are due by **3:00 pm on 12/1/25** and mailed in both hard copy and provided electronically. Proposals can be mailed to Terri Thomas Consulting, 38 East Pier, Sausalito, CA 94965. Proposals should also be delivered via email in a PDF format to ttconsulting1328@gmail.com and Marilyn Latta marilyn.latta@scc.ca.gov. Please convert your document to a single PDF file that includes scope information and an attachment with personnel and relevant experience and a separate PDF that includes budget and rates information. Please email and send a hard copy of both PDF's.

The proposal must outline the Project's deliverables and the tasks required to complete it. The proposal and attachment shall be submitted in 8½" by 11" (or 11" by 17" format), clearly marked and appropriately affixed to one another. The written submittal must be printed double-sided on 8.5-inch by 11-inch pages, in Times New Roman or Tahoma Font, with a font size no smaller than 11 point. Larger pages (e.g., 11 inches by 17 inches) should be folded to fit into the 8.5-inch by 11-inch format. No pages larger than 11 inches by 17 inches should be included in the submittal.

A Statement of Probable Cost (or fee estimate) shall be affixed to the proposal as Schedule A. The fee estimate shall consist of an itemized matrix, which identifies the tasks necessary to complete the deliverables, proposed charge rates and materials needed, and number of hours estimated by team entity and member to complete the tasks. Associated costs for each task shall

be summed up to show the consultants' estimate of total cost to complete the work. The fee estimate shall be supplied in a separate, sealed envelope and PDF file and clearly labeled as such.

A conceptual work schedule shall also be included in a matrix form as Schedule B. Each task shall be identified by indicating draft and final deliverables and assumed start dates and completion dates (day/month/year). It is the intent of this RFP that the successful candidate begins working on this project upon being awarded.

MAS, SCC, and landowners will select a successful candidate on the basis of the following parameters weighted evenly: 1) qualifications and prior experience; 2) project approach and innovation; 3) demonstration of understanding of project goals and objectives; 4) demonstration of understanding of site conditions, nature-based engineering, ecological enhancement and protection, and design challenges; 5) schedule; and 6) cost. While cost is a parameter for scoring the proposals, proposals will be evaluated on the other parameters prior to opening the attached cost to remain unbiased. Short lists, interviews, and proposal presentations may or may not be used as a part of the selection criteria and shall be at MAS's discretion.

The proposals, along with statements of qualifications and performance data will be reviewed by representatives of the SCC and MAS. Further discussions with up to three firms/teams will be completed before ranking firms and seeking to negotiate a contract with the highest-ranked firm/team. The MAS anticipates that a decision on the best qualified consultant will be made by December 18, 2025.

All questions should be submitted by email to Terri Thomas at ttconsulting1328@gmail.com and Marilyn Latta at marilyn.latta@scc.ca.gov. Original questions and responses may or may not be provided to all candidates at our discretion. Consultants may choose to submit for more than one regional RFP. MAS, the Conservancy, and landowners may suggest modifications to the top candidate regarding team composition and/or approach.

The consultant will be hired under contract to MAS. MAS will attempt to negotiate a contract with the best qualified firm/team at compensation, which the SCC determines is fair and reasonable to the State of California. If MAS is unable to do so, negotiations with that firm/team will be terminated and negotiations will then proceed in the same manner with the other firms/teams on the list in order of ranking. If the MAS is unable to negotiate a satisfactory contract with any of the selected firms/teams, the MAS may select additional firms/teams and continue the negotiation process.

TIMELINE

The contract period for the planning and design will be 12 months (Jan 15, 2025- Jan 15, 2027).

Proposals are due by **3:00 pm** on **12/1/2025**.

10/31/2025

Reviews will be conducted by MAS, SCC, and landowners from Dec 1- Dec 18, 2025.

An information meeting will be held 11/12/25 10-11am.

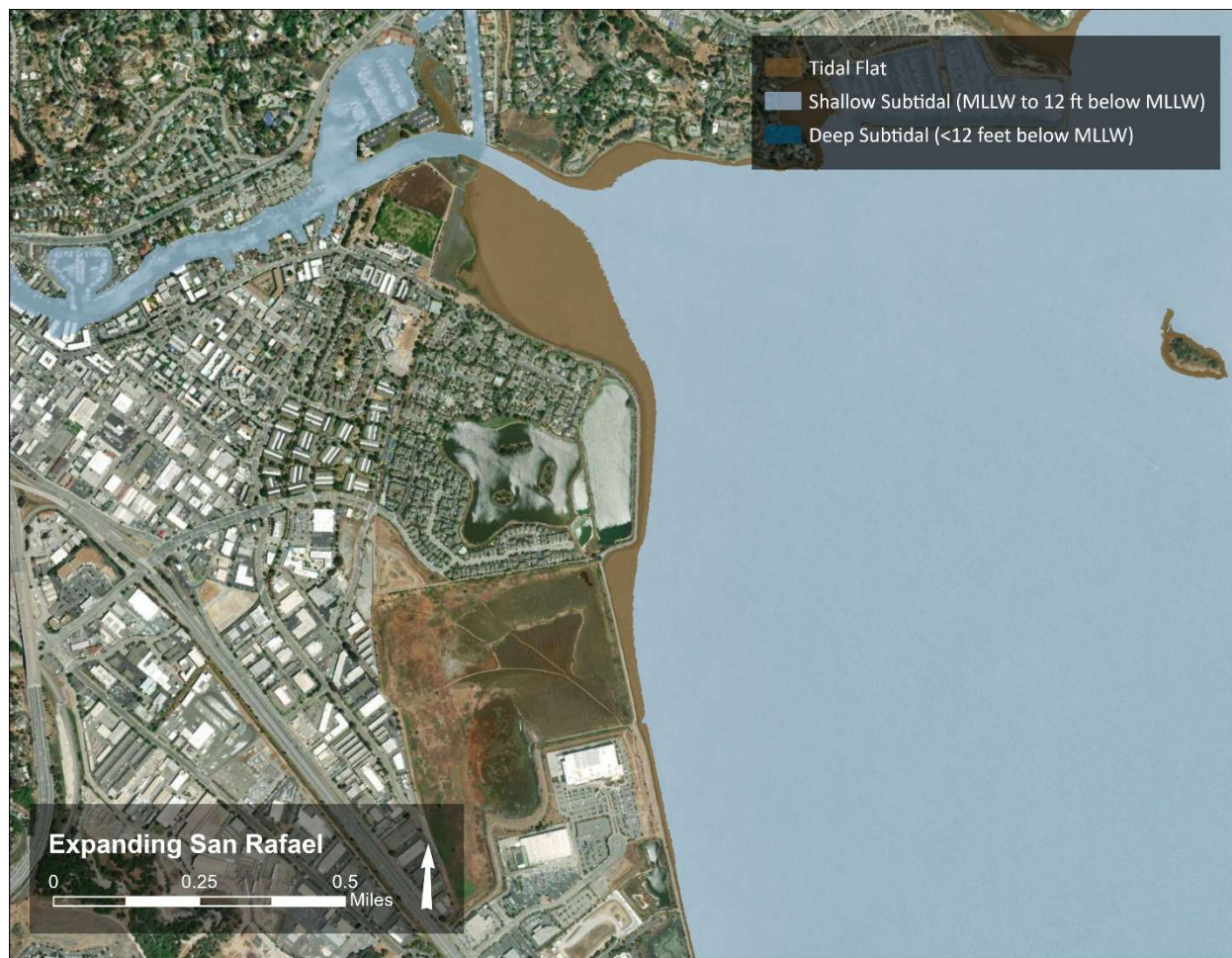
Interviews if needed will be scheduled 12/9/25.

Selection will be made by 12/18/25. Contract will be executed by 1/15/26. Design work will occur 1/15/26-1/15/27.

APPENDIX A:

Maps of RALS 10 Central Bay Project sites and three Marin sites below- note that the maps show general project areas for context, but specific project areas are to be confirmed by the hired design team after data review and confirmation with MAS, SCC, and landowners. Also note that the baseline data layer is the SFEI Baylands Habitat Map, and does not include intertidal and subtidal habitat data.





San Rafael living shorelines expansion- general area



Corte Madera Marsh Ecological Reserve and adjacent general intertidal and subtidal areas



Estuary & Ocean Science Center general area

APPENDIX B

REGIONALLY ADVANCING LIVING SHORELINES BACKGROUND

A key goal of the Regionally Advancing Living Shorelines Project in SF Bay is to plan and permit ten new living shoreline climate adaptation projects in a collaborative, programmatic manner to increase efficiency and serve as a model for other living shorelines projects in the region. Tremendous restoration opportunities exist in San Francisco Bay and the wetlands and other intertidal and shallow subtidal habitats at its edge, known as Baylands. Sea level rise and other climate impacts such as heat waves, atmospheric rivers, and storm induced erosion will dramatically transform the San Francisco Bay shorelines and nearshore habitats. Hard armoring has been the national and regional default approach and will be proposed in many locations and may be warranted in certain circumstances. At the same time, nature-based solutions, and combinations of gray green solutions are preferred for their habitat benefits and are key priorities for the Conservancy, landowners, regulatory agencies, conservation partners, and others. There is substantial and growing support for nature-based adaptation approaches by the California Natural Resources Agency and State Coastal Conservancy, San Francisco (SF) Bay Regional Water Quality Control Board, SF Bay Conservation and Development Commission, SF Bay Restoration Authority (SFBRA), SF Bay Joint Venture, and others. They are identified in several regional planning documents, including the San Francisco Bay Subtidal Habitat Goals Report (SCC 2010), Baylands Goals Climate Change Update Report (SCC 2015), San Francisco Bay Adaptation Atlas (SFEI 2018), CRNA Climate Adaptation Strategy, SF Bay Regional Board Basin Plan, BCDC Subregional Adaptation Plan Guidance, and other key policy documents in SF Bay and California. Nature-based adaptation planning efforts completed by these partners are important for setting policy direction, funding priorities, and institutional support and engagement. Beyond this, more detailed design guidance is needed on how to initiate and construct high quality living shoreline projects, which also recognizes and includes strong recommendations for local community input and engagement in co-creating designs and making sure projects consider locally specific species, habitats, community priorities, and landowner needs.

Regionally, climate risk assessments by many jurisdictions are in process or have generally been completed, but specific adaptation plans and guidance on effective and sustainable nature-based adaptation methods haven't been substantially developed. This project seeks to advance these gaps through technical-to-community regional engagement and workforce development, site-specific design planning, and new resources and design guidance to advance regional uptake, support, and involvement in living shoreline project development. This project includes implementation of living shorelines at ten locations around San Francisco Bay and each site will include a suite of nature-based habitat approaches specifically tailored to that site. The project leadership team and partners have identified ten multi-benefit habitat approaches that may be used alone or in combination, as follows:

1. Nearshore reef restoration
2. Eelgrass bed plantings
3. Shoreline vegetation plantings
4. Sand, gravel, cobble beach restoration
5. Woody debris, small scale sediment addition, high tide islands

6. Invasive species prevention and removal
7. Rocky intertidal/seaweed enhancements
8. Biologically enhanced rock slopes
9. Vertical green-grey living seawalls
10. Derelict piling and debris removal

This list is not all-inclusive and proposals for other nature-based habitat approaches are also encouraged where approaches are suitable.

Ten Living Shorelines Locations: The locations of the ten living shoreline projects are in three heavily urbanized reaches of the shoreline (San Francisco shoreline, Marin – Tiburon to San Rafael, and East Bay - Hayward to Richmond). The areas include a mix of both highly modified areas of anthropogenic fill and natural shoreline conditions including tidal marshes and mudflats, coarse grain sand and gravel beaches, and rocky intertidal areas that extend down into the submerged nearshore aquatic habitats, which include shellfish, eelgrass, seaweed, sand beds and other important fish and wildlife habitats. These shorelines are adjacent to underserved frontline communities that are currently impacted by coastal erosion, flooding, and storm events, and at high future risk from more severe flooding, sea level rise (SLR), and other coastal hazards.

Site Geography and Ownership: These sites occur on the lands of multiple landowning partners, including Port of San Francisco, Estuary & Ocean Science Center, Marin Audubon, The Nature Conservancy, California Department of Fish and Wildlife, East Bay Regional Park District, City of Richmond, City of Emeryville, City of Berkeley, and other landowners as determined by a parcel search that the Conservancy will conduct. The Conservancy will lead landowner coordination efforts along with respective non-profit leads for the three regional design RFP's, described below.

Non-profit partners build capacity by leading three design teams: The living shorelines designs will be developed by three design teams based on regional location and non-profit leadership as follows, San Francisco (three sites led by Golden Gate Bird Alliance; GGBA), Marin (three sites led by Marin Audubon Society; MAS), and East Bay (four sites led by Ducks Unlimited; DU).

Coordination, collaboration, and innovation: The Conservancy and RALS partners have developed a coalition-based approach with a focus on increasing knowledge transfer between agencies to increase the interest, uptake, and participation in developing and implementing living shorelines. The intent of the project approach is to build on past project best practices and lessons learned, integrate new ideas and information into living shorelines site designs, and widely share design concepts in order to get input from the Conservancy, landowners, and others. This approach takes more time and effort but is expected to result in improved partnerships and capacity-building, and shoreline adaptation that maximizes ecological enhancement and integration of green infrastructure that increased short- and long-term resilience.

Supplemental Terms and Conditions

This Agreement is, in part, funded by a state grant. The below listed supplemental terms and conditions are required by the funding agency, California State Coastal Conservancy (SCC), to be passed on by Golden Gate Bird Alliance to all contractors and subcontractors.

SCC GRANT REQUIREMENTS:

EARLY TERMINATION, SUSPENSION AND FAILURE TO PERFORM

Before the project is complete, MAS may terminate or suspend this contract for any reason by providing the contractor with seven days' notice in writing. In either case, the contractor shall immediately stop work under the contract and take all reasonable measures to prevent further costs to MAS. MAS shall be responsible for any reasonable and non-cancelable obligations incurred by the contractor in the performance of this contract prior to the date of the notice to terminate or suspend, but only up to the undisbursed balance of funding authorized in this contract. Any notice suspending work under this contract shall remain in effect until further written notice from MAS authorizes work to resume.

Before the project is complete, the contractor may terminate this contract for any reason by providing MAS with seven days' notice in writing and repaying to MAS all amounts disbursed by MAS under this contract. MAS may, at its sole discretion, consider extenuating circumstances and allow early termination without repayment for work partially completed.

The parties expressly agree to waive, release and relinquish the recovery of any consequential damages that may arise out of the termination or suspension of this contract under this section. The contractor shall include in any contract with any subcontractor retained for work under this contract a provision that entitles the contractor to suspend or terminate the contract with the subcontractor for any reason on written notice and on the same terms and conditions specified in this section.

INSPECTION

Throughout the term of this contract, MAS and/or SCC shall have the right to inspect the project area to ascertain compliance with this contract.

INDEMNIFICATION AND HOLD HARMLESS

The contractor shall be responsible for, indemnify and hold harmless MAS, SCC, its officers, agents, and employees from any and all liabilities, losses, claims, demands, damages, or costs, including, without limitation, litigation costs and attorney's fees, resulting from or arising out of the willful or negligent acts or omissions of the contractor, its officers, agents, contractors, subcontractors, and employees, or in any way connected with or incident to contractor's work under this contract, except for the active negligence or willful acts or omissions of the MAS, its officers, agents, or employees. The duty of the contractor to indemnify and hold harmless includes the duty to defend as provided in Civil Code section 2778. The contractor waives any and all rights to any type of express or implied indemnity or right of contribution from the State, its officers, agents, or employees, for any liability resulting from, growing out of, or in any way connected with or incident to the contractor's work under this contract. Nothing in this contract is intended to create in the public or in any member of it rights as a third-party beneficiary under this contract. The obligations in this "INDEMNIFICATION AND HOLD HARMLESS" section shall survive termination of this contract.

INSURANCE

Contractor shall procure and maintain insurance, as specified in this section, against claims for injuries to persons and damage to property that may arise from or in connection with any activities of contractor or its agents, representatives, employees, or subcontractors associated with the project undertaken pursuant to this contract. As an alternative, with the written approval of MAS, the contractor may satisfy the coverage requirement in whole or in part through: (a) its contractors' procurement and maintenance of insurance for work under this contract, if the coverage otherwise fully satisfies the requirements of this section; or (b) the contractor's participation in a "risk management" plan, self-insurance program or insurance pooling arrangement, or any combination of these, if consistent with the coverage required by this section. Any required errors and omissions liability insurance shall be maintained from the effective date through two calendar years after the completion date. The contractor shall maintain all other required insurance from the effective date through the completion date.

1. Minimum Scope of Insurance. Coverage shall be at least as broad as:

- a. Insurance Services Office ("ISO") Commercial General Liability coverage, occurrence basis (Form CG 00 01) or comparable.
- b. Automobile Liability coverage: ISO Form Number CA 0001, Code 1 (any auto).
- c. Workers' Compensation insurance as required by the Labor Code of the State of California.
- d. Course-of-construction (also known as "Builder's Risk") insurance covering all risks of loss. (Any proceeds of loss payable under this coverage shall be used to replace, rebuild or repair the damaged portions of the facilities and structures constructed under this contract.)

2. Minimum Limits of Insurance. The contractor shall maintain coverage limits no less than:

a. General Liability: (Including operations, products and completed operations, as applicable)	\$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the activities under this contract, or the general aggregate limit shall be twice the required occurrence limit.
b. Automobile Liability: c. Course of Construction: d. Watercraft Liability (for private vessel) coverage, if required under 1.d., above:	\$1,000,000 per accident for bodily injury and property damage. Completed value of the project with no coinsurance penalty provisions. In the following amounts: a. Vessels under 26 ft.: \$1,000,000 combined single limit.

	b. Vessels over 26 ft. or vessel involved in research: \$2,000,000 combined single limit.
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3. Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by the Executive Officer.

4. Required Provisions Concerning MAS and the State of California.

a. Each insurance policy required by this section shall be endorsed to state that coverage shall not be canceled by either party, except after thirty days' prior written notice by first class mail has been given to MAS; or in the event of cancellation of coverage due to nonpayment, after ten days' prior written notice to MAS. The contractor shall notify MAS within two days of receipt of notice that any required insurance policy will lapse or be cancelled. At least ten days before an insurance policy held by the contractor lapses or is cancelled, the contractor shall provide MAS with evidence of renewal or replacement of the policy.

b. The contractor hereby grants to the State of California, its officers, agents, employees, and volunteers, a waiver of any right to subrogation which any insurer of the contractor may acquire against the State of California, its officers, agents, employees, and volunteers, by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not the contractor has received a waiver of subrogation endorsement from the insurer.

c. The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

(i) The State of California, its officers, agents, employees, and volunteers are to be covered as additional insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the contractor; and with respect to liability arising out of work or operations, including completed operations, performed by or on behalf of the contractor including materials, parts or equipment furnished in connection with the work or operations.

(ii) For any claims related to this contract, the contractor's insurance coverage shall be primary insurance as respects the State of California, its officers, agents and employees, and not excess to any insurance or self-insurance of the State of California.

(iii) The limits of the additional insured coverage shall equal the limits of the named insured coverage regardless of whether the limits of the named insurance coverage exceed those limits required by this contract.

d. Coverage does not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

5. Acceptability of Insurers. Insurance shall be placed with insurers admitted to transact business in the State of California and having a current Best's rating of "B+:VII" or better or, in the alternative, acceptable to SCC and approved in writing by the SCC Executive Officer.

6. Verification of Coverage. The contractor shall furnish MAS with original certificates and amendatory endorsements, or copies of the applicable policy language, effecting coverage required by this clause. All certificates and endorsements are to be received and approved by MAS before work commences. MAS may require, at any time, complete, certified copies of all required insurance policies, including endorsements affecting the coverage.

7. Subcontractors. The contractor shall require each subcontractor to provide and maintain coverage consistent with the requirements of this section. To the extent generally available, contractor shall also require each professional subcontractor to provide and maintain Errors and Omissions Liability insurance appropriate to the subcontractor's profession and in a reasonable amount in light of the nature of the project with a minimum limit of liability of \$1,000,000

8. Premiums and Assessments. MAS and SCC are not responsible for premiums and assessments on any insurance policy.

AUDITS/ACCOUNTING/RECORDS

The contractor shall maintain financial accounts, documents, and records (collectively, "records") relating to this contract, in accordance with the guidelines of "Generally Accepted Accounting Principles" ("GAAP") published by the American Institute of Certified Public Accountants. The records shall include, without limitation, evidence sufficient to reflect properly the amount, receipt, deposit, and disbursement of all funds related to the implementation of the project, and the use, management, operation and maintenance of the real property. Time and effort reports are also required. The contractor shall maintain adequate supporting records in a manner that permits tracing from the request for disbursement forms to the accounting records and to the supporting documentation. Additionally, MAS or the State of California may review, obtain, and copy all records relating to performance of the contract. The contractor shall provide MAS or its agents with any relevant information requested and shall permit MAS or its agents access to the contractor's premises upon reasonable notice, during normal business hours, to interview employees and inspect and copy books, records, accounts, and other material that may be relevant to a matter under investigation for the purpose of determining compliance with this contract and any applicable laws and regulations. The contractor shall retain the required records for a minimum of three years following the later of final disbursement by MAS, and the final year to which the particular records pertain. The records shall be subject to examination and audit by MAS and the Bureau of State Audits during the retention periods. If the contractor retains any subcontractors to accomplish any of the work of this contract, the contractor shall first enter into a contract with each subcontractor requiring the subcontractor to meet the terms of this section and to make the terms applicable to all subcontractors. MAS may disallow all or part of the cost of any activity or action that it determines to be not in compliance with the requirements of this contract.

NONDISCRIMINATION

During the performance of this contract, the contractor and its subcontractors shall not unlawfully discriminate against, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, ethnic group identification, physical disability (including HIV and AIDS), mental disability, medical condition, genetic information, gender, gender identity, gender expression, marital status, age, sexual orientation, or military and veteran status (Government Code section 12940). The contractor and its subcontractors

also shall not unlawfully deny a request for or take unlawful action against any individual because of the exercise of rights related to family-care leave (Government Code sections 12945.1 and 12945.2). The contractor and its subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination, harassment and unlawful acts. Consistent with Government Code section 11135, the contractor shall ensure that no one, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, genetic information, or disability, is unlawfully denied full and equal access to the benefits of, or is unlawfully subjected to discrimination under, the work funded by SCC under this contract. Pursuant to Government Code section 12990, the contractor and its subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code section 12900 et seq.) and the applicable regulations (California Code of Regulations Title 2, section 7285.0 et seq.). The regulations of the Fair Employment and Housing Commission regarding Contractor Nondiscrimination and Compliance (Chapter 5 of Division 4 of Title 2 of the California Code of Regulations) are incorporated into this contract by this reference.

The contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other contract. This nondiscrimination clause shall be included in all subcontracts entered into to perform work provided for under this contract.

PREVAILING WAGE

Work done under this grant agreement may be subject to the prevailing wage and other related requirements of the California Labor Code, Division 2, Part 7, Chapter 1, sections 1720-1861. If required by law to do so, the grantee shall pay prevailing wage to all persons employed in the performance of any part of the project and otherwise comply with all associated requirements and obligations.

The Contractor is responsible for determining whether the project is subject to prevailing wage laws, and for complying with all labor laws applicable to the project. The Contractor may also review the SCC publication, Information on Current Status of Prevailing Wage Laws for State Coastal Conservancy Grantees (May 2018), available from SCC on request, which provides general information and is not legal advice to the Contractor on whether the project is subject to prevailing wage laws.