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Describe the location (250 words max, 228):

Richardson's Bay is home to a diverse population of people, wildlife, and habitats and provides a wealth of locations to test resilient solutions to rising tides. The area already floods due to a combination of rising tides and natural geography: steep upper hills draining to flat and sinking bay-filled lands. The location is a portion of the Richardson's Bay shoreline in southern Marin County, extending from unincorporated northern Sausalito to the City of Mill Valley's shoreline to Shelter Bay. The reach is diverse with homes of varying affordability (market, affordable and subsidized) and types (floating, traditional, apartments, and condominiums in public and private ownership). It includes Golden Gate Village in Marin City, Marin's only public housing for families with 297 units.

The natural habitat includes areas of rich diversity from protected wetlands to deep and shallow waters, and a number of creeks that drain to the bay. There are a number of parks and public access locations along the shoreline within County and City jurisdiction. Upper watershed lands include the Golden Gate National Recreation Area (including Muir Woods National Monument, accessed by visitors across the nation and the world), Pt. Reyes National Seashore and the Mount Tamalpais State Park lands. Communities include: unincorporated Marin County in northern Sausalito, Tamalpais Valley, Almonte and Homestead Valley; the City of Mill Valley; and the multi-ethnic, economically disadvantaged community of Marin City.

Link to Google Map with Location:

<https://drive.google.com/open?id=16-V5IY9VKKTIQQf04Oay7SpNfoE&usp=sharing>

What would make this site a good fit for the design challenge (250 words max, 218):

The Richardson's Bay reach is diverse and can be scaled-to-fit any project team. There is a history of governmental and private sector collaboration in the area that can support teams with data, community outreach, access to local and technical expertise, and existing funding districts to implement future projects. The reach is a prominent and scenic crossroads in Marin County, just north of the Golden Gate, in the shadow of Mount Tamalpais, with miles of waterfront on Richardson's Bay, and located on a regional transportation corridor visible to visitors from around the country and the world. The site includes some of the county's wealthiest and neediest residents, homes that already demonstrate resilience by floating on water, and a diversity of natural habitats that provide a range of testing grounds for adaptation designs. There are a number of existing efforts that could complement, undergird and leverage a Resilient by Design initiative.

The residents of the reach include a houseboat community of floating homes; Marin City, a vibrant, multi-ethnic, economically disadvantaged community; the Redwoods and the Fireside,

both senior housing including low-income and assisted-living units; a high school and middle school along the shoreline; and employees of businesses. The site also has a variety of natural resources, listed species, wetlands, deep and shallow waters, mudflats, tidal areas, and riparian creek habitats.

What are the potential physical vulnerabilities that threaten this site (250 word max, 201):

There is a long history of flooding in the area from the bay's rising tides, King Tides, creeks and stormwater drainage off the land. Highway 101 in Marin City was closed for several hours after storms in December 2014, cutting off the community - with only one way in and out - from jobs and necessary income, vital health and social services for vulnerable seniors, and creating a heightened sense of isolation and vulnerability. The 101 closure also resulted in regional traffic gridlock affecting Sonoma County to the north and San Francisco to the south. The Manzanita Park and Ride, located under Highway 101 on State Route One (Shoreline Highway) regularly shuts down with high tides that flood the regional park-and-ride with several feet of water. In 2015-6, the on- and off-ramps to Shoreline Highway were closed 30 times due to flooding, eliminating the southern access to all of Mill Valley and the communities of West Marin.

Rising tides would eliminate beaches, wetlands, and shoreline access to the waterfront along the reach. Small beaches in northern Sausalito, wetlands in Bothin Marsh in Tam Valley, and access to the bay at Bayfront and Hauke Parks in Mill Valley are all at risk.

What are the social vulnerabilities? (250 word max, 250)

Several vulnerable populations are impacted and in Marin, with limited opportunities for new or affordable housing, the most vulnerable residents need to be protected.

Marin City's 2,500 residents compose a vibrant, multi-ethnic, economically disadvantaged community with historic roots dating back to relocation from the South to join the WWII shipbuilding effort. Flood disruption hits low income residents particularly hard and has a multiplier effect, causing panic and anxiety over unmet health needs and job and income losses.

The Redwoods houses seniors in independent, assisted living and skilled nursing units on 10 acres of shoreline. There are 60 HUD Section 8 subsidized units within The Redwoods.

Fifty units of affordable family and senior housing are located at the Fireside in Tamalpais Valley. Waldo Point Harbor in north Sausalito consists of several hundred floating homes residents including the Gates Cooperative, home to low-income residents and families. In addition, 60 people live on boats anchored on Richardson's Bay.

The recently completed sea level rise vulnerability assessment for Marin's bay shoreline identifies further and even more imminent risks to this reach: emergency response and access to those in need; transportation vulnerabilities (highways, roads, and transit including bus lines, ferries, and bike/pedestrian pathways); lost tax revenues for school districts, Mill Valley, and Marin County; property losses for home and business owners; and perhaps, most importantly, the threatened devastation of interconnected communities along the shoreline that live with

water, but that with sea level rise will need a comprehensive solution to address local and regional issues.

Who owns or controls this site? (200 word max, 25)

The site is a mix of public and private property owners. County and City staff can access ownership for any or all of the shoreline.

What is threatened at this site? (200 word max, 196)

The obvious threats have already been described. However, the social fabric is at risk here and that resilience factor must be protected and enhanced. Community identity and a way of life that is inextricably linked to the water are threatened here. People in all of these interconnected communities have a deep reverence for and connection with this place -- the bay, creeks, habitat, flora and fauna, and history. Local ecologist and watershed hydrologist Brock Dolman calls it basins of relations. Framed by Mount Tamalpais and adjacent hills, this area has often been described as the lungs of the Bay Area, where people come to rest, restore their sense of wonder and find peace.

Local residents have a deep sense of community identity and pride, down to the community, area, neighborhood and street level. People hold fast to that sense of belonging to their town or area. Superstorm Sandy and other disasters have pointed up the vital importance of these social networks. Keeping the fabric of these neighborhoods and communities working together in the face of the shared challenge of sea level rise is a resilience value in itself to be preserved and strengthened in this process.

What local partners would need to be involved for it to be successful; what has their involvement been to date? (150 word max, 150)

Partners include: County of Marin, including Marin County Sheriff and Fire Departments; City of Mill Valley; California Department of Transportation; Sewerage Agency of Southern Marin; Mill Valley School District; Marin City Community Services District; Tamalpais Valley Community Services District; and numerous property owners.

The area is home to a number of active community-based groups, such as the multiracial coalition, Shore Up Marin, working on sea level rise education, flood mitigation and emergency preparedness in Marin City.

The County of Marin has a dedicated sea level rise program with staff from Community Development and Public Works to assist with planning and project implementation. The partners listed have already been involved with the County's sea level rise program and contributed to the development of the vulnerability assessment. The County has led coordination with cities, agencies, and districts and has subcommittees of staff and elected officials to coordinate and lead at every level.

What local plans exist or are underway in this area (150 words max—86)

Marin Shoreline Sea Level Rise Vulnerability Assessment (visit <http://www.marincounty.org/main/marin-sea-level-rise>)

Richardson Bay Shoreline Study
Southern Marin Watershed Guide
Marin City Drainage Study (in progress with community engagement collaboration with Shore Up Marin)
Coyote Creek Levee Evaluation
Mill Valley Flood Control and Stormwater Master Plan (in progress)
Arroyo Corte Madera del Presidio Flood Study (Mill Valley)
Bothin Marsh Planning (in progress by Marin County Parks)
Tamalpais Area Community Plan 1992 and Appendices
Mill Valley 2040 – City of Mill Valley’s General Plan

Many reports can be found on http://www.marinwatersheds.org/southern_marin.html

Is there any additional information that you would like to add about this site? (300 words max, 291))

This Richardson’s Bay reach is the gateway to immediately proximate communities of Marin City, Tamalpais Valley, Almonte and Mill Valley, and those in west and north Marin. This location is a crossroads and is already experiencing the effects of rising waters, cutting off critical access. Developing a successful blueprint for adaptation at this key location will help inform and underpin plans for many similarly situated locales facing sea level rise challenges, albeit at a less urgent pace.

The next phase of the County’s planning will support implementation actions. This immediately threatened location is a high priority one where the public is clamoring to see real and visible results. Successful engagement here will both inspire public confidence in adaptation and help fuel the commitment to do more.

Over the past 2 to 3 years, the residents of the Richardson’s Bay reach have demonstrated their willingness and ability to actively engage in addressing sea level rise by participating in community events and projects including the Southern Marin Sea Level Rise Pilot Study; the OWLs, sea level rise virtual reality viewers visited by thousands; and three well-attended community-wide meetings launching the Vulnerability Assessment in 2017. This area is ready.

The Richardson’s Bay reach presents threshold opportunities for the County to strengthen its coordinated approach with other municipalities and jurisdictions, and together to formulate shared principles and prioritization tools to assess benefits and consequences of implementation actions. The collaboration and communication opportunities at the Richardson’s Bay reach can serve as a replicable model and a scalable, fundable template to jump start coordinated planning and project implementation throughout the County and beyond. Sea level rise adaptation is the challenge of our time and the people of this reach are engaged, informed and ready to take action.