



# TOWN OF FAIRFAX

## STAFF REPORT

### October 7, 2015

**TO:** Mayor and Town Council

**FROM:** Michele Gardner, Town Clerk <sup>GT</sup>

**SUBJECT:** Appoint Councilmember Lacques to the MCCMC Policy Committee on Sea Level Rise

---

#### **RECOMMENDATION**

Appoint Councilmember Peter Lacques to the MCCMC Policy Committee on Sea Level Rise

#### **DISCUSSION**

The Marin Council of Mayors and Council Members (MCCMC) has created an ad-hoc Sea Level Rise policy committee, co-chaired by Stephanie Moulton-Peters and Claire McAuliffe, which has been meeting for several months. The MCCMC is now requesting each Marin town appoint a Council member to participate as a member of the committee, no later than October 15 (Attachment 1). The committee will meet regularly, either quarterly/semi-annually. Basically, it will be the policy body to guide the work being done county-wide around sea level rise, vulnerability, and adaptation.

Councilmember Lacques has previously expressed an interest in the appointment.

Details about the Committee and the County-wide work on sea level rise are contained in the Memorandum dated May 29, 2015 (Attachment 2).

#### **FISCAL IMPACT**

None

#### **ATTACHMENTS**

1. MCCMC request for Councilmember appointment
2. Memorandum dated May 29, 2015 with grant application

**From:** CLAIRE MCAULIFFE <mcauliffe229@gmail.com>  
**Date:** September 28, 2015 at 10:55:22 PM PDT  
**To:** Claire McAuliffe <mcauliffe229@gmail.com>  
**Subject:** MCCMC - Sea Level Rise committee

To MCCMC City Managers and Mayors - as most of you know, the County has obtained grant funding for a Sea Level Rise Vulnerability Assessment, now called the BayWAVE project . This is the product of significant effort on the part of the county staff, and cooperation between the County and the cities.

MCCMC has created an ad-hoc SLR committee which has been meeting for months and is grateful for the contributions of the members (listed below) who have joined us.

Given the coming next steps on the assessment, MCCMC is now asking that each city endorse the appointment of a City Council member to participate as a member of the MCCMC Policy Committee. Committee meetings will be likely be quarterly/semi-annually for that committee and more frequently for a sub-committee or executive committee whose members will be Supervisors Sears and Kinsey, and the MCCMC members selected at a recent meeting, Stephanie Moulton-Peters, Mill Valley, Eric Lucan, Novato, Claire McAuliffe, Belvedere. The Technical Committee will be County Staff and City Manager Jim McCann of Mill Valley as committee liaison to City Managers. Jim's excellent memo summarizing the current status is attached, along with the initial Grant Application outlining the initial scope.

County staff is preparing an updated Scope of Work and Schedule which will be released shortly. MCCMC believes it important that all cities participate in this common concern for us all. Thus, please could we have **confirmation of your appointments by October 15**, by email or letter from your Mayor or City Manager. You could just fill in the blanks below....

Thank you very much.  
Stephanie Moulton-Peters and Claire McAuliffe, co-chairs

Belvedere - Claire McAuliffe — appointed September 14, 2015  
Corte Madera - Diane Furst  
Larkspur - Kevin Haroff  
Mill Valley - Stephanie Moulton-Peters  
Novato - Eric Lucan  
San Rafael - Kate Colin  
Sausalito - Ray Withy  
Tiburon - Alice Fredericks

Fairfax \_\_\_\_\_  
Ross \_\_\_\_\_  
San Anselmo \_\_\_\_\_

MCL invites you: October 29 event on Sea Level Rise <http://www.marinconservationleague.org/events/calendar/mcl-meeting/mcl-water-and-watersheds-program-series-october-2015.html>.

**ATTACHMENT 1**



## Memorandum

To: MCCMC Sea Level Rise Assessment Sub-Committee  
From: Jim McCann, City Manager City of Mill Valley  
Subject: Sea Level Rise Vulnerability Assessment Project  
Date: May 29, 2015

### Background:

There is much going on in Marin County around the topic of sea level rise, vulnerability and adaptation. Work is occurring at many levels including: community and environmental interest groups, individual city/town governments, and the broader regional levels of the County Board of Supervisors (BOS) and the Marin County Council of Mayors and Councilmembers (MCCMC).

The MCCMC has formed a sub-committee focused on sea level rise and the BOS has also formed a working group to explore the topic. Recently, the County has received notice of award of a grant to supplement previously assigned County funds to undertake a comprehensive assessment of sea level rise vulnerability. In an effort to make best use of the funds allocated by the Board of Supervisors and the grant funds and to coordinate work and collaborate on this policy initiative, a consolidation of efforts has been proposed as described below.

### Discussion:

Supervisors Sears and Kinsey, who have been appointed by the BOS to the County's working group, will join the MCCMC sub-committee to serve as the combined Sea Level Rise Vulnerability Assessment Committee (this group will select its formal name as a part of its initial work). This Committee will be the policy body to guide the work being done county-wide around sea level rise vulnerability assessment. The Committee will meet regularly (to be determined by the group) to receive updates on the progress of the project, to review draft documents and provide direction. The Committee members will report to their respective City Councils and the Board of Supervisors on the key elements, progress, milestones, and direction of the study as it develops.

Jack Liebster, County Planning Manager, will be the principal staff person working on the project. Each city/town will assign appropriate staff to create a staff advisory committee to work with Jack to develop the scope of the project and then to implement the scope. Most agencies will likely assign senior members from their Public Works and/or Planning Departments to participate in the Advisory Committee.

An Executive Board will also be created from the Sea Level Rise Vulnerability Assessment Committee to meet regularly with Jack Liebster to provide policy, operations and administrative direction at key milestones. The Executive Committee will also meet with the larger Sea Level Rise Vulnerability Assessment Committee to inform this group of progress, upcoming events/milestones and decisions. The composition and ultimate charge of the Executive Committee must be determined. It is suggested that the Executive Committee include three Councilmembers from the MCCMC sub-committee, the two BOS members, the County Administrator and a City Manager. The Councilmembers will represent the geographic areas of Marin (northern, central, and southern Marin).



# GRANT APPLICATION FORM

---

*(Click in the shaded text fields to enter text, numbers and dates. The fields will expand to accommodate the data. Press the tab key to move between fields.)*

## **PART A: SUMMARY**

### **APPLICANT INFORMATION:**

Applicant name (organization): Marin County Community Development Agency

Address: 3501 Civic Center Drive, Room 308

Contact name: Jack Liebster, Planning Manager

Tel.: 415.473.4331

Fax: 415.499.7880

Email: [jliebster@marincounty.org](mailto:jliebster@marincounty.org)

Federal Tax ID# # 94-6000519

Position(s) whose incumbents are authorized to negotiate agreements and amendments:

Assistant Director or Planning Manager: Community Development Agency;

**PROJECT INFORMATION:**

Project name (limit 75 characters): **Marin Bay Waterfront Adaptation Vulnerability Evaluation** (formerly ADEPt)

Project location: City: Marin County bayfront area County: Marin  
Street: N/A Cross street: N/A

Proposed start date: 6/1/2015 Estimated completion: 6/30/2017

Acreage (if relevant): N/A

APN's (if an acquisition): N/A

Trail length (if relevant – miles or linear feet): N/A

Stream miles (if relevant – miles or linear feet): N/A

Latitude (e.g. 38.337094): 38.118478 to 37.832691 Longitude: (e.g. -122.589652): -122.496872 to -122.473526

What point is represented by the lat/longs (i.e., parking lot, center of site, etc): shoreline

**Elected Representatives for Project:**

Congressional District(s): www.house.gov

District number	Name
2 <sup>nd</sup> California	Cong. <u>Jared Huffman</u>

State Senate District(s): www.senate.ca.gov

District number	Name
2	Senator <u>Mike McGuire</u>

Assembly District(s): www.assembly.ca.gov

District number	Name
10	Assembly Member <u>Marc Levin</u>

## **PROJECT DESCRIPTION:**

### **1. Specific Need for the Project**

Marin County is second most at risk in the Bay Area for projected impacts from sea level rise (SLR), flooding and storms (Pacific Institute 2012). While Marin has only 4% of the Bay Area's population, it makes up 18% of the region's population at risk from storm, flood, and sea level rise, with potential losses of \$8.5 billion worth of buildings and contents on the bay shoreline and \$220 million along the ocean coast (Pacific Institute, 2012, 2009). Projected SLR also threatens serious impact to Marin's wetlands, creeks, beaches, other natural resources, and approximately 11 sq. miles of adjacent lands.

### **2. The project's goals and objectives;**

Our fundamental goal is to, as the Scouts say, "be prepared." To do this, we will develop a county-wide, multi-jurisdictional SLR vulnerability assessment and coordinate the various entities engaged in Climate and SLR planning and education. Our goals are to 1) to organize the breadth of SLR information for Marin and make it readily available to all., 2) achieve agreement on the data and modeling information to use 3) develop base level assessments as a solid foundation for adaptation planning, 4) develop a mutually desirable working framework for all governing bodies to participate in, 5) conduct community outreach to engage all sectors and populations in the planning dialogue, and 6) develop an early action program to implement actions targeted at essential facilities, near-term SLR impacts, and initial stages of development of longer-term green infrastructure adaptations.

### **3. Specific Tasks**

Task 1. Information, Models and Scenario Evaluation. Currently there are over twenty small projects related to SLR in Marin. We will develop a web-based means of coordinating information and findings for easy reference by all stakeholders. Building upon that, we will evaluate local, regional, state and federal data and models currently available to determine how best to use, combine and characterize a set of information that will have greatest possible acceptance and applicability and then prepare and vet workable planning scenarios. As described in Task 6, in this, and all the following tasks, we will seek to collaborate with other groups doing SLR planning and adaptation work to share information, test ideas, and where possible, divide labor to work more efficiently.

Task 2. Assessments. Conduct an Exposure Assessment and a Sensitivity Assessment for all of Marin County's Bay shoreline. Follow best practices from other efforts across the state, including our own leading-edge work in the C-SMART project for Marin's ocean coast. Assessments will map areas that are expected to experience temporary flooding as well as permanent inundation at representative water levels and time frames in the future. As suggested by climate psychology research, and using the creativity and innovation of our highly engaged community, we will explore the full range and wide variety of innovative adaptation approaches, and begin visioning workable adaptation strategies to provide the broad community confidence that suitable responses can be found (see Task 5).

Task 3. Multi-Jurisdictional Planning Framework. Continue our process of engaging elected officials and management staff from the twelve local governments and various special districts toward development of a durable, yet flexible collaborative planning framework. The specific structure will purposefully be shaped by the leaders of the cities, County and agencies in a systematic, deliberative process to maximize enduring cohesion and effectiveness of the leadership structure. Examples of recent successful collaborations that provide models to draw from include Marin Clean Energy, which has become the model for CCA's in the State, Marin Climate Energy Partnership, which leverages all local governments and public utilities in Marin for coordinated climate mitigation projects, and the Marin County Council of Mayors and Councilmembers, which works cross-jurisdictionally to solve problems such as homelessness and pension reform. We will provide staff to work hand-in-hand with partner cities to support mapping and other technical tasks, and to conduct local public outreach.

Task 4. Public, Stakeholder and Agency Engagement. Develop and implement a long-range public engagement strategy to meaningfully involve residents and decision-makers in a sustained effort to understand SLR impacts, reduce and avoid risks, and knowledgeably evaluate alternative strategies, including innovations such as horizontal levees, managed retreat, and restored wetlands. Existing engagement efforts with minority and underserved communities and the groups working with them, such as Marin Grassroots and Shore Up Marin, will be expanded. The work will build upon and strategically integrate existing public education activities (funded by other sources) in the County and several cities. These include the innovative Marin OWL Project, which will field test an interactive new tool that uses high-tech visualizations of future SLR to galvanize public consciousness of climate disruption; and the Youth Engaging in Sea-level-rise Science (YESS) project which is developing educational curriculum and involvement strategies for high school students, with a particular emphasis of placing young people from low income areas and communities of color that are particularly susceptible to SLR in project leadership positions. Resources are also allocated for facilitation of leadership, technical and stakeholder meetings by providers such as the Center for Collaborative Policy to assure the greatest return on time invested by project participants and efficient progress in decision-making.

Task 5. Early Action Implementation Program. Develop a series of implementation actions targeted at essential facilities, near-term SLR impacts, and the initial stages of developing longer-term green infrastructure adaptations. Prepare a strategy and timeline to conduct detailed analysis of cross-jurisdictional assets and vulnerabilities identified during initial vulnerability assessment. Identify how results of the BayWAVE project could be integrated into updates of Local Hazard Mitigation Plans, General Plans and Climate Action/Adaptation Plans. Implement arrangements for avoiding and responding to early manifestations of SLR, such as flooding of roads and structures during high tides, strengthening emergency response and providing information on sea level rise-proofing. Conduct initial implementation of Bothin Marsh "Natural Levee" project to demonstrate how local dredging sediments may be beneficially re-used to avoid disposal costs while creating a "green infrastructure" adaptation alternative. Leveraging other funding sources and taking advantage of the rich level of data available for this area, this task will provide information at a preliminary engineering design level to better understand the feasibility of the horizontal levee concept. The separately-funded Richardson Bay Shoreline Study will provide alignments and cost data for more traditional engineering solutions to flooding, providing comparisons that can help focus future adaptation planning. To further prepare for the next steps of adaptation planning and implementation, a preliminary assessment of adaptive capacities, potential impacts and consequences, and the risk onset profile of the entire study area will be prepared and presented to stakeholders, the public, involved agencies, and decision-makers.

Task 6. Collaboration with Other Programs. As a basis to increase information sharing, reduce unnecessary duplication and potentially gain efficiencies through well-planned divisions of labor among all those working on SLR response, we will update our inventory of all completed and ongoing SLR activities and information in Marin, and tap into information about the work of others in the Bay Area and elsewhere similar including BCDC, ABAG, San Mateo, San Francisco, Alameda/Contra Costa Counties, the San Francisquito Creek JPA, Santa Clara Valley, Vallejo, Benicia and other programs statewide through the Coastal Adaptation Network we helped create in conjunction with the Center for Ocean Solutions and Coastal commission.

#### **4. Work Products and Deliverables**

A report will be prepared at the completion of each task detailing the results of the work accomplished, as listed in the SCHEDULE section below, with a final report summarizing the key findings, recommending next steps, and detailing lessons learned for use by other SLR programs.

## FUNDING REQUEST:

Funding amount requested from Conservancy: \$250,000

Month and Year Conservancy funding needed: May 2015

### Other Funding Sources (not including in-kind services):

Source of funds	Amount (\$)	Estimated commitment date
County of Marin	250,000	committed
County of Marin	135,000	July 1, 2015
Whale Tail Grant	28,900	committed
Ocean Protection Council (Prelim Adapt. Responses)	7,200	committed
North Bay Watershed Assoc. (Bothin Marsh)	25,000	committed
County of Marin Watershed Program (Richardson Bay Shoreline Study)	75,000	committed

**Total Project Cost: \$ 771,100**

### In-kind Services

*In-kind services or contributions include volunteer time and materials, bargain sales, and land donations. Please describe and estimate value, and differentiate between expected in-kind contributions and contributions (work or other types of contributions) already obtained/completed.*

\$200,000: A conservative estimate of the time value that will be invested in the project by members of stakeholder groups, elected official, local government staff, students, teachers and business professionals.

## PROJECT GRAPHICS

See application guidelines for instructions.



## PART B: BUDGET, TIMELINE, AND ADDITIONAL QUESTIONS

### PRELIMINARY BUDGET:

*In the budget matrix below, list the major tasks of the proposed project, the estimated cost of the task, and the funding sources (applicant, Conservancy, and other) for the task. The listed tasks should correlate with the tasks described in the Project Description and listed on the Schedule.*

<b>Task Number</b>	<b>Task</b>	<b>Applicant's Funding</b>	<b>Coastal Conservancy</b>	<b>Other Funds</b>	<b>Total Cost</b>
1	Model and Scenario Vetting	10,000	20,000		<b>\$30,000</b>
2	Assessments	170,000	50,000	7,200	<b>\$227,200</b>
3	Governance.	30,000	30,000		<b>\$60,000</b>
4	Public, Stakeholder, Agency Engagement	75,000	50,000	28,900	<b>\$153,900</b>
5	Early Action Implementation Program	100,000	85,000	100,000	<b>\$285,000</b>
6	Collaboration with Other Programs	-	15,000		<b>\$15,000</b>
<b>TOTAL</b>		<b>\$385,000</b>	<b>\$250,000</b>	<b>\$136,100</b>	<b>\$771.1</b>

## SCHEDULE:

*List the project tasks and all significant project milestones related (for example, California Environmental Quality Act compliance, obtaining of permits, appraisal preparation and other land acquisition documents, commencement of construction, and project completion). For each item provide the expected completion date and any factors that could influence the timely implementation of the project.*

<b>Task and Deliverables</b>	<b>Expected Completion Date</b>
Task 1 Report. Organized compilation of existing Marin SLR information. Recommendation on modelling and scenarios.	10/30/2015
Task 2 Report. Completed Exposure and Sensitivity Assessments. Roster of potential adaptation strategies.	8/31/2016
Task 3 Report. Operating multi-jurisdictional project decision-making Organization.	9/30/2015
Task 4 Report. Effective, Comprehensive, Stakeholder, General Public, and Agency engagement program.	ongoing
Task 5 Report. Recommendations for implementing initial adaptation strategies for near-term SLR impacts and essential facilities at risk. Preliminary designs and cost estimates for a demonstration horizontal levee at Bothin Marsh.	4/28/2017
Task 6 Report. Summary of information and strategies developed in conjunction with and shared among other SLR program.	4/28/2017

## **ADDITIONAL QUESTIONS:**

*Questions 1-7 should be answered by all applicants. For each question, limit your answer to a half page, with one concise paragraph preferred. See grant application instructions for more information.*

- 1. *Project and Applicant History:*** *Provide a history of the project, and any background information not provided in the project description. Is the project related to any previous or proposed Coastal Conservancy projects? If so, which ones and how are they related?*

The Marin County Community Development Agency is well underway with Sea Level Rise (SLR) planning efforts through Collaboration: Sea-level Marin Adaptation Response Team (C-SMART), supported in part by grants from the California Coastal Commission and the Ocean Protection Council, to assess vulnerability and identify potential adaptation strategies for Marin's Pacific Coastal communities. Building upon C-SMART's established framework and local support, BayWAVE intends to expand SLR planning efforts to the Bayside, integrating best available science and stakeholder participation to develop near-term solutions while evaluating long-term green infrastructure options with multiple public benefits including flood protection, habitat, and recreation.

BayWAVE will promote the Coastal Conservancy's efforts to protect coastal and marine habitats, urban waterfronts, coastal watersheds and educational programs of the San Francisco Bay, and directly supports numerous 2013-2018 Coastal Conservancy Strategic Plan goals, including:

- 3) Revitalize coastal and inland waterfronts that provide significant public benefits and promote sustainable economic development.
- 4) Protect significant coastal resource properties, including cropland, rangeland and forests.
- 5) Enhance biological diversity; improve water quality, habitat, and other natural resources within coastal watersheds.
- 7) Enhance the resiliency of coastal communities and ecosystems to the impacts of climate change.
- 9) Expand environmental education efforts to improve public understanding, use and stewardship of coastal resources.
- 11) Protect and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open space resources of regional importance in the Bay Area.
- 12) Improve public access, recreation, and educational facilities and programs in and around San Francisco Bay, along the coast, the ridgelines, in urban open spaces, and natural area.

- 2. *Site Description:*** *Describe the project site or area, including site characteristics that are tied to your project objectives (i.e.: for acquisition of habitat, describe current vegetation assemblages, condition of habitats, known wildlife migration corridors, etc.). When relevant, include ownership and management information*

Sea level rise threatens Marin's wetlands, creeks, beaches, and other natural resources. Many of Marin's communities are built on or near former wetlands that have been diked and filled, and are subject to periodic flooding that will only worsen with sea level rise. The Coyote Creek - Bothin Marsh tidal wetlands complex is an ideal pilot project location because the benefits of both marsh enhancement and flood attenuation at this site are easy to monitor and highly visible to the public. In the 1960s, an Army Corps flood control project channelized

Coyote Creek and leveed it off from the marsh and the Almonte-Miller Avenue roadway effectively cut off the sediment supply from the steep hills immediately adjacent to the marsh. The result is a marsh without an effective terrestrial sediment supply to maintain the high marsh elevations. This problem will become more and more acute as sea levels rise and the high marsh and high tide refuge areas drown out.

The characteristics of the Coyote Creek – Bothin Marsh site described above are representative of many potential project sites in Marin County; the site exists on the boundary between developed areas and the Bay, where infrastructure has historically interfered with natural processes that provide flood protection benefits. The Bay WAVE Scenarios included in Question 11 show other areas of Marin County that will be impacted by sea level rise, and that may be determined through the Countywide Vulnerability Assessment as priority areas for adaptation.

3. **Consistency with Plans:** *Describe how the project is supported by, consistent with, or in conflict with any applicable local or regional plans, such as Local Coastal Plans, San Francisco Bay Plan, general plans, county or regional trail plans, specific area plans, regional conservation plans, climate action plans, the 2009 California Climate Adaptation Strategy, Habitat Conservation Plans/Natural Community Conservation Plans, watershed management plans, Integrated Regional Water Management Plans, etc. Identify the pertinent plan(s) and the date adopted by the applicable local/regional entity.*

The project is supported by the following general plans and climate action plans that contain resiliency and adaptation policies and programs to address impacts from coastal inundation caused by sea level rise: The Climate Action Plans of the County of Marin (draft 2014), cities of Belvedere (2011), Fairfax (2014), Mill Valley (2013), Novato (2009), San Anselmo (2011), San Rafael (2009), and Tiburon (2011); and the Marin Countywide Plan (2007), and Belvedere, Mill Valley and San Rafael General Plans (2010, 2013, and 2013). The project will be consistent with the Bay Area Integrated Regional Water Management Plan (2013) and the North Bay Watershed Stewardship Plan (2005). In addition, the project is in conjunction with the Marin County Flood Control and Water Conservation District and adheres to the Marin County Local Coastal Program Plan (draft 2014). Finally, the project will be consistent with the Local Hazard Mitigation Plans for all jurisdictions in Marin County, which will be updated during this process in 2016. This project is not in conflict with any local or regional plans to the best of our knowledge.

4. **Support:** *What public agencies, non-profit organizations, elected officials, and other entities and individuals support the project and why?*

Please see letters of support. The myriad supporters include Congressman Jared Huffman, Senator Mike McGuire, Assemblyman Marc Levine, all the cities and towns covered in the grant, BCDC, the Marin County Council of Mayors and Council Members, Marin Climate

Energy Partnership, Marin Conservation League, the Joint Policy Committee, Sustainable Marin, Community Marin among others.

5. **Regional Significance:** *Describe the regional significance of the project with respect to recreation (regional trails and parks, staging areas, environmental education facilities, etc.) and natural resources (including listed species, identified high priority habitat, wildlife corridors, watersheds, and agricultural soils). Who will benefit from the project? Will it serve a greater than local need?*

The BayWAVE Project holds vast regional significance as (1) an effort to preserve natural and recreational assets Bay Area Residents enjoy and depend on in the region, (2) a “gateway” to the Marin Coast and Sonoma County, and (3) as a leading example of and resource for collaborative cross-silo sea level rise planning.

Natural, recreational, and cultural assets in the bay side of Marin County that will be impacted include: China Camp State Park, San Rafael Canals, Larkspur Landing and Canals, Bothin Marsh Preserve, Tiburon Uplands Nature Preserve, Marin Island Wildlife refuge, Santa Venetia Marsh Preserve, McInnis County Park, and Petaluma Marsh Wildlife Preservation. These local and regional resources host over one hundred different passive and active use trails used for hiking, bird watching, biking, and other non-motorized movement. These trails are complimented by water resources for boating, paddle boarding, kayaking, and as in the case of Larkspur, regional travel and commuting. These assets attract local, regional, and far-traveling visitors. China Camp State Park is also a historic resource that tells the story of Chinese immigrants and their shrimping operations. The Santa Venetia area hosts cultural assets, including the Marsh Preserve, and the UNESCO nominated County Offices and Civic Center (including Wednesday architecture tours with an international draw), and a twice weekly farmer’s market that serves a large region of farmer’s and food processers, and serves a largest number of employees that commute from up to 2 hours away. As gateway to the Marin’s coastal asset, the bayside at Manzanita and State Route 1 is a critical access point that is already inundated during high tides and storms. As the ocean’s rise, critical measures will need to occur to maintain access. These measures will require a region and states worth of collaborators. This access point conveys millions of cars and bicycles making their way to Muir Woods, Stinson Beach, Point Reyes National Seashore, oyster-shucking destinations, or to simple enjoy the Richardson Bay and Bothin Marsh. Finally, Marin County, as lead convener, has developed an extensive statewide and bi-coastal network of professionals working to address sea level rise through planning and public works efforts. These networks include several county level technical advisory committees including state, county, and local experts across the variety of assets in the coastal and bay areas, Coastal Adaptation Network list-serve, and several informal relationships.

6. ***Need for Conservancy Funds:*** *What would happen to the project if no funds were available from the Conservancy? What project opportunities or benefits could be lost and why if the project is not implemented in the near future?*

The Conservancy is a statewide leader in helping local governments address the problem of sea level rise. For Marin County, as with other areas of the Bay and Coast, the funding being provided by the Conservancy is the catalyst for a chain reaction that brings vastly greater resources to the work on the problem. Simply the process of seeking support among Marin's cities for this Climate Ready grant application has raised the awareness of the issue, and the need for collaboration in tackling it. If funds were not granted by the Conservancy, the planned work would need to be significantly scaled back, the momentum that has been gained could dissipate, and more seriously, many decision-makers might come to feel that if the State does not put a priority on sea level rise in Marin, perhaps neither should local governments.

7. ***Compliance with CEQA:*** *Projects funded by the Coastal Conservancy must be reviewed subject to the California Environmental Quality Act ("CEQA"). CEQA does not apply to projects that will not have either a direct or indirect effect on the environment. For all other projects, if the project is statutorily or categorically exempt under CEQA, no further review is necessary. If the proposed project is not exempt, it must be evaluated by a public agency that is issuing a permit, providing funding, or approving the project, to determine whether the activities may have a significant effect on the environment. The evaluation results in a "Negative Declaration," "Mitigated Negative Declaration," or "Environmental Impact Report."*

*If the proposed project qualifies for a CEQA exemption, please specify which exemption and why it qualifies. If the project does not qualify for a CEQA exemption, specify who will be the "lead agency" under CEQA, the status of preparing the environmental review document, and your views as to which type of document would be required for the project. Please note that the Conservancy will need to review and approve any CEQA document. For more information on CEQA, visit: [http://ceres.ca.gov/topic/env\\_law/ceqa/flowchart/index.html](http://ceres.ca.gov/topic/env_law/ceqa/flowchart/index.html).*

This project is statutorily exempt under CEQA Guidelines Section 15262 Feasibility and Planning Studies.

8. ***California Conservation Corps:*** *Applicants proposing construction projects are urged to consider using the California Conservation Corps. If your project involves construction, please indicate whether you have contacted the Corps regarding your project and the results of that contact.*

The California Conservation Corps will be invited to participate in the project, potentially as outreach ambassadors to low income and minority youth as part of the educational program,

including the separately funded Youth Exploring Sea-level rise Science (YESS) project. The Corps will also be identified in the Richardson Bay feasibility study as potential partners for implementing wetland enhancement and habitat restoration.

9. **Willing Seller:** *Projects that involve acquisition of property **must** involve a willing seller. If your project includes property acquisition, please describe the status and expected conclusion of landowner negotiations.*

N/A

10. **Management and Monitoring:** *For projects involving restoration, construction or land acquisition, describe your management and monitoring plans? Who will be responsible for funding and implementing ongoing management and monitoring? Please describe your plans for compiling baseline data, undertaking future monitoring and implementing adaptive management strategies if necessary.*

N/A, however identifying a strategic monitoring program to be implemented to measure future sea level rise and other signs of climate disruption is a priority for the project.

11. **Sea Level Rise Vulnerability:** *If the project involves a site that is close to a shoreline (i.e. potentially flooded or eroded due to climate change), please identify vulnerabilities of the site in relation to flooding, erosion, and sea level rise/storm surges for the years 2050 and 2100 (assume 16 inches and 55 inches of sea level rise respectively). For reference, see the State of California's Sea Level Rise Task Force Interim Guidance Document. Describe any adaptive management approaches you have considered for addressing Sea Level Rise. What is the expected lifespan or duration of the project?*

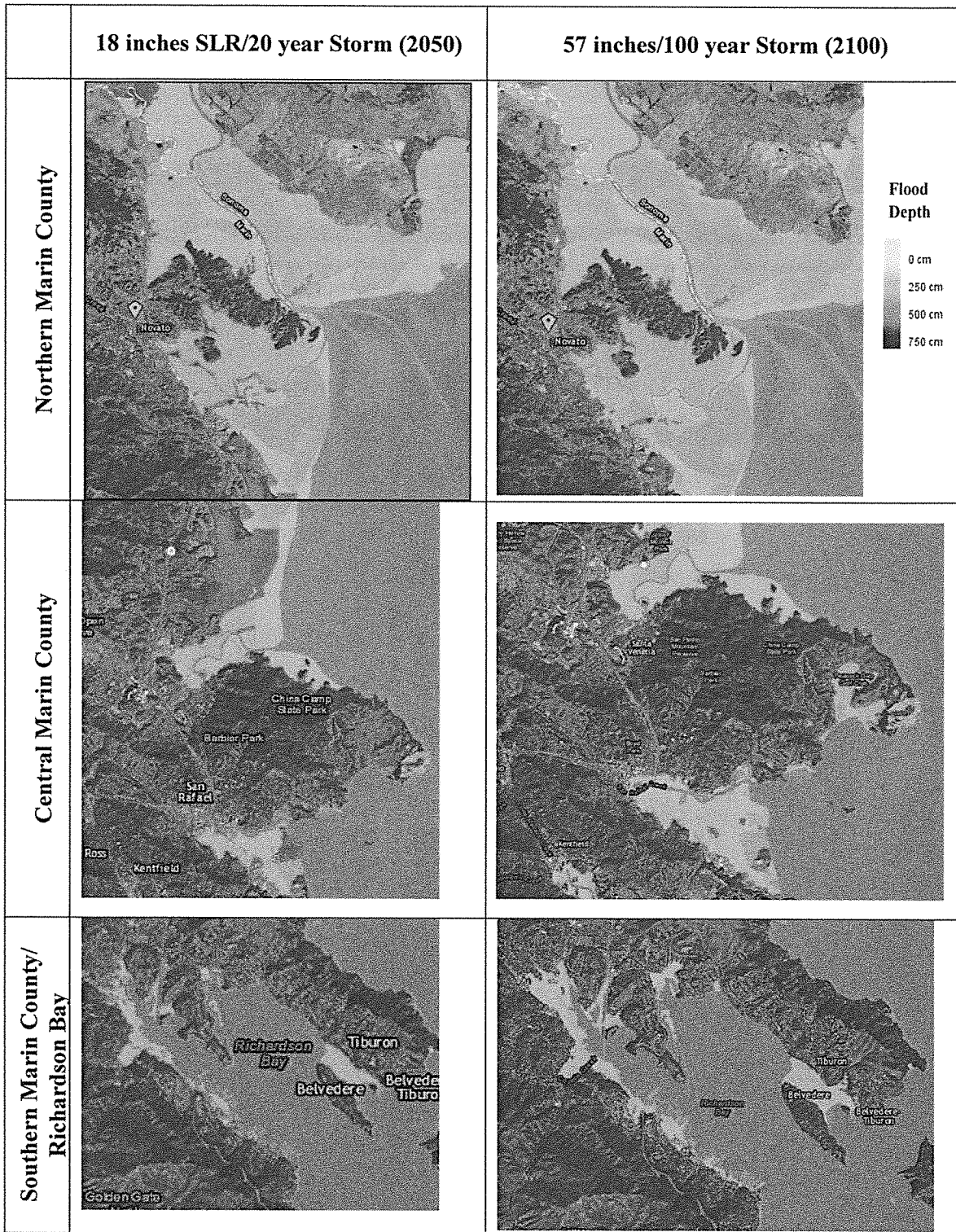
Figure below depict Marin's bayside exposed to 18 inches SLR/20 year Storm (2050), and 57 inches SLR/100 year Storm (2100), utilizing the Our Coast Our Future model. As illustrated, many of Marin's low-lying population centers and ecological areas could be vulnerable to temporary/permanent flooding, erosion, wave surge and other impacts. As discussed previously, 18% of the Bay Area's susceptible population and \$8.5 billion of property/possessions lie within the area; assets including homes, businesses, transportation networks, civic facilities, wetlands, recreational trails, parklands, historical sites, and more. A key objective of BayWAVE is to set a framework which crosses jurisdictional boundaries and collaborates with other state and regional efforts to ensure a community driven effort for protection of critical assets and prioritization of preparedness efforts. Climate change planning yields a whole new set of issues and considerations, and institutional changes are necessary to break down "silos" in various government and stakeholder sectors to tackle this problem most effectively. A sustainable system would have the inherent capacity for long-

term adaptive management through an established communication network of affected persons and topical experts.

Near-term strategies will utilize best available science and best practice lessons learned case studies to ensure maximum social/economic/environmental impacts which can be sustained with minimum additional resources. Adaptation strategies which may be considered include living with water (floodable, floating, and/or elevated development), managed retreat (abandonment/relocation), green infrastructure (horizontal levees, wetlands, oyster-beds), and traditional barriers (levees/seawalls).

The Richardson Bay pilot project intends to evaluate traditional infrastructure options that can be compared to “green” alternatives in terms to illustrate choices that will need to be made.





**12. Vulnerability from Climate Change Impacts Other than Sea Level Rise:** *Using Exhibit F: Climate Change Guidance, and the latest regional scenarios, predictions and trends, describe how the project objectives or project may be vulnerable to impacts (fire, drought, species and habitat loss, etc.) from climate change, other than sea level rise, coastal erosion or flooding? What design, siting, or other measures are you incorporating into the project to reduce these vulnerabilities? Describe any adaptive management, project monitoring, and stewardship measures you intend to use.*

As mentioned previously, Marin County has an extensive Bay shoreline that, compared to other areas of the Bay, still harbors productive wetlands. Increased SLR could yield frequent/permanent inundation, and therefore reduction or complete loss of fish/wildlife habitat. Resident flora and fauna, including special status species such as the California Clapper Rail and Salt Marsh Harvest Marsh are dependent on these remnant wetlands, and further endangerment or extinction of any native species could lead to catastrophic ecosystem collapse.

California's coastal regions are projected to have less significant temperature increases than inland regions; which could result in coastal counties such as Marin being refuge areas for populations needing to escape regions no longer habitable due to extreme heat (California State Coastal Conservancy Climate Change Policy, 2009). This could increase demand on roads and other public infrastructure, thus elevating the importance of maintaining and improving these assets.

**13 Greenhouse Gas Emissions/Climate Change:** *If the proposed project will result in production of greenhouse gas emissions (including construction impacts and vehicle miles travelled as part of a public access component), describe the measures your project includes to reduce, minimize or avoid greenhouse gas emissions through project design, implementation construction, or maintenance (Refer to Exhibit F: Climate Change Guidance for resources on Best Management Practices and green building techniques and materials). What, if any, are the possible sources or sinks of greenhouse gases for your project, such as carbon sequestration from habitats at the site? If one of the project goals is to sequester carbon (reduce greenhouse gas concentrations), how do you intend to ensure continued long term sequestration while achieving project objectives? Do you have any plans to seek carbon credits for the carbon sequestration activities on the project site?*

The project will produce greenhouse gases only to the degree that associated travel and office operations. We will be using technology such as web-conferencing to reduce the need for travel, and are currently exploring carbon offsets to make the project entirely GHG neutral or better.

On the much larger scale, the project will have a major role in raising awareness of the direct consequences of GHG emissions and climate disruption on our citizens' day to day lives. By helping to, in economic terms, internalize the externalities, or demonstrate the negative

feedback loop that currently entangles us, a tangible outcome of the project will be to stimulate individuals, governments and private businesses to reduce and avoid emissions that come to recognize will do them harm in the long run.

### ADDITIONAL CONSERVANCY QUESTIONS

*14. Please note that we are requesting more full proposals than we expect to be able to fund due to the limited funds available, and that we may not be able to fund the full amount requested by your proposal. To better enable us to review your project for these limited funds, please take care to describe your budget and indicate phases or tasks that would work with partial funding.*

We believe that only if the entire span of those who will be affected by, and will need to make decisions about, sea level rise – in other words, *all* of us – feel informed, engaged, listened to and able to make a difference will we be able to successfully navigate the years and decades of change and challenge we now face as a society. Our proposal balances the technical, educational, management and policy imperatives that are the essential ingredients needed. That is why our Board of Supervisors is making a substantial investment in kick-starting this critical process. By weaving together disparate SLR efforts we will be creating a whole that is more than the sum of its parts. As a leader in this developing field, our work will make the work of those to follow easier and more productive.

Faced with a choice, we would not weaken the base we are building by cutting back on Tasks 1 through 4, but rather would likely reduce the scope of preparing for further future work on adaptive capacity, potential consequences, and onset of risks in Task 5, and reduce the collaboration we would be able to do with others under Task 6.

*15. Please explain the leadership structure for the project indicating where Marin County will take a lead vs. where localities and other lead partners will. Please include information on how a task force would function and how the various geographies and elements of the project will tie together.*

It is widely agreed that governance is one of the most important, and most difficult, aspects of adapting to climate disruption and sea level rise. We are taking the time to get it right. The county and the cities of Marin have already begun the process described in Task 3, working at all levels, including **elected officials**, such as the leadership being provided by the Sea Level Rise Subcommittee of the Marin County Council of Mayors and Councilmembers (MCCMC), and **agency and department heads**, including the work of Marin City Managers group with the County Administrative Officer, the Marin Planning Directors' group and the Marin Public Works Directors association.

Our objectives are to include the largest possible number of people somewhere in the overall framework of the project, so that each and every one has ownership of the task of preparing for and adapting to sea level rise. By setting such a high goal, we will be guided by inclusivity and engagement in all aspects of our work. Thus, for example, we are proposing a periodic general assembly of all elected official within the County to receive major reports, to which all staff, and the general public will be invited.